In
New
Ways

Functional Cities 2015
– the active conference

RESILIENT
REGIONS
ASSOCIATION

Functional Cities aims to help cities become more attractive, effective and resilient in the face of today's and future challenges.

GLIMPSES OF FUNCTIONAL CITIES 2015

Introduction

The first conference was organized in 2014. We invited speakers and guests from cities, universities, private companies and governments to share their knowledge and various perspectives on how to implement urban resilience. The main goal of the conference was to create an understanding of how resilience can strengthen cities and maintain important societal functions. We sure reached that goal but also felt that we wanted to raise the bar just a little bit more.

THE ACTIVE CONFERENCE

We felt that the conference day was filled with great presentations, but far too many. Yep, we had fallen into the worst trap for all conference organizers: the death by PowerPoint swamp. However, the attendees agreed that Functional Cities 2014 was a great meeting place. During coffee breaks, participants had a chance to have cross-sectional chats about global and regional challenges for cities.

There were a lot of experts and competence in the room, competence that we just had to utilize. We overheard insightful and valuable conversations between different stakeholders about urbanization, aging infrastructure, disrupted technologies and climate change. Thanks to our own observations and valuable feedback from attendees, the active conference concept was born.

YOU ARE FUNCTIONAL CITIES

The aim of Functional Cities stands strong, but we will continue trying new methods to fulfil it. After all, Functional Cities and resilience is all about cooperation and being innovative. We encourage you to take an active part to form the future success of Functional Cities. Just like members of Resilient Regions Association do. Our community is as great as its members.

Think Global.
Act Local.

Cities and regions are facing global challenges ranging from climate change and urbanization to disruptive technologies with many more in between. We wanted to bring the conference participants closer to a number of selected challenges, and so we did. We know that these global challenges can be best solved on a regional and local level, in close collaboration between professionals from the public and private sectors. Together we wanted to turn these challenges into possibilities by finding new solutions and new methods.

Think Global, Act Local.

WORKING WITH THE URBAN FLOWS

Transformation of the Million Homes Programs

Many cities around the world are facing the challenges of rebuilding post war areas. These areas were built when the industrial age peaked and are variously named "Plattenbau", "Post War District" or the "Million Homes Programs". These areas were typically built during the 60's and 70's, designed as modern living in quiet neighbourhoods. City districts that are today centrally located but were once planned and built as urban suburbs.

Today these areas are in need of renovation, rebuilding and transformation. To be attractive, sustainable and resilient they are in need of new urban functions.

Are We Able to Build a Social Sustainable City?

In the past, Malmö was a large industrial city, especially in the shipbuilding industry. The major employer was Kockums which at its peak employed nearly 8000 workers. Since then, the dock-area 'Western Harbour' has been transformed into a fashionable area to both live and work in, with 'Turning Torso' as its proud symbol. Today there are about 8000 people working there – in 400 different companies. The Western Harbour is a success story when it comes to ecological and economic sustainability – but not social sustainability.

Other areas in Malmö are struggling with great challenges of unemployment and inequality. About one out of eight six-year-olds who began

pre-school in 2012 won't graduate and won't get a job. The price for that is SEK 6 489 000 000. And that's just for 2012.

"Between two different areas in the city we have great differences in ability for higher secondary school.
The lowest it's only 27%. In another area it's almost everyone, 98%."

Andreas Schönström, dept. mayor Malmö City

Andreas Schönström pointed out the difference in life expectancy depending on where people live. Between two areas with a biking distance of two minutes, life expectancy differs with six years. And he asked: Is that tolerable?

Malmö is a transit city. Only 23% of the population stayed in Malmö the whole time between 1990 and 2010. 20–25 % of the people living in the district of "Herrgården" today are going to move next year. People get jobs, an income, and they move.

"The solution to the problem is trying to get people who are getting jobs to stay put."

Andreas Schönström

Aware of the fact that the city doesn't know everything and is therefore in great need of its companies and civil society, politicians in Malmö are trying to find new alliances and trying to work in a different way, to solve the problems together.

"Are we able to turn the table?
Are we able to create equality in health?
Are we able to build a social sustainable city?
Well, those questions you have to answer!"

Andreas Schönström

Together for a
Better Life in the City

Patrik Faming is the national coordinator for the Swedish Platform for Sustainable City Development. He began his speech at Functional Cities 2015 stating the following:

"Functional and sustainable urban development requires a holistic approach. That's for sure."

Patrik Faming

Co-operation is necessary to promote sustainable development. The Swedish government has assigned the authorities the task of developing a platform for issues for sustainable urban development. The aim is to increase cross-sectorial collaboration.

Sustainable urban development is a continuously changing process. In order to meet the economic, environmental and social challenges while integrating potential development, work methods and competence in different fields are required.

During 2014, the Swedish authorities developed four focus areas, descriptions of areas with major challenges: human dimensions in sustainable development, capacity building, co-operation and financing framework.

"30% of all car journeys are shorter than 5 km. 20% of all journeys shorter than 2 km are made with a car in the city. Think about that."

Patrik Faming about the human dimension in sustainable development

Patrik Faming emphasized the importance of early dialogue with citizens when planning and building. Offen this dialogue is held too late to have an impact.

He also emphasized the need for cross-sectorial cooperation. The society is organized in sectors. They are often handled seperately and each player often prioritizes its special interest. Equal, flexible and cross-sectorial co-operation is obstructed by budgeting governed by each sector.

"Leadership requires courage, insight and knowledge. It's a key factor to sustainable urban development."

Patrik Faming

The Workshop

ENERGY INFORMATION GOODS SERVICE PEOPLE MONEY
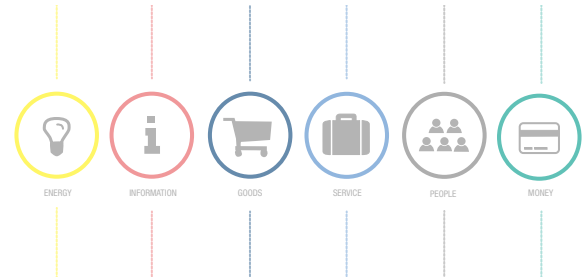
By using the concepts of Urban Flows, we will elaborate on this challenge to further understand underlying problems and explore the potential of the Million Homes Programs.

"Can we create 8 000 – 10 000 new jobs in our urban suburbs in the future? Can we create these districts where we both work and live? Hypothesis: We can!"

Magnus Qvant, Resilient Regions

THE MUSIC HUB

If we could create a hub, a core around music and sound there will be a lot of add-on services, a lot of add-on activities that really create attractiveness. The surface is always bigger than the core.

What if we place a music hub in these post-war districts? An area for academia and the private and public sectors to meet and develop the future sector of music and sound?

THE EXPORT CENTRE

The future is 'glocal'. The local market builds the global market. Global market knowledge, local market culture is next to everything.

What if we could create an export centre? The Million Homes Program areas offer lots of different languages and different cultures which are crucial assets in such a centre.

WORKING WITH THE URBAN FLOWS

If we're going to have these hubs, they need to be in functional areas. That means they need to have access to a lot of things. They must have functional urban flows.

We have found some inspiration in Bogota where they implemented a new public transport system. This led to a drop in homicides by 7% and traffic fatality decreased by 50%.

If you work with the flows of people, goods, energy, money, services and information in the infrastructure – then you will also have an impact in other areas that are not perhaps directly related to transport.

Time to workshop!

ATTRACTIVE CITY
FOR THE CREATIVE CLASS

SMASH!
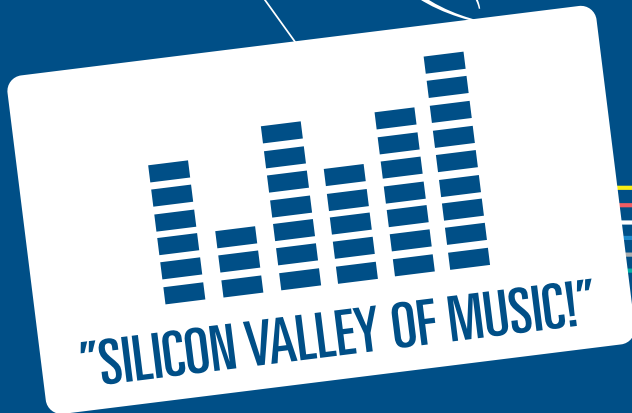
CREATIVE HUB

HEY YOU!
WE COULD REALLY
USE AN EXPORT CENTRE!

WORKING WITH
THE URBAN FLOWS
ADDING CITY VALUE CREATING RESILIENCE

ENERGY   INFORMATION   GOODS   SERVICE   PEOPLE   MONEY

"SILICON VALLEY OF MUSIC!"
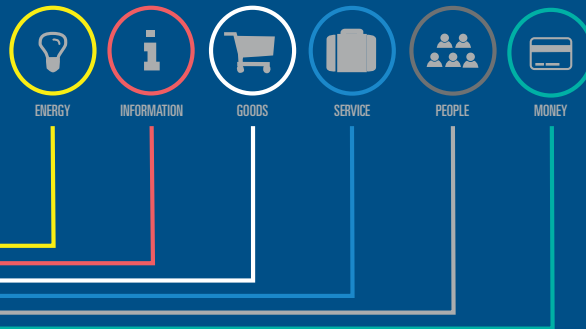
WHAT DO WE NEED TO REALIZE THE CREATIVE HUB FOR MUSIC & SOUND?

Breakout Sessions

We invited our friends from Cybercom, Vejle and UN Habitat to present their challenges and need for strategy options. The breakout sessions addressed the complexity of urban resilience. The challenges differed in scope but they had one thing in common – in order to be addressed they all require a multi-stakeholder collaboration.

What are the Components of a Big Data Strategy for Cities?

There's an increasing number of connected devices in the world, creating loads of Big Data – which may be used to create value!

The hunt for effectivity will increase, especially in the cities, and using Big Data may increase effectivity. Handling Big Data demands big caution, though. It needs to be transparent and it needs to deliver more value to the users than what's seeping.

"Don't only look at what you try to offer, look at the complete operation. For cities it's the six flows."

Peter Tyreholt, Cybercom

A Challenge from Velje: How Do We Create Resilient Communities?

A member of the Rockefeller Foundation's initiative 100 Resilient Cities, Vejle has put resilience on the agenda. Resilience requires a holistic view – and involves (resilient) community members.

"Members of resilient communities develop both individual capacity and collective capacity."

Jeppe Høj Christensen, Chora Connection

Vejle presented three challenge areas:
1. Coastal. Flooding is a challenge.
2. Post-industrial. Social challenges.
3. Resilient city of tomorrow. To build a new city, with today's knowledge, what would we do?

Framing Urban Resilience
– How to Make Strategic Choices

Cities are exposed to stress and various hazards. Urban resilience is a system of systems – social, environmental and economic. These systems need to recover quickly, the recovery is exponential and the consequences are high. Cities need to be committed but don't know what they need. Cities would be better off creating Resilience Action Plans, prioritizing and taking actions. Cross-sectorial cooperation into bigger projects may save money and deliver greater value.

"You are insuring your performance.
Performance is resilience."

Maíta Fernandez, City Resilience Profiling Programme, UN-Habitat.
UN Habitat is the main UN Agency responsible for ensuring the sustainable development of cities, towns and human settlements.

What is a Chief Resilience Officer?

The Rockefeller Foundation initiative 100 Resilient Cities is a network helping cities around the world to become more resilient to the physical, social and economic challenges that are a growing part of this century. In this effort they are providing support for a Chief Resilience Officer, a senior official who will work within the municipal government to support and convene a variety of different resources to build resilience in their city.

At Functional Cities 2015, we got to meet one.

Jonas Kroustrup is the Chief Resilience Officer (CRO) of Danish Vejle Municipality. Vejle is a member of Rockefeller 100 Resilient Cities.

A CRO is a person who can act as a missing link. Cities are very good in specializing in different divisions. Connecting subdivisions and other stakeholders is a key function for the CRO.

Jonas works directly under the Mayor and the General Manager. This means lot of backup, on the other hand he doesn't own any resources.

"Resilience is a very abstract topic."

Jonas Kroustrup, CRO Vejle

Being a member of 100 Resilient Cities, you get a city network with like-minded persons to speak with.

"Sometimes it's like when you meet somebody that has like you a very rare disease, and you feel like FINALLY! There's somebody who understands me!"

Jonas Kroustrup regarding contacts with the 'relationship city'

Resilience is very much about change, demanding that we change the ways we work. Finding common understandings that we need to work with how to solve things together. It's a maturity process with getting people on board. The term has been used professionally in many organizations but for most people it's new.

"It's like when you heard of sustainability 20 years ago, people thought it was only about green stuff whereas today it's a really really huge concept."

Jonas Kroustrup on resilience

Cooperate. Innovate.

FROM SOLUTION TO PROBLEM

Most products and services have been designed for a specific problem. We experience that problem owners often focus on solving their own issues as smoothly and efficiently as possible, that there is a lack of interest in problems that they don't have any involvement in. On the other hand, solution providers often focus on developing their own products and services, eager to refine them to perfection. Rarely is an existing solution redesigned to match anything other than the intended problem. However, based on the technique behind products or services, there are millions of other problems that could benefit from it, with some adjustments. So we addressed this issue in the following session.

More is Not Enough Anymore

Keynote speaker Charbel Aoun, with life long wisdom and experience from leading positions in the high tech industry, spoke about the need to understand the world we live in. Industrialization was a key factor in urbanization, digitalization is shaping the new generation. Yet, cities are not connected. There's a gap.

"If I'm not a smart city
– does it mean I'm a dumb city?"

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Charbel Aoun, Enevo

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Since the beginning of cities, objectives have been delivering growth, quality of life and sustainability. The meanings of these concepts have changed, but it's still about servicing people.

Now there are different challenges and different tools available, to transform cities to compete. With lessons learned from hitting the wall trying to sell technology solutions to cities, Charbel found problem-solving ways to work the city management silo systems.

"It's all sensing and actuating."

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Charbel Aoun on how cities work

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Combining information technology (IT) and operational technology (OT), where the data is, you end up with IOT which was described as psychologically more accepted by cities because it reflects everything they do. Sensing and actuating.

"It's a large monster to crack,
but we need to start somewhere."

<div align="right">

Charbel Aoun on transformations of smart cities

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How to solve the smart city puzzle? Charbel

Aoun described it as 'very simple'. What is 'smart'? The answer to that, what and why, must come from within. Focus on 'how'! Think big, look forward fifty years. Stop building, scrapping, rebuilding – instead, build something that's sustainable.

"Birds of the same feather flock together!"

Charbel Aoun on successful collaboration

As an example of successful collaboration and innovation, Charbel finished with how Enevo provides conditions for smart waste collection. Cloud-communicating waste bin sensors create value for the city and reduce collection with up to 90% in some places.

"There's a lot of value to technology if it's put in the right context. If it solves something that the city wants to solve."

Charbel Aoun

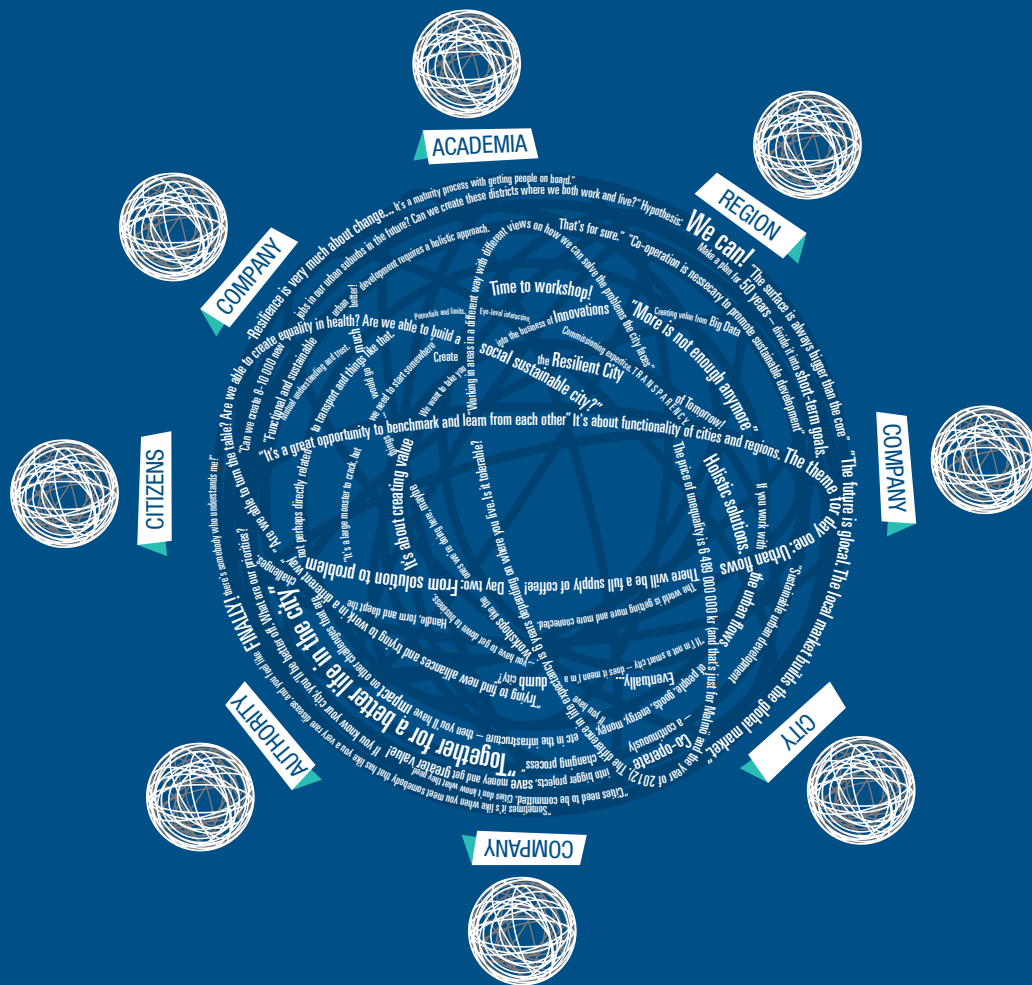# Finding New Uses for Existing Technologies: Workshop Teasers

Time to dive into solutions from six different companies! The companies had five minutes to pitch their solution before it was time to explore and pair it with a unintended problem.

The aim of the session was to give the business sector new market ideas, and provide the public sector with inspiration. Can you imagine that we gathered participants from different sectors around the table to discuss an existing technology and possible uses for it? We dare to call that true innovation and collaboration.

- Automatic Number Plate Recognition cameras can be used today to automatically read registration plates on vehicles. Can they be used in other applications to enhance resilience? By Siemens.

- A platform originally developed for information sharing and communication within organizations. Today a tool for smart and secure communication cross-administrational borders, by Crowdsoft Technology.

- IoT-/analysis platform, which allows you to act in real-time and integrate with other solutions in an easy and secure way, by Sigma.

- Cloud-based management of critical business processes, resources and recovery plans that ensures business as usual, by 4C Strategies.

- A logistic solution for waste management, which uses wireless sensors in order to measure and forecast fill-levels of waste containers, by Enevo Inc.

- A unique self-learning system, which organizes information and presents it as a tapestry of events, people and organizations, by LearningWell.

WHAT IF...

...WE GATHER

PEOPLE

MEMBERS OF

COMMUNITIES

TO TALK ABOUT

RESILIENCE

TO CHANGE

THE WAY WE WORK

COME UP WITH NEW IDEAS

FOR A BETTER WORLD

OF TOMORROW?

OH, WE DID!

ACADEMIA

REGION

COMPANY

COMPANY

CITY

COMPANY

AUTHORITY

CITIZENS

Innovations of Innovations:
The Outcomes

Sigma's 'Sensation' could be used as a platform or umbrella for resilience. In this case, resilience could be different kinds of information sources from sensors. We can collect information and use it as a base for investment decisions.

"Areas of application could be a lot wider."

Workshop participant on Sigma's "Sensation"

The Crowdsoft participants were discussing in two main directions: 1. How to involve the public. 2. How to involve more professional actors.

"I think we realize that there is a communication problem today. Awareness is slowly growing."

Workshop participant regarding the demand for this kind of technology

Siemens solutions could be used in the future energy system, in traffic flows (e.g. adaptive bus lanes and emegency lanes), in healthcare and also to handle flooding challenges.

"Not only to act on flooding but also act preventively, to make sure there will be less flooding."

Tina Karlberg on possible use of Siemens technology

The largest consumers of LearningWell's unique system are the Swedish and the Swiss armies. But could it also be a tool for a network like Resilient Regions, to gather information around resilience? Maybe Resilient Regions could create a Nordic network of cities? Another area of use that was discussed was in the growing business of mobile health.

"We can do all those things. But we're always working with open data, we're not going into the journals."

Joakim Tornhill, LearningWell

Enevo has brought tweeting trashcans to the world, but their system could also be used in collection of for instance sludge waste. Transports are annoying! Septic tanks are a shitty business! It would add values like less wear of the roads, less noise, less traffic, less dust, less smells, better prices and last but not least a higher awareness of how we use water.

"Septic tanks are a shitty business!"

Workshop participant

A tool to insure quality of service, both avoiding risks and insuring continuity so that we have power and tap water all the time. 4C Technology's Risk management system provides criteria for prioritizing and quantifying both risks and assets.

"It lets us talk about risks and the prices for medicating risks and what downtime we are willing to accept."

Workshop participant

City-Business Collaboration

ICLEI is focusing on commercial partnerships – how do cities and the private sector work together and what can be improved? Some of the continuum starts from a very early stage where actors sit together and talk about what the society needs and what should be done in the city – pretty much an exercise like the one we had at Functional Cities 2015.

"Eventually you have to get down to business."

Roman Mendle, ICLEI

Between the initial discussions and the business-making, things are sometimes missed. It could be vested interests or political agendas. Finding the partner overwhelming, complex

systems, shareholder accountability or business-incompatible needs.

Things may also emerge like mutual understanding and trust and getting potentials and limits of the partnership right. Eye-level interaction is important. As well as transparency, commissioning expertise and holistic solutions. You need to know how your partner functions.

"If I don't understand it, I don't need it."

Roman Mendle on the importance of wrapping into holistic solutions

In the end it comes down to how you involve people. It's about having a common dialogue basis where you understand each other, and maybe down the road something comes out of this.

"If you have workshops like the ones we're doing here, maybe things would go much better."

Roman Mendle on Functional Cities

Networks

Resilient Communities are regional platforms and cooperation around a specific region's functionality, attractiveness, effectivity and resistance to pressures.

A Resilient Community can be started up in any region or large city. The target group are the actors responsible for systems in the region: municipalities, regions, county councils, private business, researchers and other actors who want to work on the challenge to create high quality of life in a resilient, smart and attractive region.

RESILIENT
REGIONS
ASSOCIATION

Resilient Regions Association is a neutral arena where the business sector, municipalities and government agencies meet to solve regional challenges. Together we build a more resilient society with robust functions and flows – a society with the ability to quickly overcome and recover from societal pressures.

www.resilientregions.org