

The history and rebirth of an industrial city: the case of Izhevsk, Russia

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1. Abstract

The research is exploring the journey of Izhevsk, the plant city, from living for hundreds of years as a military closed city, where people's regional and national identities were ignored, to the introduction of contemporary Izhevsk as a cultural and creative hub. Izhevsk as a city and active society decided to be open up to the whole world, through a remarkable efforts to establish national and international open conversation. At the present time Izhevsk is a fertile field and an attractive subject for developing a bottom up planning approach.

The research uses several methods: The first method is literature analysis of cultural, historical and economic parameters of the city, and the potentials of its active society, using expert articles, journals, interviews, presentations, workshop events, reports and books. The second method used is SWOT-analysis of economic, social, cultural and historical dimensions of Izhevsk.

Finally, the third method applied is the analysis of illustrative and visual materials, plans and maps.

By analysis of different projects and proposals for urban regeneration, conservation and creation of a new identity for the city of Izhevsk, the research came to the result of identifying and formulating the main tools proposed by an active society to reinvent their city. Studying the model of Izhevsk as a postindustrial city led to identifying a set of ideas, which can contribute to reinventing other postindustrial cities around the world. This model proves that once closed industrial cities, which were developed and controlled by traditional centralized policies, can be recreated and reinvented by the efforts and thoughts of their active societies.

2. Research theory and hypothesis

Through the study, deductive reasoning was applied. Initially, the research theory was presented that the city of Izhevsk requires a new identity and brand to support its revitalization and rebirth process. Moreover, the hypothesis of research was cited that the plant city identity of Izhevsk has declined. In consequence, the urban, economic and socio-cultural features of the city are degrading. Then, facts and details about Izhevsk were demonstrated. Thereafter, this data was analyzed using SWOT matrix, which led to the conclusion that rebranding Izhevsk shall be the catalyst for urban, socio-cultural and economic upgrading. Finally, recommendations were brought about to formulate an action plan to achieve the goal of subediting a new identity and brand for Izhevsk.

3. Methodology

The case study of Izhevsk has been viewed by the research through various windows. It was assumed that data and information collected from diverse sources lead to tackling the research issue from different points of view, which in consequence, would help in constructing a holistic original view.

The aim of the research was to investigate particular keywords, which are generally the plant-city model with focus on the specific case of Izhevsk. Due to the fact that initial research issues were comprehensive, a wide range of data were gathered about historical background, current situation and community efforts to reinvent a new identity and branding of Izhevsk. The literature was selectively gathered for their academic value, practical nature and the close relation of the authors to plant cities as a whole and Izhevsk as a concrete case study, which insures that their works are originally built on deep, theoretical and empirical understanding.

The collected material is inherently qualitative. The major data congregation methods are; conducting focus groups, interviews and making observations together with reviewing those

within the framework of other research projects, along with engaging in several action researches to assist in upgrading and developing Izhevsk city and agglomeration.

The combination of methods used to explore information is built on their correlation, starting with a literature analysis method of socio-cultural, economic and historical factors. This method provides the research with essential facts and data necessary for establishing the SWOT matrix. Furthermore the inspection of illustrative and visual materials (plans, maps, photos, etc.) advocates the hypothesis and results of research.

4. Introduction

Izhevsk is the capital of Udmurt Republic (Figure.1), Russia. It is located in the western European part of Russia along the Izh River in the western Urals (Potrov et al, 2013). The territory of Izhevsk also exists between the rivers Vyatka and Kama. Izhevsk territory is on the junction of Ural and Volga regions. It is the nineteenth largest city in Russia. The city is a major hub of industry, commerce, politics, culture, and education in the Volga Region. It is famous for its defense, engineering, and metallurgy (metal works) industries. Izhevsk has the titles of the Armory Capital of Russia and the City of Labor Glory. Originally established as a plant city, Izhevsk, for more than 300 years had the identity and image of an industrial city. Izhevsk gained great importance for being a military closed city due to the weapons industry. Like many Russian and post-soviet cities, Izhevsk has been experiencing the hardship of the post-industrial period, the economic and social crises of the 1990s. Unfortunately, over the past couple of decades the city has not been able to find a new identity. Izhevsk now is in a state of transition to the post-industrial economy (Potrov et al, 2013).



Figure 1: The map of Russia, In yellow Udmurt Republic. Source: (Potrov et al, 2013).

5. Parameters of Izhevsk

5.1 Historical features

The Name of the city changed many times, starting as 1760-1918 – Izhevsk plant, 1918-1984 – Izhevsk, 1984-1987 – Ustinov (the city was renamed after the soviet marshal D. F. Ustinov Minister of Defense of the Soviet Union 1976-1984), 1987- current Izhevsk (Agafonov et al, 2014).

The official foundation date of Izhevsk is 1870 (the foundation date of the ironworks plant; Izhevsk plant). Izhevsk was built as one of the Urals plant cities (Agafonov et al, 2014).

Arms factory foundation: In 1800, Emperor Paul I ordered an arms factory to be built in the Urals considering mounting threat from Napoleonic France. The task of choosing a location was given to Andrew Deryabin, a mining engineer, chief of Goroblagodat, Perm, Kama and Bogoslov Plants. He saw several places in the Perm and Vyatka Governorates and drew a conclusion that the most suitable place for a plant foundation was Izh Zavod (Izhevsk plant). It occurred to him to turn the ironworks into the armory. Alexander I approved of Deryabin's project and arms factory building began on June 10, 1807. Thus 1807 is considered the year of Izhevsk's second birth (En.wikipedia, 2015). Plants as institutions significantly affected the urban planning and architecture of Izhevsk.

The Soviet period saw significant growth in the size and importance of Izhevsk. A new general plan was made for the city. Many old wooden houses were replaced by stone buildings. The monotonous typical housing quarters invaded the city.

It was believed that in a closed industrial city as Izhevsk, the most important was utilitarian functional needs and not aesthetic values (Agafonov et al, 2014).

The Postindustrial period witnessed the devaluation of the prestigious status of a plant worker. Many traditional plants and factories were closed and workers were dismissed. Postindustrial Izhevsk is confronted with serious problems such as high unemployment and vast ecological damage (Lintz, 2007). The mentality of people from old industrial cities is described in studies, "in regions where industry played an important role, many people cannot imagine other paths of development" (Ernits, 2002). Izhevsk is in the middle of a vicious circle of decline in industrial output, and loss of image and self-esteem among the population. This, in turn, has led to a considerable exodus of the highly qualified and young sections of the population, a group which is essential for the development of new economic structures 'from within' (Águeda, 2009).

5.2 Economic features

The main financial resource for the development of social and cultural life in Izhevsk has been provided by plants. The administration of the plants controlled the city's development (Agafonov et al, 2014). Military industry remained the core of the local economy even after World War II, leading to Izhevsk being designated a closed city, inaccessible to foreigners. The city's Izhmash factory began manufacturing the AK-47 automatic rifle in 1948 and continues to produce modern variants of the design to this day. The rifle's designer, Mikhail Kalashnikov lived in Izhevsk until his death in 2013. In 1966, Izhmash began manufacturing the Izh brand of automobiles (En.wikipedia, 2015); however, the main focus of Izhmash is still the manufacturing of weapons.

In the 1990s the influence of factories and their administration on the city's economy and development significantly decreased (Agafonov et al, 2014). Izhevsk was stricken by the same economic and political crises as the rest of the country.

As for unemployment, according to data for 2012, the Udmurt Republic (Its capital is Izhevsk) is 42nd in the unemployment rate, which amounted to 6.00%, while the Russian national average was 5.46%. Minimum level of unemployment 0.81% was recorded in the City of Moscow. It is important to note that the unemployment rate in the Udmurt Republic in 2000 was 9.68 % in comparison with 6 % in 2012, which may indicate that the economy is recovering (Удмуртская_республика, 2011). The average salary in Izhevsk is 22,774 rubles (\$456), which is considered low even in comparison with other regions in Russia (Potrov et al, 2013).

Concerning regional economy, Izhevsk is part of two agglomerations:

1- The Izhevsk agglomeration has a population of about 1 million residents. It includes Sarapul town, Votkinsk town, Zavyalovsky and Votkinsk urban settlements and Sarapul'skiy municipal district.

Sarapul town houses over 100 thousand people and rich of historical sites. Historically it was a major commercial center on the Kama River. The economy of the city depends on the Sarapul'skiy generator plant and the Sarapul Radio Plant. Sarapul faces problems such as low wages and immigration of qualified youth. The town is regarded as a place where there are almost no possibilities for new forms of business. Most of the population is economically inactive (Potrov, A. et al. 2013).

Votkinsk town has a population of nearly 100 thousand. The town's economy depends on industry (Potrov, A. et al. 2013).

2- The Investment agglomeration includes 13 Municipal entities of Udmurtia republic, Tatarstan republic and Perm region. The total number of Investment agglomeration residents is nearly 1.2 million.

5.3 Socio-cultural features:

The population of Izhevsk in 2013 was estimated to be 631,182 (UN data, 2014). Izhevsk's society consists of different ethnic groups. 16% of the population is Udmurt, 67.5% is Russian, 9% is Tatar and 7.5% is Ukrainian, Belarusian, Bashkiria, Azerbaijanis, Maritsian and Tchovashi (Potrov et al, 2013). Although of different ethnic groups and backgrounds citizens of Izhevsk like to call themselves Izhevchani. This is how they express their belonging to their city.

As the capital of the Udmurt republic Izhevsk houses institutions for reviving and conservation of cultural and national heritages. The city is considered a center for Udmurt and Tatar cultures. The socio-cultural combination of factory people is diverse and rich. Plant-city residents came from different regions in Russia to work and live there and sometimes even from other countries. In the 19th century after converting the iron works factory to a weapons industry a German community was founded in Izhevsk. (Potrov et al, 2013). It can be considered a unique type of society – a special lifestyle of factory workers and economic levels uniting people from different cultures and ethnic groups. These people came to Izhevsk with their traditions, mentalities and dialects.

There is a diverse rich mixture of:

- In the 18th and 19th centuries factory life (culture, knowledge and daily regime),
- Village socio-cultural reservoir which has been formed for centuries,
- In addition to 20th century Soviet life style, culture and mentality,
- Finally capitalist mindset and way of living, which has been emerging since 1990s.

These are the components of the socio-cultural features of Izhevsk (Suksunskymuseum of regional history, 2013).

6. Formation of the city of Izhevsk

Gorod- Zavod (Plant-City) is a unique type of human settlement established in the 18th century in Russia on the basis of water existence for operating plants. At that time metal gained prime importance and widespread use in industry and economy. That is the reason for the evolution of plant cities in Russia. These settlements were planned around factories for processing metal. They played a key role in the development and planning of industrial cities (Agafonov et al, 2014), (Suksunsky museum of Regional History, 2013). Locations for building plant cities were determined by the presence of:

- 1- Reservoirs and water bodies needed for generating water energy to operate factories;
- 2- Lands suitable for constructing roads and connections between locations;
- 3- Forest zones and raw materials for processing and manufacturing.

In general plant-cities were built in territories between rivers (Bondarenko, 2013), (Suksunsky museum of regional history, 2013).

The typical urban composition of Plant-cities consists of:

Plant – artificial lake- the square in front of the plant with a church in the middle of this square. The territories of industrial institutions are located at the center of the Plant-city. The public center of Plant-cities had mixed functions (administrative, cultural, commercial and housing). The house of the head of the plant or his owner always located at the center. All these facilities at the Plant-city center were designed with their entrances direction to the



Figure 2: Plan of Izhevsk settlement 1764. Source: (Maps of Izhevsk and Udmurt republic (2014).

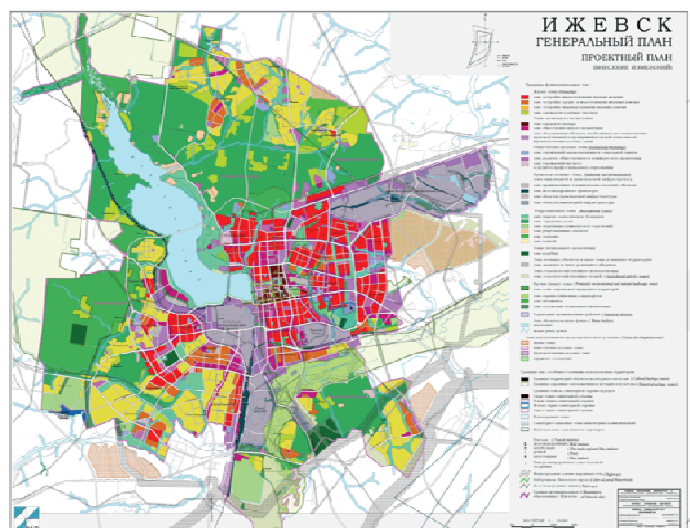


Figure 3: General plan of Izhevsk city, 2009. Source: (Izhevsk city council site, 2009), translated by author.

plant. They were located at the plants square (Agafonov et al, 2014). They now form the historical center of these cities.

In the middle of the 18th century deposits of magnetic iron ore were discovered at the location along the Izh River in the Western Urals, between the rivers Vyatka and Kama. These raw materials were needed at that time for military manufacturing needs. A factory for processing magnetic iron for military purposes was constructed. The town was founded and developed as a "City – factory / Plant-city".

In the early 19th century, the plant was redeveloped to manufacture weapons (Agafonov et al, 2014), (Potrov et al, 2013). The Plant-city requirements and parameters for hydraulic engineering constructions (dams) on the IzhRiver defined the geographical features of the future city.

At the beginning of the first urban settlement construction on the chosen location (Figure.2):

-Industrial buildings were built on the west bank of the river near the dam. This territory had lowlands. The houses of builders and factory workers were also built there.

-The house of the factory head was constructed on the highlands on the east bank.

The Izhevsk urban settlement had two main axes:

1- The educated middle and rich high class settled in the hills. (Foramen, merchants and managers).

2- The working class settled in the lowlands (Potrov et al, 2013).

The position of a person in the factory and nature of his work determined where he could live in 18th century Izhevsk.

During the Soviet Union period Izhevsk witnessed multiplication of its factories. More than 15 factories were built from 1932 to 1972. Residents of Izhevsk were evicted from the city during the revolution and were replaced by immigrants from rural areas (Potrov et al, 2013).

7. SWOT analysis of Izhevsk case study

A very useful methodology in strategic urban and regional planning is SWOT analysis. It studies strength and weakness points of a city, and identifies opportunities and threats. SWOT analysis defines internal and external factors affecting urban planning of a city. As a result allowing for strategic planning as a systematic development of urban and regional changes determining the future of a city (Khalifipour et al, 2012). The research uses SWOT-analysis of economic, social, cultural and historical dimensions of Izhevsk. This methodology to determine the needed strategic plan and actions to reinvent Izhevsk and finding way-out of the predefined historical stereotype .

<p>7.1 Strengths</p> <p>Geographical characteristics</p> <ul style="list-style-type: none"> -The presence of a huge number of springs in Udmurt republic. <p>Udmurt's area represents two-thirds the basin of Vyatka, the whole territory of the region is covered by a network of rivers (Figure.4).</p> <ul style="list-style-type: none"> - The proximity of groundwater - Izhevsk has a hilly relief and fertile arable land. - The Republic of Udmurt has reserves of oil, peat, coal and spring water. - Izhevsk lies on seven hills. Land elevation from 98 	<p>7.2 Weaknesses</p> <p>Geographical characteristics</p> <ul style="list-style-type: none"> - Izhevsk lake has high levels of pollution. - The petroleum industry was not developed over 10 years and is in state of production declining. <p>Urban planning</p> <ul style="list-style-type: none"> - In the city there is no defined clear center (the area that is called the center). Formally, the center is the building of the Izhevsk plant. There are old and new centers. The unofficial center is the intersection of Gorki and Soviet streets.
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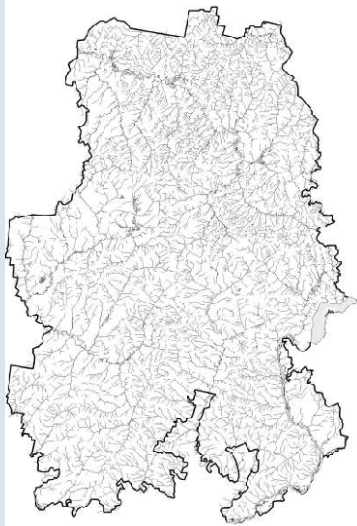


Figure 4: Rivers network in Udmurt republic territory, Izhevsk. Source: (Potrov, A. et al. 2013).

(the level of the water's edge Izhevsk lake) up to 208 m.

- Izhevsk has an artificial lake. It is one of the biggest artificial lakes in the Ural region.

Urban planning

The city is divided into 2 parts by the river and the lake.

Transportation:

More than 50% of Izhevsk's residents find public transportation is comfortable, satisfying.

Izhevchani use public buses, trams, trolleybuses, microbus services and taxis.

More than 65% of residents believe that using a private car is neither comfortable nor satisfying.

Ticket prices are low (.33 US dollars).

Maximum travelling time is 45 minutes per trip.

Izhevsk is directly connected by railways to Moscow, Perm, Kazan, Yekaterinburg, Adler, Novorossiysk, NovyUrengoy.

The airport is located 15 km from Izhevsk. Flights are currently performed by one airline. There are regular flights only to Moscow 2-3 times daily.

Economy:

Izhevsk is part of two agglomerations The

1- Izhevsk agglomeration,

2- Investment agglomeration.

Within the Izhevsk agglomeration is located the Sarapul port. It is 40 km to the south of Izhevsk, on the Kama river. The Sarapul port is a large river port which has access to the Baltic and Black Sea.

Culture:

There is cultural diversity in Izhevsk. The dominant cultures are Russian, Udmurt and Tatar.

The new center is Pushkinskaya street.
-It is hard to move from one part of the city to another part through the lake and river.

-There is a severe shortage of parks and green infrastructure. The existing ones are polluted.

- According to surveys, residents report the poor condition of sidewalks, grass, deficiency of plantings, unclear navigation marks and signs.

- Only 10% of residents promenade in the water front of the Izhevsk artificial lake.

This is because of the bad condition of urban design and space organization.

- The network of streets is in bad condition. Only 13.7 % of residents are satisfied with the condition of the streets.

- The Izhevsk airport is inefficient (Potrov et al, 2013).

Economy:

The average salary is low in Izhevsk (\$456).

Surveys and massive protests show the dissatisfaction of residents with the standard of living in Izhevsk.

7.3 Opportunities

- Springs allow the city to develop the food industry, drinking water, and alcoholic beverages production.

- Land, relief and water availability allow uses such as urban agriculture and intensification of green areas.

- Topography of Izhevsk allows for creating a regional recreational center for skiing.

Urban planning

- Presence of lake and rivers through the city is a potential for planning entertainment, recreational areas and waterborne transit development.

- Existence of three places considered centers can be planned for the city to have different central places with different characters and activities.

More than 55% of residents would like to promenade in the Izhevsk lake waterfront, in case of redeveloping and renovating it.

Availability of comfortable public transportation is a potential for developing a sustainable life style, especially with the residents belief in the ineffectiveness of private car use.

The railways and airport are key elements in the development of Izhevsk and future urban and economic upgrading.

Economy:

Residents of towns and settlements in agglomerations serve as human resources for Izhevsk.

Immigration and commuting within agglomeration (cities, towns, villages and settlements) encourages improving transportation infrastructure on a regional scale.

The Sarapul port within the Izhevsk agglomeration can be used to increase and stimulate investment, importing and exporting on national and international scales.

Culture:

Cultural diversity is an element of sustainable society. This can be a chance for many cultural festivals that attract tourists and investment to the city.

Dissatisfaction with the standard of living stimulated the society to improve their city and exchange experiences, with other cities on national and international scales.

7.4 Threats

Geographical characteristics

- Waste of Petroleum industry, in consequence declining revenues.

Urban planning

-Not planning and using the river and lake potential leads to Isolation of the two parts of the city and disconnection.

-Shortages and degradation of parks and green infrastructure lead to population health deterioration and waste of already unused natural advantages.

- The poor condition of streets can lead to many accidents and daily traffic congestions.

The inefficiency of the airport leads to the loss of many investment opportunities.

Economy:

Low salaries lead to a loss of the qualified working force and a low standard of living
Dissatisfaction with the standard of living can lead to immigration from Izhevsk to other cities with a higher standard of living.

In general, a survey about the possibility of immigrating from the Udmurt republic To another region in Russia or another country shows that 34% of population is considering immigration.

Among the reasons:

39% low salaries and standard of living, 14% unsatisfying quality of education, 11% inability to find a job, and 10% the decline of the economic situation in the Udmurt republic.

8. Results and Discussion

Over the last few years, bottom up movements by the active society of Izhevsk made many important steps towards reinventing their city. These efforts were organized under the leadership of ARGO, a nongovernmental organization (Izhevsk association for city development), and the sponsorship of interested citizens and business men. Izhevsk's active community has set a goal of bringing innovative and sustainable development solutions. These solutions will contribute to the regeneration and rebirth of Izhevsk. Revitalization efforts by the city's active society and professionals are trying to regain attention and importance for the city on national and international scales.

8.1 All Russians forum of livable cities in Izhevsk(URBANFEST):

Through such events experts and professionals from different communities exchange national and international experiences and best practices. The main goal of this yearly event is to change Izhevsk to be a more livable city (All Russians forum of livable cities in Izhevsk: how it was achieved, 2015).URBANFEST is one of the initiatives of the bottom-up planning approaches in Izhevsk.

8.2 Izhevsk school of Urbanists:

It is a nongovernmental training program sponsored by active society members. The tasks of the program are to collect materials, develop ideas, introduce technologies and projects to improve the urban environment in Izhevsk. Its aim is to build public awareness and encourage professionals and citizens to work together in urban teams to form project proposals for urban reform and development. It also aims to train citizens and local government representatives to cooperate together in decision making and planning stages. Since 2014 the Izhevsk school of urbanists has carried out a program for Teenurbanists. This program aims to train teenagers to formulate their ideas and dreams as urban design projects for the city of Izhevsk, with the help of participants of Izhevsk school of Urbanists and professionals.

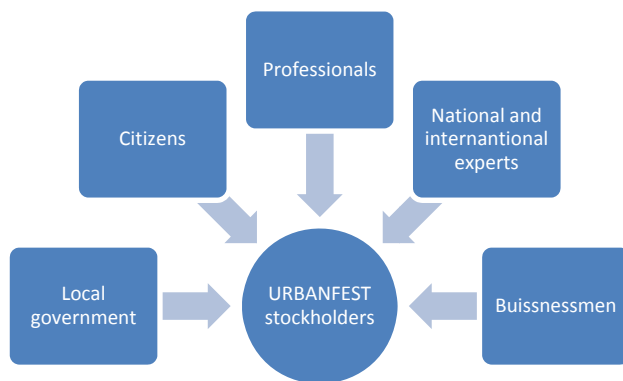


Figure 5: The stockholders of the URBANFEST forum, Izhevsk. Source: author.



Figure 6: Izhevsk's Teenurbanists urban teams, Izhevsk. Source: (Gavrilov, 2014).

The Izhevsk school of Urbanists is one of the bottom-up initiatives in Izhevsk.

8.3 Branding Izhevsk:

The community of Izhevsk believes in the importance of defining their identity and redrawing the image of the city. This will play a crucial role in promoting urban reform and upgrading projects, such as a museum quarter in Izhevsk. The goal of the project is to discover or reinvent a new identity for Izhevsk. It is an initiative by active citizens, professionals and the city council of Izhevsk to promote regeneration and rebirth of their city.

The main tasks of the initiative are:

- to search for a unique character and identity of Izhevsk, favored by Izhevchanis,
- to rediscover and retrieve what they are proud of and really value in their city,
- at the same time to work to develop and emphasize a brand that can be understandable, attractive and important for potential investors,

- to develop a branding plan and brand platform for Izhevsk,
- to form a communication strategy to achieve the city's new identity and introduce it to national and international societies.

The economic importance of branding Izhevsk is attracting investment and obtaining more revenue for the city. This revenue will help in urban upgrading and development to make the lives of citizens more healthy and comfortable. It will also help generate more jobs. Branding adds value to everything that is made or sold in Izhevsk. This will increase sales and the prices of goods and services produced by the city. Articulating a unique character for the city by branding will also promote the expansion of the sales channels on regional, national and international scales (Potrov, A. et al. 2013).

Possible Brands for Izhevsk:

The results of a survey made by the scientific journal "Iznakar", research project "mental map of Izhevsk", shows that the most popular and possible brands of Izhevsk from the Izhevchani's point of view are:

- The capital of Udmurtia 80.9%, The city of gunsmiths 71.5%, cosmopolitan city 45.2%, Major industrial center 32.1%, Educational Center 12.8%, The cultural capital of the Volga region 12.8%, Sports center 10.7%, The center of Izhevsk-Votkinsk rebellion 1918-1919, 2% (Potrov, A. et al. 2013).
- The Gate of the Urals (Vorota Urala): The urban activists in accordance with historians and geographers agree that Izhevsk should be branded as the Gate of the Urals (Vorota Urala). This term was formed due to the fact that Izhevsk is an important model for the typology of cities in the Ural region ("Gorod-Zavod"; City- Plant or Plant city). These cities were built within the framework of the development of the Ural metal works region (Bondarenko, 2013). In addition Izhevsk is the capital of the Udmurt republic (Agafonov et al, 2014), (Potrov et al, 2013).
- The city of Kalashnikov (Gorod Kalashnikov): Due to the fact that this popular brand is well-known both in Russia and internationally, some voices even suggest changing the name of the city from Izhevsk to the city of Kalashnikov. Unfortunately, according to an interview held by (Potrov, A. et al. 2013), this is already outdated and not a favored brand for citizens or the local market. It is also criticized for emphasizing military history and the politicization of the city identity.
- Russian capital of engineering is the suggestion of a research group of the branding of Izhevsk project based on surveys and interviews held by them. This is due to the long engineering history of the city. It is also related to Kalashnikov as a major international engineering achievement of the city. The presence of engineering education institutes in the city promotes this idea. The fact that the economy of Izhevsk mainly depends on engineering and industry supports this brand. Interviews with experts and regional engineering organizations strongly acknowledge this idea. This idea is very welcomed by Izhevchani (Potrov, A. et al. 2013).

8.4 A new cultural quarter for Izhevsk (the waterfront cultural quarter):

This is a proposal for a city museums complex and other potential cultural facilities in Izhevsk. This will be a cultural complex located on the east and south waterfront of the Izh Pond, and will include the General's House, the Ironworks factory, the Bodalev Brewery factory, Pump House, the former technical educational Institute for factory workers, and the public realm between and around the sites (Figure.7).



Figure 7: Izhevsk cultural quarter site, Izhevsk.
Source: (Generalcki dom museum, 2013)

The main goals of the project are:

- 1- Making the city more culturally competitive by creating world-class, extraordinary museums and venues,
- 2- Creating a sense of identity for the city of Izhevsk by increasing access to Izhevsk's history through storytelling and encouraging locals to contribute their stories,
- 3- Promoting creative industries in the city by providing spaces for idea generation,
- 3- Making a once closed city open, by improving communication and connections between people within the city and with those who have left.

The project started in 2013 by the planning and renovation of General's house and garden (Currently summer garden and Gorky park). The project should be completed in 7 years (The gallery exhibition center, 2013). The General's house is now a museum. The collection of the museum is the works of contemporary artists and architectural elements of old demolished houses, conserved and saved by active citizens of Izhevsk (Rupsova, 2014).

8.5 Revival of local identity, cultures and heritage:

In 1990, after the declaration of Udmurtia as a republic with Izhevsk its capital, a new constitution of the Udmurt republic was issued (Agafonov et al, 2014). National Udmurt politics and culture were revived. Original Udmurt traditions, values and language were actively widespread among the society. Other ethnic groups such as Tatar also revived their identity and culture. In the city there are Tatar and Udmurt cultural centers that organize events and meetings for their ethnic groups. Also national celebrations and feasts of both these ethnic groups are celebrated in Izhevsk. In the city there are different communities for youth of ethnic groups (e.g. The Union of Tatar Youth). Tatar language and traditions are taught to children and youth in educational centers in Mosques and also in the Tatar cultural center. Udmurt State University is considered one of the carriers and deliverers of Udmurt history, language and literature, through higher education in its faculties. The Udmurt nation also celebrates their culture through a famous musical group, the Udmurt international musical band Baranovichskie Babushki who participated in national and international concerts. Izhevsk is the main center for Udmurt culture as the capital of the republic.

8.6 Izhevsk participates in international venues:

Izhevsk activists and innovators seek international attention and support for their city, and of course investments through participating in venues such as:

6th edition of the World Forum "Communication on Top" in Davos. Participating at the forum, Izhevsk activists aim to mobilize local urban work in the city. This is part of the development and creation of an entire strategy for marketing and promoting Izhevsk. This public initiative arose from an awareness of the need for international support and interest in Izhevsk. The panel discussed the Izhevsk experience under the theme "How to attract the planet: investment and branding regions" two major reports: Barcelona and Izhevsk (Gordon, 2015). World exhibition of information technologies and telecommunications CeBIT 2015 Germany, Hannover (Smyslov, 2015). In this venue the Klabukov brothers represented Izhevsk (the founders of mobile application Hudway). It is notable to say that this new industry brings around 40 million rubles a year (\$800,000) to Izhevsk. The Klabukov brothers' initiative at the Hannover exhibition aimed to present Izhevsk as technological hub and center for the telecommunication industry. Their motto was "Izhevsk smart city with a soul".

9. Conclusion

9.1 Tools to reinvent Izhevsk

The research concluded the main tools used by active society to reinvent Izhevsk:

Exchanging experiences, ideas and practices with international activists and professionals, connecting, communicating and opening up to the world. This is achieved through events such as URBANFEST. This is an important initiative because it presents new ideas to develop the city. This also helps introduce Izhevsk to international society, which can help the economy and bring more foreign investments.

Educating society about contemporary urban planning, development approaches and planning workshops. This is an important strategy to build awareness of society, attract the

attention of citizens, changing the mentality and rebuilding self-esteem. Building urban knowledge is one of the first steps towards changing decision-making processes from top-down to bottom-up.

Branding the city. This tool works to reformulate the identity of Izhevsk and help citizens remember the importance and uniqueness of their city. It is important for attracting investors and generating more employment opportunities.

Conserving and retelling history, reusing and reinvesting Izhevsk's urban planning and architectural heritage. History and heritage are crucial identity elements. The historical part of Izhevsk represent sits glory, achievements and position among Russian industrial hubs. It is very important to conserve, reuse, tell the stories and provide opportunities to experience life activities in these buildings and public realms. This practice reinforces identity and retrieves lost self-esteem because of economic crises, as they are a proof and witness of a history full of glorious achievements.

The tool of revival of local identity, cultures and heritage is an effective way for introducing contemporary Izhevsk as a cultural creative hub with many rich, diverse cultural groups. For citizens it is important to identify their ethnicity, revive it and introduce it to other ethnic groups of the city to exchange experiences and cultures. It is a good idea for Izhevsk to be branded as the center of Udmurt international and cultural festivals.

The tool of participating in international venues is to tell their story to the world and get constructive and useful feedback. Exchanging experiences is a key factor in gaining a competitive position and evaluating the current stage of development. International venues work as a mine of ideas. Most of these ideas proved successful. Willingness and awareness of Izhevsk activists of this fact proves that they no longer live isolated from the rest of the world. These initiatives help Izhevsk integrate into the international system. These bottom-up efforts can make Izhevsk occupy a distinguished position among innovative cities in the future.

Cities are gold mines. Active citizens are the gold seekers. It is astonishing and would have been a shame for a city like Izhevsk to stay undiscovered. When a city find its own self, with the help of its citizens, people know how unique they are together with their city. As presented in the research paper, Izhevsk has many urban, historical, cultural, economic, natural and human opportunities. The research came to the conclusion that many steps have been made towards an innovative and sustainable future for Izhevsk. The most important steps are:

- 1- educating and growing urban awareness among Izhevchanis,
- 2- the active society's willingness to be integrated together with their city in international society.

Healthy livable cities can never be developed by top-down control. Only residents who understand their city can lead innovation and upgrading initiatives. That is why bottom-up development is a crucial strategy in the city's future.

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