

WHY STARTUPS HELP GO CITY SMART

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Abstract

Both worldwide and in Poland, more and more startups are being formed to offer solutions introducing breakthrough innovations both in terms of the way cities operate and in terms of implementation of the Smart Cities concept. Owing to the innovative nature of the enterprises, startups contribute to growing entrepreneurship in local communities. Their existence also impacts the way urban policy is pursued. More and more often, urban policy features programmes and support tools for these undertakings. The paper aims to present current results of the author's research into the impact of startups on the development of selected aspects of a smart city.

Key words: smart city, sustainable development, quality of life, social capital

1. QUALITY OF LIFE FROM VARIOUS VANTAGE POINTS

1.1. The notion of the quality of life – definitions

Deliberations on the impact of startups on the city dwellers' quality of life ought to begin with an attempt to define what quality of life is. Controversy around the meaning of this notion is primarily determined by the complexity of the term and differences in the interpretation of its basic components. Quality of life as a notion was created after the Second World War. Initially, it was associated with the material well-being of an individual, next it was extended to include non-material factors. In the 1950s, A. Campbell considered "good life" to be identical with consumption and related it to people's property and assets. In 1954, an expert group within the United Nations formulated a definition according to which *the notion of the level of living refers to actual conditions of people's life and the level of material and cultural satisfaction of their needs by a stream of paid goods and services, as well as those financed with social funds*. (International Definition and Measurement of Levels of Living. An Interim Guide 1961). In 1973, the interpretation of the notion was broadened to include elements of personal satisfaction, whereas in 1975, a prerequisite for happiness was added (Rokicka 2013, p. 166).

The definitions of the notion of quality of life can be divided into three groups:

- 1) existential definitions related to the satisfaction of basic needs such as ownership of assets, current socio-economic situation; *quality of life stands for decent conditions of life in a society. Decent conditions of life comprise material assets, a sense of equality and justice, equal opportunity in education and employment, fair distribution of income, humanization of labour [...]* (Soziologie-Lexikon, 1991, p. 364).
- 2) definitions related to satisfying higher-level needs, specified by the level of self-fulfillment, professional and life ambitions. Against this background, the quality of life is identified with general welfare comprising the material and social status, mental well-being and an individual's personal development (Galloway, 2006, p. 111).
- 3) environmental definitions related to the availability of environments of a specific quality: natural and socio-economic in a broad sense. In this context, the quality of life captures i.a. the satisfaction of an individual, material welfare, ecologically healthy natural environment, the ability to shape an individual's own lifestyle or an individual's integration within the society (Famielec 1999, p. 17). Quality of life is defined as "an individual's perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards and concerns, (...) physical health, psychological state, level of independence, social relationships, personal beliefs." (WHOQOL 1997, p. 1).

Current documents that ought to be mentioned when analyzing the notion of the quality of life include the new 2030 Agenda for Sustainable Development, also called Post-2015 Development Agenda. It was adopted at the UN Sustainable Development Summit, held in New York between 25–27 September 2015. The document is a development plan for the world and by 2030, wants countries to mobilize efforts to end poverty, promote prosperity and decent life for everyone, and guarantee peace. The Sustainable Development Agenda replaces the Millenium Development Goals, adopted in 2000.

The document provides for 17 Sustainable Development Goals and 169 related targets, monitored with appropriate benchmarks. The Agenda and its targets are universal in themselves because they concern both developing and developed countries. Issues like improvement of people's quality of life, social protection and the environment they live in are in the center of attention. Goal no. 3 intends to ensure healthy lives and promote well-being for people at all ages.

The 2015 World Report on Ageing and Health is another important document. It underlines the role of the elderly. In the aftermath of the published report, several international treaties and documents dedicated to the aging problem were published. The documents provided for freedom from discrimination against elderly women, elderly migrants and elderly people with disabilities.

1.2. Quality of life from the perspective of city dwellers

When embarking on an analysis of the issues related to city dwellers' quality of life, we should first of all refer to the definition of the quality of life, related to the way of performing tasks or possibly achieving life plans [Leźnicki, 2011, p. 214].

The manner of perceiving the quality of life is contingent on several socio-economic factors which are part of the specificity of a place (city), including on the desired level of satisfaction of material and non-material needs. The value system affects all that is contained within the limits of acceptance of a society, i.a. the way people rise to power, accumulate wealth in a specific setting is a decisive factor for the selection of appropriate development tasks, handpicked and suited to the needs and abilities of an individual.

Higher- and lower-level needs also arise from our own, individual expectations, pursued goals and the capacity at hand. It is the needs that play a crucial role in determining the factors which affect the quality of life. An individual selects a suite of needs that is necessary for them at a specific place and time, hence the level of satisfaction of the needs will be different for each person (Kaleta 1988; Borowicz 1988).

The reference to space and place where the quality of life is considered is elaborated upon in the WHO definition of 1993. Quality of life is defined as *the individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns*. Against this background, the notion under scrutiny is *a group of spatial and environmental, production and cultural factors that make up the reality in which a human being lives* (Otok 1987, p. 79).

Currently, five main areas of interest in the quality of life can be distinguished (Rokicka, 2013, p. 161):

- 1) themed around protecting the natural environment – it indicates the consequences of civilizational progress for the environment, health and quality of people's lives due to noise, pollution of water or air etc.),
- 2) related to health metrics – in medical science, the quality of life conditional upon health,
- 3) associated with urbanization processes – unfavorable consequences of scientific and technical development in urbanized areas, such as defective planning of cities, housing etc.,
- 4) based on social and psychological premises – negative consequences of civilizational development for an individual and social life, such as social alienation, loneliness etc.,
- 5) focusing on the economic aspect of the quality of life – the quality of life of an individual, local and regional communities, and the country.

The availability of goods and services in themselves does not guarantee the satisfaction of needs and ambitions that matter for an individual or a group. Access to telecommunications infrastructure is a good example; in the 1990s, it was a prerequisite for a high quality of life. Technological development ultimately left the needs behind. What is currently of crucial importance for the quality of life is i.a. the level of satisfaction of the needs with tools and capacity offered by universal access to the internet or mobile telephony.

2. STARTUPS AND THE QUALITY OF LIFE IN THE CITY

A *startup* most frequently denotes newly established technological enterprises. They mainly include internet websites, portals and mobile applications. It is worth noting, though, that the aforementioned group does not rule out projects from other fields (see Fig. 1).

Amsterdam
WeTransfer
Booking.com

Berlin
SoundCloud
Delivery Hero
Foodpanda

Stockholm
Spotify
Pixlr
Bloglovin

Riga
Ask.fm

Saint Petersburg
VK

Hangzhou
Alibaba

Beijing
Baidu

Hong-Kong
9GAG

Sydney
Canva
Freelancer

Cracow
Estimate

Budapest
Prezi

Copenhagen
Endomondo

Arlington
Politico

Seattle
Redfin
Startup Grind

Chicago
Groupon

L.A.
Tinder
Vevo
Hulu

San Francisco
Twitter
Uber
Alexa
Airbnb
Lyft
Zynga
Yo
Instagram
Visual.ly
Zite
Yelp
Square
Dropbox
Pinterest
Salesforce
TechCrunch
Reddit
SlideShare
Engadget
Path
Eventbrite

N.Y.C.
Squarespace
Kickstarter
Mashable
The Huffington Post
Shutterstock
Fab
Livestream
Tumblr
Digg
Aereo
BuzzFeed
Vimeo
FourSquare
Gawker
Business Insider
TED
Fotolia
Elite Daily
StumbleUpon

London
Last.fm
Shazam
FilmOn
Citymapper
Shopzilla
YPlan

As the experts representing the sector see it, these undertakings are characterized by low costs of initial business activity, high risk of failure with a potentially high return on investment and high scalability of the model into technology-based business. Hence, a startup is a rapidly growing business, primarily in the technological area.

It has been assumed on the internet that startups are defined as already existing businesses. On the other hand, not every small, newly established business is a startup. A startup is aimed at generating products or services with a broader range, yielding high revenue while maintaining the personal vision of the originator who has made an assumption that their idea will go to market fast and successfully. All the indispensable steps are taken to this end. One of the prerequisites for the development of a startup is the participation of internet users at the stage of establishment and further development of the enterprise.

It should be stressed that startup founders are not only young people. Even organizations which have been in operation for several years may separate a startup or morph into one if they choose to change their strategy and objectives or enter a new development path which hinges upon properly connected resources, strategies and environment. An appropriate "startup configuration" is likely to minimize common financial problems (Martens D., Vanhoutte Ch., De Winne S., Baesens B., Sels L., Mues Ch. 2010).

2.2. The impact of startups on the city dwellers' quality of life – results of research

An attempt to link the development of startup undertakings with the quality of life will be associated with the results of the author's quantitative and qualitative research, conducted in the period from October 2016 until now in the startup environment, in Poland's fourth largest city of Wrocław and the fifth considering the number of startups.

As there is no official publication and owing to ongoing research, the author allows for some simplification.

The crucial impact of startups on the environment in which they operate may be as follows:

- 1) Creating new jobs,
- 2) Generating household income,
- 3) Building human capital,
- 4) Positive spillover effects of innovation,
- 5) Improving the quality of life through products and services delivered by the startup (Diagnoza ekosystemu startupów w Polsce 2016, pp. 84-87).

Being innovative undertakings, startups hire staff. As a result, the unemployment rate in the region drops owing to new jobs. A job increases the household income, which increases the affluence of the entire society and consumption of available goods. People with higher incomes tend to spend more. As a result, infrastructure is created to meet the growing demand. Interpersonal relationships are built in new cafés, restaurants and entertainment venues.

According to Wrocław experts representing the startup sector, the added value, related to the development of innovative ventures, is the significant impact of startups on building social capital. Compared with Western Europe or Scandinavia, Poland does not have any startup traditions. Yet, there are more and more people who think outside the box, are ambitious, want to establish their own business and are capable of working hard to be successful. They make up the holistic image of the places (usually cities) in which startup originators live and establish their businesses.

It should also be underlined that the nature of work for a startup requires one to constantly raise qualifications and skills. Thus, those hired by startups support the culture of continuous learning. Dissemination of this culture results in raising the level of human capital in the society. This, in turn, contributes immensely to the success of the startups. Social capital is also part of the success of the startups. This success is more and more frequently building social capital – of key importance from the vantage point of effective development of smart cities.

The nature of startup activity requires the ability to form relations, to cooperate and trust other people. Soft skills are crucial for building an effective and cooperative team, acquiring financing or finding a mentor in the field. Those involved in startup activity must attach special weight to the development of these skills to enable their undertaking to go through subsequent maturity stages. In this way, the startup community advocates the dissemination of attitudes and behavior which are determinants of high social capital.

The activity of the city has a significant influence on the development of startups. The city may actively support the startups or be a passive observer of the steps taken by the originators of innovative undertakings. As experts from Wrocław see it, the city ought to bring in added value in the form of networking activities. They would consist in active engagement of city authorities in contacting local and foreign investors, and entrepreneurs who are in search of financing. In this way, startup originators would obtain realistic support.

Innovative undertakings are at the same time innovative solutions that other economic entities may benefit from. Even though the solutions offered by startups are covered by patents or a different form of know-how protection, they are a harbinger of a profitable and prospective course of development for other businesses. Intensive research and development activity of startups broadens universally accessible knowledge resources. Universal access to knowledge and the latest discoveries is an indispensable catalyst of knowledge-based economic growth and at the same time a prerequisite for the establishment of smart cities.

All in all, startups affect the city dwellers' quality of life in a direct manner. This is due to the fact that the innovative solutions that they create are deployed in areas such as medicine or biology. Part of the products and services offered by these entities are improvements that make it possible to save time and money, as well as to achieve higher productivity of work. Many of them improve the comfort of life, open new communication channels, in this way broadening access to diversified forms of entertainment. These qualitative results that are difficult to assess are decisive for the significant impact of startups on the socio-economic reality of the urban community.

3. SUMMARY

An attempt to look into the dependency between the quality of life and development of innovative entrepreneurship in the form of startups provides evidence for the positive impact of these undertakings on the city dwellers' level of living. The author is aware of the restrictions on the generalization of conclusions owing to a narrow and targeted research sample. On the other hand, the obtained results are a point of departure for further detailed research, both in the area of science and business.

There are several international publications dedicated to the dependencies between innovative enterprises and the city dwellers' quality of life. The existing reports dedicated to startups in Poland include i.a. Startup Poland 2016 (Skala, Kruczkowska 2016). According to the studies that can be found in the document, Wrocław has attracted ca 7% of all innovative undertakings from the digital sector, and is ranked fifth following Warsaw (27%), Kraków (11%), Tri-City and Poznań (9% each) in Poland. Wrocław has human capital of immense creativity, innovation and entrepreneurship (see Fig. 2 and 3).

Fig. 2. Number of startups in Poland (Skala A., Kruczkowska E. 2016, pp. 18)

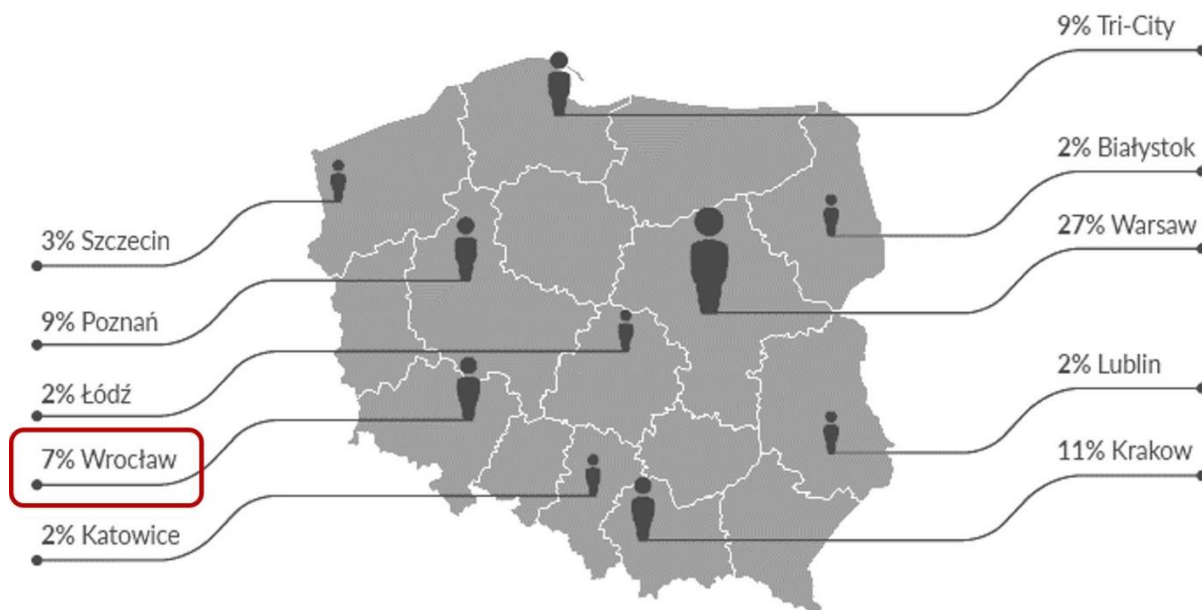
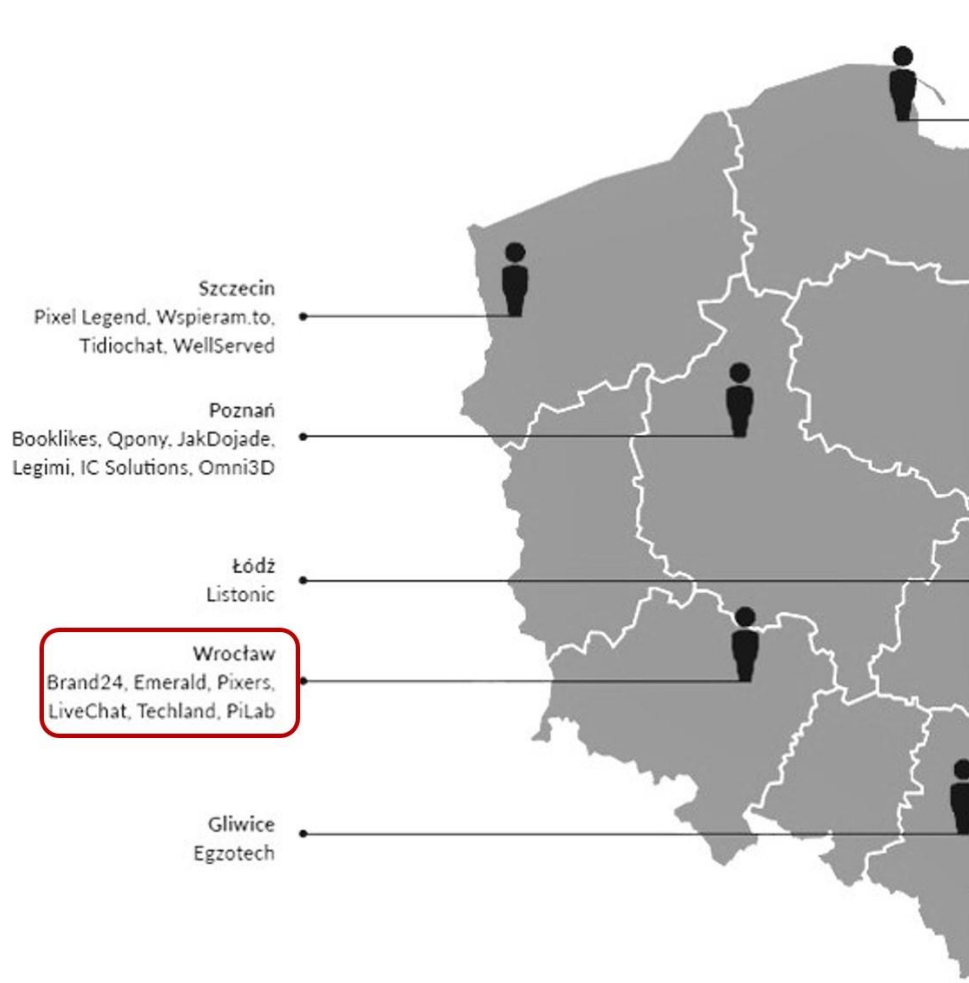


Fig. 3. Examples of Polish startups – Western Poland (Skala A., Kruczkowska E. 2016, pp. 62)



Startups create jobs adapted to the city's potential. This is why the startup market sees dynamic growth. With the number of innovative undertakings growing fast, other economic entities must be involved to provide support for the entrepreneurs.

Based on the conducted interviews and analyses of secondary sources, the following conclusions and recommendations may be formulated for startups, not only with reference to the environment available in Wrocław:

- it is necessary to continue the development of the startup ecosystem with active participation of startups themselves, local authorities, universities and business,
- it is necessary to further integrate the startup environment with the use of i.a. the following tools: consultation, integration, themed or industry meetings,
- solutions implemented in other cities in Poland and abroad are a valuable source of best practices; they are benchmarks which can be aspired to and which, having been adapted to local settings, may be applicable in Polish cities,
- particular emphasis should be placed on the deployment of academic capital, in particular of that of future and current PhD degree holders who intend to leave universities, current support tools for startups must be reviewed within the scope of local government in terms of effectiveness of their application and optimization in view of the examined expectations of innovative entrepreneurs (<http://blogi.wroclaw.pl/rozwoj/wroclaw-startups-city/>).

The above approach will be the starting point for further, optimal development of innovative undertakings, which, in turn, will translate into urban dwellers' higher quality of life.

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