Connected Smart Cities – Innovation Ecosystems:

Innovation Ecosystems session demonstrated an approach which is cities and citizen driven and backed by industry. The session aimed to prove that innovation ecosystems can be valid mechanisms for the creation of cities enablement platforms with simple standards for interoperability and near real data exchange from connected cities.

Innovation Ecosystems – part I
Moderator: Gohar Sargsyan, Member of the European Commission's DG CONNECT's OISPG group and Partner/ICT Innovation lead EU at CGI Group Inc.
- From triple helix to quadruple helix innovation including the users/citizens for the complete ecosystem.
- Need for creating venues and commercialize the results and processes.
- Experimentation as intermediary layer – ENoLL here, OASC already in the transition to the commercialization as an enabler
- Digital transformation enables the participation of the whole ecosystem

Nicolas Walder, Mayor of Carouge:
- Carouge is part of the movement to work with new technologies to bring new services to citizens
- Participating in the SynchroniCity project, leading the Smart City initiative in the state of Geneva.
- Security and vivid community as key areas.
    - Public governance coordination
    - Governance involving the whole community
- Testing two projects in Carouge
    - 3D mapping with connected sensors monitoring the noise
    - Parking monitoring – online assistance to street parking places, offer coupons for public transport and parking

Panel:
Ingrid Willems, Manager, Creative Ring
- Cities are attractive for young entrepreneurs to work together; they need the ecosystem in order to be able to grow.
- Creative Ring offers access to the initiative
- Creativity & entrepreneurship is a critical element of an innovation ecosystem
- Today Creative Ring is Eindhoven, Brussels, Aarhus, Barcelona and Gent working together
    - Sharing best practices, building bridges between creative ecosystems, working on novel approaches and using new technologies
    - Incubating & accelerating creative entrepreneurs
- Last year a FIWARE accelerator project, this year focus is on Creative Challenge 2017 – WEAR, wearable technology

Davor Meersman, City of Things Lead, imec - City of Things & Smart Flanders
- How was a smart city ecosystem built in city of Antwerp?
- City of Things project creating test and validating IoT service applications and technologies – establishing infra on 1. IoT enabling IoT communication – technology lab 2. Living lab
- Sharing economy – getting benefits from using services gets more important
- Focus on big data, IoT and on Internet on humans
- Living lab – panel management, real time feedback. Gateways all over the city. Air quality monitoring case providing real-time view of the air quality.
- City becoming an actuating environment

- Smart Flanders: Developing coordinated Smart City programme for 14 largest cities in Flanders and Brussels

Louise Overgaard, Innovation Office, City of Aarhus
- Citizens in the center – involving them via questionnaires, debates and in more active ways such as introducing school classes to Smart Cities.
- Involving also relevant city stakeholders as for example people working for the city
- Participate in projects involving citizen engagement
- Implementing LPWAN in the city
- Involving business developers from the city, external business developers and the citizens in creating new IoT solutions
- Aarhus City Lab – knowledge buildings, a lot of inhabitants, traffic – gathering various needs of the city, inviting people to be part of that.

Auke van den Hoek, Vice President, PayQueste
- Offering of services to public in rural areas is declining, there is conflict between social welfare and economics
- Goals: preserve or restore livability in the rural areas, need healthy local economics and this way you have social welfare
- Solution for this is the ServiceCorner – a self-service centre with a healthy business-case behind

Complete different perspectives in the panel – complement well for getting a whole picture of innovation ecosystems

Innovation Ecosystems – part II
Moderator: Zsuzsanna Bodi, Acting Lead, Project and Business Development Manager, European Network of Living Labs
- The market creation element – market-creating innovation potentials by digital technologies and business model innovations at the interface of different sectors, technologies and disciplines
- How the Quadruple Helix approach can support large-scale pilots and address legal and standardization requirements as well as citizen/user/consumer involvement
- Living Labs explained:
  - How to bridge the gap between start phase and commercialization with people?
  - Empowering everyone to innovate
  - Convincing the economic benefits for companies when involving the living labs in the service creation

In this part of the session, the participants divided according to their areas of interest for interactive co-creation and information sharing sessions. The sessions were led by Living Lab experts and were divided into four thematic groups:

Academia/Research session - led by Dr. Dimitri Schuurman from imec.livinglabs:
- Challenge: how can academic research be flexible, agile and able to create value for all stakeholders? Universities conduct fundamental research, exploration in the focus; Living Labs have applied researchers, experimentation in the focus
- Findings from the session:
  - Participants agree that it is a challenge to involve academia in QH, but that it provides high added value
  - Academia = the actor that can observe, learn and intervene in QH interactions and set-up

- o   Difference between project research activities and research carried out on these activities = meta-research
- o   This 'meta-research' should involve wicked problems, QH-interactions and network characteristics → understanding and grasping QH
- o   Academia also in charge of generating project methodology → iterative process + 'action research' as method and tool
- o   Solution: differentiate between 'applied' academic researcher active in QH-projects and 'fundamental' academic researchers active on relevant topics for the QH-organization → provide interaction spaces for both so that the applied can test and experiment with propositions from the fundamental researchers, while the applied researchers generate propositions out of practice that are fed back to the fundamental researchers

Business session - led by Quadrio Alves from Future Cities CGI & Yilmaz Czakir from Basaksehir Living Lab:
- • Challenge: How can the business/industry effectively use the Quadruple Helix model and help aligning large scale pilots to city objectives?
    - o   How can the business make sure large-scale pilots can contribute to city objectives?
    - o   How to assess city maturity based on industry key performance indicators?
    - o   What is the role of business/industry to the outlined steps?
- • Difficulties experienced with private sector – challenges
- • Findings from the session:
  What is needed is:
    - o   citizen participation
    - o   good communication channels
    - o   to learn from best practices
    - o   sustainability of projects
    - o   strategy from the city management
  Problems/challenges:
    - o   silos (when different units work on the same problem, but are not aware of each other's work)
    - o   culture can be an obstacle (e.g. countries such as Portugal), therefore there is a need for better communication
    - o   "buy-in" by city management

Government session - led by Wim de Kinderen from Brainport EU Office, Eindhoven Living Lab:
- • Government in QH co-creation
- • Findings from the session:

During the Government/Public respective group discussion mainly Data Privacy related questions, issues and some recommendations were brought up, especially about the ownership of produced data.
Similarly, some best practices were mentioned by participants, used in different cities and various environments - e.g.: who owns the data produced in LivingLabs? Startups offered to use facilities and producing data - who is the owner of produced data?

- o   What kind of data can be shared on a city level?
- o   Where and who the data belongs? Example of Eindhoven (municipality has access to/visibility on most of the data)
- o   "data created by the citizens is owned by the people" - how does it work in practice?
- o   municipalities should set examples rather than frameworks
- o   better awareness is needed between citizens and the creation of trust especially for Data Privacy matters

- o different examples of shared data in different cities (example of Antwerp, portable sensors - improving air quality, city selling its captured electricity consumption data to private companies and as a result lowering electricity prices)

People/Citizen Engagement session - led by Marita Holst from Botnia Living Lab:
- Challenge: Engaging Citizens in IoT projects (LSPs):
  - o Mobilizing – how can we reach users
  - o Management of user groups
  - o Trust & privacy
  - o View on users (A or F) – actors or factors – risk that citizens are invited as factors, but want to engage them as actors
- Findings from the session – what to consider when engaging the citizens:
  - o How to get the citizens' needs?
  - o How to make citizens competent? Associations/communities
  - o Balancing the perspectives
  - o Security issues
  - o How to engage? Informing – validation – experimentation
    - ▪ Difference in working for – with – by people
  - o How to deal with different interests?
  - o Are people willing to share data? Who owns the data?
  - o Raise interest, this is how you get attention of people