

Wicked city problems; Creative cavalry to the rescue!

By Dr. A.A.P. Everts, 2017 March.

Resume

In this paper, I aim to clarify the value that can benefit from bringing creative thinkers into complex city challenges that were formerly addressed by experts. When expertise falls short, which often is the case in transition, as smart city related issues are, we need different resources like creativity, naivety, open minds, lateral thinking and design based approaches. Related to this I'd like to advocate working with people from the creative industries¹, not only on a product level, but first and foremost on the level of their mental structures, their mind set, cognitive predisposition, imaginary skills, turning issues upside down and inside out, ways of thinking and communicating. I will do this by elaborating a recent, specific case that can be seen as best practice and be extrapolated to (other) smart city challenges.

A complex challenge

In the northern region of the Netherlands lies one of the world's largest gas fields. It has been discovered in 1959 and exploited since 1963. With an average annual profit of about 10 billion euros it contributes with 40% to our state benefits. Partly the gas is for domestic use, a larger part is exported to foreign countries e.g. Russia.

Due to years of gas mining in this region serious problems have occurred regarding the substratum or deeper layers in the ground. Because of the extraction of gas the ground settles, this goes with sudden shocks or earthquakes. Some of them have reached a measuring of 3,6 on the Richter scale.

At the surface these underground movements manifest not only in damaged and demolished real estate. Of course, many houses suffer from large cracks in the inner and outer walls, an increasing number of houses are declared condemned dwelling or uninhabitable house. Some families had to leave their homes, some farmers and other businesses had to stop and move elsewhere, some schools had to be solidified, etc. A larger number of houses in this area can easily be identified by timbered braces around the outside walls to prevent them from collapsing. Also, the city of Groningen with approximately 200.000 inhabitants is affected. In the officially acknowledged affected municipalities (which the city of Groningen is not) about 30.000 houses suffer from damage.

For many years the gas mining was disputed as the source of these problems by the Dutch government and the companies that exploited the gas fields. Since 2012 this has changed and now the NAM (held by Shell, Esso and the Dutch government) officially acknowledge their responsibility and the claim that mining leads to earthquakes. This doesn't say that the region finds itself compensated or even sufficiently regarded as aggrieved party. A full-blown discussion is still going on between state government and NAM on the one side and the people from the region and local government on the other. Meanwhile the region gets increasingly deprived in economic and demographic aspect as well as in the perception of safety and liveability. Also, the housing market is

¹ 1. Advertising and marketing, Architecture, 2. Crafts, 3. Design (product, graphic and fashion design), 4. Film, TV, Video, radio and photography, 5. IT, software and computer services, 6. Publishing, 7. Museums, galleries, and libraries, 8. Music, performing and visual arts. (DCMS, 2001)

deadlocked; it's almost impossible to sell a house to a market-level price. It's fair to say that most people are not planning to leave the region, but those who are, have to sell with loss or can't leave at all.

All these earthquake related problems adds to a situation of declining population², a high unemployment rate³, relative low living standards⁴ and poor mean educational level (with exception of the city of Groningen).

Within this complex situation, a distinction is made between financial, technical, demographic problems as well as those regarding liveability, image, perception of safety, and economy. As far as liveability is concerned research pointed out that 1 on 3 households (> 15.000) in the earthquake affected municipalities feel unsafe, more than 4.000 people suffered from mental problems caused by earthquakes (source: Sociaal Planbureau Groningen, 2015). With every subsequent earthquake, these figures rise.

Local government struggling with all these matters approached TSI Foundation to help finding solutions or directions to address the liveability, image and economy related challenges. We gladly accepted the assignment, and here the journey started towards creative interventions.

Calling in the troops

As counts for most complex issues or wicked problems, bringing in expertise mostly is not satisfactory and surely not a guarantee for feasible solutions. For a large part this has to do with the so called 'waterbed-type' of problems; pressing away a blob in one place leads to another blob elsewhere, meaning that one solution causes a new problem in a different area. Inherent to wicked problems is that they are insolvable, blueprints are not at hand and working on an ultimate or final solution is like driving straight into the swamp of disappointment. So instead of expertise one has to rely on creativity and ingenuity and designing a step-by-step approach without capitalizing on finding the ultimate answers. Also in this case, we needed resources that could help us think outside the box and were familiar with these kinds of challenges. For this we relied on the Creative Council Northern Netherlands (CCNN) who invited people working in the creative industries. Among them architects, designers, game developers, artists of all sorts whom are used to work at the basis of creative problem solving.

We asked them not only to put in their creative skills but also a certain commitment on their behalf with the eventually spin off or follow-up in terms of implementing. This resulted in finding creative people from the earthquake affected region itself.

It didn't have any trouble to find creatives willing to participate in this endeavour. The situation concerning the region and its gas mining related problems were well-known as well as the sense of urgency and need to do something.

In a one day session about 30 creatives gathered around different thematic tables (liveability, economy, image and perception of safety) to work on designing suitable answers. After a warm

² Expectations are that only the population of the municipality of Groningen will increase (28% more inhabitants in 2040 compared to 2000). The largest shrinkage is expected to take place in the northern and eastern parts of the province, in particular the municipality of Delfzijl (35% less inhabitants in 2040 than in 2000). (Source: Sociaal Planbureau Groningen, 2017)

³ Unemployment rate increased from 6,1% in 2010 to 10,2% in 2015. (Source: Sociaal Planbureau Groningen, 2017)

⁴ One on eight households (13%) in 2013 are living on a low budget (was 9% in 2009). The municipality of Groningen counted 18% that same year. (Source: Sociaal Planbureau Groningen, 2017)

welcome an introduction was made to the program and participants were encouraged to be as bold as possible in their creative efforts. Each table had a host to make sure there was some alignment in the session and output would be caught on paper, in text or in drawings. Within a few minutes the room was buzzing with ideas.

What were the results?

In how far was breakthrough thinking involved? Were the ideas generated innovative, as in offering added value and feasible? Yes and no. There were no ‘shocking’ ideas or suggestions that would leave one speechless. But, as mentioned before, considering the complex character of the problem it would be unwise to work on or expect the one all defying solution.

The ideas generated can be divided into four clusters; ‘energy’, ‘tourism’, ‘living lab’, ‘health’, with some cross-cluster characteristics here and there. (fig. 1)

Remarkably most ideas were transition related, meaning that in one way or another they were connected to the contemporary fundamental and society based complex challenges. Almost as if the creative participants had made a secret agreement to focus collectively on these matters. Apparently, there was a hidden common trait within this group to regard radical systemic changes as most important.

The ideas generated for the most part had something else in common; they acted upon the earthquake suffering region as a given chance. The common denominator was that a situation as this, seems perfectly suited to transform the region into an immense living lab. The whole sum of regional problems was considered so bizarre that a drastic turnaround should be realised. The region, including all its villages, should be transformed into multiple testing facilities, attractive to innovative businesses and researchers. A large ecosystem for creative industries working closely together with educational institutions, citizens and business was depicted. The region would be an interesting facility for innovations from all over the world. Infrastructural, high-end technological, automation, alternative energy, mobility, etc. Every innovation could be tested, surveyed and monitored here with full cooperation of local inhabitants. Worlds’ largest test- and playing facility for societal innovation that would also generate synergy and lead to serendipity because of the presence of so many creative minds, conditions and innovations within a short distance.

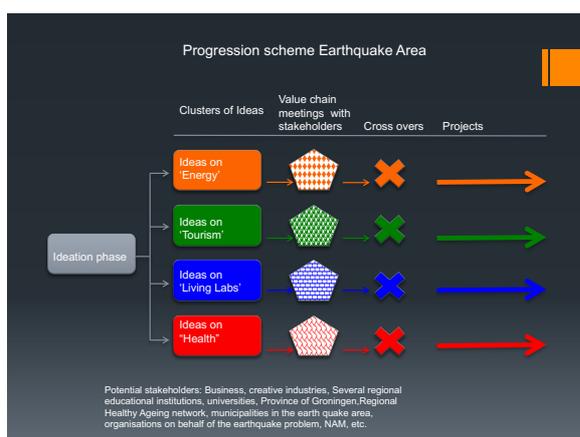


Fig. 1 Progression Scheme Earthquake Area

could be considered as quite costly. As long as the NAM was perceived as the opposite party instead of partner in finding solutions there was no willingness on the side of local governments to take the lead in investing.

Of course it is a challenge to put this imagination of the region into practise. Just like to make its large-scale character persuasive enough to pursue. That's the next step!

Also, other thresholds for implementing were present; first there was an ownership issue regarding the whole situation. From the perspective of the local governments and the inhabitants of the region the NAM was held responsible. They were regarded the party who exploited the gas (and still do), benefit from it and should solve the problem. Second, most of the suggested ideas from the creatives session

Meanwhile it's been over two years ago since the results were presented to the client and the discussion is now topical on testing a 5G network in the region as well as investing in testing out local, small scale alternative energy sources.

As one might imagine I'm inclined to see this as the start of something beautiful; the realisation of worlds' largest testing region; an idea stemming from creative minds formed in a co-designing lab two years ago. But something tells me there's a lot to be done before this can happen.

Innovation in need of creativity

As complexity increases we get more dependent on creativity. But even apart from complexity there cannot be innovation without a moment of creativity prefacing it. Creativity is the condition innovation can't do without, the *conditio sine qua non*. Once we realise the meaning of this premise, the urgency of making creativity possible springs to mind.

Regardless of the fact it's arguable that every person can be creative, creativity, innovation and designing skills can best be found within the creative industries.

The creative love to make mistakes, to discover things they did not plan. This is the base of innovation!

Penta helix

As city development is an ongoing process and complex challenges occur on a regular basis it's not a sensible idea to have creatives jumping in on an ad hoc basis.

There are a few reasons. First, when only invoking creatives when they're very much needed mostly means you're too late in reaching out. Problem solving as a process knows different stages and a lot of time can be saved by bringing in the acquired assets as early as possible. Most descriptions of problem solving processes start with an identifying or defining stage. Already it seems clear that

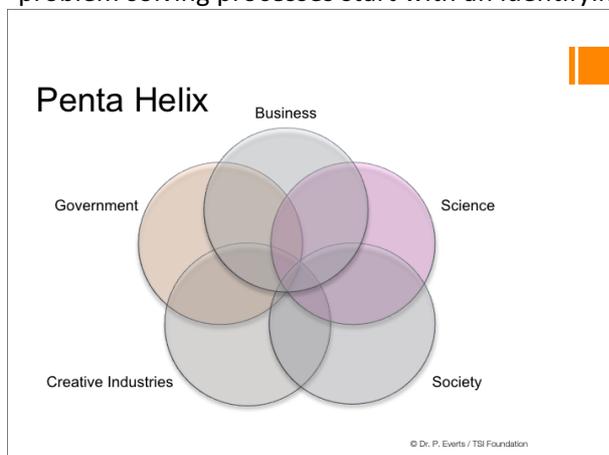


Fig. 2 Penta Helix

different ways of looking at the problem may be a first boost in the solution process.

Second, involving creatives only when in deep water leads to a rather instrumental relationship. When building partnerships, especially with creatives who as mentioned above have been placed outside the circle of influence, it's important to invest in continuity. Third, from the perspective of creatives being perceived as needed only when there's trouble, colours the perception in a negative way. It can be so much more beneficial for the relationship and the fun-factor to work together in designing or celebrating successes together.

This is why I propose the model of the penta-helix (fig. 2) in which there's an explicit part for creatives next to business, government, education and society / citizens.

In fact, this could be seen as an overview of parties constructing an eco-system in which all city challenges are permanently picked up in dialogue and a strong sense of shared ownership.

We're inclined to view the creative industries as part of business as a whole. Rather than this I propose to shine a separate light on this sector because it distinguishes itself purely on the basis of their strength to design and innovate. Seen this way we're not looking at a triple - or quadruple helix, but at a penta-helix.

Implications

Apart from the question if the results of the creative pressure cooker will ever be realised, it has demonstrated what can happen if a challenge is addressed by creatives and not experts. This immediately leads to questions as why is this not done more often, how can we scale up this possibility and what are the pitfalls and obstacles?

Creative Industries is divided, diffuse and fragmented

First, many people working within the creative industries do not see themselves as being part of it. E.g. an architect is likely to consider his profession as being part of the construction sector, a game developer sees himself as part of ICT. Second, within the sector and its different branches there is a relative low degree of internal organisation and alliance. Third; creatives tend to be internally focused and often work 'under the radar' and therefore sometimes are hard to find. If we want to make use of creatives in city building challenges, we need a linking pin with the sector as a whole. This role could be picked up by facilities as creative councils that are locally or regionally organised.

Repairing partnerships

Over the years creatives, particularly artists, have taken an increasingly eccentric position towards society. This is because of the premise of manufacturability. Our tendency in dealing with complexity became more and more dominated by control and constraint. By means of organizing, classifying, categorizing and simplifying we have tried to get grip on complexity. The more we assumed we succeeded by doing so, the more the idea of a manufactured society forced itself upon us. We needed managers and controllers, people to colour within the lines, there became less and less space for people to do things differently. Everyone who didn't compel to this rule was banned from the system; sometimes literally where creatives lived in the outskirts of cities or felt impelled to draw back into rural settlements. Their position towards society became the one of criticaster, shaking up societies comfort zone, confronting and holding up a mirror to the system they didn't feel part of. In a certain way, a distance has grown between the prevailing system of values and creatives. We have to bridge this gap if we want creatives to act constructively in cooperation with society, to cooperate, co-create, and to co-design.

What binds us most nowadays is the finding that the systems we have created have become obsolete and don't serve us any longer the way they did. There is a need for systemic transformation, otherwise called a transition. For this there are no blueprints available, how the new system we have to create looks like is unclear and certainly not manufactured. We need to experiment and find out. For this we need creativity, guts, stamina and imaginary skills. All these competences are to be found most easily within the creative industries.

This means we have to restore the bonds, invite creatives and convince them of their value.

Science and Educational institutions

For actual challenges as well as for future creative input our educational system plays an important role. Let's first look at the characteristics of the systems we know nowadays. Students are taught to reproduce knowledge, develop analytical skills and be critical. There's hardly any emphasis on producing, designing or creating. Even worse; space for creativity is restricted. Every student or scholar we know, including ourselves, has had the experience of being compelled to colour between the lines. The space for being different in thinking and acting is small and acting differently could mean a punishment would follow.

Governments role

A dedicated governmental policy on this matter is of eminent importance. Creative Industries should be acknowledged as crucial in encountering complex societal challenges. As one of the major owners of societal challenges government on different levels should invite representatives of the creative industries to brainstorm sessions, think tanks and task forces. Ownership, passion and creative thinking are to be used as important parameters in this invitation policy instead of sheer expertise.

More future orientated, governments' major challenge lies in investing in more space for creativity in the educational system. As long as this system is profoundly based on reproducing knowledge, conducting analysis and critical thinking there is no incentive nor motive for creativity.

Secondary, but not less important are the opportunities and potential creative industries represent towards employability and economic growth. Reciprocity is intensified when cities benefit from an increasing economic strength and in return creatives add value to the challenges cities are facing.

Market level rewards.

Over the last decades, we've witnessed a tendency to reward creatives for their contribution with a bottle of wine, gift coupons or a bouquet. After all what they did was their passion, isn't it? And they were offered a stage to shine.....

It's time for a reset; if we want creatives to act as valuable assets in our strive for a better planet, smarter cities or other transition related challenges, we'll have to reward them adequately and calculated in the estimates.

Be critical and keep an open mind.

Not every creative person has the ability to add value to societal challenges. We need constructive rebels, brave hearted authentic and committed people, sometimes referred to as 'flip-thinkers'. Sometimes their input is perceived as disruptive and can easily put us off. But beware; outside the comfort zone is where the magic happens.

Common language and new narratives

As we have seen in the past and to a certain amount nowadays, there's a difference in the languages that are spoken in a governmental context compared to a business context. Although free market idiom has entered the world of the not for profit, not in least because of the introduction of free market forces in domains that used to be ruled by state policy (energy, health care, communication), to a certain extent there still is a language preserved for each sector. Often these ways of phrasing are magnified in the other sector to underline the uniqueness of one's own. Or sometimes to mock the others.

Creative industries have their own subset of expressions. Many words spring from the world of arts and design, or sometimes a philosophical or intangible context. To outsiders these aren't always easy to grasp or rapidly leading to misunderstanding.

To gap the bridge in these different languages it's helpful to bring in translators; people that are familiar to both worlds and are specifically asked to focus on good mutual understanding.

Over time new narratives should grow to foster the cooperation between creatives and other sectors and reinforce the mutual trust that has been built. Narratives may concern best practices, heroes, failures to learn from, new codes, vices and virtues. The same narratives with comparable meanings should be told in each sector as an indicator for solid cooperation.

In conclusion

Calling in the creatives in your local environment to work on complex problems increases the amount of breakthrough thinking. The power of design is a constructive force that influences the approach of problems in a positive way. Especially where all seems to have been done and problem owners feel to be running around in circles.

Nevertheless, this cannot be done without considering the basic conditions needed to make the creatives' input possible. Creativity needs space and direction. This means one has to organize as few restrictions as possible as far as idea generation is concerned and simultaneously it has to be clear to what kind of 'dream' or ideal end-state ideas have to contribute. Besides that, creatives have to feel welcome and rewarded in their effort to contribute. This is easier said than done because of the convention poor style of communication creatives often are depicted by. The other side is that most creatives are sensitive, associative and often introvert which makes them notice what's happening. These features are important to create new solutions and make interventions.

We have to restrain ourselves from reacting on form and style. Instead paying close attention to the content and the implication of what is being put forward is key.

In a certain way one could argue we have to be able to speak the same language as designers or at least be able to understand it.

No matter how difficult, important or tantalizing the challenges we are facing, we have to be willing to join the creatives in their perception of pleasure and fun while designing (ways to) solutions.

This way their interference doesn't only bring us further, it also adds in a positive way to how we perceive the process.

Invite the creatives, approach and respect them as valuable partner or stakeholder. Chances are it'll bring you more than ever expected and most likely in a direction you never would have thought of.

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