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HOW STUPID CAN SMART BE?

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Abstract: This essay begins by reflecting on the fact that the city of Eindhoven has been declared the ‘smartest city in the world’ at a time when, paradoxically, it was suffering from major problems, including crime and air pollution. What could be lacking from such a model so that it has the potential to overlook important issues and become almost – paradoxically – ‘stupid’? How can we go beyond such an approach? This essay proposes a new model, coined ‘Sustainocracy’, based around core values, citizen science and community engagement. This model was developed out of the AiREAS project, which has improved awareness and facilitated action on air pollution in Eindhoven and other cities in Europe.

Keywords: smart city, citizen science, community engagement, sustainocracy.

It may be questionable to use the term ‘stupid’ in a scientifically oriented article, however we use the emotional opposite ‘smart’ all the time in our modern discourse about city and regional development. What does it mean? During an encounter in Dresden (Germany), representatives of 12 countries and 18 universities reflected about experimenting with smartness. I was invited to present the case of sustainocratic processes in Eindhoven (Netherlands) as they are being incorporated in CITIMAP, a venture covering six European cities. My presentation was done in collaboration with the University of Aachen (Germany) and ISSeP of Liege (Belgium).
1. Smart is relative

Citizens of Eindhoven (Netherlands) arrived at the question of what smart really is when their region was declared ‘smartest of the world’\(^1\) in 2011. The paradox of smart and stupid was relevant. An analysis of the situation of this town that same year revealed that it had been declared the most criminal city of the Netherlands, it was located in the centre of the highest human exposure to air pollution of North West Europe, and the effects of climate change positioned the town in a region of having to deal with much more than wet feet\(^2\). Why then was Eindhoven the smartest region of the world? Smarter than neighboring Helmond or Breda? Or European cities like London, Barcelona or Stockholm? Or in the world Shanghai, New York or Johannesburg? What defines the Smartness of a city?

Apparently the criteria for smartness in this case were the amount of patents registered as average per citizen, which was about 10 times (!) higher than anywhere else, together with something about the education systems in use. The public question arose on what we use all those patents and education for if in the end the community suffers criminality, sickness and dramatic environmental threats? How stupid can smartness be? Isn’t human wit best used to serve the core values of the community, such as health and safety, through social interaction, use of modern technological instruments and awareness driven innovation? If those patents only serve the economic wealth of shareholders of business enterprises located in Eindhoven, why aren’t they then declared the ‘smartest’ rather than the city or region? A city has to take care of its citizens in terms of wellness, quality of life and sustainable progress. Instead it claimed smartness produced by others. Is this smart? From a political economic perspective, maybe, and with large question marks due to the high costs of remedial actions and bureaucracy to address the consequences of such focus on stupid smartness. From a humanitarian and evolutionary perspective, it is not smart at all.

2. Smart is not relative

Due to a convergence of circumstances a group of citizens had mobilized in the Netherlands to redefine their own cultural and societal focus. The country had evolved into a care-taking hierarchy over the population. It had developed social securities in return for legally structured money contributions through taxes, insurance and pension schemes. A dual society has appeared. The care-taking hierarchy in need for ever growing large amounts of funding and the care-receiving community that has to finance it, no matter how, that had grown reluctant to take responsibility itself. Originally, back in the 50’s, 60’s and 70’s this post-war policy looked perfect to deal with the challenges at the time. The population concentrates on consuming and


\(^2\) http://ngm.nationalgeographic.com/2013/09/rising-seas/if-ice-melted-map
governance makes sure it remains consuming by taxing and creating remedial services. This way of dealing with society was considered to be the best option to keep peace.

Now, after 30 to 50 years, many people were suffering the consequences of these choices and became drop outs of a system that had grown more speculative and manipulative than supportive. Money driven realities are only smart when they serve the entire community but become stupid when serving just a few at the expense of everyone else, no matter how intelligent those speculative structures define themselves. Within the hierarchies of political care, financial abuse had grown out of proportion. Change was needed but difficult to achieve in a system of mutual dependence and financial steering.

Citizens grouped in the STIR Foundation and defined the core values for human wellness development and evolution of themselves and their community, referred to as the City of Tomorrow. These core values are:

- **Health:** We have reached a point of awareness in which our global and local health perspectives are in jeopardy due to pollution, manipulation, climate change and mismanagement of our resources. In nature everything is always healthy, whatever is not disappears, including humankind. Healthcare does not remediate lack of health, it repairs sickness.

- **Safety:** Without safety, not just in the sense of physical integrity but also respect for each other and our environment, a community cannot exist. Only with safety a community enters the self-aware dynamics of co-creation to achieve common values, else individuals concentrate on their self-interest and survival.

- **Regional self-resilience:** A community develops its main needs together and locally without dependency of others. Dependency from external supply chains makes a community vulnerable. Only when one produces sufficient abundance the option of exchange arises with others and other communities.

- **Awareness:** one can buy knowledge, not awareness. One can buy healthcare, not health. One can buy protection, not safety. Core values are hence shared responsibilities that are not part of democratic choices or political economic battles. They are the fundament of all life and progress. This deeper understanding demands community leadership to sustain harmony through permanent innovative change that assures the core values at all times by taking responsibility together in an ever changing environment.

- **Basic needs:** food, water, air, energy. These tangibles can be bought through financial systems, making communities vulnerable to manipulation, shortages and speculation. Whatever can be produced and shared within the community through symbiotic interaction with nature and use of knowledge or technology does not have to be bought and therefore reduces dependencies and enhances sustainable progress.
Such core human values do not only apply to the human beings but also to all life that exists on Earth. They are therefore as much human values as natural values requiring an intense relationship with our environment. We as humans are not dominant, we are part of it all and through our wit and creativity have excellent and even better changes than our fellow species to anticipate, survive and even evolve in all circumstances, including our own awareness breakthroughs. Within those core values we do not have a choice. Smart is necessarily and irrevocably related to the core values, everything else brings us into trouble as we see abundantly across the world today.

3. City of Tomorrow

A (city) community that leads itself by these core values is coined a Sustainocracy and involves as much local government, innovative entrepreneurship, socially-oriented science and citizens. They do not debate the direction of the community but define their priorities together to achieve sustainable human progress through measuring the core values. The City of Tomorrow is healthy, with healthy people and a healthy, productive relationship with its environment. Sustainocracy is the ‘new smart’ and citizen’s engagement the new economy for sustainable progress. The city of Eindhoven became the living lab for such initiative when citizens invited government, science and innovative entrepreneurship to join local AiREAS, a multidisciplinary and sustainocratic City of Tomorrow movement that focuses on co-creation of a healthy city through the measurement of air quality, civilian health and human dynamics (mobility and lifestyle).

The core value of Health becomes predominant in policy making, scientific research, innovative entrepreneurship and citizen’s science, yet can only be achieved through proactive interaction of all areas together. AiREAS establishes the optimum independent environment for this where executives, policy makers, scientists and citizens unite to interact purpose and results driven on the basis of equality rather than in the traditional hierarchy. AiREAS uses the three steps and a cyclic process defined by Sustainocracy, in which each participant represents itself and its self-interests, always within the context of the purpose driven and multidisciplinary commitment to assuring and developing quality of life.

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Cyclic three step approach used in AiREAS

**Step 1 (Look!):** In order to achieve expected results in air quality and citizen’s health we need data to see to what extent citizens are affected by pollution and how. The context to produce measurement is therefore necessary and needs to be determined in order to focus intelligence gathering for engagement into social innovation (step 3). In Eindhoven no measurement system was available at all. It was decided that for citizen’s involvement a fine maze, real-time, low-cost network would be needed that measures as many polluting elements as close as possible to the daily open space activities of the people. If people know their exposure they could be stimulated to take corrective actions themselves and together.

**Step 2 (Think!):** By the end of 2013 the scientifically defined network had become operational, and had helped develop a lot of insights into the cultural and behavioural patterns of the city’s population in contributing and getting exposed to air pollution, from ultrafine particles to larger pollutants, including gases such as ozone and NOx. But these data are only relevant when connected to information on the effects on individual health, and their relationship with other data streams, such as weather, traffic, cultural rituals, lifestyle, personal health issues and the whereabouts of individuals in town. In the field of interpretation, a large area of investigation and experimentation appears that places extra demands on step 1, the measurement system.
Step 3 (Act!): Still with the improvement of health and air quality in mind all kinds of social and technological innovations could be developed and introduced through persuasive techniques. We used the intelligence provided by the all the combined data streams and research areas to determine unique tools and mechanisms to involve citizens into three levels of engagement:

1. No engagement: people are reluctant to change their worldviews while operating their daily activities in a particular paradigm. If there is no perceived need to engage then people don’t and won’t. Here we also find the “silent majority”, the massive amount of people who do what everyone else does in a mentality of progress through the least possible effort. They may engage but if so they do this as followers of a (new) mainstream, unaware of their choices.

2. Passive engagement: citizens acknowledge the issue to be dealt with and adjust some of their daily decisions to benefit themselves from the knowhow, without necessarily contributing to the overall challenge.

3. Active engagement: here the civilians start contributing to the reduction of pollution by adjusting their lifestyle and daily choices. These citizens form the core of emerging markets to which new entrepreneurship engages. This entrepreneurship is often even initiated by these pioneers. Eventually they form the “positive example” to which the other citizens relate and gradually engage as followers of the emerging trends.

The learning process connects step 3 again with step 1 as a positive spiral dynamics that generates both new technological and scientific impulses for measurement and interpretation techniques as well as entirely new civilian awareness, business development and new economic waves for progress. AiREAS was recognized by external analysts as a peer 4 regional development structure, an awareness driven eco-system. It also received the European VINCI Innovation Award.

4. Other regions

Many other regions of the world showed interest and started to visit Eindhoven to see how this works. Their remark was often “if it exists, we want it too”. Even though they may not coincide in the priority of air quality and human health they all have strong issues to deal with related to combinations within the list of core values. Sustainocratic processes are equally relevant when regional leadership demands action in favour of local cohesion, co-creation and regional harmonic progress by avoiding or eliminating risks and dependencies. CITIMAP was initiated by ISSeP in Liege (Belgium) and involves six cities and multiple co-creation partners of the North Western region of Europe. They all want to be genuinely smart.
The paper should be referenced as follows: