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Public Participation in Urban Development Process through Information and Communication Technologies

A thesis submitted for the Partial fulfillment of
Master degree (M.Sc.)
in Urban planning

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بسم الله الرحمن الرحيم

" قَالُوا سُبْحَانَكَ لا عِلْمَ لَنَا إِلا مَا عَلَّمْتَنَا

إِنَّكَ أَنْتَ العَلِيمُ الحَكِيمُ "

صدق الله العظيم

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LIST OF ABBREVIATIONS

ADSL:	**A**symmetric **D**igital **S**ubscriber **L**ine
ASU:	**A**in **S**hams **U**niversity
BPO:	**B**usiness **P**rocess **O**utsourcing
CAPMAS:	**C**entral **A**gency for **P**ublic **M**obilization **A**nd **S**tatistics
CBOs:	**C**ommunity **B**ased **O**rganizations
CSS:	**C**ascading **S**tyle **S**heets
CNS:	**C**atholic **N**ews **S**ervice
CAPI:	**C**omputer **A**ssisted **P**ersonal **I**nterviewing
CATI:	**C**omputer **A**ssisted **T**elephone **I**nterviewing
CFA:	**C**ommission **F**or **A**frica
DFID:	**D**epartment **F**or **I**nternational **D**evelopment
DOCP:	**D**epartment **O**f **C**ity **P**lanning
DOM:	**D**ocument **O**bject **M**odel
DSL:	**D**igital **S**ubscriber **L**ine
ECMA:	**E**gyptian **C**apital **M**arket **A**ssociation
E-Commerce:	The exchange of money for goods and services over the Internet
E-Democracy:	Use of the Internet to facilitate citizen participation
EDI:	**E**lectronic **D**ata **I**nterchange
E-Government:	The use of information technology to support government operations
E-Life:	**E**lectronic **L**ife
EM:	The office of **E**nvironmental **M**anagement
E-Management:	Use of information technology to improvement management
E-Mail:	**E**lectronic **Mail**
E-Services:	The **E**lectronic delivery of **S**ervices
ESV:	**E**gypt's **S**mart **V**illage
FedStats	**Fed**eral **Stat**istical Office
GIS:	**G**eographical **I**nformation **S**ystem
GOPP:	**G**eneral **O**rganization for **P**hysical **P**lanning

HTML:	**H**yper **T**ext **M**arkup **L**anguage
HUD:	**H**ousing and **U**rban **D**evelopment
ICDL	The **I**nternational **C**omputer **D**riving **L**icense
ICM:	The **I**nstitute of **C**ommercial **M**anagement
ICT:	**I**nformation and **C**ommunication **T**echnologies
ICT4D:	**I**nformation and **C**ommunication **T**echnologies **F**or **D**evelopment
IP:	**I**nternet **P**rotocol
IT:	**I**nformation **T**echnologies
ITDG:	**I**ntermediate **T**echnology **D**evelopment **G**roup
K2C:	**K**ansas **to** **C**airo
MCIT:	**M**inistry of **C**ommunication and **I**nformation **T**echnology
MDGs:	The **M**illennium **D**evelopment **G**oals
MIT:	**M**assachusetts **I**nstitute of **T**echnology
MSN:	**M**icro**S**oft **N**etwork
MuCSAT:	**Mu**barak **C**ity for **S**cientific research **a**nd **T**echnology
NCTV:	**N**orthern **C**oast **T**echnology **V**alley
NDSU:	**N**orth **D**akota **S**tate **U**niversity
NEPAD:	**Ne**w **P**artnership for **A**frica's **D**evelopment
NGOs:	**N**on-**G**overnmental **O**rganizations
NICI:	**N**ational **I**nformation & **C**ommunication **I**nfrastructure
NIMBY:	**N**ot **I**n **M**y **B**ack **Y**ard
OECD:	The **O**rganization for **E**conomic **C**o-operation and **D**evelopment
OLPC:	**O**ne **L**aptop **P**er **C**hild
OPCS:	**O**ffice of **P**opulation, **C**ensuses and **S**urveys
OSS:	**O**pen **S**ource **S**oftware
PCs:	**P**ersonal **C**omputers
PDA	**P**ersonal **D**igital **A**ssistant
PlaNYC:	The **Pla**n of **N**ew **Y**ork **C**ity
PP:	**P**ublic **P**articipation
PPP:	**P**ublic **P**rivate **P**artnership
RITSEC:	The **R**egional **I**nformation **T**echnology and **S**oftware **E**ngineering **C**enter

RSS:	**R**eally **S**imple **S**yndication
SACHRU:	**S**outh **A**ustralian **C**ommunity **H**ealth **R**esearch **U**nit
SL:	**S**econd **L**ife application
STV:	**S**inai **T**echnology **V**alley
TRA:	**T**elecom **R**egulatory **A**uthority
TDC:	**T**echnology **D**evelopment **C**enter
TOR:	**T**erms **O**f **R**eferences
UN:	**U**nited **N**ations
UNCHS:	**U**nited **N**ations **C**entre for **H**uman **S**ettlements
UNESCO:	**U**nited **N**ations **E**ducational, **S**cientific, and **C**ultural **O**rganization
UNIDO:	**U**nited **N**ations **I**ndustrial **D**evelopment **O**rganization
UNRISED:	**U**nited **N**ations **R**esearch **I**nstitute for **S**ocial **D**evelopment
USA.gov:	US. government's official web portal
USC:	**U**niversity of **S**outhern **C**alifornia
USDOE:	**US**. **D**epartment **O**f **E**nergy
WAP:	**W**ireless **A**pplication **P**rotocol
Web 2.0:	Web applications that facilitate participatory information sharing, interoperability, user-centered design, and collaboration on the World Wide Web.
WSIS:	**W**orld **S**ummit on the *I*nformation **S**ociety
XHTML:	e**X**tensible **H**yper**T**ext **M**arkup **L**anguage
XML:	**E**xtensible **M**arkup **L**anguage
3D:	**Three D**imensional

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Hend Magdy

ABSTRACT

*"While planners bring technical skills and knowledge, citizens provide community history, local knowledge, and an understanding of cultural values." (**Healey** 1992; **Innes** 1996, 1998; **Talen** 1999)*

The emphasis on the participatory and communicative side of planning has grown in the past decade, and planners have developed various theories to empower communities and increase communication. Too often, however, planners are not equipped with appropriate planning tools, such as visualization techniques, to provide a common language to which all participants, technical and non-technical, can relate.

Recently, modern advanced technologies & Internet based programs are opening new forms of computer-mediated communications, allowing for new forms of information dissemination, social interaction and collaborative working

Consequently, this thesis hypothesize that improving the effectiveness of participation will benefit from the development of support tools and that new information and communication technologies will add a new dimension to the available methods and will extend the scope of participation.

The study comments on the foundations of increasing the level of participation in urban design and planning; it starts from the premise that it is the right of all affected by an urban design to have an active role in its development and that appropriate ways of exercising this right can lead to richer, more comprehensive planning and design solutions. (**Goodspeed**, 2008).

However, to accomplish a highly effective public participation programs it takes a very good job of planning. The real challenge is to design an appropriate program where the techniques match the purpose, reach the interested stakeholders, and result in a clear linkage between the public participation and the decision-making process.

Seeking to provide a guideline that can fit to different circumstances, the study introduces the Ideal types to design successful public participation programs, presents the best practices &lessoned learned from international examples and identifies an evaluation tool to assess & evaluate the degree of achievements.

Concerning with Egypt, the study considers similar experiences in Arab Countries & Africa. It explores the actual and potential existence of IT & reviews the disparities between those with access to ICT and those without, revealing obstacles facing them & factors contributing to bridge them.

It then focuses on Egypt, Providing a comprehensive overview of the information-technology sector, aiming at understanding the potentials of utilizing different forms of information and communication technologies for increasing "Public Participation" and citizenship in urban development.

Addressing the digital divide within Egypt itself, The study tests the hypothesis with reference to a Case Study in a rural area; the National Project of Preparing a Strategic Master Plan for the Egyptian Villages; specifically, the Village of El-Zwammel, El-Zwammel County, Belbes center, El-Sharquia Province.

It introduces the Project background and briefly presents El Zwammel village, it then conducts a comparative analytical assessment between the two methodologies undertaken in 2002 and in 2006, starting from data collection and ending with the generation of the Strategic Master Plan.

With reference to the Ideal Types & Best Practices of Public Participation Planning Programs, the study evaluates and assesses the experience of involving the public within the frame of GIS technologies and its impact on improving the efficiency of public participation. It then comments on how advanced technologies and internet based programs can be tailored to fit in the framework of the planning process to overcome the drawbacks and consequently enhance the public participation creating an inclusive, democratic and equitable planning process.

Finally, it concludes that modern advanced technologies & Internet based programs can serve as a new venue for public conversation, potentially more accessible and flexible than any previous approach, consequently, can be a key to the promotion of a higher level of citizen participation in urban planning and design.

However, these benefits have not appeared to be evenly distributed among countries. In fact, effective usage of IT equipment requires many other complementary investments & factors like human capital and the provision of a reliable telecommunication infrastructure which many countries still lack. The study finally discusses the costs and the benefits and suggests areas in which additional researches are needed.

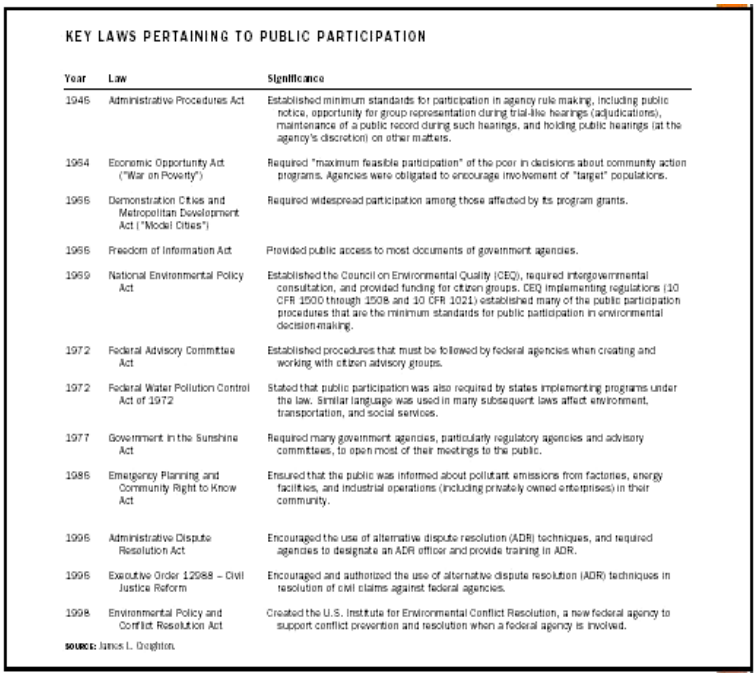
INTRODUCTION

PARTICIPATION is a rich concept that varies with its application and definition. The way participation is defined also depends on the context in which it occurs. For some, it is a matter of principle; for others, practice; for still others, an end in itself (**World Bank**, 1995).

It is used in many social contexts, from working life and technological development over urban and regional planning to general politics and everyday situation. Yet, "*community participation*" is an intricate expression, as it has no specific definition, limits, boundaries, or established criteria with which it can be measured. It is argued by **Bately** (1996) to be open to speculations and personal interpretations.

> *"Participation is a broad word, widely used, relating to work place and production, to community development/neighborhood self-help and to government administration."*

Since 1946s, key laws pertaining to public participation have been developed as well as sophisticated techniques and theories regarding how and why to involve citizens in planning processes. Critics pilloried the effectiveness of citizen participation during the War on Poverty, suggesting a new theoretical approach to participation itself was needed. (**Goodspeed,** 2008**)**



KEY LAWS PERTAINING TO PUBLIC PARTICIPATION

Year	Law	Significance
1946	Administrative Procedures Act	Established minimum standards for participation in agency rule making, including public notice, opportunity for group representation during trial-like hearings (adjudications), maintenance of a public record during such hearings, and holding public hearings (at the agency's discretion) on other matters.
1964	Economic Opportunity Act ("War on Poverty")	Required "maximum feasible participation" of the poor in decisions about community action programs. Agencies were obligated to encourage involvement of "target" populations.
1966	Demonstration Cities and Metropolitan Development Act ("Model Cities")	Required widespread participation among those affected by its program grants.
1966	Freedom of Information Act	Provided public access to most documents of government agencies.
1969	National Environmental Policy Act	Established the Council on Environmental Quality (CEQ), required intergovernmental consultation, and provided funding for citizen groups. CEQ implementing regulations (10 CFR 1500 through 1508 and 10 CFR 1021) established many of the public participation procedures that are the minimum standards for public participation in environmental decision-making.
1972	Federal Advisory Committee Act	Established procedures that must be followed by federal agencies when creating and working with citizen advisory groups.
1972	Federal Water Pollution Control Act of 1972	Stated that public participation was also required by states implementing programs under the law. Similar language was used in many subsequent laws affect environment, transportation, and social services.
1977	Government in the Sunshine Act	Required many government agencies, particularly regulatory agencies and advisory committees, to open most of their meetings to the public.
1986	Emergency Planning and Community Right to Know Act	Ensured that the public was informed about pollutant emissions from factories, energy facilities, and industrial operations (including privately owned enterprises) in their community.
1996	Administrative Dispute Resolution Act	Encouraged the use of alternative dispute resolution (ADR) techniques, and required agencies to designate an ADR officer and provide training in ADR.
1996	Executive Order 12988 – Civil Justice Reform	Encouraged and authorized the use of alternative dispute resolution (ADR) techniques in resolution of civil claims against federal agencies.
1998	Environmental Policy and Conflict Resolution Act	Created the U.S. Institute for Environmental Conflict Resolution, a new federal agency to support conflict prevention and resolution when a federal agency is involved.

SOURCE: James L. Creighton.

However, although it is widely understood by people in all sectors of the development industry that such involvement can lead to more appropriate and sustainable development solutions and stronger citizen groups and communities.

> *"Participatory strategies that rely on empowerment of residents to identify community priorities, plan and undertake interventions and safeguard improvements are keys to defining sustainable development strategies."* ***(International Training Program Prospectus****, 1994).*

Yet, there is almost universal uncertainty as to the best way of involving local communities in any given situation. The ways of citizens are involved in urban planning can vary a lot from countries. Actually, each community needs to devise its own community planning process carefully to suit local conditions. The approach adopted in each case will be different and there is rarely a quick fix solution or blueprint.

> *"Currently the choice of approach is largely ad hoc, depending on the experience and knowledge of those initiating activity."* ***(Arnstein****, 1969)*

A vast range of methods is available with different uses and characteristics. These methods have long been used in public participation and certainly have their remarkable benefits and advantages that have proven efficiency for a long time in this field. Yet, there are some disadvantages of using them

which cannot be ignored for their great effect on the quality and quantity of community participating, among which are:

Lack of Information Dissemination

Different types of individuals who might be interested in contribution might not be successfully engaged, as they had no record of such meetings, they were neither informed nor invited.

The restricted time and geographical location

Planning meetings often tend to take place at morning in specific times which can limit the number of people who are able to attend.

Also, physical access to such meetings can also cause problems for the disabled, the elderly and infirm as well as those who may be working outside the country and hadn't had any chance to contribute by attending the meetings or answering the questioners.

Confrontational Atmosphere

This can discourage participation by an often less vocal majority causing public meetings to be dominated by individuals who may have extreme views which may not necessarily represent the wider view of local people.

Lack of Visualization

Most of the people can participate far more effectively if information is presented visually rather than in words, which can be costly to prepare and may not be cost-effective.

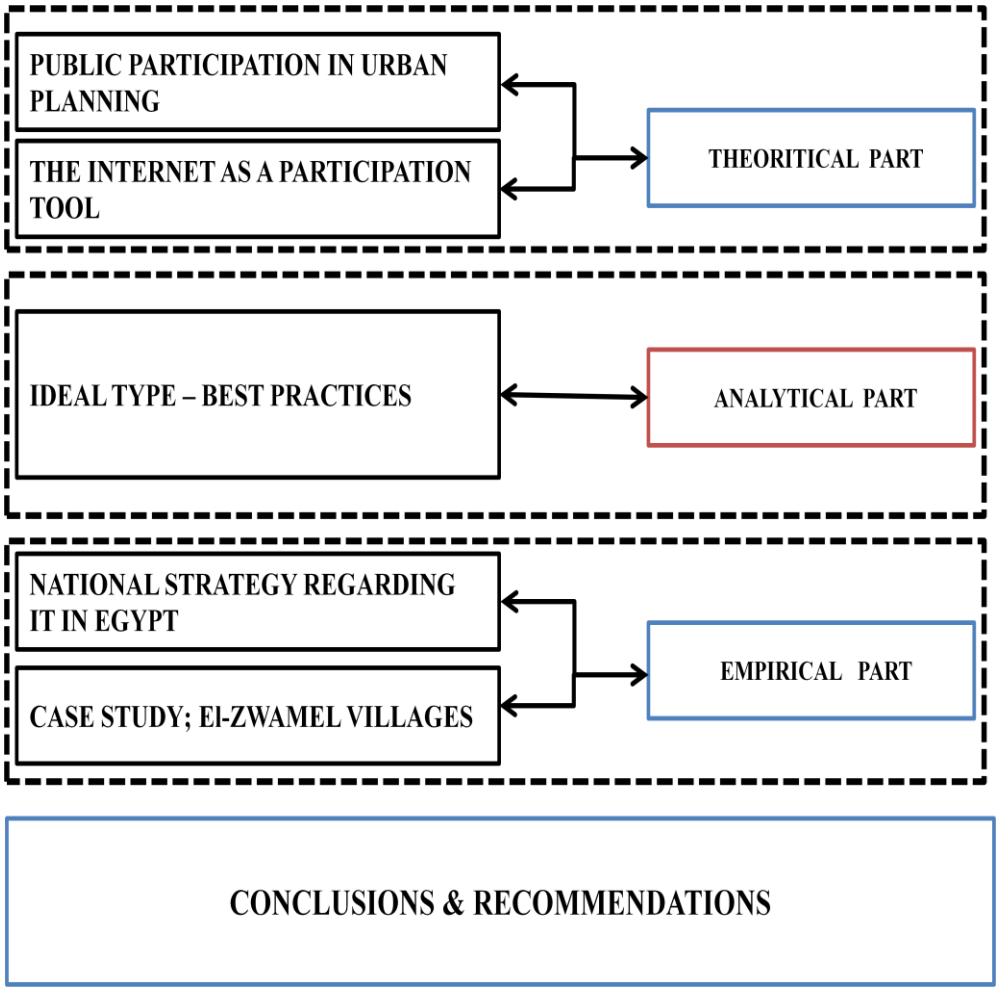
Huge amount of Paper Work

One-day events can generate a wealth of information and ideas which can easily be lost. Besides, it would take several weeks to be compiled and anglicized.

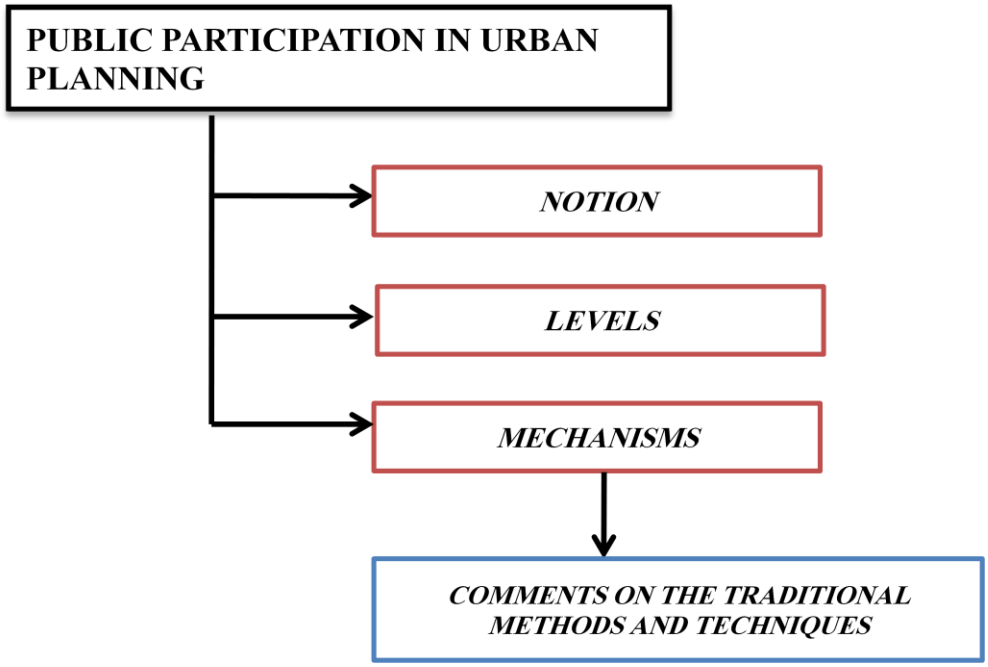
However, the rapid development of the Internet, as a place of information dissemination provides researchers and policy-makers with considerable challenges on how best to realize the potential in the pursuit of worthwhile goals. Modern advanced technologies & Internet based programs are opening new forms of computer-mediated communications, allowing for new forms of information dissemination, social interaction and collaborative working (**Goodspeed**, 2008).

Consequently, this thesis hypothesize that improving the effectiveness of participation will benefit from the development of support tools and that new information and communication technologies will add a new dimension to the available methods and will extend the scope of participation. However, In order to propose how the Internet could be used as a participation tool, we need to understand both professional models of good participation and critics of participation as it is practiced today.

Accordingly, This Thesis consists mainly of Six Chapters representing the Theoretical, Analytical & Empirical parts of the Study.



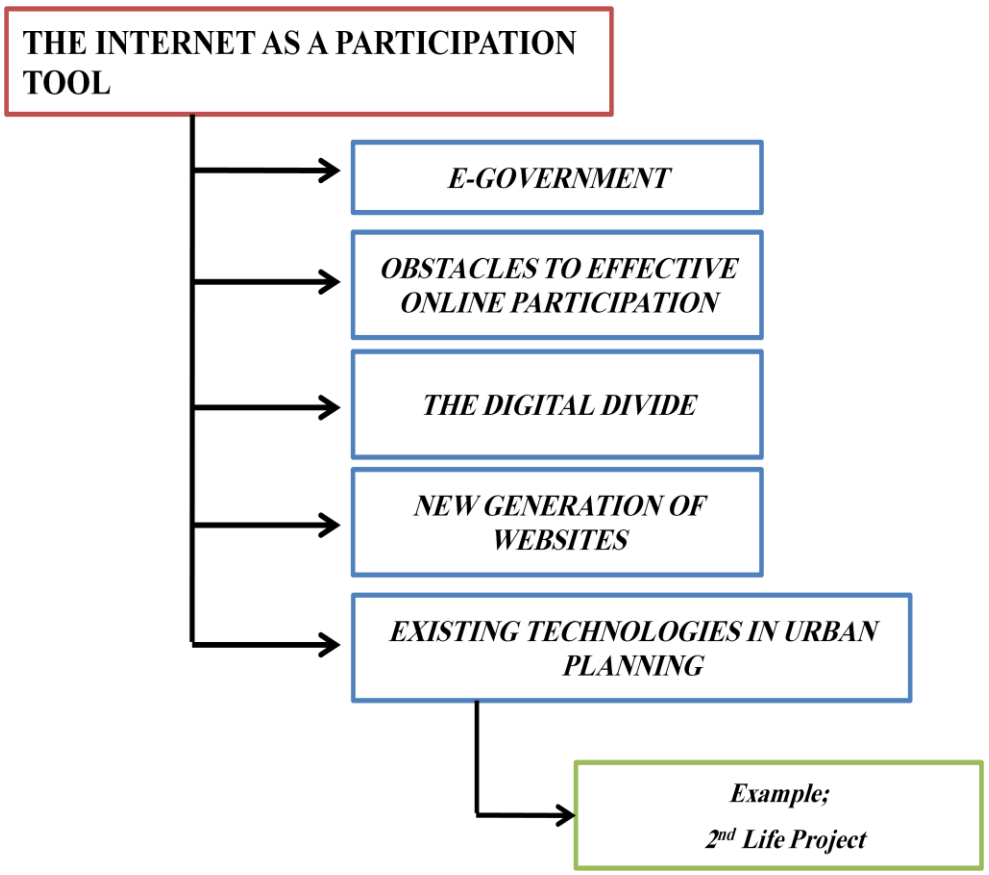
Chapter One comments on the foundations of increasing the level of participation in urban design and planning; it starts from the premise that it is the right of all affected by an urban design to have an active role in its development and that appropriate ways of exercising this right can lead to richer, more comprehensive planning and design solutions.



It discusses what is meant by Public Participation, and reveals its different notions as a mean in a Top-Down decision-making and as an end in a Bottom-Up Decision Making Process.

It then discusses the different levels and scales of Public Participation, classifying the different mechanisms and approaches of involving People in the urban planning and Design processes

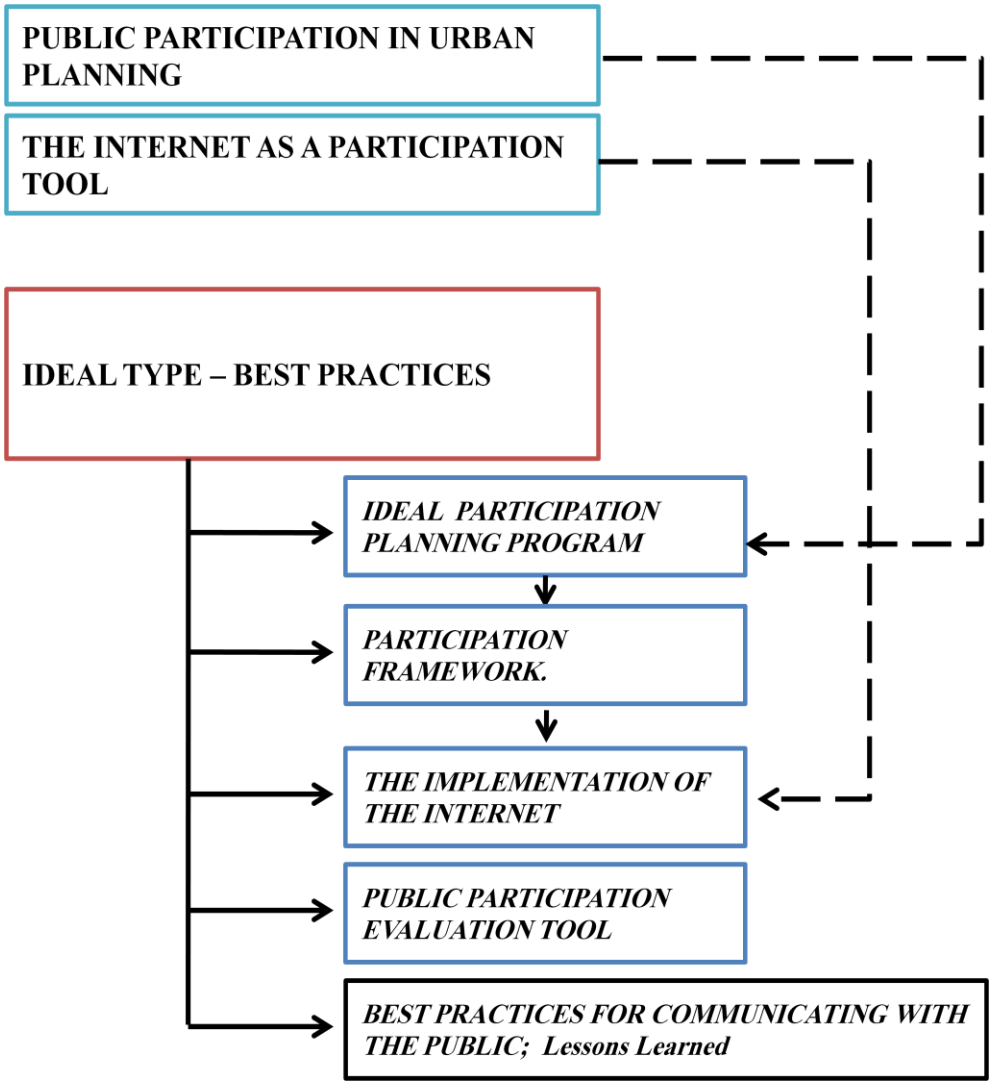
Recently, modern advanced technologies & Internet based programs are opening new forms of computer-mediated communications, allowing for new forms of information dissemination, social interaction and collaborative working. Chapter Two discusses the objectives of a Planning Support System for Public Participation, presents a general framework aiming at examine and assessing the new tools of public participation in urban planning and design.



It then focuses on the importance of virtual reality in Public Participation with reference to a recent example k2c project | cross-cultural collaboration process within virtual world.

However, to accomplish a highly effective public participation programs it takes a very good job of planning. The real challenge is to design an appropriate program where the techniques match the purpose, reach the interested stakeholders, and result in a clear linkage between the public participation and the decision-making process.

Chapter Three seeks to provide a guideline that can fit to different circumstances, the study introduces the Ideal types to design successful public participation programs, presents the best practices &lessoned learned from international examples and identifies an evaluation tool to assess & evaluate the degree of achievements.



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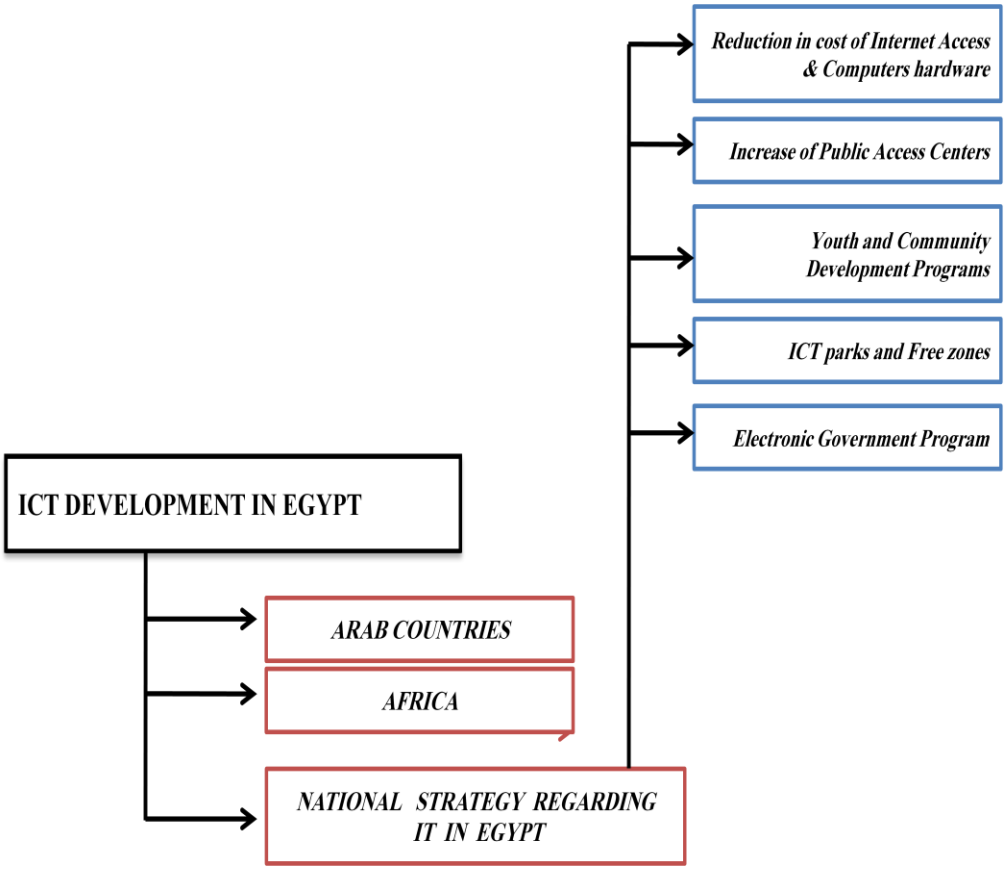
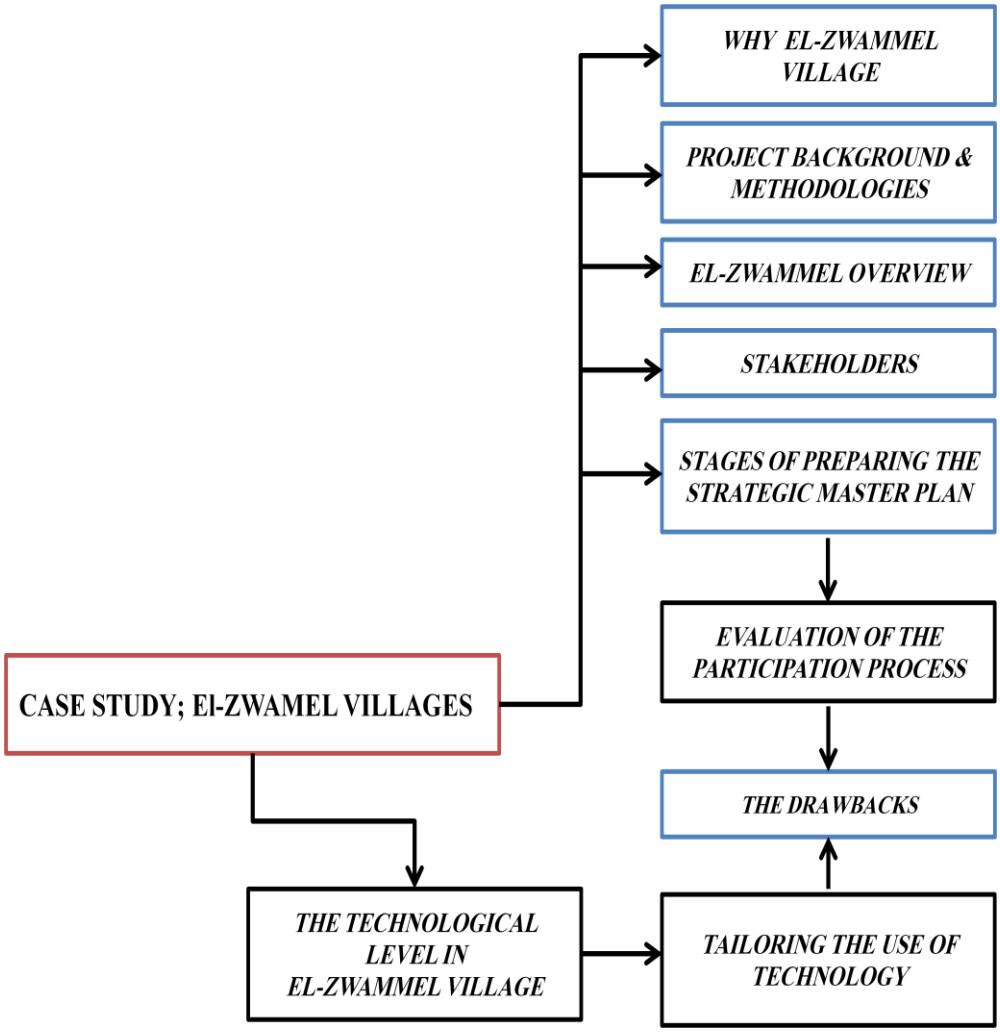


Addressing the digital divide within Egypt itself, Chapter Five tests the hypothesis with reference to a Case Study in a rural area; the National Project of Preparing a Strategic Master Plan for the Egyptian Villages; specifically, the Village of El-Zwammel, El-Zwammel County, Belbes center, El-Sharquia Province.



It introduces the Project background and briefly presents El Zwammel village, it then conducts a comparative analytical assessment between the two methodologies undertaken in 2002 and in 2006, starting from data collection and ending with the generation of the Strategic Master Plan.

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consequently enhance the public participation creating an inclusive, democratic and equitable planning process.

Finally, Chapter Six concludes that modern advanced technologies & Internet based programs can serve as a new venue for public conversation, potentially more accessible and flexible than any previous approach, consequently, can be a key to the promotion of a higher level of citizen participation in urban planning and design.

However, these benefits have not appeared to be evenly distributed among countries. In fact, effective usage of IT equipment requires many other complementary investments & factors like human capital and the provision of a reliable telecommunication infrastructure which many countries still lack. The study finally discusses the costs and the benefits and suggests areas in which additional researches are needed.

CHAPTER 1

PUBLIC PARTICIPATION IN URBAN PLANNING

CHAPTER 1

PUBLIC PARTICIPATION IN URBAN PLANNING:
A CRITICAL REVIEW OF THE LITERATURE

1.1. INTRODUCTION

This chapter begins with a short history of public participation in planning. The history seeks to challenge the profession's view of participation as simply the public processes designed and controlled by planners.

Public participation includes not only the deliberate hearings, but also the role of politicians, civic activists, business leaders, the media, and others in engaging in or forcing public conversation about planning topics. (**Goodspeed**, 2008)

The idea of an ideal community Participation can be traced back to Jean Jack Rousseau[1]. As a reaction to his experience of the urban public of the eighteenth century, Rousseau developed a political philosophy based on the ideal community. In this philosophy, Foucault argues, Rousseau dreams of:

> *"It was the dream that each individual, whatever position he occupies, might be able to see the whole of the society, that men's hearts should communicate, their vision be unobstructed by obstacles, and that the opinion of all reign over each."* (**Foucault**, 1980)

In the **Rousseau's** dream, we have a society where all people are aware of existing opportunities for effective participation in decision making, they believe participation is worthwhile, and they participate actively in a society that holds that collective decisions bind. In this society, the role of participation is exactly that men "*not law*" should rule, and therefore be ruled by the logic operation of the political situation that they themselves have created. In such situation the role of individual men is automatically precluded. (**Pateman**, 1970)

> *"If man is essentially learning, creating and communicating being, the only social organization adequate to his nature is a participatory democracy, in which all of us, as unique individuals, learn, communicate, and control. Any lesser, restrictive system is simply wasteful of our true resources; in*

[1] **Jean Jack Rousseau** (1712 – 1778), a major Genevan philosopher, writer, and composer of 18th-century Romanticism. His political philosophy heavily influenced the French Revolution, as well as the American Revolution and the overall development of modern political, sociological and educational thought.

wasting individuals, by shutting them out from effective participation, it is damaging our true common process." **(Williams,** 1961**)**

The notion of participation is about DEMOCRATIZING US "*the human beings*" and not just "*society*" or as **H. Koch** [2] puts it:

"Even if we succeeded in implementing both political and economic democratization of society, we would not have come much further if we could not democratize man."

1.2. THE NOTION OF PARTICIPATION

Participation is a widely used notion. It is used in many social contexts, from working life and technological development over urban and regional planning to general politics and everyday situation. Yet, "*Community Participation*" is an intricate expression, as it has no specific definition, limits, boundaries, or established criteria with which it can be measured. It is argued by **Bately** (1996) to be open to speculations and personal interpretations.

"Participation is a broad word, widely used, relating to work place and production, to community development/neighborhood self-help and to government administration."

Part of the problem arises from the different definitions of what constitutes community participation and, according to **Moser** [3], the conflicting purposes of interested agencies, governments, international aid bodies, non-governmental organizations, as well as those of the people of any particular community. The diversity of definitions reflects the ideological range of interpretation of development and the divergent approaches to it.

Moser (1989) argues that contradictions between intentions on paper and the real agenda can become apparent in the practice of community participation.

Mayo (1995) argues that community participation is used also for ideological reasons.

"Community development was also significant ideologically in encouraging favorable institutions and attitudes, and in discouraging those unfavorable ones that might lead to the development of a radical challenge."

[2] **Hamilton Koch** (born in May 3, 1940), an American businessman, philanthropist, political activist, and chemical engineer. Known for Philanthropy to cultural and medical institutions; Political advocacy in support of libertarian and conservative causes

[3] **Moser, C.,** is an academic specializing in social policy and urban social anthropology. She has researched community participation, looking at the social dimensions of economic reform, the role of human rights, social protection and responses of the urban environment to climate change.

Some authors argue that participation creates satisfaction at the level of the participants, e.g. **Schumacher** [4] calls participation the "*good work*", work of the kind that fulfils life both; in the way that it is carried out and by means of what is done and made.

White's definition of community participation (1982) can be perceived to play an active role in the provision of basic needs, not only to increase self-reliance but also for efficiency of application.

> *"Such needs as health, education, safer water, and sewage can only, or more efficiently, be provided for through public effort…The role of non-material basic needs, both as an end in their own right, and as a mean to meeting material needs that reduces costs and improve impact, is a crucial aspect of the basic needs approach."*

UNRISED[5] in 1979 identified the real objective of participation as:

> *"…to increase control over resources and regulative institutions in given social situation, on the part of groups and movements of those hitherto excluded from such control."*

This definition assumes that participation involves a certain sharing and transfer of power as local groups deliberately attempt to increase their control over resources. It includes recognition that tension might develop with the state in this case, while trying to promote participation to achieve centrally desired objectives on the grounds of efficiency.

UNCHS (1986) Director's report stated that it is not in the interest of governments to involve their clients in designing and sharing the responsibility of development efforts. In practical terms, community participation directly benefits agencies because it broadens their resource base in physical, financial and most important human terms.

> *"Clearly it is not in the interest of governments to involve their clients in designing and creating support programs and in sharing the responsibility for short-term and long-term outcomes of development efforts.*
>
> *In practical terms, community participation directly benefits agencies such as social welfare departments, planning offices and local housing authorities, because it broadens their resource base in physical, financial and most*

[4] **Ernst Friedrich "Fritz" Schumacher,** (1911 –1977) was an internationally influential economic thinker, statistician and economist in Britain. His ideas became popularized in much of the English-speaking world during the 1970s.

[5] The **United Nations Research Institute for Social Development (UNRISD)** is an autonomous agency engaging in multidisciplinary research on the social dimensions of contemporary problems affecting development. The Institute attempts to provide governments, development agencies, grassroots organizations and scholars with a better understanding of how development policies and processes of economic, social and environmental change affect different social groups.

important human terms…It distributes or shares responsibility for the design, management, and executions of programs and projects.

Through community participation, government, despite limited outlays in per capita support, can assist a far greater number of needy than can be reached by current conventional programs."

Hamza (1998) argues that from a government's point of view, participation is mostly seen as an attempt directed from above.

"To orient the actions of people to attain collectively defined goals and values, to achieve system legitimacy and to overcome inherited social cleavages."

Rakodi and **Schlyter** (1981) also, maintain the governments utilize participation as follows:-

- An instrument legitimizing political control by the ruling party.
- A periodic voting to ensure the accountability of government and perpetuate a "*myth of democracy*"
- A mean by which the regime promotes ideological and development goals.

White (1982) describes "*Community Participation*" according to the world-bank definition to have three corners:

1. Is the involvement of all those affected in decision making about what should be done and how?
2. Is mass contribution to the development effort?
3. Is sharing in the benefits of the program?

To summarize the various definitions of community participation, we can divide them into two categories:

1- As a mean in a Top-Down decision-making process.

Here it is used as a form of mass mobilization to get things done, only to use the community as cheap labor to reduce and to achieve specific development objectives predetermined from the beginning by the state or agencies.

2- As an end in a Bottom-up decision-making process.

Here the final objective is not a product of quantifiable development goal, but considered as a process. The real goal is to increase control over resources and regulations. People take control of their decisions, and are

free to make their contributions in design, construction, management and maintenance of their houses.

1.2.1 Participatory Urban Planning And Design

Rapoport defines urban design as:

> "*Urban design, or the art of building cities, is the method by which man creates a built environment that fulfils his aspirations and represents his values."* (**Rapoport,** 1969)

This he does in his own likeness, the Sixteenth-century theorist and architect **John Shute** (1963) likens the city to the human figure:

> *"A city ought to be like the human body and for this reason it should be full of all that give life to man."*

Accordingly, urban design, like architecture, is a people's use of an accumulated technological knowledge to control and adapt the environment for social, economic, political and religious requirements.

> *"It is the method learned and used by a people to solve the total program of requirements for city building."* (**Moughtin**, 2003)

The city is an element of a people's spiritual and physical culture and, indeed, it is the one of the highest expressions.

> *"Central to the study of urban design is the man, his values, aspirations and power or ability to achieve them. The task of the city builder is to understand and express, in built form, the needs and aspirations of the client group."* (**Moughtin**, 2003)

How does the city builder design to best serve the community's needs? How can he ensure that the end product is culturally acceptable?

These and other similar questions are important issues for those in the city designing professions. In traditional practice the architect worked for an individual or a small group representing a landing proprietor. However, growth of democracy and mass culture now requires the architect and city builder to recognize a wider client group. This wider group includes the ordinary voter and the general user of the buildings.

> *"The community inhabiting towns and cities, and therefore the focus of the subject, is complex heterogeneous groups made up of diverse sub-cultures with differing values and aspirations."* (**Moughtin**, 2003)

As culture can be viewed as filter acting between the outside environment and the receiver, many in this expanded client group do not share the values of the designer group. **Rapoport** (1977) states that,

> *"Understanding others requires, primarily, an understanding of the limitations of one's own cultural and personal frame of reference."*

Frequently, it is possible that a wide cultural gap separates the city builder and the new client- the man and woman in the street.

The gap between city designer and client can be bridged when the problem is recognized and its nature defined: When the complexity and heterogeneity of the client group is admitted and when the designer realizes that culture is never static: it is in a constant state of change and to some extent, he or she- the designer- is an agent for those changes.

> *"Culture is never entirely static; it is in a constant state of change. The world is getting smaller and there is increasing contact between peoples. As a result, cultures are changing. What are more they appearing to be changing at an increasing rate."* (**Moughtin**, 2003)

However, even when working with people, the designer is not a neutral, objective observer, but a significant factor in the process of culture change. Eventually, an important aspect of the designer's skill is the development of a menu of techniques for incorporation into the design process.

Nevertheless, all of this sounds very far from the life of the man in the street. How then can the community be involved in the process? At what point? Therefore, do people take part in the design and development process?

Starting the design process from a theoretical foundation and from abstract notions does give to the professional, with his or her long period of education and experience, great advantages over the layperson. However, the layperson, too, has knowledge and experience.

He is expert on his family, its needs and aspirations. This is a highly specialized knowledge about the sort of housing, educational, health care, and recreational facilities the family needs and can afford.

Also, the layperson is well able to extend this personal knowledge and to form accurate ideas about his neighbors' needs. He is then the expert on the problems of the neighborhood in which he or she lives.

The professional when carrying out surveys into user requirements estimates in crude terms this knowledge, whereas the layperson's knowledge in this field is immediate and first hand.

Moughtin (1970) argues that the ordinary citizen also has ideas about the ways in which these problems can be solved and how to capitalize on any possibilities that exist.

Furthermore, making the most of this wealth of experience requires starting the design process; either by investigating the problem, permitting the community to outlines its problems, or by their posing solutions to problems already intimately known to them, then examining these solutions in the light of an evaluation.

> *"Experiments in Belfast, Nottingham, and Newark confirmed that residents are perfectly capable to of organizing their own survey and are also able to generate planning and architectural solutions."* (**Moughtin**, 1970)

According to **Gibson** (1979), the professional's role, in citizen-participant dominated design, is not defunct. On the contrary, it becomes more delicate and subtle requiring patience and, above all, skills in listening. It also requires of the designer the humility to be able to offer advice only when requested.

> "*The professionals advice on technical matters is supreme, experience shows that it is well respected by the layperson."*

The layperson can offer solutions only from within, his or her, own experience. The professional can open up a new whole world of experience to the client group through knowledge of many other similar situations.

Sharing this knowledge with the client has always been part of the professional's role; it remains so in the process of participation.

The layperson's knowledge and experience of planning and design matters beyond the immediate neighborhood decreases as does his or her interest. These wider issues, and their implications for the locality, have to be interpreted and made clear to the community by the professional.

If, however, high levels of participation are thought desirable in the planning and design process should give emphasis to a bottom-up order rather than working from the region or city down to the neighborhood and the street.

The higher levels of planning then become an amalgam of small-scale plans coordinated to ensure that higher level services are not inhabited.

1.2.2 Objectives of Public Participations

According To **Jean Jack Rousseau**, Participation has a psychological effect on the participants, ensuring a continuing interrelationship between the workings of institutions and the psychological capabilities of individuals interacting with them.

His theory of participatory democracy[5] is based on the argument that participation fosters human development, enhances the sense of political efficacy, reduces the sense of estrangement from power centers, nurtures a concern for collective problems and contributes to the formation of an active and knowledgeable citizenry capable of taking an active interest in governmental and managerial affairs.

The theory is an attempt to resolve the antithesis between individuality and sociality:-

> *"The theory of participatory democracy is built round the central assertion that individuals and their institutions cannot be considered in isolation from one another.*
>
> *The existence of representative institutions at national level is not sufficient for democracy; for maximum participation by all the people at that level socialization, or "**social training**", for democracy must take place in other spheres in order that the necessary individual attitude and psychological qualities can be developed. This development takes place through the process of participation itself."* (**Pateman**, 1970)

The major function of participation in the theory of participatory democracy is, according to **Pateman** (1970), an educational one, including both the psychological aspect and the development of democratic skills and procedures. The education function is important, even if it is not clear. It is not only showing that participation is indeed central to the democratic prospective; it also emphasizes the social and cultural aspect; that democracy does not consist of institutions alone.

Moreover, Planners increasingly find that public participation is fundamental to develop appropriate and effective solutions or community design and planning problems. (**Alexander,** 1977**; Altschuler, 1970; McClure, Byrne and Hurand,** 1997; **Sanoff,** 1978**,** 1991**; Smith,** 1993**; Towers,** 1995**)**

The benefits of broad-based community involvement in planning are widely documented; they include:

[5] **Participatory Democracy**, also known as pure democracy and, direct democracy; its more thoroughgoing version in which the people are empowered to exercise power directly through voting on issues with public implications whether they are political, economic, or otherwise. According to the Enlightenment thinker Jean-Jacques Rousseau, only a direct democracy is a true democracy, because to delegate the people's power is to alienate it and risk losing control over one's representative.

- Enhancing the capacity of citizens to cultivate a stronger sense of commitment
- Increasing user satisfaction
- Creating realistic expectations of outcomes
- Building trust

According to **Craig** (1998) organizing public participation in a city can have the following objectives:

- Expands the public's role in defining questions and making decisions in which location or geography have a bearing on the issues addressed.
- Increase public participation in the identification, creation, use and presentation of relevant information in various problem solving contexts; and,
- Enable wider public involvement of stakeholders in planning, dispute resolution and decision-making environment through a computer-based public participation process.

Schuler ***(***1996***)*** argues that in order to be efficient, the characteristics of a public participation process should be:

- Community-based, that is to say that everyone in the whole community/city should be involved;
- Reciprocal, i.e. any potential "consumer of information" should be a producer as well;
- Contribution-based, because forums are based on contributions of participants
- Unrestricted, i.e. anyone can offer his participation
- Accessible and inexpensive, that is to say that the use of the system must be free of charge to everyone;
- Modifiable, because the legislative framework, the planning systems and the software can evolve, and those evolutions must be taken easily into account.

However, although it is now widely understood by people in all sectors of the development industry that such involvement can lead to more appropriate and sustainable development solutions and stronger citizen groups and communities.

> *"Participatory strategies that rely on empowerment of residents to identify community priorities, plan and undertake interventions and safeguard improvements are keys to defining sustainable development strategies."* (**International Training Program Prospectus**, 1994)

Yet, there is almost universal uncertainty as to the best way of involving local communities in any given situation.

1.3. LEVELS OF PUBLIC PARTICIPATION

Since the 1960s, the urban planning profession has developed increasingly sophisticated techniques and theories regarding how and why to involve citizens in planning processes. Critics pilloried the effectiveness of citizen participation during the War on Poverty, suggesting a new theoretical approach to participation itself was needed.

Despite the theoretical disagreement about the proper definition and practice of participation, professional literature reflects a consensus a variety of additional techniques can enhance the process and result in more effective and democratic plans. These debates suggest ways planners can craft strategies that take into account social divisions and inequality, and effectively incorporate Internet technology into existing processes.

The ways of citizens are involved in urban planning can vary a lot from countries. Actually, each community needs to devise its own community planning process carefully to suit local conditions. The approach adopted in each case will be different and there is rarely a quick fix solution or blueprint.

> *"Currently the choice of approach is largely ad hoc, depending on the experience and knowledge of those initiating activity."* (**Arnstein**, 1969)

The problem of the various degree of involving people in land use planning is very old. **Arnstein** (1969), a former U.S. Department of Housing and Urban Development (**HUD**) official, published one of the most influential articles on the topic of public participation.

Titled "*A Ladder of Citizen Participation*," **Arnstein** (1969) proposed the first ladder for public participation with eight steps.

The steps are organized into three levels: nonparticipation (manipulation and therapy), tokenism (informing, consultation, placation), and citizen power (partnership, delegated power, citizen control).

Arnstein described the lack of meaningful participation in policymaking in poor urban communities, and identified "*Citizen Control*" as the proper definition of citizen participation in planning.

This approach discarded any effort where "*Citizens*" were not given full authority. **Arnstein** (1969) observed

> *"No Model City can meet the criteria of citizen control since final approval power and account-ability rest with the city council."*

This "*ladder*" of participation was a powerful critique of duplicitous participation processes that do not provide citizens with real power. Two characteristics of the critique influenced subsequent debates and the usefulness of the ladder today.

> First, the ladder provides few specific strategies. If we are sympathetic to her findings, it offers little guidance for planners seeking to design processes that conform to the standards proposed. The citizen control section describes one approach as giving grants to grassroots organizations, but **Arnstein** concedes full neighborhood self-government seems unlikely in the future. Aside from criticizing the usual methods used by formal planning to incorporate citizen input – public meetings, special committees, etc – she has little to say about how these processes can be improved.
>
> Second, the article provides little to those who might disagree that citizen control should be the proper goal of citizen participation. Her model radically eliminates any role for the rational or technical expertise of planners, and assumes citizen power will result in good planning decisions. Transportation, environmental, and many other types of planners may bristle at any strategy that completely removes them or elected officials from the decision-making process. Indeed, the tension between planning's technical expertise and democratic aspiration has fueled ongoing debate.

Starting from a previous work made some years before, **Kingston** (1998), has proposed a six-step ladder (**Figure 1.1**) which appears more relevant for our purpose. Among the steps, one can successively find from bottom to top (the lower steps meaning no real public participation):

- Public right to know: in this first level phase, the public has only the possibility to be aware that some planning issue could be of interest;
- Informing the public: here the concerned local authority implements some action plan in order to inform the people; but the people has no possibility to react;
- Public right to object: here the city-dwellers may say yes or no to a project, but have no possibility to react neither to amend it;

- Public participation in defining interests, actors and determining agenda: this is the very first level of participation;
- Public participation in assessing consequences & recommending solutions: now the public is truly involved in analyzing the impacts of possible decisions and can recommend solutions which can be accepted to be implemented;
- Public participation in final decision: this is real participation in the final decision; the decision is not only made by elected officers (city-councilors for instance), but each citizen can vote whether or not to accept the plan.

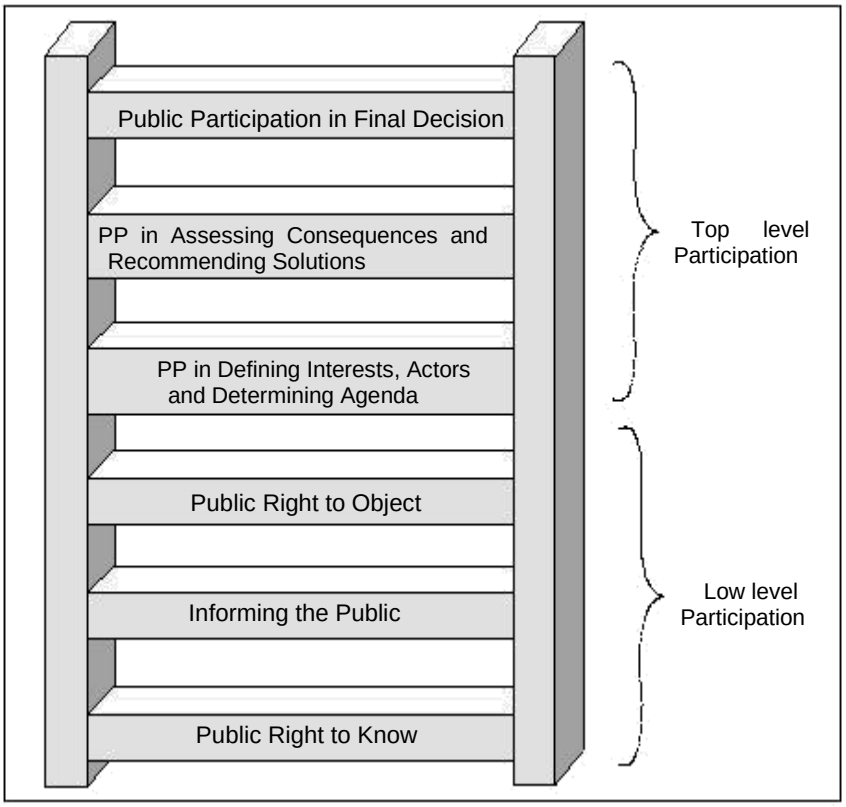

Figure 1.1: The public participation ladder according to Kingston 1998 with modifications

Another way to present the different scales of involving the public in the planning process is shown in **Figure 1.2. Nobre** (1999) has established four main degrees of community participation:

To Inform, To Consult, To Discuss, To Share

Autocracy	Technocracy	Democracy	Citizenship
←	To Inform To Consult To Discuss To Share		→
Manipulation	Information	Delegation	Partnership

Figure 1.2: Community Participation Ruler together with the political profile and the proceeding status **(Nobre, 1999).**

Lower levels are one-way procedures as they do not necessary ask for any particular feedback from the community. On the contrary, higher levels of participation require two-way procedures as they imply capturing the public's reactions and feed the decision-making process with such data.

The idea of planning secretly by far professionals to avoid political or economical local constraints – a common concept from the sixties – is nowadays completely overcome. In contrast "***To Inform***" (the first level **Nobre** is considering) is the minimal proceeding that one organization must provide to assure any operations success, whether a planning or a marketing operation.

The second participation degree is "***To Consult***". It means not just "***To Inform***" but also to collect from some representatives institutions their opinion, by organizing public inquiries and discussion encounters. It can be considered a two-way procedure if and when the planning promoters accept to introduce the inquiries results as an input in their decision-making process.

"***To Discuss***" is somehow accepting "***To Share***" knowledge, but sharing power decision is clearly the highest level of community participation. It is a turning point on this subject as well.

Being able to exert citizenship is as important as the will of the administrations to improve community participation to all urban life issues. According to **Nobre** (1999), some theorists speak about one "*educational city*" to underline how urban fabric is a fertile field to innovative social behaviors.

Yet, the useless of the "*participation ruler*" would not be completed, without crossing it with the "*Proceeding Status*" (the way is information provided and what intends to achieve) and the "*Decisional Political Profile*" (which power fundaments exerted by what means).

Brody, Godschalk & Burby (2003) proposed in an article a clearer regulation of participation that organizes these themes into five areas. This framework provides a contemporary summary of what form participation should take according to stated professional theories.

1. **Objectives**: provide information to as well as listen to citizens; empower citizens by providing opportunities to influence planning decisions.
2. **Timing**: involve the public early and continuously.
3. **Targets**: seek participation from a broad range of stakeholders.
4. **Techniques**: use a number of techniques to give and receive information from citizens and, in particular, provide opportunities for dialogue.
5. **Information**: provide more information in a clearly understood form, free of distortion and technical jargon.

However, in order to facilitate the active participation of communities with the planning and development of the environment requires a whole range of approaches and a full menu of techniques. These approaches are likely to vary according to local preference, availability of funds, and the values of government officials.

1.4. MECHANISMS OF INVOLVING PEOPLE

Vindasius (1974) (quoted by **Sarjakoski,** 1998) proposed a classification of the type of mechanism to involve people in planning (See **Table 1.1**).

For each of those types, a sort of scale is given trying to evaluate the foci in scope, specificity, and communications and so on.

Type of public involvement mechanism	**Descriptive dimensions**				
	Focus in scope	**Focus in specificity**	**Degree of two-way communications**	**Level of public activity required**	**Agency staff time requirements**
Informal local contacts	*	***	***	**	**
Mass media (newspapers, radio, TV)	***	*	*	*	*
Publications	***	**	*	*	**
Surveys, questionnaires	**	***	*	**	**
Workshops	*	***	***	***	***
Advisory committees	*	***	***	**	***
Public hearings	**	*	*	***	**
Public meetings	**	*	**	**	**
Public inquiry	***	*	*	**	**
Special task forces	*	***	***	***	***
Gaming simulation	*	***	***	***	***

Legend: * Low, ** Medium, *** High

Table 1.1: Types of public involvement, according to **Vindasius (**1974**)**

A vast range of methods is available with different uses and characteristics. An annotated list in alphabetical order of some of the methods now available for involving people in urban design is presented in details later on in appendix 1.

These methods have long been used in public participation and certainly have their remarkable benefits and advantages that have proven efficiency for a long time in this field.

However, there are some technical and financial disadvantages of using them which cannot be ignored for their great effect on the quality and quantity of community participating.

1.5. COMMENTS ON THE TRADITIONAL METHODS AND TECHNIQUES

1 Traditional methods of public participation at planning meetings quite often involve a confrontational atmosphere.

This can discourage participation by an often less vocal majority causing public meetings to be dominated by individuals who may have extreme views which may not necessarily represent the wider view of local people.

2 The restricted time and also the actual geographical location of public meetings can further restrict the possibility of widespread attendance.

Planning meetings often tend to take place at morning in specific times which can limit the number of people who are able to attend.

Physical access to such meetings can also cause problems for the disabled, the elderly and infirm as well as those who may be deaf.

3 In traditional settings using a physical model, the public are encouraged to place flags on places where they wish to express views and opinions.

This limits the amount of information that the public can put across as the flags are relatively small.

4 Representatives have to take the written proposals, which have been placed on the flags, off the model periodically and collate this information in a database for future analysis.

One-day events can generate a wealth of information and ideas which can easily be lost. Besides, it would take several weeks to be compiled and anglicized.

5 Setting up an interactive exhibition in a public street or square depends greatly on atmospheric conditions.

This may restrict participation, if windy conditions are likely to happen it may blow away.

6 People can participate far more effectively if information is presented visually rather than in words, which can be costly to prepare and may not be cost-effective.

A great deal of poor development, and hostility to good development, is due to people not grasping what is intended.

7 Getting formal permission to set up stall in a public area can take forever, which might be a reason for holding back.

Methods are still evolving and being refined and new ones continue to emerge. There is a shortage of adequate good practice guidance and little knowledge of what does exist. Most practitioners have experience of only a small range of the options available. As a result, inappropriate approaches are all too often adopted.

While, **Urban Design Group** (1998) states,

> "*Improving the quantity and quality of public involvement in urban design is one of the keys to improving the quality of the built environment*."

Reich et al (1997) argue that improving the effectiveness of participation may benefit from the development of support tools[5].

[5] **Reich, Y., Konda, S., Levy, S. N., Monarch, I., and Subrahmanian, E.** have several papers discussing the underlying foundations for supporting participatory design with computational tools. It introduces *n*-dim and illustrates it through a plausible reconstruction of a participatory design project for developing a community library.

1.6. CONCLUDED REMARKS

Despite the theoretical disagreement about the proper definition and practice of participation, it is now widely understood by people in all sectors of the development industry that such involvement can lead to more appropriate and sustainable development solutions and stronger citizen groups and communities.

Yet, there is almost universal uncertainty as to the best way of involving local communities in any given situation. The ways of citizens involvement in urban planning can vary a lot, each community needs to devise its own community planning process carefully to suit local conditions.

A vast range of methods is available with different uses and characteristics. These methods have long been used in public participation and certainly have their remarkable benefits and advantages that have proven efficiency for a long time in this field. However, there are some technical and financial disadvantages of using them which cannot be ignored for their great effect on the quality and quantity of community participating.

Planners can strive to give citizens a meaningful role in the development of plans and ensure that information is made available to the public in a convenient format and sufficiently in advance of any decision. Given this professional culture and ethical requirements, a clear model to use the Internet to facilitate participation will be professionally useful. It may also be possible that the technology addresses concerns raised by critics about conventional practices, allowing for new forms of information dissemination, social interaction and collaborative working.

Actually, the rapid development of the Internet, as a place of information dissemination provides researchers and policy-makers with considerable challenges on how best to realize the potential in the pursuit of worthwhile goals.

In order to propose how the Internet could be used as a participation tool, we need to understand both professional models of good participation and critics of participation as it is practiced today.

CHAPTER 2

THE INTERNET AS A PARTICIPATION TOOL

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2.1. INTRODUCTION

Since the advent of Information Technology, there has been intense interest in its potential use to enhance and improve governmental functions. Despite innovations in many areas of governance, the use of the information technology in general and the Internet specifically to facilitate citizen involvement in urban planning has been limited.

According to **Goodspeed** (2008), two fundamental reasons explain this:

1. The unique character of public participation has made it difficult to replicate online.
2. Professionals have hesitated to work on the Internet due to the unequal distribution of Internet access.

These reasons also serve to describe the obstacles that must be overcome before effective online participation can be realized. New tools and expanding Internet access address these concerns.

This section seeks to apply the historical and theoretical lessons to suggest a path for use of the Internet for participation; it will provide an outline on how planners and practitioners can use technology to engage public in a planning process.

2.2. PUBLIC PARTICIPATION IN E-GOVERNMENT

The Center for Technology in Government defines e-government as:

> "*The use of information technology to support government operations, engages citizens, and provides government services*."

Defined in a more general sense, E-government is the use of Information and Communications Technologies (**ICT**) to promote more efficient and effective government, facilitate more accessible government services, and

allow greater public access to information in order to make the government more accountable to citizens.

Also, E-government might involve delivering public services via the Internet, telephone, wireless devices or other communications systems.

The four broad government functions reflected in this definition are:

1. The electronic delivery of services (**E-Services**)
2. Use of information technology to improvement management (**E-Management**)
3. Use of the Internet to facilitate citizen participation (**E-Democracy**)
4. The exchange of money for goods and services over the Internet (**E-Commerce**)

Despite that the fact that E-Services and E-Commerce have spread rapidly, the development of E-Democracy tools has lagged behind; the innovation in the area of participation has been limited to facilitate individual communication (e.g. email) to government officials.

Although enhanced participation in government decision-making has long been a theoretical goal of E-Government advocates, its actual implementation has been limited. By 2008, the vast majority of planning departments and commissions had at least posted plans and other information online, many posted contact information to government officials, agendas and minutes from government meetings and many have also begun to experiment with putting geographic databases online. (**Charles H. Kaylor**, 2005).

Consultants have emerged specializing in workflow management, online document production, and even receipt of public comments for proposed plans in electronic formats.[7]

Despite broad adoption of some level of Internet use by public sector planners, few have elevated it to an important place in their work. A 2003 study of 60 urban planning processes in Florida and Washington found just 5 % used web sites as a "*Central role in providing information*". (**Brody, Godschalk, and Burby**, 2003)

Government planners have not readily adopted Internet tools to engage the public in urban planning processes partly because of a lack of appropriate

[7] The UK-based Limehouse Software, www.limehousesoftware.com, markets their product to government agencies as an integrated system to create documents, engage the public, and collaborate through a virtual environment. Urban Insight , www.urbaninsight.com , publisher of the popular planning portal Planetizen, offers clients web design and development, database development, and internet consulting services.

technologies. The work of creating plans is not limited to individual communications with the general public, but involves working with groups of people to identify problems and build consensus.

In creating their plans planners must engage multiple distinct stakeholders, and often reach out to specific communities, organizations, and government agencies. (**Kelly and Becker**, 2000).

Planners need easy-to-use tools that allow multiple constituencies to hold a mutual conversation. They need appropriate means to moderate the conversation as well as present a large amount of visual, cartographic, and textual data. Finally, despite advances in teleconferencing, the subtle aspects of face-to-face interaction cannot be easily reproduced virtually.

This style of communication contrasts sharply with the technology developed for E-Services and E-Commerce. These systems are oriented towards managing individual requests, or managing relationships between individuals and a central organization. Technologies emphasizing individual communication have limited utility to planners trying to build consensus between people and groups.

The creation of plans is fundamentally different than many other government actions because of its unique character. It often involves a large volume of information, takes place over relatively long periods of time, and entails abstract and value-laden policy choices like defining a future vision for a city. Planning processes involve public input and engagement with multiple constituencies. Unlike issuing permits or receiving service requests, it is difficult to imagine moving the process of creating long term plans entirely online.

Although access to the Internet has grown considerably, access remains unequally distributed. From a planning perspective, online initiatives may reach only a select group of residents or may be totally inaccessible to community members.

Expending time and effort to development Internet systems seem less democratic than conventional means of engaging the public: meetings, notices, and receiving written comments.

However, access to the Internet ranges widely, and participants of conventional participation practices can be more unrepresentative than online population.

2.3. OBSTACLES TO EFFECTIVE ONLINE PARTICIPATION

The Gates Foundation study of year 2005 showed that 87% of the world's population has no access to Internet. Though the majority of the United States population can be reached using online tools, majority of world's population cannot be reached due to the lack of internet accessibility. Difference in access to internet, speed, language and disability is one major challenge in using technology to enhance participation process. (**Karki**, 2009).

Other challenges include administrative barrier, technical barrier and educating the public about the use of planning tools. Every time new technologies are introduced and the expense associated with new hardware and software creates an administrative barrier in an organization. Planning departments or planning firms cannot keep up with the rapid technology change. They fear that the technology they invest on may be quickly outdated and may need replacement. (**Jennifer and Conroy**, 2006)

Technical barriers usually occur due to the lack of staff knowledgeable in both planning and technology. Identifying right hardware and software for an interactive website, designing the website, using the right file size for citizen's access and managing the information obtained from online citizen participation are some of the technical problems faced by the planners.

If planners are successful in creating a web-based tool, then it is not just sufficient to create the tool but it important to educate the public about its use. Many times planning support system fail because of the lack of awareness among citizens about how to use them. For example:

> *"Greenpeace Canada launched a website to support its Stop Esso campaign in May 2002. The site included a forum to help people organize for the campaign, which aims to pressure the giant oil company to change its environmental policies. But according to David Fields, a former campaigner with Greenpeace Vancouver who worked on the project, many interactive features such as sending private messages to other users or broadcasting messages to the home page simply did not get used."* **(Groc**, 2005)

Unless planner educate people about the features available in the planning support system and how to use them, people will not make the best use of the system. Thus, if the planners want an effective result from citizen's participation using the planning support system they have to use techniques to educate the public about the tools. New technologies and approaches are developed to address these concerns.

2.4. THE DIGITAL DIVIDE

There are some demographic differences in Internet access. (See Figure 2.1) 21% of differences in Internet access can be explained by demographic factors. (**Weisbard**, 2000)

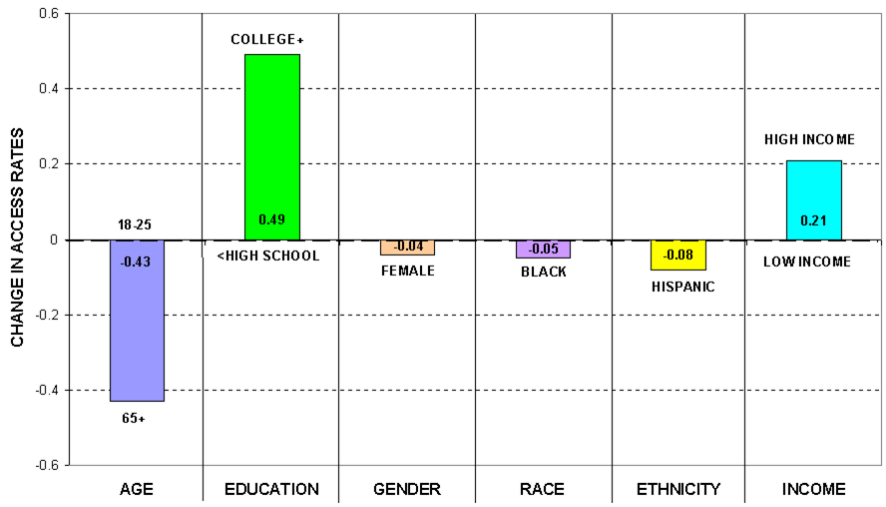

Figure 2.1: Difference in rates of Internet Access; Effects of Age, Education, Gender, Race/Ethnicity, and Income.

By far the most important factors facilitating or inhabiting Internet access are **education** and **age**, and not income nor race/ethnicity or gender, each of which account for less than 5% change in rates of access and are statistically insignificant.

By contrast, a college education boosts rates of internet access by well over 40% points compared to the least educated group, while people over 65 shows a more than 40% point drop in their rates of internet access compared to those under 25. Age really reflects generational differences, and thus shows what to expect in the future. (**Compaine**, 2001)

There are few demographic differences in Internet use. (See figures 2.2, 2.3) Only 6% of differences in Internet use can be explained by demographic factors: thus, once people are connected to the Net they hardly differ in how much they use it and what they use it for-except for a drop-off after age 65, and a faint hint of a gender gap.

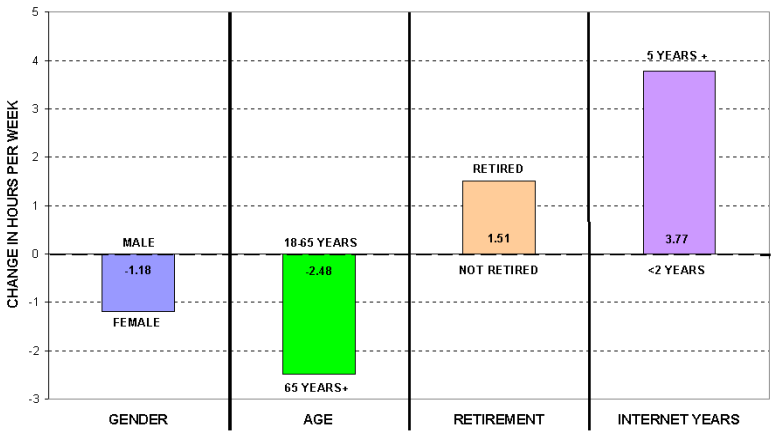

Figure 2.2: Difference in hours of Internet use; Effects of Gender, Age, Retirement, Internet years.

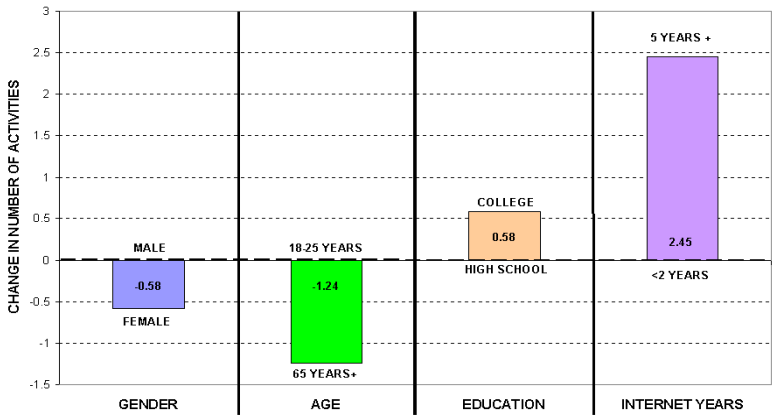

Figure 2.3: Differences in range of Internet Activities; Effects of Gender, Age, Education, Internet years.

Demographic differences in Internet use involve at most an hour and a half a week, mainly reflecting people's time budgets and work status; and they involve hardly more than half an additional Internet activity, in the letter case reflecting levels of education.

Instead and above all internet use increases dramatically, both in terms of amount of time and in terms of range of activities. The longer people have been connected to the Internet, and this fact will make for steady growth in the future.

2.5. THE DIGITAL DIVIDE IS DISAPPEARING

The data shows a gap in Internet use according to several important social and economic variables, a fact that has fueled concern with a "*digital divide*" and its effectiveness as a citizen participation tool. Although overall growth in the rate of Internet use has flattened in recent years, several historically underrepresented groups have seen rapid gains in Internet use. (**Fox**, 2005)

Furthermore, Internet access in public schools and libraries has become practically ubiquitous, reaching public schools and school classrooms in 2002. (**Kleiner and Lewis**, 2003)

The cost of computer hardware and Internet connections has declined sharply, with a fully-featured desktop computers available for less than $500 ($20 a month using credit programs), and dial-up Internet connections for less than $10 a month. Increasingly the paradigm of a technologically-driven "*divide*" between groups is inappropriate.

While disparities remain, the data shows significant variation in access to Internet connections, quality of the connection, and skills and motivation to use it. One scholarly examination of the "*digital divide*" urges us to "*Declare the War Won*". Citing rapidly expanding use, declining cost, and advancing technology, concludes the "*digital divide is disappearing*" and the role of public policy will be to help those left at the fringes. **(Compaine**, 2001).

A colloquium between activists in low-income communities and urban planning academics underscores the shifting understanding of the impact of the Internet. The activists were excited to learn about applications of information technology to enhance urban planning, empower communities, and compete for government resources and attention.

> *"All these reasons contributed to the activists' enthusiasm to learn about information technology (IT), even though the academics… argued that IT is unlikely to alter the conditions of the urban poor."* (**Sanyal and Schon**, 1990)

Despite excitement about the potential for e-democracy, technical barriers remain. Utilization of government websites depends on the website's accessibility, usability, design, and functionality. Even citizens with computers may not be able to access websites that don't function on their computers or that are difficult to use.

2.6. NEW GENERATION OF WEBSITES

Since 2000, a host of highly interactive and popular websites has developed that allow Internet users to share information, form communities, and interact in new ways. Described by commentators as "***Web 2.0***" websites, they include social networking websites and specialized platforms allowing users to easily share photos and information.[8]

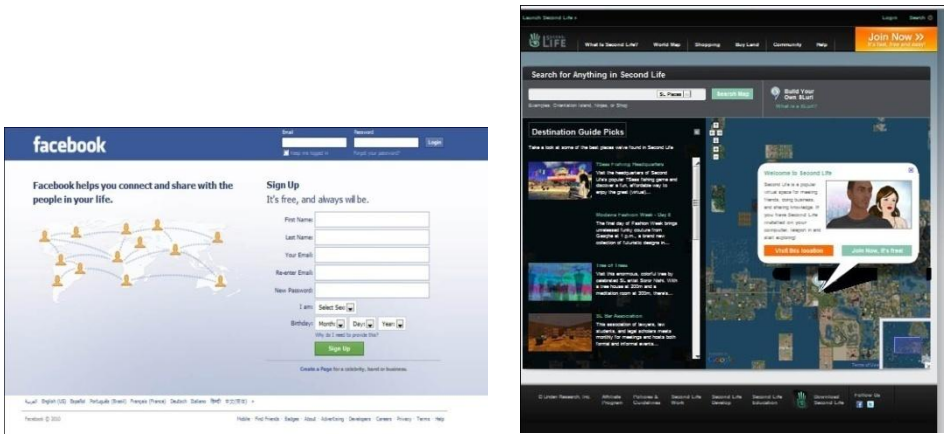

Figure 2.4: Facebook & Virtual Reality, highly interactive and popular websites

These websites share a common dedication to simplicity, usability, and interactivity. Collectively, they allow groups to communicate and collaborate online. Standards and technologies developed in this generation of websites are the source material for some services provided by planning technology consultants.

These technologies have several ramifications for the urban planning community. Because they have engaged huge numbers of citizens, they have created sources of information about very local issues. Neighborhood email lists, blogs, discussion boards, or other types of interactive websites are now commonly found in neighborhoods and towns across the country, containing a mix of information and opinion.[9]

[8] These include websites to share links (del.icio.us), videos (youtube.com), photos (flickr.com). The term was popularized by technology writer Tim O'Reilly. For more information see Wikipedia contributors, "*Web 2.0*" Wikipedia, The Free Encyclopedia, http://en.wikipedia.org/wiki/Web_2, 2008.

[9] **Email lists circulate email messages among all group members.** They can be privately administered, or easily set up using free services like Yahoo Groups or Google Groups, and the members and messages may or may not be moderated by the list owner. Blogs, short for web log, is a frequently updated website written by an individual or a group, and generally allow visitors to leave feedback in the form of comments. Discussion boards allow individuals to post messages on a website. All three may or may not be accessible to nonmembers, but blogs are generally the most easily available to general Internet users.

The technology offers a menu of tools well suited for planners' long-standing goals of sharing information, interacting with the public, and fostering community. (**Steins and Stephens**, 2008)

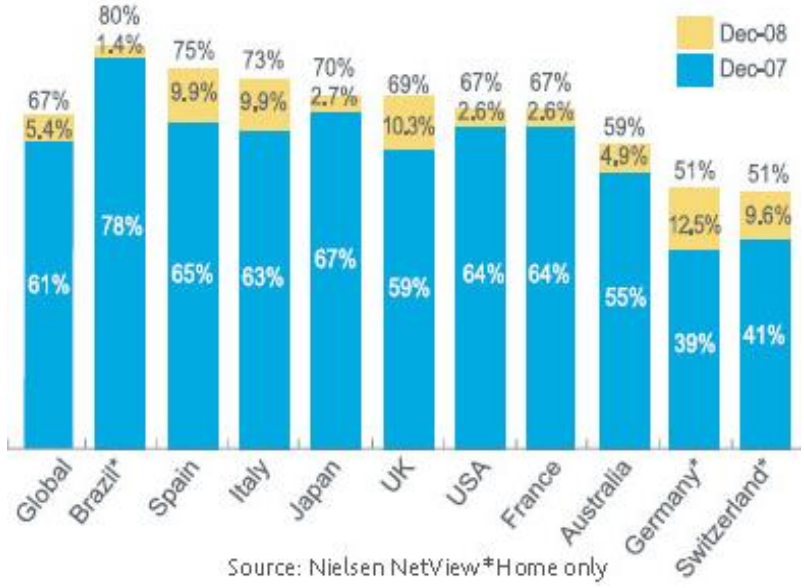

Figure 2.5: Social Networking Growth. (**Nielsen's Global Online Media Landscape**, 2009)

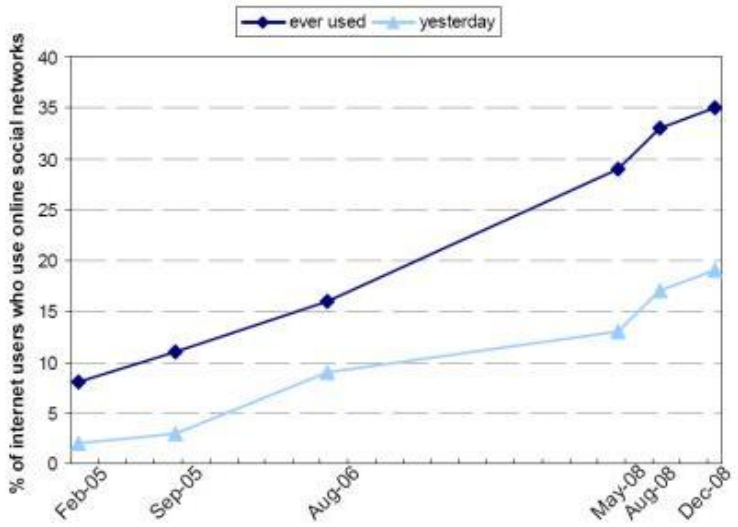

Figure 2.6: Growth in use of Online Social Network. (**Martel**, 2009)

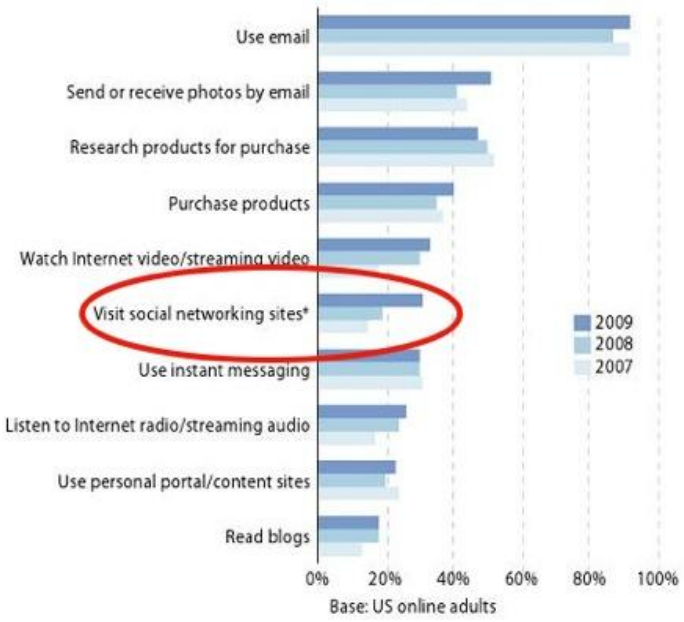

Figure 2.7: Online Activities. (**North American Techno graphic, Bench mark Surveys**, 2007 to 2009).

In 2009, the ***Pew Internet and American Life Project*** released a report on the adult usage of social network sites. Though still for the young, these sites are seeing an increase of usage from adults and large-scale growth in general.

> *"While media coverage and policy attention focus heavily on how children and young adults use social network sites, adults still make up the bulk of the users of these websites. Adults make up a larger portion of the U.S. population than teens, which is why the 35 % number represents a larger number of users than the 65 % of online teens who also use online social networks."*

The Pew report concludes,

> *"younger online adults are much more likely than their older counterparts to use social networks, with 75 % of adults 18-24 using these networks, compared to just 7 % of adults 65 and older."*

2.7. EXISTING TECHNOLOGIES IN URBAN PLANNING

The use of technology in urban planning is also referred to as planning support system. The planning support system is a "*new perspective on computer-assisted planning*" (Mary Madden, 2006) that integrates different computer system to support the planning function. Several authors have defined planning support system in various ways,

Britton Harris (2005) defines it as:

> *"An appropriate integrated system formed by the combination of a range of computer based methods and models to support planning function."*

On the other hand, **Klosterman** (2007) keeps his definition broad enough to include all the current and future technologies useful for planning; he defines planning support system as:

> *"Computer-based tools that include only the computer hardware, software and related information systems used specifically for planning."*

Thus, planning support system is the computer based tools, which can be hardware, software, information system, web based technology or combination of all these tools developed to provide planners with all the capabilities to fulfill their responsibilities with ease.

Though planning support systems exist, planners have not made the best use of them due to the lack of awareness about the type of technologies that exist and their use in the planning and participation process. It is important to be aware about the existing technology that can be used for participatory process to ease the planning process and also to outline a technology centered model to enhance public participation. **(Goodspeed**, 2008)

This section will review the existing technologies available for planning and participation processes, developed to provide planners with all the capabilities to fulfill their responsibilities with ease.

Review of existing technologies will provide the planners a sense of type of technology available for planning and participation process and what are the potential advantage and disadvantage of such technologies. Technologies reviewed are selected based on internet search of the technologies used in public participation efforts and as found in literature review.

All the technologies reviewed are categorized into four categories and some technologies may fall into more than one category. (**Slotterback & Hourdos**, 2009)

1. Hardware: The technologies in this category are made up multiple physical component upon which can be installed an operating system or other software to perform desired function. Physical components are the unique feature of this category.

2. Software: Software is the term used to define the technologies that use computer programs, procedure and documentations to perform task on regular computers and/or over the internet. These technologies perform various functions like analyzing, calculating or managing.

3. Information system: Information system refers to technologies that store data and information. It does not perform any analytical function but helps to accessing and displaying information or data stored locally or remotely.

4. Systems: These technologies are the combination of hardware, software and information system. It does not function without the combination of all the components.

There are various activities related to participation efforts and each technology can be used to either do one or two or all of the activities related to participation efforts. The activities common in most of the participatory effort are as following:

Preparation for meeting: In any participation effort such as open house, public hearing and committee meetings planners have to prepare information and materials. Planners may have presentations and data that they need to share with public. By using technology they can create scenarios, project impacts and analyze data and plans.

Analysis and Facilitation: For every meeting there will be a facilitator or chair person to conduct the meeting. Technologies can be used by the meeting conductors to execute the meeting. They can use technologies to brainstorm, to visualize scenarios, to do impact analysis, share feedback and results. Use of technologies in these meeting will also give an opportunity for shy people to give their thought and opinion about a plan.

Dissemination of meeting outcomes: In any participatory effort participant provide their input on a plan which further needs to be incorporated and further disseminated to the participants. Thus use of technology in such situation will help to synthesize multiple inputs, summarize feedback and update the plans. Planner will also be able to

show the consensus to the participants and avoid misunderstanding. Technology can also make the dissemination of meeting information and communicating meeting outcomes easier.

In total thirty four different technologies were reviewed. Details about the various technologies reviewed are provided in Appendix 2. A summary table categorizing the technologies based on the type of technology and its application to prepare for meetings facilitate and analyze meetings, and to disseminate participation outcomes is provided in **Table 2.1** below.

From the table, we can see that same technologies can also be used different types of activities and can also fall into different category of technologies. For example, CommunityViz is software that can be used to prepare presentation and information of existing situation of a plan for a meeting. It will help to analyze a planning proposal by exploring various scenarios and data sets and further help the participants visualize the plan. Google earth is another technology that fall under software and information system category. It uses the database to give the visual of any site or locations.

Thus, these technologies help both the planners and the participant to communicate clearly based on facts and figure instead of assumptions or guesses.

Visual tools help to envision a realistic plan. Technologies used to analyze consensus, incorporate feed back in the plans and show the result to the participants provides power to citizen in a planning process as they can see their input has made a difference. (**Slotterback & Hourdos**, 2009)

EXISTING TECHNOLOGIES IN URBAN PLANNING	TECHNOLOGY TYPE				TECHNOLOGY APPLICATION		
	HARDWARE	SOFTWARE	INFORMATION SYSTEM	SYSTEM	PREPARATION	ANALYSIS FACILITATION	DISSEMINATION
1. BENEFIT-COST ANALYSIS OF BICYCLING FACILITIES		√			√	√	
2. BIG BOX EVALUATOR			√		√	√	
3. CAVE	√					√	
4. COMMUNITY IMMAGE SURVEY			√			√	√
5. COMMUNITYVIZ		√			√	√	√
6. DECISION THEATER				√		√	
7. ELECTRONIC VISUALIZATION LABORATORY				√	√	√	
8. ELECTRONIC INTERACTIVE CHARRETTE			√			√	
9. ENVIRONMENTAL SIMULATION CENTER				√	√	√	
10. GEOWALL	√				√	√	
11. GIS/MAP PLANNING TABLE	√				√	√	
12. GOOGLE EARTH		√	√		√	√	
13. GOOGLE MAPS		√	√		√	√	
14. GOOGLE SKETCHUP		√			√	√	√
15. GROUPMIND EXPRESS		√				√	√
16. INDEX		√			√	√	√
17. KEYPAD VOTING	√					√	√
18. LONDON PROFILER			√		√	√	
19. M3D (MINNESOTA 3-D)			√		√		
20. MICROSOFT SURFACE	√					√	

21. PATHMAKER			√			√	√
22. PICTOMETRY				√	√	√	
23. PLACES		√				√	
24. SHAPING DANE			√			√	√
25. SIMCITY		√				√	
26. TELUS		√				√	
27. THINKTANK			√			√	
28. 28. TOWNSQUARE		√				√	
29. (CASA) UNIVERSITY COLLEGE LONDON CENTRE FOR ADVANCED SPATIAL ANALYSIS				√	√		
30. URBAN SIMULATION TEAM				√	√	√	
31. URBANSIM		√			√	√	√
32. WHAT IF?		√			√	√	√
33. METROQUEST		√			√	√	
34. SECOND LIFE		√			√		√

Table 2.1: Categorization of Existing Technologies based on Type & Application

Planners use various type of participatory effort in their planning process but the typical type of activity seen are presenting and sharing the information, facilitating meetings, getting participants feedback on a plan, incorporating participants feedback in a plan, creating collaboration with participants, getting consensus and taking votes.

Planners can select technologies listed in the existing technologies to enhance the public participation and to have an effective public meeting. Overall, the technology review provides a sense of the range of technologies currently being utilized in different settings. Many are designed for use in participation efforts, while others were developed for other purposes, but connections to public processes are now starting to be recognized.

2.7.1 Virtual Reality For Public Participation

New technologies extending spatial capacity never miss to appear. Among new visualization systems, there is virtual reality which deserves a very important section in this study.

Virtual space based on internet technology is now opening another battlefield, the cooperation between virtual and real world makes this battle even more anticipating.

For urban planning, an ideal Virtual Reality system can give the citizen the impression that he is present both in the actual and the planned environment.

> *"Imagine you can feel your urban space, observe the progress, fix your errors, live the experience and see your fantasies come true in a virtual world…." (**ASU,** 2009)*

As described in this Chapter, modern technologies allow to radically changing the nature of public participation to decision regarding urban planning.

> *"For the future, some are forecasting the apparition of a new kind of citizen, named cyber-citizens, or sometimes cyber- spatial citizens, who will be citizens using new information technologies to act as real citizens, especially in connecting with authorities."*

In this regard, let me briefly present a recent planning exercise. In 2009, Ain Shams University of Egypt (**ASU)** has performed an interesting cross-cultural collaboration project in liaison with the University of Southern California USC through virtual world. Details about this project are provided in Appendix 3.

The students of the third year of urban design & planning department in ASU were asked to collaborate with their colleagues in the USC in the designing of a master plan for a specific site using Second Life's (**SL**) application. The goal was to explore SL's application to the architectural field & create an interesting space that could be imagined and built in the real world. The team worked together in real life while working in SL. This made the communication much faster and the work much more enjoyable.

2.7.2 K2C PROJECT[10] | Cross-Cultural Collaboration in Virtual World

The students of the third year of urban design & planning department in ASU & USC were divided into seven groups consist of ten students each. Each team was asked to specify an actual site in Egypt and start working on the design of the master plan using the applications of the second life program.

> *"Imagine all that put together …. collaboration and group work on an international scale, dealing with a whole different culture ,language and view of life ,over and above getting to master the use of a new tool as virtual world, a tool that makes your fantasies become a reality…. I think this is what K2C project offers us…new ideas…new tools …a better perception of life and of future work in architecture and urban planning…."* ***Heba Ghalib****, One of the Egyptian team said.*

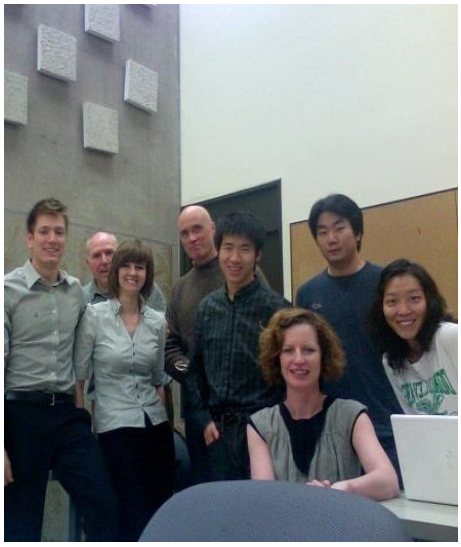

Figure 2.8: The American Team

Figure 2.9: The Egyptian Team

In order to do that, each student should subscribe in the program and create an avatar of him.

> *"In virtual world avatars are not humans, they are projected desires and interests, which are the things that actually bring us together"*

[10] **K2C**: (Kansas to Cairo) is a cross culture collaboration design project connecting students from the United States with students in Egypt.

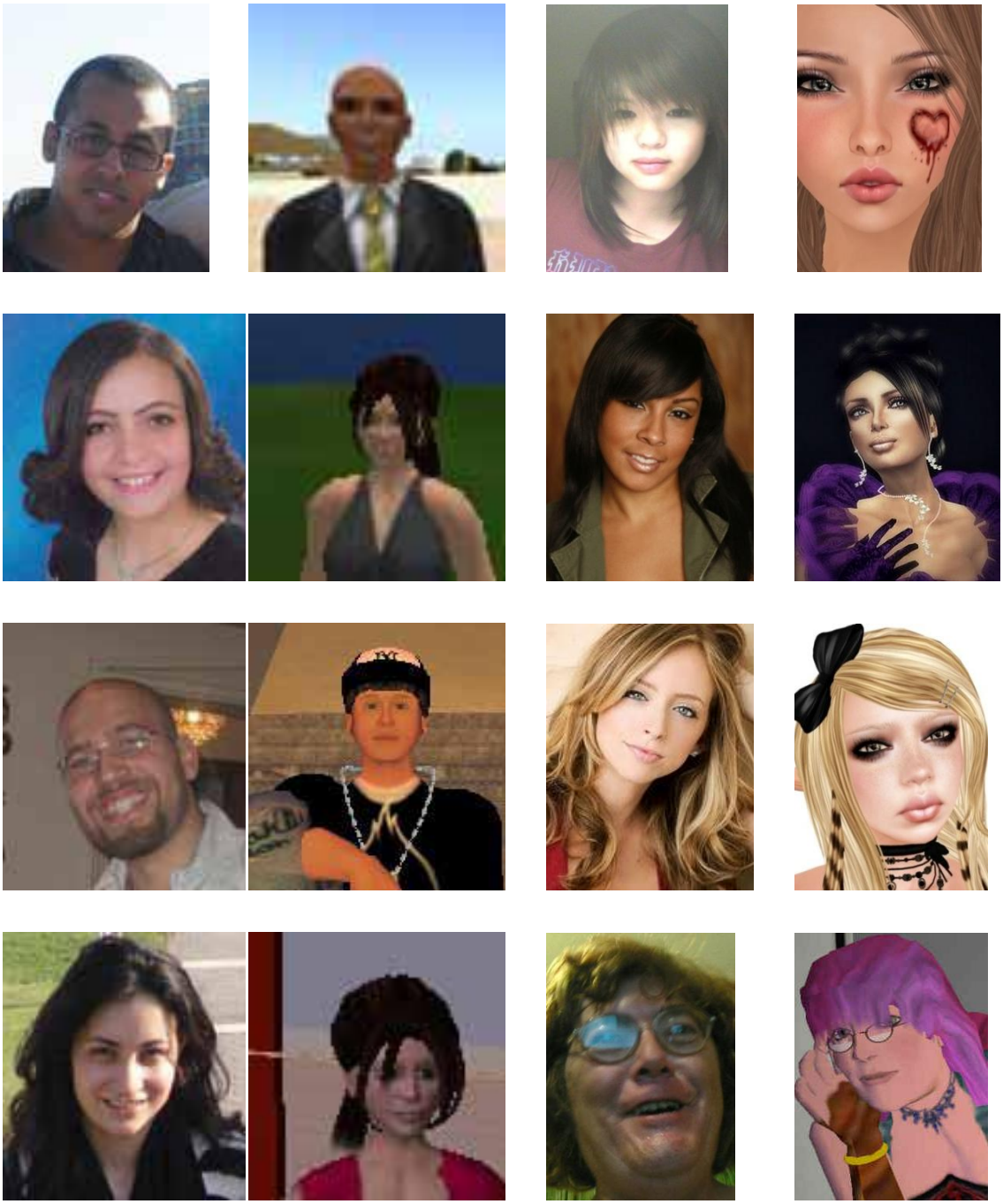

Figure 2.10: Some of the Egyptians/Americans team members both in real life and as avatars

The project passed through three main phases:

PHASE 1: learning phase.

In which team members starts to learn about the tool, the professors gave them manuals as a general guideline, and then they developed their skills through actual practice.

PHASE 2: designing the project in the real world

Each team chooses a specific site and starts to collaborate with his team members discussing concepts and ideas until they agree on a common layout.

PHASE 3: using the tool and build the models on the second life.

Each team starts to build up the model in SL, playing with colors, textures, and glows, and using some assisting software such as AutoCAD, Photoshop, illustrator and sketch up.

For these approaches, a lot of communication were needed to decide the final design and share each student's ideas, both USC and ASU students used E-Mail, Skype and MSN messenger to share researched images and communicate with each other. Sometimes they used Digital Drop Box website to share larger images permanently.

Though the project encountered a lot of problems in overseas collaboration, for instance, time difference, interference in schedules and of course different backgrounds, yet it, was by all means, a new way to experience space. Working in SL gave both, the Egyptians & the Americans, a good opportunity to design, build, feel their own design, illustrate their concepts and exchange ideas where all the distance and cultural barriers disappeared.

"The outcome was very much a surprise, we started off using SL only as a modeling tool, then we became more involved and used it as a platform for collaboration and erasing cultural boundaries, and then our ideas blossomed into regarding SL as way of life, actually A second life, with different projection of our own persons, with different needs and different architecture." **Nourhan Zakarany**, One of the Egyptian team said.

"Second life, is such a new effective technique, by which we design exterior as well as interior, travel abroad and explore many countries in zero time without minimum move. Using second life in testing our buildings

avoids losing materials in real life." **Salma Showika**, One of the Egyptian team said.

Though Second Life cannot be used as a building design tools in the way that Rhino and other programs like Revit can, it gives one the unique opportunity to experience a 3D model in a new way, to literally walk though the project.

It can be used by anyone as they do not require knowledge of other 3d modeling programs, In other words, ordinary people will get to understand more the intentions behind the design through the experience of walking through it in Second Life. Second Life provides a platform where architects can easily communicate with the general public; an issue that has always been to contend with.

2.8. CONCLUDED REMARKS

Information technology is dominating the contemporary world. It links the government, economy, society and culture, now most of government information can be obtained from websites and one can use email instead of mails to contact government officials or planner.

Citing rapidly expanding use, declining cost, and advancing technology, concludes that the "*digital divide is disappearing*" and the role of public policy will be to help those left at the fringes.

However, despite excitement about the potential for e-democracy, technical barriers remain. Administrative, technical, accessibility barriers and lack of public education about the use of technology can be the challenges and risk for Planners to use technology in planning process.

Hardware and access are necessary but not sufficient to expand e-democracy in planning. Public participation planning processes are not easily moved to online systems and may contain qualitative features that cannot be replicated through Internet technology. Also needed is a conceptual model to understand how Internet technology can contribute to a larger planning process.

Since 2000, a host of highly interactive and popular websites has developed that allow Internet users to share information, form communities, and interact in new ways. These websites share a common dedication to simplicity, usability, and interactivity. Collectively, they allow groups to communicate and collaborate online.

The technology offers a menu of tools well suited for planners' long-standing goals of sharing information, interacting with the public, and fostering community.

Though planning support systems exist, planners have not made the best use of them due to the lack of awareness about the type of technologies that exist and their use in the planning and participation process. It is important to review the existing technologies available for planning and participation processes, developed to provide planners with all the capabilities to fulfill their responsibilities with ease. These technologies help both the planners and the participant to communicate clearly based on facts and figure instead of assumptions or guesses.

Visual tools help to envision a realistic plan. Technologies used to analyze consensus, incorporate feed back in the plans and show the result to the participants provides power to citizen in a planning process as they can see their input has made a difference.

Planners use various type of participatory effort in their planning process but the typical type of activity seen are presenting and sharing the information, facilitating meetings, getting participants feedback on a plan, incorporating participants feedback in a plan, creating collaboration with participants, getting consensus and taking votes.

Every process and tool has it positive and negative aspect of it but if the positive aspect outweighs the negative aspect and risk of using the system can be minimized then using the tool to achieve an effective result will be a sensible decision.

The use of technology will help in reaching wider audience, will make information accessible any time, provide equal access to information and feedback to all participants and allow participant to think carefully about an issue.

The question now is whether the internet based techniques can extend the scope of participation and add a new dimension to the available methods.

CHAPTER 3
IDEAL TYPE – BEST PRACTICES

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3.1 INTRODUCTION

Public participation is an important characteristic of a planning process, however, it takes a very good job of planning to accomplish a highly effective public participation programs.

This section seeks to provide a guideline to design public participation programs that can fit to different circumstances.

According to **USDOE**[11] (2002), there is no one-size-fits-all approach to public participation. There are, however, certain issues that arise in designing any public participation program. This chapter provides a systematic way of addressing these issues.

3.2 IDEAL PARTICIPATION PLANNING PROGRAM

EM [12] Policy and Guidance states:

> *"EM Program Managers are responsible for the development and implementation of public participation plans for the technical programs/projects that they manage.*
>
> *They have the lead responsibility for clearly defining the decision-making process for those programs/projects as the initial input to the public participation planning process.*

In other words, the person responsible for the decision is also responsible for developing the public participation plan. Developing a public participation plan is normally a team effort.

It is important to include all concerned internal stakeholders in planning in order to get commitment from all parts of the organization that will need to contribute to making the public participation process work and consequently work out the differences between them before going to the public. **(USDOE,** 2002)

[11] **USDOE**: U.S. Department of Energy, The U.S. Department of Energy (DOE) manages the largest environmental remediation program in the world.

[12] **EM**: The Office of Environmental Management, EM maintains a program with which it promotes occupational safety and health during all phases of development and deployment of environmental remediation technologies.

3.3 STAGES OF PLANNING

According to **USDOE** (2002), there are three stages of planning that need to occur for an effective public participation program:

- **Decision Analysis**
- **Public Participation Planning**
- **Implementation Planning**

These stages are described in more details in Figure 3.1

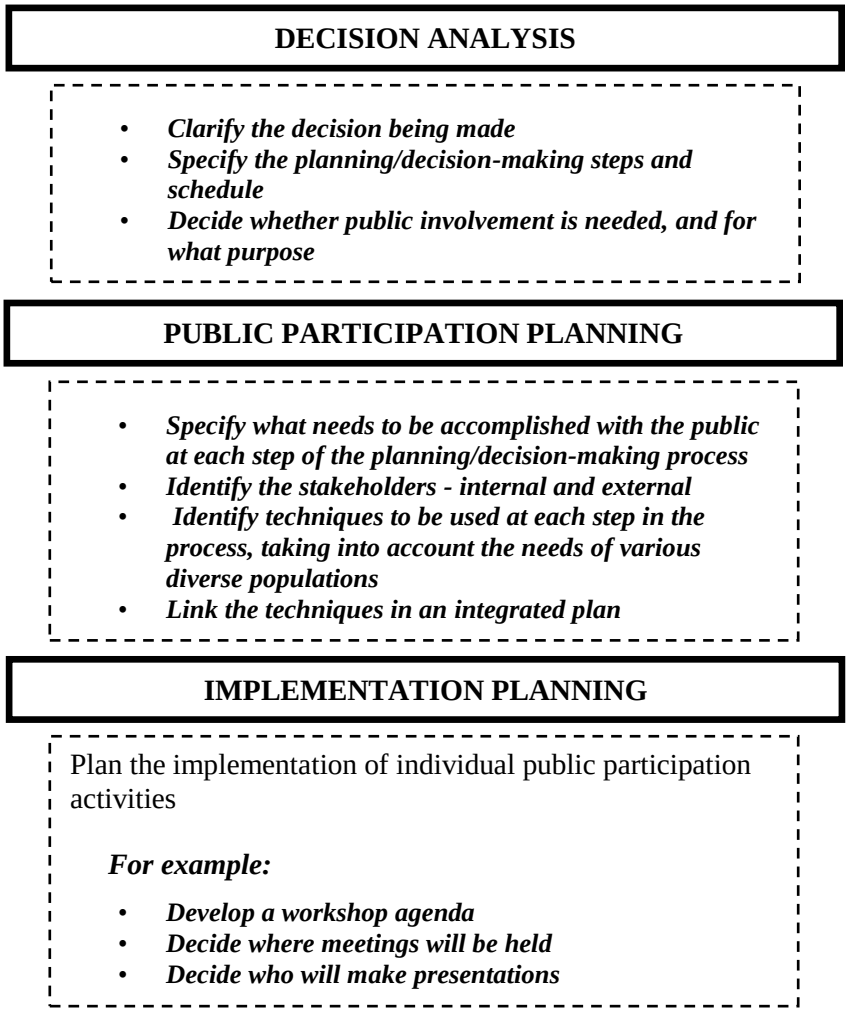


Figure 3.1: Stages of Public Participation Planning

[11] **USDOE**: U.S. Department of Energy, The U.S. Department of Energy (DOE) manages the largest environmental remediation program in the world.

[12] **EM**: The Office of Environmental Management, EM maintains a program with which it promotes occupational safety and health during all phases of development and deployment of environmental remediation technologies.

3.4 DECISION ANALYSIS

The decision analysis stage of planning is designed to reduce the risk that some problems might occur if the decision process is not thought through carefully. According to **USDOE** (2002), these are some of the questions being addressed during Decision Analysis:

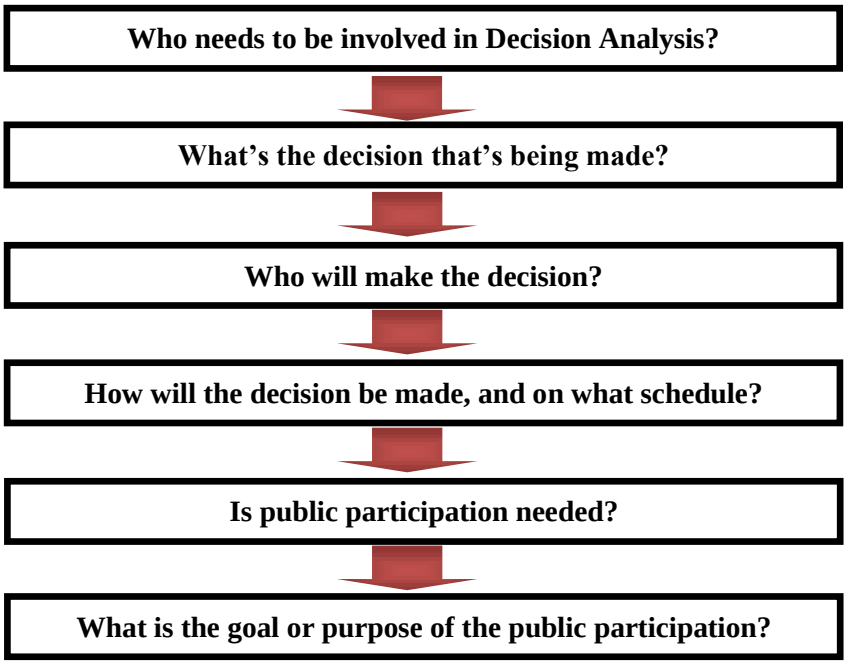


Figure 3.2: Decision Analysis

3.4.1 Clarify the decision being made

Even when there is agreement on the problem definition, the decision may still not be stated — or "*framed*" — in a way the public can understand or relate to.

3.4.2 Specify The Steps and The Schedule

It is simply a statement of the steps that will be gone through to make a decision, and a schedule for completion of these steps. Some decision making processes are simple others are much more complex, that depends entirely on the decision being made, and the approach being used to make that decision.

I. Defining the Steps

According to **USDOE** (2002), most of the decision making processes are an elaboration on these basic steps:

- Define the problem
- Define evaluation criteria
- Identify alternatives
- Evaluate alternatives
- Decide on a course of action

II. Defining the Schedule

Once the steps in the decision making process have been defined, the next task is to define the schedule, public participation activities must be carefully scheduled to ensure that the information from the public is available in a timely manner for each decision point.

The schedule can have impacts beyond just the challenge of integrating the decision making process and the public participation process. The schedule may also impact which public participation techniques can be used. This can force a switch to techniques that may not be as effective but can be completed in the time available.

3.4.3 Decide whether public participation is needed

There are times when there is enough internal resistance to conducting a public participation program that the public participation planning team may need to make a considered judgment about the risks of committing to a major program.

Schedule or resource constraints may require the use of certain kinds of techniques, or may make it impossible to conduct effective public participation.

3.4.4 Determine the goal of any public participation process

Once a decision has been made that some form of public participation is needed, the next question is: "*What is the goal of the public participation program?"*

The term "*Public Participation*" is used to describe very different kinds of involvement, as shown in **Figure 3.3**:

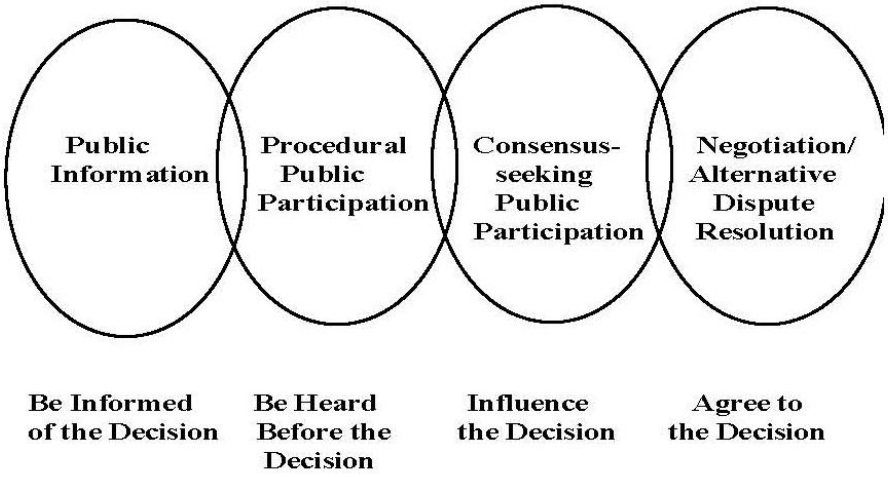


Figure 3.3: Kinds of Participation

The appropriate level of public participation is the level that best matches the situation. Most problems arise when the public expects a higher level of involvement than the agency is willing to consider.

The most important remedy for avoiding this kind of problem is for the agency to be clear with the public about what level of involvement the agency is actually seeking. (**USDOE**, 2002)

3.5 PUBLIC PARTICIPATION PLANNING

This is the second level of planning. This stage of planning concludes with the preparation of a public participation plan that specifies the techniques that will be used, their sequence and timing.

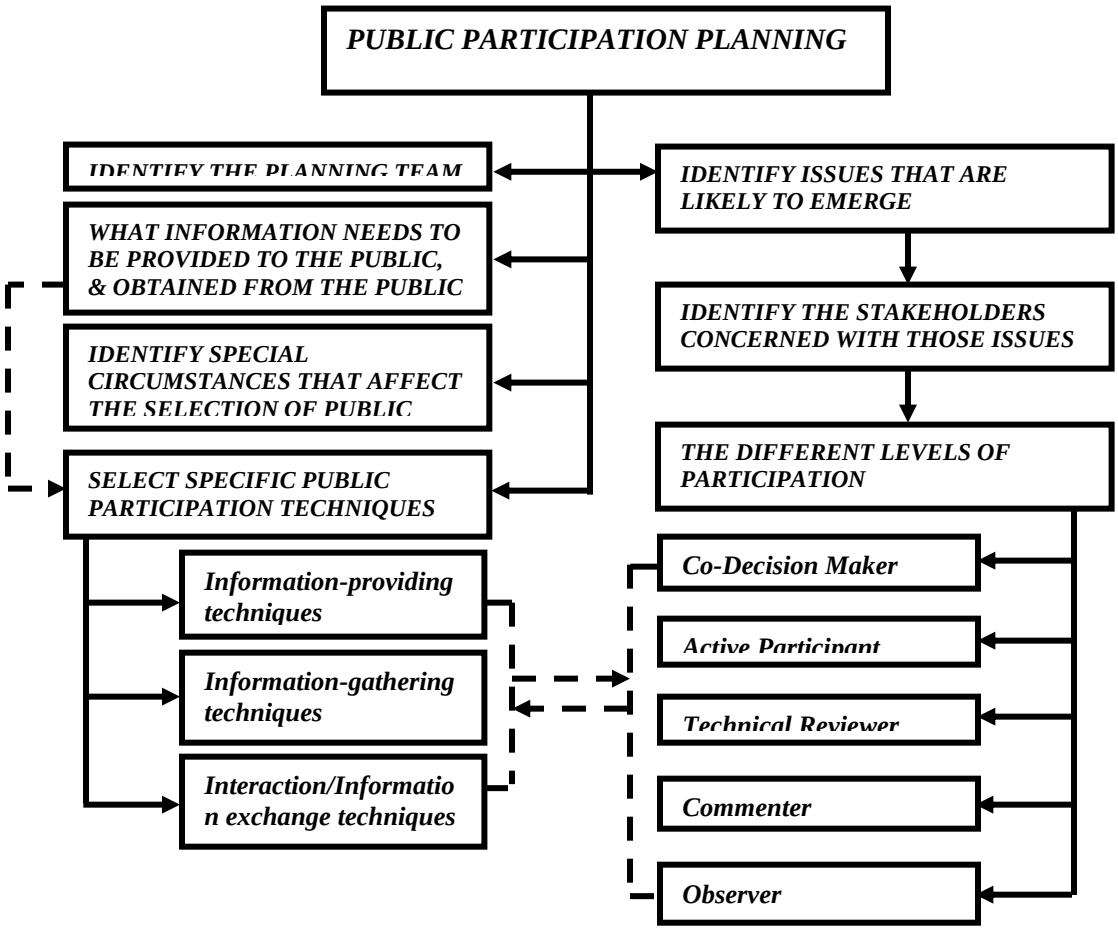


Figure 3.4: Public Participation Planning

3.5.1. Identify the planning team.

Since this level of planning is more detailed, the composition of the public participation planning team may need to be changed. The team may need additional people with expertise in implementing public participation programs, such as meeting facilitators, writers, or media relations specialists. (**USDOE**, 2002)

3.5.2. Identify issues and stakeholders

During this step the public participation planning team will identify the issues that are likely to emerge during the course of the public participation program, as well as the "*stakeholders*" who are most likely to be concerned with those issues.

Public participation programs are more effective if they are targeted at those individuals and groups that have an interest in the issues likely to arise during the course of making a particular decision. Some decisions may be of interest to twenty people, others to a cast of thousands. "*The public*" is different for each decision.

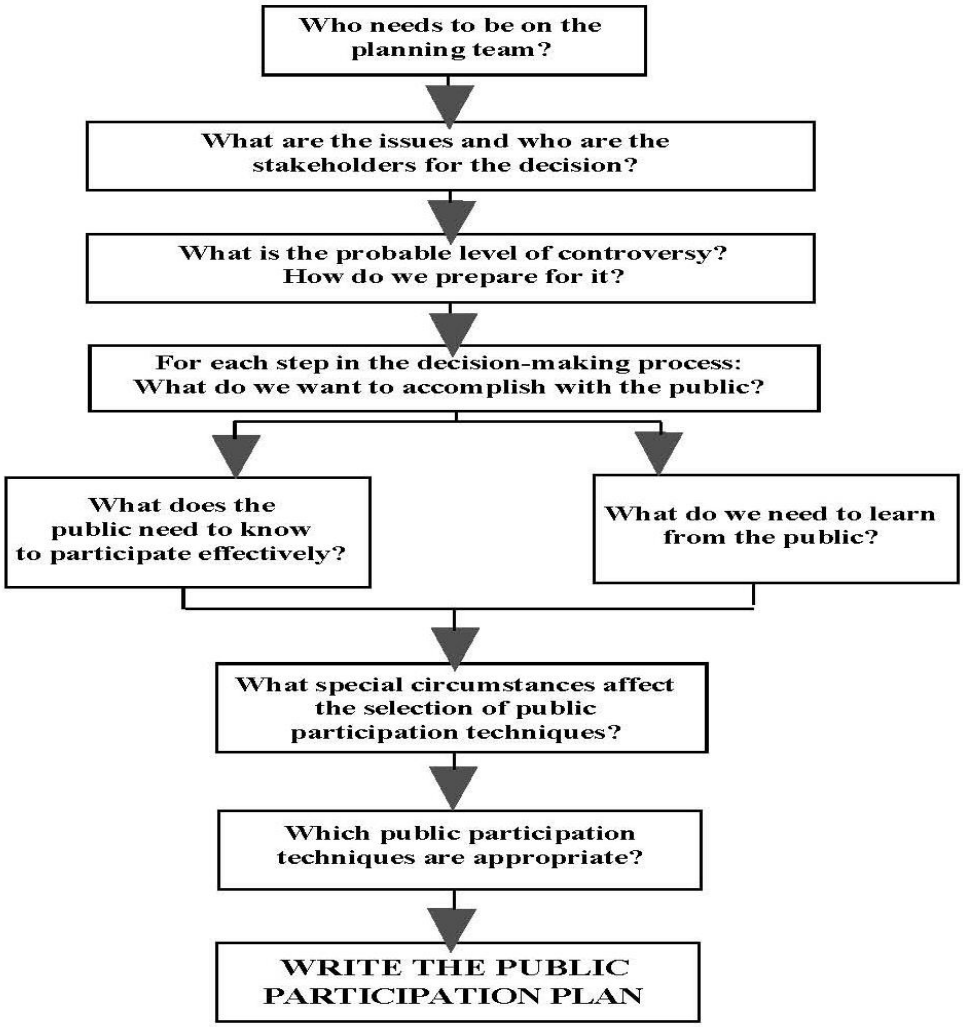


Figure 3.5: Public Participation planning

The real challenge in designing public participation programs is to design an appropriate program to the particular groups interested in a particular decision.

Since not all stakeholders have the same level of interest, they will not participate the same way. The difference in intensity of interest is often reflected in how the stakeholders will participate.

One way to categorize the different levels of participation is: co-decision maker, active participant, technical reviewer, commenter, and observer:

I. *Co-Decision Maker*

Someone who sits at the table as a full participant in decisions both about the process and the substantive decisions. A "*Co-Decision Maker*" must actually "*agree*" for decisions to count.

II. *Active Participant*

Active Participants may make recommendations that will be seriously considered, he reserves the right to criticize but the decision maker reserves the right to make the final decision.

III. *Technical Reviewer*

Technical Reviewers are the equivalent to active participants, but confined to study approach and methodology. They examine the way in which technical studies are conducted and appraise their adequacy. They might have considerable impact on how the studies are done, but not the decision itself.

IV. *Commenter*

These are individuals or groups who may "comment" by speaking at a meeting or sending a letter, but they are unwilling to make the time commitment to participate in all the activities.

V. *Observer*

These individuals or groups read the newspaper articles about the process, or read any public information document, but unless they become very concerned they may not express themselves. They are, however, an important part of public opinion.

While it is important to know something about Observer or Commenter and provide them with the information they need to choose whether to participate, it is particularly important to be clear on whom the Co-Decision maker(s), Active Participants and Technical Reviewers are for any issue.

Figure 3.6 shows an example of the kind of analysis a team might make for an individual project:

	Technical Reviewers (Influence the Process)	Active Participant (Influence the Decision)	Co-Decision Maker (Agree to the decision)
External Stakeholders:			
EPA			x
National Academy Committee	x		
Sierra Club		x	
Internal Stakeholders:			
Public Affairs Office		x	
HQ - Program Office A			x
HQ - Program Office B	x		

Figure 3.6: Levels of Participation

3.5.3. Assess the level of controversy and develop a plan to anticipate potentially controversial issues.

The next step is to assess the level of controversy. Something that seems like it should be highly controversial may not generate much interest, while something that seems quite bland may become a battleground.

According to **USDOE** (2002) there is no magic way to predict, but there are indicators of probable controversy. The most basic indicator is the significance of the impacts. However, issues that might seem relatively uncontroversial can become highly controversial if:

- There has been a prior controversy on the same issue.
- If the issue ties-in to another major issue over which there is continuing controversy or a power struggle.
- If the issue touches on local political topics such as land use or economic development that are the basis for political debate within the community
- If this issue is the total reason for existence of stakeholder groups.

3.5.4. Developing an Issue Management plan

Issue Management Plan lists the tasks, completion schedule and responsibilities to ensure that the information will be available when it is needed during the decision-making process.

ISSUE: Is Technology A sufficiently proven to go into production?	**RESPONSIBILITY**	**COMPLETION**
Studies that must be completed before this issue can be resolved:		
Peer review of test results	*XXXXX*	*5/10/XX*
Transportation studies	*XXXXX*	*7/5/XX*
Policy decisions that must be made before this issue can be resolved:		
Regulatory permit process	*XXXXX*	*8/1/XX*
Waste form criteria for permanent repository storage	*XXXXX*	*8/1/XX*
Informational materials that need to be developed to address this issue:		
Informational bulletin describing the technology in language suitable for the general public	*XXXXX*	*12/1/XX*
Summary of test results in language suitable for the general public	*XXXXX*	*12/1/XX*
Other actions needed:		
Complete the contracting arrangements for communications support	*XXXXX*	*7/15/XX*

Figure 3.7: An Example of an Issue Management Plan

3.5.5. Identify the public participation objectives for each step in the decision making process.

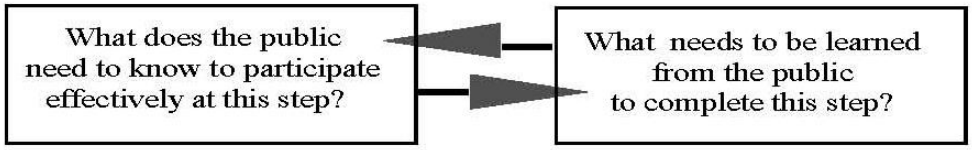
This step is to develop public participation objectives; i.e. identify exactly what needs to be accomplished with the public during each step in the decision-making process. These objectives often specify what level of participation is required.

Step in Decision Making	**Generic Public Participation Objective(s)**
Define the problem	Obtain a complete identification and understanding of how the problem(s) is viewed by all significant interests Identify the level of public interest in the issue
Establish evaluation criteria	Identify a complete list of possible criteria for evaluating alternatives Agree on evaluation criteria
Identify alternatives	Develop a complete shopping list of all possible alternative actions
Evaluate alternatives	Develop a complete understanding of the impacts of the various alternatives, as viewed by the public Assess the relative merit assigned to alternatives by various interests
Select a course of action	Determine which alternative would be the most acceptable

Figure 3.8: Example of Generic PP Objectives

3.5.6. Analyze the exchange of information that must take place to achieve the public participation objectives.

For each of the public participation objectives there is an exchange of information with the public that must take place. For each step in the decision-making process:



3.5.7. Identify special circumstances that could affect the selection of public participation techniques.

Considering whether there are special circumstances that may affect which public participation techniques are used. Examples of special circumstances to consider are:

- Cultural/ethnic sensitivities
- Interest of national stakeholders
- Distance
- Issue is connected politically to other issues
- Level of interest
- Political sensitivities

3.5.8. Select specific public participation techniques.

The goal of all the preceding analysis has been to provide the information needed to decide what public participation techniques to use. The following information should now be available:

- Exactly what needs to be accomplished with the public at each step in the decision-making process and by what point (time and sequence)
- How the information received will be used, e.g. will it help determine the range of alternatives being considered, or help choose between alternatives
- Who the key stakeholders are likely to be, and what level of participation they will likely require
- What information needs to be provided **TO** the public, and obtained **FROM** the public to achieve your public participation objectives

- Whether there are any special circumstances that influence the choice of techniques

The next step is to select techniques that will achieve the public participation objectives. Below is a list of frequently used public participation techniques, this list is divided into getting information:

- **TO the public** (one-way)
- **FROM the public** (one-way)
- **EXCHANGING information** (interaction)

Information-Providing Techniques	*Information-gathering techniques*	*Interaction/Information exchange techniques*
Briefings	Focus groups	Advisory groups / task forces
Exhibits/Displays	Mail-in response forms (including ads, inserts or newsletters)	Hotlines
Feature stories	Plebiscite	Interviews
Information repositories	Polls, surveys, questionnaires	Open houses
Mailings containing technical reports / environmental reports		Participatory television/cable television
News conferences		Public hearings
Newsletters		Paid advertisements
Newspaper inserts		Public meetings
News releases		Retreats
Press kits		Workshops
Public service announcements		
Speaker's bureau		
Web sites		

3.5.9. The Public Participation Plan

The final step is to actually write out a public participation plan.

Why bother to write it out?

- Forces clarity of thought
- Serves as a basis for getting the commitment of internal stakeholders
- People will relinquish authority to a plan that they won't relinquish to another part of the organization
- Can be shared with external stakeholders

The plan should contain:

- Plan purpose and contents - introductory overview
- Vision, goals, and objectives
- Assumptions made in planning process - explicitly stated
- Community profile - identifying the "*public*"
- Chronology of community involvement (can be an appendix to the plan)
- Description of key community concerns
- Public participation program description: framework and design, forums and processes, workshops, comment periods, how feedback will be provided, identify internal and external communication flows, and self evaluation mechanisms
- Organization and resources: specific roles and responsibilities, planning and coordination framework; resources and training needed to ensure effective implementation

3.6 THE PUBLIC PARTICIPATION FRAMEWORK

In order to facilitate the active participation of communities with the planning and development, it requires a whole range of approaches and a full menu of techniques. These approaches are likely to vary according to local preference, availability of funds, and the values of government officials.

When people talk about highly successful public participation programs they are talking about programs where the techniques matched the purpose of the

program, reached the interested stakeholders, and resulted in a clear linkage between the public participation process and the decision-making process.

This framework provides a contemporary summary of what form participation should take according to stated professional theories.

1. **Objectives**: provide information to as well as listen to citizens; empower citizens by providing opportunities to influence planning decisions.
2. **Timing**: involve the public early and continuously.
3. **Targets**: seek participation from a broad range of stakeholders.
4. **Techniques**: use a number of techniques to give and receive information from citizens and, in particular, provide opportunities for dialogue.
5. **Information**: provide more information in a clearly understood form, free of distortion and technical jargon.

In order to propose how the Internet could be used as a participation tool, we need to understand both professional models of good participation and critics of participation as it is practiced today.

3.7 THE IMPLEMENTATION OF INTERNET IN PP FRAMEWORK

According to **Brun**, (1999) there was some very narrow legislative framework for public participation with very formal procedures such as: design of the project, publication, public consultation and decision.

And the population was asked to give its opinion against a finalized project. The consequence was often the occurring of deadlocks, especially in the **NIMBY** syndrome [13].

Now, a negotiated involvement of citizens is possible, starting from the early stages of the land use design. Those processes imply a greater transparency from local authorities and public services: they need to provide complete and reliable information to citizens. As a framework, it adopts the five choice areas advocated by **Brody**, **Godschalk**, and **Burby** (2003) for participation in general.

[13] **NMBY** Syndrome: Not in My Back Yard, The term is used to describe opposition by residents to a proposal for a new development close to them. Also used more generally to describe people who advocate some proposal, but oppose implementing it in a way that would require sacrifice on their part.

1. **OBJECTIVES:** Provide information to as well as listen to citizens; empower citizens by providing opportunities to influence planning decisions.

   This objective argues the Internet should be approached as a tool for communication among government and citizens. In addition to accepting inquiries by phone or in person, planning websites should support email correspondence.

   Furthermore, allowing the receipt of comments in a public forum can allow a collective process of clarification. The Plan NYC website allows visitors to post comments, and private vendor products like LimeHouse software allows commenting on plan elements. (**PlaNYC**, 2005)

   Some communities have launched blogs that accept public comments on a variety of public topics. Montgomery County, Maryland (2002) has started a blog dedicated to housing policy. The organization E-Democracy.org has created a forum that exists through email and a website, allowing high quality interaction between citizens and government officials. (www.e-democracy.org)

   In addition to making information available governments can create RSS feeds, email lists, and other approaches that "*push*" information to citizens who have subscribed.

   These efforts can cultivate both bi-directional communication between citizens and many-to-many communication among a broader community.

   Better information delivered promptly can also improve citizen's ability to influence decisions by helping them contribute comments and attend events at appropriate times.

2. **TIMING:** Involve the public early and continuously.

   Offline planning models are nearly unanimous in their belief that high quality participation takes place both at the beginning and ending of a planning process. The iterative, ongoing nature of many processes is well suited to the architecture of the Internet. Blogs are easily updated, and organized in chronological order. Once published, online information is instantaneously distributed or available.

   Finally, online systems make archives easily accessible. The City of Alexandria, Virginia collects all information presented on a given topic on one page in "*Plans, Projects, and Initiatives*" section of their

Department of Planning and Zoning website. (**Planning & Zoning Website**, 2008)

The right to know about the proper venue to have their views heard is an important prerequisite to allow public involvement at the appropriate project stage. Allowing citizens to impact decisions require not only providing the details, but also regular communication over the long term and projects evolve. Websites can accomplish this by allowing citizens to register for newsletters, or even to be notified regarding local issues (development within a certain radius of their home or office, for example).

Furthermore, online information often lags far behind the offline program. Timely information empowers citizens to know how and decide whether they would like to get more involved.

3. TARGET: Seek participation from a broad range of stakeholders.

There are several implications for Internet participation if planners commit to engaging a broad range of stakeholders.

First, the digital inequality described previously may be shrinking but is very real. Like any technology, it is likely a small group of citizens will never possess the access and skills to utilize a planning website. One scholar points out,

"Participation requires not only physical access to computers and connectivity, but also access to the requisite skills and knowledge, content and language, and community and social support to be able to use ICT for meaningful ends." **(Warschauer**, 2003)

Planners can bridge these gaps by explaining the use of technical tools through other mediums, or collaborating with educational institutions to connect citizens with information online.

The Internet is best used in conjunction with other outreach strategies to engage different types of individuals. Citizens have unequal levels of interest and understanding in public issues to motivate them to attend meetings, unequal access to meeting facilities, and unequal time to attend meetings. A study of participants in a planning process in Austin, Texas found them better educated, whiter, and wealthier than the public at large. (**Beatley et al**, 1994)

Although these inequalities are known, they are not reasons to abstain from online outreach any more than they are reasons to abolish public meetings. Instead of choosing whether to go online, officials should craft

their strategies online and off to reach diverse populations. On the web, multiple languages, background material explaining the planning process, animations and videos, and other content may be needed.

Lastly, the best research available shows Internet technologies exist in a hierarchy of use. Of the 75% of adults who use the web, 92% have sent an email, 91% use a search engine, 66% purchased a product, 48% watched a video, 39% sent an instant messages, 22% post comments to a website, and 12% write their own blog. (**Pew Internet & American Life Project**, 2008)

These discrepancies are due to varying levels of motivation, skills, and technology by Internet users. It suggests the simplest information – such as email newsletters and simple websites found easily by search engine searches – will reach the widest audience, with more sophisticated tools and information reaching fewer users. Simple factors such as font size and website design, described in chapter 1, can increase the number of website visitors, commenter's, and time spent reading.

4. <u>TECHNIQUES: use a number of techniques to give and receive information from citizens and, in particular, provide opportunities for dialogue.</u>

The unique characteristics of face-to-face communications in building consensus, communicating complex information, or creating new ideas means it cannot be totally replaced by online communications. However, the Internet is the idea "*home base*" for any multidimensional strategy for several reasons.

First, it is increasingly the repository for disclosing government information. For this reason government officials often post meeting minutes, reports, and other documents of presumptive public interest.

Second, its persistent character means it is ideal to store reference or archival information for review at any time and place with a connection. While participants in conventional processes can see diminishing participation as citizens drop out along the way, online event calendars and notices can allow citizens to participate in the meetings and events of interest to them without risking losing touch with the process.

The Internet can supplement offline work by making additional information available, and archiving information presented at public meetings for future reference, as well as serving as a venue for ongoing conversation.

5. INFORMATION: provide more information in a clearly understood form, free of distortion and technical jargon.

This principle has a number of specific implications: content presentation, web design for ease of use, using web standards to maximize access, and providing data in open formats.

Planning websites too often are organized according to organizational structures, instead of according to the type of information sought by visitors. In order to reverse the structure of the website, planners can construct a taxonomy organized by issues and themes of interest to citizens.

Visitor tracking services can allow planners to see which articles are most important, and expand and improve the sections receiving the most visitors, or evaluate what barriers exist for infrequently used resources.

Planning websites should be organized with the public in mind, organizing data according to intuitive categories and explaining the process. The American Planning Association's neighborhood planning guide urges planners to de-mystify planning jargon in order to encourage local participation. Critics of participation argue the existing system of public hearings assume more technical expertise than most people possess. Others argue the hearings are dominated by technocratic discourse.

Planning websites should contain not just digital copies of zoning codes or lengthy technical reports, but can seek to explain the meaning of policies and data, and seek to respond to public interest in topics from hit data and visitor surveys. Such efforts won't benefit simply the visitors to the site, but also community leaders, nonprofit organizations, advocates, and even members of the media, who have come to increasingly rely on the Internet for background information. This approach requires additional skills, as some of these functions fall in the area of knowledge management or journalism.

From a technical point of view, presenting clear information online involves web design, web standards, and open data formats. A standard text on web standards describes how web standards make it possible to have "*forward compatibility*":

"Designed and built the right way, any page published on the web can work across multiple browsers, platforms-and will continue to work as new browsers and devices are invented." (**Zeldman**, 2007)

The author of a standard text on the topic argues websites developed not conforming to web standards have real costs in terms of bandwidth and server expenses. Standardized formats exist for website's structure (HTML, XHTML, and XML) presentation (CSS), and behavior (DOM, ECMA Script). Open standards, formats owned by no company, have formed the basis of blogging and a variety of applications.

Websites developed under web standards have valid markup, meaning the pages are coded according to industry standards and can be viewed on a wide range of browsers. The federal government also requires its websites meet the Section 508 requirements. Intended to make the Internet easy to use for people with disabilities, it includes standard approaches to handle graphics and text for those using special software. One advocate argues,

"Compliance with accessibility guidelines and web standards not only makes your site more available to millions who are living with disabilities, but also helps you reach millions more … and attract still more via search engines."

Government websites that provide data according to open formats like XML empower citizens to monitor, download, and analyze the data themselves. In Washington, D.C., a neighborhood activist has utilized the District of Columbia's data feeds to provide automatically updating lists of crimes, complaints, and permits in the neighborhood (**Dupree**, 2008).

Indeed, one study of the use of technology in low-income communities suggested that

"Public policies must ensure that the computer functions as a repository of information for interactive use by grass-roots planners."

Pointing out that

"even if universal coverage is achieved, the programs and computers used by upper-and lower-income residents may differ … governments must be willing to support the minimum threshold data needs of low-income communities …" (**Sanyal & Schon**, 1990)

AREAS OF PARTICIPATION		**THE IMPLEMENTATION OF THE INTERNET**
1.Objectives	Provide information & listen to citizens; Provide opportunities to influence planning decisions	RSS feeds, email lists, push information to citizens. Comments in a public forum by email correspondence
2.Timing	Involve the public early & continuously	Easily be updated, organized in chronological order & instantaneously distributed or available once published. Provide regular communication, allowing citizens to register for newsletters, or even to be notified regarding local issues
3.Targets	Seek participation from a broad range of stakeholders	Not only physical access but also skills and knowledge. Explaining through other mediums, or collaborating with educational institutions to connect citizens. Online and off to reach diverse populations. The simplest information– such as email, newsletters and simple websites found easily by search engine searches – will reach the widest audience.
4.Techniques	use a number of techniques to give and receive information from citizens and provide dialogue	The Internet is the idea "*home base*" for any multidimensional strategy for several reasons. The Internet can supplement offline work by making additional information available, and archiving information presented at public meetings for future reference, as well as serving as a venue for ongoing conversation
5.Information	provide information in a clear understandable form, free of distortion and technical terminologies	Contents presentation, Simple website design for ease of use, using web standards to maximize access, and provide data in open formats. Websites can explain the meaning of policies and data, and respond to public interest. Can work across multiple browsers, platforms-and will continue to work as

[14] **SACHRU**: South Australian Community Health research Unit.

		new browsers and devices are invented. For people with disabilities, it includes standard approaches to handle graphics and text for those using special software. Updated lists complaints, and permits in the neighborhood.

Table 3.1: The Implementation of the Internet in the PP Framework.

There are two levels of systems that can be defined.

1. A support for exploration and communication between the actors, and more precisely with the citizens
2. Dedicated for enhancing analysis and deliberation between actors

3.8 PUBLIC PARTICIPATION EVALUATION TOOL

There is no public participation technique that will work in all circumstances.

When people talk about highly successful public participation programs they are talking about programs where the techniques matched the purpose of the program, reached the interested stakeholders, and resulted in a clear linkage between the public participation process and the decision-making process.

In spite of the ambitious expectations from public participation, it cannot be argued that every participation activity meets those expectations. Therefore, the evaluation of public participation is essential in order to reflect on the degree of achievement of the goals, particularly the long term goal of social learning for collective action, and also to justify the allocation of limited resources, i.e., time, funds and efforts. (**Özerol,** 2002**)**

According to **SACHRU**[14] (2005), there are various approaches to evaluating public participation and each of them takes into account several aspects of public participation. Evaluation questions have been adapted from a review of the literature on evaluation of community participation and are divided into three sections:

- *Preparation and Planning*
- *Process Evaluation*
- *Impact/Outcome Evaluation.*

[14] **SACHRU**: South Australian Community Health research Unit.

3.8.1 Preparation and Planning For Public Participation

Planning and evaluation are closely linked so evaluation of community participation will be much more effective if a careful planning stage is included. Key themes in planning community participation and questions for organizations are listed below: (**National Resource Centre for Consumer Participation in Health**, 2004)

- Commitment
- Purpose
- Who to Involve
- How will Community Participation be Implemented and Supported?
- Use and Feedback

These themes and associated questions for organizations to use in planning for Community Participation are explored below.

I. Commitment

The first step for an organization is to reflect on the commitment and attitude to community Participation at organizational and individual staff levels.

- What is the management and staff commitment to community participation?
- What are the attitudes of staff and management to community participation?
- What are the attitudes to various groups of consumers
- Do we know why we want to involve community members?
- What aspects of the organization's history may impact on community participation?
- How will this be addressed?
- Are we really prepared to commit the time, patience, energy and resources to making Community Participation work?
- What staff and financial resources will be available?
- What are the staff concerns?
- How can they be addressed both practically and financially?

II. Purpose

Next the organization needs to be clear about why community participation is important, and how the participants and the organization will benefit.

- What do community members want from the organization?
- How and why do community members want to participate in our organization?
- What does the organization want from community participation?

III. Who to involve

For each program or for the service overall, are people being asked to participate as individuals or as representatives? If as representatives, guidelines are needed about which communities of interest are included and how representatives are accountable to their communities.

Organizations also need to understand the diversity of consumer and community views, and how to reach out to those who may be less accessible.

- Do we know who our consumers and communities of interest are?
- How will the organization reach out to community members?
- How will the organization reach out to people who are not attending the service?

IV. How will community participation be implemented and supported

From the beginning, community members should be involved in planning for community participation, they will know best how to make it work for them.

There is a need to provide support, skills training and recognition for participation. A range of methods and opportunities for participation should be offered and realistic time frames set.

- How will we support community members who provide their time and expertise to the organization?
- Will they be paid?
- How will the organization cover attendance costs? (e.g. hire of equipment, transport, childcare etc)

- In what ways are the organization's structures alienating for community members? (Administrative, management, structure, service delivery, relationships with other organizations etc).
- How can we make changes to improve these structures?
- How will the organization accommodate circumstances that could make it difficult for community members to participate effectively? (e.g. meeting times, stress of meetings, health etc)
- What kinds of skills will be required by community members and staff to do this work and how can the organization support community members and staff to work together?
- What opportunities will there be for community members to discuss issues on their own?

V. Use and feedback

The organization needs to consider how input from community participation will be used and what barriers there might be to making changes. Participants should be provided with feedback on how their input was used and the results. Some attempt should be made to follow up on people who drop out.

- How will we make the organization more open to ideas initiated by community members?
- How will what community members say be listened to and acted on by management?
- How will the organization communicate to community members about the changes that have occurred due to community participation?
- How will the organization respond if community participation flags, or attendance drops?

3.8.2 Public Participation Process Evaluation

Ideally, evaluation questions should be asked along the way so that organizations can identify and address issues as they arise. It is unlikely that resources will available to answer all the possible evaluation questions. Questions will need to be prioritized according to local need and resources.

I. *Extent and scope of community participation*

- What proportion of the service's programs/activities includes opportunities for participation?
- How many people attended this participation activity?
- What was the socio-demographic distribution of people that attended the program/activity?
- Does it reflect the community of interest for the program/activity?
- Was participation inclusive of all stakeholders groups and interests?
- Was diversity in participants encouraged and valued?
- What barriers were there to participation and how were these addressed?
- Have community participants persisted or have they gone away after a few meetings?

II. *Working together*

- Are the organization and the community ready to work in partnership?
- What do community members say about their experience of being involved?
- What has the organization and staff learnt and what needs to be changed to improve participation processes?
- Are all stakeholders satisfied with the quality of involvement?
- Has there been efficient and effective communication between all stakeholders?
- Has all relevant information been shared with all stakeholders in an accessible way?
- Have community participants been involved in planning and evaluating participation strategies?

- Are the participation strategies appropriate?
- Has there been a partnership approach to working with communities?
- How is conflict managed?

III. Capacity and support

- Are participants satisfied with the level of support received?
- Does the staff have appropriate skills, knowledge and confidence to support community participation? If not, how is this addressed?
- Do the participants have appropriate skills, knowledge and confidence to engage in participation? If not, how is this addressed?
- Are participants recognized for their input and expertise?
- Is there sufficient organizational capacity for community participation?
- Is there sufficient community capacity for community participation?

3.8.3 Public Participation Impact and Outcome Evaluation

I. Influence

- What changes have been implemented as a result of participation and community member-staff collaboration?
- Have the changes that participants wanted to see been implemented?
- If changes were not able to be made, was this explained to the satisfaction of participants?
- What barriers to implementing participants' changes were identified and how were these addressed?
- Were participants satisfied with their opportunity to be heard and influence decisions?
- Where on the ladder did the participation mostly occur?
- How did participants or the community benefit from the participation?
- Are there new, beneficial relationships and partnerships between the community and the organization?

3.9 BEST PRACTICES FOR COMMUNICATING WITH THE PUBLIC; Lessons Learned

1) Targeting Audience

Public participation programs are more effective if they are targeted at those individuals and groups most interested in the issues likely to arise during the course of making a particular decision. Information campaigns and other outreach efforts should follow a well thought-out plan clearly identifies the target audiences.

Public Participation Programs are moving towards:

- Targeting most interested
- Small activities and more innovative communications
- Involving the public at the beginning and throughout process
- Actively influencing decisions

2) Interviews & small group meetings

Sometimes people within the public participation planning team will know the stakeholders well enough to make an informed judgment as to how intense their interest will be. On occasion, though, the only way to assess the potential for controversy is to meet with stakeholders and discuss their interest in the issue and their suggestions for what kind of participation is appropriate.

These interviews or small group meetings can play an important role in developing a successful public participation plan.

3) Interactive Techniques

Use interactive techniques in preference to formal meetings. Examples of interactive techniques include:

- workshops
- coffee klatches
- large group/small group format meetings
- interviews
- one-on-one or small group meetings
- If you must use a formal meeting:
- Be sure it comes at the conclusion of the public participation process, and is not the first and only opportunity to participate.

- Consider providing other mechanisms for participation alongside the meeting; e.g., open houses, phone-in comments, etc.
- Use interactive meeting formats to make it less formal.

4) Effective communication channels

A public participation program often uses a number of different techniques all at the same time to ensure that stakeholders can participate at their own level of interest. Effective communication channels include:

- Face-to-face meetings with opinion leaders
- Personalized letters sent to selected audiences
- Informational open houses, public availability sessions, and poster sessions
- Speaker's Bureau events and base/site tours for key community groups
- Product templates developed/branded by headquarters, which regional offices can cater to specific audiences
- News updates via the installation's Web site
- Informational open houses with poster presentations
- Time line mailers/fact sheets
- Site tours
- Information booths at remediation sites
- Informational web sites
- Cross-cultural/bilingual signage/meetings
- Site update mailers
- Videos
- Maps/GIS

An apparently simple straight-forward technique, like running a series of public workshops, may require the integration of a number of techniques.

TYPE OF STAKEHOLDER	POSSIBLE TECHNIQUE
Co-decision Maker	Negotiation session
Active participant	Workshop or advisory committee
Technical reviewer	Peer review panel
Commenter	Public meeting or workshop
Observer	Newsletter or infoirmation bulletin
General public	News release

Figure 3.9: Example of specifying techniques to meet level of interest of the participants

5) Putting the activities in a sequence

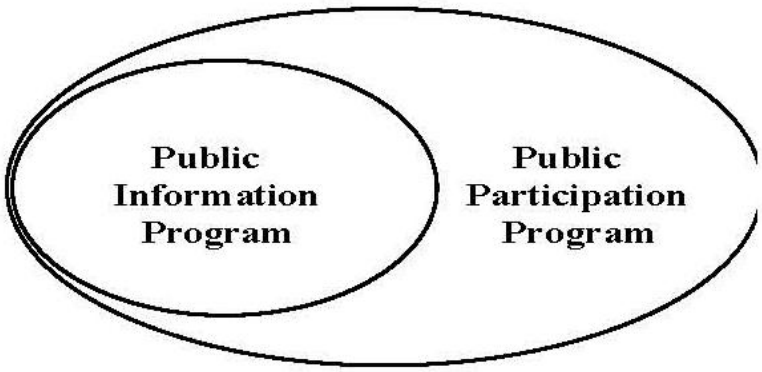
To develop a complete public participation program the techniques that have been selected need to be put together in a coordinated sequence. Each activity should be accompanied by an assignment of responsibility (the person whose job it is to make that step occur) and a completion date.

Step in the Decision Making Process:	Public Participation Activities	Responsibility	Completion
Problem Definition	Prepare draft project brochure	XXXXXXX	5/1/XX
	Obtain approvals for project brochure	XXXXXXXXX	6/1/XX
	Conduct briefings for key agency and elected officials	XXXXXXX	7/1/XX
	Conduct interviews with selected stakeholders	XXXX	8/15/XX
	Prepare draft Newsletter #1	XX XXXXXXX	8/15/XX
	Obtain approvals for Newsletter #1	XXXXX	9/15/XX
	Identify meeting sites for scoping meetings	XXXXXXX	9/15/XX
	Publish Federal Register notice of scoping meetings	XXXX	10/1/XX
	Mail scoping meeting invitations to stakeholders	XXXXXX	10/15/XX

Figure 3.10: An Example of a Sequential Plan of Action

6) Good Public Information Program

Inside every good public participation program, there is a good public information program — good public information is a necessary precondition if the public is to participate effectively.



7) Maintain Visibility and a Sense of Continuity

- During any period where internal studies are being conducted and there are few visible public participation activities, find mechanisms -- such as newsletters or briefings -- to maintain visibility and a sense of continuity.
- Every time somebody participates, acknowledge it and tell participants what you're going to do with their ideas.
- Show people the connections between their participation and the outcomes: "*What we asked was this; you said this; this is what we did with what you said*".

3.10 CONCLUDED REMARKS

Public participation is an important characteristic of a planning process, however, it takes a very good job of planning to accomplish a highly effective public participation programs.

When people talk about highly successful public participation programs they are talking about programs where the techniques matched the purpose of the program, reached the interested stakeholders, and resulted in a clear linkage between the public participation process and the decision-making process.

The real challenge in designing public participation programs is to design an appropriate program to the particular groups interested in a particular decision.

The appropriate level of public participation is the level that best matches the situation. The difference in intensity of interest is often reflected in how the stakeholders will participate.

There is no public participation technique that will work in all circumstances. In order to facilitate the active participation of communities with the planning and development, it requires a whole range of approaches and a full menu of techniques. These approaches are likely to vary according to local preference, availability of funds, and the values of government officials.

In spite of the ambitious expectations from public participation, it cannot be argued that every participation activity meets those expectations. Therefore, the evaluation of public participation is essential in order to reflect on the degree of achievement of the goals, and to justify the allocation of resources, i.e., time, funds and efforts.

CHAPTER 4

ICT DEVELOPMENT IN EGYPT

CHAPTER 4
ICT DEVELOPMENT IN EGYPT

4.1 INTRODUCTION

Even though IT diffusion has been proven to have significant spillovers on the world economy, these benefits have not appeared to be evenly distributed among countries. In fact, effective usage of IT equipment requires many other complementary investments including factors like human capital and the provision of a reliable telecommunication infrastructure which many of the developing countries still lack.

Consequently, in order to examine and assess the possibilities of using different forms of information and communication technologies for increasing "*Public Participation*" and citizenship in urban development "*particularly*" in Egypt, we need to consider similar experiences of utilizing the information technology in the Arab Countries & Africa.

This chapter reviews the disparities between countries and the gap between those with access to ICT and those without. It then explores the actual and potential existence of IT in Arab Countries & Africa, revealing the obstacles it faces & factors contribute to bridging it.

Focusing particularly on Egypt, the study provides a comprehensive overview of the information-technology sector in Egypt, statistics and indicators aiming at understanding the information-technology market in Egypt and potential investment opportunities.

4.2 DISPARITIES BETWEEN COUNTRIES

The last twenty years have witnessed an enormous expansion in the Internet usage all over the globe, from fewer than 200,000 in 1990, to over 1,966,514,816 in 2010. (**World Internet Users and Population Stats**, 2010)

Growth, however, has been anything but uniform. The geographic distribution of connections to the internet heavily favors developed countries, developing countries, on the other hand, have been far less intensive users of the internet. With more than 80% of the world's population, the developing world, currently owns a mere 4% of the world's computers. (**Harris**, 2008)

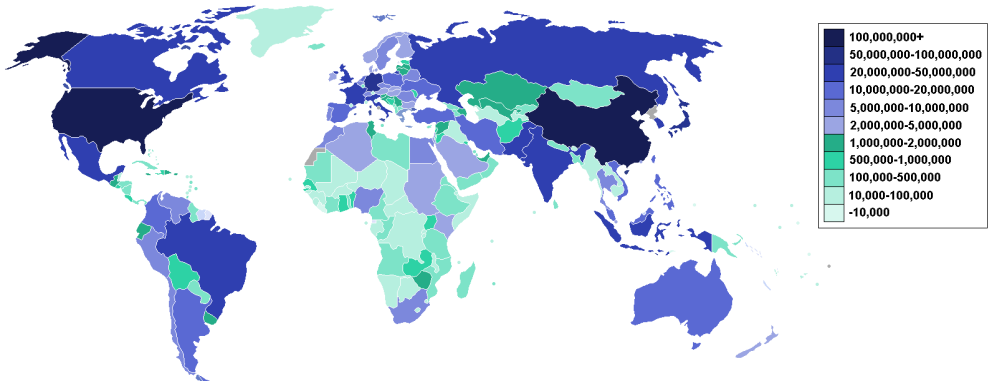


Figure 4.1: Internet users by country (**Internet world stats**, 2008)

According to Postnote (2008), OECD[15] countries have the highest access to new ICT, followed by South Asian and some African countries. Sub-Saharan countries fare worst (excepting South Africa). A detailed list of internet usage statistics by country is provided in appendix 4

[15] **OECD:** The Organization for Economic Co-operation and Development, an international economic organization of 34 countries founded in 1961 to stimulate economic progress and world trade.

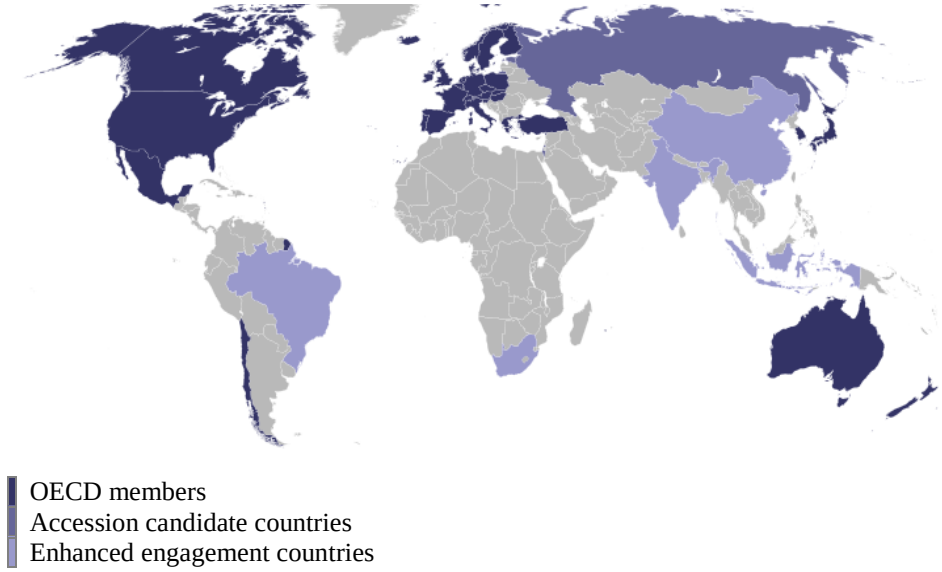


Figure 4.2: OECD members, (**Internet world stats**, 2010)

WORLD INTERNET USAGE AND POPULATION STATISTICS						
World Regions	**Population (2010)**	**Internet Users 2000**	**Internet Users 2010**	**Penetration (% Population)**	**Growth 2000-2010**	**Users % of Table**
Africa	1,013,779,050	4,514,400	**110,931,700**	10.9 %	2,357.3 %	5.6 %
Asia	3,834,792,852	114,304,000	**825,094,396**	21.5 %	621.8 %	42.0 %
Europe	813,319,511	105,096,093	**475,069,448**	58.4 %	352.0 %	24.2 %
Middle East	212,336,924	3,284,800	**63,240,946**	29.8 %	1,825.3 %	3.2 %
North America	344,124,450	108,096,800	**266,224,500**	77.4 %	146.3 %	13.5 %
Latin America/ Caribbean	592,556,972	18,068,919	**204,689,836**	34.5 %	1,032.8 %	10.4 %
Oceania/ Australia	34,700,201	7,620,480	**21,263,990**	61.3 %	179.0 %	1.1 %
WORLD TOTAL	6,845,609,960	360,985,492	**1,966,514,816**	**28.7 %**	444.8 %	100 %

Table 4.1: Internet Usage Statistics, (**World Internet Users and Population Stats**, 2010)

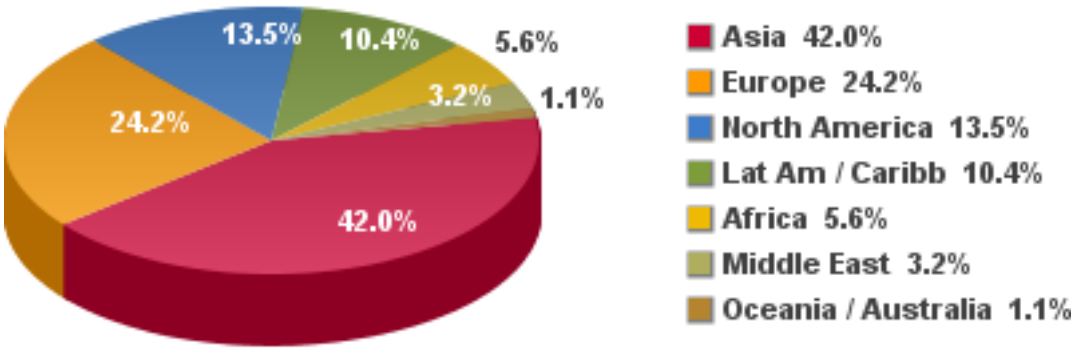


Figure 4.3: Internet users in the world by world regions, (**Internet world stats**, 2010)

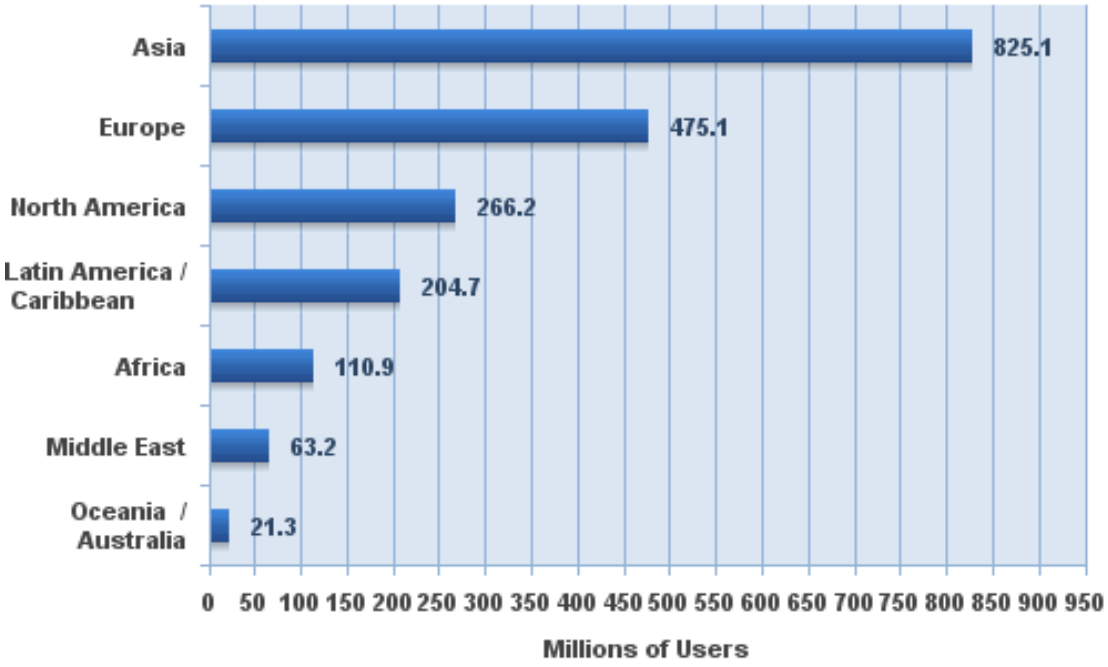


Figure 4.4: Internet users in the world by Geographical regions, (**Postnote**, 2010)

4.3 ICT IN DEVELOPING COUNTRIES

There are wide disparities between countries in the extent to which different developing countries, and different socio-economic groups within countries, benefit from ICT.

One reason for differences between developing countries is the wide variation in government policy. A range of government strategies, from cutting taxes on devices such as mobile phones, to liberalizing markets, can increase ICT uptake. (**Sanyal & Schon**, 1990)

> *"In Egypt a dynamic Ministry of Communications and Information Technology has played a strong role in catalyzing ICT development in collaboration with the private sector. For example, its transfer of internet subscription charges from consumers to Telecom Egypt and internet service providers (ISPs) coincided with a sharp rise in new users: from ~9 users per ten thousand inhabitants in 2001, to ~55 per ten thousand in 2004."* (**MCIT**, 2007)

It is argued that some policies increase only net ICT access. For example, efforts to develop the "*high tech*" end of the market, such as mobile phones with multimedia exchange, tend to benefit the middle classes rather than improving basic levels of access for all. It is also argued that governments sometimes set overambitious targets for ICT uptake, which have little hope of being put into practice.

> "*You'll find people in developing countries doing incredible things with their fingernails, scratching out access,"* said **Raul Zambrano** (2008), information technology specialist for the UN development project. "*But while this is wonderful, the gap between the haves and have-nots is widening.*"

New technologies, and changes in usage, can increase access to ICT. For example:

- Recent developments in wireless local area network technologies are raising new hopes for internet diffusion in parts of the developing world.
- Sharing of devices is common in developing countries; it can also generate employment.
- Open Source Software (OSS) is also an expanding area. Since there is no licensing fee attached to it, OSS can be cheaper to acquire than proprietary software. (**UN**, 2005)

- The '*One Laptop per Child'* project aims to supply schools with cheap Personal Computers (PCs) which run on OSS.

> *"This $100 laptop is a robust, open source based computer that can be cranked into operation. It has been developed by the non-profit One Laptop Per Child (**OLPC**) organization at the Massachusetts Institute of Technology (**MIT**), with assistance from corporate members such as **Google** and **NewsCorp**. It will be sold to governments and issued to children by schools."*

It is broadly agreed that ICT can play a part in bridging developmental disparities between and within countries. There is less agreement over how high a priority it should be, in relation to other developmental concerns.

Some suggest that the introduction of ICT in developing countries will rapidly improve wealth as well as social and personal well-being. They say it should be treated as a matter of urgency, since any delay puts developing countries at risk of being further marginalized. Others question the relevance of spending development aid on improving access to ICT, arguing that basic services should be prioritized. (**Compaine,** 2001)

However it is increasingly acknowledged that the two approaches are linked, since ICT can improve access to basic services, such as health and education.

There are thousands of technicians, entrepreneurs, and philanthropists working to increase Internet access in the developing nations. They all have different goals, but one common denominator. They want to make connections. The Internet will be much more important to the poorer countries of the world than it is to their wealthier neighbors.

It's a type of reverse colonialism. For a relatively small cost, citizens of developing countries can exploit industrialized wealthy nations for an endless supply of that precious commodity—information

The '*digital divide'* commonly refers to the gap between those with access to ICT and those without; yet, many factors besides physical access contribute to these disparities, among which are:

- Strong Governmental Support
- A Suitable Legislative and Investment Environment
- A State of the Art Infrastructure and Investment in Human Resources

Even in developing countries with relatively high net ICT uptake, ICT is still out of reach of many groups, according to **Compaine** (2001), this is due to:

- **Lack of appropriate products:** products are often not designed to meet the needs of the poor, or those in remote areas. These groups can face constraints such as access to electricity (lacked by two billion people worldwide).
- **Cost:** roughly half the world lives on less than four dollars a day. Many potential users are too poor to afford any form of access to ICT.
- **Education:** even where there is physical access to ICT, many people do not have the technical skills needed to benefit from them.
- **Language**: Poor literacy is a problem with ICT such as the internet. Of those who can read, many know only a local language, while the internet is dominated by English-language content.
- **Human resources**: As in many sectors, the migration of skilled ICT professionals from developing to developed countries contributes to a lack of human resources to support ICT.
- **Lack of robust regulatory framework** for ICT can limit uptake.

However, many factors could contribute to bridging the digital divide. National governments, NGOs [16], industry and international donors all play a role, often work together.

Focusing particularly on **Egypt**, as a leading country in North Africa & in the Arab World in the use of information technologies for governance, and according to **Internet world stats** (2010), Egypt is positioned in the rank 27th on the world regarding the number of internet users. However, in terms of penetration to the population, it is positioned in the rank 133.

[16] **NGOs**: non-governmental organizations, are legally constituted organizations created by natural or legal persons that operates independently from any government

Rank	Country	Internet Users	% Pop.	Date
—	*World*	1,966,514,816	28.7%	2010
001	China	425,000,000	31.8%	2010
002	United States	240,000,000	77.4%	2010
003	Japan	99,150,000	78.2%	2010
004	India	81,000,000	6.9%	2010
005	Brazil	75,943,600	37.8%	2010
006	Mexico	68,430,000	61.5%	2010
007	Germany	65,200,000	79.1%	2010
008	Russia	59,850,000	42.8%	2010
009	United Kingdom	51,450,000	82.5%	2010
010	France	44,630,000	68.9%	2010
011	Nigeria	43,985,000	28.9%	2010
012	South Korea	39,500,000	81.1%	2010
013	Turkey	35,000,000	45.0%	2010
014	Italy	34,000,000	54.0%	2010
015	Iran	33,200,000	43.2%	2010
016	Indonesia	30,000,000	12.3%	2010
017	Philippines	29,750,000	29.7%	2010
018	Spain	29,095,000	62.6%	2010
019	Argentina	26,615,000	64.4%	2010
020	Canada	26,224,900	77.7%	2010
021	Vietnam	24,269,083	27.1%	2010
023	Poland	22,450,600	58.4%	2010
022	Colombia	21,529,415	48.7%	2010
024	Pakistan	18,500,000	10.4%	2010
025	Thailand	17,486,400	26.4%	2010
026	Australia	17,033,826	80.1%	2010
027	**Egypt**	**17,060,000**	**21.2%**	2010
028	Malaysia	16,902,600	64.6%	2010
029	Taiwan	16,130,000	70.1%	2010
030	Ukraine	15,400,000	33.7%	2010
031	Netherlands	14,890,200	88.7%	2010

Table 4.2: Internet Usage Statistics by country, (**World Internet Users**, 2010)

The main challenges that should be addressed are the digital divide (within the country itself), the language barrier (Arabic contents and Arabic Domain Names), the literacy rates, hardware and software prices, limited connectivity, awareness, and telecommunications infrastructure.

To establish E-Government programs we need to have a national vision and planning accompanied with more commitment and collaboration to carry out

such programs, the challenges facing both governments and citizens in their quest towards development, inclusion and empowerment.

The Resistance to change and Internet usage in addition to the public Trust in online transactions in general could be also part of the challenges. Some governmental procedures need long steps. (**Shaban**, 2008)

4.4 STATISTICS IN THE ARABIC COUNTRIES

According to **Department of Economic and Social Affairs Statistics** (2006), several Arab countries have already introduced some e-government applications while others are still in the process.

1. **The United Arab Emirates have implemented the following applications:**
    - Human Resources Management System (HRMS): Provides a tool for planning and managing employee related activities
    - Financial Management Information System: Comprehensive financial systems for the Federal government agencies
    - E-Stamps: The e-Dirham payment tool devised by the Ministry of Finance and Industry in order to facilitate collection of revenues and provide secure payment method.
    - E-Tender: Electronic tendering system used by the government
    - Other specialized systems related to some Ministries and authorities
2. **Bahrain**
    - The Financial and Human resources systems in 30 ministries and governmental department.
3. **Applications in Lebanon.**
    - Document Management and Archiving System, Business Automation and E-Procurement (with Italian Government assistance)
4. **Implemented Applications in Jordan**
    - Financial, purchasing and inventory systems in different governmental agencies
    - E-Payments in the telecommunications sector
    - E-Tendering

- Wideband network in 18 Ministries (will be the infrastructure of the E-Government services)

5. Implemented Applications Kuwait

- Financial and HR systems (in government educational universities too)

6. Implemented Applications Egypt

- ERP in 6 ministries
- Archiving systems in 6 ministries
- Workflow in more than 28 governmental agencies

7. In progress Applications Oman

- Disaster Recovery system
- E-Tendering
- E-payment Gateway
- Technology Park
- CRM (Oman Municipality)

The above programs to succeed there should be a leadership support and advocacy for E-Government, clear goals and specific performance targets.

4.4.1. Internet Usage In Arab World

According to **Internet world stats** (2010), Egypt is ranked the first among the Arab countries regarding the number of internet users as shown in **Figure 4.5.**

Egypt is leading the Arab world in terms of Internet users with 17.5 million, followed by Morocco with 10.4 million users and Saudi Arabia with 9.8 million.

Rank	Country	Internet users	% of population
1	**Egypt**	**17,060,000**	**21.2%**
2	Morocco	10,442,500	33%
3	Saudi Arabia	9,800,000	38%
4	Algeria	4,700,000	13.6%
5	Sudan	4,200,000	10%
6	Syria	3,935,500	17.7%
7	United Arab Emirates	3,777,900	75%
8	Tunisia	3,600,000	34%
9	Jordan	1,741,900	24.2%
10	Oman	1,236,700	41%
11	Kuwait	1,100,000	39.4%
12	Lebanon	1,000,000	24.2%
13	Bahrain	649,300	55%
14	Qatar	436,000	51.8%
15	Yemen	420,000	1.8%
16	Libya	353,900	5.5%
17	Iraq	325,000	1.1%

Table 4.3: Internet usage in the Arab world, (**Nielsen Online**, 2010**)**

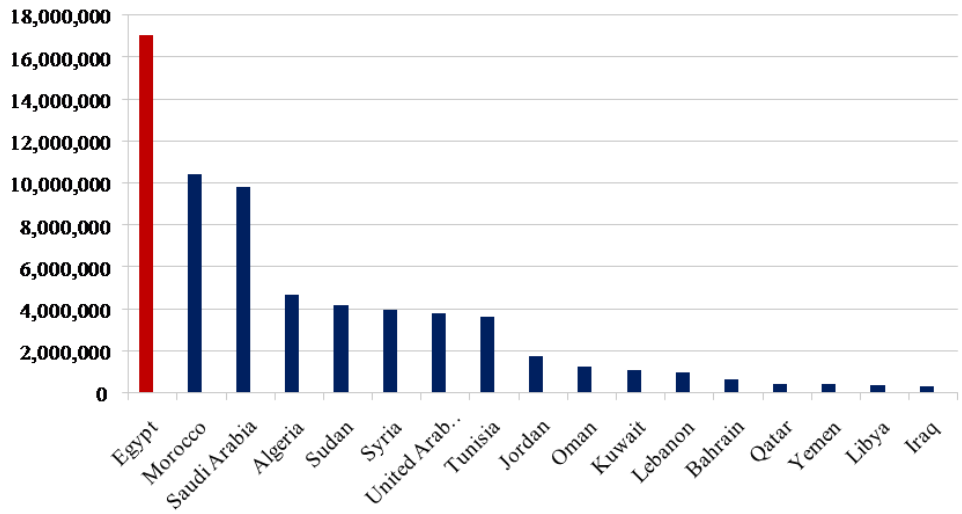


Figure 4.5: Statistics of internet usage in Arab world – (**Internet world stats**, 2010)

4.4.2. Internet Usage Penetration

In terms of Internet Usage Penetration, Egypt is positioned in rank 11 with penetration rate of only 21.2 %. This reflects disparities in utilizing the ICT within the country itself.

On the other hand, the United Arab of Emirates boasts the highest penetration of the Internet in the Arab world with 75%, however, most of the users in this country are expats.

Bahrain and Qatar are ranked second and third respectively with penetration rate of 55 % & 51.8. (**Nielsen Online**, 2010)

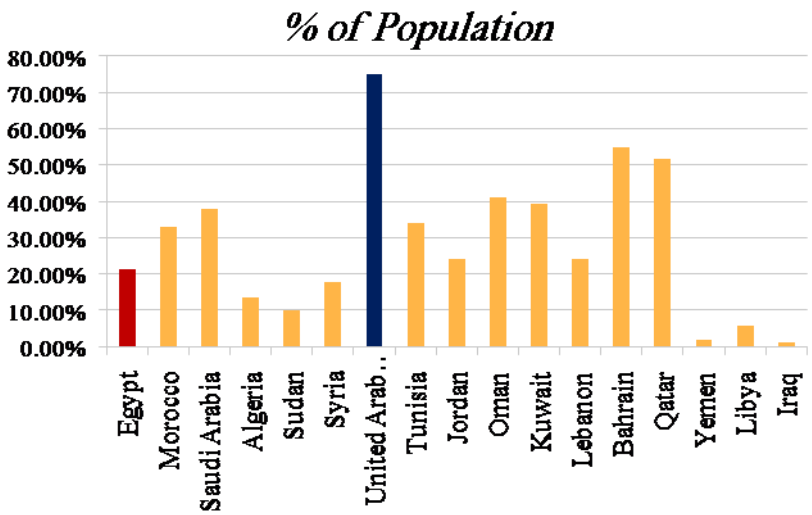


Figure 4.6: Statistics of internet users' numbers penetration in Arab countries (% of population). **Internet World Stats**, 2009

A new Arabic financial website (**www.nuqudy.com**) reported that the total number of Web users in the Arab world is estimated at about 75 million users by the end of July 2010. However, it said that the actual number of Internet surfers in the Arab countries is much higher in the case the users of the Web via mobile phones in this region are taken into account.

It is claimed that in some countries the internet penetration rate is low but the cellular penetration rate is close to 100%. For example, the Internet penetration rate in Algeria is put at about 15%, while the penetration rate of mobile phones in this country is over 100%.

4.4.3. Internet Growth

Willingness and ability to change, knowledge sharing, starting small and growing quickly and developing acceptable privacy and security safeguards are needed to achieve good e-government application.

Although some Arab countries are investing huge amount of money on restructuring their electronic infrastructure such as Saudi Arabia; others are still far away and depend on receiving aid from developed countries.

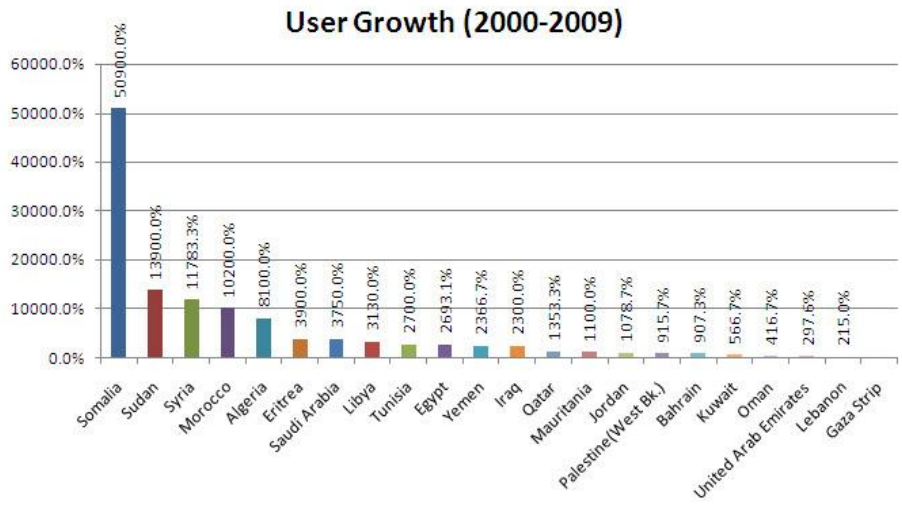


Figure 4.7: Statistics of Internet usage growth in Arab countries, (**Internet World Stats**, 2009)

Saudi Arabia investment in E-Government has topped SAR 3 billion recently which will lay the foundations for the beginning of a comprehensive implementation of e-Government.

There is no doubt that Dubai E-Government has played a pioneering role in driving the E-governance initiative in the region and through its comprehensive web portal, citizens, residents, visitors and business enterprises can access more than 2,000 electronic services, including payment of traffic fines, payment of Municipality fees, applying for visas for friends and relatives, renewing health cards, company registration, among others.

Meanwhile while others are still struggling with culture and tradition, some countries have already shortened the distance between them and the developed world believing in the future generation of E-life.

4.5 INTERNET USERS IN AFRICA

New Internet usage figures for Africa were published by Internet World Stats. African countries have advanced very much recently in Internet usage, but they still exhibit low penetration rates.

Statistics show for the second quarter 2008, a World Penetration Rate of 31.8 %. However, Internet penetration in Africa was 10.9 %, a fourth of the world average.

INTERNET USERS AND POPULATION STATISTICS FOR AFRICA						
AFRICA REGION	**Population (2010 Est.)**	**Pop. % in World**	**Internet Users, Latest Data**	**Penetration (% Population)**	**Use Growth (2000-2010)**	**% Users in World**
Total for Africa	1,013,779,050	14.8 %	**110,931,700**	10.9 %	2,357.3 %	5.6 %
Rest of World	5,831,830,910	85.2 %	**1,855,583,116**	31.8 %	420.5 %	94.4 %
WORLD TOTAL	6,845,609,960	100.0 %	**1,966,514,816**	28.7 %	444.6 %	100 %

Table 4.4: Africa Internet Usage and Population Stats, Internet usage in the Arab world, (**Nielsen Online**, 2010)

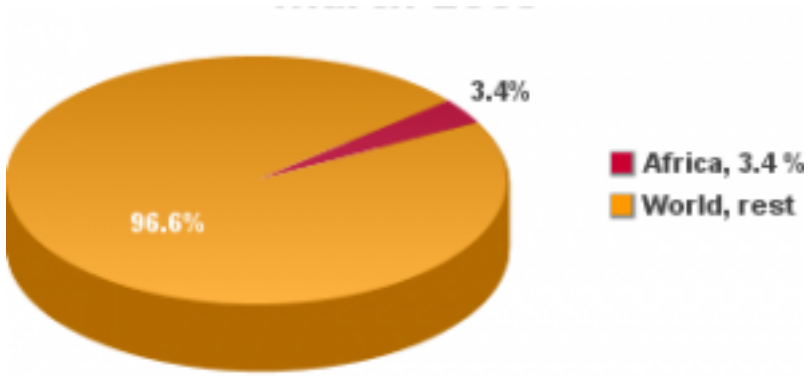


Figure 4.8: Internet users in Africa, (**Internet World Stats**, 2009)

According to Internet world stats (2010), Egypt is ranked the Second after Nigeria regarding the number of internet users.

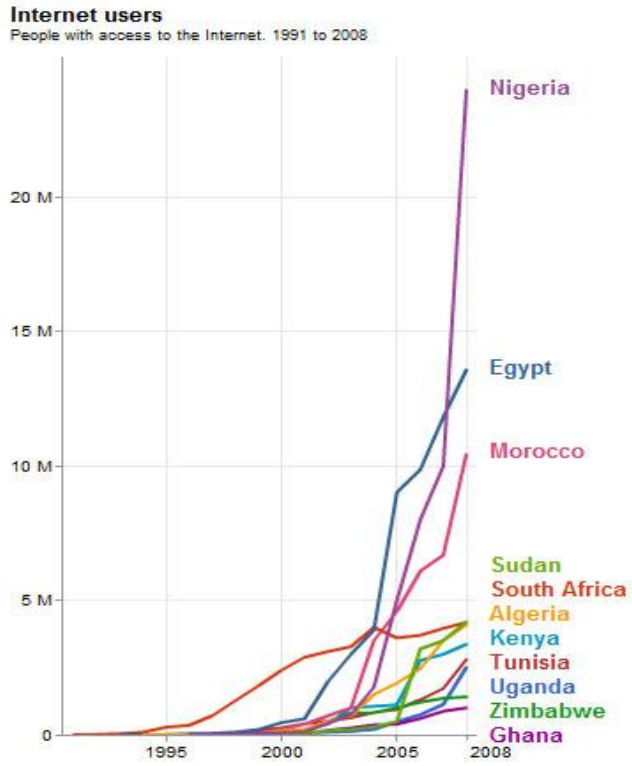


Figure 4.9: Internet users in Africa, 2008

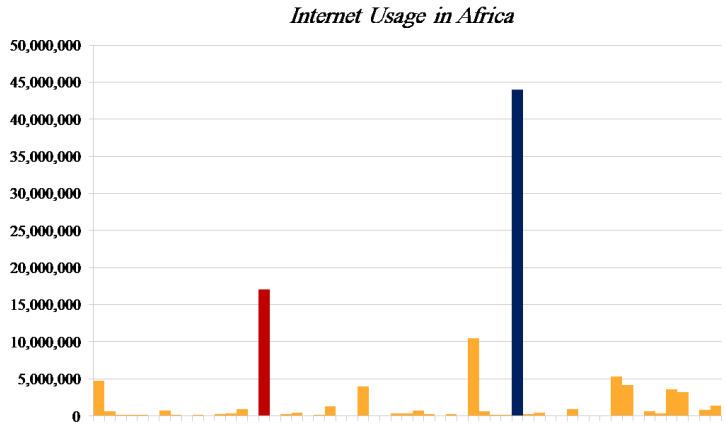


Figure 4.10: Internet usage in Africa, (**Internet world stats**, 2010)

4.5.1. Internet Usage Penetration in Africa

The penetration of Internet in Africa is quite limited compared to the rest of the world. Measurable parameters such as the number of ISP-registered users, overall number of hosts, IXP-traffic, and overall available bandwidth all indicate that Africa is way behind the "*digital divide*".

Moreover, Africa itself exhibits an inner digital divide, with most Internet activity and infrastructure concentrated in Nigeria, Egypt, Morocco, and South Africa as well as some smaller economies like Mauritius and Seychelles. According to **Internet world stats** (2010), Egypt is ranked the 9th in terms of Internet Usage Penetration, a detailed list of internet usage statistics for Africa by country is provided in appendix 4

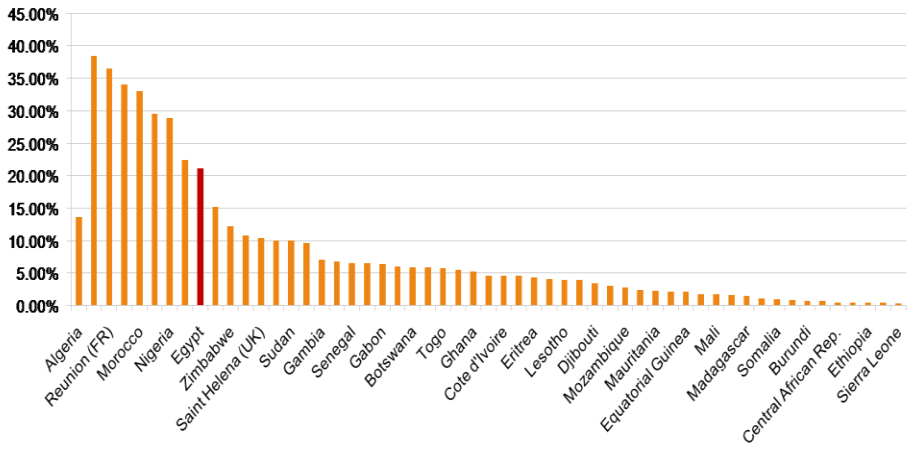


Figure 4.11: Statistics of internet users numbers penetration in Africa, (**Internet World Stats**, 2009)

4.5.2. Internet Growth in Africa

One of the most basic issues to be faced by Internet users in Africa is that the overall available bandwidth is scarce. Most Internet traffic to or from Africa has to go through expensive satellite links, since cable connections are few and limited in capacity. This has the effect to boost the cost of Internet use, especially for broadband. In 2007, Africa had about 1,000,000 broadband subscribers overall, most of them being companies and institutions.

4.6 ICT FOR DEVELOPMENT (ICT4D)

Although Information and communication technology (**ICT**) was argued to have significant spillovers on the world economy, (**www.grameentelecom.net**)

> *"Information and communication technology (**ICT**) can help developing countries tackle a wide range of health, social and economic problems. By improving access to information and by enabling communication, ICT can play a role in the elimination of extreme poverty, combating serious disease, and achieving universal primary education and gender equality".*

These benefits are not fully realized as many countries have inadequate infrastructure and human capacity to support ICT; ICT is often out of reach of the poor and those in rural areas. The international community plays a key role in stimulating access to ICT. Some major initiatives are outlined in more detail in appendix 5.

According to **Zgodzinski** (1996), Some ICT4D commentators suggest developing country governments should encourage uptake of technologies such as mobile phones, which have proved popular among the poor. They say this is better than promoting ICT like the PC, uptake of which has been comparatively slower. There is consensus that education and IT skills training play a role in improving access to ICT.

However there is a debate over how to raise awareness and generate demand: some say donor-funded tele-centers (which offer a range of telephone, computing, internet and information services) have a role to play in familiarizing people with basic ICT. Others suggest generating consumer demand is more important, citing the growth of the internet among middle-classes. **(Zgodzinski**, 1996)

ITDG[17] has undertaken a pilot research study, funded by **DFID**[18], on strengthening the information systems and knowledge of poor urban people. This involved a literature review and field studies in informal settlements in Peru, Sri Lanka and Zimbabwe. (**KIS**, 2002)

The field studies also helped to identify key informants - people playing a particularly important information provision role for communities, and some of these were followed up with supplementary interviews. Key informants were generally individuals, Community Based Organizations (**CBOs**), NGOs and Government institutions.

[17] **ITDG**: Intermediate Technology Development Group

[18] **DFID**: Department for International Development

In Zimbabwe, however, individuals were not mentioned. Specific groups or bodies mentioned included community and village development committees, housing co- operatives, the Local Board (in Zimbabwe), political leaders and women's societies. Useful characteristics of key informants were:-

- Being able to provide information in an accessible format
- Willingness to share information rather than hold onto it
- Ability to access information and extensive outside links
- Experience, education, skills, knowledge and reliability
- Being close to the communities
- Being interested in the development of the community and being willing to listen
- Leadership and influence

Identified constraints to poor people being better able to access information included:-

- Too much information is supply-led rather than demand driven and poor people have little influence on this situation
- Information is sometimes not in a suitable format
- Some information is not reliable and cannot be independently verified
- Some people or institutions act as 'gatekeepers' and make it difficult for others to get their information
- Many poor people are unwilling to pay for information.
- Few key informants match up to most of the seven desirable characteristics given above, and their own information sources would also be likely to be deficient
- Access to Information and Communications Technologies (ICT's) is still very limited, few poor people have televisions and not that many have radios
- Women's specific information needs might be overlooked or ignored
- People might not prioritize information sources in an effective way, e.g. they are more likely to believe imported soap operas than information from a local medical centre.

4.7 NATIONAL STRATEGY REGARDING IT IN EGYPT

Over the past decades, Egypt has witnessed a major technological development and an outstanding revolution in the domain of communications; that constituted what so-called "*fast way for information*".

The communication services have become available for most of the social categories through a strategy that contributed to realizing a qualitative move in the field of communication and information network. This has rendered Egypt a producer of elements of sophisticated technology and a main base for information industry.

Egypt continuously seeks to cope with scientific and technological events and has powerfully entered the world of communications and information with the aim of creating a modern society capable of efficiently dealing with the perquisites of the age of globalization and future challenges. (**Egypt State information Service**, 2008)

> *"To invest in the technological industry is to invest without the least hesitation in Egypt's future, particularly in view of the fact that the promising beginnings we have already seen reaffirm that Egypt has the capability of catching up with this significant development."* ***Ex-President Mohamed Hosni Mubarak*** *said.*

Developing Egypt into an Information Society is a top priority. With these key words, Egypt's Ex-President **Mubarak** gave impetus to the development of information and communication technologies (**ICT**) in Egypt, linking them to the economic and social development of the country. (**Ex-President Mohamed Hosni Mubarak**'s **address** to the National conference on Information technology Development in 1999)

The government of Egypt as a major stakeholder is committed to building an Egyptian Information Society, offering every individual, business and community the opportunity to harness the benefits of the new information era to achieve national priorities.

The Information Decision Support Center that was established in 1985 was instrumental in establishing E-Government as early as 1990.

Egypt launched its National Information Highway program to support and energize its socio-economic development as early as 1994. Egypt was also one of the countries that recognized the need for highly skilled human resources development as early as 1992. The Regional Information Technology and Software Engineering Center (**RITSEC**) were established in 1992 to support and develop the information communication technology industry and infrastructure in Egypt.

In September 1999, Ex-President Mubarak announced the inauguration of a national program for the development of the communication and information technology sector. The national program goals were to create the Information Society in Egypt, and an export oriented ICT industry.

In October 1999, a new Ministry of Communications and Information Technology (**MCIT**) was formed to facilitate Egypt's transition into the global Information Society.. This ministry, in spite of being new, has succeeded in achieving tangible technological development through a wide leap in the field of communications, which led to establishing an advanced communication network that contributed to the spreading of computers and Internet services to all categories of the society.

Among the key programs that were launched by the Ministry was the National Plan for Information and Telecommunications Development[19] based on studies conducted by international consulting houses and business consortiums affiliated with the telecommunications and information sector.

Egypt has since embarked on a number of projects that aim at improving the ICT industry and advancing universal access to information and communication and the creation of jobs. Among which are:

- Electronic government program that aim to improve the effectiveness and efficiency of ministries and public institutions
- Establishment of free zones and ICT parks; incentives to private sector particularly in software development and export and the creation of enabling policy environment for telecommunications and Internet services industry
- Youth and community development programs, comprehensive human resource development strategies targeting research and young people, information society awareness programs for the public
- Increasing number of public access centers and Reduction of cost of access to information and communication services. That goal (building Egypt's information society) has been the chief objective of the Ministry since its creation, as it launched the Free Internet initiative at Cairo Telecom 2002, and adopted an equally ambitious project that of "*PC for Every Home*".

[19]**The National Plan For Information And Telecommunications Development:** The Ministry of Communications and Information Technology (MCIT) proposed the "National Plan for Communications and Information Technology". The plan is Egypt's blueprint for the future, mapping out projects aimed to achieve successive leaps in the ICT sector

Indicators show the rise of revenues of IT and communication sector to L.E. 9.6 billion in the period of April-June 2008 compared to L.E. 8.3 billion in the same period of the previous year and at an annual growth rate of 16%.

4.7.1. Electronic Government Program

The E-Government is an advanced system that aims at promoting the efficiency and quality performance of the economic and government bodies, companies and banks. It started in 2001, aiming at providing high standard service to citizens and investors, overcoming red tape through making the government services available as soon as needed to everybody wherever he is. A government portal on the internet is being launched, allowing citizens to have certain transactions processed.

In 2007, the experimental operation of the purchases gate in the E-Government was triggered. The goal of this initiative is to reach a new level of convenience in government services, offer citizens the opportunity to share in the decision making process, and greatly improve efficiency & quality.

In 2010, The Egyptian minister of state for administrative development announced that 200 government services will soon be available online through a new e-government portal. The portal will offer 70 services in both English and Arabic. According to the Ministry for Administrative Development, more than 20 government agencies currently offer services and licenses online.

Cultural and Natural Heritage Documentation Center

Established in the smart village in 2004, it is considered the first of a kind in Egypt. It aims at promoting the public awareness of Egypt's cultural and natural heritage by submitting the information technology tools in order to document this rich heritage of Egypt.

"*Eternal Egypt*" website is one of ten distinguished programs administrated by the center. These programs are:

1. Egypt's Archeological Map
2. Egypt's Architectural Heritage
3. Egypt's Natural heritage
4. Egypt's popular heritage
5. Egypt's musical heritage
6. Egypt's Photographic memory

7. Islamic scientific heritage
8. Manuscripts
9. Heritage panorama & Joint international projects

It is worth mentioning that "*Eternal Egypt*" project won the Universal Top Prize for information in Tunisia in 2005 as it is considered a vivid record about Egypt's history, people, places and religions and arts related to it.

UNESCO Award for The Heritage Documentation Center

Due to its distinguished role on the international arena, the cultural and natural heritage documentation center won the UNESCO Award for its role in preparing a file about As-Sira Al-Hilaleya "*The Helal's Biography*". This biography was added to the UNESCO list for the international moral heritage.

The center participated in several exhibitions and conferences such as "*the international heritage conference*" held in Alexandria in cooperation with the UNESCO.

Information and Communication Technology Advanced Performance on The World Level in 2008

Communication and information technology sector's advanced performance in 2008 gained an unprecedented world appreciation. The most significant of such achievements are as follows:

- The development and economic co-operation organization announced in 2008 that Egypt has officially joined the information technology and communication committee affiliated to the organization.
- Over recent years the communication sector has succeeded in attracting a number of major international companies in this field to operate in the Egyptian market.
- Egypt in fact has achieved a remarkable progress pertaining to the indicator of network availability issued by The World Economic Forum in Davos.
- Egypt hosted Africa telecom exhibition in May 2008 which is organized by the international federation of communications.
- The Egyptian telecommunication company won the award of the best fixed line operator in the Middle East by Comms Mea Organization.
- Egypt ranked first in the international competition for electronic content in the electronic education among 16 competing countries.

- In El-Maadi, the implementation of the first new technological zone was started as the first application of the amended investment law of 2007 pertaining to technological zones.
- Egypt launched the first electronic gateway to informational technology and communication indicators in Egypt in cooperation with Microsoft cooperation.

More Developed Postal Services

The affiliation of the Postal Authority to the Ministry of Communication and Information Technology contributed to upgrading its services and introducing it with more efficiency and activity. The Electronic Data Interchange (**EDI**) was introduced, thus providing secure exchange of electronic documents among users through the central unit for communication (EDI SWITCH). This contributes to finding reliable various applications of E-Business, E-Commerce and E-Government systems.

The first phase of the project of creating a modern digital communication network for the Postal Authority was opened in 2003 with total investments of LE 1 million as a new step to link all offices in Egypt together with the main centers. According to the world rating of the average mail transport time between Egypt and the outside world, Egypt was classified under the first category.

Postal Service… An Increase in Post Offices and Savings in 2007

The National Postal Authority witnessed several achievements during 2007, salient of which: Number of post offices increased to 3,591, number of automated post offices increased to 750 and the savings in the Saving Fund increased to about LE 50.1 billion.

Implementing Phase II of Automating Postal Offices

In cooperation with the Postal Authority, the Ministry of Communication and Information Technology had prepared an executive plan for the second phase of linking the postal offices with a unified network through which all the state-of-the-art financial and postal services are provided. This phase is a pivotal turning point in the modernization process of the Egyptian postal sector as it includes extending and automating all services to more than 2500 postal offices in villages and remote areas. The first phase of such a plan included 600 offices and was successfully implemented in 2004.

Electronic Archive Project

This project is an electronic method to store the documents of companies and industrial establishments participating in the project. Within one year during its first phase, the project is providing 1000 job opportunities. The National postal Authority has finished storing all documents of the postal Authority and putting them in archives.

In the meantime documents of Egypt Tele-Communication Company are being stored in a step to expand the project to spread all over Egypt.

Mobile Offices

It is a new attempt applied by the postal Authority within recent development which converted the authority from an authority for services to an economic authority and from a fixed to a mobile authority that can reach out to clients wherever they were 20 more mobile offices are under way to spread the project all over Egypt.

Postal Authority Social Services

The postal authority offers a group of postal services; these services are offered in coordination with the parties concerned with these services.

Among these parties the ministry of social solidarity, insurance and pensions as the pensions of 3 million pensioners were paid and delivered to their residence. There are bother various services like housing project "*Build Your House*" and "*Housing of Low income Categories*" and taxes. Thee stands of the postal authority are being used to give the documents of these projects to citizens who ask for them.

700 Electronic services

The postal authority is able to provide the needs of the citizens through the internet. 700 electronic services are offered to citizens among which are: inquiries and interrogations in addition to the services of real-estate, traffic and courts.

4.7.2. Establishment of free zones and ICT parks

This initiative is designed to foster the creation of an export-oriented ICT industry. The development of an ICT industry can be a powerful engine for export growth and job creation. (**UNIDO**, 2007)

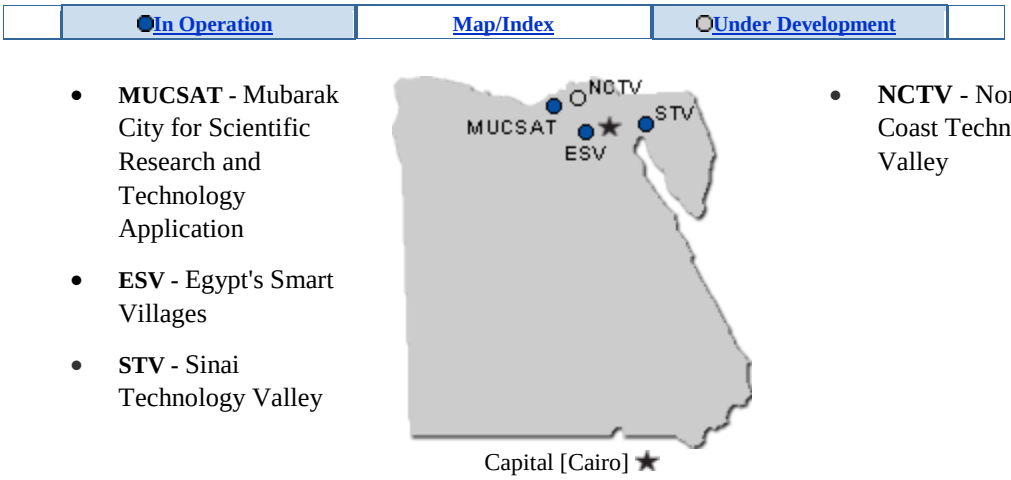


Figure 4.12: Locations of Technological parks in Egypt

In this section, the main ICT parks and incentives in Egypt shall be presented briefly, however, a detailed description is provided in appendix 6.

These are mainly:

1. Mubarak City for Scientific Research and Technology Applications (MuCSAT)
2. Egypt's Smart Village (ESV)
3. Sinai Technology Valley (STV)
4. Northern Coast Technology Valley (NCTV)
5. Alexandria Telecom Free Zone

Mubarak City for Scientific Research and Technology Applications (MuCSAT)

Mubarak City for Scientific Research & Technology Applications (MuCSAT) is the newest addition of research institutes in Egypt that was directed to the development and renovation of industry. A decision to develop a science park in the Alexandria region was reached in 1993 in order to acquire and improve scientific technologies in different areas of human life.

Figure 4.13: The main building in Mubarak City for Scientific Research and Technology

MuCSAT is located at New Borg El Arab City, west of Alexandria & occupies 250 acres in the industrial area.

It is engrossed to both scientific researches & application of technologies. This is the foremost spirit that distinguishes the city from other scientific research in Egypt.

Moreover, the technology centers in the city are unique in their aim to spread the modern technology application and to provide the training in order to develop small industry and develop new jobs which is the leading concern of the government. (**MuCSAT**, 2010)

Egypt's Smart Village (ESV)

Figure 4.14: A Maquette showing the Master Plan of the Smart Village

Founded in 2001 to lead and foster branded chain of Technology clusters and Business Parks on the local and regional level. Smart Villages Company is a successful model of "*Public Private Partnership- PPP*" investment model, with 80% ownership to the private sector and 20% to the Ministry of Communications and Information Technology.

Smart Village Cairo was launched in 2003 as the first fully operational Technology Cluster and Business Park in Egypt that accommodates Multinational and Local Companies, Governmental, Financial Authorities and Organizations, as well as Educational Institutions and Research & Development Centers all of which share the sophisticated state of the art infrastructure, up to date facility management and a full range of business and recreation services.

It offers a thriving environment full of innovative spirit & a growing number of business services to assist their business process, in addition to top notch services and facilities including a nursery, School, Club, Restaurants, clinic and a number of business support services.

By 2009 Smart Village hosted more than 28,000 professionals in more than the 120 companies in the park & is expected to host more than 500 companies and more than 100,000 employees by 2014.

Smart Villages Company is expanding its presence, experience and know how in different locations locally and internationally, with a concept plan

for Smart Village Damietta Business and Logistics Park, and Smart Village Alexandria Business Park, this as well as the Smart Villages Company's Franchise and consultancy Services. (**ESV**, 2008)

Sinai Technology Valley (STV)

The Sinai Technology Valley is one of the major techno-poles projects for socioeconomic development in Egypt. It is located at the northwestern access to Sinai Peninsula, on the east bank of the Suez Canal within the territorial jurisdiction of Ismailia governorate, covering an area of 72 square kilometers.

The "*Technology Valley*" project will be implemented in five stages, in which the investments in the first stage amounted to nearly 500 million Egyptian pounds. It focuses on ICTs, Microelectronics, Biotechnology, New materials, Fine tools, and Renewable energy. (**Technology in Egypt**, 2008)

Northern Coast Technology Valley (NCTV)

This proposed techno-pole is still at the study stage. The project is being considered by Alexandria Governorate, the Ministry of Higher Education, and the Ministry of State for Scientific Research and the Social Fund for Development.

Alexandria Telecom Free Zone

Egypt is in the process of establishing the first transit telecommunications free zone. Located in Alexandria, the free zone will offer co-location services, managed services and application services via the *'Telecom Hotel'*.

In 2010, Egypt's Ex-Minister for Communications, Information and Technology **Tarek Kamel** announced that the government would launch a new innovation strategy.

The new strategy will mirror initiatives such as the recently established entrepreneurship and innovation centre in Smart Village, as well as the Technology Cluster and Business Park. The aim behind the strategy is for Egypt to move up the value chain from basic business process outsourcing (**BPO**) and call centre services.

4.7.3. Youth and Community Development Programs

ICT is a complementary tool for higher standards of education at all levels and for upgrading the skills and productivity of the citizenry.

This initiative aims to promote the use of ICT in education and to develop a new generation of citizens who understand and are comfortable with the use of ICT in their daily lives.

The IT Boom that took place in Egypt during the past few years and the success of the Egyptian graduates' project which led to an IT skill upgrade for Egypt's graduates and Human resources were among the factors for choosing IBM Egypt to build the "*Knowledge Factory*".

IBM Egypt knowledge factory is the 14th unit worldwide and the first unit in Middle East and Africa. The unit is designated to be the core of the development and export of e-learning content for IBM in the Middle East and Africa.

The development of the content requires efficient professional teams to handle the technical design, development and analysis of the content, assigning experts for Software and multimedia development and using a team for quality monitoring and assurance according to international standards. This is achieved through partnering with "*Subject Matter Experts*" who take the responsibility of preparing the course material, and the "*Knowledge factory*" team handles the development of the required content using latest technologies.

"We are so proud for being selected to establish the "knowledge Factory" in Egypt, that is considered one of the Egyptian Graduates Projects fruits, which is a part of the plan framework of the ministry of communications and IT to train the graduates on latest e-business technologies and software development" said Eng. Amr Tawfik, General Manager, IBM, Egypt.

"This unit will avail employment opportunities for the graduates, and as a start, we will recruit 25 specialists" he added.

The "*knowledge factory*" is a new addition to the efforts exerted by Cairo Technology Development Center (**TDC**) of IBM Egypt which focuses on software and skills exports in order to contribute to the development and advancement of IT industry in Egypt.

Moreover, The former Minister of Communications and Information Technology Dr. **Tarek Kamel**, has sponsored the call center training initiative, which provides international high level training for call center agents, supervisors, and personnel.

4.7.4. Increasing Number of Public Access Centers and Reduction of Cost of Access to Information and Communication Services.

In the framework of the technological advancements in communication, the free-of charge Internet services were launched in January 2007. (**Egypt State information Service,** 2007)

In order to make the transition to E-Egypt, the Telecom Regulatory Authority (**TRA**) licensed several companies to build and operate CIT infrastructures that provide data services such as IP, DSL and frame relay. The goal is to help private Internet and data communications providers extend data communications and free Internet services throughout Egypt, bringing the establishment of E-Egypt closer.

In this regard, Egypt's IT spending is expected to increase from US$1.4bn in 2010 to US$2.6bn by 2014. BMI forecasts that Egyptian IT market growth will remain below pre-economic crisis levels in 2010. Growth is expected to bounce back in 2010/2011 as the external and public sectors lift the Egyptian economy, but unemployment and the threat of inflation could act as an inhibitor on spending. (**BMI**, 2010)

Telephone Services… Wide spread in Cities and Villages

Telephone services are widely spread all over Egypt. Fixed line subscribers increased to 11.4 million in October 2008 up from 11.045 million in May 2007 at an annual growth rate of 3.9%. Telephone exchange capacity increased to 13.960 million lines in 2008 compared to 717 million lines in 2007 with an annual growth rate of 1.8%

Within the framework of this development, Egypt has witnessed the spread of cell phone service at an unprecedented rate. In 2008, the number of cell phone subscribers rose to 39.147 million up from 27.787 million in the same period of the previous year at an annual growth rate of 40.9%.

Giving access to the intelligent network which offers ADSL services contributed much to providing more free of charge services thus increasing number of ADSL connections to 603.6 thousand in 2008 compared to 366.8 thousand in the same period of the previous year at an annual growth rate of 64.5%.

Internet Rise In The Number Of Subscribers

In January 2002, Ex-President Mubarak gave the go-ahead to the free of charge internet as a pilot initiative all over the world which contributed to increasing the number of internet subscribers to reach 76 million in 2008 up from 8.01 million in the same period of the previous year at an annual growth rate of 47% users of free of charge internet that constitute 48% of internet network users.

The international internet capacity rose to 27,077 million pulses / second by the end of October 2008 up from 14,556 million pulse / second in October 2007 at an annual growth rate of 93.5%.

IT Clubs… Computers and Internet for All

Due to the keenness on increasing the social IT awareness and providing computer and internet services for the whole society, the IT clubs were established.

The number of these clubs reached 1771 by October 2008 up from 1556 in October 2007. Such clubs are open areas in the youth centers, public libraries, civil society's headquarters, cultural palaces, information centers, schools and universities.

The clubs are equipped with computers and internet so as to provide low-cost services to youth and children in all cities and villages especially in poor and remote areas.

The Major part of these clubs lies in Upper Egypt at a rate of 24% of the total number of the clubs in Egypt.

PC for every Home

Nevertheless, portable computers supplied by four international companies including Toshiba, IBM, Compaq & Siemens are offered in the first stage of the "*Portable Computer for every Professional*" initiative.

The total unit price stands at about L.E. 9,000 - 10,000 ($1500). The deal will only be guaranteed by the commercial telephone line (of the company) & the commercial/ professional register of the line owner. Monthly installments for the new computers will only range about L.E. 250-300 ($50); but a down-payment representing 20% of the total price will be also required. Banque Misr (the leading Egyptian bank) is the lead financer of the initiative.

Targeted under this initiative are businessmen, Medical Doctors, Architects, Journalists, Accounting Firms, Etc… Meanwhile a committee at the ministry is said to continue reviewing applications of other companies to join the initiative.

All computers sold under the initiative would be exclusively imported & companies included in the initiative need to guarantee their disposal of a branch and a maintenance & service center in the country.

Meanwhile, under the "*PC for every Home*" sister initiative also promoted by MCIT; some 15 Egyptian IT companies are now licensed to supply PC to Egyptian household under the umbrella of the initiative that is also sponsored by Telecom Egypt & Banque Misr.

Egypt as a global call center destination

Moreover, Egypt is strongly emerging as a global call center destination, with a highly competitive industry offering a combination of operational expertise, people skills, cutting-edge technology, and competitive pricing schemes, and with a government committed to supporting and booting the industry, Egypt is moving steadily towards becoming one of the world's most attractive call center destinations.

The progress made in the CIT sector has made Egypt the choice of many Multinationals, on the call center industry; many multinationals have chosen Egypt to be their call center destination either through outsourcing their business to existing call centers or through opening a branch for their operations in Egypt.

Egypt is positioned to host state-of-the-art customer service call centers. Egypt's telecommunications infrastructure (network), combined with its highly trained IT professionals makes the country ideal for operating international customer service call centers. The creation of international call centers based in Egypt and serving international markets in fields such as travel information, banking services, and IT services, is just one of the opportunities possible.

The Competitive edge of the call center industry in Egypt is the direct result of many factors some are related to Egypt's' social and economic environment and others that have evolved and excelled with the emergence of the call center industry.

In 2010, a number of factors help IT spending growth, including new hardware and software upgrade cycles as well as sales of Microsoft’s new Windows 7 operating system. Economic recovery, tenders delayed from 2009 and higher incomes boosted by pay raises for civil servants and other groups should help to keep IT sales on an upward trajectory.

4.8 THE INNOVATION IN THE AREA OF PARTICIPATION IN EGYPT

Over the past decades, Egypt has witnessed a major technological development and an outstanding revolution in the domain of communications.

There are limitless Information Technology and telecom investment opportunities in Egypt. Not only the government invests in the nation's infrastructure, but it also creates a strong human base by investing in the nation's youth. New generations of Egyptians are now receiving a quality education and have plenty of opportunities for skills development and professional training.

However, despite the excitement about the potential of using the Information and Communications Technologies (**ICT**) to promote more efficient and effective government services and allow greater public access to information, the innovation in the area of participation has been limited to facilitate individual communication (e.g. email) to government officials. Despite advances in teleconferencing, the subtle aspects of face-to-face interaction cannot be easily substituted.

Moreover, although access to the Internet has grown considerably in Egypt, access remains unequally distributed among the country; not all the Governorates of Egypt enjoys the same ICT services.

The main challenge that should be addressed is the digital divide within the country itself, with more than 60% of Egypt’s population lives in rural areas, the language barrier (Arabic contents and Arabic Domain Names), literacy rates, limited connectivity, awareness, in addition to telecommunications infrastructure, can consist a strong barrier for Planners to use technology in planning process.

The next chapter aims to evaluate and assess the experience of involving the public in the planning process within the frame of new technologies such as the GIS in one of the Low Rate Category of Internet Users in Egypt, i.e. an average Egyptian village.

It comments on how advanced technologies and internet based programs can be fitted in the framework of the planning process to overcome the drawbacks and consequently enhance the public participation.

4.9 CONCLUDED REMARKS

Even though IT diffusion has been proven to have significant spillovers on the world economy, these benefits have not appeared to be evenly distributed among countries. In fact, effective usage of IT equipment requires many other complementary investments including factors like human capital and the provision of a reliable telecommunication infrastructure which many of the developing countries still lack.

The '*digital divide'* commonly refers to the gap between those with access to ICT and those without; yet, many factors besides physical access contribute to these disparities, among which are:

- Strong Governmental Support
- A Suitable Legislative and Investment Environment
- A State of the Art Infrastructure and Investment in Human Resources

Even in developing countries with relatively high net ICT uptake, ICT is still out of reach of many groups, this is due to:

- **Lack of appropriate products:** products are often not designed to meet the needs of the poor, or those in remote areas. These groups can face constraints such as access to electricity (lacked by two billion people worldwide).
- **Cost:** roughly half the world lives on less than four dollars a day. Many potential users are too poor to afford any form of access to ICT.
- **Education:** even where there is physical access to ICT, many people do not have the technical skills needed to benefit from them.
- **Language**: Poor literacy is a problem with ICT such as the internet. Of those who can read, many know only a local language, while the internet is dominated by English-language content.
- **Human resources**: As in many sectors, the migration of skilled ICT professionals from developing to developed countries contributes to a lack of human resources to support ICT.
- **Lack of robust regulatory framework** for ICT can limit uptake.

However, many factors could contribute to bridging the digital divide. National governments, NGOs, industry and international donors all play a role, often work together.

Moreover, latecomer advantages enable developing countries to benefit from the rapidly decreasing prices of IT equipment resulting from technological innovations and R&D conducted by the developed world.

Also, using open source software which is provided for free on the Internet, in addition to importing used or low-specification computers are all considered low cost options that developing countries may benefit from.

Focusing on **Egypt**, as a leading country in North Africa & in the Arab World in the use of information technologies for governance, Egypt has witnessed a major technological development and an outstanding revolution in the domain of communications.

Not only the government invests in the nation's infrastructure, but it also creates a strong human base by investing in the nation's youth. New generations of Egyptians are now receiving a quality education and have plenty of opportunities for skills development and professional training.

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CHAPTER 5

ICT4D of El-ZWAMEL VILLAGE

CHAPTER 5

ICT4D of El-ZWAMEL VILLAGE;

Preparing a Strategic Master plan for Egyptian villages

5.1. INTRODUCTION

Over the past decades, Egypt has witnessed a major technological development and an outstanding revolution in the domain of communications. However, although access to the Internet has grown considerably in Egypt, access remains unequally distributed among the country; not all the Governorates of Egypt enjoys the same ICT services.

The main challenge that should be addressed is the digital divide within the country itself, with about 60% of Egypt's population lives in rural areas[20], the language barrier (Arabic contents and Arabic Domain Names), high literacy rates, limited connectivity, limited awareness, in addition to poor telecommunications infrastructure, can consist a strong barrier for Planners to use advanced technologies in planning process.

This part represents the empirical part of the study. The study hereby tests the hypothesis with reference to a recent Case Study; the National Project of Preparing a General Strategic Master Plan for the Egyptian Villages; specifically, the Village of El-Zwammel, El-Zwammel County, Belbes center, El-Sharquia Province; an average Egyptian village represents those with the lowest level of access to Information and communication technologies in Egypt.

The study introduces the Project background, objectives and methodologies and briefly presents El Zwammel village, registers the involved stakeholders and reviews the stages of generating the Strategic Master Plan. It then conducts a comparative analytical assessment between the two methodologies undertaken to generate the Indicative Master Plan of El- Zwammel village in 2002 and the Strategic Master Plan in 2006 starting from the data collection and up to the generation of the final Strategic Master Plan.

[20] The 1996 census counted 57 percent of Egypt's population as rural, including those residing in agricultural areas in the Nile Valley and Delta, as well as the much smaller number of persons living in desert areas. Rural areas differ from the urban in terms of poverty, fertility rates, and other social factors

With reference to the Ideal Type & Best Practices of Public Participation Planning Programs previously introduced in chapter 3, the study evaluates and assesses the experience of involving the public within the frame of GIS technologies and its impact on improving the efficiency of public participation, highlighting both the positive outcomes and the drawbacks.

In order to examine the possibility of using more advanced technologies in such society, a quick field survey was conducted to assess the technological level that already exists in the village. The study then tailors the use of technology that best fits the society in the different stages of planning process and examines its ability to overcome the drawbacks & consequently enhance the public participation planning process.

It's worth mentioning that El-Zwammel Village was specifically chosen for three main reasons:

1. It is considered a society that represents those with the lowest level of access to Information and communication technologies in Egypt; i.e. an average Egyptian village. The success of using ICT in the framework of the planning process in such society shall guarantee its success in higher levels of social communities.

2. The Master Plan of this village was generated twice by using two different methods; the Indicative Master plan generated in 2002 using the evaluation criteria by professionals in the physical planning, and the Strategic Master Plan generated in 2006 using a participatory planning within the GIS framework. The difference in the outcomes of both Master Plans was quite distinguished which clearly reflects the impact of involving the public within the frame of new technologies on improving the decision making in urban development processes.

3. As per the Report of the effectiveness of participation prepared for this particular village, the experience of public participation in the planning process of El-Zwammel village was considered positive at the level of all stages of the process unlike most of other town and villages. Accordingly, can be set as a good example to highlight the importance of public participation and stress on their involvement throughout the different stages of the planning process.

5.2. THE PROJECT BACKGROUND

The National Urban Development policy in Egypt has aimed at invading the deserts by constructing new cities and urban settlements since the late of the seventies. However, this trend didn't prevent the continuous random sprawl on the agricultural lands that resulted in the waste of more than 1.5 million feddans by year 2005 of vital high productive cultivated area. Accordingly, the recent National Urban Development policy has focused on managing the urban sprawls by using the scattered vacant land within the built-up area that appeared as a result of the random urbanism; free spaces, interspaces and urban pockets, to direct the urban expansion and put an end to the long-term conflict between the authorities and the abuser of the agricultural lands. Also, propose a new corporate limit that identifies the urban growth boundary of the village.

Moreover, it plans on the foundation of 400 new villages at the sides of the valley and delta, to absorb the speculated population increase of the nearby cities and villages after the year 2022. However, by analyzing the Egyptian villages' current situation, various problems were found that constrain the development; the most important of which are:

- **The abusive urban expansion** over more than one million feddans of cultivated area damaging vital economic resources as well as the rural society;
- **The absence of an effective urban administration as well as a clear urban growth boundary** create different negative social aspects;
- **Ineffective urban planning** due to the lack of a detailed frame work for communities that identifies the action priorities according to each village or town.
- **Irrigation channels and underground water pollution and the solid wastes bad management** which represents a permanent inconvenient for the habitants.

Consequently, the national authorities and institutions mobilized their efforts to implement the Government program target of preparing general strategic master plans for villages comprising:

- *Villages priorities identification*
- *Urban borders of the villages*
- *General economic, environmental and social policies determination*

5.2.1. The Project Methodology

In 2002, a methodology was adopted that depends on an assessment context. Through data collecting and basic field work surveys, the study team identified the main insisting needs and problem issues of the village and demonstrated the threats and weaknesses that encountered the development process. Consequently, they suggested projects and activities (either to improve the existing or implement new ones). Finally, they generated the Indicative Master Plan that demonstrated the improvement scenarios adopted, and carried out the study outcomes by using CAD packages & some auxiliary programs such as Photoshop & PowerPoint.

Afterwards, the General association for physical planning developed the strategy in January 2006, and planned to use a methodology based on a participatory context. It strengthened public involvement in all aspects of the planning process, and enhanced the sense of "*unified front*" between all development partners and stakeholders in order to realize the common vision into an existing reality.

The methodology undertaken focused on using the assessment evaluating technique. Where asking local people, collecting basic data as well as making fieldwork surveys were the means to demonstrate the main problem issues in the village and identify the threats and weakness that obstacles the efficiency of the developing process.

In addition, graphics and maps were generated by the aid of geographical information system GIS and was connected to a specific database. Identifying main problem issues and prior projects and activities were according to local partners' point of view along with the study team's suggestions, public meetings in all its shape (questionnaires, meetings, workshops…..etc.) were the method adopted to achieve that so that all different visions and issues should be involved in order to be then analyzed and concluded as an approach to prepare the general strategic master plan that demonstrates the improvement scenarios and development strategies.

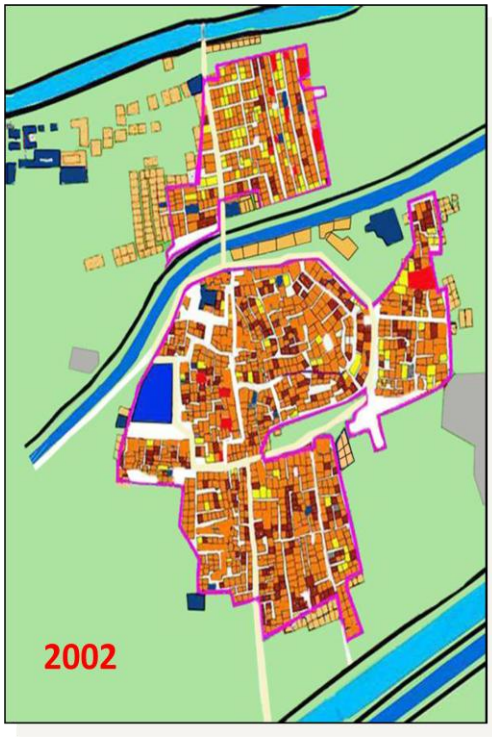


Figure 5.1: The Indicative Master Plan prepared in 2002 for El-Zwammel Village. (**GOPP,** 2008**)**

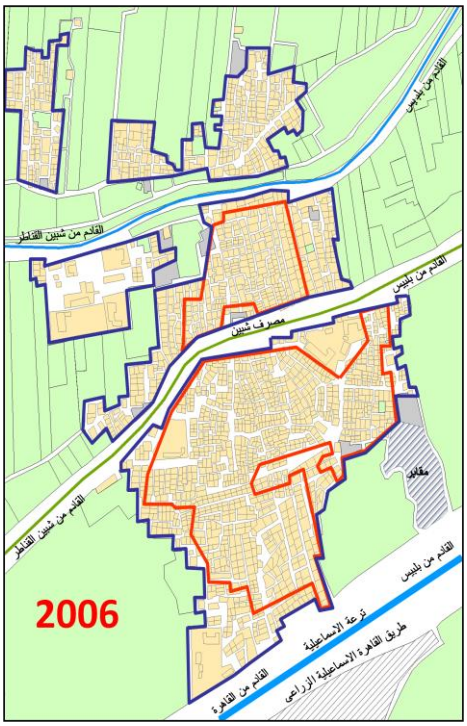


Figure 5.2: The Strategic Master Plan prepared in 2006 for El-Zwammel Village. (**GOPP,** 2008**)**

According to **GOPP** TOR (2006**),** The Strategic Master Plan was prepared in reliance to:-

I. *<u>Identifying Public Needs and Problem Issues.</u>*

Through analyzing and assessing the existing situations, discussing it and agreeing upon the activities related to issues and which fulfill the main insisting needs of the villages' level of the local administration unit.

Also the distribution of the roles and activities on the main village and the subsidiaries, and consequently set an agreement on the overall improvement scenarios which takes place in the first public meeting at the villages' level of the local administration unit.

II. *Identifying Local Problem Issues in the Villages at the Level of the Local Administration Unit.*

Also goals and different alternatives and possibilities of placing prior project as well as the border limit to the urban expansion.

Urban policies, and set the agreements in the workshops with the local people at the villages' level.

III. *Preparing the Final Strategic Master Plan to all Villages that belong to the Local Administration Unit as well as the Detailed Framework.*

This identifies the roles, resources and responsibilities of the local partners. Discussed in the final public meetings with the local community of the local administration to set the final agreement and collaborate in achieving its implementation in the presence of a representative of the general organization of physical planning. (But the executive responsibilities will be on the local unit later on).

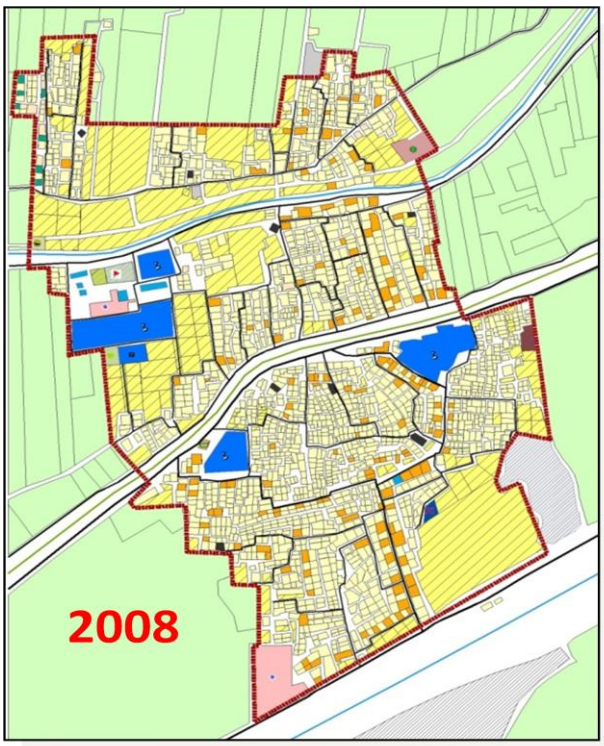
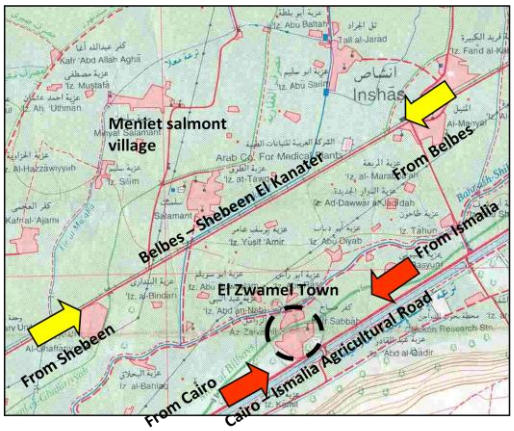


Figure 5.3: The Final Strategic Master Plan prepared in 2008 for El-Zwammel Village. (**GOPP,** 2008**)**

5.3. EL-ZWAMMEL OVERVIEW

The county El-Zwammel consists of a main town called El-Zwammel, two other hamlets called Meniat Salamont, and Basateen El-Ismaillia (El-Rwashda) as well as about 29 subsidiaries. It is located in the southern part of the center Belbes, and it can be reached through either the regional highway Cairo-Ismaillia, or Belbes-Shebeen El-kanater.



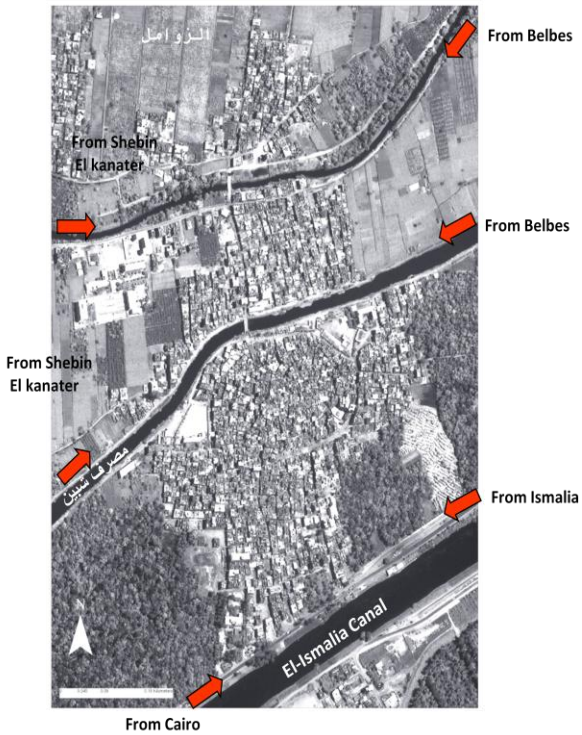


Figure 5.4: El-Zwammel Village Overview. (**GOPP,** 2008**)**

The town El-Zwammel is subsided by 29 clusters, in a confined that reaches approximately about 2,475 feddans. The population scattered among the main town and its subsidiaries is about 21,773 person in the year 1996, where as it reaches 9,864 person in the main built-up area of the town, and about 11,909 person in the subsidiaries. More details are provided in appendix 7. (**GOPP,** 2010**)**

5.3.1. Stages of Growth

THE STAGE	THE PERIOD	TOWN AREA	THE ADDED AREA
FIRST	1950	20.62 FEDDAN	_____
SECOND	1985	37 FEDDAN	16.38 FEDDAN
THIRD	2002	84.33 FEDDAN	47.33 FEDDAN

Table 5.1: The Stages of Urban Growth in El-Zwammel Village. (**GOPP,** 2008**)**

5.3.2. The Socio-Economical Studies

I. The percentage of Unemployment

Unemployment decreased gradually from **7.5 %** in **1976** to **4.1%** in **1996**, and then witnessed a remarkable increase to reach **9.4%** in **2006** specifically among the graduates of high school and colleges. (**CAPMAS,** 2008**)**

II. Population

The Number of population reaches **28 501** in **2006**, while the annual growth rate of population decreases from 3.13 in 1976 to 2.18 in 1996. (**CAPMAS,** 2008**)**

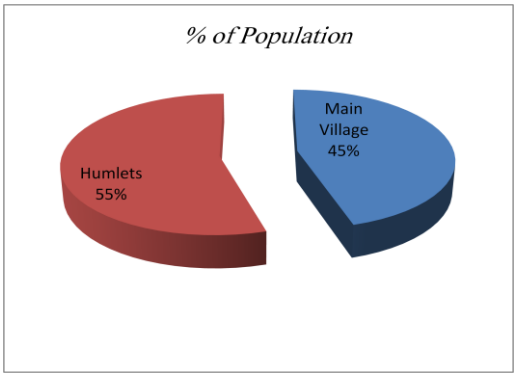


Figure 5.5: the Distribution of population between the main village & the surrounding humlets. (**CAPMAS,** 2008**)**

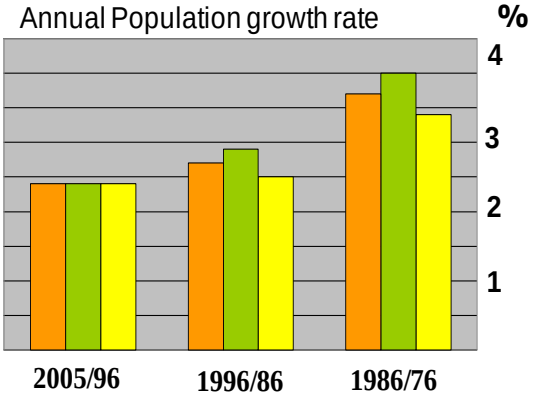


Figure 5.6: the Annual Population growth rate. (**CAPMAS,** 2006)

III. *The Percentage of Illiteracy*

It decreases from 71.6% in 1976 to 48.5% in 1996, to reach **37.5 %** in **2006**

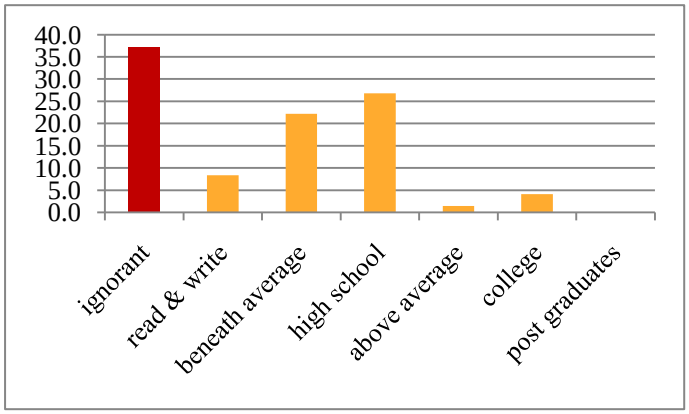


Figure 5.7: The Educational Categories in the Village. (**CAPMAS,** 2008)

IV. *The Percentage of Women contribution in the Work Force*

It increases from 2.2 % in 1976 to 4.1% in 1996, to reach **7.1%** in **2006**.

V. *The Work Force*

Most of the work force works in agriculture although this percent is gradually decreasing from 71.2% in 1976 to 40.9% in 1996, to reach **39%** in **2006**

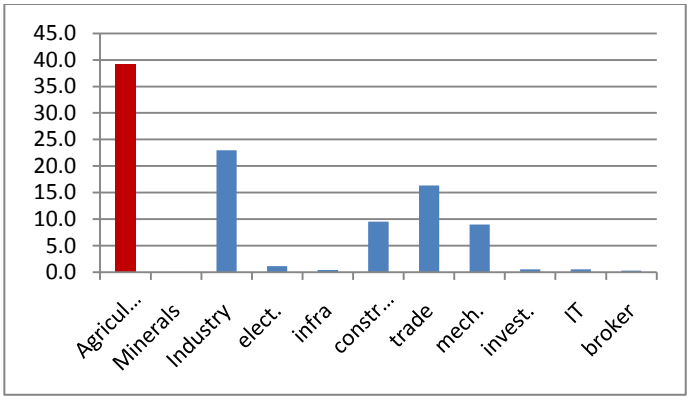


Figure 5.8: The Distribution of the Work force in the Village. (**CAPMAS,** 2008**)**

5.3.3. The Distinctive Features

It shows a clear diversity between the old downtown and the new recent one; where the old one is characterized with its spontaneous dispersal pattern, while the new one expands to a great extent in a geometric form pattern.

In the middle of the old downtown exists the main public space with public telephones as a distinctive feature. Also, The Shebiny-canal interprets the built-up area in the northern part, where as the Ismaillia canal restricted it from the south.

Moreover, most of the buildings are being rebuilt with reinforced concrete and red-blocks and rises up to one or two floors.

Figure 5.9: Some photos that represent the distinctive features of the village. (**GOPP,** 2008**)**

5.3.4. The Problem Issues

Urban Problems

1. The urban intervening of the rural areas.
2. The unsuitable building heights in contrast to the size of inner roads of the village.
3. The deteriorated physical conditions of some residential areas.

Infrastructure Problems

1. The inefficiency of the inner road system especially in the old downtown.
2. The absence of night lightening.
3. The absence of parking lots
4. The deteriorated conditions of the main entrances of the village.

Environmental Problems

1. The dissemination of garbage, agricultural and solid wastes through the village and in its surroundings.
2. The contamination of sewers
3. The deteriorated conditions of the built-up environment.

Figure 5.10: Some photos that represent the deteriorated environmental conditions of the village. (**GOPP,** 2008**)**

5.3.5. The Obstacles and Restrictions

Natural Restrictions

The Shebiny canal interprets the built-up area in the northern part, where as the Ismaillia canal restricted it from the south, besides the presence of the surrounding rural areas. (**GOPP,** 2010**)**

Urban Restrictions

1. The main and secondary entrances of the village
2. The public service buildings inside & outside the corporate limits.
3. The good and average buildings that raise more than two floors.
4. The suggested corporate limit to the village.

Socio-Cultural Restrictions

It is represented in the presence of the summitry area in the southern part of the village

5.3.6. The Potentials

Urban Potentials

1. Buildings of good physical conditions that can be further elaborated to upgrade the built-up environment.
2. Areas with average physical conditions that can be further developed and upgraded
3. The existence of inner free spaces.
4. The buildings with deteriorated physical conditions that can be restored with new ones

Lawful Potentials

The permission to the increase of the population density inside the built-up area from 150 up to 250 person/feddans (**GOPP,** 2010**)**

5.4. DISTRIBUTING ROLES AND RESPONSIBILITIES

5.4.1. General Organization for physical planning (GOPP)

1. Prepare the required term of references, making contracts with local agencies and consultant offices, sending manned letters and schedule the procedures into an accurate time-frame
2. Provide all required digital topographic maps
3. Organize a main committee that subscribes into three other secondary committees

Support committee

It supports all the procedures of contracting and all technical administrational issues, as well as explaining all the clarifications.

Follow-up committee

It follows up the recite of the results of each phase, to ensure that the time schedule is applied and followed.

Assessment committee

It evaluates, assess, imply strategies, and assess the efficiency of participation of the local community in decision-making process.

5.4.2. The Study Team

1. It performs all the preparation, and procedural steps, in order to prepare the strategic master plan of the local administration unit and subsidiaries. Basically according to the contract's conditions and the approved term of reference submitted by the general organization of physical planning.
2. It tends to organize the required study team so that it involves the economical, environmental, social, urban sectors. As well as scheduling the required work in an accurate time frame.
3. It is also responsible of collecting all basic and secondary data and information regarding the main village and the subsidiaries. It also studies all the transportation methods as well as all other available connections.

4. It organizes the local partners' group members as representatives of the main large families of the village as well as suggests the methods and techniques suitable for their collaboration.
5. Determining the requirements regarding the time frame schedules, communication and transportation methods, natural resources. As well as manage and organize public meetings and workshops.
6. Prepare and deliver all the required work regarding the project and according to the required method and form.
7. Support and encourage the local administration and local people to propose alternatives of financial funding within local means and resources.

5.4.1. Local partners

Local partners (members and organizations) should be committed to the collaboration in decision-making process through public interviews, meetings and workshops as well as participating in the urban planning group (study team).

It also contribute in facilitating the work generally and the public meetings specifically.

They also participate in identifying problem issues and other priorities. They even suggest and organize the role of members and determine their contribution in funding and implementing the projects and activities depending on the concept of self-funding.

It is classified into;-

Local Administration

It consists of the chief member and the employees in the local administration unit as well as other related sectors in governmental organizations. It implements and follows up the improvement scenarios as well as facilitates the collaboration between the participants.

Moreover, it supports and cooperates with the study team in order to facilitate the procedures as well as delivering all required information and contributions. It supports financial funds either by central funding, donations, or through natural resources.

Public Residents

It consists of local public committee members as well as the representatives of the main large families. They enhance the self-efforts, donations, and contribution either with land, effort or money. They also support families with special needs.

Local Agencies

It is represented by non-profit groups that tend to support those with special needs and don't seek profit gains.

Private business sector

Basically are represented by land owners as well as the owners of some private small projects in the village. However, the small size of the projects as well as the chances of investments without any organization has a great effect on the efficiency of the role of this group.

5.5. STEPS OF PREPARING THE FINAL STRATEGIC MASTER PLAN

The methodology used in the preparation of the project of upgrading the Egyptian villages in the year 2002 had relied on using the evaluation criteria by professionals in the physical planning.

Through collecting statistical data and field work surveys, they could identify the main problem issues and the restrictions and obstacles that confront the development process.

Then propose activities and projects and consequently generate the general master plan that expresses the suggested development strategy and the prior projects.

Also all maps had been prepared in reliance to a topographic map of the village where the corporate limit of the year 1985 is clear, and is updated by site surveys, while CAD packages were used to generate it along with a presentation program such as PHOTOSHOP.

However, this method ignored the importance of public participation in all the development process and decision making and lacked a local detailed vision to issues of prior importance in accordance to the local partners and according to their priorities.

Besides, that using the CAD package and PHOTOSHOP has proved to be insufficient because of its limited capabilities of modification and manipulating.

Accordingly, the methodology has been modified in April 2006, so that it stresses on the participation of the local community in all the stages of the project beginning with data collection and preparation up to selection and elaboration of development plan, as well as location the projects and setting of the coordinates of the new suggested corporate limit.

Also all the maps and the study outcomes were generated by geographical information systems, GIS and were connected to a special database in order to be able to be modified and updated easily without much effort.

In the following a comparative analytical assessment is purchased between the general master plan of El- Zwammel village generated in the year 2002 and the general strategic plan generated in the year 2006 for the same village along in all the development stages initiating with data collection up to generating the master plan.

This case study tests the hypothesis of the research and assesses the importance of new technologies such as the GIS in improving the efficiency of public participation in all stages of the development process.

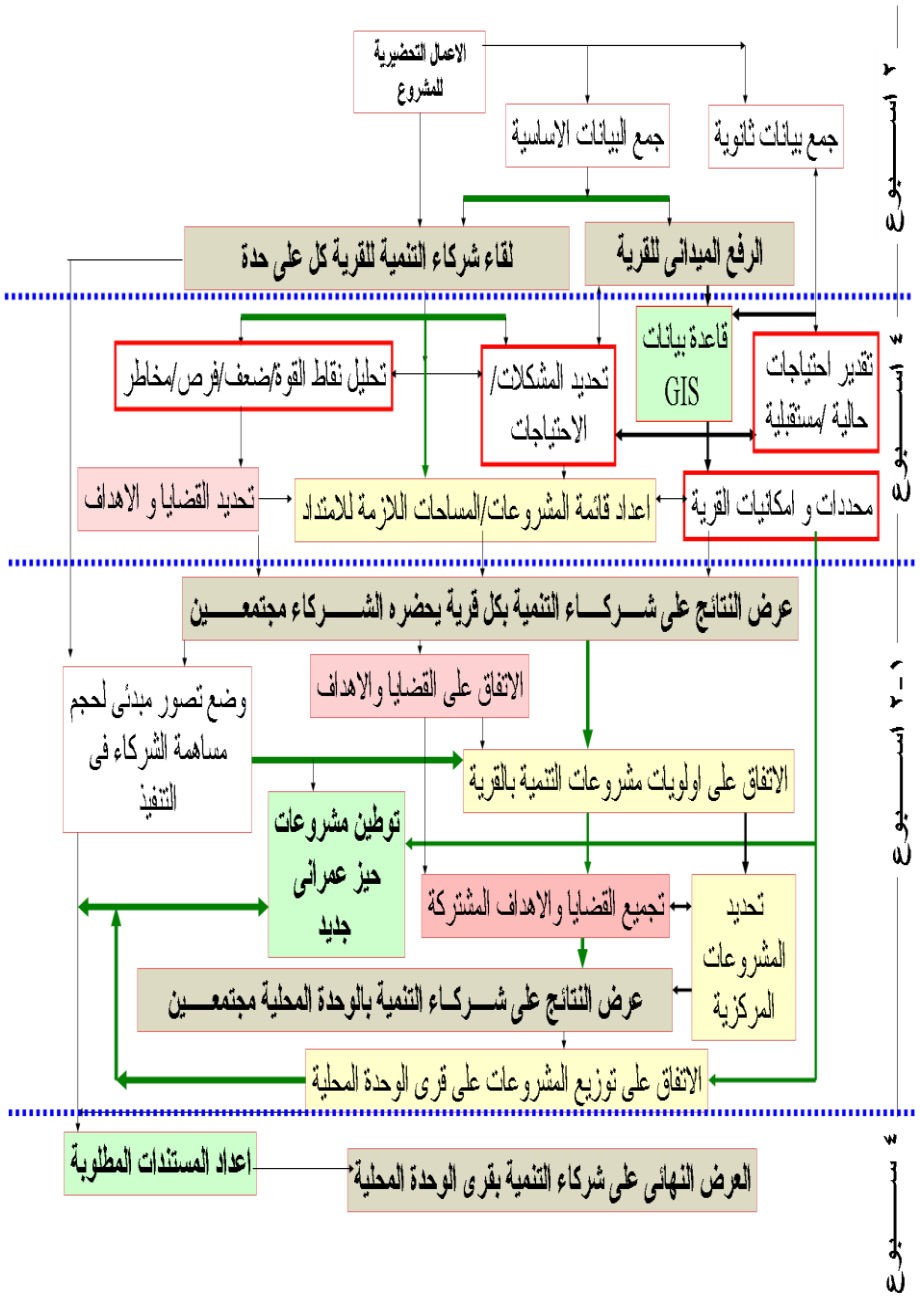


Figure 5.11: Steps Of Preparing The Final Strategic Master Plan. (**GOPP,** 2008)

5.5.1. Data collection

the data and information is considered the basic foundation to prepare the general strategic master plan and so, all the required data related to all the phases of preparation should be available and honestly expressing the existing situation of the village in all the developing aspects (environment, economy, social, urban, as well as infrastructure and public services). (**GOPP,** 2006**)**

First methodology in the year 2002

It relied on:

1. **Gathering the statistical information from the statistical information centers** as a source of demographic data and topographic maps at different time-periods.
2. **Site field-work surveys** in reliance to a topographic map of the village where the corporate limit of the year 1985 is clear, and is updated by free hand sketching and consequently by AutoCAD.

Second methodology in the year 2006

It relied on:

1. **Gathering the statistical information from the statistical information centers** as a source of demographic data and topographic maps at different time-periods.
2. **Site field-work surveys in reliance to aerial photographs** and uses the GIS database to generate information.
3. **Holding public meetings and questionnaires** presented by asking questions, submitting questionnaires (a guide approved forum applicable to modification according to the situation and circumstances in each village), and holding public meetings with the local partners of the village where discussion takes place to determine the objectives and prior needs, as well as the problem issues through the time-frame of the project. It demonstrates the threats, weaknesses, opportunities and strengths in all development aspects; economical, social, environmental….etc.)

Moreover, it presents an initial proposal that identifies the size, mean of contribution and collaboration among partners in implementing the strategy.

محافظة الشرقية	مركز: بلبيس		وحدة محلية : الزوامل	قرية : الزوامل
اسم ذو الصلة	الادارة المحلية	العمل الاجتماعى	السكان	القطاع الخاص

دراسة قضايا القطاع الريفي

	الإدارة المحلية
1	ما هى مساحة الكتلة العمرانية للقرية الحالى ؟ 96 فدان
2	*ما هى المساحة منذ 10 سنوات ؟ 91 فدان*
3	ما هو عدد السكان التقديرى الحالى ؟ 27000 نسمة للقرية والعزب التابعة
4	ما هو عدد السكان التقديرى منذ 10 سنوات ؟ 21773 نسمة للقرية والعزب التابعة
5	ما هى العائلات الرئيسية بالقرية ؟ 1 - أبو طاحون - أبو أشرف – آل صباح – أبو رمضان – بسيونى – أبو نعمة – العفيفى – أبو عامر – العفيفى – الأشرم – أبو حبيب -
6	ما هى برامج التدريب التى تمت لموظفين الوحدة المحلية ؟ 1 - تنمية المهارات – خدمة المواطنين – الادارة والتنظيم
7	فى حالة وجود برامج تدريب ما هى السلبيات و الإيجابيات ؟ 1 - الايجابيات تتمثل فى وجود الدورات بينما السلبيات فى أن مدة الدورة لاتكفى 2 - تثقيف العاملين بالوحدة المحلية-أرتباطها بالكادر الوظيفى 3 - ليس لها تأثير على العاملين بالوحدة المحلية. 4 - الأداء كما هو بالدورات أو بدونها
8	هل هناك مقار حزبية بالقرية و ما هى ؟ 1 - الحزب الوطنى
9	ما مصادر الدخل السيادية و المحلية للقرية (الخطة العاجلة – شروق – جهاز تنمية القرية – الموازنة العامة – تراخيص – إشغالات – رسوم.....) فى الثلاث سنوات السابقة ؟ 1 - الخطة الموحدة – رسوم تراخيص المبانى – رسوم تفتيش المحلات – رسوم خدمات رسوم اشغالات
10	ما هى أوجه صرف مصادر الدخل السيادية والمحلية ؟ 1 - مياه- رصف-كهرباء وانارة داخل القرية- نظافة 2 - المياه-الكهرباء-الصرف-تغطية المجارى المائية. 3 - الرصف-الانارة-صيانة المرافق. 4 - الانارة والرصف وتغطية المجارى المائية ومتابعة الخدمات

(These questions are only guidelines that can be modified according to each village)

Answers of local partners

1- local administration 2- local agencies 3- local residents 4- business sector

Table 5.2: Shows the typical approved questionnaire. (**GOPP,** 2008)

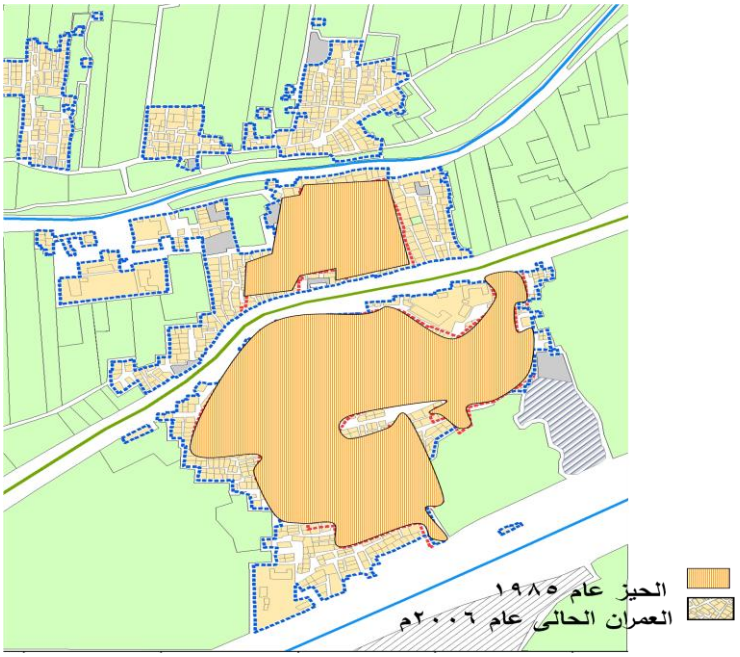


Figure 5.12: shows the border limit of urban expansion of one of the villages approved in the year 1985. (**GOPP,** 2008**)**

Figure 5.13: Shows the aerial photography of one of the villages. (**GOPP,** 2008**)**

5.5.2. Preparation of Sector studies

All different aspects of development are being studied so that it focuses on problem issues and guides the study towards the related situations through the public meetings with the local partners.

It also contributes in identifying all the different aspects of the process and consequently adds projects and alternative improvement scenarios as well as studying the estimate costs and the available work opportunities through the project. (**GOPP,** 2006**)**

First methodology in the year 2002

Were generated using CAD packages along with a presentation program such as Photoshop, which have proved to be insignificant because of its limited capabilities to modification and interactivity

Second methodology in the year 2006

Were generated by using geographical information systems; GIS; connected to a special database in order to be able to be modified and updated easily without much effort

ADRSU	كلية الهندسة - جامعة عين شمس				المخرجات الرقمية لنظم المعلومات الجغرافية (الوضع الراهن)						
					قرية:	الزوامل					
	وحدة التصميمات والبحوث والدراسات المعمارية				الوحدة المحلية:	الزوامل					
					مركز:	بلبيس					
المدخلات		استعمالات الأراضي Land use			استعمالات المباني use Buildings				اسلوب الانشاء Buildings construction		
		الاستعمال	المساحة بالمتر المربع		الاستعمال	عدد الوحدات	المساحة بالمتر المربع		الانشاء	عدد الوحدات	المساحة بالمتر المربع
استعمالات الأراضي		سكني	226097.9		متعدد الاستخدام	82	11288		هيكلي	701	101047
		زراعي	0.0		استخدام واحد	1545	22377		حوائط حاملة	559	78786
استعمالات المباني		إداري	0.0		اجمالي	1627	235066		منشأ خفيف	367	55233
		تجاري	127.8						لبن	0	0.0
اسلوب الانشاء		خدمات عامة	1024.4		المباني المتعددة الاستخدام Multiuse Buildings				اجمالي	1627	235066
		خدمات زراعية	12670.1		الاستعمال	عدد الوحدات	المساحة بالمتر المربع				
حالات المباني		ترفيهي	1146.6		سكني_تجاري	71	9305.3		حالات المباني conditions Buildings		
		صناعي	114.4		سكني_إداري	1	210.3		الحالة	عدد الوحدات	المساحة بالمتر المربع
الارتفاعات		حرفي	201.4		سكني_حرفي	8	930.8		جيد	679	99867.0
		ديني	2942.9		تجاري_إداري	0	0.0		متوسط	534	75019.0
Protected		تعليمي	1613.7		إداري_حرفي	0	0.0		رديء	414	60180.0
		صحي	12565.1		تجاري_حرفي	24	4775.3		اجمالي	1627	235066
		مرافق	0.0		اجمالي	104	15221.7				
٢٦ ابريل ٢٠٠٦		صحراء	0.0						الارتفاعات Buildings Heights		
		متخللات	34296.0		مساحة الأراضي الفضاء				الارتفاع	عدد الوحدات	المساحة بالمتر المربع
		مقابر	3681.3						دور واحد	356	50435.0
		اجمالي	**403200**		عدد الوحدات	381	575		مساحة النطاق العمراني الحالي 2006		
					المساحة بالمتر المربع	49158.4	83097.7		**362744.1**		متر مربع
					المساحة بالفدان	11.70	19.79		86.4		فدان

Figure 5.14: Shows the digital outcomes of the geographical information systems. (**GOPP,** 2010)

5.5.3. Data analysis and Public meetings' Results

After gathering all the required data and information and analyzing it;

First methodology in the year 2002

Professionals in physical planning identify the problem issues and development objectives and goals using SWOT analysis method and consequently propose alternative improvement scenarios in accordance to planning specifications.

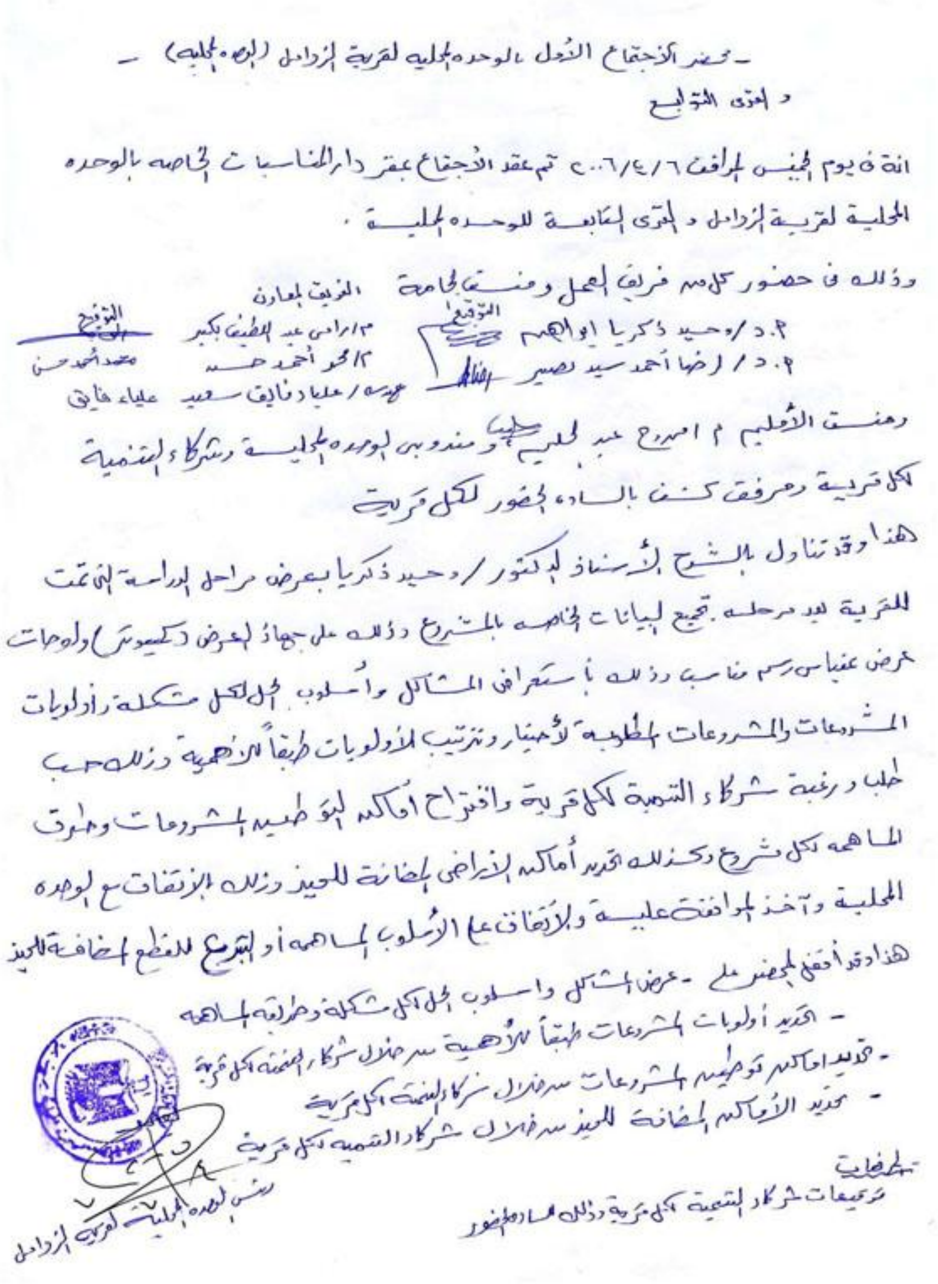
Second methodology in the year 2006

Professionals in physical planning together with local participants identify the problem issues and development objectives and goals using SWOT analysis method and consequently propose alternative improvement scenarios in accordance to planning specifications along with the priorities of the local partners and their point of view.

I- public meetings on the scale of main villages

Figure 5.15: Shows the first public meeting at the municipality of El-Zwammel. (**GOPP,** 2010**)**

I- <u>public meetings on the scale of main villages</u>



- محضر الاجتماع الأول بالوحدة المحلية لقرية الزوامل (الوحدة المحلية) -
والقرى التوابع

انه في يوم الخميس الموافق ٢٠٠٦/٤/٦ تم عقد الاجتماع بمقر دار المناسبات الخاصة بالوحدة المحلية لقرية الزوامل والقرى التابعة للوحدة المحلية .

وذلك في حضور كل من فريق العمل وممثلي الجامعة — الفريق المعاون

أ.د/ وحيد زكريا ابراهيم — التوقيع
أ.د/ رضا أحمد سيد نصير
م/ رامي عبد اللطيف بكير — التوقيع
م/ محمد أحمد حسن — محمد أحمد حسن
مهندسة/ علياء نايف سعيد — علياء نايف

وممثل الإقليم م/ ممدوح عبد الحليم ومندوبي الوحدة المحلية وشركاء التنمية لكل قرية ومرفق كشف بالسادة الحضور لكل قرية

هذا وقد تناول بالشرح الأستاذ الدكتور / وحيد زكريا بعرض مراحل الدراسة التي تمت للقرية بعد مرحلة تجميع البيانات الخاصة بالمشروع وذلك على جهاز العرض (كمبيوتر) ولوحات عرض على مقياس رسم مناسب وذلك باستعراض المشاكل وأسلوب الحل لكل مشكلة وأولويات المشروعات والمشروعات المطلوبة لاختيار وترتيب الأولويات طبقاً للأهمية وذلك حسب طلب ورغبة شركاء التنمية لكل قرية واقتراح أماكن لتوطين المشروعات وطرق المساهمة لكل مشروع وكذلك تحديد أماكن الأراضي المضافة للحيز وذلك بالاتفاق مع الوحدة المحلية وأخذ الموافقة عليه والاتفاق على الأسلوب المساهمة أو التبرع للقطع المضافة للحيز

هذا وقد اتفق الحضور على: - عرض المشاكل وأسلوب الحل لكل مشكلة وطريقة المساهمة
- تحديد أولويات المشروعات طبقاً للأهمية من خلال شركاء التنمية لكل قرية
- تحديد أماكن توطين المشروعات من خلال شركاء التنمية لكل قرية
- تحديد الأماكن المضافة للحيز من خلال شركاء التنمية لكل قرية

المرفقات:
توقيعات شركاء التنمية لكل قرية وذلك للسادة الحضور

رئيس الوحدة المحلية لقرية الزوامل

Figure 5.16: Shows the script of the first public meeting at the municipality of El-Zwammel. (**GOPP,** 2010**)**

5.5.4. Identifying projects and activities of priorities

First methodology in the year 2002

1. The commitment to the corporate limit of the year 1985 and the erasing of all the intervening outside it in order to restore the wasted agricultural lands
2. Revealing the free spaces and urban fringes. (**GOPP,** 2006**)**

Second methodology in the year 2006

1. Determining the coordinates of the new suggested corporate limit that enclose all the residential and service buildings inside it to ensure the accuracy.
2. Revealing the free spaces and urban fringes as well as the property owner situation (public area, private property….etc.). (**GOPP,** 2006**)**

5.5.5. Location projects and activities of priorities

First methodology in the year 2002

1. The study was satisfied by determining the required area of land to implement the projects; however, it didn't determine the exact location. it assumed that it would be settled in the free land ignoring the fact the 90% of it were private properties that can't be withdrawn without the acceptance of its owners
2. It also resulted in estimating the approximate costs of the project without discussing the methods of funding. (**GOPP,** 2006**)**

Second methodology in the year 2006

1. The study determined the required area of land to implement the projects; however, in contrast it determined the exact location in accordance to land owners. It encouraged the donation of quarter of the land so that the whole land would be included inside the corporate limit.
2. It also estimated the approximate costs of the projects and discussed with the local partner the methods of funding and the organizations that contribute to it.
3. It also classified the projects and activities and determined the required time-frame as well as the organizations that are benefited from it. (**GOPP,** 2006**)**

5.5.6. Generating the General Strategic Master Plan

The study concluded as a result:

First methodology in the year 2002

1. The corporate limit approved in the year 1985
2. Suggested land use within the corporate limit.
3. Proposed road system and network
4. The Erasing of all the intervening outside the corporate limit in order to restore the wasted rural area

Second methodology in the year 2006

1. Suggested new corporate limit.
2. The accurate coordinates of the new corporate limit
3. Building conditions and restrictions
4. Suggested land use within the corporate limit.
5. The location of the suggested projects and activities.

However, this proceeds under the condition of the acceptance of the land owners and the study team is responsible for delivering all documents and evident that ensures their acceptance signed by all those who attended the public meetings and conferences, as well as the chief member of the local administration unit and the regional facilitator.

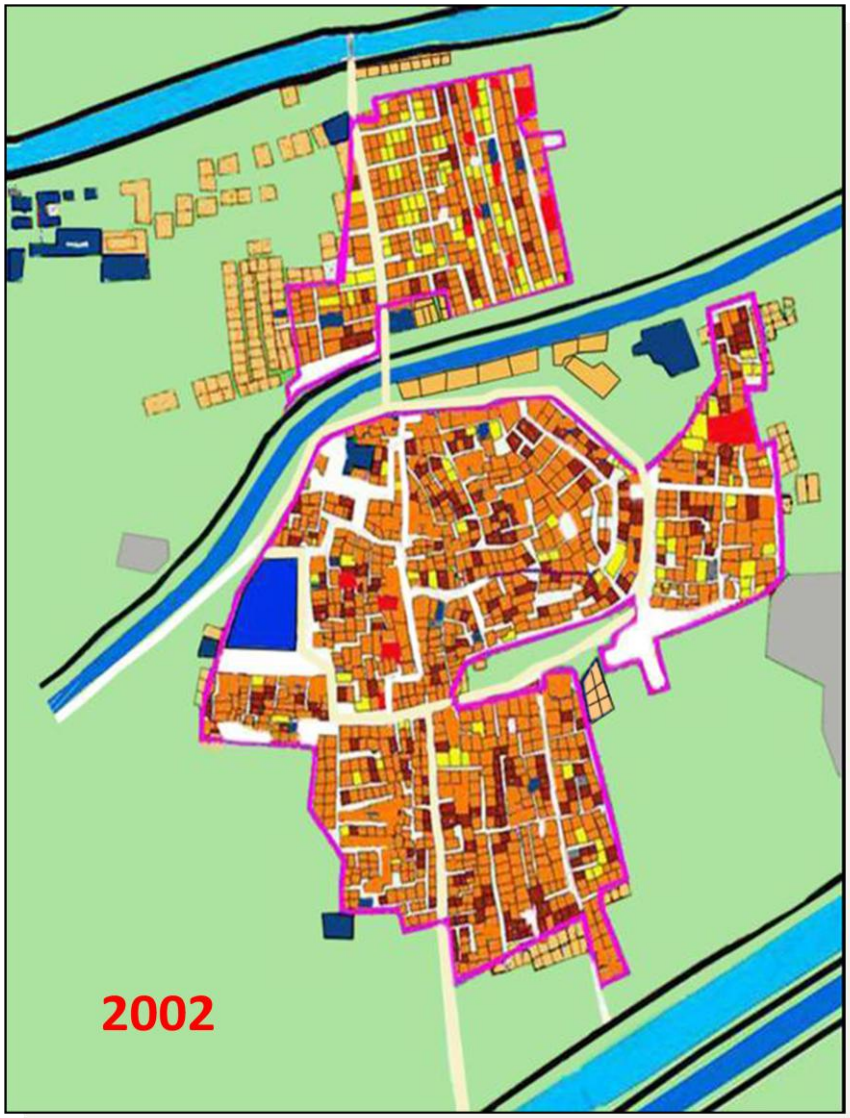


Figure 5.17: Shows the general master plan in the year 2002. (**GOPP,** 2010**)**

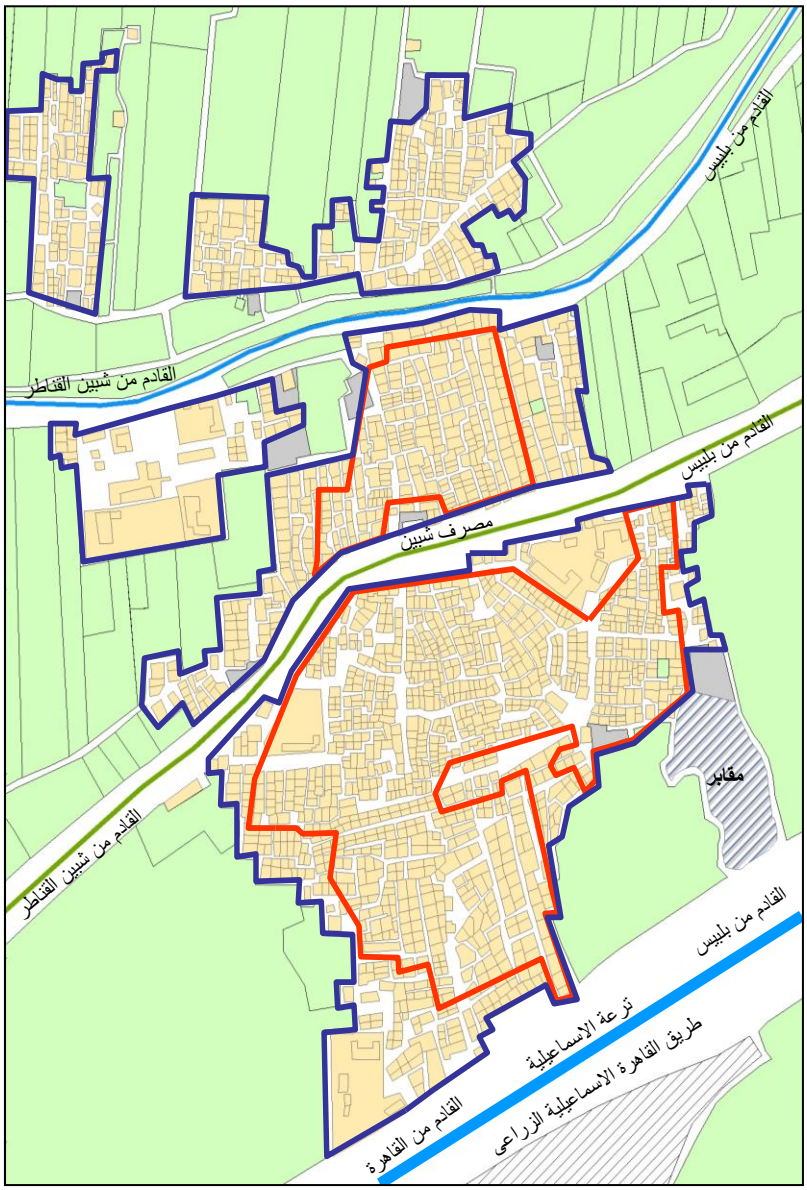


Figure 5.18: Shows the Strategic general master plan in the year 2006.
(**GOPP,** 2010**)**

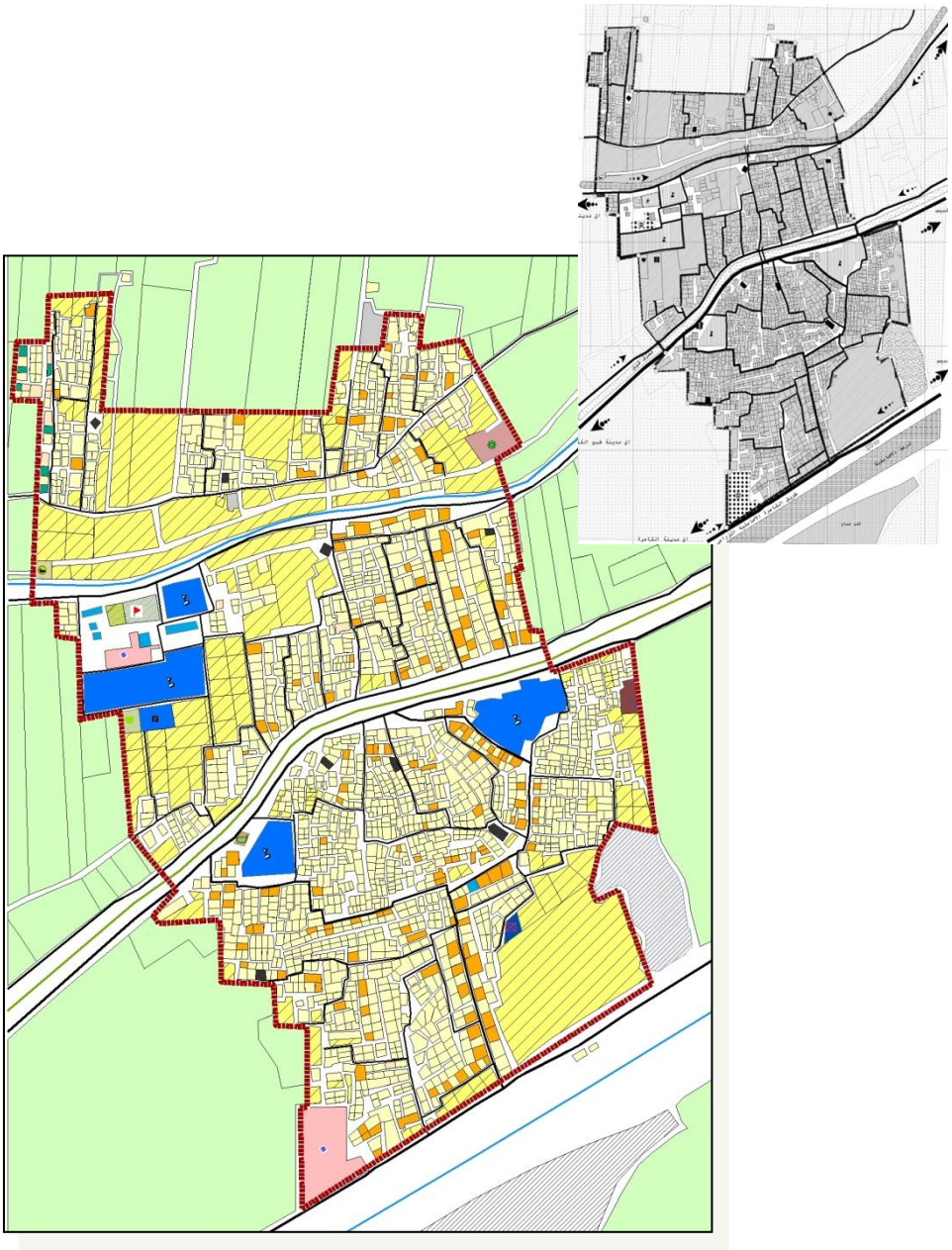


Figure 5.19: Shows the final general master plan in the year 2008 created by the General Organization for Physical Planning. (**GOPP,** 2010**)**

5.5.7. Final Public conference and Implications Frame-work

This conference is being held at the scale of the county in the presence of a representative of the general organization of physical planning to reveal the final results of the studies.

After the committees of the municipality revise the results, this conference is held to gather the final acceptance of all the participants on the final suggested corporate limits, and the location of projects of priorities.

Moreover, it should accomplish the following:-

1- Set an agreement upon the prior development project packages.

2- Estimate the costs of the projects at the scale of the county and the organizations that can contribute in funding it. (Donations, non-governmental organizations, social funding, private sector.) As well as time schedule for its implementation.

3- Organize a group for the development purpose

4- Evaluate the participation method using an approved prototype specifically for this purpose.

II-<u>Public meetings on the scale of local administration unit</u>


محضر اجتماع شركاء التنمية
الوحدة المحلية لقرية الزوامل والقرى التوابع

انه فى يوم الاربعاء الموافق ١٢/٤/٢٠٠٦ تم عقد اجتماع شركاء التنمية بمقر
الوحدة المحلية وذلك فى اطار اعداد المخططات الاستراتيجية لقرى الوحدة المحلية
لقرية الزوامل والقرى التوابع
وقد تم فى هذا الاجتماع
١- عرض قضايا القرية المختلفة (عمرانية - اجتماعية - اسكانية - اقتصادية - البنية الاساسية - البيئية - والحلول المثلى لكل قضية
٢- الاتفاق على المشروعات ذات الاولوية بالقرية والبدائل المقترحة لتوطين كل مشروع وطرق تمويلها.
٣- الموافقة على تحديد اماكن لتوطين المشروعات بالمخطط الاستراتيجي لكل قرية ونسب المساهمة
٤- الموافقة على شكل الحيز العمرانى المقترح لكل قرية بمشاركة الشركاء والوحدة المحلية
٥- الاتفاق على دور شركاء التنمية
٦- الموافقة على الاراضى المضافة للحيز وطرق مساهمة الشركاء سواء بنسبة من الارض او دفع مبلغ للمتر عند البناء لصالح جمعية او اى كيان يتفق عليه من قبل شركاء التنمية
٧- الموافقة على مسودة المخطط الاستراتيجى لكل قرية بالمشاركة مع الوحدة المحلية وشركاء التنمية شاملة وضع الحل الامثل للمشاكل والقضايا السالف ذكرها
(عمرانية - اجتماعية - سكانية - بنية اساسية - بيئية - اقتصادية --- الخ)

الحضور فى محضر الاجتماع
١- د / وحيد زكريا ابراهيم
٢- د / رضا احمد المصرى
٣- م / ممدوح عبد المحسن
عن الوحدة المحلية
٤- / عبد السميع سليم — نائب رئيس الوحدة

التوقيع

منسق الجامعة
منسق الجامعة
هيئة العامة للتخطيط العمرانى

رئيس الوحدة المحلية لقرية الزوامل

تابع ما يعده
المرفقات خمس (٥)

Figure 5.20: shows the script of the second conference at the municipality of El-Zwammel. (**GOPP,** 2010**)**

5.6. EVALUATION OF THE PARTICIPATION EFFECIENCY

In this section, The study aims to evaluate the partners participation in the planning process of generating the strategic master plan for the village of El-Zwammel through assessing their participation at different stages of the project, beginning from data collecting and ending with settling the Final Strategy Plan of development for the village..

As per the Report of the effectiveness of participation prepared for this particular village, the experience of public participation in the planning process of El-Zwammel village was considered positive at the level of all stages of the process.

The participation meetings of the local partners of El-Zwammel village were held in the municipality of El-Zwammel county at the following dates.

- **First meeting: 6/4/2006**
- **Second meeting: 12/4/2006**

According to the table shown below, the number of participants was 22 in the first meeting, 12 in the second meeting, assuming they were different persons in each meeting, the total number of local participants were 34 in both meetings.

General Indicator (*the number of members participated in the public meetings*)					
Partners	**First meeting**	**Place**	**Second meeting**	**Place**	**Total**
CENTRAL GOVERNMENT	**-**	**municipality**	**-**	**municipality**	**-**
LOCAL ADMINISTRATION	**7**		**4**		**11**
LOCAL AGENCIES	**5**		**2**		**7**
PRIVATE SECTOR	**5**		**2**		**7**
RESIDENTS	**5**		**4**		**9**
TOTAL	**22 person**		**12 person**		**34 person**

Table 5.3: The number of members participated in the public meetings. (**GOPP,** 2010**)**

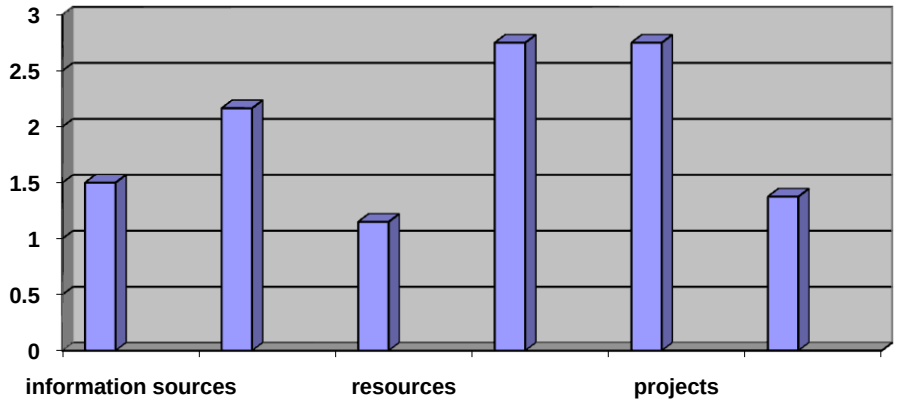


Figure 5.21: Indicators evaluating the effectiveness of participation as per the Report of the effectiveness of participation prepared for El-Zwammel village. (**GOPP,** 2010**)**

The values used range between 0 and 3, whereas close the value is to 3, as it indicates high performance, and as close it is to the 0, it indicates low performance.

As per the above diagram, and according to the Report of the effectiveness of participation prepared for El-Zwammel village, it is obvious that the average of the indicators was relatively high except in the settlement of the new suggested urban boundary.

However, Having the Total Population of the main village and surroundings more than 28, 501 persons as per the statistics in the year 2006, the number of local participants who represented the different socio-economic groups of the society in El-Zwammel village in the public meetings would be less than 0.12 %. This actually raises my concerns regarding how adequate their participation was and whether they really reflected the actual desires and needs of the society they represented.

Consequently, the study herby aims at evaluating the efficiency of participation in decision-making process in reliance to the application forms of the participants in both public meetings (the first and the second) & in accordance with the reference of the Ideal Type & Best Practices of Public Participation Planning Programs previously introduced in chapter 3, highlighting both the positive outcomes and the drawbacks.

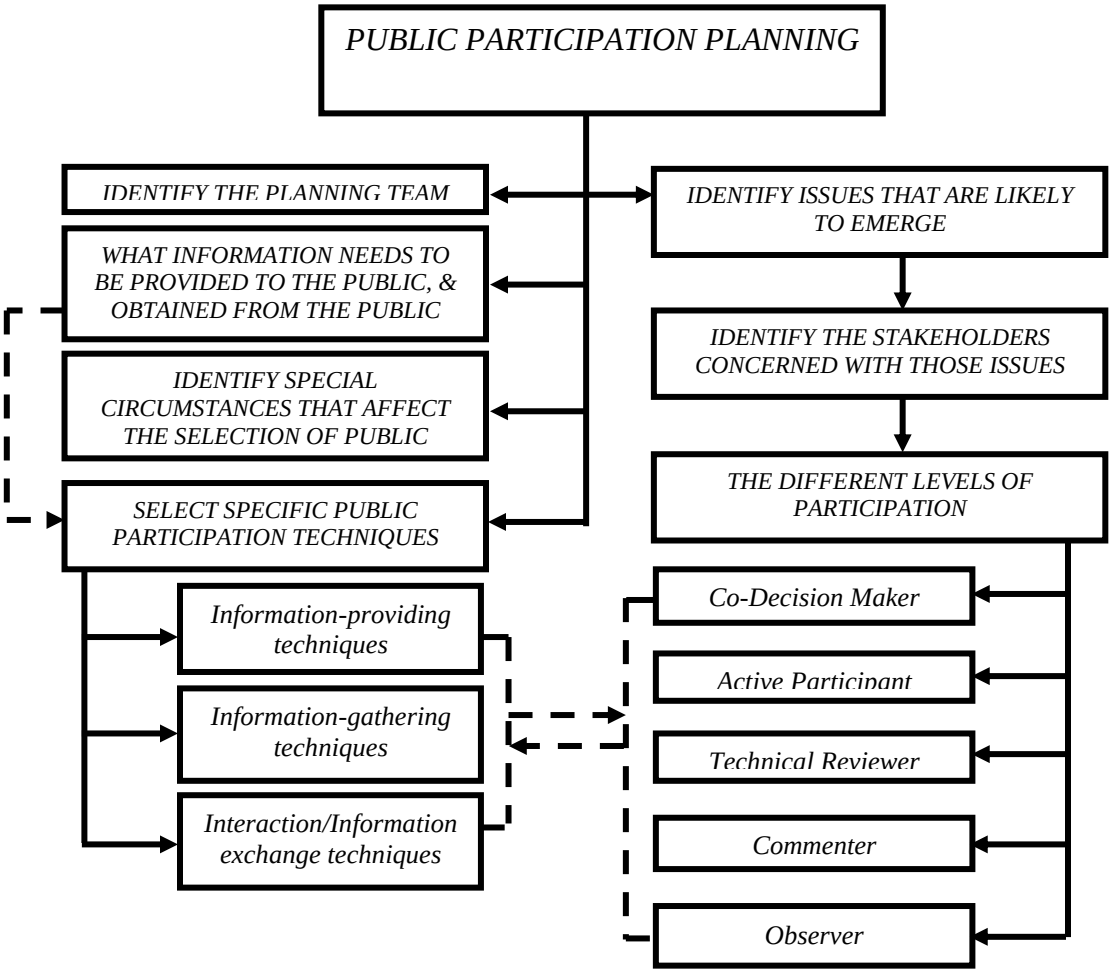


Figure 5.22: Ideal Type & Best Practices of Public Participation Planning Programs. (**USDOE**, 2002)

5.6.1. Identify issues that are likely to emerge

During this step the public participation planning team should have identified the issues & subjects that are likely to arise during the course of the public participation program, and accordingly, have identified individuals and groups most interested in these issues.

In the case of El Zwammel village planning experience, the subjects were as follows:

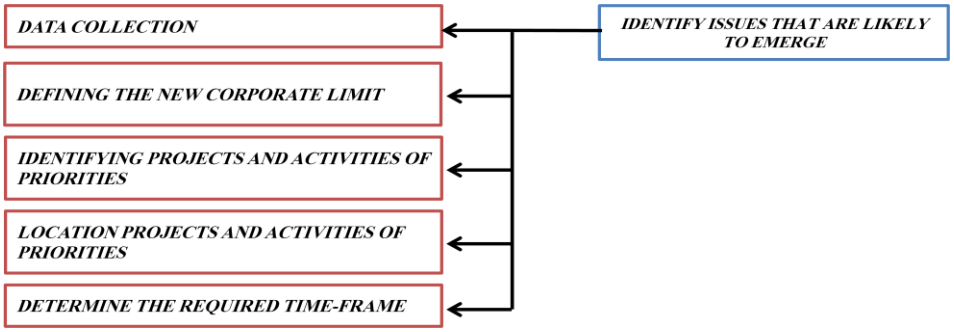


Figure 5.23: Issues to be determined throughout the Planning Process.

I Collecting and Evaluating Data of The Present Conditions

The data and information is considered the basic foundation to prepare the general strategic master plan and so, all the required data related to all the phases of preparation should be available and honestly expressing the existing situation of the village in all the developing aspects.

Holding public meetings with the local partners of the village, asking questions and submitting questionnaires, demonstrate the threats, weaknesses, opportunities and strengths in all development aspects, & identify the mean of contribution and collaboration among partners in implementing the strategy.

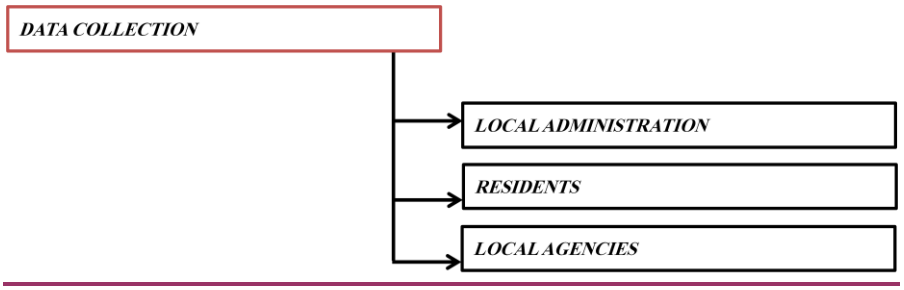


Figure 5.24: Individuals and groups most interested in this issue.

As presented in the table below, the evaluation shows that the partners' participation in data collection was considered moderate; however it resulted in correcting and modifying some of the basic data and information.

General indicator (*collecting and evaluating data of the present conditions*)					
Partners	**First meeting**	**Place**	**Second Meeting**	**Place**	**Average Indicator value**
CENTRAL GOVERNMENT	**-**	**municipality**	**-**	**municipality**	**-**
LOCAL ADMINISTRATION	**3**		**3**		**3**
LOCAL AGENCIES	**1**		**1**		**1**
PRIVATE SECTOR	**1**		**1**		**1**
RESIDENTS	**1**		**1**		**1**
TOTAL	**1.5**		**1.5**		**1.5**

Table 5.4: Indicator values of participation in collecting and evaluating data of the present conditions as per the Report of the effectiveness of participation prepared for El-Zwammel village. (**GOPP,** 2010**)**

II Defining the Corporate Limit

In order to define the boundaries of the new proposed corporate limit for the village, the study team should target those mostly affected by this decision, in addition to the representatives of the local Administration to ensure the legality and formality of the planning process.

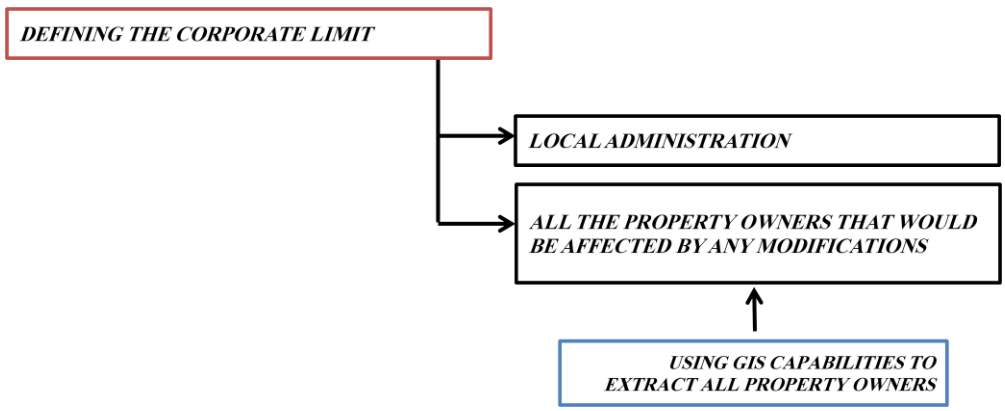


Figure 5.25: Individuals and Groups most interested in this issue.

Since the targeted audiences in this decision making were both; those mostly affected by this decision as well as the representatives of the local Administration, Accordingly, the total number of interested participants was 20 persons (assuming they were different persons in each meeting).

While having an Urban Expansion of about 59 feddan on the rural area beyond the corporate limit of 1985, the number of 20 persons representing those affected seems quite unreasonable and actually rise the concerns of how appropriate was the decision taken.

In fact, the study team could have used the GIS capabilities to extract all property owners who would mostly be affected by this decision, and hence target them & invite them to participate in the decision making process.

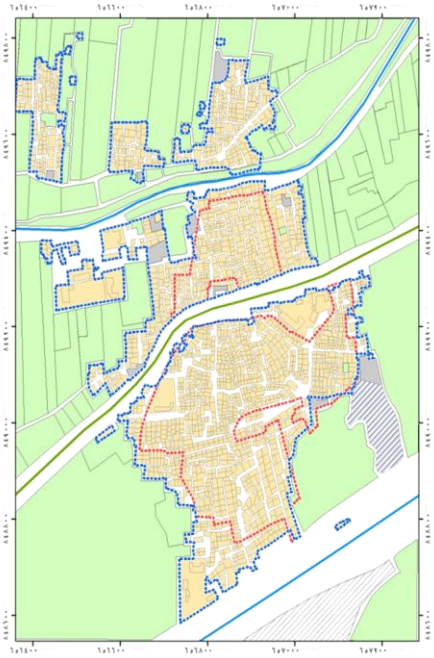


Figure 5.26: Urban Expansion beyond the corporate limit of 1985. (**GOPP,** 2010**)**

General indicator (*suggested corporate limit*)					
Partners	**First Meeting**	**Place**	**Second meeting**	**Place**	**Average Indicator value**
CENTRAL GOVERNMENT	**-**	**Municipality**	**-**	**Municipality**	**-**
LOCAL ADMINISTRATION	**3**		**3**		**3**
LOCAL AGENCIES	**2**		**2**		**2**
PRIVATE SECTOR	**3**		**3**		**3**
RESIDENTS	**3**		**3**		**3**
TOTAL	**2.75**		**2.75**		**2.75**

Table 5.5: Indicator values of participation in the suggested corporate limit as per the Report of the effectiveness of participation. (**GOPP,** 2010**)**

The previous evaluation shows that the partner's participation in determining the corporate limit was considered high which reflects their agreement on the suggested limit. This however, reflects the lack of awareness among the residents regarding the preservation of the agricultural land, as the majority have encouraged expanding the range of urban borders for their beneficial profits.

III Identifying Projects and Activities of Priorities

In this stage, the study team in cooperation with the local partners classifies the projects and activities of priorities, estimate the approximate costs, methods of funding, required time-frame as well as the organizations that contribute & benefited from it.

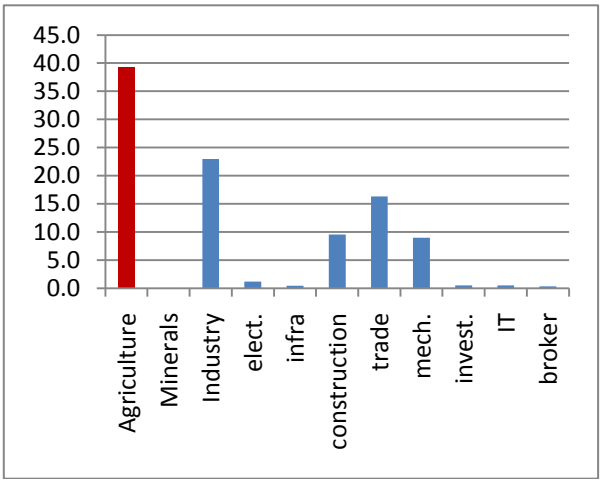


Figure 5.27: Projects and Activities of Priorities in El-Zwammel village

Accordingly, individuals and groups that are mostly interested in this issue are:

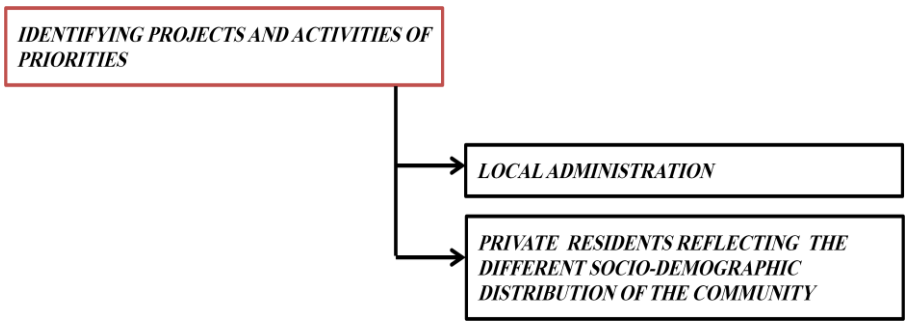


Figure 5.28: Individuals and Groups most interested in this issue.

General indicator (*projects of priorities at the local level*)					
Partners	**First Meeting**	**Place**	**Second Meeting**	**Place**	**Average Indicator value**
CENTRAL GOVERNMENT	**-**	**Municipality**	**-**	**Municipality**	**-**
LOCAL ADMINISTRATION	**3**		**3**		**3**
LOCAL AGENCIES	**2**		**2**		**2**
PRIVATE SECTOR	**3**		**3**		**3**
RESIDENTS	**3**		**3**		**3**
TOTAL	**2.75**		**2.75**		**2.75**

Table 5.6: Indicator values of participation in Projects of priorities at the local level as per the Report of the effectiveness of participation. (**GOPP,** 2010**)**

The previous evaluation shows that the partners' participation in determining the projects of priorities at the local level was considered high.

IV Location Projects And Activities Of Priorities

In this stage, the study team in cooperation with the local partners classifies the required area of land for projects and activities of priorities as well as the exact location in accordance with land owners. The methodology adopted is to encourage the donation of quarter of the land so that the whole land could be included inside the new corporate limit.

Accordingly, individuals and groups that are mostly interested in this issue are:

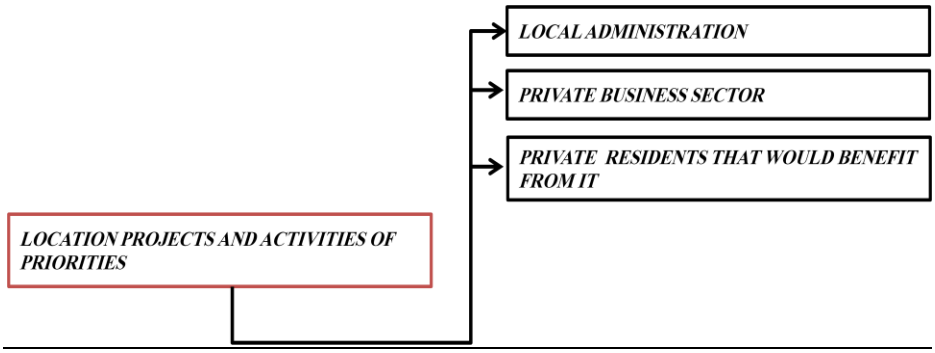


Figure 5.29: Individuals and Groups most interested in this issue.

General indicator (*the location of projects*)					
Partners	**First meeting**	**Place**	**Second meeting**	**Place**	**Average Indicator value**
CENTRAL GOVERNMENT	**-**	**municipality**	**-**	**municipality**	**-**
LOCAL ADMINISTRATION	**3**		**3**		**3**
LOCAL AGENCIES	**2**		**2**		**2**
PRIVATE SECTOR	**3**		**3**		**3**
RESIDENTS	**3**		**3**		**3**
TOTAL	**2.75**		**2.75**		**2.75**

Table 5.7: Indicator values of participation in the location of projects at the local level as per the Report of the effectiveness of participation. (**GOPP,** 2010**)**

The previous evaluation shows that the indicator is considered high where all the partners have agreed on the location of the projects and activities in order to have the whole land included in the new corporate limit.

V Determine The Required Strategies & Time-Frame

After the committees of the municipality revise the results, this conference is held to gather the final acceptance of all the participants on the final suggested corporate limits, and the location of projects of priorities.

Moreover, it should accomplish the following:-

- Set an agreement upon the prior development project packages.
- Estimate the costs of the projects at the scale of the county and the organizations that can contribute in funding it. (Donations, non-governmental organizations, social funding, private sector.) As well as time schedule for its implementation.
- Organize a group for the development purpose
- Evaluate the participation method using an approved prototype specifically for this purpose.

This conference is being held at the scale of the county in the presence of a representative of the general organization of physical planning to reveal the final results of the studies.

Accordingly, individuals and groups that are mostly interested in this issue are:

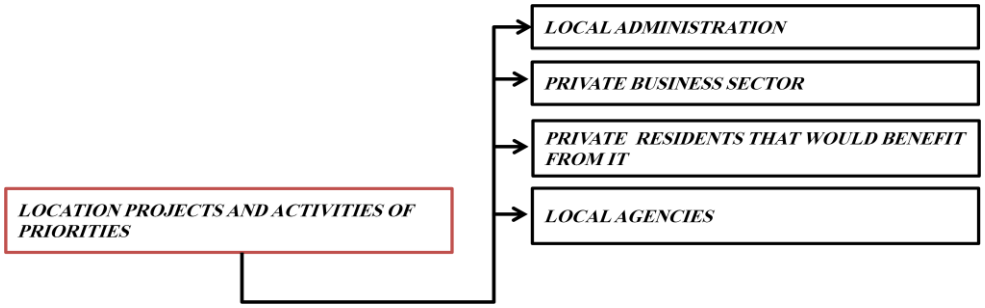


Figure 5.30: Individuals and Groups most interested in this issue.

General indicator of the strategy					
Partners	**First Meeting**	**Place**	**Second Meeting**	**Place**	**Average Indicator value**
CENTRAL GOVERNMENT	**-**	**Municipality**	**-**	**Municipality**	**-**
LOCAL ADMINISTRATION	**3**		**3**		**3**
LOCAL AGENCIES	**2**		**2**		**2**
PRIVATE SECTOR	**3**		**3**		**3**
RESIDENTS	**3**		**3**		**3**
TOTAL	**2.75**		**2.75**		**2.75**

Table 5.8: General indicator of the strategy. (**GOPP,** 2010**)**

The previous evaluation shows that the general indicator of the strategy is considered high

5.6.2. The Different Levels of Participation

Since not all stakeholders have the same level of interest, they will not participate the same way. The difference in intensity of interest is often reflected in how the stakeholders will participate. To identify the different levels of participation, Participans should be categorized as: co-decision maker, active participant, technical reviewer, commenter, and observer:

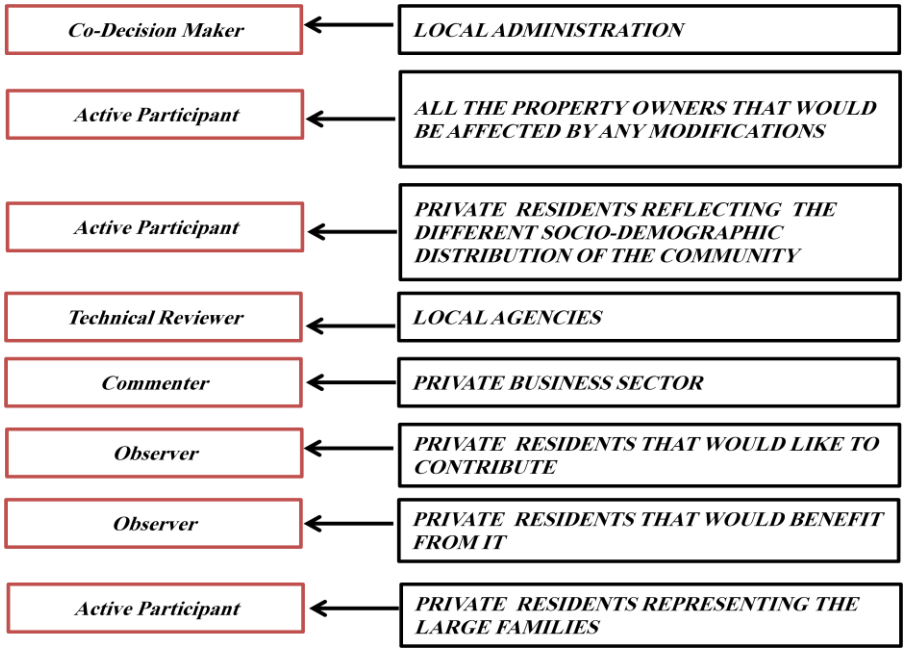


Figure 5.31: Stakeholders categorized as their level of participation

Consequently, specify the techniques & the effective communication channels that best meet the level of interest of each participant.

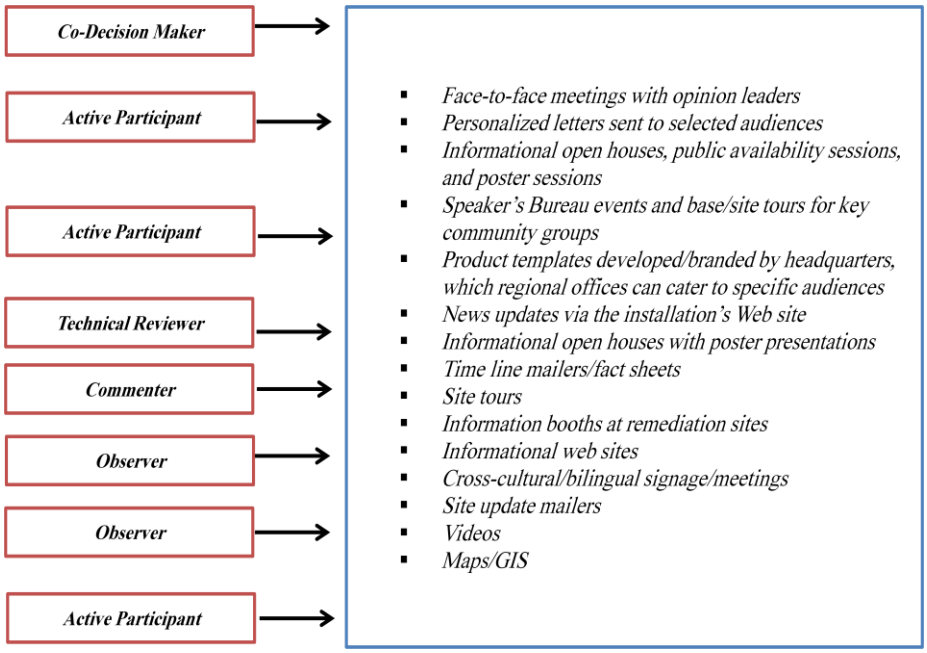


Figure 5.32: Stakeholders categorized as their level of participation

5.7. THE RESULTS

As per the Ideal Type & Best Practices of Public Participation Planning Programs, & in order to evaluate the public participation planning process of El-Zwammel village, certain evaluation questions should be addressed:

- The success of Reaching the interested stakeholders
- Whether The techniques matched the purpose of the program
- Whether there was a clear linkage between the public participation process and the decision-making process.

In the experience of public participation in the planning process of El-Zwammel village, even though it was considered positive according to the Report of the effectiveness of participation prepared for this particular village, there were several negative aspects that have been noticed throughout the stages of the project.

The first step to achieve a successful engagement of the public is to identify the main stakeholders that should be committed to the collaboration in decision-making process, and then specify how they can be approached and get notified..

In our case, Local residents were mainly represented by local public committee members as well as the representatives of the main large families, as they enhance the self-efforts, donations, and contribution either with land, effort or money.

There were different types of individuals that might be interested in contribution but were not successfully engaged, i.e. educated unemployed youth, household's women, & disabled. And since typically most of the young educated citizens are working outside the village due to the shortage in job opportunities, they hadn't had the chance to contribute by attending the meetings or answering the questioners.

Having the number of local participants in the public meetings who represented the different socio-economic groups of the society less than 0.12 % of the Total Population in El-Zwammel village raises the concerns regarding how adequate their participation was and whether they really reflected the actual desires and needs of the society they represented.

Also having just 20 persons to represent those affected by changing the corporate limit, while having an Urban Expansion of about 59 feddan

on the rural area, seems quite unreasonable and actually rise the concern of how appropriate was the decision taken in the first place.

With the presence of the property data, the study team could have used the GIS capabilities to extract all property owners who would mostly be affected by this decision, and hence target them & invite them to participate in the decision making process.

Furthermore, holding public meetings, asking questions and submitting questionnaires were the only techniques used to communicate with the local partners which in return resulted in a huge amount of gathered information wait to be transferred to digital format in order to be properly processed and analyzed, besides of course the difficulty in reading some of the handwritings and the risk of losing or damaging any of the gathered hardcopies.

Moreover, Citizens have unequal levels of interest and understanding in public issues to motivate them to attend meetings, unequal access to meeting facilities, and unequal time to attend meetings, different channels should have been approached to engage inactive community groups such as telephone surveys or advanced Internet based programs such as **CAPI** (Computer Assisted Personal Interviewing).

Also, one of the drawbacks was the rise of self-consideration in contrast to the community benefit. Most of the local owners of the rural areas attached to the present built-up area showed the desire to donate the quarter of their lands in order to guarantee that their lands would be included in the new corporate limit for the beneficial profit. This also reflects lack of awareness regarding the preservation of the agricultural land.

Another drawback was presented in the inconvenience and lack of trust between the residents and the government to identify a new corporate limit and submit it to the localities to be implemented in the near future.

There is no doubt that the unique characteristics of face-to-face communications in building consensus, communicating complex information, or creating new ideas cannot be totally replaced by online communications. However, The Internet has tremendous potential to allow planners to enhance and improve existing participation techniques.

In order to evaluate whether using more advanced technologies and Internet based programs can overcome the drawbacks & further enhance the participation process in such community, we needed first to make a quick survey to assess the technological level that is actually & potentially applicable in the village.

5.8. ASSESSING THE TECHNOLOGICAL LEVEL IN EL-ZWAMMEL VILLAGE

More than 15 villagers, with different ages ranging from 10-40 years old, Children, youth, and grown up men and women were asked and interviewed. The results found were quite astonishing.

Figure 5.33:

The Signage at the main entrance of El-Zwammel Village. (**Site survey**, 2010)

The amazing part is that almost 50% of the villagers have computers at home and around 50% of them have internet connections either as subscribers in DSL or using USB modem or even take a connection from each other (which are quite common in the village).

Figure 5.34:

Shows the sharing of Internet cables between neighbors, a very common procedure in low-income communities. (**Site survey**, 2010)

I also found 9 licensed Cyber Spaces in the village with Internet connections & was told that there are many others but illegal.

Figure 5.35: Shows some of the Cyber Spaces in the village.
(**Site survey**, 2010)

More than 70 % of the children (almost all of them are males) with ages ranging from 10-18 are familiar with the use of computers, 50% of them can browse the internet searching for games & movies, 60% of them can use Microsoft office and some of them are joining **ICDL**[21] courses at school. Moreover, El-Zwammel primary school has awarded some of them laptops with USB connections as a prize for obtaining high degrees.

Figure 5.36:

Shows some children using the computers in the village.
(**Site survey**, 2010)

Regarding the youth with ages ranging from 19-29 years old, it was found that almost all the highly educated youth are working outside the village either in Cairo, or in big cities like Belbis or El-Zakaziq. However more than 80% of them are familiar with the computer programs and uses it in their daily operations at work, 50% of them have personal computers at home, and 30% have a face book account & an e-mail address.

Figure 5.37:

Shows a personal computer with an Internet connection in a very small shop. (**Site survey**, 2010)

A young villager says,

> "*I have a double account on the face book, and I usually spend more than 4 hours daily chatting with friends or downloading movies and songs.*"

Other says; "*I usually go to the Cyber space to play games especially Concur*."

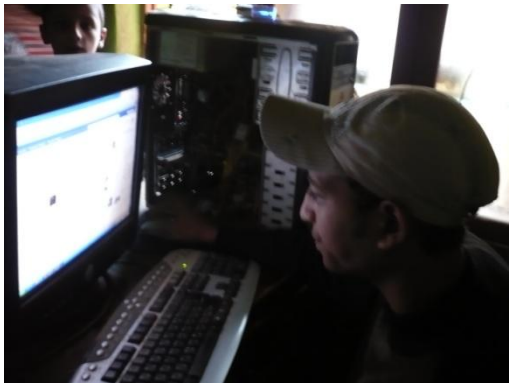


Figure 5.38:

Shows a young villager checking his E-mail. (**Site survey**, 2010)

[21] The International Computer Driving License (**ICDL**) is the world's leading end-user computer skills certification program offering youth an internationally accredited certification at no cost. The program raises candidates' level of ICT and computer skills and increases their level of competency in using personal computers and common computer applications

Ahmed Belal, 21 years old, works at a Cyber Space in the village, told me that his Cyber encounters a lot of children and youth especially at weekends and summer holidays, he also added that almost 70% of them are coming to play games like Concur or Playstation, 30% to download movies or songs, 25% to check their e-mails or face book accounts, and just 10% use the Internet as a search engine when they have a research at school or university.

On the other hand, grown up men ranging from 30-40 years old have quite little knowledge of using the computer and barely use it, even though 50% of them possess a personal computer at home for the sake of their children.

Mr. **Abass Aly Abass**, 39 years old, & an employee at The Company of Electricity said:

> *"I can barely use the computer perhaps only for games but the young generations can use it much better. Even though I rarely use it, I insisted on buying one for my children, they are very good at using it. And as it is becoming the language of the age, I don't want my children to be lagged behind."*

Moreover, it's worth mentioning that I was really astonished when I found that more than 70% of the villagers, men & children, have mobiles, even those with very low-income like Cart drivers. Moreover, some of them have blackberries and mobiles with internet.

But the most surprising result was that neither of those interviewed has ever heard anything about the project of upgrading El-Zwammel village that was held 4 years ago.

5.9. TAILORING THE USE OF TECHNOLOGY FOR DIFFERENT PARTICIPATORY PROCESSES

5.9.1. Data collection stage

1. Gathering the statistical information from the statistical information centers

In the case of our project, the main source of gathering the statistical information was mainly **CAPMAS** (Central Agency for Mobilization and Statistics) in Egypt, the official source of providing all the State's agencies, authorities, universities, research centers and international organizations with data, statistics and reports that serve in the activities of planning, development, and decision making. (**CAPMAS**, 2008)

Since the study was prepared in 2002 and then 2006, the study team had to go to **CAPMAS** in person to gather the required information issued in hardcopies, and then work on transferring it into digital format suitable for editing and analysis; this of course consumed a lot of time and effort.

Recently, the Internet has been approached as a tool for communication among government and citizens, in addition to accepting inquires by phone or in person, planning websites nowadays support email correspondence & the download of digital copies online.

For example, the US. government's official web portal, **USA.gov** (an interagency initiative administered by the U.S. General Services Administration's Office of Citizen Services and Innovative Technologies), makes it easy for the public to get U.S. government information and services on the web. It provides details on its policies and guidelines with regard to disclaimers of endorsements, web accessibility, free downloads, and privacy and security matters. (**www.usa.gov/index.shtml**)

Also, **FedStats** provides easy access to statistics and information produced by more than 100 US Federal Government agencies. (**www.fedstats.gov**)

Moreover, the Internet has provided a way to facilitate rapid and free access to aggregate data, and many agencies have software that allows users to create their own tables or time series, such as Tablebuilder and Infoshare, new ways of visualizing official statistics are also being developed.

Examples are Hans Rosling's Gapminder, purchased by Google in 2007 (**Rosling**, 2007), the dynamic population pyramids produced by the Federal Statistical Office of Germany, the UK Office of National Statistics; the US Bureau of the Census and the Australian Bureau of Statistics and interactive mapping tools, such as those used on a DVD available from Statistics New Zealand, so that users can investigate regional Commuter Patterns. (**Statistics, New Zealand**, 2009)

In Jul 13th, 2007, CAPMAS in Egypt released a formal website on the Internet. Currently, statistics are issued in hard copies, Softcopies, CDs, and are also published on the websites: www.capmas.gov.eg, www.egyptictindicators.gov.eg. (**Egyptoo**, 2010)

CAPMAS initiated "*Egypt Intranet project*" – a network of information containing data bases on various economic and social areas prepared by **CAPMAS** as well as by other institutions. The project allows subscribers to access to data 24 hours a day, 7 days a week. [22]

As a further step for more integration with the public, **CAPMAS** completely transformed the web design to be easier in use in October 2010. (**The New Sherouk**, 2010).

This could have saved a lot of time and effort and could have provided equal access to information to all participants in the planning process.

2. *Holding public meetings and questionnaires*

Involving the public presented by asking questions and submitting questionnaires resulted in huge amount of gathered information wait to be transferred to digital format in order to be properly processed and analyzed.

This consumed so much effort and time specially when involving large number of citizens from different backgrounds & education. Besides of course the difficulty in reading some of the handwritings and the risk of losing or damaging any of the gathered hardcopies.

Using advanced Internet based programs such as **CAPI** (Computer Assisted Personal Interviewing), enables the study team to interviews thousands of citizens without the need to transcribe the results into a computer form. The computer program places the results directly in a format that can be read by statistical analysis programs conceiving both time and effort.

CAPI is a simple idea; Instead of collecting data on paper questionnaires, interviewers use portable computers to enter data directly via a keyboard. Most of the early applications of CAPI have been to large scale, continuous surveys for government and the commercial sector. For example, in the public sector, **OPCS** has converted to CAPI for the Labor Force Survey for interviews with 25,000 households a year, and the Family Resources Survey has used CAPI from its outset in 1992. In the commercial sector, British Telecom's annual customer satisfaction survey has been increasing its use of CAPI since it started in 1990. The National Readership Survey is also CAPI-based. (**Sainsbury, Ditch and Hutton**, 1993)

Also, other electronic devices like iPad can be used to conduct surveys on transit vehicles to increase the speed of surveys and enhance accuracy by eliminating the need to input data from written forms. Portable technology like iPads may help improve consistency, accuracy & can be used to gain broader participation.

3. Phone Survey

Telephone surveys used to be the most popular form of interviewing before the web became dominant. Traditionally, centrally based phone centers were set up with interviewers seated at booths, each one operating **CATI** (Computer Assisted Telephone Interviewing) software. Many of these CATI systems included automated dialing and recall systems to ensure maximum operator efficiency**.** (**Snap Survey**, 2010)

The London Survey is a major annual opinion survey of Londoners, commissioned by the Mayor and the Greater London Authority. ICM Research was commissioned to carry out regular telephone surveys with residents in Greater London, to inform policy development. (**Greater London Authority**, 2010)

[22] It should be noted that data that come from easily accessible websites has the caveat that it may not be of the same quality standard as that of CAPMAS

5.9.2. Stakeholders Engagement

The first step to achieve a successful engagement of the public is to identify the main stakeholders that should be committed to the collaboration in decision-making process, and then specify how they can be approached and get notified.

All of the key stakeholders should be notified at the start of the consultation to invite them to read the draft strategy and attend the public meetings.

In our case, Local residents were mainly represented by local public committee members as well as the representatives of the main large families, as they enhance the self-efforts, donations, and contribution either with land, effort or money.

One of the drawbacks was the rise of self-consideration in contrast to the community benefit. Most of the local owners of the rural areas attached to the present built-up area showed the desire to donate the quarter of their lands in order to guarantee that their lands would be included in the new corporate limit for the beneficial profit regardless of the agricultural loss.

However, there were different types of individuals that might be interested in contribution but were not successfully engaged, i.e. educated unemployed youth, household's women, & disabled. And since typically most of the young educated citizens are working outside the village due to the shortage in job opportunities, they hadn't had the chance to contribute by attending the meetings or answering the questioners.

Moreover, Citizens have unequal levels of interest and understanding in public issues to motivate them to attend meetings, unequal access to meeting facilities, and unequal time to attend meetings, different channels should have been approached to engage inactive community groups. Comments can be submitted on the project website, e-mailed, mailed, or faxed. The Internet is best used in conjunction with other outreach strategies; i.e. project websites and electronic notifications (e.g. email alerts, e-newsletters, listserves).

1. GIS Capabilities

One of the drawbacks of this study was a result of the misusing the quick turnaround time that was allowed with the use of a GIS system. With the presence of the property data, the team would have been able to extract all of the property owners that would be affected by any modifications. Once extracted, a comprehensive database could have been imported into Microsoft Access.

This technology is extremely helpful in determining who shows up at each of the public meetings. A graphic representation of public turnout can be generated and used to re-evaluate how effective the public outreach techniques were.

2. Project Web Site and Electronic Notifications

A newer vehicle used is developing a specific web site for the project with information available to all stakeholders and a project team specific site that houses the day-to-day project documentation and information. Typically, this site should have a high-level overview of the project, timelines, impacts on stakeholders, and questions and answers. (**Dupree**, 2008)

Websites including information people might want if they cannot attend meetings or information summarizing meeting outcomes, video and audio recording of meetings, collecting feedback on visuals (e.g. maps, visualization).

Moreover, websites can allow citizens to register for newsletters, or even to be notified regarding local issues (development within a certain radius of their home or office, for example).

In addition to making information available governments can create RSS feeds, email lists, and other approaches that "*push*" information to citizens who have subscribed. These efforts can cultivate both bi-directional communication between citizens and many-to-many communication among a broader community. Press releases announcing the availability of the draft on the project's website

The simplest information such as email newsletters and simple websites found easily by search engine searches – will reach the widest audience, with more sophisticated tools and information reaching fewer users. Simple factors such as font size and website design, described in the previous chapters, can increase the number of website visitors, commenter's, and time spent reading.

3. Address varied technological ability or knowledge

Simplify and make things understandable, improve participant access (e.g. use multiple media types, use familiar platform such as Google), provide training in technology or use facilitators.

Providing access at public locations & community hubs such as schools, meeting halls and leisure centers may be possible to engage with a variety of groups in a single location. (**Warschauer**, 2003)

Moreover, providing copies of the draft and final to public libraries, on the website, and by request, as well as providing a toll-free telephone line for requests and comments would have engaged more public.

4. Interactive Video Displays And Kiosks

Interactive displays take advantage of evolving video and communications technologies. Information is provided through a presentation that invites viewers to ask questions or direct the flow of information. Viewers activate programs by using a touch-screen, keys, a mouse, or a trackball. Software used in interactive video displays and kiosks is highly specialized, storing information on CD-ROM or floppy disks that allow retrieval of specific information based on directions from the viewer. By contrast, hardware requirements are fairly minimal, requiring relatively simple computer equipment.

For example, The Massachusetts Turnpike Authority has installed interactive tourist information kiosks at each of its ten rest areas. The kiosks have a constantly-running video designed to attract passers-by. During the loop presentation, viewers touch the screen to activate certain modules of information such as museums or other attractions by region or for any part of the Commonwealth.

If well-sited, interactive programs reach people who do not normally attend hearings or meetings. They should be located where large numbers of people gather -- for instance, in shopping malls, community colleges, and government buildings. They are placed where people naturally congregate to talk, shop, or socialize, or -- in railway stations for instance -- where they wait for arrival or departure. For example, The Colorado Governor's Office initiated a program of touch-screen informational displays in shopping centers.

The New York State Urban Development Corporation developed an interactive video for public distribution to help explain the Miller Highway Relocation Project in New York City. The video offers highly-developed video images and animations to explain various

project alternatives and their environmental implications. Users see the different alternatives from a variety of perspectives and enter their reactions.

The Arizona Supreme Court has developed interactive displays, called Quick court terminals, to assist people in understanding how to navigate through the judicial system. The Arizona Quick court system has used locations such as shopping malls, schools, and government offices. Orange County, California, uses a movable kiosk display to show transit project information on a touch screen.

On-screen text is written at a fourth-grade reading level, and a narrator gives audio direction. Key words and numbers flash in synchronization with the narration to assist users with poor reading skills. In the first year of operation, almost 24,000 Quick court transactions were conducted, and only a handful of users had to seek further help.

This method of displaying information supplements other methods of dissemination, thus conserving staff resources. The Smithsonian Institution added an interactive kiosk about transportation to an exhibit at the Museum of American History in Washington, D.C. The kiosk allows visitors to ask questions about public transit, commercial vehicle operations, traffic management, traveler information, and accident prevention. (**US Department of Transportation**, 2010)

5. Social networking websites

Social networking applications are the most familiar Web 2.0 application. The most popular include Facebook, MySpace, LinkedIn and XING. There is even an application called Ning **(http://www.ning.com/)** that enables people to create their own social networks.

Social networking applications are still in their infancy. It's clear that they are important, but unclear exactly how they can be used most effectively. However, in spite of this problem, social networking is a powerful tool that can improve two-way communications with all types of users and thereby help improve the development and operation of all types of transport systems.

In the Fargo-Moorhead area as part of a research project at North Dakota State University, Facebook, and Twitter will be used to gather public input on transit. (**NDSU News**, 2010)

The project is part of a nationwide effort by the Federal Transit Administration explore innovative ways to improve public

participation in transportation planning. "*NDSU*'s project is unique in its emphasis on technology.

Social networking tools will be used to expand the reach of public participation efforts. They will be used to notify individuals of opportunities to participate and will serve as a vehicle for distributing planning documents.

> *"We are always looking for ways to improve communication with our customers," says* ***Lori Van Beek****, Moorhead Transit Manager. "More than 50 percent of our riders are college students. They are very used to technology and electronic communication, so this should be a good fit."*

5.9.3. Data Sharing

1. Aiding Orientation

A digital camera systematically documented the present condition of the neighborhood, conversely, on-neighborhood shots recorded spatial links from inside out: routes, and shuttered, filtered, sneak, and panoramic views into the surrounding space.

The team also shot all access routes and visual links -sneak glimpse, views, etc.- from around the immediate neighborhood periphery looking in.

On-neighborhood photographs also documented the mass and details of the impinging forms: materials, openings, textures, colors, and the like.

If Photographs were hot-linked to their geographic location, they would have coordinated with a key plan to show the direction and position of each shot. This arrangement was meant to aid orientation during future reference in design and help identifying the neighborhood environmental problems so as to raise the awareness of local residents.

This arrangement was intended to visually represent types, architectural styles, and locations of buildings and designs that could be incorporated into the neighborhood plan.

2. Raising Public awareness

Most of the villagers weren't aware of how deteriorated their built-up environment suffers. As much as they get used to it they lose the sense of realizing the deteriorated aspects in their lifestyle.

The GIS image database could have been contained examples of numerous developments near the neighborhood and throughout the city. These images could have been used as anchor points for raising awareness and discussing development alternatives.

As planners suggested solutions, they would have displayed images that most closely match the ideas. Design examples can be used to probe and support the suggested ideas. It could have even fostered discussion by providing prototypes examples of what the village will look like in five, ten and twenty years.

3. Visualization Techniques

Visualization is a key in public participation because it is the only common language to which all participants can relate. Visualization provides a focus for a community's discussion of their design ideas; it guides them through the design process; it raises their design awareness, and facilitates better communication.

By visualizing the past and present conditions of the village it could have engaged the community members in the development process.

There are other visualization techniques available to planners, such as virtual reality of urban environment (**George**, 1998), multi-media and decision-support systems in planning context (**Shiffer**, 1995). Each may work in a specific situation. (**Klosterman**, 1999)

There is no single method that works for all situations. Planners should explore the different methods that are most effective for different situations

4. Facilitating Virtual Public Meetings

In committee or executive meeting if someone cannot attend the meeting a virtual meeting can be set up using videoconferencing and webinar technologies.

The Los Angeles Departments of City Planning and Transportation presented a webinar in July 22nd, 2010 for a presentation and discussion about the City's recently released 2010 Bicycle Plan (2010 Plan) and the first Five-Year Implementation Strategy.

The webinar consisted of two separate one-hour presentation and discussion sessions. The first presentation was an overview of the entire 2010 Bicycle Plan and the second presentation introduced the 2010 Bicycle Plan's proposed Five-Year Implementation Strategy. A question and answer session were included in webinar both sessions. (**Department of City planning**, 2010)

In Washington (**CNS**) -- a Webinar examined the role of Catholic media outlets and the links between them and the bishops, who are quite often the publishers of locally produced Catholic newspapers and broadcast programming. The July 28 Webinar, "*Faithful Catholic Media: Continuing the Conversation*," jointly sponsored by the Catholic Press Association and the U.S.

Catholic media professionals gathered at 39 sites across the country, including USCCB headquarters in Washington, to join the Webinar, which cost $49 for access per location. Others involved in the session joined in from their respective offices, Dominic Perri of Chicago, a consultant to the USCCB, was the facilitator. (**Pattison**, 2010)

5. Interaction or Collaboration among Participants

Planning websites should support email correspondence. Furthermore, allowing the receipt of comments in a public forum can allow a collective process of clarification. The PlaNYC website allows visitors to post comments, and private vendor products like LimeHouse software allows commenting on plan elements. (**www.nyc.gov/planyc**)

6. Games

Can urban development programs also use games to attract and sustain broader community participation?

> *"Through over six months of field research at Rosario Hábitat, I found that a game approach can enhance the quality of community participation, by making it more attractive, active, and effective, and making decisions fairer and more transparent."* (**Lerner**, 2010)

Games such as the puzzle challenge ignite participation; build community, and open people's minds. Game mechanics such as vivid visuals and enjoyable core mechanics activate and engage people's senses. Participant-generated rules, multimodal presentation of the rules, justification of fixed rules, and structures for organic learning establish and legitimate rules. Magic circles and group vs. system

conflict generate healthy competition that increases collaboration. Linking participation to concrete yet uncertain outcomes, presenting these outcomes vividly, and measuring progress through levels and points provides more incentives to participate, and to keep participating.

In Rosario, Argentina, the urban development program Rosario Hábitat uses game techniques to engage slum dwellers in participatory workshops. The experience of Rosario Hábitat, however, suggests that if development programs use game mechanics that engage the senses, legitimate rules, generate collaborative competition, and link participation with measurable outcomes, they can enhance community participation. In particular, they can make participation more attractive, active, and effective, and make decisions fairer and more transparent.

> *"For participatory planners, games have become a key tool for engaging community members in workshops and design charettes, usually through physical icebreakers, team-building games, mapping simulations, and contests."* (**Al-Kodmany**, 2001)

5.9.4. Capture participants' Input

1. Allow collaborative writing or editing of documents

Online tools like survey monkey, wikis, input stations at meetings with instant tabulation of results, blogs or online discussion forums and email correspondence can be used to collect public input. If planners need to get consensus at the meeting, they can use electronic voting, which will allow them to see the result instantly about what majority of people want.

Moreover, Output from an interactive display is used to record preferences or to recognize and respond to specific participant concerns. It is also used to expand mailing list databases. Most displays can store large amounts of data. If connected to a telephone line, the data may be downloaded by a central agency or operations center.

2. Allow interactive voting

Keypad voting, online surveys, text-in or call-in voting

The following table (**Table 5.9**) summarizes all the above mentioned study.

Typical participation activity		How technology can be used
Data Collection Stage	**Gathering the statistical information**	The Statistical Information Websites provide rapid and free access to aggregate data.
	Holding public meetings and questionnaires	Advanced Internet based programs such as **CAPI** (Computer Assisted Personal Interviewing) and other electronic devices like iPad.
	Phone Survey	Using CATI (Computer Assisted Telephone Interviewing) software.
Stakeholders Engagement	**GIS Capabilities**	Extracting all of the property owners that would be affected by any modifications
	Project Web Site and Electronic Notifications	Websites including information, meeting outcomes, video and audio recording of meetings. RSS feeds, email lists, push Press releases and newsletters to subscribers. Access at public locations & copies to public libraries. Also, a toll-free telephone line for requests and comments could engage more public.
	Address varied technological ability or knowledge	Simplify and make things understandable, improve participant access (e.g. use multiple media types, provide access at public locations, use familiar platform such as Google), provide training in technology or use facilitators
	Interactive Video Displays And Kiosks	Provide presentations that invite viewers to ask questions or direct the flow of information. Viewers activate programs by using a touch-screen, keys, a mouse, or a trackball.
	Social Networking Websites	Facebook, MySpace, LinkedIn and XING
Data Sharing	**Aiding Orientation**	Hot-Linking Photographs to their geographic location.
	Raising Public awareness	The GIS image database could contain examples of numerous developments &

		display images that most closely match the ideas.
	Visualization Techniques	Visualization of outcomes and ideas, interactive simulations,
	Facilitate virtual public meetings	Videoconferencing And Webinar Technologies
	Interaction or Collaboration among Participants	Email Correspondence, Community or committee forums or online, wikis and dynamic editing of documents, hardware improvements (SmartBoards, cs)
	Games	Games such as the puzzle challenge, Game mechanics such as vivid visuals and enjoyable core mechanics activate and engage people's senses.
Public Input	**Capture participants' Input**	Online surveys, wikis to collect public comments, input stations at meetings with instant tabulation of results, blogs or online discussion forums, email comments. Also, Output from an interactive display.
	Allow collaborative writing or editing of documents	Wikis, track changes tool in Microsoft Word
	Allow interactive voting	Keypad voting, online surveys, text-in or call-in voting

Table 5.9: Tailoring the use of technology for different participatory processes.

5.10. CONCLUDED REMARKS

In the experience of public participation in the planning process of El-Zwammel village, even though it was considered positive according to the Report of the effectiveness of participation prepared for this particular village, there were several negative aspects that have been noticed throughout the stages of the project.

The first step to achieve a successful engagement of the public is to identify the main stakeholders that should be committed to the collaboration in decision-making process, and then specify how they can be approached and get notified..

In our case, Local residents were mainly represented by local public committee members as well as the representatives of the main large families, as they enhance the self-efforts, donations, and contribution either with land, effort or money.

There were different types of individuals that might be interested in contribution but were not successfully engaged, i.e. educated unemployed youth, household's women, & disabled. And since typically most of the young educated citizens are working outside the village due to the shortage in job opportunities, they hadn't had the chance to contribute by attending the meetings or answering the questioners.

Having the number of local participants in the public meetings who represented the different socio-economic groups of the society less than 0.12 % of the Total Population in El-Zwammel village raises the concerns regarding how adequate their participation was and whether they really reflected the actual desires and needs of the society they represented.

Also having just 20 persons to represent those affected by changing the corporate limit, while having an Urban Expansion of about 59 feddan on the rural area, seems quite unreasonable and actually rise the concern of how appropriate was the decision taken in the first place.

With the presence of the property data, the study team could have used the GIS capabilities to extract all property owners who would mostly be affected by this decision, and hence target them & invite them to participate in the decision making process.

Furthermore, holding public meetings, asking questions and submitting questionnaires were the only techniques used to communicate with the local partners which in return resulted in a huge amount of gathered information wait to be transferred to digital format in order to be

properly processed and analyzed, besides of course the difficulty in reading some of the handwritings and the risk of losing or damaging any of the gathered hardcopies.

Moreover, Citizens have unequal levels of interest and understanding in public issues to motivate them to attend meetings, unequal access to meeting facilities, and unequal time to attend meetings, different channels should have been approached to engage inactive community groups such as telephone surveys or advanced Internet based programs such as CAPI (Computer Assisted Personal Interviewing).

Also, one of the drawbacks was the rise of self-consideration in contrast to the community benefit. Most of the local owners of the rural areas attached to the present built-up area showed the desire to donate the quarter of their lands in order to guarantee that their lands would be included in the new corporate limit for the beneficial profit. This also reflects lack of awareness regarding the preservation of the agricultural land.

Another drawback was presented in the inconvenience and lack of trust between the residents and the government to identify a new corporate limit and submit it to the localities to be implemented in the near future.

There is no doubt that the unique characteristics of face-to-face communications in building consensus, communicating complex information, or creating new ideas cannot be totally replaced by online communications. However, The Internet has tremendous potential to allow planners to enhance and improve existing participation techniques.

As an attempt to pay a quick glance on the technological level that actually exists in the village in order to assess the possibility of introducing more advanced information technologies in such society, it is worth mentioning that no data were found in the relevant authorities, or communication providers in Egypt such as Telecom Egypt or TE-Data.

There were no such record; all the involved parties were only interested in Cairo metropolitan, a fact that reveals the unequally distribution of ICT services in Egypt.

However, after a quick field survey in the village, several observations, & interviewing more than 15 villagers, with different ages ranging from 10-40 years old it was found that:

- Around 50% of the villagers have computers at home, 50% of which have internet connections
- More than 70 % of the children were familiar with the use of computers, which clearly reveals the importance of promoting the use of ICT in education since it has developed a new generation of citizens who understand and are comfortable with the use of ICT in their daily lives.
- More than 80% of the highly educated youth are familiar with the computer programs and uses it in their daily operations at work, 50% of them have personal computers at home, and 30% have a face book account & an e-mail address,

However, almost all the highly educated youth are working outside the village either in Cairo, or in big cities like Belbis or El-Zakaziq. This reflects the reason behind the fact that neither of those interviewed has ever heard anything about the project of upgrading El-Zwammel village that was held 4 years ago.

On the other hand, grown up men ranging from 30-40 years old have quite little knowledge of using the computer and barely use it, even though 50% of them possess a personal computer at home for the sake of their children.

Although access to the Internet has grown considerably in Egypt, access remains unequally distributed among the country; not all the Governorates of Egypt enjoys the same ICT services, the digital divide lies within Egypt itself.

Yet, with a strong human base by investing in the nation's youth, New generations of Egyptians receiving a quality education have plenty of opportunities for skills development and professional training, thus, advanced technologies and internet based programs can be easily tailored to fit in the framework of the planning process & overcome the drawbacks and consequently enhance the public participation creating an inclusive, democratic and equitable planning process.

Modern advanced technologies & Internet based programs can serve as a new venue for public conversation, potentially more accessible and flexible than any previous approach, consequently, can be a key to the promotion of a higher level of citizen participation in urban planning and design.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

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6.1. CONCLUSION

Despite the theoretical disagreement about the proper definition and practice of participation, it is now widely understood by people in all sectors of the development industry that such involvement can lead to more appropriate and sustainable development solutions and stronger citizen groups and communities.

Yet, there is almost universal uncertainty as to the best way of involving local communities in any given situation. The ways of citizens involvement in urban planning can vary a lot, each community needs to devise its own community planning process carefully to suit local conditions.

A vast range of methods is available with different uses and characteristics. These methods have long been used in public participation and certainly have their remarkable benefits and advantages that have proven efficiency for a long time in this field. However, there are some technical and financial disadvantages of using them which cannot be ignored for their great effect on the quality and quantity of community participation.

Planners can strive to give citizens a meaningful role in the development of plans and ensure that information is made available to the public in a convenient format and sufficiently in advance of any decision. Given this professional culture and ethical requirements, a clear model to use the Internet to facilitate participation will be professionally useful. It may also be possible that the technology addresses concerns raised by critics about conventional practices, allowing for new forms of information dissemination, social interaction and collaborative working.

Actually, the rapid development of the Internet, as a place of information dissemination provides researchers and policy-makers with considerable challenges on how best to realize the potential in the pursuit of worthwhile goals.

Information technology is dominating the contemporary world. It links the government, economy, society and culture, now most of government information can be obtained from websites and one can use email instead of mails to contact government officials or planner.

Citing rapidly expanding use, declining cost, and advancing technology, concludes that the "digital divide is disappearing" and the role of public policy will be to help those left at the fringes.

However, despite excitement about the potential for e-democracy, technical barriers remain. Administrative, technical, accessibility barriers and lack of public education about the use of technology can be the challenges and risk for Planners to use technology in planning process.

Hardware and access are necessary but not sufficient to expand e-democracy in planning. Public participation planning processes are not easily moved to online systems and may contain qualitative features that cannot be replicated through Internet technology. Also needed is a conceptual model to understand how Internet technology can contribute to a larger planning process.

Since 2000, a host of highly interactive and popular websites has developed that allow Internet users to share information, form communities, and interact in new ways. These websites share a common dedication to simplicity, usability, and interactivity. Collectively, they allow groups to communicate and collaborate online.

The technology offers a menu of tools well suited for planners' long-standing goals of sharing information, interacting with the public, and fostering community.

Though planning support systems exist, planners have not made the best use of them due to the lack of awareness about the type of technologies that exist and their use in the planning and participation process. It is important to review the existing technologies available for planning and participation processes, developed to provide planners with all the capabilities to fulfill their responsibilities with ease. These technologies help both the planners and the participant to communicate clearly based on facts and figure instead of assumptions or guesses.

Visual tools help to envision a realistic plan. Technologies used to analyze consensus, incorporate feed back in the plans and show the result to the participants provides power to citizen in a planning process as they can see their input has made a difference.

Planners use various type of participatory effort in their planning process but the typical type of activity seen are presenting and sharing the information, facilitating meetings, getting participants feedback on a plan, incorporating participants feedback in a plan, creating collaboration with participants, getting consensus and taking votes.

Every process and tool has it positive and negative aspect of it but if the positive aspect outweighs the negative aspect and risk of using the system can be minimized then using the tool to achieve an effective result will be a sensible decision.

The use of technology will help in reaching wider audience, will make information accessible any time, provide equal access to information and feedback to all participants and allow participant to think carefully about an issue. However, it takes a very good job of planning to accomplish a highly effective public participation planning programs.

The real challenge in designing public participation programs is to design an appropriate program, where the techniques matches the purpose of the program, reaches the interested stakeholders, and results in a clear linkage between the public participation process and the decision-making process.

The appropriate level of public participation is the level that best matches the situation. The difference in intensity of interest is often reflected in how the stakeholders will participate.

There is no public participation technique that will work in all circumstances. In order to facilitate the active participation of communities with the planning and development, it requires a whole range of approaches and a full menu of techniques. These approaches are likely to vary according to local preference, availability of funds, and the values of government officials.

However, In spite of the ambitious expectations from public participation, it cannot be argued that every participation activity meets those expectations. Therefore, the evaluation of public participation is essential in order to reflect on the degree of achievement of the goals, and to justify the allocation of resources, i.e., time, funds and efforts.

Even though IT diffusion has been proven to have significant spillovers on the world economy, these benefits have not appeared to be evenly distributed among countries. In fact, effective usage of IT equipment requires many other complementary investments including factors like human capital and the provision of a reliable telecommunication infrastructure which many of the developing countries still lack.

The *'digital divide'* commonly refers to the gap between those with access to ICT and those without; yet, many factors besides physical access contribute to these disparities, among which are:

- Strong Governmental Support
- A Suitable Legislative and Investment Environment
- A State of the Art Infrastructure and Investment in Human Resources

Even in developing countries with relatively high net ICT uptake, ICT is still out of reach of many groups, this is due to:

- **Lack of appropriate products:** products are often not designed to meet the needs of the poor, or those in remote areas. These groups can face constraints such as access to electricity (lacked by two billion people worldwide).
- **Cost:** roughly half the world lives on less than four dollars a day. Many potential users are too poor to afford any form of access to ICT.
- **Education:** even where there is physical access to ICT, many people do not have the technical skills needed to benefit from them.
- **Language:** Poor literacy is a problem with ICT such as the internet. Of those who can read, many know only a local language, while the internet is dominated by English-language content.
- **Human resources:** As in many sectors, the migration of skilled ICT professionals from developing to developed countries contributes to a lack of human resources to support ICT.
- **Lack of robust regulatory framework** for ICT can limit uptake.

However, many factors could contribute to bridging the digital divide. National governments, NGOs, industry and international donors all play a role, often work together.

Moreover, latecomer advantages enable developing countries to benefit from the rapidly decreasing prices of IT equipment resulting from technological innovations and R&D conducted by the developed world.

Also, using open source software which is provided for free on the Internet, in addition to importing used or low-specification computers are all considered low cost options that developing countries may benefit from.

Focusing on **Egypt**, as a leading country in North Africa & in the Arab World in the use of information technologies for governance, Egypt has witnessed a major technological development and an outstanding revolution in the domain of communications.

Not only the government invests in the nation's infrastructure, but it also creates a strong human base by investing in the nation's youth. New generations of Egyptians are now receiving a quality education and have plenty of opportunities for skills development and professional training.

However, despite the excitement about the potential of using the Information and Communications Technologies (ICT) to promote more efficient and effective government services and allow greater public access to information, the innovation in the area of participation has been limited to facilitate individual communication (e.g. email) to government officials. Despite advances in teleconferencing, the subtle aspects of face-to-face interaction cannot be easily substituted.

Before planners attempt to use technology in public meetings or build online tools, they should make sure citizen have the accessibility to use it. Cowley and Conroy explored the use of e-governance in municipalities and found that

> *"Beyond the issues of digital divide, there are issues of accessibilities for those with disabilities and for those who do not speak English."* (**Conroy et al**, 2004)

Moreover, although access to the Internet has grown considerably in Egypt, access remains unequally distributed among the country; not all the Governorates of Egypt enjoys the same ICT services.

The main challenge that should be addressed is the digital divide within the country itself, with more than 60% of Egypt's population lives in rural areas, the language barrier (Arabic contents and Arabic Domain Names), literacy rates, limited connectivity, awareness, in addition to telecommunications infrastructure, can consist a strong barrier for Planners to use technology in planning process.

In the experience of public participation in the planning process of El-Zwammel village, even though it was considered positive according to the Report of the effectiveness of participation prepared for this particular village, there were several negative aspects that have been noticed throughout the stages of the project.

The first step to achieve a successful engagement of the public is to identify the main stakeholders that should be committed to the collaboration in

decision-making process, and then specify how they can be approached and get notified.

In our case, Local residents were mainly represented by local public committee members as well as the representatives of the main large families, as they enhance the self-efforts, donations, and contribution either with land, effort or money.

There were different types of individuals that might be interested in contribution but were not successfully engaged, i.e. educated unemployed youth, household's women, & disabled. And since typically most of the young educated citizens are working outside the village due to the shortage in job opportunities, they hadn't had the chance to contribute by attending the meetings or answering the questioners.

Having the number of local participants in the public meetings who represented the different socio-economic groups of the society less than 0.12 % of the Total Population in El-Zwammel village raises the concerns regarding how adequate their participation was and whether they really reflected the actual desires and needs of the society they represented.

Also having just 20 persons to represent those affected by changing the corporate limit, while having an Urban Expansion of about 59 feddan on the rural area, seems quite unreasonable and actually rise the concern of how appropriate was the decision taken in the first place.

With the presence of the property data, the study team could have used the GIS capabilities to extract all property owners who would mostly be affected by this decision, and hence target them & invite them to participate in the decision making process.

Furthermore, holding public meetings, asking questions and submitting questionnaires were the only techniques used to communicate with the local partners which in return resulted in a huge amount of gathered information wait to be transferred to digital format in order to be properly processed and analyzed, besides of course the difficulty in reading some of the handwritings and the risk of losing or damaging any of the gathered hardcopies.

Moreover, Citizens have unequal levels of interest and understanding in public issues to motivate them to attend meetings, unequal access to meeting facilities, and unequal time to attend meetings, different channels should have been approached to engage inactive community groups such as telephone surveys or advanced Internet based programs such as CAPI (Computer Assisted Personal Interviewing).

Also, one of the drawbacks was the rise of self-consideration in contrast to the community benefit. Most of the local owners of the rural areas attached to the present built-up area showed the desire to donate the quarter of their lands in order to guarantee that their lands would be included in the new corporate limit for the beneficial profit. This also reflects lack of awareness regarding the preservation of the agricultural land.

Another drawback was presented in the inconvenience and lack of trust between the residents and the government to identify a new corporate limit and submit it to the localities to be implemented in the near future.

There is no doubt that the unique characteristics of face-to-face communications in building consensus, communicating complex information, or creating new ideas cannot be totally replaced by online communications. However, The Internet has tremendous potential to allow planners to enhance and improve existing participation techniques.

As an attempt to pay a quick glance on the technological level that actually exists in the village in order to assess the possibility of introducing more advanced information technologies in such society, it is worth mentioning that no data were found in the relevant authorities, or communication providers in Egypt such as Telecom Egypt or TE-Data.

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Also, it was found that more than 80% of the highly educated youth are familiar with the computer programs and uses it in their daily operations at work, 50% of them have personal computers at home, and 30% have a face book account & an e-mail address, however, almost all the highly educated youth are working outside the village either in Cairo, or in big cities like Belbis or El-Zakaziq. This reflects the reason behind the fact that neither of those interviewed has ever heard anything about the project of upgrading El-Zwammel village that was held 4 years ago.

On the other hand, grown up men ranging from 30-40 years old have quite little knowledge of using the computer and barely use it, even though 50% of them possess a personal computer at home for the sake of their children.

Although access to the Internet has grown considerably in Egypt, access remains unequally distributed among the country; not all the Governorates of Egypt enjoys the same ICT services, the digital divide lies within Egypt itself.

Yet, with a strong human base by investing in the nation's youth, New generations of Egyptians receiving a quality education have plenty of opportunities for skills development and professional training, thus, advanced technologies and internet based programs can be easily tailored to fit in the framework of the planning process & overcome the drawbacks and consequently enhance the public participation creating an inclusive, democratic and equitable planning process.

Modern advanced technologies & Internet based programs can serve as a new venue for public conversation, potentially more accessible and flexible than any previous approach, consequently, can be a key to the promotion of a higher level of citizen participation in urban planning and design.

Yet the best example that can be provided is what has happened in Egypt the last few months. There is no doubt that Facebook and the Internet were responsible for the uprising in Egypt.

Facebook has seen a rise in publicity due to its use by protesters in Egypt recent public revolution. It has been reported that Facebook helped organize these rallies and disseminate information among protestors as well as the outside world.

The revolution actually started on Facebook in June 2010 when hundreds of thousands of Egyptians started collaborating intents.

> *"I've always said that if you want to liberate a society just give them the Internet." Said* ***Wael Ghonim****, a marketing manager for Google, and a key protest in Egyptian revolution, 2011*

6.2. RECOMMENDATIONS

The research conducted in this thesis has led to some useful results and conclusions on how the Internet based Techniques can extend the scope of participation and add a new dimension to the available methods, however, it has also uncovered many areas that need additional study.

The purpose of this section is therefore to identify various areas where further research is needed, these areas include the following:

6.2.1. A Framework of ICT Exploitation for E-Participation Initiatives

Researcher and literature has always supported the use of technology but there has been no attempt to inform planners about the availability of the technology and existence of number of technologies that can be fitted into the planning process.

The use of appropriate ICT tools for different e-Participation objectives at various phases of the policy-making process can serve to increase the effectiveness of e-Participation initiatives. This eventually contributes to the success of e-Government efforts in enhancing democratic processes.

This thesis has put together a list of technologies that can be used for various purpose of a planning meeting and enhance participation process. However, further research is needed to consider how planners and practitioners can engage public by using technology and how they can overcome the technological barrier to fit in technology in their planning process.

6.2.2. The Complexity of PP GIS Applications

The use, the potential and the limitations of online PPGIS are to be studied. Currently available PP GIS applications vary strongly concerning their included GIS functionalities and their complexity.

A potential danger is that if the GIS functionalities increase in a PP GIS application, also the complexity of a system may increase. High complexity of an application might prevent elderly and less computer skilled people from using it.

The complexity also strongly depends on the nature of the decision-making process itself and related possible level of interactivity.

Technically, PP GIS applications can be designed in a relatively simple way in the cases of one-way communication where the planning authority only informs the participating people about the planned actions. Complexity and needed GIS functionalities is higher in the cases of map-based discussion and involvement in decision-making.

There is a lack of practical, user-based testing of such applications where a minimum set of needed GIS functionalities can be defined and tested.

Further development of PP GIS applications should be based on the principles of intelligent user interfaces and decision making support systems that offer personalized information and the possibility of communication with the citizens.

6.2.3. Using Visualization Techniques for enhancing Public Participation in Planning and Design

Exploring alternative visualization techniques could be a necessity for ensuring successful communication. Planning processes vary in nature and different situations, ends and goals, and may require different visualization tools.

In order to facilitate public involvement in the consensus building process needed for community development, a lot of time and effort needs to be spent on assessing and sharing public concerns. New approaches for support for context sharing that involve visualizing public meeting records, among which:

Visualize the transition of topics to enable the user to grasp an overview and to find specific arguments.

Visualize topic-related information to enable the user to understand background.

Visualize the auditory scene to enable the user to find and to listen to paralinguistic (prosodic) information contained in audio recordings.

These approaches support citizens and stakeholders to find, to track, and to understand target arguments from the records of a public meeting.

6.2.4. Social Networking And Public Participation

It’s no secret that social media has a strong foothold in public participation. From influencing national revolutions in the Middle East to helping re-launch careers, major social networks like Twitter and

Facebook have the ability to spread information and connect users faster than ever before.

With regards to planning, social media is used as a tool in breaking down the barriers between planners and constituents, using the medium as a way to crowd source ideas and promote a bottom-up approach to a usually top-down practice. As a result, plans become more custom-tailored to the needs of the people, and citizens feel empowered in their ability to directly influence public policy.

The benefit to public participation initially seems obvious. However, the question as to whether social networking can fully engage the public, compared with face-to-face contact, is still open. The opportunity that social networking affords by communicating to a mass, global audience should not be underestimated though, and the online/offline worlds could well complement each other.

6.2.5. Bridging the Digital Divide between Urban and Rural Areas

The digital divide is the gap between those with regular; effective accesses to digital technologies, in particular the Internet, and those without.

The global digital divide is a term often used to describe the gap between more and less economically developed nations, while at the national level, there is often an urban-rural divide.

The language barrier, literacy rates, limited connectivity, awareness, in addition to telecommunications infrastructure, can create a strong barrier for Planners to use technology in planning process in rural areas.

The main challenge that should be addressed is how to bridge the digital divide within the country itself.

REFERENCES

REFERENCES

Alexander, 1977
Christopher Alexander et al, "*A Pattern Language: Towns, Buildings, Construction; working method to enable untrained people to design any part of the environment themselves*", Oxford University Press, Oxford, 1977.

Al-Kodmany, 2001
Kheir Al-Kodmany, "*Online tools for public participation*", Government Information Quarterly 18(4): 329-341. 2001.

Al-Kodmany, 2001
Kheir Al-Kodmany, "*Visualization Tools and Methods for Participatory Planning and Design*", Journal of Urban Technology 8, No.2, P. 1-37, 2001

Altschuler, 1970
Alan Altschuler, "*Decision Making and the trend toward Pluralistic Planning; In Urban Planning in Transition*", New York, Grossman Publishers, 1977

Arnstein, 1969
Sherry R. Arnstein, "*A Ladder of Citizen Participation*", Journal of the American Institute of Planners, 1969

ASU, 2009
Ain Shams University, Faculty of Engineering, 3rd year Urban Design & Planning Department, "*K2C Project | Cross-Cultural Collaboration in Virtual World*", The SL presentation before selection, 2009.

Attia, 2002
Amr A. Attia, , "*The potential of E- Business Success in Egypt and the role to be played by the Government and the private sector*", 2002

Batley, 1996
R. Batley, "*Public-private relationships and performance in service provision*", Urban Studies, 33 (4-5), pp. 723-751, 1996

Beatley et al, 1994
Timothy Beatley, J. David, Brower Lucy & H. William, "*Representation in Comprehensive Planning: An Analysis of the Austin plan Process*," Journal of the American Planning Association, Vol. 60, 1994

Bernie, 1990
Jones Bernie, "*Neighborhood Planning: a Guide for Citizens and Planners*", Chicago: American Planning Association Planner's Press, 1990

BMI, 2010
Business Monitor International limited, "*Egypt Information Technology Report*", 2010.

Brody, Godschalk, & Burby, 2003
Samuel D. Brody, David R. Godschalk, and Raymond J. Burby, "*Mandating Citizen Participation in Plan Making: Six Strategic Planning Choices*," Journal of the American Planning Association, Vol. 69, 248, 2003

Brun, 1999
P. Brun, "*New Models of Participation – New Information Tools*", Proceedings of the 21st Urban Data, Management Symposium (**UDMS**), Venice, Italy, http://www.udms.net ,1999.

Burby, 2003
Raymond J. Burby, "*Making Plans that Matter: Citizen Involvement and Government Action*", Journal of the American Planning Association 69:1, P. 33-49, 2003.

Buss and Redburn, 2006
Terry F. Buss and F. Stevens Redburn, "*Information Technology and Governance in Modernizing Democracy; Innovations in Citizen Participation"*, New York: M.E. Sharpe, 2006

CAPMAS, 2008
Central Agency for Public Mobilization and Statistics, "*Statistics of Egyptian Villages & Subsideries; El-Sharquia Province*", www.capmas.gov.eg, 2008

City of Alexandria, 2008
City of Alexandria, "*Planning & Zoning Website*", Virginia, 2008 http://alexandriava.gov/planning

Compaine, 2001
Benjamin M. Compaine, "*Declare the War Won in The Digital Divide; Facing a Crisis or Creating a Myth*", Cambridge, Massachusetts Institute of Technology, Press Sourcebooks, 2001

Conroy and Cowley, 2004
M. Conroy and J. E. Cowley, "I*nforming and Interacting: The Use of E-Government for Citizen Participation in Planning,*" Journal of E-Government, Vol. 1-3, 2004

Cornwall and Brock, 2005
Andrea Cornwall and Karen Brock, "*Beyond Buzzwords; Poverty Reduction, Participation and Empowerment in Development Policy*", United Nations Research Institute for Social Development, Overarching Concerns Program Paper No. 10, 2005

Creighton, 2005
James L. Creighton, "*The Public Participation Handbook: Making Better Decisions Through Citizen Involvement*", San Francisco: Jossey-Bass, 2005

Day, 1997
Diane Day, "*Citizen Participation in the Planning Process: An Essentially Contested Concept?*", Journal of Planning Literature, Vol. 11, No. 3, 421-434, 1997

Department of Economic and Social Affairs Statistics, 2006
Department of Economic and Social Affairs, Population Division, "*World Population Prospects; The 2006 Revision*", United Nations, New York, 2007. www.un.org/esa/population/publications/wpp2006/English.pdf

DOCP, 2010
Department Of City Planning, "*Los Angeles Bike Plan Webinar*", City Of Los Angeles, California, 2010
http://www.kpfk.org/programs/170-bike-talk/3770-los-angeles-bike-plan-webinar.html

Dupree, 2008
Jacqueline Dupree, "*JDLand: near Southeast Development*", http://www.jdland.com, 2008

Egypt State information Service, 2007
Egypt State information Service, "*Communication & Information Technology*", www.sis.gov.eg, 2007

Egypt State information Service, 2008
Egypt State information Service, "*Your Gateway to Egypt*", SIS Publications, chapter 11: Information and communication technology Egypt year book 2008, http://www.sis.gov.eg/en/LastPage.aspx?Category_ID=1066

Egypt Travel Search, 2008
Egypt Travel Search, "*Technology in Egypt*", http://egypttravelsearch.info , 2008

Egyptoo, 2010
Egyptoo, "*CAPMAS – Egypt*", http://www.egyptoo.com/directory/detail/1315/capmas-egypt.html, 2010

ESV, 2008
Egypt's Smart Village, http://www.smart-village.com , 2008

Ferreiro, 2002
S. Ferreiro, "*Information Literacy: A Perspective from Chile",* White paper prepared for UNESCO, presented at the Information Literacy Meeting of Experts, Prague, 2002

Foucault, 1980
M. Foucault, "*Power/ Knowledge*", Pantheon, New Work, p. 152, 1980

Fox, 2005
Susannah Fox, "*Digital Divisions*," Pew Internet and American Life Project, 2005

Fox, 2006
Susannah Fox, "*Internet Usage Trends – through the Demographic Lends*," Speech 6, http://www.pewinternet.org , 2006

George, 1998
Varkki George, "*HyperSpace: Communicating Ideas about the Quality of Urban Spaces*", Journal of Planning and Education Research, Vol. 17, No 1, 1998

Gibson, 1979
Tony Gibson, "*People Power: Community and Work Groups in Action*", Penguin Books Ltd, 1979

Goodspeed, 2008
Robert C. Goodspeed, "*Citizen Participation and Internet in urban planning*", University of Maryland, 2008

GOPP, 2006
General Organization for Physical Planning, "*The National Project of Preparing Strategic Master Plans for Egyptian Villages; Terms of references",* Ministry of Housing, Utilities, & Urban development, Egypt, 2006

Greater London Authority, 2010
Greater London Authority, "*Annual London Survey*", 2010

Groc, 2005
Isabelle Groc, "*Weaving a useful: Want to involve citizen through internet?*" AICP Journal 30, P. 30-36, 2005

Hamza and Zetter, 1998
M. Hamza and R. Zetter, "*Egypt: The State, Foreign Aid and Community Participation in Urban Shelter Projects*" International Planning Studies, 3(2), 185-205, 1998

Hanna, 2000
Kevin S. Hanna, "*The Paradox of Participation and the Hidden Role of Information: A Case Study*," Journal of the American Planning Association 66:4, 398-410, 2000

Harris, 2005
C. Britton Harris, "*Project: Spatial Statistics Analysis of Bicycle Infrastructure in Minneapolis,"* Minnesota, University of Pennsylvania, 2005

Harris, 2008
Roger W. Harris, "*Information Technology in Developing Countries*", Faculty of Information Technology, University Malaysia Sarawak, 2008

Harvard University, 1995
Harvard University, Graduate School of Design, "*International Training Program Prospectus*", Unit for Housing & Urbanization, 1994

Healey, 2005
P. Healey, "*The Communicative Turn in Planning Theory and its Implications for Spatial Strategy Formations*", Environment and Planning B: Planning and Design 23, 217-234, 2005

Heeks, 2005
R. Heeks, "*ICT and the MDGs: on the wrong track",* I4D, vol.3, No.2, 2005

Hulchanski, 1977
John David Hulchanski, "*Citizen Participation in Urban and Regional Planning: A Comprehensive Bibliography*". Council of Planning Libraries, Exchange Bibliography, 1977

Inhaber, 1998
Herbert Inhaber, "*Slaying the NIMBY Dragon*", New Brunswick, N.J.: Transaction Publishers, 1998

Innes, and Booher, 2004
Judith E. Innes and David E. Booher, "*Reframing Public Participation: Strategies for the 21st Century*", Planning Theory and Practice Vol. 5, No. 4, 2004

Internet world stats, 2008
Internet world stats, "*Internet users by Country*", www. Internetworldstats.com, 2008

Internet world stats, 2010
Internet world stats, "*Internet Usage in the Middle East*", www.Internetworldstats.com , 2010

Internet world stats, 2010
Internet world stats, "*World Internet Users and Population Statistics*", Internet usage statistics, www.internetworldstats.com, 2010

Internet world stats, 2010
Internet world stats, "*Internet users in the world by Geographical regions*", www.Internetworldstats.com, 2010

Jennifer and Conroy, 2006
Evan-Cowley Jennifer and Maria Manta Conroy, "*The Growth of E-government in Municipal Planning*", Journal of Urban Technology 12.4, P. 81-107, 2006

Karki, 2009
Apeckchya Karki, "*Using Technology to enhance Public Participation in Urban Planning*", University of Minnesota, 2009

Kaylor, 2005
Charles H. Kaylor, "*The State of Local E-Government and E-Democracy: Benchmarking the Progress of US Cities at Providing Online Opportunities for Citizen Engagement*", E-government: Key Citizen Participation Issues and Applications for Local Governments, Columbus, Ohio, The John Glenn Institute of Public Service and Public Policy, 2005

Kelly and Becker, 2000
Eric Damian Kelly and Barbara Becker, "*Community Planning: An Introduction to the Comprehensive Plan*", Island Press, 2000

Kem, 2005
Kathy Kem, "*Citizen Participation Model Ordinances*", BRR Architecture, American Planning Association National Conference Poster, 2005

Kingston, 1998
Richard Kingston, "*Web based GIS for public Participation decision Making in the UK*", Paper presented at the Empowerment, Marginalization, and Public Participation GIS Meeting, Santa Barbara, California, 1998

Kleiner & Lewis, 2003
A. Kleiner & L. Lewis, "*Internet Access in U.S. Public Schools and Classrooms: 1994–2002*", U.S. Department of Education National Center for Education Statistics, Washington D.C. 2003

Klosterman, 1999
R. E. Klosterman, "*The What If? Collaborative support system*", Environment and Planning, 1999

Klosterman, 2001
R. E. Klosterman, "*Planning support systems: A new perspective on computer-aided planning*", CA: ESRI Press. 2001

Klosterman, 2007
R. E. Klosterman, "*Engaging the Future: Forecasts, Scenarios, Plans and Projects*", Lincoln Institute of Land Policy, Cambridge, MA, 199-219, 2007

Lerner, 2010
Lerner Josh, "*What Games Can Teach Us about Community Participation; Participatory Urban Development in Rosario's Villas*", The New School for Social Research, 2010

Linking People, 2010
Linking People, "*Mubarak City for Scientific Research and Technology Applications*", Information & Technology, http://www.mucsat.sci.eg, 2010

Madden, 2006
Mary Madden, "Data Memo: Internet Penetration and impact", Pew Internet & American Life Project, http://www.pewinternet.org, 2006

Martel, 2009
David Martel, "*The Threat of Social Network Rise*", Pew Internet & American Life Project, 2009

Mayo and Craig, 1995
Marjorie Mayo and Gary Craig, "*Community, participation and empowerment; the human face of structural adjustment of tools for democratic transformation*" A Reader in Participation and Development, Zed Books LTD, 1995

McClure, Byrne and Hurand, 1997
Wendy McCLure, Abby Byrne, and Fred Hurand, "*Visualization Techniques for Citizen Participation; In the Rural town, Designing for Growth & Sustainability*", Center for Business development & Research, University of Idaho, 1997

MCIT, 2007
Ministry of Communication and Information Technology, "*Egypt's ICT Strategy: 2007-2010*", www.mcit.gov.eg, 2007

Moser, 1989
Caroline Moser, "*Community Participation in Urban Projects in the Third-world*" Progress in Planning, Vol.32, p.73-133, 1989

Moughtin, 2003
Cliff Moughtin, "Urban Design: Streets and Squares", p. 12, 13, 2003

Moughtin, 1970
Cliff Moughtin, "*Markets area re-development*", 1970

MuCSAT, 2010
Mubarak City for Scientific Research and Technology, http://www.mucsat.sci.eg, 2010

National Resource Centre for Consumer Participation in Health, 2004
National Resource Centre for Consumer Participation in Health, "*Consumer and Community Participation*", version 2.0, 2004

NDSU News, 2010
North Dakota State University News, "*Tech Tools Will Aid Public Input to Transit in NDSU Research*", 2010

New Sherouk, 2010
New Sherouk News, "*The release of the new electronic site for CAPMAS*", 2010 http://www.shorouknews.com/ContentData.aspx?id=318096

NICI, 2008
National Information & Communication Infrastructure Polices & Plans, "*E-Strategies*", 2008

Nielsen Online, 2009
Nielsen's Global Online Media Landscape, 2009

Nielsen Online, 2010
Nielsen Online, "*Internet usage in the Arab world*", 2010

Nielsen Online, 2010
Nielsen Online, "*Africa Internet Usage and Population Stats*", 2010

Nielsen Online, 2010
Nielsen Online, "*Internet usage in the Arab world*", 2010

Nobre, 1999
J. A. Nobre, "*Improving Community Participation in Urban Planning Decision Making*", Private communication, Public Works Ministry of the Macau Government, 1999

North American Techno graphic, 2009
North American Techno graphic, "*Bench marks Surveys; 2007-2009*", 2009

Özerol, 2002
Gül Özerol, "*Participatory Multi-criteria Evaluation of Public Participation toward Sustainable Water Management*", Center for Clean Technology and Environmental Policy, University of Twente, Netherlands, 2002

Pateman, 1970
C. Pateman "*Participation and democratic Theory*", Cambridge University Press, 1970

Pattison, 2010
Mark Pattison, "*Webinar focuses on Catholic media's role, relationship with bishops*", Catholic News Service, http://www.catholicnews.com/data/stories/cns/1003099.htm, 2010

Pew Internet & American Life Project, 2005
Pew Internet and American Life Project, "*Digital Divisions*," 2005 http://www.pewinternet.org

Pew Internet & American Life Project, 2008
Pew Internet & American Life Project, "*Total Online Activities Report*", 2008 http://www.pewinternet.org/trends.asp

PlaNYC, 2010
New York City PlaNYC Initiative, http://www.nyc.gov, 2010

Postnote, 2005
Postnote, "*Parliamentary office of science & technology*", No. 242, 2005 http://www.parliament.uk

Postnote, 2006
Postnote, "*ICT In Developing Countries*", Parliamentary office of science & technology, No. 261, http://www.parliament.uk, 2006

Rakodi and Schlyter, 1981
Rakodi Carole and Schlyter Ann, "*Upgrading in Lusaka: Participation and Physical Changes*", National Swedish Institute for Building Research, 1981

Rapoport, 1969
Amos Rapoport, "*House Form and Culture; Foundations of Cultural Geography Series*", Englewood Cliffs, N.J.: Prentice Hall, 1969

Rapoport, 1977
Amos Rapoport, "*Human aspects of urban form: towards a man environmental approach to urban form and design*", Pergamon Press, New York, 1977

Reich et al, 1993
Y. Reich, F. R. Coyne, S. Konda, I. Monarch, E. Subrahmanian and W. A. Westerberg, "*Computer-Aided Participatory Design*", the use of n-dim as a support system for participatory design, 1993

Reich et al, 1992
Y. Reich, S. Konda, I. Monarch and E. Subrahmanian, "Participation and Design: An Extended View", Proceedings of the Participatory Design Conference, (Cambridge, MA), Muller, M. J., Kuhn, S., and Meskill, J. A. (eds.), CPSR, Palo Alto, CA., 1992.

Reich et al, 1993
Y. Reich, E. Subrahmanian, S. L. Konda, S. N. Levy, A. W. Westerberg and I. A. Monarch, "*Equations aren't Enough: Informal Modeling in Design*", AI EDAM, 7(4):257-274, 1993

Reich et al, 1993
Y. Reich, E. Subrahmanian, R. Coyne, S. L. Konda, S. N. Levy, R. Martin, I. Monarch, A. Westerberg, "*Support system for different-time different-place collaboration for concurrent engineering*", In Proceedings of the 2nd IEEE Workshop on Enabling Technologies Infrastructure for Collaborative Enterprises (WET ICE), pp. 187-191, IEEE Computer Society Press, Los Alamitos, CA.,1993

Reich et al, 1997
Y. Reich, S. L. Konda, S. N. Levy, I. A. Monarch, and E. Subrahmanian , "*Varieties and Issues of Participation and Design, Design Studies*", 17(2):165-180, 1997

Rosling, 2007
H. Rosling, "GapMinder Foundation", 2007
http://www.gapminder.org/about-gapminder/history/

SACHRU, 2005
South Australian Community Health Research Unit, "*Community Participation Evaluation Tool*", 2005

Sainsbury, Ditch and Hutton, 1993
Roy Sainsbury, John Ditch and Sandra Hutton, "*Computer Assisted Personal Interviewing*", Social Research Update, issue 3, Department of Sociology, University of Surrey, 1993

Sanoff, 1978
Henry Sanoff, "*Designing with Community Participation*", New York, McGraw-Hill Book Company, 1978

Sanyal & Schon, 1990
Bish Sanyal and Donald A. Schon, "*Information Technology and Urban Poverty: The Role of Public Policy*", Massachusetts Institute of Technology, 1990

Sanyal & Schon, 1990
Bish Sanyal and Donald A. Schon, "*High Technology and Low-Income Communities: Prospects for the Positive Use of Advanced Information Technology*", Cambridge, Mass.: Massachusetts Institute of Technology, 1990

Sarjakoski, 1998
T. Sarjakoski, "*Networked GIS for Public Participation – Emphasis on Utilizing Image Data*", International Workshop on Groupware for Urban Planning, Lyon, pp. 9.1-9.13, 1998

Schuler, 1996
D. Schuler, "*New Community Networks: Wired for Change*", Reading, MA: Adison-Wesley, 1996

Shaban, 2009
Charles Shaban, Talal Abu-Ghazaleh Organization (TAGOrg), 2009

Shiffer, 1995
Michael Shiffer, "*Environmental review with hypermedia System; Environment and Planning B, Planning and Design*", 1995

Shute, 1963
John Shute, "*The first and chief grounds of Architecture*", Book IV**,** p**.** 45, 1963

Slotterback, and Hourdos, 2009
Schively-Slotterback, C. and J.H. Hourdos, "*Technology in planning and participatory processes: Identifying new synergies through real world application*", University of Minnesota, Center for Transportation Studies, 2009

Smith, 1993
Herbert Smith, "*The Citizen\s Guide to Planning*", Chicago, Planner's Press, 1993

Smith, 2010
Jeff Smith, "*Social media use and civic participation*", University of Maryland's School of Public Policy, http://www.e-democracy.org, 2010

Snap Survey, 2010
Snap Survey, "*Phone Survey*", http://www.snapsurveys.com/phone-surveys/, 2010

Statistics New Zealand, 2009
Statistics, New Zealand, 2009

Steins and Stephens, 2008
Chris Steins and Josh Stephens, "*Building Cities in the Virtual World: It's time for Web 2.0* Planning", 2008

Technology in Egypt, 2008
Technology in Egypt, http://egypttravelsearch.info, 2008

Thomas, 1995
John Clayton Thomas, "*Public Participation in Public Decisions: New Skills and Strategies for Public Managers*", San Francisco, Jossey-Bass, 1995

Towers, 1995
Graham Towers, "*Building democracy; Community architecture in the Inner Cities*", London, University college London Press, 1995

UN, 2005
United Nations, "*The Digital Divide: ICT Development Indices 2004*", Conference on Trade and Development, 2005

UNIDO, 2007
United Nations Industrial Development Organization, "*Technology Parks in Egypt*", http://www.Unido.org, 2007

Urban Design Group, 1998
Urban Design Group, "*General Principals for Public Participation*", 1998

USDOE, 2002
U.S. Department of Energy, "*How to Design a Public Participation Program*", Office of Intergovernmental and Public Accountability (EM-22), 2002 http://www.em.doe.gov/ftplink/em22/doeguide.pdf

USDOT, 1999
US Department of transportation, "*Public Involvement for Transportation Decision-making*", U.S. Federal Highway Administration and Federal Transit Administration, Washington DC.1999

USDOT, 2010
US Department of transportation, "*Public Involvement Techniques For Transportation Decision-Making; Interactive Video Displays And Kiosks*", U.S. Federal Highway Administration and Federal Transit Administration, Washington DC., 2010 http://www.fhwa.dot.gov/reports/pittd/intervid.htm

U.S. Environmental Protection Agency, 1996
U.S. Environmental Protection Agency, "*Public/community Involvement & Participation; Public involvement in selecting the remedy & regulatory requirements for public participation*", RCRA Public Participation Manual– chapter 2, 1996 http://www.epa.gov/epaoswer/hazwaste/permit/pubpart/manual.htm

Vindasius, 1974
D. Vindasius, "*Public Participation Techniques and Methodologies: A Resume Environment*", Canada, Ottawa, 1974

Vonk, Geertman, and Schot, 2005
G. Vonk, , S. Geertman and P. Schot, "*Bottlenecks preventing the widespread use of planning support systems*", Environment and Planning A: P. 909-924, 2005

Vonk, Geertman, and Schot, 2007
G. Vonk, S. Geertman, and P. Schot, "*A SWOT analysis of planning support systems*", Environment and Planning A, P. 1699-1714, 2007

Warschauer, 2003
Mark Warschauer, "*Technology and Social Inclusion: Rethinking the Digital Divide*", Cambridge, Mass.: The MIT Press, 216, 2003

Weisbard, 2000
Phyllis Holman Weisbard, "*Cyberjanes and Cyberjitters: Myths and Realities of Gender Differences and the Net*", Waal Spring Conference Talk, 2000

White, 1982
A. T. White, *"Why Community Participation?",* Assignment Children, P. 17-34, 1982

Williams, 1961
R. Williams, "*The Long Revolution*", Hogarth Press, p. 118, 1961

Wikipedia
The free encyclopedia, "*Decision Theater*",
http://en.wikipedia.org/wiki/Decision_Theater

World Bank, 1995
World Bank, "*The World Bank and Participation*; *Learning Group on Participatory Development*", Washington DC., 1995

World Internet Users and Population Stats, 2010
Internet World Stats, Usage and Population Statistics, "*Internet Usage Statistics; World Internet Users and Population Stats*",
www.internetworldstats.com/stats.htm, 2010

FedStats.gov
Statistics and information for economic and population trends, United States.org, www.fedstats.gov

USA.gov
U.S. Government's Official Web Portal for all government transactions, Public Service and Volunteerism, www.usa.gov/index.shtml

Zambrano, 2008
Raul Zambrano, "*ICTs, Digital Divide and Social Inclusion*", e- STAS, 2008

Zeldman, 2007
Jeffrey Zeldman, "*Designing with Web Standards*", 2nd edition, Berkeley, California: New Riders, P. 15, 2007

Zgodzinski, 1996
David Zgodzinski, "*Third-World Internet", Internet World Online"*, 1996 http://www.iw.com/current

APPENDICES

APPENDIX 1:

AVAILABLE METHODS FOR INVOLVING THE PUBLIC

Here is an annotated list in alphabetical order of some of the methods now available for involving people in urban design. They include activities, events, organizations and places and they range in scale from visual display techniques to national support programs. Some are specific to participation in urban design; some have other uses as well.

On the following pages, ten of the methods (those highlighted) are covered in more detail. The main features and uses of each are summarized together with tips, sample formats and checklists to help people get started. The selection is not intended to indicate greater importance, they are merely the methods focused on by the UDG PPP over the last 2 years. The forthcoming Community Planning Handbook will provide details of more of the methods and will include details on how to find further information on their use.

Action Planning Event

Carefully structured collaborative event; at which all sections of the local community work closely with independent specialists from all relevant disciplines to produce proposals for action.

Activity Mapping

A way of getting people to plot how they use places as an aid to understanding how best to improve them

Adaptable Model

Flexible 3D model of an area or building, it allows people to test out alternative design options.

Appreciative Inquiry

Group working process builds on potentials, solutions and benefits to create change.

Architecture Centre

Place aimed at helping people understand, and get engaged in the design of the local built environment.

Architecture Week

Week of activities designed to promote interest in, and debate on, architecture, usually includes opening interesting buildings to the public.

Awareness Raising Day

Day of activities designed to promote interest in an urban design issue, normally held prior to a planning day or other intensive activity.

Best Fit Slide Rule

A discussion tool designed to examine the consequences of alternative ways of inserting new buildings in an existing street, similar to Elevation Montage.

Briefing Workshop

Working session of users and professionals held at an early stage in a building or planning project to establish a brief.

Capacity Building Workshop

Event organized primarily to establish partnerships between the public, private and voluntary sectors on development issues.

Community Appraisal

Survey of the community by the community to identify needs and opportunities, sometimes referred to as a Community Audit.

Community Design Centre

Place providing free or subsidized architectural, engineering and planning services to people who cannot afford to pay for them.

Community Indicators

Measures devised and used by communities for understanding and drawing attention to important issues and trends.

Community Plan

Plan for the future of a community devised by local community interest groups.

Community Planning Forum

Multipurpose session lasting several hours designed to secure information, generate ideas and create interaction between interest groups.

Sample advertising leaflet.

Key components: Slogan summarizing overall purpose; venue; time; date; statement of immediate objectives and perhaps some background information; map of area with venue marked; name of organizers.

Community Projects Fund

Fund for making grants to community groups for employing professionals & undertake feasibility studies on environmental projects.

Design Assistance Team

It's a Multidisciplinary team that visits an area and produces recommendations for action, usually after facilitating an Action Planning Event. Also known as Urban Design Assistance Teams (UDATs) or Regional/Urban Design Assistance Teams (R/UDATs)

Design Day

Day when architects and local people brainstorm for design solutions to a particular building problem, usually in teams

Design Game

Method for devising building and landscape layouts with residents using colored cutouts on plans.

Design Workshop

Hands-on session allowing groups to work creatively developing planning and design options

Hands-on

Devising improvements to Leeds City Centre, 1996

Development Trust

Independent, not-for-profit organization controlled by local people, it facilitates and undertakes physical development in an area.

Elevation Montage

Display technique for helping people to understand and make changes to streetscapes.

Wall-mounted.

Resident pasting a post-it note on a wall-mounted montage, Birmingham, 1994.

Environment Shop

Shop selling items and providing information which help people get involved with improving their environment.

Fish Bowl

Workshop technique, where participants sit around and observe a planning team working on a problem without taking part themselves

Forum

Non-statutory body for discussing a neighborhood's affairs and acting as a pressure group for improvements

Future Search Conference

Highly structured two and a half day process allowing a community or organization to create a shared vision for its future

Mobile Planning Unit

Caravan or mobile home converted into an office/studio as a base for undertaking community planning activity on location.

Mock Up

Full-size representation of a change or development, usually on its proposed site prior to finalizing the design

Neighborhood Planning Office

Local office established to co-ordinate community planning activity.

Open Design Competition

Open competition for ideas for improving a neighborhood aimed at stimulating creative thinking and generating interest.

Open Space Workshop

Structured workshop process for generating commitment to action in communities or organizations

Open House Event

Event allowing those promoting development initiatives to present them to a wider public and secure reactions informally

Inviting people in
Pavement sign

Encouraging passersby to visit an Open House event in a vacant shop on the future of the area. Farnham,1997

Parish Mapping

Arts-based way in which a community can explore and express what they value through the creation of maps made out of a wide variety of materials

Participatory Appraisal

Set of methods for gaining a rapid in-depth understanding of a community, or certain aspects of it, based on the participation of that community and a range of visual techniques.

Participatory Building Appraisal

Method for users and providers to jointly assess the effectiveness of buildings after they have been built

Planning Aid

The provision of free and independent information and advice on town planning to groups and individuals who need it and who cannot afford consultancy fees

Planning Day

Day when people work intensively on developing urban design options for a site or neighborhood.

Workshops

Participants divided into groups working round tables with flipchart to side. Planning day, Oxpens Quarter Initiative, Oxford, 1997.

Planning For Real

Technique for community involvement in planning and development focusing on the construction and use of flexible 3D models and priority cards

Planning Weekend

Highly structured, intensive procedure in which professionals work with local people over a long weekend to produce proposals for action

Reconnaissance

Team members being shown round the area at the beginning of a planning weekend, Ore Valley, 1997

Process Planning Session

Event organized to allow people to determine the most appropriate process for their particular purposes.

Plenary session

Reporting back from the workshops. Planning day, Oxpens Quarter Initiative, Oxford, 1997.

Resource Centre

Place designed to provide community groups with the facilities they need to make the most of their energies and enthusiasm.

RoadShow

Series of linked public workshops, exhibitions and forums to explore the potential for improving the built environment

Round Table Workshop

Workshop process for engaging the main stakeholders in generating a vision and strategy for an area

Street Stall

Way of securing public comment on planning issues by setting up an interactive exhibition in a public street or square.

> *"The street stall proved to be an invaluable and invigorating experience for us all. We were overwhelmed by the interest taken... and all subsequent developments of our scheme were made against the backdrop of what the people of Bath wanted to see."* **(Student report, Prince of Wales's Institute of Architecture, Bath Project, 1996)**

Bath News

PRECINCT'S FUTURE: hundreds stop to answer revamp questions

Shoppers speak out on Southgate ideas

Taking to the streets

Shoppers join in a debate on the future of the town centre by writing post-its, sketching their own ideas and holding discussions with the organizers. Over 2,000 post-its were posted up over 5 hours on a cold winter day and two books filled with comments. The results were used to prepare a scheme for one of the most important development sites in the town. Bath, 1997.

Table Scheme Display

Simple way of securing comment on design proposals by taping drawings on a table top and requesting people to vote with sticky dots

Table Scheme Displays

Allow a large number of people to understand and make an input into development proposals with or without engaging with others. They can be used as part of an exhibition or Open House Event.

Task Force

Multidisciplinary team of students and professionals who produce in-depth proposals for a site or neighborhood based on an intensive programme of site studies, lectures, participatory exercises and studio working, normally lasting several weeks.

Topic Workshop

Session at which a group, usually aided by a facilitator, explores problems, dreams and action needed in relation to a particular topic.

Trail

Carefully planned walk through an area designed to help people understand the problems and opportunities.

Urban Design Game

Way of helping people to understand the planning process and the views of others by simulating future scenarios and using role-play.

Urban Design Soapbox

Huge video screen linked to booths allowing people to broadcast their views on local planning issues.

Urban Design Studio

Unit attached to an architecture or planning school which focuses on involving local communities in live project work.

Urban Studies Centre

Centre of environmental education, usually focusing on the immediate surroundings.

APPENDIX 2:

LIST OF THE TECHNOLOGIES REVIEWED (Alphabetical):

Benefit-Cost Analysis of Bicycling Facilities:

The tool provides a standard method to analyze potential costs and benefits of a proposed bicycling facility while enabling users to tailor information to reflect individual projects. The table produced can be imported in excel and can be customized according to need of the research. This includes the educational utility of helping students, planners and policymakers to understand the potential hidden costs and less quantitative benefits associated with bicycling infrastructure.

http://www.bicyclinginfo.org/bikecost/index.cfm

Big Box Evaluator:

This is an online tool designed to guide planners and the public in the evaluation of the pros and cons of big retail operating in their community. This is an example of limited use software but it is indicative of what can be developed. http://www.bigboxevaluator.org

CAVE (Cave Automatic Virtual Environment):

This is a hardware visualization tool capable of visualizing viewscapes at a 1:1 3D scale. Due to its design it has limited use on participatory processes that have more than 3-5 people in the group. http://inkido.indiana.edu/a100/handouts/cave_out.html.

Figure APP.2.1:

A CAVE for virtual reality

Community Image Survey (*also known as* ***Visual Preference Survey/Image Preference Survey):***

This is a survey method involving pictures made to resemble conditions describing the different design alternatives. It is usually employed for city or neighborhood revitalization projects. http://www.sbcouncil.org/Visual-Preference-Survey.

CommunityViz:

This is a software enhancement for ArcGIS that provides enhanced impact analysis, scenario analysis, and 3-D visualization capabilities. http://www.communityviz.com.

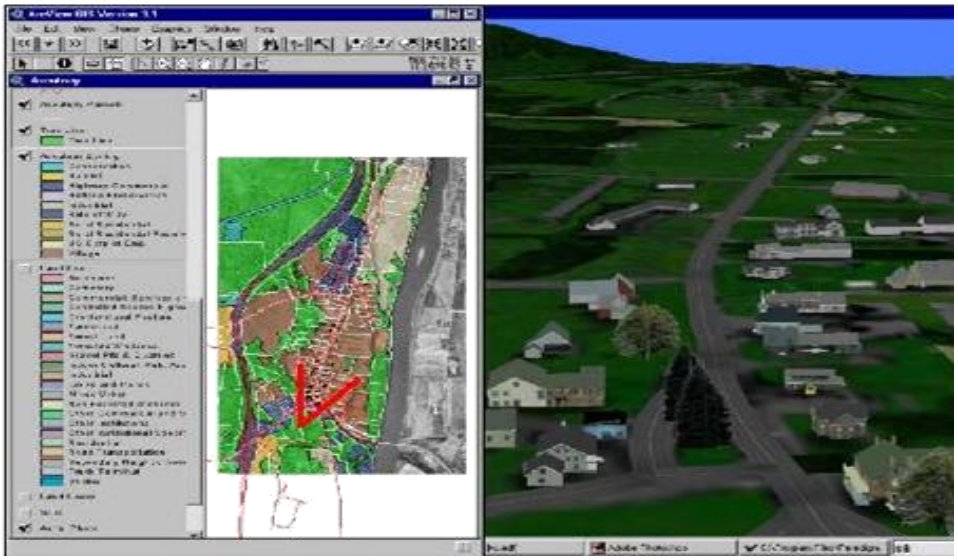


Figure APP.2.2: CommunityViz

Decision Theater:

This technology belongs in the systems category since it is an actual building designed to facilitate participatory processes. It has various visualization and collaboration technologies integrated in one unit. www.decisiontheater.org.

Electronic Visualization Laboratory (EVL):

The Electronic Visualization Laboratory (EVL) is an interdisciplinary graduate research laboratory that combines art and computer science, specializing in advanced visualization and networking technologies. It has

been used for participatory processes on several occasions. http://www.evl.uic.edu/index2.php

Electronic Interactive Charrette:

Both, a software and a hardware technology where participants engage in a standard charrette, developing a design on a printed map with the assistance of an expert. Images are then scanned and placed onto a computer where renderings and/or manipulated photos encapsulate the principal design concepts. http://www.smartcommunities.ncat.org/toolkit/tcddm/dover1.htm

Environmental Simulation Center:

The center specializes in visualization of city scapes. Its purpose is to utilize advanced computer visualization to involve the public in decision making. http://www.simcenter.org/index.html

GeoWall:

It is a hardware technology similar to the CAVE but resembling a window through which users see 3D renderings of different designs. http://geowall.geo.lsa.umich.edu/intro.html

Figure APP.2.3: GEOWALL

GIS/Map Planning Table:

This is a hardware technology consisting of a horizontal surface capable on which one or two computer screens are projected. Single user tracking devices allow the user to manipulate any program displayed on the surface. There are several known versions of this technology with the first being developed at the University of Illinois by Lew Hopkins.

Google Earth:

This is both software and a GUI technology. It is basically an "almost" free application that people can use to access maps and aerial imagery. In addition it allows for customization and the display of prepared material. Google Earth requires little programming expertise. http://earth.google.com/

Figure APP.2.4: Google Earth

Google Maps:

Similar to Google Earth but with the difference that it provides also a set of programming tools allowing people to use the mapping engine to map, display, and distribute their own data and applications. Google Maps require considerable programming expertise. http://maps.google.com/

Google SketchUp:

It is a widely used 3D imaging and modeling application where users can develop material later used in participatory processes or in conjunction with Google Earth. http://sketchup.google.com/

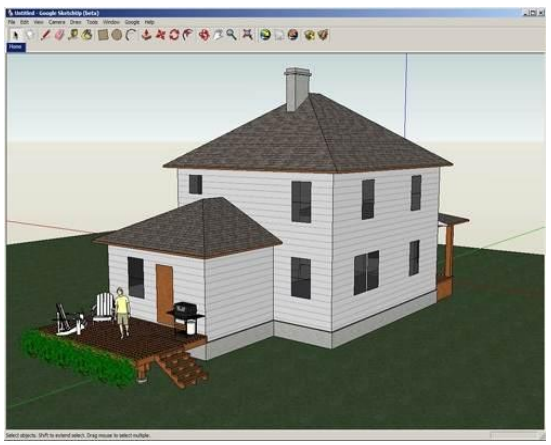


Figure APP.2.5:

Google sketch up

GroupMind Express:

It is an internet-based application that links computers together to produce and share digital information. GroupMind Express is made up of four complementary components, called "products," each with an array of features. http://groupmindexpress.com/

INDEX:

It is GIS-based software designed to support the entire process of community planning and development. Applications often begin with benchmark measurements of existing conditions to identify problems and opportunities that merit attention in plans. INDEX can then be used to design and visualize alternative planning scenarios, analyze and score their performance, and compare and rank alternatives. http://www.crit.com/index/index.html

Keypad Voting:

Generally, keypad voting gives each audience member a wireless keypad with numerically labeled buttons in which to indicate answers to a multiple-choice question. http://www.audiencevoting.com/fsr.html

Figure APP.2.6: Keypad voting

London Profiler:

It is a web site application that enables users to display a customized map of the geo-demographics of Greater London including: cultural/ethnicity, e-literacy (electronic), levels of higher education, and health related problems. London profiler visualizes neighborhood profiles through a Google Maps Application Programming Interface (API), created using GMAP creator. London Profiler allows users to visualize themes at different scales, search by postcode or borough level, change layer transparency, and to add KML layers. http://www.londonprofiler.org/

M3D (Minnesota 3-D):

It is a dynamic, GIS-based Internet application that brings together labor market, housing, and development information and analysis for the Twin Cities metro area into one easy-to-use tool for economic and community developers. http://www.cura.umn.edu/M3D.php

MetroQuest:

It is a standalone software program that allows people to alter aspects of their city to view future scenarios up to 40 years into the future. MetroQuest has nine major categories, ranging from population/job location, housing density and roads/transit. By answering a series of multiple choice questions, users can be given a satellite-view map (color coded) and graphical displays showing projected changes into the future. Users can switch their answers at will and instantly see changes to the scenario results. These custom made scenarios can be presented to the larger audience or, for the On-line version, allow users to experiment with creating scenarios themselves. http://www.envisiontools.com/uses.aspx

Microsoft Surface:

It is a stand-alone computer system with a projection tabletop that users can manipulate with touch, instead of using a keyboard and mouse. It allows for multiple user input but has not yet been utilized in a participatory process. http://www.microsoft.com/surface/

PathMaker:

It is an organizational application that outlines step-by-step progression for client projects. Theoretically, PathMaker could allow participants to access project information and leave feedback in an alternative method. The ability to hold on-line conferences and to show conceptual visual diagrams might allow participants to gain a better understanding of the planning process while enabling them the opportunity to express feedback if their availability did not permit the attendance of traditional meetings. http://www.skymark.com/pathmaker/pathhome.asp

Pictometry (including Microsoft's Virtual Earth):

It involves the capture and access of high-resolution imagery photos that are used to create a "*sophisticated, integrated information system that allows users to have high-resolution images of neighborhoods, landmarks, roads, and complete municipalities from multiple views at the click of a mouse*."

These photos often allow users to import them into GIS for geo-referencing and can make semi-accurate measurements of buildings and lot sizes. Most often, users are public agencies that purchase the photos for uses in planning, 911 dispatch, and engineering.

http://www.pictometry.com/home/home.shtml

PLACE3S (Planning for Community Energy, Economic, and Environmental Sustainability):

It is a customized process that was developed primarily by the California Energy Commission (with involvement by the Oregon Department of Energy and the Washington State Energy Office) to create efficient communities through a public participatory process.

http://www.energy.ca.gov/places/index.html

Shaping Dane:

Shaping Dane is the project name given to an initiative by the Verona Planning Resource Center to provide an online portal with links to information about the planning process. When accessing the Shaping Dane website (http://www.lic.wisc.edu/shapingdane/), users are given access to two additional parts of the Verona Planning Resource Center website.

The first directs users to the main webpage where they can choose between many different potential links. Several of the links encompass the "*on-line*" atlas, allowing users to generate custom made maps of Verona Township or to view already produced maps linked to photographs of landmarks and/or aerials. There is also a "*planning library*" which allows users to read up on GIS, Smart Growth, or planning in general.

Second Life (SL):

Is an online virtual world developed by Linden Lab which was launched on June 23, 2003. A number of free client programs called Viewers enable Second Life users, called Residents, to interact with each other through avatars. Residents can explore the world (known as the grid), meet other residents, socialize, participate in individual and group activities, and create and trade virtual property and services with one another. Second Life is intended for people aged 13 and over, and as of 2011 has more than 20 million registered user accounts.

Built into the software is a three-dimensional modeling tool based around simple geometric shapes that allows residents to build virtual objects. There is also a procedural scripting language, Linden Scripting Language,

which can be used to add interactivity to objects. More complex three-dimensional sculpted prims (colloquially known as sculpties), textures for clothing or other objects, and animations and gestures can be created using external software. The Second Life Terms of Service provide that users retain copyright for any content they create, and the server and client provide simple digital rights management functions.

SimCity games series:

The SimCity games are simulations where users design cities using some functions performed by governments. For example, zoning is used to determine where residential, commercial and industrial uses are permitted. A road network is required to access land, while electricity and water are needed to support any development. Users also build schools, police and fire stations, and hospitals to provide needed services to the citizens, called "*sims*". Users can adjust tax rates, enact ordinances or take out loans to balance the city's budget as needed. http://simcitysocieties.ea.com

Figure APP.2.7: SimCity

TELUS (Transportation, Economic and Land Use System):

It is a fully integrated information management and decision support system to help metropolitan planning organizations (MPO) and state departments of transportation (DOTs) develop their transportation improvement programs and carry out other planning responsibilities, particularly public participation. Each MPO and State DOT decides on projects to include in their respective Transportation Improvement Programs (TIP) and State Transportation Improvement Programs (STIP). TELUS helps in making these decisions based on a variety of factors, including: future travel demand, project life cycle costs, land use changes, economic growth, and environmental impacts. http://www.telus-national.org/general/hgac.html

ThinkTank:

It is an application that allows a group of people to communicate in a web conference over an internet browser. The program is accessed through a special icon (a light bulb) added to a user's default internet browser, but does not require the installation of any actual software.

http://www.groupsystems.com

Townsquare:

It specifically designs a public-based website (or "*portal*") that is based on the needs of the client. With that, Townsquare provides a series of tools for the client to update and manage content on the website. These tools include a document manager, discussion facilitator (providing response services for public input), or a news coordinator allowing site users to sign up for notifications on upcoming events.

http://www.migtownsquare.com/Content/10001/solutions.html

Other more advanced tools are:

- Townsquare: Content Manager
- Townsquare: Education Simulator
- Townsquare: E-Mail Notification Administrator
- Townsquare: Image Annotator
- Townsquare: Interactive GIS Mapper
- Townsquare: Project Data Manager
- Townsquare: Survey Creator
- Townsquare: Wiki Publisher

University College London (UCL) Centre for Advanced Spatial Analysis (CASA):

The Centre of Advanced Spatial Analysis or CASA is a research center located within the University College London that specializes in the creation of computer-based research and applications studying spatial analysis and planning. Started in 1995-1996, CASA works within the departments of Geography, Geomatic Engineering, Planning/Architecture (through the Bartlett School) along with the Institute of Archaeology and the Centre for Transport Studies. http://www.maptube.org/casa.aspx

Urban Simulation Team:

The primary focus of the Urban Simulation Team is to provide a digital 3D model of the entire Los Angeles basin, covering some four thousand square miles. The Urban Simulation Team utilizes a series of twenty specialized graphical workstations for creating and interacting with the model. To model an urban area, plan view aerial photographs are used as the base image. Streets and blocks are identified, outlined, and inserted into the database. Video images from a street-level survey of the study area are then fed directly into the computer, perspective- and color-corrected. Modeling is then done primarily in Multigen where viewing of the model occurs primarily through Openflight. http://www.ust.ucla.edu/ustweb/ust.html

Figure APP.2.7:

Urban Simulation Team

UrbanSim:

UrbanSim is a Python/C++ based complex software system that models the urban processes of a region over subsequent decades, through upwards of 55 separate indicators (which may range from development policy to population density). Metropolitan areas are broken down into 150x150 meter grids that form the basis of UrbanSim's geographic representation. UrbanSim then employs a "discrete-choice" model, meaning its scenarios are based upon the choices of its "actors" (households, jobs, development, etc) and uses probability within its programmed set of variables to determine how a region is most likely to develop. http://www.urbansim.org

What If:

What If? Is a GIS-based, policy-orientated planning system that attempts to show a possible scenario if particular actions or policies were adopted. It is not meant to predict the future, but to foreshadow potential outcomes given decisions made in the present. (Klosterman 2001) It considers three main categories: land suitability, land demand and public policies (in how it is impacts the former two). Each category is displayed as an additional layer that is projected over an existing GIS map, so people may have a geographic reference point to the information. (**Klosterman** 2001) http://whatifinc.biz/index.html

APPENDIX 3:

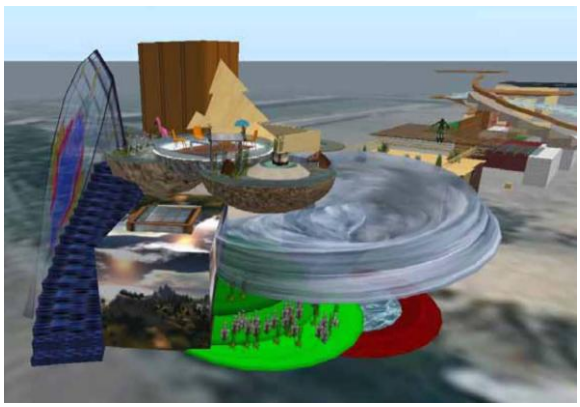
CROSS-CULTURAL COLLABORATION PROJECT

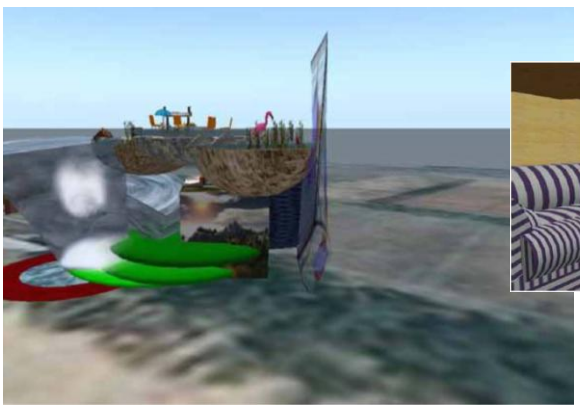
APP.3.1 . GROUP OVERVIEW

APP.3.1.1 . Group No.1

Selavie Nasr ASU			Selavie Restless
Sara Esmael ASU			2at2oot Alex
Mohamed ElMahdy ASU			Mizo Mallir

APP.3.1.2 . <u>Project Sample</u>

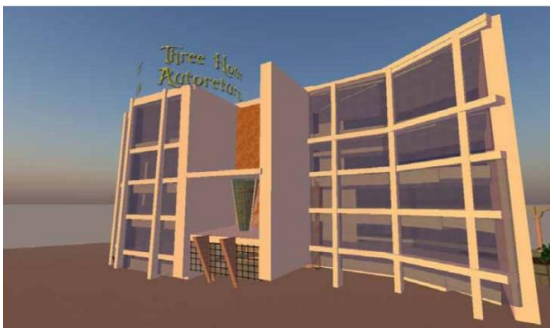


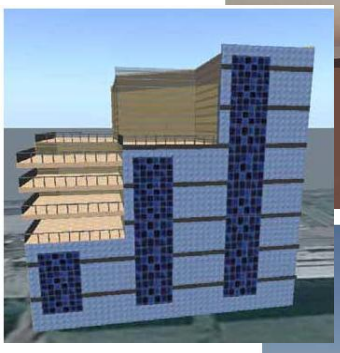


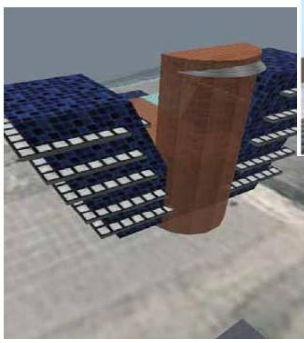
*APP.3.1.3 . **Group No.2***

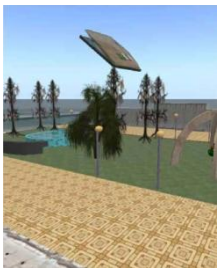
	RL	SL	
Ahmed Adel GROUP COORDINATOR | ASU			Adel Grau
Abdelrahman Mohamed ASU			Boddy Darkthief
Hesham El-Gazzar ASU			Gazzar Dover
Kareem M. Fayed ASU			Kareem Glasswing
Nancy masoud ASU			El7ayah Ordinary
Ben Dansby USC			Ben Ixtar
Mariam George ASU			Faith Pierrick

APP.3.1.4 . ***Project Sample***

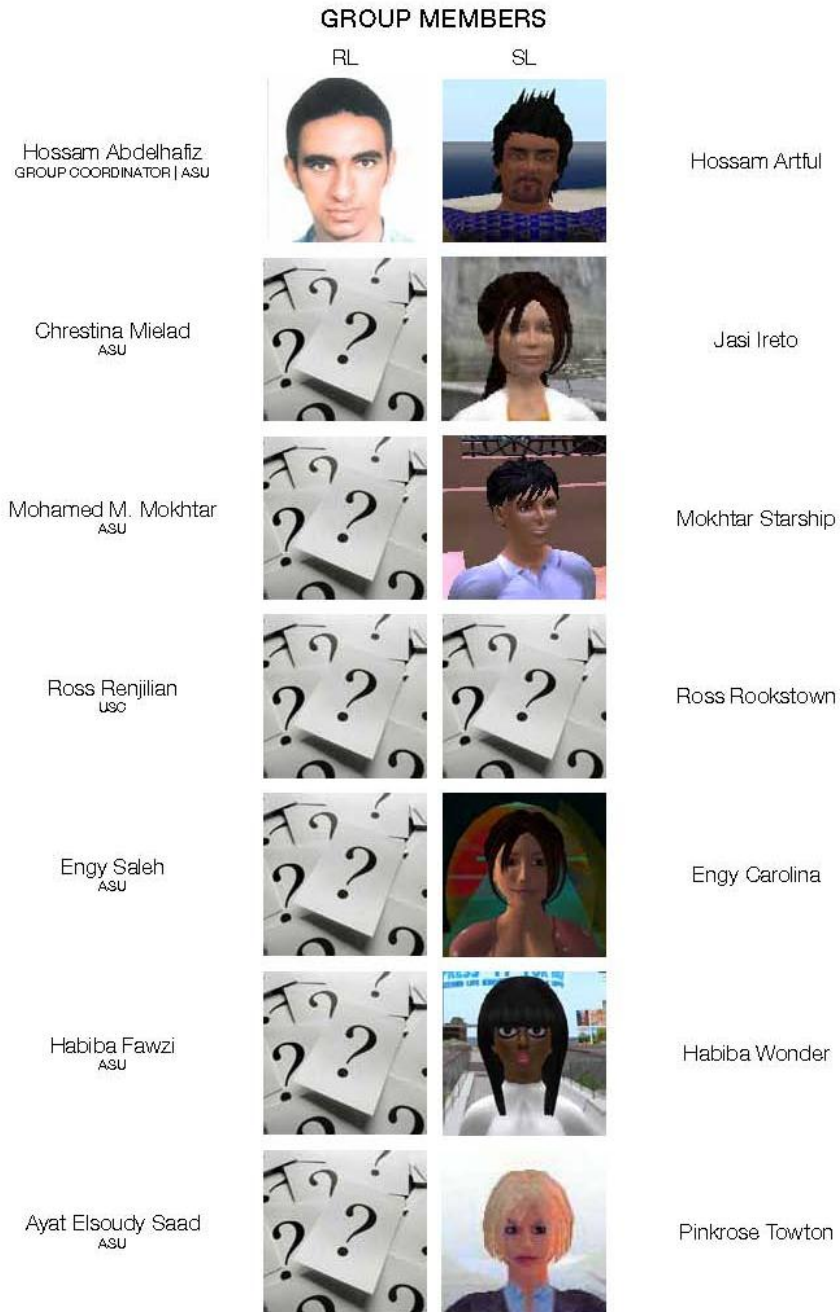








APP.3.1.5 . ***Group No.3***

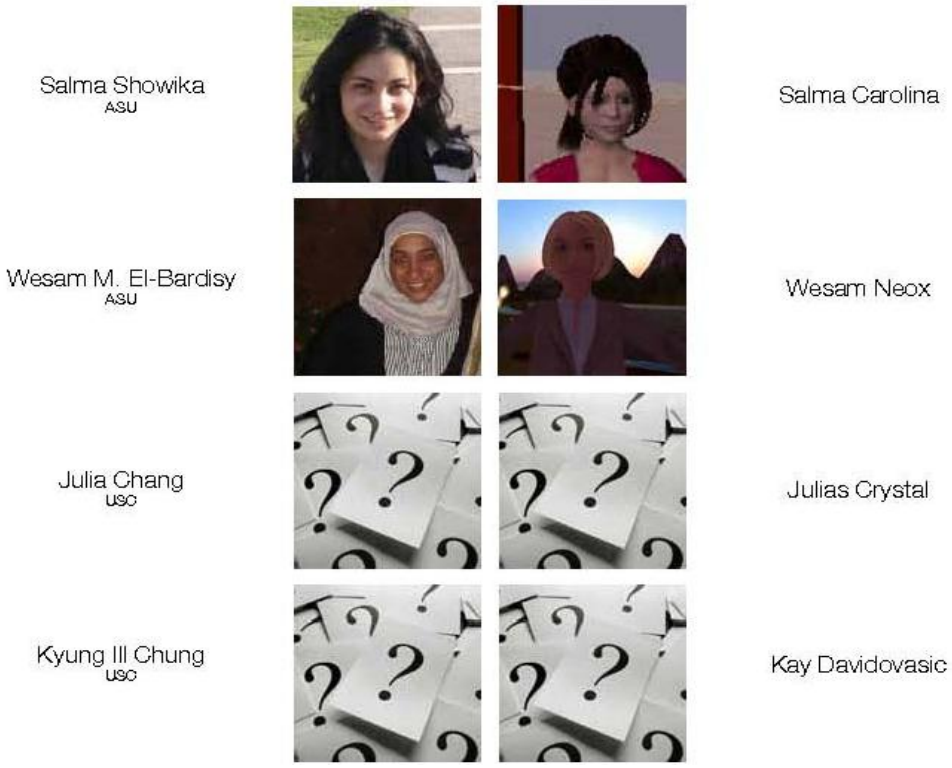


APP.3.1.6 . ***Project Sample***

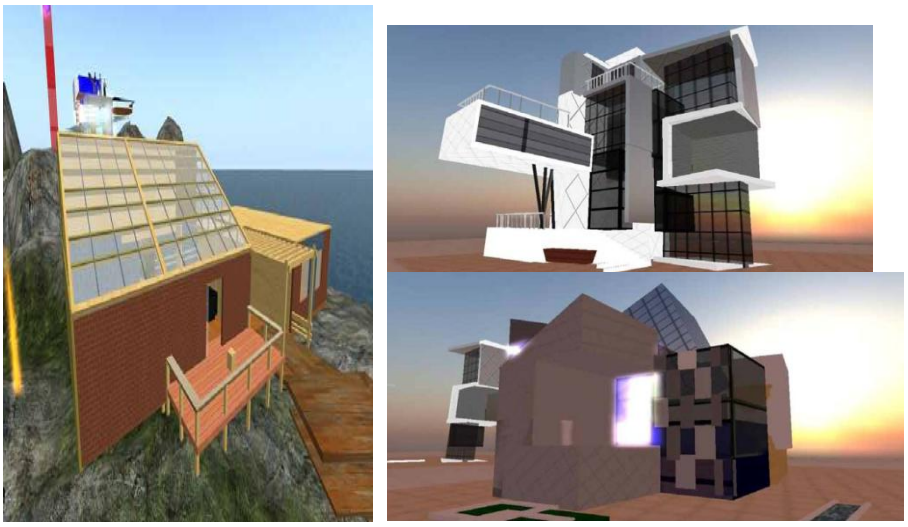
APP.3.1.7 . ***Group No. 4***

GROUP MEMBERS

	RL	SL	
Sayed Abdelmohsen GROUP COORDINATOR | ASU			MrBrain Dexler
Ayaa M. El- Wagieh ASU			Ayaa Wiskee
Dina Abdelrashid ASU			Zenobia Spanton
Eman A. Kafafy ASU			Eman Roxan
Mohamed AL-Feky ASU			Neo007 Spiritor
Noha Abouelezz ASU			Waterlily Memo
Salma M. Sayed ASU			Salma Ohmai



APP.3.1.8 . ***Project Sample***



APP.3.1.9 . ***Group No. 6***

GROUP MEMBERS

	RL	SL	
Nancy N. Micheal GROUP COORDINATOR | ASU			Nosa Frenzy
Heba Ghalib ASU			HebaGhalib Emerald
Sheriff M. Ashoush ASU			3ashoush Voir
Wesam T. Salama ASU			Wissa Braham
Yasmin Zakaria Kamh ASU			Jess Twig
Yousef Magdy Louka ASU			YousefMagdi Rubi
Juliane Dome USC			Julianne Mistwalker

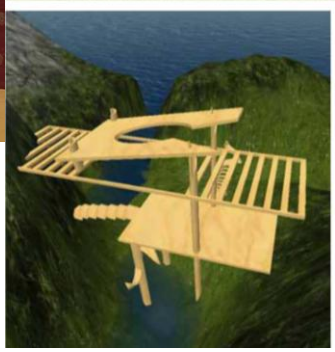
Lolien Gamal El-din
ASU

Lolien Florian

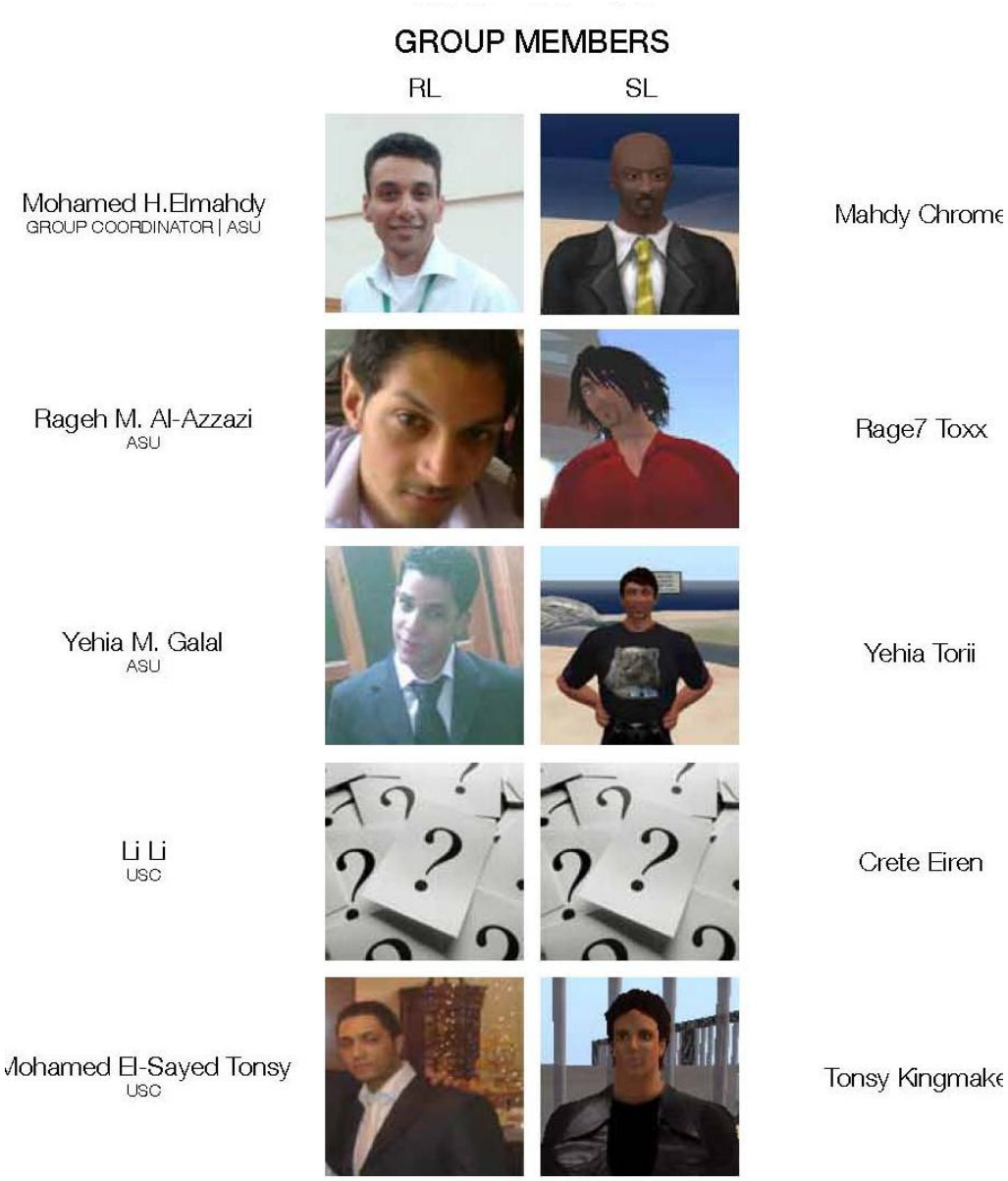
Chrestine Nabil
ASU

Koki Hallison

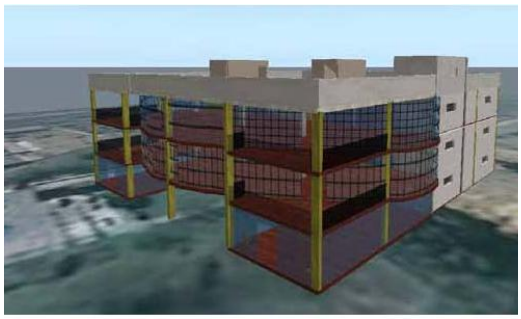
APP.3.1.10 . <u>Project Sample</u>

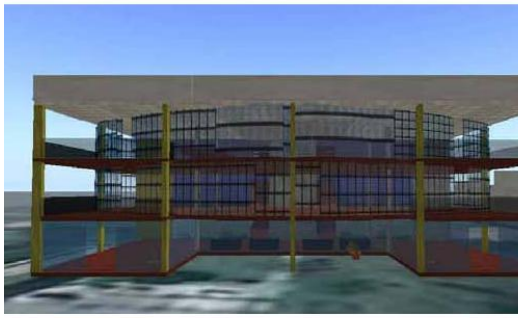


*APP.3.1.11 . **Group No. 7***



3.1.12 . ***Project Sample***





APP.3.2 . FINAL QUESTIONS

3.1.13 . ***Sample of the Egyptian Team***

- **Describe your final project goal, your team and your general workflow. What other kinds of software/media did you use for the project**?

My final project goal was to create a lively interactive experience out of my urban design project using virtual world. While working on my project & for my final project presentation I used many softwares: AutoCAD, second life, Photoshop & sketch up.

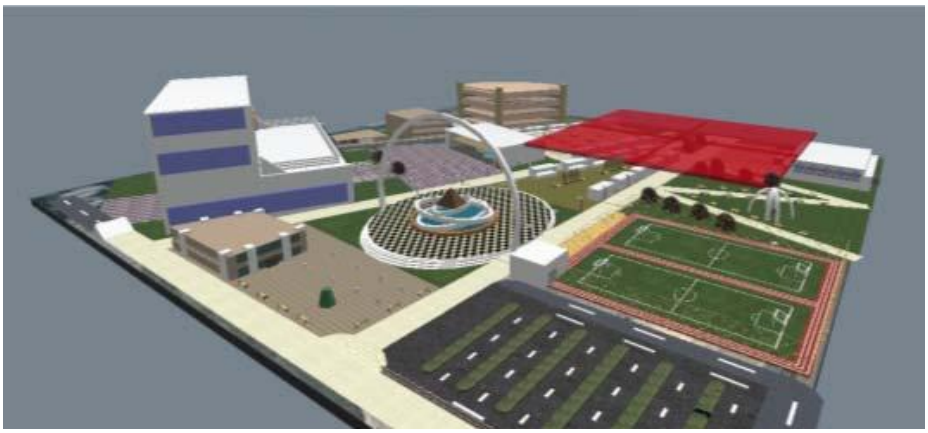
- **What was critical to the success of your project? What were the problems you encountered in the collaboration with the Egyptians and with your US team?**

For my project to succeed I wanted to give viewers a somehow alive experience to help them imagine the project if applied in real life…I also wanted to design a project which communicates with its surrounding and gives due appreciation to the site where it is (Pyramids Plateau, Grand Egyptian Museum).

Working with my team (Egyptian) has not faced many problems for we have been working as a team all year long, the only problem to be considered was that we worked on second life on one design project as a group but in real life we had to deliver individual projects which caused a duality in our priorities.

Working with the Americans had a few difficulties the time difference ,interference between our schedules ,and of course our different backgrounds which gave us different ideas about urban design and urban spaces.

- **What was the most successful built example of your collaboration? Please describe method, outcome and attach a picture. If there was a critical flaw in your project, what was it? Please be subjective.**



lt the attached layout with my Egyptian colleagues , then we discussed it with our American colleagues ,after that they decided to take the part marked with the red square and redesign it according to some ideas we discussed together so we decided to keep both designs as alternatives for whole project design.

- **Reflect about the process of working with Second Life on this project. What were the surprises in the final outcome? What do you think are the potential applications of this software in architecture? As a collaborative tool, how could any of these components of the entire project work in another studio environment and the practice of architecture?**

Working with Second Life on this project was a great experience ,seeing the outcome of this project gave us more ideas & more realistic thoughts as we could walk through our designs and change them as needed.

I think virtual reality can be very useful in architecture in the future, it can help architecture students to experience urban spaces and buildings built by others to give them a view of their future work, they could also use it to get the real feeling of what they design which could greatly affect their design decisions.

Virtual reality could also be a great marketing tool as it can give the customer a clear idea about the design so that he would know wether it suits his needs or not.

- **What are your suggestions if we were to redo this project next year? What would be helpful to amend versus what worked well?**

  Giving us more time to learn this tool and communicate with our American colleagues, helping us go on with our urban design project in parallel with second life as we had to find time for each separately as we worked on two different layouts.

3.1.14 . ***Sample of the American Team***

- **Describe your final project goal, your team and your general workflow. What other kinds of software/media did you use for the project?**

  Our final project goal was to apply the tools in Second Life toward a real design that could actually be built. We took the master plan of the Egyptians and narrowed the focus to a section that we liked where two paths converged and focused the views toward the pyramids. Using our precedent of Universal Citywalk in Hollywood, we created a large café to anchor the plaza that faces the pyramids. To the side of the plaza is a public amphitheater that can be used for concerts or events. On the sides of the paths are opportunities for visitors to engage in Western style shopping. In the space between the two converging paths is a grid of market stalls for tourists to explore. We considered real world issues such as circulation, scale, and sun shading in our design.

  The team consisted of Preema and I as the American students and HebaGalib Emerald and Adel Grau as the Egyptian students. After we met with the Egyptians to get an explanation of their master plan, Preema and I developed it on our own.

  In addition to Second Life, we used other resources to gather and compile information that we needed. We used the internet to find textures and conduct site research. We also used Photoshop and Illustrator to create diagrams and modify some of the textures before uploading them to Second Life. Most of our designing was done within Second Life, but we also used hand sketches to explore basic ideas and layout before building things in Second Life.

- **What was critical to the success of your project? What were the problems you encountered in the collaboration with the Egyptians and with your US team?**

  Unfortunately, the thing that made our project successful was the ability for Preema and I to meet in person in order to build in Second Life and discuss our ideas. Even though the class was about online collaboration, we found that it was limiting to meet in world without seeing each other face to face. Working next to each other, we were able to see what the other was doing on their laptop screen and we were able to talk about our ideas or about the things we were working on without having to email back and forth or build in Second Life. Being in the same room was much more efficient.

  The other thing we noticed that contributed to our success was that we seemed to get better feedback when we played around and made things that "looked cool" rather than when we designed in the same way we might design in studio. For example, when we made a color-coded massing model of our proposed build in Second Life, the feedback we seemed to get was that the model was boring, that the colors didn't work, that it needed textures, and that the scale was wrong. After we started playing around more with things like colors, textures, and glows, we started to get better feedback even if we couldn't necessarily justify every move we made.

  As far as collaboration with the Egyptians, we encountered a number of challenges. The biggest was probably finding meeting times that worked for everyone since there was no scheduled class time for group collaboration. We found that because of the time difference and because of our very different schedules, it was almost impossible to meet and collaborate. We ended up meeting to talk about the Egyptian master plan, but Preema and I developed it on our own because it was much easier for the two of us to find time to work together.

  Since we didn't get to spend much time together, we didn't get a chance to get to know the Egyptians well. Going to Cairo would have helped get to know them, but spending more time online together would have worked too. However, one thing that made this difficult is the fact that this is only a 2 unit class that we are juggling with a number of other classes. Even though we would like to spend more time in-world exploring and meeting people, the reality is that we often end up going into Second Life to work on whatever is due, then leaving again so we can move onto the next project for the next class.

More effective collaboration could have been achieved if we had developed more of a relationship with our Egyptian counterparts.

- **What was the most successful built example of your collaboration? Please describe method, outcome and attach a picture. If there was a critical flaw in your project, what was it? Please be subjective!**

The most successful example of our collaboration in Second Life was our final build for our section of the master plan. We were able to incorporate the original master plan and develop it to a more detailed level at full scale. To accomplish this, Preema and I first met with the Egyptians who were able to explain their master plan in more detail and answer any questions that we had. We then chose what we felt was the most interesting area to develop at full scale. Looking at our precedent, we began to sketch a few ideas for how to lay out the space, then we started building in Second Life. We first built a scale massing model to help figure out organization and scale of buildings. We then set to work getting everything built full scale, and finally, we went back, adding detail and rebuilding as necessary to create interesting spaces for people to inhabit.

The most effective method for us was to meet and bounce ideas off each other as we built. In this way, we were able to use our time more efficiently than if we had to collaborate using only Second Life. We were also having issues with modifying each other's objects so we

were able to easily ask the other person to modify their own objects if we wanted something changed.

If anything, our critical flaw was our lack of collaboration with the Egyptians, but we were still able to pull something together of which we could both be proud. However, if we had been able to collaborate more, our project could have been more contextual and could have tied in better with the rest of the master plan.

- **Reflect about the process of working with Second Life on this project. What were the surprises in the final outcome? What do you think are the potential applications of this software in architecture? As a collaborative tool? How could any of these components of the entire project work in another studio environment and the practice of architecture?**

  Second Life was frustrating at first, but once we got to know it better, it became more manageable. However, we noticed that the building tools seemed limited and we found ourselves avoiding certain forms because we weren't sure how they could easily be built or how they could be built at all. In addition, the prim limits were also a bit frustrating. Although we never ran out of prims while we were building, we felt pressured to keep our prim usage low and avoided certain designs that we knew would require a great number of prims.

  One positive aspect of the building tools in Second Life is their ability to be used by anyone. They do not require knowledge of other 3d modeling programs so they were fairly easy to pick up. In some ways, I wish it were at easy to mutate forms in rhino as it is to mutate prims in Second Life.

  One surprise about our final outcome was how well it turned out. Preema and I were constantly frustrated as we were building, but whenever we'd step back and look at our overall project, we were usually pleased by the progress. Although there were a few areas that could have been improved, Preema and I were impressed by what we were able to accomplish in the short time we were given.

  Second Life definitely has potential applications for architecture. It is a way that clients can actually participate in the building process more easily than trying to learn a 3d or CAD program. It is also helpful because you can walk through your build at anytime and you can get a sense of scale by seeing your avatar. As far as modeling complex building forms or building components, Second Life is not there yet, but it will continually be improved and refined.

As a collaborative tool, Second Life can never truly replace human interaction, but it comes close. However, because it costs Lindens to upload things, it discourages uploading process work, which is an important part in collaboration. It also does not allow you to read a person's expressions or to see the screen they are working on, both of which can be effective for collaboration. I feel the best use of Second Life is for modeling buildings to get a sense of scale and to give tours to clients, but not necessarily for the architects who are designing the buildings.

- **What are your suggestions if we were to redo this project next year? What would be helpful to amend versus what worked well?**

  If this project were to be redone, I would definitely suggest limiting the number of students on both sides to a reasonable number, and I would suggest making sure the numbers were equal. This semester, it took so long to get organized that we had little time to develop a relationship with the Egyptians and to develop our projects to the level that was expected. The groups of 4 with 2 Americans and 2 Egyptians that we finally had by the end of the class were ideal for the project, but the groups of 8 with only 1 American were not. Next time, it would be helpful to assign the groups and send out contact lists at the very beginning.

  It would also be helpful if the class had a designated time in the schedule, perhaps in the morning for the Egyptians and the evening for the Americans, or vice versa. If the class was scheduled to meet twice a week, one meeting could be with everyone and one meeting could be with groups. If it were part of the class schedule, we would have a guaranteed time when both parties would be free to meet, and this would ensure a much more effective collaboration. It would also ensure that students would not have to plan every weekend around their Sunday morning class. A scheduled time would also allow for everyone to attend field trips such as the one to the USC Institute of Creative Technologies.

  One thing I enjoyed about the class was getting to meet people such as David Denton, Dennis Schaffer, Bernhard Drax, people from the USC Institute of Creative Technologies, and people from the government who all work in Second Life. These people were valuable resources and definitely made the class more interesting. The other aspect of the class that intrigued me from the beginning was the ability to meet and collaborate with Egyptian students. Although we ran into a number of barriers and it did not end up being as effective of a collaboration as it

could have been, the idea of working together with people from another culture still intrigues me and I hope it can be improved in future iterations of this class.

- **If this were offered as a design studio - would you be interested in participating? Would you want the project to be local? How important would the collaboration with students overseas be?**

  Because of the amount of work and the time constraints we faced in this class, I definitely feel that it would be better suited as a design studio. I feel it would be effective as a 2-part studio: the first part geared toward building in Second Life on a local site and the second part geared toward collaboration with foreign students on a foreign site. If this were a studio course, it would also allow us to spend a lot more time in-world exploring and getting to know our counterparts. We would have time to get into depth both with the collaboration aspect and with our technical building skills. We could also explore how to use Second Life in conjunction with the standard digital tools that we are accustomed to using. This sounds like a very interesting studio and I would definitely be interested in signing up for it.

- **Anything else you'd like to share? Please do!**

  Although it would no longer be Kansas to Cairo, I think the idea of collaboration could be very effective if it were tried with students in another country that was closer to Los Angeles, such as somewhere in Central or South America. The same idea of collaboration between cultures could still be achieved and there would not be as many scheduling issues related to time zones. If we collaborated with students who were closer, it would also be easier to arrange and pay for a trip, which I feel would have been very valuable for getting to know the Egyptians and the site.

APPENDIX 4:

A DETAILED LIST OF INTERNET USAGE STATISTICS BY COUNTRY

Rank	Country	Internet Users	% Pop.	Date
—	*World*	1,966,514,816	28.7%	2010 [1]
001	China	425,000,000	31.8%	2010
002	United States	240,000,000	77.4%	2010
003	Japan	99,150,000	78.2%	2010
004	India	81,000,000	6.9%	2010
005	Brazil	75,943,600	37.8%	2010
006	Mexico	68,430,000	61.5%	2010
007	Germany	65,200,000	79.1%	2010
008	Russia	59,850,000	42.8%	2010
009	United Kingdom	51,450,000	82.5%	2010
010	France	44,630,000	68.9%	2010
011	Nigeria	43,985,000	28.9%	2010
012	South Korea	39,500,000	81.1%	2010
013	Turkey	35,000,000	45.0%	2010
014	Italy	34,000,000	54.0%	2010
015	Iran	33,200,000	43.2%	2010
016	Indonesia	30,000,000	12.3%	2010
017	Philippines	29,750,000	29.7%	2010
018	Spain	29,095,000	62.6%	2010
019	Argentina	26,615,000	64.4%	2010
020	Canada	26,224,900	77.7%	2010
021	Vietnam	24,269,083	27.1%	2010
023	Poland	22,450,600	58.4%	2010
022	Colombia	21,529,415	48.7%	2010
024	Pakistan	18,500,000	10.4%	2010

025	Thailand	17,486,400	26.4%	2010
026	Australia	17,033,826	80.1%	2010
027	Egypt	17,060,000	21.2%	2010
028	Malaysia	16,902,600	64.6%	2010
029	Taiwan	16,130,000	70.1%	2010
030	Ukraine	15,400,000	33.7%	2010
031	Netherlands	14,890,200	88.7%	2010
032	Morocco	10,450,000	33.0%	2010
033	Saudi Arabia	9,800,000	38.1%	2010
034	Venezuela	9,306,916	34.2%	2010
035	Sweden	8,400,000	92.5%	2010
036	Chile	8,370,000	50.0%	2010
037	Belgium	8,113,200	77.8%	2010
038	Peru	8,085,000	27.0%	2010
039	Romania	7,790,000	35.5%	2010
040	Czech Republic	6,700,000	66.5%	2010
041	Hungary	6,176,400	61.8%	2010
042	Austria	6,143,600	74.8%	2010
043	Switzerland	5,739,300	75.3%	2010
044	South Africa	5,300,000	10.8%	2010
045	Kazakhstan	5,300,000	34.3%	2010
046	Israel	5,263,146	71.6%	2010
047	Portugal	5,168,800	48.1%	2010
048	Greece	4,970,700	46.2%	2010
—	*Hong Kong*	4,878,713	68.8%	2010
049	Denmark	4,750,500	86.1%	2010
050	Algeria	4,700,000	13.6%	2010
051	Uzbekistan	4,689,000	16.8%	2010
052	Finland	4,480,900	85.3%	2010
053	Belarus	4,436,800	46.2%	2010
054	Norway	4,431,100	94.9%	2010
055	Sudan	4,200,000	10.0%	2010

056	Serbia	4,107,000	55.9%	2010
057	Slovakia	4,065,000	74.3%	2010
058	Kenya	3,995,500	10.0%	2010
059	Syria	3,935,000	17.7%	2010
060	United Arab Emirates	3,777,900	75.9%	2010
061	Azerbaijan	3,689,000	44.4%	2010
062	Singapore	3,658,400	77.8%	2010
063	New Zealand	3,600,000	85.4%	2010
064	Tunisia	3,600,000	34.0%	2010
065	Bulgaria	3,395,000	47.5%	2010
066	Uganda	3,200,000	9.6%	2010
067	Ireland	3,042,600	65.8%	2010
068	Dominican Republic	3,000,000	30.5%	2010
069	Ecuador	2,359,710	16.0%	2010
070	Guatemala	2,280,000	16.8%	2010
071	Croatia	2,244,400	50.0%	2010
072	Kyrgyzstan	2,194,400	39.8%	2010
073	Lithuania	2,103,471	59.3%	2010
074	Costa Rica	2,000,000	44.3%	2010
075	Uruguay	1,855,000	52.8%	2010
076	Sri Lanka	1,776,200	8.3%	2010
077	Jordan	1,741,900	27.2%	2010
078	Cuba	1,605,000	14.0%	2010
079	Jamaica	1,581,100	55.5%	2010
080	Latvia	1,503,400	67.8%	2010
081	Bosnia-Herzegovina	1,441,000	31.2%	2010
082	Zimbabwe	1,422,000	12.2%	2010
083	Albania	1,300,000	43.5%	2010
084	Georgia	1,300,000	28.3%	2010
085	Slovenia	1,298,500	64.8%	2010
086	Ghana	1,297,000	5.3%	2010
087	Moldova	1,295,000	30.0%	2010

088	Oman	1,236,700	41.7%	2010
089	Bolivia	1,102,500	11.1%	2010
090	Kuwait	1,100,000	39.4%	2010
091	Macedonia	1,057,400	51.0%	2010
092	Afghanistan	1,000,000	3.4%	2010
093	Haiti	1,000,000	10.4%	2010
094	Lebanon	1,000,000	24.3%	2010
095	Paraguay	1,000,000	15.7%	2010
—	*Puerto Rico*	1,000,000	25.1%	2010
096	El Salvador	975,000	16.1%	2010
097	Estonia	969,700	75.1%	2010
098	Cote d'Ivoire	968,000	4.6%	2010
099	Panama	959,900	28.1%	2010
100	Honduras	958,500	12.0%	2010
101	Senegal	923,000	6.6%	2010
102	Zambia	816,700	6.9%	2010
103	Cameroon	750,000	3.9%	2010
104	Malawi	716,400	4.6%	2010
105	Tajikistan	700,000	9.3%	2010
106	Tanzania	676,000	1.6%	2010
107	Bahrain	649,300	88.0%	2010
108	Nepal	625,800	2.2%	2010
109	Bangladesh	617,300	0.4%	2010
110	Mozambique	612,500	2.8%	2010
111	Nicaragua	600,000	10.0%	2010
112	Angola	607,400	4.6%	2010
113	Laos	527,400	7.5%	2010
114	Trinidad and Tobago	485,000	39.5%	2010
115	Rwanda	450,000	4.1%	2010
116	Ethiopia	445,400	0.5%	2010
117	Qatar	436,000	51.8%	2010
118	Cyprus	433,800	39.3%	2010

119	Luxembourg	424,500	85.3%	2010
120	Yemen	420,000	1.8%	2010
121	Kosovo	377,000	20.8%	2010
122	Democratic Republic of the Congo	365,000	0.5%	2010
—	*Palestine (West Bank)*	356,000	14.2%	2010
123	Togo	356,300	5.7%	2010
124	Libya	353,900	5.5%	2010
125	Mongolia	350,000	11.3%	2010
126	Iraq	325,000	1.1%	2010
127	Madagascar	320,000	1.5%	2010
128	Brunei	318,900	80.7%	2010
129	Iceland	301,600	97.6%	2010
—	*Réunion*	300,000	36.5%	2010
130	Montenegro	294,000	44.1%	2010
131	Mauritius	290,000	22.4%	2010
—	*Macao*	280,900	49.5%	2010
132	Eritrea	250,000	4.3%	2010
133	Mali	250,000	1.8%	2010
134	Republic of the Congo	245,200	5.9%	2010
135	Malta	240,600	51.9%	2010
136	Guyana	220,000	29.4%	2010
137	Armenia	208,200	7.0%	2010
138	Benin	200,000	2.2%	2010
139	Chad	187,800	1.8%	2010
140	Burkina Faso	178,200	1.1%	2010
—	*Martinique*	170,000	41.9%	2010
141	Suriname	163,000	33.5%	2010
142	Cape Verde	150,000	29.5%	2010
143	Saint Lucia	142,900	88.8%	2010
144	Barbados	142,000	49.7%	2010
145	Gambia	130,100	7.1%	2010

146	Namibia	127,500	6.0%	2010
147	Botswana	120,000	5.9%	2010
148	Papua New Guinea	120,000	2.0%	2010
149	Niger	115,900	0.7%	2010
150	Bahamas	115,800	37.3%	2010
151	Myanmar	110,000	0.2%	2010
153	Somalia	106,000	1.0%	2010
153	Fiji	103,000	10.9%	2010
—	*Guadeloupe*	103,000	23.2%	2010
154	Gabon	98,800	6.4%	2010
155	Guinea	95,000	0.9%	2010
—	*French Polynesia*	90,000	31.4%	2010
156	Swaziland	90,000	6.6%	2010
157	Maldives	87,900	22.2%	2010
—	*Guam*	85,000	47.6%	2010
—	*New Caledonia*	85,000	37.4%	2010
158	Turkmenistan	80,400	1.6%	2010
159	Cambodia	78,000	0.5%	2010
160	Lesotho	76,800	4.0%	2010
161	Saint Vincent and the Grenadines	76,000	72.9%	2010
162	Mauritania	75,000	2.3%	2010
163	Antigua and Barbuda	65,000	74.9%	2010
164	Burundi	65,000	0.7%	2010
165	Andorra	67,200	79.5%	2010
166	Belize	60,000	19.1%	2010
—	*French Guiana*	58,000	24.6%	2010
—	*Bermuda*	54,000	79.1%	2010
—	*Greenland*	52,000	90.2%	2010
167	Bhutan	50,000	7.1%	2010
—	*Guernsey*	48,300	74.6%	2010
—	*Faroe Islands*	37,500	76.4%	2010

168	Guinea-Bissau	37,100	2.4%	2010
169	Seychelles	33,900	38.4%	2010
—	*U.S. Virgin Islands*	30,000	27.3%	2010
—	*Jersey*	29,500	31.6%	2010
170	Dominica	27,500	37.8%	2010
171	Grenada	27,000	25.0%	2010
172	São Tomé and Príncipe	26,700	15.2%	2010
173	Djibouti	25,900	3.5%	2010
174	Comoros	24,300	3.1%	2010
—	*Aruba*	24,000	22.9%	2010
—	*Cayman Islands*	24,000	47.8%	2010
175	Liechtenstein	23,000	65.7%	2010
176	Monaco	23,000	75.2%	2010
177	Liberia	20,000	0.5%	2010
178	Central African Republic	22,600	0.5%	2010
179	Saint Kitts and Nevis	17,000	34.1%	2010
180	San Marino	17,000	54.0%	2010
181	Vanuatu	17,000	7.8%	2010
182	Federated States of Micronesia	16,000	14.9%	2010
183	Sierra Leone	14,900	0.3%	2010
184	Equatorial Guinea	14,400	2.2%	2010
—	*Northern Mariana Islands*	10,000	19.4%	2010
185	Solomon Islands	10,000	1.7%	2010
—	*Gibraltar*	9,853	34.2%	2009
186	Samoa	9,000	4.1%	2009
187	Tonga	8,400	6.9%	2008
188	Palau	5,400	26.0%	2007
—	*Cook Islands*	5,000	42.1%	2009
—	*Anguilla*	4,500	31.2%	2009
189	Tuvalu	4,200	33.9%	2008
—	*British Virgin Islands*	4,000	16.3%	2002

—	*Falkland Islands*	2,483	100.0%	2009
190	Marshall Islands	2,200	3.4%	2007
191	Kiribati	2,000	1.8%	2001
—	*Netherlands Antilles*	2,000	0.9%	1999
192	Timor Leste	1,800	0.2%	2009
—	*Montserrat*	1,200	23.5%	2009
—	*Wallis and Futuna*	1,200	7.8%	2009
—	*Niue*	1,000	62.6%	2010
—	*Saint Helena*	800	10.4%	2010
—	*Tokelau*	800	58.4%	2010
—	*Norfolk Island*	700	27.4%	2010
—	*Christmas Island*	464	33.1%	2010
193	Nauru	300	2.1%	2010
194	Vatican City	93	11.2%	2010
195	North Korea	-	-	2009

Source: **Wikipedia**, the free encyclopedia, *"World Internet Users"*, InternetWorldStats.com, 2010, http://www.internetworldstats.com/stats.htm.

APPENDIX 5:

ICT FOR DEVELOPMENT (ICT4D)

APP. 5.1 THE MILLENNIUM DEVELOPMENT GOALS (MDGS)

The **MDG**s, agreed at the United Nations Millennium Summit in 2000, aim to reduce world poverty and improve lives by 2015. The UK Department for International Development (**DFID**) has made the **MDG**s the focus of its work. ICT is seen as a means of achieving many **MDG** goals. One target specifically relates to ICT aiming "*to make the benefits of ICT available to all*".

There has been progress in this area, although critics argue that the target does not specify which ICT should be made available, to whom, and by when. Others argue the **MDGs** should place more emphasis on economic growth: they suggest the MDG-inspired prioritization of ICT applications for micro- and small-scale firms ignores medium- and large-scale firms that are key drivers of wealth creation and competitiveness.

APP. 5.2 WORLD SUMMIT ON THE INFORMATION SOCIETY (WSIS)

WSIS, a two phase United Nations (UN) summit, aimed at overcoming the digital divide and creating an all inclusive Information Society. During the second phase, November 2005, management of Internet infrastructure particularly top level internet domain names (like .com or.org), was a key area of debate.

While WSIS did not result in any major changes to arrangements in this area, one outcome was the creation of the UN Internet Governance Forum (IGF). The IGF will provide a platform for discussing cross-cutting issues such as internet security, although it will have no decision-making powers. While WSIS brought together many actors in the ICT4D field, some critics suggest that it lacked representation from the ICT industry (particularly from developing countries). They also point to a lack of independent research and 'big ideas' beyond the $100 laptop.

APP. 5.3 NEW PARTNERSHIP FOR AFRICA'S DEVELOPMENT (NEPAD)

NEPAD is an African-initiated strategic framework for the continent's revival. It identifies ICT development as a priority action area. It focuses on two key areas: the rapid development of ICT infrastructure and dissemination of ICT skills across the African population, by implementing an e-schools program across primary and secondary schools.

NEPAD has been widely praised for having placed ICT on the development agenda although some critics suggest it lacks the resources and infrastructure to fulfill its goals.

APP. 5.4 COMMISSION FOR AFRICA (CFA)

The CFA is a UK government initiative set up in 2004 to stimulate development in Africa. The CFA report from 2005 recognizes the importance of ICT in many areas, including higher education, economic growth, governance, culture, trade and finance. It urges donors to increase funding to support a free media (including new ICT such as internet broadcasting). Critics say that although the commission proposes substantial increases in funding to carry out its recommendations, it is not clear how these funding increases will be delivered.

APP. 5.5 EXAMPLES OF ICT4D PROJECTS

• **Health:** Kenya Blown telemedicine project aims to provide an online network for all hospitals and health districts in Mali. Physicians are the sole users of the pilot site, but other healthcare workers are invited to consult and contribute content. Medical tele-teaching has also been initiated.

Examples of consultations include one between an expert in Geneva and a patient in the Bamako, Mali; and a leprosy consultation between an expert in Bamako and patient in Geneva.

• **Economic empowerment:** The Grameen Bank NGO,3 a village-based organization in Bangladesh, offers women low-cost loans to set up mobile phone exchanges in villages where there are few landlines.

The women charge for the use of their Village Pay Phones, and earn close to three times the annual average income. Their earnings allow them to

send their children to school and enhance their status in the community. However the scheme is threatened by the increasing availability of cheaper phones for potential purchasers.

• **Human rights:** The Kubatana Trust in Zimbabwe aims to strengthen the use of e-mail and internet strategies in local NGOs and civil society organizations.

Kubatana makes human rights and civic education information accessible to the general public from a centralized, electronic source, and has become an important means for disseminating information about the political situation locally and internationally.

• **Commerce:** In Senegal, Manobi (a French private telecommunications company) uses Wireless Application Protocol (WAP)-enabled mobile phones to obtain up-to-date market prices for Senegalese fruit and vegetable farmers. The prices are updated in real time via a central database by data collectors at various markets, and offer transparency of prices inside the market that many producers lack.

APPENDIX 6:

IT PARKS IN EGYPT

APP. 6.1. MUBARAK CITY FOR SCIENTIFIC RESEARCH AND TECHNOLOGY APPLICATIONS (MuCSAT)

Mubarak City for Scientific Research & Technology Applications (MuSCAT) is the newest addition of research institutes in Egypt that was directed to the development and renovation of industry. A decision to develop a science park in the Alexandria region was reached in 1993 in order to acquire and improve scientific technologies in different areas of human life.

The Muscat occupies 250 acres in the industrial area located at New Borg El Arab City, west of Alexandria. This region also inhabits about 40% of the Egyptian industry. The science park comprises 12 research centers to be developed at different intervals.

The first stage of Muscat was inaugurated on the 13th of August, 2000 and included Genetic Engineering and Biotechnology Research Institute (GEBRI), Informatics Research Institute (IRI) and Institute of Advanced

Technologies and New Materials (IATNM). In addition, a Technology Capabilities Development Center is fully functioning in the Dekhlia Branch.

The MuSCAT is managed by a board of trustee headed by his Excellency Dr. Mofied Shehab, Scientific Research Minster.

The objectives of Muscat institutes were clearly categorized to serve the development and renovation of industry in Egypt. These objectives can be summarized as follows:

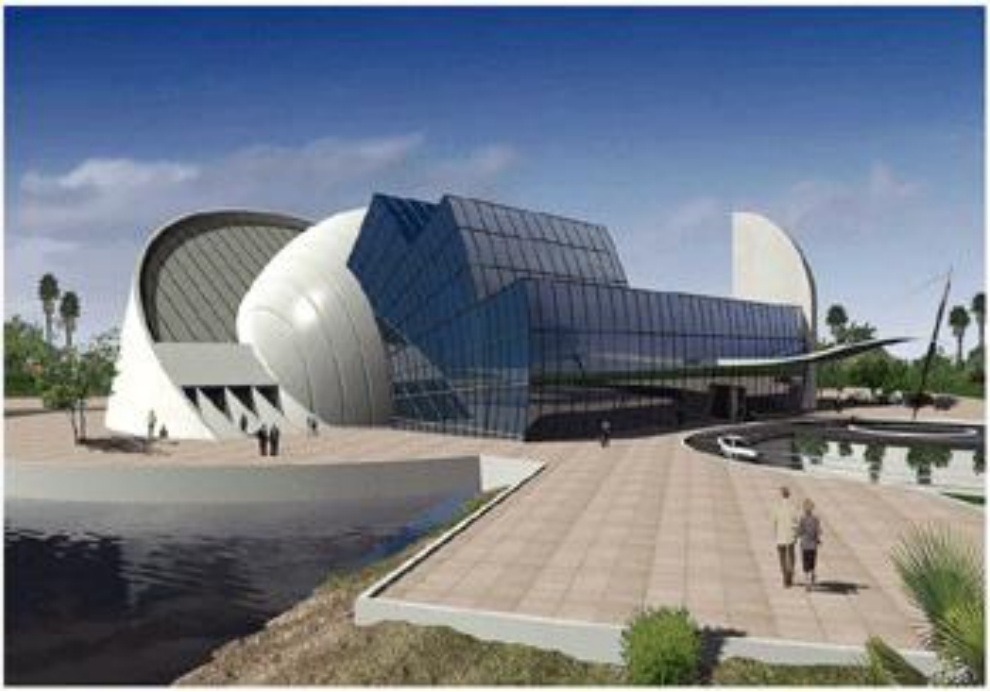
- Develop centers of scientific Excellency that aim to serve both economic and social developments of the Egyptian society.
- Develop new technologies and provide new scientific methods in different fields of industry in order to link research programs to national development plans.
- Provide training consulting and technology transfer to different production and services agents in Egypt.
- Conduct applicable projects to ensure better performance in different areas that can benefit the Alexandria region and the national economy.
- Cooperation with different national and international institutes in the various areas of technology.

It is extremely clear from the different objectives of the city that Muscat is engrossed to both scientific researches in addition to the application of technologies. This is the foremost spirit that distinguishes the city from other scientific research in Egypt.

Moreover, the technology centers in the city are unique in their aim to spread the modern technology application and to provide the training in order to

develop small industry and develop new jobs which is the leading concern of the government at this moment.

APP. 6.2. EGYPT'S SMART VILLAGE (ESV)



Founded in 2001 to lead and foster branded chain of Technology clusters and Business Parks on the local and regional level. Smart Villages Company is a successful model of "***Public Private Partnership- PPP***" investment model, with 80% ownership to the private sector and 20% to the Ministry of Communications and Information Technology.

The Company's main objective is to offer a hassle free business environment through which creativity, innovation and business development are enhanced, in addition to creating synergies between the park's communities.

Smart Villages Company's teams of experts works on offering a prestigious quality of business environment that has been safeguarded by the high-quality urban plan, in which emphasis is placed on the relationship between architecture, landscape, durability and innovation. A Smart mix of business and leisure spots in addition to top notch services and facilities including a nursery, School, Club, Restaurants, clinic and a number of business support services.

Spread over 3 Million Square meters, in Cairo's west suburb and stands as Egypt's prime Communication and Information Technology (CIT) Cluster and Business Park.

Smart Village Cairo was launched in 2003 as the first fully operational Technology Cluster and Business Park in Egypt that accommodates Multinational and Local Companies, Governmental, Financial Authorities and Organizations, as well as Educational Institutions and Research & Development Centers all of which share the sophisticated state of the art infrastructure, up to date facility management and a full range of business and recreation services. It offers not only an excellent infrastructure, but also a thriving environment full of innovative spirit. This in addition to a growing number of business services to assist their business process.

By the end of 2009 Smart Village Cairo hosted with pleasure more than 28,000 professionals in more than the 120 Companies enjoying their presence in the park. With the growing number of new buildings and companies joining the Smart Village Cairo, the Park is expected to host more than 500 companies and more than 100,000 employees by 2014.

Smart Villages Company is expanding its presence, experience and know how in different locations locally and internationally, with a concept plan for Smart Village Damietta Business and Logistics Park, and Smart Village Alexandria Business Park, this as well as the Smart Villages Company's Franchise and consultancy Services.

APP. 6.3. SINAI TECHNOLOGY VALLEY (STV)

The Sinai Technology Valley is one of the major projects for socioeconomic development in Egypt. It is a techno pole and is located at the northwestern access to Sinai Peninsula, on the east bank of the Suez Canal within the territorial jurisdiction of Ismailia governorate, covering an area of 72 square kilometers.

The "*Technology Valley*" project will be implemented in five stages, in which the investments in the first stage amounted to nearly 500 million Egyptian pounds. The Focus sectors are as follows:

- ICTs
- Microelectronics
- Biotechnology
- New materials
- Fine tools
- Renewable energy

APP. 6.4. NORTHERN COAST TECHNOLOGY VALLEY (NCTV)

This proposed techno pole is still at the study stage. The project is being considered by Alexandria Governorate, the Ministry of Higher Education, the Ministry of State for Scientific Research and the Social Fund for Development.

APPENDIX 7:

THE STRATEGIC MASTER PLAN OF EL-ZWAMMEL VILLAGE

APP. 7.1 QUESTIONS & ANSWERS

محافظة الشرقية	مركز: بلبيس		وحدة محلية : الزوامل	قرية : الزوامل
اسم ذو الصلة	الادارة المحلية	العمل الاجتماعى	السكان	القطاع الخاص
دراسة قضايا القطاع الريفي				
1	الإدارة المحلية			
1	ما هى مساحة الكتلة العمرانية للقرية الحالى ؟ 96 فدان			
2	*ما هى المساحة منذ 10 سنوات ؟ 91 فدان*			
3	ما هو عدد السكان التقديرى الحالى ؟ 27000 نسمة للقرية والعزب التابعة			
4	ما هو عدد السكان التقديرى منذ 10 سنوات ؟ 21773 نسمة للقرية والعزب التابعة			
5	ما هى العائلات الرئيسية بالقرية ؟ أبو طاحون – أبو أشرف – آل صباح – أبو رمضان – بسيونى – أبو نعمة – العفيفى – أبو عامر – العفيفى – الأشرم – أبو حبيب			
6	ما هى برامج التدريب التى تمت لموظفين الوحدة المحلية ؟ – تنمية المهارات – خدمة المواطنين – الادارة والتنظيم			
7	فى حالة وجود برامج تدريب ما هى السلبيات و الإيجابيات ؟ 1. الايجابيات تتمثل فى وجود الدورات بينما السلبيات فى أن مدة الدورة لاتكفى 2. تثقيف العاملين بالوحدة المحلية–أرتباطها بالكادر الوظيفى 3. ليس لها تأثير على العاملين بالوحدة المحلية. 4. – الأداء كما هو بالدورات أو بدونها			
8	هل هناك مقار حزبية بالقرية و ما هى ؟ – الحزب الوطنى			
9	ما مصادر الدخل السيادية و المحلية للقرية (الخطة العاجلة – شروق – جهاز تنمية القرية – الموازنة العامة – تراخيص – إشغالات – رسوم.....) فى الثلاث سنوات السابقة ؟ 1. الخطة الموحدة – رسوم تراخيص المبانى – رسوم تفتيش المحلات – رسوم خدمات رسوم اشغالات			
10	ما هى أوجه صرف مصادر الدخل السيادية والمحلية ؟ 1. مياه– رصف–كهرباء وانارة داخل القرية– نظافة 2. المياه–الكهرباء–الصرف–تغطية المجارى المائية. 3. الرصف–الانارة–صيانة المرافق. 4. – الانارة والرصف وتغطية المجارى المائية ومتابعة الخدمات			

11	ما هى الخدمات التى تؤديها الإدارة المحلية لسكان القرية ؟ 1. تصاريح المبانى – توصيل المرافق – النظافة – رفع الاشغالات – مشروعات البنية الأساسية – مياه الشرب – رصف الطرق – الانارة – التغطيات
12	ما هى القوانين و التشريعات الحالية التى تنظم عمران القرية ؟ 1. – قانون التخطيط العمرانى رقم 3 لسنة 1982م ، والكتب الدورية الصادرة من الاسكان والمحافظة
13	ما هى سلبيات أو إيجابيات تلك القوانين ؟ 1. عدم وجود عقوبات رادعة للمخالفين – بطئ البت فى محاضر المخالفات – عدم وجود شرطة متخصصة لتنفيذ القانون والحد من المخالفات والتعديات
14	ما هى المؤسسات الحالية الموجودة بالقرية (بنوك – خدمات زرعات – خدمات بيطرية – إرشاد زراعى – جمعيات أهلية – لجان زكاة.....) ؟ 1. – بنك القرية – بنك ناصر – جمعية الاصلاح الزراعى– الشئون الاجتماعية– جمعية تنمية المجتمع
15	كيف يتم تجميع أموال الجهود الذاتية و من المسئول عن التصرف فيها ؟ 1. – بالوحدة المحلية – جمعية تنمية المجتمع – والتصرف للمجلس المحلى أو مجلس ادارة الجمعية 2. – من خلال أهل الخير بالقرية وجمعية تنمية المجتمع 3. – بيت المال. 4. – بيت المال وأهل الخير والوحدة المحلية
16	هل يوجد صندوق لتلقى شكاوى المواطنين ؟ 1. نعم 2. نعم 3. نعم 4. نعم
17	ماهى مراحل إصدار تراخيص مبانى أو ورش أو محلات تجارية ؟ 1. تقديم المستندات وفق القانون – موافقة الجهات المعنية – معاينة اللجنة الخماسية – سداد الرسوم – استخراج التراخيص 2. تقديم الطلبات بالوحدة المحلية و هي تقوم باللازم 3. مراحل متعددة ومعقدة 4. الاجراءات صعبة ومعقدة ومطلوب تبسيطها لتشجيع الاستثمار بالقرية
18	هل من اليسير حصول أهل القرية على قروض ؟ 1. نعم في حالة وجود مشروعات فعليه – من بنوك القرية والصندوق الاجتماعى 2. نعم فى حالة استكمال الاوراق والضمانات المطلوبة 3. لا يمكن الحصول علي قرض بسهولة 4. – الاجراءات صعبة ومعقدة والضمانات لاتناسب الشباب
19	من الذى يقدم تلك القروض ؟ ما هى الضمانات المطلوبة ؟ 1. بنك القرية – بنك ناصر – الصندوق الاجتماعى – / الضمانات الحيازة الزراعية أو مرتب الموظف أو ضمانات شخصية 2. بنك الائتمان بالقرية و الضمان الحيازة و الممتلكات 3. بنوك القرية – الأملاك 4. البنوك والضمانات الحيازة والملكيات

20	ما هى أوجه التعاون الحالية بين الإدارة المحلية و المؤسسات المدنية والجمعيات الأهلية العاملة بالقرية ؟ 1. شراء أراضى لاقامة مدارس – اقامة معاهد دينية – خطوط الصرف الصحى – شبكات المياه 2. يوجد تعاون شعبي و تنفيذي 3. يوجد تعاون ولكن القرية تحتاج لكثير من الدعم 4. التعاون فى توفير المرافق والخدمات وحل مشاكل القرية
21	هل يتعاون أعضاء المجالس الشعبية مع أعضاء المجالس التنفيذية لتنمية القرية ؟ وضح ذلك بالأعمال التى تمت 1. نعم و ذلك في اقتراحات الخطة العاجلة و خطة شروق و ذلك تبعا لأولويات القرى 2. نعم هناك تعاون 3. احيانا في تحديد أولويات الخطط 4. التعاون لتوفير الخدمات والمرافق بالخطة العاجلة
22	هل توجد سيطرة و تحكم على العمران بالقرى التابعة ؟ كيف 1. نعم من خلال الوحدة والجمعية الزراعية والعمد و الشرطه 2. نعم بالمتابعه عن طريق الأدارة الهندسية 3. –نعم – الإزالة 4. – نعم – الازالة
23	ما هى مشكلات الإدارة المحلية الحالية 1. مركزية الادارة ، تداخل الاختصاصات، عدم وجود حيز عمراني ، ضعف الموارد السيادية و المحلية ، ضعف المرتبات ، عدم وجود شرطة مرافق 2. عدم وجود دعم مالى كافى لتطوير القرى 3. ليس لها سلطة اتخاذ القرار – الروتين – الاجراءات المعقدة و غير الواضحة 4. الدعم المالى وعدم وجود حيز ومركزية القرار
24	ما هى اقتراحاتك لمشروعات أو اجراءات تساهم فى حل مشكلات الإدارة المحلية ؟ 1. الدعم المادي و اصلاح الهيكل المالي لموظفي الادارة المحلية وتعديل قانون الادارة المحلية 2. أن يكون لها سلطة اتخاذ القرار وزيادة المخصصات المالية و تحسين الظروف المعيشية للعاملين بها 3. الدعم و تسهيل الاجراءات 4. حسن معاملة أهالى القرية وتنفيذ روح القانون
2	القضايا البيئية
1	كيف يتم التخلص من القمامة ؟ 1. جمعية الخدمات الاجتماعية مسئولة عن ذلك 2. جمعية الخدمات الاجتماعية 3. الجمعية تقوم بالتجميع و بعض السكان يلقونها بالشوارع و الترع والمصارف 4. الجمعية الاجتماعية ولكن القمامة منتشرة بالترع والمصارف والطرق
2	كيف يتم التخلص من المخلفات الزراعية ؟ 1. اعلاف وسماد 2. اعلاف أو حطب 3. سماد عضوى وأعلاف 4. مصانع الاعلاف أو استخدامها فرشة للمواشى أو الحرق
3	كيف يتم التخلص من مخلفات الورش و الصناعات ؟

	1. لاتوجد صناعات كبيرة أما الورش فيتم تجميع مخلفاتها من خلال مشروع تجميع القمامة 2. لايوجد صناعة بالقرية والورش تبيع مخلفاتها 3. لا يوجد مصانع و مخلفات الورش مع مخلفات المساكن وبعضها يباع 4. تجار الخردة أو مزارع الدواجن تشترى نشارة الخشب لاستخدامها فرشة للدواجن
4	كيف يتم التخلص من روث المواشى ؟ 1. تستخدم كسماد للأراضي الزراعية 2. تدميس الأراضي الزراعية 3. تستخدم كسماد لتدميس الأراضي الزراعية 4. تسميد الأرض الزراعية
5	هل يوجد تلوث بالترع ، وفى حالة وجود تلوث مامصدره ؟ 1. لا 2. نعم من القمامة 3. نعم ، القمامة أو الصرف الآدمى 4. نعم من القمامة والحيوانات والطيور النافقة
6	هل يوجد تلوث بالمصارف الزراعية ، فى حالة وجود تلوث مامصدره ؟ 1. نعم لإلقاء المخلفات والصرف الآدمى 2. نعم من الصرف الصحي في بعض المناطق 3. نعم ، القمامة أو الصرف 4. نعم القمامة والصرف الصحى
7	هل توجد جهات تقوم بتطهير المجارى المائية ؟ ما هى هذه الجهات ؟ ما هى مشكلاتها ؟ 1. وزارة الرى والموارد المائية ، والمشكلة فى عدم وعى الأهالى 2. وزارة الرى – التلوث مستمر من الصرف الصحى والقمامة 3. نعم ، وزارة الرى ، إلقاء السكان للقمامة بالمجاري المائية 4. وزارة الرى / ترك ناتج التطهير على جانبى الترع / عدم الوعى البيئى لبعض من سكان القرية
8	هل يوجد تلوث بمياه الشرب ، ماأسباب ذلك التلوث فى حالة وجوده ؟ 1. لا 2. لا يوجد إلا في المناطق التي تتهالك فيها الشبكة واختلاط مياه الصرف مع مياه الشرب 3. نعم في بعض مناطق الشبكة المتهالكة 4. قليل فى بعض مناطق الشبكة المتهالكة
9	هل تو جد مخاطر صناعية بالقرية (تلوث صناعى – خطوط كهرباء متاخمة للمبانى.....الخ) ؟ 1. يوجد خط كهرباء ضغط عالى وتم ادراج دعم مالى لرفعه بالخطة العاجلة 2007/2006م
10	هل توجد مصادر تلوث أخرى ؟ ما هى ؟ 1. نعم – مكامير الفحم 2. نعم الفحم 3. لا 4. قش الأرز أحياناً والحيوانات النافقة والمبيدات الزراعية
11	ماذا فعلت الادارة المحلية للحد من التلوث البيئى و حماية الأهالى ؟ 1. – تغطية الترع داخل الكتلة السكنية ومحاضر بيئة لمكامير الفحم

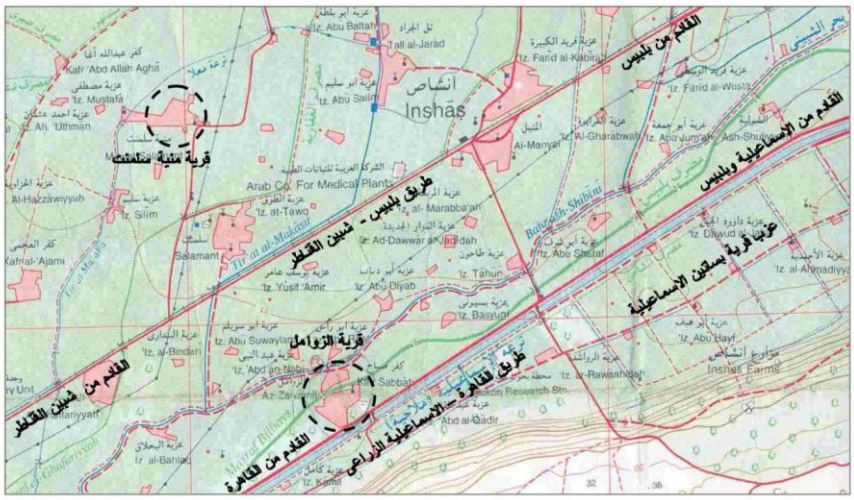
12	ماذا فعلت الجمعيات الأهلية و المؤسسات المدنية من أعمال للحد من التلوث البيئى ؟ 2. التجميع والتخلص من القمامة
13	ماذا فعل الأهالى للحد من التلوث البيئى ؟ 1. البعض استجاب للتوعية بعدم حرق قش الأرز و عدم استخدام المبيدات الزراعية 2. البعض يستجيب والبعض يلوث البيئة لعدم الوعى 3. البعض يحاول و البعض يضر البيئة 4. لاشئ
14	اقترح مشروعات تساهم فى القضاء على التلوث بالقرية. 1. مشروع تدوير القمامة – نقل مكامير الفحم الى الظهير الصحراوى 2. ترخيص مقلب قمامة وشبكة الصرف الصحي ومحطة المعالجة و تخصيص عربات مغطاة لنقل القمامة 3. توفير مكان لتجميع القمامة – انشاء مصانع تدوير القمامة – مشروع صرف صحى – تجديد شبكة المياه المتهالكة 4. تطهير وتغطية الترع والمصارف– تدعيم مشروع جمع القمامة بالعربات والمعدات – انشاء مصانع تدوير القمامة – الصرف للمناطق المحرومة – تجديد شبكة المياه المتهالكة – انشاء مصنع اخشاب من قش الارز
15	من الذى سيتولى القيام بتلك المشروعات و ما هو أسلوب التمويل و الإدارة ؟ 1. شركاء التنمية و الوحدة المحلية – التمويل من الموازنة العامة و المساهمات الشعبية 2. الوحدة المحلية وجمعية تنمية المجتمع – الجهود الذاتية – الإدارة من أبناء القرية 3. الوحدة المحلية أو تأسيس جمعيات أهلية و التمويل من خلال قروض أو جهود ذاتية أو تأسيس صندوق لتنمية القرية 4. شركاء التنمية و الوحدة المحلية– الجهود الذاتية– تأسيس صندوق لتنمية القرية

Answers of local partners

1- local administration 2- local agencies 3- local residents 4- business sector

APP. 7.2 EL-ZWAMEL- PRESENTATION

المدخل الاقليمى – العلاقات المكانية لقرى الوحدة المحلية



العرض الأول لاجتماع شركاء التنمية للوحدة المحلية الزوامل
المدخل الاقليمى

موقع محافظة الشرقية من الدلتا

التقسيم الادارى لمحافظة الشرقية

الطاقات المتاحة للقرى الوحدة المحلية الزوامل

• تعتبر محافظة الشرقية من اكبر المحافظات الريفية فى مصر وتقع شرق الدلتا ولها حدود ادارية مع محافظات الاسماعيلية والقليوبية والدقهلية، وتطل على بحيرة المنزلة من الاتجاه الشمال الشرقى ، عاصمتها مدينة الزقازيق وتبعد نحو ٨٠ كم شمال شرق مدينة القاهرة تبلغ المساحة الإجمالية للمحافظة ٤٩١١ كم٢منها نحو ٤٧٦٤.٣ كم ٢ مساحة مأهولة بالسكان ونحو ١٤٣.٧ كم٢ أراضى صحراوية فى الاتجاه الشرقى ، بلغ عدد سكان المحافظة ٤.٦٩١ مليون نسمة (تقديرات ٢٠٠١ م) منها ١.٠٦٧ مليون نسمة (حضر) بنسبة مئوية ٢٢.٧% ونحو ٣.٦٢٤ مليون نسمة (ريف) بنسبة مئوية ٧٧.٣% وتأتى المحافظة بالمرتبة الثالثة سكانيا بين المحافظات وبنسبة مئوية ٧.٧% من اجمالى سكان مصر.

• تنقسم محافظة الشرقية إداريا فى خمس عشر وحدة ادارية على النحو التالى: ثلاث عشر مركز هى (الزقازيق – بلبيس – الحسينية – فاقوس – منيا القمح –ابو حماد – ابو كبير – ديرب نجم – كفر صقر – هيا – مشتول السوق – الابراهيمية – فاقوس – صقر) بالاضافة الى مدينة العاشر من رمضان و قسم المصالحة الجديدة

الوحدة	داخل حدود الزمام	خارج حدود الزمام	الاجمالى
مركز	١٣	-	١٣
أحياء	٢	-	٢
مدينة	١٣	٢	١٥
وحدة محلية	٨٥	-	٨٥
قرى توابع	٤٩٤	-	٤٩٤
عزبة / كفر / نجع	٣٨٢٣	-	٣٨٢٣

المكونات العمرانية للوحدة المحلية الزوامل (عام ٢٠٠٦م)

تتكون الوحدة المحلية الزوامل من عدد ثلاثة قرى وعدد ٥٩ عزبة تابعة موزعة على النحو التالى

القرية الأم : قرية الزوامل ويتبعها عدد ٢٩ عزبة

القرى التابعة : قرية منية سلمت ويتبعها عدد ٦ عزبة

قرية بمعقين الاسماعيلية وتتكون من ٢٤ عزبة تابعة ولاتوجد قرية رئيسية

عدد السكان بالوحدة المحلية الزوامل (عام ٢٠٠٦م)

بلغ عدد سكان الوحدة المحلية الزوامل ٥٩٧٥٤ نسمة موزعة على النحو التالى

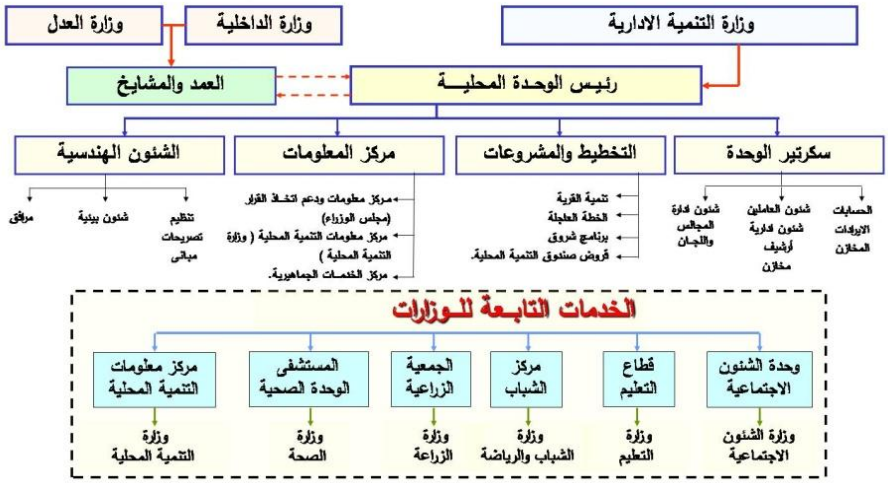
القرية الأم : قرية الزوامل ٢٧١١٠ نسمة

القرى التابعة : قرية منية سلمت ٤٩٩٦ نسمة

قرية بمعقين الاسماعيلية ٢٧١٤٨ نسمة

قضايا الادارة المحلية واولويات التنمية

الهيـكل الادارى



الخدمات التابعة للـوزارات

قضايا الادارة المحلية واولويات التنمية

مصادر الدخل السيادية والمحلية

الخطة الموحدة وتشمل (الخطة العاجلة + شروق + الخطة الاستثمارية) – الصندوق الاجتماعى – صندوق التنمية المحلية (رسوم تراخيص بناء – رسوم تراخيص أنشطة اقتصادية ٠٠٠٠٠٠)

الاستثمارات المنفذة

السنة المالية	٢٠٠٢/٢٠٠٣م	٢٠٠٣/٢٠٠٤م	٢٠٠٤/٢٠٠٥م
اجمالى الاستثمارات	٣٣٥.٤ ألف جنيه	٦٤٤.٢ ألف جنيه	٧٤٨.٥ ألف جنيه

دور الادارة المحلية فى التنمية

الخطة الموحدة — انارة عامة وتدعيم شبكات الكهرباء
رصف – تغطية ترع ومصارف
انارة وتغطيات ومبانى خدمات

الصندوق الاجتماعى للتنمية مشروعات شباب الخريجين

بنك الائتمان الزراعى تدعيم النشاط الزراعى

الجمعيات الأهلية والمؤسسات المدنية بالقرية

وحدة الشئون الاجتماعية - جمعية تنمية المجتمع – جمعية الخدمات الاجتماعية - بنك الائتمان الزراعى – الجمعية الزراعية – الجمعية الشرعية – جمعية كفالة اليتيم

القوانين والقرارات المنظمة للعمران بالقرية

- قانون الزراعة رقم ٥٣ لسنة ١٩٦٦م المعدل رقم ١١٦ لسنة ١٩٨٣م
- قانون التخطيط العمرانى رقم ٣ لسنة ١٩٨٢م
- القرار رقم ١٠٦ (المحكمة الدستورية العليا ١٩٩٦م)

المشروعات المدرجة بالخطة الموحدة

* لاتوجد مشروعات مدرجة للصرف الصحى بالرغم من عدم وجود محطات رفع أو معالجة على مستوى الوحدة المحلية
* يوجد مشروع مدرج ودعم مالى بالخطة الموحدة ٢٠٠٦/٢٠٠٧م لرفع خط كهرباء جهد عالى ملاصق للكتلة السكنية

الخطوات الادارية للحفاظ على الأراضى الزراعية

* تحرير محضر تعدى من خلال الجمعية الزراعية
* تحويل المحضر الى الجهات الأمنية المختصة بمركز بلبيس وتنفيذ الازالة
* اخطار العمدة أو شيخ البلد بعمل حراسة ووقف الأعمال لحين البت فى القضية

قضايا الادارة المحلية واولويات التنمية

تحليل دراسات الادارة المحلية

نقاط القوى Strengths

- ☐ تعدد مصادر الدخل للقرية
- ☐ تعدد المؤسسات الخدمية بالقرية
- ☐ وجود ادارة تلقى شكاوى المواطنين بالوحدة المحلية
- ☐ وجود برامج للتنمية الادارية للعاملين بالوحدة المحلية
- ☐ مساهمة المؤسسات المدنية والأهلية والجهود الذاتية فى التنمية
- ☐ وجود العديد من برامج التحسين بالقرية مثل تغطية بعض المجارى المائية داخل الكتلة السكنية ورصف وانارة الطرق
- ☐ اعضاء المجالس المحلية تتعاون مع المجالس التنفيذية لتنمية القرية
- ☐ التعاون بين الجمعية الزراعية والوحدة المحلية فى رصد التعديات والازالة الفورية فى مهدها لبعض الحالات

نقاط الضعف Weakness

- ☐ عدم وجود خرائط مساحية حديثة للقرية
- ☐ عدم وجود مخطط معتمد للقرية
- ☐ مركزية القرار وعدم القدرة الادارة المحلية على اتخاذ قرارات التنمية
- ☐ تضارب بين القوانين والتشريعات والقرارات المنظمة لعمران القرية
- ☐ العديد من المبانى غير مدرجة بالعوائد مما يضعف مصادر الدخل المحلية
- ☐ موازنة الخطة الموحدة غير كافية لسد احتياجات القرية
- ☐ الدورات التدريبية ليس لها تأثير مباشر فى تعامل الادارة مع المواطنين
- ☐ قوانين وقرارات تنظيم العمران بالقرية غير منشورة على أهل القرية

مكامن المخاطر Threats

- ☐ عدم وجود حيز عمرانى يؤدى الى تعديات على الأراضى الزراعية
- ☐ عدم تناسب مخصصات الخطة الموحدة للقرية مع عدد سكان القرية
- ☐ ضعف المرتبات للعاملين على تنمية القرية
- ☐ احكام المحكمة الدستورية العليا بالبراءة لبعض حالات التعديات تؤدى الى عدم استكمال مراحل قرارات الازالة
- ☐ لاتوجد مشروعات مدرجة للصرف الصحى بالخطة الموحدة بالرغم من التلوث البيئى الشديد بالقرية

مكامن الفرص Opportunities

- ☐ امكانية تكوين صندوق تنمية للقرية يمول من مساهمات الشركاء وبدل التحسين على الاراضى المصرح لها بالبناء لتنمية القرية
- ☐ محاولة تحديد أولويات التنمية بالقرية من خلال مدخل تشاركي لكافة أهالى القرية
- ☐ امكانية تنظيم ادارة العمران بتوفير الخرائط الرقمية الحديثة الجارى تجهيزها حالياً ووضع مخطط استراتيجى للقرية
- ☐ اتجاه السياسات الى اللامركزية الادارية
- ☐ استعداد الأهالى لتكوين مجلس ادارة للقرية من سكان القرية لتنظيم وادارة التنمية بالقرية

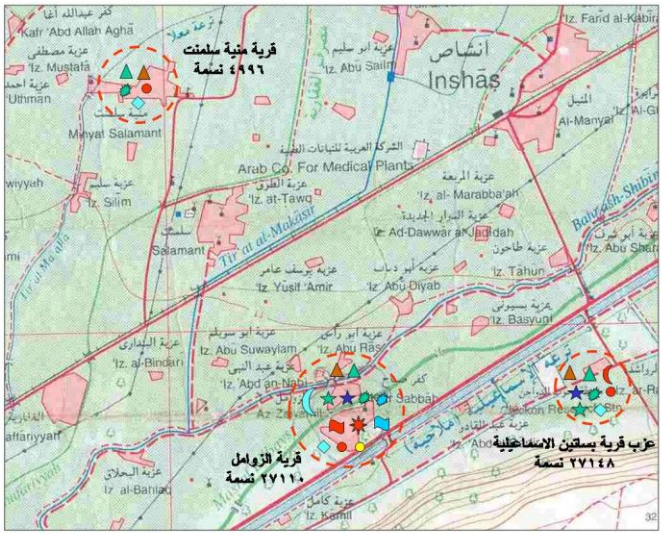
العرض الأول لاجتماع شركاء التنمية للوحدة المحلية الزوامل
القضايا الرئيسية والمشروعات – الادارة المحلية

القضايا	الأهداف	بدائل الأنشطة والمشروعات ذات الأولوية	نوع النشاط	التكلفة التقديرية	المساهمة	الأولوية
التحكم فى عمران القرية	وجود حدود قانونية للكتلة العمرانية الرئيسية للقرية	اعتماد حيز عمرانى للوضع الراهن	اجرائى	٣١ ألف جنيه	وزارة الاسكان	١
	الحفاظ على الأراضى الزراعية	السماح بالبناء داخل الحيز المقترح والسماح بتراخيص الاحلال والتجديد والتكثيف الرأسى	اجرائى	تمويل ذاتى	اهالى القرية	٢
سوء المعاملة بالوحدة المحلية	اعادة الثقة بين أهالى القرية وبين الجهاز الادارى بالوحدة المحلية	دورات تدريبية للعاملين بادارات الوحدة المحلية	اجرائى	موازنة الدولة	مجلس الوزراء	٣
	مراقبة التعامل بين العاملين بالوحدة المحلية وبين أهالى القرية	توسيع مجال عمل الرقابة الادارية	اجرائى	موازنة الدولة	هيئة الرقابة الادارية	٤
		تكوين مجلس ادارة القرية يدخل فى اختصاصاته مراقبة سلوك الادارة المحلية مع المواطنين	اجرائى	اجرائى	مجلس الوزراء	٥
مخصصات القرية غير كافية للتنمية	توفير موارد اضافية للقرية	زيادة اعتمادات الخطة الموحدة الموجهة للقرية	اجرائى	موازنة الدولة	وزارة التخطيط	٦
		انشاء صندوق لتنمية القرية يمول من الموارد المحلية للقرية	اجرائى	اجرائى	وزارة التنمية المحلية	٧
		فرض بدل تحسين على الأراضى التى يسمح لها بالبناء داخل الحيز المقترح	اجرائى	٢٥ % من قيمة الفدان	اجرائى	٨
نقص الامكانيات بالوحدة المحلية	رفع كفاءة العمل بالوحدة المحلية	تزويد الوحدة المحلية بالخرائط واجهزة الكمبيوتر ووسائل الاتصالات لرصد عمران القرية	اجرائى	٢٠٠ ألف جنيه	وزارة التخطيط	٩
		دورات تدريبية للتعامل مع اسلوب التخطيط بالمشاركة	اجرائى	موازنة الدولة	مجلس الوزراء	١٠
		زيادة المرتبات والارتقاء بالحالة المعيشية للعاملين بكافة ادارات الوحدة المحلية	اجرائى	موازنة الدولة	وزارة المالية	١١

العرض الأول لاجتماع شركاء التنمية للوحدة المحلية الزوامل
القضايا الرئيسية والمشروعات – الادارة المحلية

القضايا	الأهداف	بدائل الأنشطة والمشروعات ذات الأولوية	نوع النشاط	التكلفة التقديرية	المساهمة	الأولوية
التحكم فى عمران القرية	وجود حدود قانونية للكتلة العمرانية الرئيسية للقرية	اعتماد حيز عمرانى للوضع الراهن	اجرائى	٣١ ألف جنيه	وزارة الاسكان	١
	الحفاظ على الأراضى الزراعية	السماح بالبناء داخل الحيز المقترح والسماح بتراخيص الاحلال والتجديد والتكثيف الرأسى	اجرائى	تمويل ذاتى	اهالى القرية	٢
الفجوة بين أهالى القرية وبين العاملين بالوحدة المحلية	اعادة الثقة بين أهالى القرية وبين الجهاز الادارى بالوحدة المحلية	دورات تدريبية للعاملين بادارات الوحدة المحلية	اجرائى	موازنة الدولة	مجلس الوزراء	٣
	مراقبة التعامل بين العاملين بالوحدة المحلية وبين أهالى القرية	توسيع مجال عمل الرقابة الادارية	اجرائى	موازنة الدولة	هيئة الرقابة الادارية	٤
		تكوين مجلس ادارة القرية يدخل فى اختصاصاته مراقبة سلوك الادارة المحلية مع المواطنين	اجرائى	اجرائى	مجلس الوزراء	٥
مخصصات القرية غير كافية للتنمية	توفير موارد اضافية للقرية	زيادة اعتمادات الخطة الموحدة الموجهة للقرية	اجرائى	موازنة الدولة	وزارة التخطيط	٦
		انشاء صندوق لتنمية القرية يمول من الموارد المحلية للقرية	اجرائى	اجرائى	وزارة التنمية المحلية	٧
		فرض بدل تحسين على الأراضى التى يسمح لها بالبناء داخل الحيز المقترح	اجرائى	٢٥ % من قيمة الفدان	اجرائى	٨
نقص الامكانيات بالوحدة المحلية	رفع كفاءة العمل بالوحدة المحلية	تزويد الوحدة المحلية بالخرائط واجهزة الكمبيوتر ووسائل الاتصالات لرصد عمران القرية	اجرائى	٢٠٠ ألف جنيه	وزارة التخطيط	٩
		دورات تدريبية للتعامل مع اسلوب التخطيط بالمشاركة	اجرائى	موازنة الدولة	مجلس الوزراء	١٠
		زيادة المرتبات والارتقاء بالحالة المعيشية للعاملين بكافة ادارات الوحدة المحلية	اجرائى	موازنة الدولة	وزارة المالية	١١

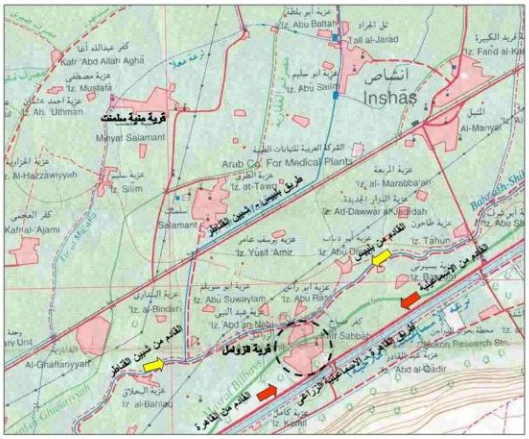
العرض الأول لاجتماع شركاء التنمية للوحدة المحلية الزوامل
الخدمات الحالية بالوحدة المحلية (٢٠٠٦م)



- مستشفى قروى
- وحدة صحية
- تعليم ابتدائى
- تعليم اعدادى
- مركز شباب
- وحدة شئون اجتماعية
- جمعية زراعية
- وحدة بيطرية
- سوق اسبوعى
- مكتب بريد
- بنك القرية
- مبنى الوحدة المحلية
- عمدية
- محطة مياه ارتوازية وخزان مياه

العرض الأول لاجتماع شركاء التنمية لقرية الزوامل
الصورة الفضائية للقرية

العرض الأول لاجتماع شركاء التنمية لقرية الزوامل
محاور الوصول للقرية



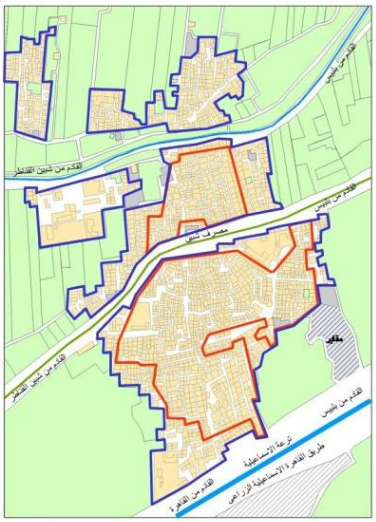
١- محاور الوصول الرئيسية

- يمكن الوصول الى القرية من الطريق الاقليمى القاهرة – الاسماعيلية الزراعى

٢- محاور الوصول الثانوية

- يمكن الوصول الى القرية من القرية من الطريق الاقليمى بلبيس – شبين القناطر

قضايا العمران واولويات التنمية – الحيز العمرانى ١٩٨٥ م والكتلة العمرانية الحالية



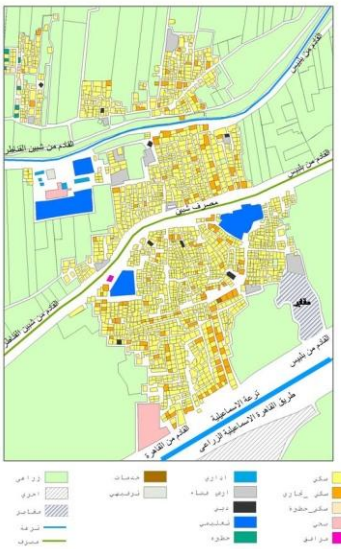
مساحة الحيز العمرانى ١٩٨٥م
٣٧ فدان

مساحة الكتلة العمرانية الحالية
عام ٢٠٠٦م
٨٤.٣٣ فدان

اجمالى عدد السكان عام ٢٠٠٦م
١٢٢٨١ نسمة

متوسط الكثافة السكانية الحالية
١٤٥.٦ نسمة / فدان

قضايا العمران واولويات التنمية – استعمالات الأراضى



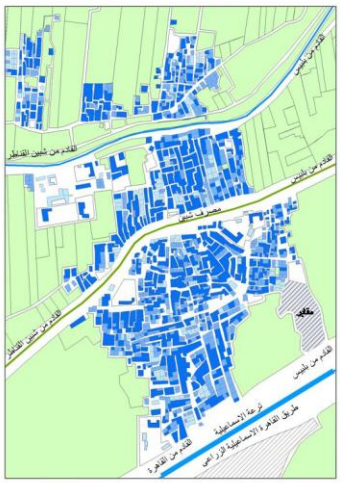
الوضع الراهن

- تبلغ مساحة الكتلة العمرانية الرئيسية للقرية عام ٢٠٠٦م نحو ٨٤.٣٣ فدان
- عدد السكان الحالى للقرية (٢٠٠٦م) ٢٧١١٠ نسمة منهم ١٢٢٨١ نسمة بالكتلة الرئيسية وعدد ١٤٨٢٩ نسمة بالعزب التابعة للقرية
- الكثافة السكانية الاجمالية الحالية بالكتلة العمرانية الرئيسية ١٤٥.٦ نسمة/فدان
- استعمال المبانى السائد هو الاستعمال السكنى ٦١.٩٧ %
- بالقرية أراضى فضاء ومتخللات وجيوب زراعية بمساحة ١.٣٥ فدان يمكن الاستفادة منها فى الاسكان والخدمات
- التنسيج العمرانى للقرية متشعب تقليدى بالنواة الرئيسية للقرية وشريطى خارج النواة الرئيسية

الاستفادة من الأراضى الفضاء

- تبلغ مساحة الأراضى الفضاء بالقرية ١.٣٥ فدان
- يصرح بالبناء على نسبة ٨٠ % لتوسعة الطرق والاستفادة من قانون ارتفاع المبانى ١.٥ عرض الطريق
- المساحة المتاحة للبناء = ١.٣٥ × ٨٠% = ١.٠٨ فدان
- متوسط الارتفاع مابين دورين الى ثلاثة أدوار
- اجمالى المساحة المتاحة = ١.٠٨ × ٢.٥ دور = ٢.٧ فدان
- مساحة الوحدة السكنية فى حدود ١٠٠ م٢
- اجمالى الوحدات السكنية المتوقع بالأراضى الفضاء = ٢.٧ × ٤٢٠٠م٢ ÷ ١٠٠م٢ = ١١٣ وحدة سكنية
- متوسط عدد افراد الاسرة خلال سنوات الهدف = ٤.٩٢ فرد / اسرة
- عدد السكان الممكن استيعابهم بالأراضى الفضاء = ٥٥٨ نسمة

قضايا العمران واولويات التنمية – ارتفاعات المبانى



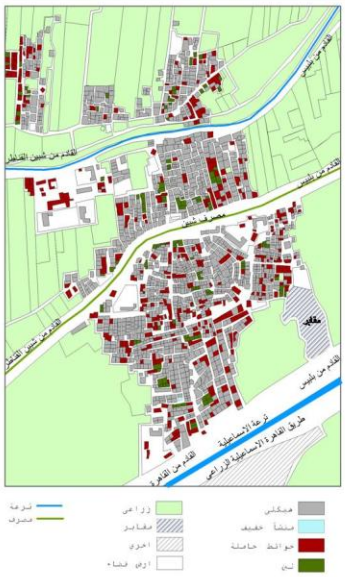
الوضع الراهن

- النسبة الغالبة من مبانى القرية ترتفع أكثر من ثلاث أدوار حيث المبانى التى ترتفع دور واحد (دور أرضى فقط) تبلغ نسبتها نحو ١٠.١ % من اجمالى مساحة الكتلة البنائية بالقرية ، بينما المبانى التى ترتفع دورين تبلغ نسبتها نحو ٢٨.٢٥% ، والمبانى التى ترتفع ثلاثة أدوار أو أكثر تبلغ نسبتها نحو ٦١.٦٥ %
- وجود نسبة من المبانى السكنية ذات الدور أو الدورين يعتبر امكانية عمرانية بالقرية تفيد فى عملية التكثيف الرأسى واستيعاب بعض من الزيادة السكانية حتى سنة الهدف ٢٠٢٢م

التكثيف الرأسى للمبانى السكنية

- تبلغ مساحة المبانى السكنية الجيدة والمتوسطة بالقرية التى ترتفع مابين دور واحد الى دورين ١٦.٦٥ فدان
- بمراجعة عروض الطرق مع ارتفاع المبانى اتضح امكانية تطية نحو ٣٤ % من تلك المبانى مابين دور واحد الى دورين
- المساحة المتاحة للتكثيف الرأسى = ١٦.٦٥ × ٣٤% × ١.٥ دور = ٨.٤٩ فدان
- مساحة الوحدة السكنية فى حدود ١٠٠ م٢
- اجمالى الوحدات السكنية المتوقع من التكثيف الرأسى للمبانى السكنية = ٨.٤٩ × ٤٢٠٠م٢ ÷ ١٠٠م٢ = ٣٥٧ وحدة سكنية
- متوسط عدد افراد الاسرة خلال سنوات الهدف = ٤.٩٢ فرد / اسرة
- عدد السكان الممكن استيعابهم من التكثيف الرأسى = ١٧٥٥ نسمة

قضايا العمران واولويات التنمية – طرق الانشاء ومواد البناء



الوضع الراهن

• النسبة الغالبة من المبانى بالقرية هيكلية من الخرسانة المسلحة والحوائط من الطوب الأحمر الطفلى ، وتبلغ نسبة المبانى الهيكلية نحو ٧٢.١% من اجمالى المبانى بالقرية – بينما تبلغ نسبة المبانى من الحوائط الحاملة والاسقف من الخرسانة المسلحة نحو ٢٢ % ، بينما المبانى من الطوب اللبن والمنشآت الخفيفة نحو ٥.٩ %

الاحلال والتجديد للمبانى السكنية الرديئة

• تبلغ مساحة المبانى السكنية الرديئة بالقرية ٣٠٠ فدان
• بمراجعة عروض الطرق مع ارتفاع المبانى السكنية الرديئة اتضح امكانية احلال وتجديد تلك المبانى بارتفاع مابين دورين الى ثلاثة أدوار (متوسط ٢.٥ دور) بشرط البناء على ٨٠% من مساحة الأرض للاستفادة من قانون ارتفاع المبانى
• المساحة المتاحة من الاحلال والتجديد = ٣٠٠ × ٨٠% × ٢.٥ دور = ٦٠٠ فدان
• مساحة الوحدة السكنية فى حدود ١٠٠ م٢
• اجمالى الوحدات السكنية المتوقع من الاحلال والتجديد للمبانى السكنية الرديئة = ٦٠٠ × ٤٢٠٠م٢ ÷ ١٠٠م٢ = ٢٥٢ وحدة سكنية
• متوسط عدد افراد الاسرة خلال سنوات الهدف = ٤.٩٢ فرد / اسرة
• عدد السكان الممكن استيعابهم من الاحلال والتجديد = ١٢٤٠ نسمة
• عدد السكان الحالى بالمبانى السكنية الرديئة = ٣٠٠ × ٢٣٥ نسمة/فدان (الكثافة السكانية الصافية) = ٧٠٥ نسمة
• عدد السكان المضاف من عملية الاحلال والتجديد = ١٢٤٠ – ٧٠٥ = ٥٣٥ نسمة

قضايا العمران واولويات التنمية – الخدمات الحالية والمستهدفة بالقرية

عدد السكان الحالى (تقديرات ٢٠٠٦م) ٢٧١١٠ نسمة

عدد السكان المتوقع عام ٢٠٢٢م (٣٥٨٩٢ نسمة)

الخدمة	الوضع الحالى ٢٠٠٥م	المتوقع والمستهدف عام ٢٠٢٢م
التعليم	التعليم الابتدائى : يوجد ٣٦٠٢ طالب وعدد ٧٥ فصل بكثافة ٤٨ طالب / فصل	المتوقع ٤٣٠٧ طالب فى حاجة الى ١٠٨ فصل بكثافة ٤٠ طالب / فصل والمطلوب اضافة ٣٣ فصل لفصول التعليم الابتدائى الحالية (٠.١٥ فدان)
	التعليم الاعدادى : يوجد ١٥٨٦ طالب وعدد ٣٤ فصل بكثافة ٤٧ طالب / فصل	المتوقع ٢٥١٢ طالب فى حاجة الى ٦٣ فصل بكثافة ٤٠ طالب / فصل والمطلوب اضافة ٢٩ فصل لفصول التعليم الاعدادى الحالية (٠.١٤ فدان)
	التعليم الثانوى : لا يوجد تعليم ثانوى	المتوقع ١٧٩٥ طالب فى حاجة الى ٥٠ فصل بكثافة ٣٦ طالب / فصل والمطلوب انشاء مدرسة ثانوى تشمل ٥٠ فصل (١.٥ فدان)
الصحة	يوجد مستشفى الزوامل المركزى ومجموعة صحى	تحتاج المجموعة الصحية الى احلال وتجديد
الشباب والرياضة	يوجد مركز شباب بدون ملاعب	تطوير مركز الشباب واضافة قاعات وأجهزة رياضية وانشاء ملعب (١.٠٠ فدان)
الخدمات الاجتماعية	توجد وحدة شئون اجتماعية ، وجمعية تنمية مجتمع وجمعية خدمات اجتماعية وجمعية شرعية ولجنة كفالة اليتيم ولجان البر والزكاة	التوسع فى تأسيس الجمعيات الأهلية و مشروعات الاسر المنتجة والحضانات والجمعيات الاهلية ومشاغل الفتيات والتدريب المهنى للشباب
الخدمات الثقافية	لاتوجد	القرية فى حاجة الى مكتبة (٠.٠٤ فدان)
الخدمات الدينية	يوجد عدد كافى من المساجد	تطوير وترميم المساجد الحالية
الاسواق	يوجد سوق يومى وسوق اسبوعى	تطوير ونظافة وتنظيم الاسواق
الخدمات الأمنية	يوجد مقر عمودية	كافية للوضع الراهن والمستقبلى ومطلوب نقطة شرطة واطفاء
الخدمات الزراعية	توجد جمعية زراعية	مطلوب دعم اسعار التقاوى والاسمدة والكيماويات
الخدمات البيطرية	لاتوجد	مطلوب انشاء وحدة بيطرية (٠.٠٤ فدان)
المستزرل والبريد	يوجد مستزرل و يوجد مكتب بريد	كافية للوضع الراهن والمستقبلى

مساحة الخدمات اللازمة حتى سنة الهدف ٢٠٢٢م = ٢.٨٧ فدان

قرية الزوامل – قضايا العمران واولويات التنمية – الاسكان

الوضع الراهن

- القرية فى مرحلة التحول من نمط الاسكان الريفى الى نمط الاسكان الحضرى حيث البناء الهيكلى من الخرسانة المسلحة أو الحوائط الحاملة والسقف من الخرسانة المسلحة
- النسبة الغالبة من المبانى السكنية المتوسطة أو الجيدة فى مرحلة تعليات أو تم تعليتها ومازالت خالية تحت التشطيب
- النسبة الغالبة من واجهات المبانى السكنية بدون نهو
- تخزين المخلفات الزراعية فوق أسطح المبانى السكنية من العشش الريفية التى مازالت غالبة على المبانى بالقرية
- النسبة الغالبة من المبانى السكنية يتم تخصيص جزء من الدور الأرضى تستخدم حظيرة لتربية الماشية أو الطيور
- الملكية الخاصة هى النمط الغالب لحيازة المسكن حيث كل اسرة تبنى لذاتها ومن القليل وجود نمط التأجير أو التمليك
- لا توجد مشروعات حالية لاسكان منخفض التكاليف بالقرية أو بالاقليم الارجح لشباب القرية

يوجد العديد من المبانى السكنية المتدهورة بالقرية يمكن أن تستوعب وحدات سكنية اضافية فى حالة الاحلال والتجديد

الأراضى الفضاء داخل الكتلة العمرانية وعلى الأطراف يمكن أن تستوعب وحدات سكنية جديدة

العديد من المبانى السكنية جيدة وحديثة الانشاء ومازالت خالية يمكن أن تستوعب نسبة كبيرة من الزيادة السكانية

الاحتياج المستقبلى للوحدات السكنية

	المعدلات	١٩٩٦م	٢٠٠٦م	٢٠١٢م	٢٠١٧م	٢٠٢٢م
الكتلة الرئيسية للقرية	السكان (نسمة)	٩٨٦٤	١٢٢٨١	١٣٧٩٩	١٥٠٥٥	١٦٧٥٩
	حجم الاسرة (فرد / اسرة)	٥.٥٩	٥.١٧	٤.٩٢	٤.٧١	٤.٥
	السكان المضاف فى كل مرحلة (نسمة)			١٥١٨	١٢٥٦	١٢٠٤
	الاسر المضافة فى كل مرحلة (اسرة)			٣٠٩	٢٦٧	٢٦٧
	اجمالى الاسر المضاف مابين ٢٠٠٦م/٢٠٢٢م (اسرة)					٨٤٣
	اجمالى السكان المضاف مابين ٢٠٠٦م / ٢٠٢٢م (نسمة)					٣٩٧٨

تحتاج الكتلة العمرانية الرئيسية للقرية الى توفير حوالى ٨٤٣ وحدة سكنية جديدة لاستيعاب الزيادة السكانية حتى عام ٢٠٢٢م

نتائج دراسة الطاقة الاستيعابية للقرية

الطاقة الاستيعابية للقرية	عدد السكان المضاف (نسمة)	متوسط حجم الاسرة خلال مئوات الهدف (نسمة / اسرة)	عدد الأسر المضافة (اسرة)
الاستفادة من الأراضى الفضاء	٥٥٨	٤.٩٢	١١٣
التكثيف الرأسى للمبانى السكنية الجيدة والمتوسطة	١٧٥٥	٤.٩٢	٣٥٧
الاحلال والتجديد للمبانى السكنية المتدهورة	٥٣٥	٤.٩٢	١٠٩
الاجمالى	٢٨٤٨	٤.٩٢	٥٧٩

النتيجة : الطاقة الاستيعابية للقرية تستوعب عدد من السكان يقل عن الزيادة السكانية المتوقعة للقرية بنحو ١١٣٠ نسمة وبالتالى تحتاج القرية الى اضافة أراضى بمساحة ٤.٥٢ فدان بكثافة ٢٥٠ نسمة / فدان

قضايا العمران واولويات التنمية

تحليل الدراسات العمرانية والخدمات

نقاط القوى Strengths

- وجود خدمات متعددة بالقرية لخدمة سكان القرية والقرى والعزب التابعة
- توجد متابعة حالية للحد من التعديات على الأراضى الزراعية
- العمران الحالى يمكن أن يستوعب الزيادة السكانية حتى عام ٢٠٢٢م لسكان القرية
- نسبة كبيرة من المبانى الجيدة والمتوسطة ترتفع مابين دور واحد الى دورين
- المبانى المتدهورة بالقرية تبلغ ١٧.٤ % من اجمالى المبانى بالقرية
- الملكية الخاصة هى الغالبة مما ينعكس ايجابياً على صيانة المبانى فى حالة تقنين اوضاع عمران القرية
- الثروة العقارية بالقرية يمكن أن تحقق دخل سنوى للعوائد يقدر بنحو ٦٠ ألف جنيه يمكن أن توجه لبرامج التنمية بالقرية
- وجود متخللات وجيوب زراعية وأراضى فضاء بالكتلة العمرانية الرئيسية بالقرية بمساحة ٧.٨٧ فدان يمكن الاستفادة منها فى الاسكان ومشروعات خدمية وانتاجية بالقرية

نقاط الضعف Weakness

- عدم وجود مخطط معتمد للقرية يحدد حدود القرية والاستعمالات ومناطق الأنشطة الاقتصادية
- طول فترة التقاضى والبراءة من المحكمة الدستورية لبعض حالات التعديات
- صعوبة وضع خط تنظيم لتوسعة الطرق الضيقة بالقرية حيث المبانى الجيدة والمتوسطة تنتشر بجميع اتجاه القرية والمتوقع أن يصل عمرها الافتراضى لنحو ١٠٠ عام
- نواة القرية شوارعها ضيقة ومتعرجة يؤدى الى صعوبة حركة سيارات الطوارئ أو الاطفاء بها
- وجود المستشفى المركزى والمجموعة الصحية بنقصها العديد من التخصصات أو ادوية ، وأمراض الكبد والفشل الكلوى منتشرة بين اهالى القرية ولا يوجد تأمين صحى للعمالة الزراعية
- كثافات فصول التعليم مرتفعة وعدم كفاءة القائمين على العملية التعليمية أدى الى انتشار الدروس الخصوصية
- مركز الشباب يحتاج الى ملعب
- لاتوجد خدمات ثقافية بالقرية
- لاتوجد نقطة شرطة
- لاتوجد وحدة بيطرية

مكامن المخاطر Threats

- التباطؤ فى تقنين العمران القائم وفى اعتماد حيز عمرانى للوضع الراهن سيؤدى الى مزيد من التعديات على الأراضى الزراعية
- التعدى على الأراضى الزراعية فى العطلات الرسمية أو اثناء الانتخابات
- الطرق بالنواة الرئيسية للقرية مازالت ضيقة متعرجة يصعب وصول سيارات الاطفاء اليها
- تخزين المخلفات فوق أسطح المبانى يعوضها لأخطار الحريق

مكامن الفرص Opportunities

- امكانية تقنين العمران الحالى بالقرية فى ضوء السياسات العمرانية الحالية بالدولة
- المبانى السكنية المتدهورة تمثل نحو ٢٧.٤% من اجمالى المبانى السكنية بالقرية يمكن الاستفادة منها فى عملية الاحلال والتجديد واستيعاب السكان حتى سنة الهدف
- ٨٤.٤% من المبانى السكنية ترتفع مابين دور واحد الى دورين

خصائص السكان والمجتمع والعمل الاجتماعى واولويات التنمية

الخصائص الديموجرافية – الوضع الراهن

١ – التطور العددى للسكان

(نسمة)	١٩٧٦م	%	١٩٨٦م	%	١٩٩٦م	%	٢٠٠٥م	%
الكتلة الرئيسية	٥٨٦٥	٤٧	٧٨٦٣	٤٦	٩٨٦٤	٤٥.٣	١١٩٩٩	٤٥.٣
الحزب التابعة	٦٦٠١	٥٣	٩٢٧٤	٥٤	١١٩٠٩	٥٤.٧	١٤٤٨٩	٥٤.٧
اجمالى القرية	١٢٤٦٦	١٠٠	١٧٠٨٧	١٠٠	٢١٧٧٣	١٠٠	٢٦٤٨٨	١٠٠

٢ – معدل النمو السكانى السنوى وعدد السكان الحالى والمتوقع حتى عام ٢٠٢٢م (نسمة)

السكان عام ١٩٩٦	السكان عام ٢٠٠٥م	معدل النمو ١٩٩٦/٢٠٠٥م	السكان عام ٢٠٠٦م	معدل النمو ٢٠٠٥/٢٠٠٦م	السكان عام ٢٠١٢م	معدل النمو ٢٠٠٦/٢٠١٢م	السكان عام ٢٠١٧م	معدل النمو ٢٠١٢/٢٠١٧م	السكان عام ٢٠٢٢م	معدل النمو ٢٠١٧/٢٠٢٢م
٢١٧٧٣	٢٦٤٨٨	٢.٤	٢٧١١٠	٢.٣٥	٣٠٤٦١	٢.٠٦	٣٣٢٣٣	١.٨٢	٣٥٨٩٢	١.٦

%	٧٦/١٩٨٦م	٨٦/١٩٩٦م	٩٦/٢٠٠٥م
الكتلة الرئيسية	٣.٤	٢.٥	٢.٤
الحزب التابعة	٤	٢.٩	٢.٤
اجمالى القرية	٣.٧	٢.٧	٢.٤

٣ – حجم الاسرة ومعدل التزاحم

يبلغ متوسط حجم الاسرة بالقرية ٥.٥٩ فرد / اسرة ، ويبلغ متوسط معدل التزاحم ١.٢١ فرد/غرفة ، ويعتبر حجم الاسرة مرتفع و معدل التزاحم متقارب بالنسبة للعديد من القرى والمدن فى مصر

٤ – النسبة المئوية للمواليد مقارنة بعدد السكان الاجمالى للقرية

انخفاض النسبة المئوية للمواليد بالنسبة لعدد السكان الاجمالى من ٣٢% الى ٢٨% خلال السنوات مابين ١٩٨٦م / ١٩٩٦م

٥ – عدد السكان الحالى والمتوقع حتى عام ٢٠٢٢م

مكونات القرية (نسمة)	السكان عام ١٩٩٦م	الأهمية النسبية %	السكان عام ٢٠٠٦م	السكان عام ٢٠١٢م	السكان عام ٢٠١٧م	السكان عام ٢٠٢٢م
الكتلة الرئيسية	٩٨٦٤	٤٥.٣ %	١٢٢٨١	١٣٧٩٩	١٥٠٥٥	١٦٢٥٩
الحزب التابعة	١١٩٠٩	٥٤.٧ %	١٤٨٢٩	١٦٦٦٢	١٨١٧٨	١٩٦٣٣
الجملة	٢١٧٧٣	%١٠٠	٢٧١١٠	٣٠٤٦١	٣٣٢٣٣	٣٥٨٩٢

خصائص السكان والمجتمع والعمل الاجتماعى واولويات التنمية

الظواهر والسمات الاجتماعية – الوضع الراهن

١ – البطالة

إنخفاض النسبة المئوية للبطالة مابين ٧.٥% الى ١٢.١% الى ٤.١% خلال السنوات مابين ٧٦/٨٦/١٩٩٦م

٢ – الامية

انخفاض النسبة المئوية للامية (لشريحة السكان العمرية فوق ١٠ سنوات) من ٧١.٦% الى ٦٣% الى ٤٨.٥% خلال السنوات مابين ٧٦/٨٦/١٩٩٦م

٣ – مساهمة المرأة فى النشاط الاقتصادى

ارتفاع النسبة المئوية لمساهمة المرأة فى النشاط الاقتصادى من ٢.٢% الى ٢.٧% الى ٤.١% خلال السنوات مابين ٧٦/٨٦/١٩٩٦م

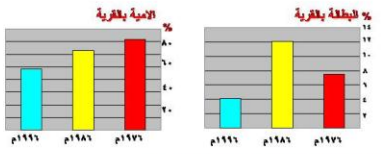
٤ – العمل الاجتماعى

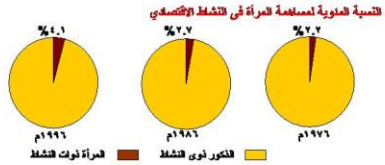
توجد ادارة للشئون الاجتماعية بالقرية ويعض من لجان الزكاة والبر والجهود الذاتية وجمعية تنمية المجتمع وجمعية خدمات اجتماعية – النسبة الغالبة من السكان محرومة من التأمين الاجتماعى والصحى – القروض الاجتماعية شحاتاتها صعبة وفوائدها المركبة مرتفعة

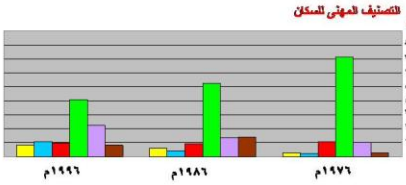
٥ – التصنيف المهنى للسكان

المهن الرئيسية	١٩٧٦م	%	١٩٨٦م	%	١٩٩٦م	%
اصحاب المهن العلمية	٧٧	٢.٦	٢٦٧	٦.٣	٤٦٠	٨.٢
الاعمال المكتبية والاخصائيون	٧٥	٢.٥	١٦٩	٤	٦٠٥	١٠.٧
البيع والخدمات	٣٢١	١٠.٦	٣٩٥	٩.٤	٥٤١	٩.٦
المزارعون	٢١٥٩	٧١.٢	٢٧٢٠	٥٢.٦	٢٣١٢	٤٠.٩
الحرفيون	٣١٤	١٠.٣	٥٧٦	١٣.٧	١٢٥٧	٢٢.٣
المهن المكتبية والمشابهة	٨٥	٢.٨	٥٩٠	١٤	٤٦٦	٨.٣
اجمالى ذوى المهن	٣٠٣١	١٠٠	٤٢١٧	١٠٠	٥٦٤١	١٠٠

• مجتمع القرية فى مرحلة التحول من المجتمع الريفى الى المجتمع الحضرى







خصائص السكان والمجتمع والعمل الاجتماعى واولويات التنمية

تحليل الدراسات السكانية والاجتماعية

نقاط القوى Strengths

- انخفاض النسبة المئوية للمواليد مقارنة بعدد السكان الاجمالى للقرية
- انخفاض النسبة المئوية للاصابة بين الذكور والاناث على السواء لشرائح السكان العمرية مابين ٦ سنوات الى ٣٠ عاماً
- ارتفاع عددى ونسبى لمساهمة المرأة فى النشاط الاقتصادى
- ارتفاع عددى ونسبى للسكان التى تحترف المهن الحرفية
- وجود ادارة للشئون الاجتماعية وجمعية تنمية المجتمع والجمعية الشرعية والعديد من لجان الزكاة والبر يمكن أن تساهم فى التنمية الاجتماعية بالقرية فى حالة تحفيز السكان على العمل الاجتماعى
- لاتوجد معوقات لتأسيس جمعيات أهلية
- انخفاض نسبة الامية
- يوجد دعم يحصل عليه الفقراء من وحدة الشئون الاجتماعية وبنك ناصر
- انخفاض النسبة المئوية للبطالة ٤.١ %

نقاط الضعف Weakness

- عدم وجود بيانات دقيقة بالوحدة المحلية لرصد المتغيرات السكانية والاجتماعية أوتحديث البيانات بالقرية وبخاصة لنسبة البطالة
- النسبة المئوية للمواليد مازالت مرتفعة
- متوسط عدد افراد الاسرة مرتفع
- ارتفاع عددى ونسبى للسكان خريجو التعليم العام والمتوسط ليس لديهم مهارة حرفية وبالتالى ترتفع نسبة البطالة بينهم
- النسبة الغالبة من السكان وبخاصة العمالة الزراعية محرومة من التأمين الصحى والتأمين الاجتماعى
- لاتوجد برامج منتظمة بالوحدة المحلية أو بالمؤسسات المدنية لتوفير فرص العمل والحد من البطالة
- القروض الاجتماعية ضماناتها صعبة
- موارد الجمعيات الأهلية محدودة وضعيفة لاتساعد على التنمية الاجتماعية

مكامن المخاطر Threats

- الانخفاض المتزايد العددى والنسبى للسكان التى تحترف مهنة الزراعة خلال سنوات التعداد ١٩٩٦/٨٦م
- تأخر سن الزواج للشباب
- الفلاح المسئول عن توفير الأمن الغذائى لمصر والأكثر تعرضاً للأمراض محروم من نظام التأمين الصحى

مكامن الفرص Opportunities

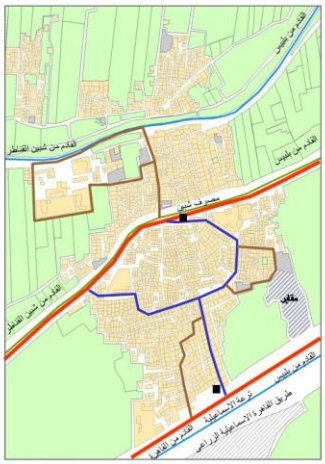
- زيادة الوعى لأهمية التعليم بين الذكور والاناث على السواء لشريحة السكان العمرية الاصغر من ٣٠ عاما مما يساهم فى نجاح برامج التنمية بالقرية
- خروج المرأة للعمل وارتفاع النسبة المئوية لمساهمة المرأة فى النشاط الاقتصادى
- وجود مؤسسات اجتماعية ولمكانية تأسيس جمعيات أهلية لتحفيز العمل الاجتماعى بالقرية

العرض الأول لاجتماع شركاء التنمية لقرية الزوامل

القضايا الاجتماعية الرئيسية والمشروعات

القضايا	الأهداف	بدائل الأنشطة والمشروعات ذات الأولوية	نوع النشاط	التكلفة التقديرية	المساهمة	الأولوية
العمل الاجتماعى	تفعيل وتحفيز السكان على العمل الاجتماعى	ندوات بوحدة الشئون الاجتماعية وجمعية تنمية المجتمع لتوعية السكان بأهمية العمل الاجتماعى	اجرائى	اجرائى	الشئون الاجتماعية	١
		تأسيس جمعيات أهلية	اجرائى	اجرائى	الشئون الاجتماعية	٢
القروض الاجتماعية	تسهيل الحصول على قروض مشروعات انتاجية	تكوين صندوق تنمية القرية يدعم الشباب بالقروض بضمان المشروعات	اجرائى	اجرائى	وزارة التنمية المحلية	٣
		تسهيل اجراءات القروض والضمانات ببنك ناصر الاجتماعى وأن يكون الضمان هو المشروع ذاته	اجرائى	اجرائى	الشئون الاجتماعية	٤
البطالة	توفير فرص عمل	مصنع مربى	اقتصادى	٢٥٠ ألف جنيه	خاص	٥
		مصنع عصائر	اقتصادى	٢٥٠ ألف جنيه	خاص	٦
		مصنع اخشاب	اقتصادى	٢٠٠ ألف جنيه	خاص	٧
		مصنع منتجات ألبان	اقتصادى	٢٥٠ ألف جنيه	خاص	٨
		ثلاجة حفظ منتجات زراعية	اقتصادى	٢٥٠ ألف جنيه	خاص	٩
		مجمع ورش ومشاغل فنيات ومركز تسويق	اقتصادى	٢٠٠ ألف جنيه	صندوق القرية	١٠
		مشروع تسمين مواشى	اقتصادى	١٥٠ ألف جنيه	خاص	١١
		مصنع تجفيف فواكه	اقتصادى	١٠٠ ألف جنيه	صندوق القرية	١٢
		شراء آلات زراعية	اقتصادى	١٠٠ ألف جنيه	صندوق القرية	١٣
الامية	القضاء على الأمية	التوسع فى برامج محو الأمية	اجرائى	تطوعى	الشئون الاجتماعية	١٤
الفقر والمرأة المعيلة	توفير فرص عمل مدعمة	مركز تدريب مهنى	اجتماعى	٥٠ ألف جنيه	صندوق القرية	١٥
		مشروعات اسر منتجة	اجتماعى	الف جنيه لكل مشروع	صندوق القرية	١٦
		مركز تسويق مشروعات الاسر المنتجة	اجتماعى	٥٠ ألف جنيه	صندوق القرية	١٧

قضايا البيئة والبنية الأساسية واولويات التنمية
شبكة الطرق



طريق اقليمي ثانوي عرض من ٦ الى ٨ متر مرصوف
طريق رئيسي عرض من ٤ الى ٦ متر مرصوف
طريق ثانوي ٤,٠٠ متر مرصوف
طريق محلي اقل من ٤,٠٠ متر ترابي
موقف عشوائي للنقل الجماعي

الوضع الراهن لشبكة الطرق بالقرية

- يمر بالقرية الطريق الاقليمي القاهرة الاسماعيلية الزراعي بعرض ١٠ متر والطريق مرصوف وحالة الرصف عليه متوسطة
- كما يمر بالقرية الطريق الاقليمي الثانوي بلبيس – شبين القناطر وهو طريق مرصوف بعرض ٦ متر وحالة الرصف عليه متوسطة
- الطرق الرئيسية الداخلية بالقرية مرصوفة وحالة الرصف عليها متوسطة تتراوح عروضها مابين ٤ الى ٦ متر
- الطرق الثانوية عرض ٤ متر ترابية
- الطرق المحلية اقل من ٤ متر عرض ترابية متعرجة تصعب فيها الحركة الآلية
- وجود انتظار عشوائى لسيارات الاجرة والميكروباص وسط وجنوب القرية

قضايا البيئة والبنية الأساسية واولويات التنمية
المياه والصرف الصحى والطاقة الكهربائية والاتصالات

الوضع الراهن

التغذية بالمياه

- تعتمد القرية على التغذية بمياه الشرب من محطة مياه جوفية بالقرية بطاقة ١٥٠٠ م٣/يوم ويوجد بالقرية خزان علوى ومحطة رفع مياه وتوجد شبكة قائمها مرفق المياه والوحدة المحلية وبعضها قائمها الاهالى بالجهود الذاتية ويتصل بالشبكة نحو ٤٨٨٠ مشترك بالقرية
- متوسط الاستهلاك يتراوح مابين ٤٥ الى ٦٠ لتر / نسمة/يوم بما يعادل ١٣٥٥ م٣ يوم عام ٢٠٠٥م وشبكة المواسير بأقطار ٨ ، ٦ ، ٤ ، ٢ بوصة بحالة جيدة ومتوسطة وبعضها متهالك وتخدم كل انحاء القرية والمياه ضعيفة ودائمة الانقطاع وملوثة لعدم صيانة الخزان ولأن الأعماق غير كافية

الصرف الصحى

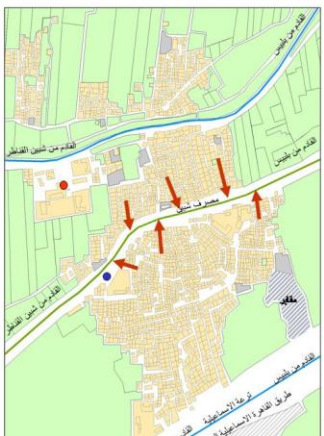
- لا يوجد بالقرية شبكة صرف صحى بالانحدار أومحطة رفع أومحطة معالجة
- تغطى القرية شبكة صرف صحى قائمها الاهالى بالجهود الذاتية وبعضها بمعرفة الوحدة المحلية بأقطار من ٤-٨ بوصة بأجمالى أطول حوالى ٢٨ كم وتنتهى الشبكة بمصرف شبين مما يسبب العديد من المشاكل البيئية والتلوث بالقرية ، وتقدر كمية الصرف الغير صحى التى تنتهى بالمصرف بنحو ٤٣٠م٣/ يوم بمتوسط ٣٥ لتر / نسمة يومياً وذلك لسكان الكتلة الرئيسية للقرية فقط.

الكهرباء

- القرية متصلة بشبكة الكهرباء عن طريق خط هوائى قائم من محطة محولات بلبيس الرئيسية ، ويوجد بالقرية عدد ١٢ محول بقدرة اجمالية ٣٤٠٠ (ك.ف.أ) ويبلغ عدد المشتركين بالشبكة ٤٨٧٩ اشتراك منزلى و تجاريوحرفى وخدمى ويبلغ متوسط استهلاك الفرد ١٢٠ ك.و.س/ سنوياً

الاتصالات

- ايوجد بالقرية سنترال ويبلغ عدد المشتركين ٢٧١١ مشترك منزلى و غير منزلى، وتبلغ الكثافة التليفونية بالقرية ١٠ خط / ١٠٠نسمة وتعتبر متساوية بالنسبة لمتوسط الجمهورية البالغ ١٠ خط / ١٠٠ نسمة ويوجد مكتب خدمات بريدية حكومى بالقرية

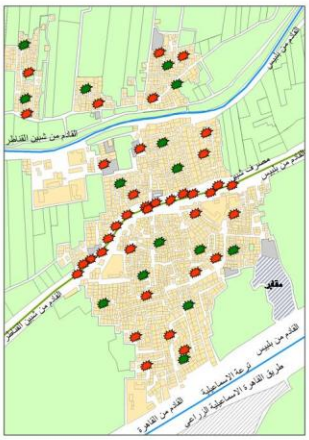


محطة مياه ارتوازية وخزان المياه
شبكة لصرف الصحى بالجهود الذاتية وعشوائية تنتهى بالمصرف الزراعى يتسبب تلوث شديد بالقرية
السنترال
زراعى
ترعة
مصرف

الاحتياج الحالى و المستقبلى

- * تحتاج القرية الى انشاء مشروع صرف صحى متكامل يشمل شبكة بالانحدار ومحطة رفع ومحطة معالجة بطاقة تحقق متوسط استهلاك ٩٠ لتر / نسمة يومياً
- * تحتاج القرية الى زيادة اعماق محطة مياه الشرب الارتوازية وتطهير المياه وانشاء خزان علوى اضافى ومرقبة سلامة المياه ولحلال وتجديد الشبكة الحالية وزيادة نصيب الفرد من المياه النقية ليصل الى ١١٥ لتر يومياً
- لحلال وتجديد شبكة الكهرباء المتهالكة ونقل الكابلات الهوائية المكشوفة منها ، وتحقيق المسافات الآمنة بين الشبكة الهوائية والمبانى بالقرية وزيادة المحولات والاكشاك لرفع نصيب الفرد الى ٥٠٠ (ك.و.س) سنوياً حتى سنة الهدف ٢٠٢٢م
- تحتاج القرية الى توسعة السنترال لرفع الكثافة التليفونية الى ١٧ خط / ١٠٠ نسمة وهو الهدف القومى حتى عام ٢٠٢٢م

قضايا البيئة والبنية الأساسية واولويات التنمية
القمامة والمخلفات الزراعية



الوضع الراهن

- توجد شركة تجميع قمامة بجمعية الخدمات الاجتماعية
- نسبة كبيرة من سكان القرية غير مشتركة بمشروع القمامة
- يمر بالقرية ترعة الاسماعيلية ومصرف شبين
- نوع التربة السائد بالقرية التربة الطينية الطمية

المشاكل البيئية بالقرية

- تلوث المجاري المائية (ترع ومصارف) لالقاء القمامة والحيوانات النافقة بها
- عدم اشتراك العديد من الأهالى بمشروع القمامة وعدم انتظام شركة تجميع القمامة أدى الى انتشار القمامة بالشوارع وبالترع والمصارف
- تدهور البيئة الصرفية بقلب القرية
- تربية المواشى بالطرق الداخلية وعلى الأرصفة وانتشار الروث بالقرية
- تلوث الهواء أحياناً نظراً لحرق بعض من المخلفات الزراعية وحرق القمامة كلما تزداد تراكمها
- انتشار الذباب والباعوض والفئران نتيجة للقمامة وتلوث الترع والمصارف
- تخزين المخلفات فوق أسطح المبانى أو بجوار المساكن يمكن أن يؤدى الى كارثة فى حالة نشوب حريق

الاحتياج الحالى والمستقبلى

تحتاج القرية الى توعية السكان للاشتراك فى مشروع جمع القمامة وتدعيم مشروع نقل القمامة بجرار وصناديق تجميع القمامة وتطهير الترع والمصارف والارتقاء بالبيئة العمرانية بالنواة الرئيسية للقرية وانشاء مخازن وشون لتجميع المخلفات الزراعية

تخزين المخلفات فوق أسطح المبانى يؤدى الى كارثة عند حدوث حريق

انتشار القمامة بالطرق الداخلية

القمامة منتشرة بكافة بالأراضى الفضاء وبالترع والمصارف

قضايا البيئة والبنية الأساسية واولويات التنمية

تحليل الدراسات البيئية والبنية الأساسية

نقاط القوى Strengths	نقاط الضعف Weakness	مكامن المخاطر Threats
❑ وجود محطة مياه ارتوازية وشبكة مياه وخزان مياه علوى ❑ وجود شبكة للتغذية بالطاقة الكهربائية ❑ وجود مشروع لتجميع القمامة بالقرية عن طريق جمعية خدمات المجتمع ❑ اتصال القرية بشكل جيد بشبكة الطرق الاقليمية ❑ قيام الوحدة المحلية برصف مداخل القرية والطرق الرئيسية وبعض من الطرق الثانوية ❑ وجود سنترال بالقرية ومكتب بريد وتصالات ❑ ارتباط القرية بشبكة المواصلات الاقليمية بالاقليم	❑ عدم وجود نظام متكامل للصرف الصحى ❑ الاعتماد بمحطة المياه الارتوازية غير كافية تسبب تلوث المياه ❑ شبكة الكهرباء والمحولات ضعيفة والتحميل الزائد يؤدى الى هبوط مستوى الجهد وانقطاع مستمر للتيار والشبكة لاتتحمل اعباء اضافية ❑ عدم اشتراك نسبة كبيرة من أهالى القرية بمشروع تجميع القمامة ❑ لا توجد موارد كافية لجمعية خدمة المجتمع للمساهمة فى الحد من التلوث	❑ عدم وجود محطة رفع أو معالجة أدى الى القاء الصرف الآدمى بالمصرف مما يسبب تلوث بيئى شديد ❑ اعماق محطة المياه الجوفية غير كافية يؤدى الى تلوث المياه ❑ انتشار القمامة على جانبى المصرف يؤدى الى انتشار الأمراض بالقرية

مكامن الفرص Opportunities

❑ وجود محطة معالجة بقرية انشاص غرب قرية الزوامل يمكن توصيل القرية عليها
❑ امكانية تكوين صندوق تنمية القرية يساهم فى مشروعات البنية الأساسية بالقرية

العرض الأول لاجتماع شركاء التنمية لقرية الزوامل
قضايا البيئة والبنية الأساسية الرئيسية والمشروعات

القضايا	الأهداف	بدائل الأنشطة والمشروعات ذات الأولوية	نوع النشاط	التكلفة التقديرية	المساهمة	الأولوية
تلوث البيئة	التخلص من القمامة	تدعيم مشروع التجميع والتخلص من القمامة بالمحات	بيئى	١٠٠ ألف جنيه	صندوق القرية	١
	التخلص من المخلفات الزراعية	شراء مكبس لكبس المخلفات الزراعية وتوفير مخزن مركزى على مستوى القرية	بيئى	١٠٠ ألف جنيه	خاص	٢
مياه الشرب	توفير مياه الشرب بالقرية	زيادة الاعماق بمحطة المياه الارتوازية بالقرية	بنية أساسية	١٠٠ ألف جنيه	وزارة الاسكان	٣
		احلال وتجديد بعض من خطوط شبكة المياه المتهلكة	بنية أساسية	٢٥ ألف جنيه	وزارة الاسكان	٤
الصرف الصحى	توفير خدمة الصرف الصحى بالقرية	انشاء شبكة صرف بالاحجار	بنية أساسية	٢٥٠ ألف جنيه	جهود ذاتية	٥
		انشاء محطة رفع وخط طرد وربطها بمحطة معالجة انشاص الرمل	بنية أساسية	٥٠٠ ألف جنيه	وزارة الاسكان	٦
الطرق والمواصلات	تطوير شبكة الطرق والمواصلات	اعادة رصف الطريق الاقليمى المار بالقرية وتزويده بالعلامات الارشادية	بنية أساسية	٢٥ ألف جنيه	وزارة الاسكان	٧
		رصف الطرق الداخلية للقرية	بنية أساسية	٦٠ ألف جنيه	وزارة الاسكان	٨
		انشاء ٣ محطة مواصلات جماعية	بنية أساسية	١٥ ألف جنيه	صندوق القرية	٩
الطاقة الكهربائية	تحقيق الأمن لأهالى القرية	احلال وتجديد بعض من الشبكة المتهلكة	بنية أساسية	٤٠ ألف جنيه	وزارة الكهرباء	١٠
		عزل الكابلات والاسلاك المكشوفة	بنية اساسية	٢٠ ألف جنيه	وزارة الكهرباء	١١
الاتصالات	توفير خدمة الاتصالات	توسعة منتزال للقرية	بنية أساسية	٥٠ ألف جنيه	وزارة الاتصالات	١٢

العرض الأول لاجتماع شركاء التنمية بالوحدة المحلية الزوامل
تصوير اللقاءات

جامعـــــة عين شمـــــس
كليـــــة الهندســـــة
قسـم التخطيـط العمرانـــي

المشاركة الشعبية في عملية التنمية العمرانية من خلال تكنولوجيا المعلومات و الاتصالات الحديثة

رسالة مقدمة الى قسم التخطيط العمراني – كلية الهندسة – جامعة عين شمس
كجزء من متطلبات الحصول على درجة الماجستير
في التخطيط العمراني

اعـــداد:
م/ هند مجدي محمد سامح

تحت اشراف:

أ.د عمر الحسيني
أستاذ و رئيس قسم التخطيط العمراني
كلية الهندسة – جامعة عين شمس

أ.د عمرو عبد العزيز عطية
أستاذ مساعد بقسم التخطيط العمراني
كلية الهندسة – جامعة عين شمس

٢٠١١

جامعـــــة عين شمـــــس
كليـــــة الهندســـــــة
قسـم التخطيـط العمرانـــي

الدرجة: ماجستير في الهندسة المعمارية – قسم التخطيط العمراني

إسم الباحثة: هند مجدي محمد سامح

عنوان الرسالة: المشاركة الشعبية في عملية التنمية العمرانية من خلال تكنولوجيا المعلومات و الاتصالات الحديثة

لجنة اللإشراف

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أ.د عمرو عبد العزيز عطية أستاذ مساعد بكلية الهندسة – جامعة عين شمس

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أ.د عمر محمد الحسيني عبد السلام أستاذ بكلية الهندسة – جامعة عين شمس

أ.د عمرو عبد العزيز عطية أستاذ مساعد بكلية الهندسة – جامعة عين شمس

تاريخ البحث: / /

الدراسات العليا

ختم الإجازة: / / أجيزت الرسالة بتاريخ: / /

موافقة مجلس الكلية موافقة مجلس الجامعة

إقـــــــــــــــــــرار

هذه الرسالة مقدمة إلى جامعة عين شمس للحصول على درجة الماجستير في الهندسة المعمارية – قسم التخطيط العمراني.

إن العمل الذي تحتويه الرسالة قد تم إجراؤه بمعرفة الباحث في قسم التخطيط العمراني بكلية الهندسة جامعة عين شمس في الفترة الواقعة بين ٢٠٠٠ – ٢٠١٠.

هذا و لم يقدم أي جزء من هذا البحث لنيل أي مؤهل أو درجة علمية لأي معهد علمي أخر.

و هذا إقـــــــرار مني بذلك.....

التوقيع:

الأسم: هند مجدي محمد سامح

التاريخ: / /

الملخـــــــــــــص

مقدمـــــــــــة

يتزامن الإنتهاء من هذه الرسالة بمرور العالم بأحداث جديدة من التغيير و الثورات الشعبية التي قام بها الشباب في جميع أنحاء مصرو العالم العربي من أجل الحرية.

و حيث كان الفتيل الذي أشعل شرارة الثورة في مصرهي مجموعة "كلنا خالد سعيد" علي أحد برامج المشاركة الإجتماعية علي الإنترنت "Facebook" والتي كان لها أكبر الأثر في حشد الشباب على إختلاف مستوياته و تنظيم ثورة ٢٥ يناير، مما يوضح الإمكانيات الكبيرة لهذه البرامج و القدرات الكامنة في حشد العديد من عموم الأفراد لمناقشة الأوضاع المختلفة و تنظيم حلول و إقتراحات لها على أرض الواقع.

و إذا كانت المشاركة الشعبية قد نجحت في إحداث التغيير في أحد أصعب المجالات تغييراً بل أكثرها إستحالة كالأوضاع السياسية في البلاد فإن ذلك يفتح المجال لأشكال جديدة و أساليب مبتكرة لإتاحة المعلومات المختلفة و تحسين التفاعل و التعاون الإجتماعي و الذي من شئنه زيادة نسبة المشاركة الشعبية في عمليات إتخاد القرارات و توسيع نطاقها لتشمل كافة المجالات الإجتماعية و العمرانية في المجتمع.

و حيث ان المشاركة الشعبية هي أحد أهم خطوات التخطيط العمراني الناجح و الخطوة الأولى على طريق الديمقراطية فإنها لا تقف عند حد إطلاع عموم السكان على المخططات و المشاريع بل تتعدى ذلك إلى محاولة تسهيل و تبسيط الأفكار التخطيطية لغير المتخصصين لتمكينهم من فهم المخطط بل و إبداء أرائهم فيه.

و من هنا ظهرت أهمية إستحداث الوسائل مثل الرسومات الثلاثية الأبعاد و الحقيقة الإفتراضية Virtual Reality لإيجاد لغة مشتركة بين شركاء التنمية المتخصصين و غير المتخصصين.

و عليه فإن هذه الدراسة تفترض أن إبتكار آساليب جديدة ووسائل مبتكرة في تكنولوجيا المعلومات تؤدي الى تحسين التفاعل و التعاون الإجتماعي و الذي من شئنه زيادة نسبة المشاركة الشعبية في عمليات إتخاد القرارات و توسيع نطاقها لتشمل كافة أفراد المجتمع على إختلاف مستوياته مما يؤدي إلي حتمية الوصول لقرارات أكثر توافقاً و موائمة لإحتياجات المجتمع و حلول أكثر شمولاً و إيجابية.

الهـــــدف

تهدف الرسالة الي ما يلي:

١. التعرف على المفاهيم المختلفة للمشاركة الشعبية و المستويات المتعددة لها.

٢. إستعراض ثورة تكنولوجيا المعلومات و ما تتيحه من آساليب ووسائل مبتكرة يمكن الإستفادة منها في المراحل المختلفة لعملية المشاركة الشعبية في التنمية العمرانية، كذلك التعرف على المعوقات التي تواجهها و مدى إمكانية التغلب عليها.

٣. التعرف على النماذج الإيجابية لتنظيم برامج المشاركة الشعبية في التنمية العمرانية والدروس المستفادة من التطبيقات العالمية الناجحة، كذلك إستعراض طرق مختلفة لتقييم مدى نجاح التجربة و تحديد أوجه القصورأو النجاح بها.

٤. إستعراض مستوى التكنولوجيا في مصر و الخطة القومية للنهوض بمستوى التكنولوجيا. كذلك التركيز على العالم العربي و الدول الأفريقية و بيان التفاوت الكبير فيما بينهم و الجهود الرائدة في هذا المجال.

٥. تقييم تجربة المشاركة الشعبية في مشروع المخطط الإستراتيجي للقرى المصرية و بالأخص قرية الزوامل، مركز بلبيس، محافظة الشرقية، لبيان مدى نجاح التجربة، و من ثم دراسة مدى إمكانية إستخدام الوسائل الحديثة و تطبيقها لرفع كفائة المشاركة و التغلب على مواطن الضعف و القصوربها بها.

٦. الخروج بالنتائج و التوصيات للأبحاث المستقبلية.

منهـــجية البحـــث

و لتحقيق أهداف البحث، تتبع الدراسة المنهجية التالية:

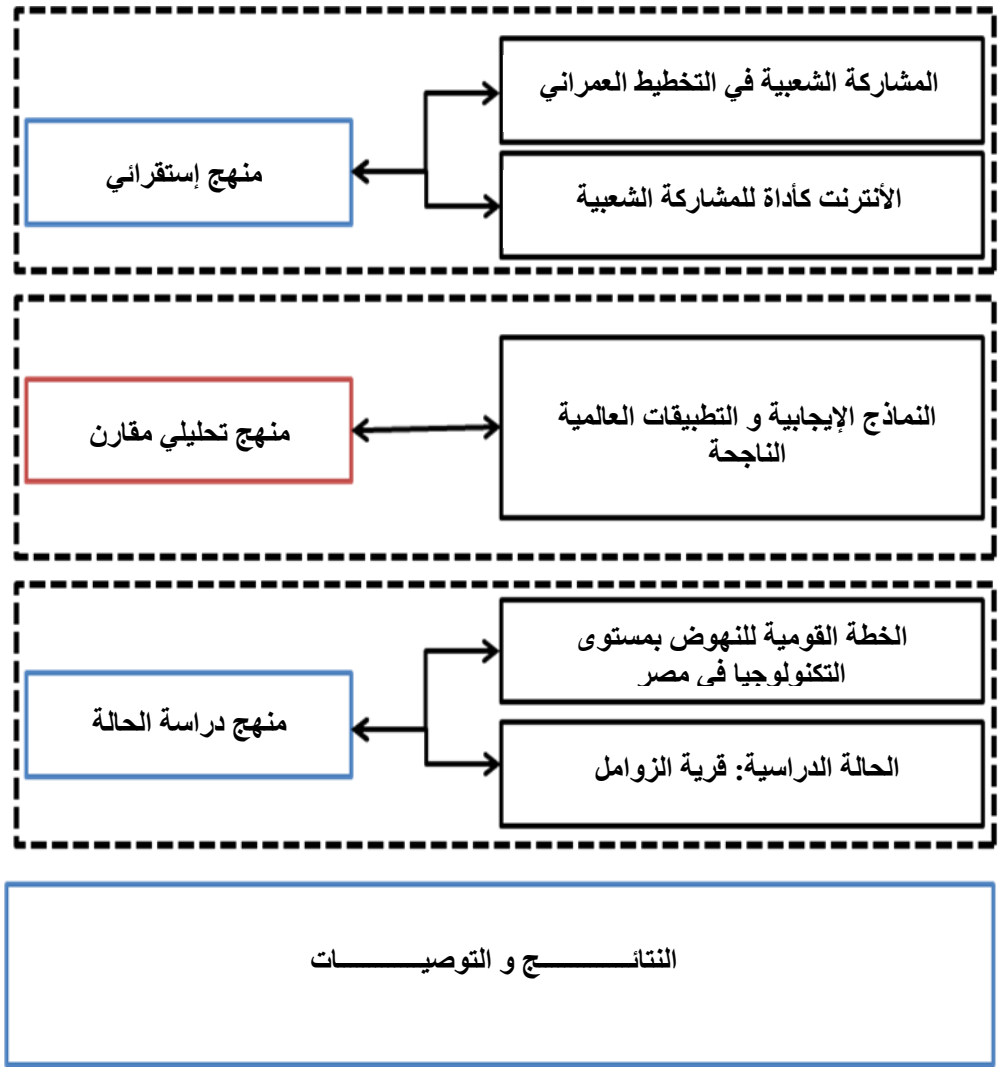
منهج إستقرائي يمكن من خلاله التعرف على أساليب ومستويات الشراكة ، وذلك من خلال الإستعانة بعدد من المراجع التي تتعلق بهذا الموضوع من الناحية النظرية، بالإضافة إلى تقارير تعرضت لتجارب الدول المختلفة في هذا الشأن.

منهج تحليلي مقارن يتم من خلاله شرح وبيان أسس وأهداف عملية الشراكة، ويوضح الاختلافات بين كل أسلوب والآخر، والتي قد تفيد عند إتخاذ القرار وإختيار أسلوب الشراكة مع المجتمع المحلي.

منهج دراسة الحالة: حيث أخذ البحث قرية الزوامل كحالة دراسية.

هيكـــل الدراســـــة

و قد تم وضع هيكل الرسالة علي الوجه التالي:



البـــــاب الأول:

و فيه يتم التعريف بالأهداف الأساسية للمشاركة الشعبية في عملية التنمية العمرانية و إستعراض الطرق المختلفة لتحقيق ذلك. كذلك يعرض الوسائل و الأساليب التقليدية المستخدمة و يعمل على تقييمها وتحديد أوجه القصور بها.

البـــــاب الثانـــي:

و يتم فيه إستعراض أهم نتائج ثورة المعلومات و الإتصالات في كافة المجالات و ظهور مصطلحات ومفاهيم جديدة أصبحت جزء من الحياة اليومية للمجتمعات، ففي مجال الاقتصاد كانت التجارة الإلكترونية والأعمال الإلكترونية، والنقود الإلكترونية ، وفي مجال الإتصالات كان البريد الإلكتروني والتعليم الإلكتروني والجامعة الإلكترونية، وفي المجال الحكومي كانت الحكومة الإلكترونية. هذا بالاضافة الى ظهور جيل جديد من المواقع الإلكترونية على شبكة الويب تتيح نسب عالية من المشاركات بين أفراد المجتمع على إختلاف مستوياتهم الإجتماعية و الثقافية مثل ال Facebook و Second Life.

كما يعرض هذا الباب المعوقات المختلفة و سبل التغلب عليها و الإمكانيات المستقبلية لتوسيع نطاق إستخدام التطور التقني الهائل في سبل الاتصال وانتقال المعلومات.

يتم عرض الوسائل الحديثة و الأساليب المبتكرة الحالية و المستقبلية التي تتيحها شبكة المعلومات و الإتصالات لرفع كفاءة المشاركة الشعبية.

كذلك يتم إستعراض أحد النمادج الحديثة التى تم إستخدام الحقيقة الإفتراضية بها Virtual Reality و إستخدام أحد أهم المواقع الإكترونية وأكثرها إنتشاراً The Second Life لعمل مشروع حضاري مشترك بين طلبة و طالبات قسم التخطيط العمراني بجامعة عين شمس و نظرائهم بجامعة بأمريكا.

البـــــاب الثالـــث:

وضع منهجية للمشاركة الشعبية قابلة للتطبيق في المشاريع المختلفة كذلك التعرف على النماذج الإيجابية لتنظيم برامج المشاركة الشعبية في التنمية العمرانية والدروس المستفادة من التطبيقات العالمية الناجحة، كذلك إستعراض طرق مختلفة لتقييم مدى نجاح التجربة و تحديد أوجه القصورأو النجاح بها.

البـــــاب الرابـــع:

في هذا الباب يتم دراسة مستوى التكنولوجيا في الدول النامية وإستعراض التفاوت الجسيم فيما بينهم و أهمية التركيز على التواصل الشخصي في هذه المجتمعات. كذلك تستعرض الدراسة الأوضاع التكنولوجية في الدول العربية و الدول الأفريقية على وجه التحديد.

كذلك تعرض الدراسة الخطة القومية الأولى للإتصالات وتكنولوجيا المعلومات بمصر و توضح الجهود المكثفة التي تبذلها الحكومة المصرية لتحرير قطاع الإتصالات وتطويره وجعله على قائمة أولوياتها لضمان توفير خدمات الاتصالات وتكنولوجيا المعلومات لجميع أفراد المجتمع– (المواطنون والحكومة ومقدمو الخدمات وموفروها) – على نحو يتسم بالإستمرار والأمان وقلة التكلفة بجميع قطاعات المجتمع.

علاوة على ذلك، تهدف الوزارة لتحويل مصر إلى مركز لتكنولوجيا المعلومات والإتصالات معترف به عالميًا يؤمه الناظر إلى أفريقيا والشرق الأوسط، وذلك لتوفير خدمات التقارب التكاملية في أحدث صورها لأبناء مصر والشركات، وكذا تصدير الخدمات التقاربية التكاملية إلى الدول المجاورة.

الباب الخامـــــس:

حيث أن الريف هو العمود الفقري للمجتمع المصري، وهو الأصل الذي تكونت منه حضارة مصر على مدار السنين، ويشكل الجزء الأكبر من النسيج العمراني المصري، وقطاعاً من أكبر قطاعاته الاقتصادية والاجتماعية، وعنصر فعال في التطور الاجتماعي الاقتصادي لمصر، فهو المحور الرئيسي لأي مستقبل يمكن أن تصل إليه مصر في الألفية الثالثة، لذلك كان من المهم أن نتوجه لذلك الجزء بالدراسة.

وتتناول هذه الورقة البحثية أسلوب المشاركة الشعبية في إعداد المخطط الاستراتيجي للقرية المصرية من خلال تحليل لسمات وأهداف عملية المشاركة والوسائل المتبعة والمعوقات التي تواجهها بالأخص في قرية الزوامل بمحافظة الشرقية.

و تقوم الورقة البحثية بدراسة مدى إمكانية إستخدام الوسائل الحديثة و تطبيقها لرفع كفائة المشاركة بالقرية و التغلب على مواطن الضعف بها. وفي هذا الإطار نجد أن التطورات الحديثة في تكنولوجيا الأقمار الصناعية أسفرت عن انخفاض التكلفة وسرعة الاتصال مما يعني إمكانية الاستعانة بها في المناطق الريفية.

الباب السادس:

في هذا الباب يتم الخروج بنتائج الدراسة و الوصول الى بعض الإرشادات و التوجيهات للأبحاث القادمة.