

# SMART CITIES: HEADING TOWARD PANOPTICIONS OR SMART SOCIETIES?

BY  
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Smart cities – which municipal authority does not want them? The complex societal issues – “wicked problems” – of the 21st century really are made concrete at the city level. Whereas politicians in The Hague, Brussels or Washington can endlessly discuss thorny issues like, say climate change, traffic congestion or their own Wars on Drugs, municipal decision makers need to get their act together now. How are we going to heat our buildings in winter and cool them in summer? How can we make city traffic flow more smoothly while emitting less pollution? How can we prevent social disruption due to drug trafficking in the hoods?

The smart cities-concept is promising – or at least promises a lot – in addressing these real and persistent headaches. Two solution pathways are smartly designed physical infrastructure and the effective use of big data, respectively. Road networks are designed differently, homes can be made “intelligent”, the electricity grid smart and drones can help detect criminal activity. However, there is more. In the nightlife area in the Dutch city of Eindhoven, ever more ingenious data-driven technologies are being used to monitor the crowd. If a disturbance is likely to happen, enforcers receive an early warning. Should things still be getting out of control, crowd behavior can be manipulated by situated light and sound effects, and even well-chosen scents. Who could be against this?

At the end of the 18th century, the English philosopher and social theorist Jeremy Bentham proposed the “Panopticon”, a revolutionary prison design. The dome prisons in the Dutch cities of Arnhem, Breda and Haarlem are prominent examples. In a panopticon, a single guard can keep an eye on a complete prison. The idea is that its inmates do not know if and when they are being observed, resulting in them self-adjusting their behavior, “just in case”.

What does all this have to do with smart cities? In the Eindhoven nightlife area case, one could reasonably say that invisible observation of the crowd is in the common interest and the societal benefits outweigh the privacy risks, assuming the right legal checks and balances. Where to draw the

line, however? In China, the largest societal big data project in the world is being rolled out: the introduction of the Social Credit System. Based on a plethora of ongoing observations, citizens receive a personal social reputation score, with a far-reaching impact on their lives. Crossing a red traffic light can already result in penalty points. A low score can negatively affect somebody’s opportunities for getting a job, a loan, traveling and social status.

But something like this would be inconceivable in the West, right? Is that so? Once, I heard a city councilor of a large Dutch city proudly announce that he had signed a letter of intent with a huge Chinese corporation that would build the smart cities-data infrastructure in his city. When asked how the privacy rights of the citizens would be guaranteed, the councilor said that that would sort itself out. After all, in case of privacy violations, citizens would protest and take action. This, however, seems very much like wishful thinking. Such high-tech smart city-solutions comprise the intransparent collection of huge volumes of data, to be processed by very complex algorithms. Often, the results of these ever more advanced analyses surprise even their creators. Who then would still be able to take care of the interests of individual citizens and the common good?

It should be clear that smart cities- with all of their dizzying technological capabilities – should be more than a mass of isolated individuals, to be observed and manipulated by experts and officials from their Invisible Towers. Admittedly, smart infrastructure and big data provide many useful functionalities and are here to stay. There is also increasingly more regulation to address the worst excesses. At the same time, ongoing problems with influencing of elections by social media giants such as Facebook and Twitter show that effective action is not easy to take in practice.

Already in the sixties, the influential German philosopher Jürgen Habermas wrote about the demise of the public sphere, the commons where individuals can freely discuss societal problems from many different perspectives and then influence political action. According to him, causes of

the downfall included rampant consumerism and political control of the mass media by modern capitalist forces, resulting in increasing manipulation of the public sphere. The rise of the Internet only strengthened this process. Dutch opinion leader Jan Kuitenbrouwer even talks about the rise of the “data dictatorship” because of the enormous power wielded by combining big data and social media.

Something is amiss therefore in the smart cities idea. The emphasis now is often on the “smart” technologies, instead of on the “cities” as the melting pots of communities, together forming the local public sphere. The city teems with communities, rooted in neighborhoods, clubs, and associations, nurtured by culture, education, business, all kinds of services, and citizenship. A city connects its communities through its physical compactness and common meeting spaces. Its intelligence is therefore not just defined by its infrastructure and data, but by the combined imagination of the residents and visitors, this amalgam turning the city into a vivacious whole. As in the city numerous local communities meet, intertwine, influence policy making and engage in social innovation they jointly turn it into a “smart society”.

How to support cities as smart societies? One way is to (once more) invest in public spaces and activities which strengthen the connections between local communities. An impressive example is the recently opened LocHal in the Dutch city of Tilburg, a former locomotive revision hall of Dutch Railways, which the public library has turned into the “Living Room of the City” (making it win the World Building of the Year 2019 award). But this is not sufficient. Contemporary neoliberal society is characterized by a strong centrifugal force, which fragments rather than unites communities. Apart from public spaces and community building activities, an active process of reflection is needed. Through such sensemaking, local communities can define their common ground, their common agenda to jointly address the complex problems of their city more effectively.

In Brno – the second city of the Czech Republic – a forward-looking city council started a process



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of having a multitude of stakeholders together define a common thematic governance agenda with broad support from its many communities: #Brno2050. To further develop this agenda on an ongoing basis, an experimental process of reflection was started in which community representatives take part, supported by the trusted Brno public library. The first step is visualizing their “collaboration ecosystem” in a participatory mapping process: which organizations and target groups are interested in and working on what themes? In which collaborative activities do they engage? Which resources are available? The next step is to jointly interpret the maps in terms of the actual and potential “connection force” participants detect. What are the issues at play? Which connections are already there, or still missing? What are the priorities? What are the next actions? Who commits to what? This commonly built, used, and maintained “collaboration knowledge base” in this way can act as a driving force in making the city a smarter society.

All over the world, cities are the indispensable engines of societal change. Smart physical infrastructure and big data play an important role. Still, the current focus on these top-down developed and controlled high-tech solutions insufficiently acknowledges the importance of a healthy human public sphere. How to make this public sphere – with at its core a thriving network of local communities – align with an advanced physical infrastructure and ICTs of the city-as-a-smart-society still requires a lot of thought. Will you join us in that quest?

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## SHORT PIECE

# COMPUTER PROFESSIONALS WITHOUT BORDERS

## What Computer Professionals do with their free time? Volunteering

BY

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In November 2005, a group of Italian computer professionals decided to give their knowledge for bridging the digital divide and founded ISF, "Informatici Senza Frontiere" ("IT without borders") [1]. It is a non-profit organization with the goal of providing help to people living in situations of poverty and marginalization. With the main office in Treviso (in North-East Italy) now is present in most of the Italian regions with hundreds of members, men and women. Their activities span from Italy to developing countries, with courses, digitalization of hospitals and social centers, collaborating with schools, universities and prisons, retirement homes for the elderly and applications for people with disabilities. In May 2013 the UN invited ISF to Geneva for the World Summit on Information Society, recognizing its role and what



IT can do for society.

ISF teams have multidisciplinary competences, many years of real world experience and are supporting hospitals in Africa with its flagship project Open Hospital [2]. It is a free and open source software, particularly suitable for people who carry out digital projects in developing countries, it supports functions like keeping track of patient data, visits, hospitalizations, medicines and lab results for better day-to-day management. It was used for the first time in the St. Luke Hospital in Uganda and now in several others. ISF teams intervene also in emergency situations, providing all the necessary assistance for the restoration of IT infrastructures and services.

Digital technologies represent an essential prerequisite for social activities and participation and ISF is the realization, in its highest expression, of the international community mobilized to bridge the digital divide and ensure the most genuine form of democracy. Every year ISF organizes the "ISF Festival" in the city of Rovereto, Italy, where hundreds of members, citizens and students meet to discuss for two days updates about digital technologies, their social and ethical implications and about future projects.

### References

- [1] ISF, (2020). Informatici Senza Frontier. <https://www.informaticisenzafrontiere.org/en/>.
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<sup>1</sup>Note: this image was selected by the editor, as not only decorative, but to highlight Amsterdam's use of "smart technology" to power and control city lights. Several descriptions of this effort can be easily found via Internet searches, such as the description at, <https://www.smartcitylab.com/blog/urban-environment/amsterdam-launches-a-modular-urban-lighting-system/>.