PRACTICE MAKES SMARTER? A FOCUS ON TURKISH AND SLOVAK SMART CITY PRACTICES

SILA CEREN VARIŞ & MİLAN HUSAR

BETWEEN TEMPTATIONS OF EXPONENTIAL TECHNOLOGY GROWTH AND THE CONCEPT OF HUMAN CITY

Table of Contents

- Introduction
- Defining Smart Cities
- Threats of Smart Cities
- Smart Cities in Turkey
- Smart Cities in Slovakia
- Discussion

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

SPECTRA
Centre of Excellence

STU
SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA

BETWEEN TEMPTATIONS OF EXPONENTIAL TECHNOLOGY GROWTH AND THE CONCEPT OF HUMAN CITY

Introduction

From **garden** city...**sustainable** city...**green** city....**just** city...**liveable** city...

...to **SMART** city

ever-increasing complexity of urban systems whose management is creating urgency to look for more efficient ways to manage contemporary urban challenges (*Nam & Pardo, 2011*)

Objective

❑ To analyze, examine and compare the development of smart city concept in Turkey and Slovakia from the point of view of smart development a.k.a. what is smart there?

❑How is the concept of smart city understood in both countries?

❑ Critical assessment of non-critical use of the term smart city and interpretation of some actors in the public and private sector

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

SPECTRA
Centre of Excellence

STU
SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA

BETWEEN TEMPTATIONS OF EXPONENTIAL TECHNOLOGY GROWTH AND THE CONCEPT OF HUMAN CITY

SMART ECONOMY (Competitiveness)
- Innovative spirit
- Entrepreneurship
- Economic image & trademarks
- Productivity
- Flexibility of labour market
- International embeddedness
- *Ability to transform*

SMART PEOPLE (Social and Human Capital)
- Level of qualification
- Affinity to life long learning
- Social and ethnic plurality
- Flexibility
- Creativity
- Cosmopolitanism/Open-mindedness
- Participation in public life

SMART GOVERNANCE (Participation)
- Participation in decision-making
- Public and social services
- Transparent governance
- *Political strategies & perspectives*

SMART MOBILITY (Transport and ICT)
- Local accessibility
- (Inter-)national accessibility
- Availability of ICT-infrastructure
- Sustainable, innovative and safe transport systems

SMART ENVIRONMENT (Natural resources)
- Attractivity of natural conditions
- Pollution
- Environmental protection
- Sustainable resource management

SMART LIVING (Quality of life)
- Cultural facilities
- Health conditions
- Individual safety
- Housing quality
- Education facilities
- Touristic attractivity
- Social cohesion

(Giffinger et al, 2007)
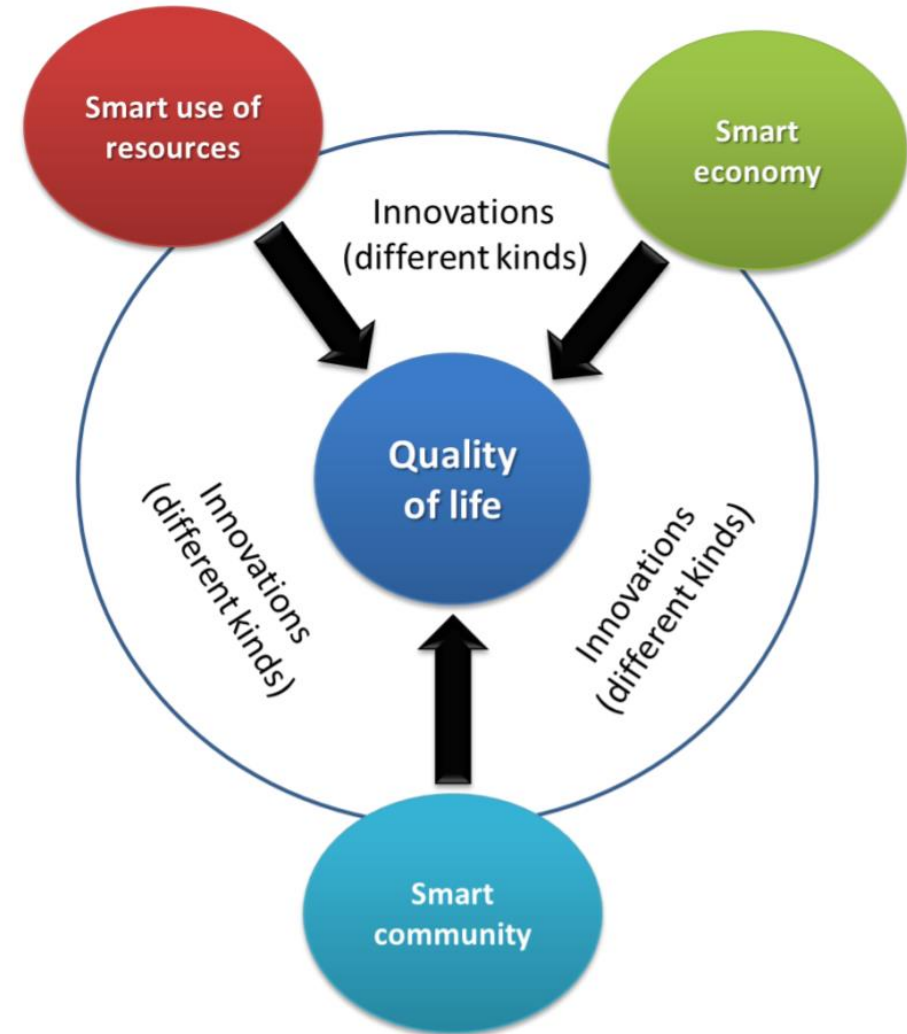
(Finka et al, 2017)

BETWEEN TEMPTATIONS OF EXPONENTIAL TECHNOLOGY GROWTH AND THE CONCEPT OF HUMAN CITY
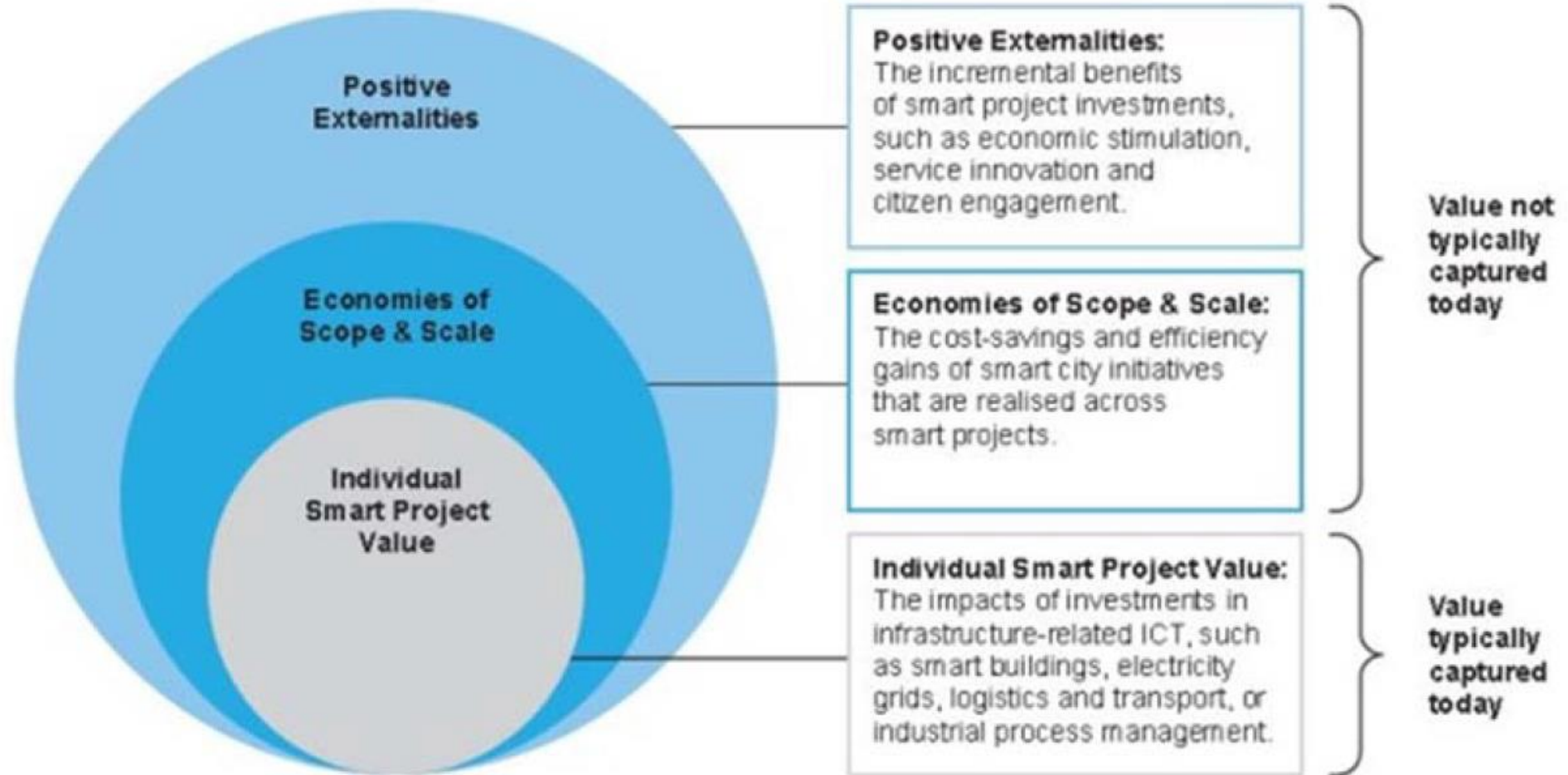
(The Climate Group, Accenture, ARUP, Horizon, 2012)

BETWEEN TEMPTATIONS OF EXPONENTIAL TECHNOLOGY GROWTH AND THE CONCEPT OF HUMAN CITY

Threats of Smart Cities

- a **panacea** for all urban ills (Varghese, 2016; Odendaal, 2015) & being '**trendy**' can hardly be the only justifying parameter

- being abstracted from social and cultural ties with their **built environment rendered obsolete**, and their overall existence undermined by technology (*Greenfeld, 2013; work of Graham and Marvin*)

- "**death of cities**, which are nothing more than leftover baggage from the industrial era" (*Mitchell, 1999:157*)

- "[technologies] can be a veil, **obfuscating the broader agenda and processes of neoliberalization** and accumulation by dispossession that may disadvantage citizens in the long run" (*Leszczynski & Kitchin, in press, In Kitchin et al, 2018*)

- **failing to make people smarter** as they do not enhance one's **ability to think for himself** and communicate with others as technology is rather trying to supersede these capabilities and in practice **might inhibit them** (*Sennett, 2012*)

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

SPECTRA
Centre of Excellence

STU
SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA

BETWEEN TEMPTATIONS OF EXPONENTIAL TECHNOLOGY GROWTH AND THE CONCEPT OF HUMAN CITY

Smart City Concept in Turkey

❑ 8 cities are expected to reach a certain sustainability level in terms of smartness by the year of 2025 (Frost & Sulivan report)

❑ National Level

  ❑ 5-Year-Development-Plans – Only 10th Plan 2014-2018 «Urban transformation and transport»

  ❑ National Smart Cities Strategy and Action Plan 2019-2022 «Smart city ecosystem, Massive investments, Turkey's capacity in terms of smart city practices»

❑ Local Level

  ❑ Regional Development Agencies «advisory role, funding for single projects»

  ❑ State Provincial Organizations «administrative role»

  ❑ Municipalities «the real responsible for smart city applications, public procurement, financing issues»

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

SPECTRA
Centre of Excellence

STU
SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA

BETWEEN TEMPTATIONS OF EXPONENTIAL TECHNOLOGY GROWTH AND THE CONCEPT OF HUMAN CITY

Case Studies by Function and Population

❑ İstanbul – Metropol (15 M people)

❑ Ankara – Capital city (5.4 M people)

❑ İzmir – Harbor and Manufacturing city (4.2 M people)

❑ Antalya – Harbor and Touristic city (2.4 M people)

❑ Bursa – Manufacturing city (1.8 M people)

❑ Adana – Harbor Logistics and Agriculture city (1.7 M people)

❑ Eskişehir – Central Anatolia University city (800.000 people)

❑ Denizli – Manufacturing city (550.000 people)

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

SPECTRA
Centre of Excellence

STU
SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA

LOCATION OF CITIES

Key notions from Turkish cases

❑ Strong position of the public sector, subcontracts to private companies

❑ RDAs supporting projects by grants

❑ Formal involvement of citizens esp. ex post

❑ Focus of the projects: transportation, digitalization, water, urban transformation

❑ Rise of e-government services

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

SPECTRA
Centre of Excellence

STU
SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA

BETWEEN TEMPTATIONS OF EXPONENTIAL TECHNOLOGY GROWTH AND THE CONCEPT OF HUMAN CITY

Bratislava Smart City Strategy

❑ 600 000+ daily visitors, part of Vienna-Bratislava metropolitan region

❑ Bratislava Smart City 2030 (*September 2018)

❑3P strategy, 12 key action areas (city governance, energy, mobility, public spaces etc)

❑Roadmap with actions in three time horizons, little regard for detailed time plan

❑28 smart benches Steora and Steora Urban+

❑New mayor, new focus

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

SPECTRA
Centre of Excellence

STU
SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA

BETWEEN TEMPTATIONS OF EXPONENTIAL TECHNOLOGY GROWTH AND THE CONCEPT OF HUMAN CITY

Nitra Smart City Strategy

❑ 78 000+ inhabitants, 100km from Bratislava, Land Rover Jaguar car factory

❑ "First Smart City in Slovakia" (*2016)

❑ 4 key principles: human/social capital investments; infrastructure (transportation, ICT) investments; intelligent energy management; use of modern technologies and solutions

❑ objectives to safeguard the vision: urban mobility; quality of life; intelligent energy; energy management

❑ bike sharing, car sharing, LED lighting, smart benches (20,607EUR for 6)

❑ E-government platform with 154 electronic services

❑ Absenting roadmap

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

SPECTRA
Centre of Excellence

STU
SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA

BETWEEN TEMPTATIONS OF EXPONENTIAL TECHNOLOGY GROWTH AND THE CONCEPT OF HUMAN CITY

Discussion

❑ **Big market** for newly established smart city projects

❑ Considerable problem for the implementation and acceptance of smart city interventions as **the number of beneficiaries** is limited and profits are shared with narrow group of individuals.

❑ Urban and rural areas **distribution**

❑ Main focus is **transportation/mobility**

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

SPECTRA
Centre of Excellence

STU
SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA

Discussion

❑ Smart is the **new green**

❑ Infusing the intelligence into each subsystem of a city **not enough** to become a smarter city

❑ Smart city of **2019** vs smart city of **1999**?

❑ Smart city in the city **strategy** vs smart city in **practice**

❑ Part of **political agenda**?

❑ Concepts tend to expire and the new ones are to replace the old ones...**what will be the new craze?**

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

SPECTRA
Centre of Excellence

STU
SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA

THANK YOU FOR YOUR ATTENTION

Ďakujeme ☺   Teşekkür ederiz ☺

Making City

References

❑Akgül, M. K. (2013), "Kentlerin E-Dönüşümü: Akıllı Kentler", *Anahtar Dergisi*, Mart, S.291, http://anahtar.sanayi.gov.tr, 12.10.2017.

❑Albino, V., Berardi, U. & Dangelico, R. M. (2015). Smart cities: definitions, dimensions, and performance. Journal Of Urban Technology, 22(1), 3-21.

❑Althusser, L. (1971). Lenin and Philosophy and Other Essays. Trans. Brewster B. London: NLB.

❑Arroyo, F. L., de la Fuente Prieto, J., & Perea, E. C. (2018). Connect Smart Cities and Heritage Through Augmented Reality. In State of the Art Virtual Reality and Augmented Reality Knowhow. IntechOpen.

❑Bilici, Z., & Babahanoğlu, V. (2018) Akıllı Kent Uygulamaları ve Konya Örneği. Akademik Yaklaşımlar Dergisi, 9(2), 124-139.

❑Chourabi, H., Nam, T., Walker, S., Gil-Garcia, J. R., Mellouli, S., Nahon, K., et al. (2012). Understanding smart cities: An integrative framework. Hawaii international conference on system sciences, 3(Conf 45), 2289–2297.

❑......

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

SPECTRA
Centre of Excellence

STU
SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA