

ITEA PO Days 2022

Creating customer-oriented research projects with impact

ITEA PO Days 2022, 13 September - Helsinki
Jean-François Lavignon, ITEA Vice-chairman



Agenda

- Current trends
- Smart Health customer workshop take-aways
- Smart City Advisory Board meeting results
- Cyber Security Advisory Board meeting results
- General advices

Current trends

What are the hot IT technologies?

Smarter devices

- More powerful
- Integration of applications: natural language processing, image recognition, recommendations

Cyber security

- Increasing risk for individuals and companies / organisations
- Emergence of solutions but not yet at the right level

Hyperautomation / Robotic Process Automation

- Automation of business processes such as interpreting applications, processing transactions, dealing with data, and even replying to emails
- Repetitive tasks can be automated to increase productivity

What drives digital transformation?

- AI and digital twin are corner stones of digital transformation for high the sectors
- New AI methods
 - Coupling with explicit knowledge
 - New methods for improved / more productive learning
 - Explanation
 - Collaboration with human
- Data integration
- PaaS (Platform as a Service) is gaining attraction and pushes towards API (Application Programming Interface) driven development

Societal trends

- Hybrid-distributed (home office / company office) organisation
- Technology for good
- Energy concerns - Sobriety
- Sustainability and environmental concerns



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Smart Health customer workshop



ITEA 4 is the Eureka Cluster on software innovation



Smart Health customer workshop

Importance of healthcare

■ Economic importance

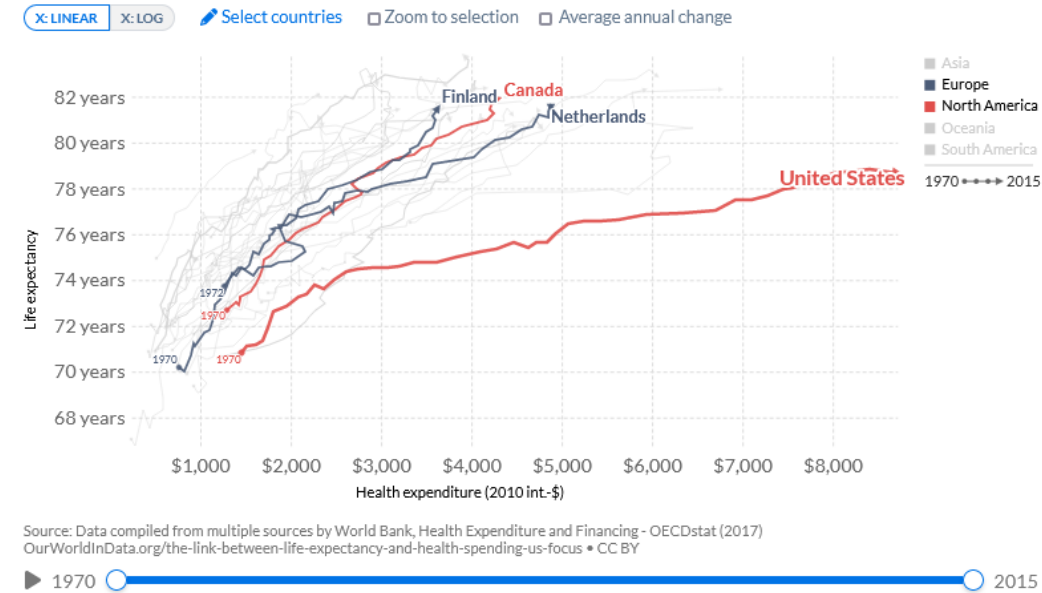
- Steady growth of health sector
- 10% of GDP (from 8% 2000)
- Complete ecosystem in Europe and North America economy

■ Social expectation

- New solutions to cure diseases
- Strong support to invest in healthcare system
- Higher priority for healthy lifestyle

Life expectancy vs. health expenditure, 1970 to 2015

Health financing is reported as the annual per capita health expenditure and is adjusted for inflation and price level differences between countries (measured in 2010 international dollars).



From <https://ourworldindata.org/the-link-between-life-expectancy-and-health-spending-us-focus>



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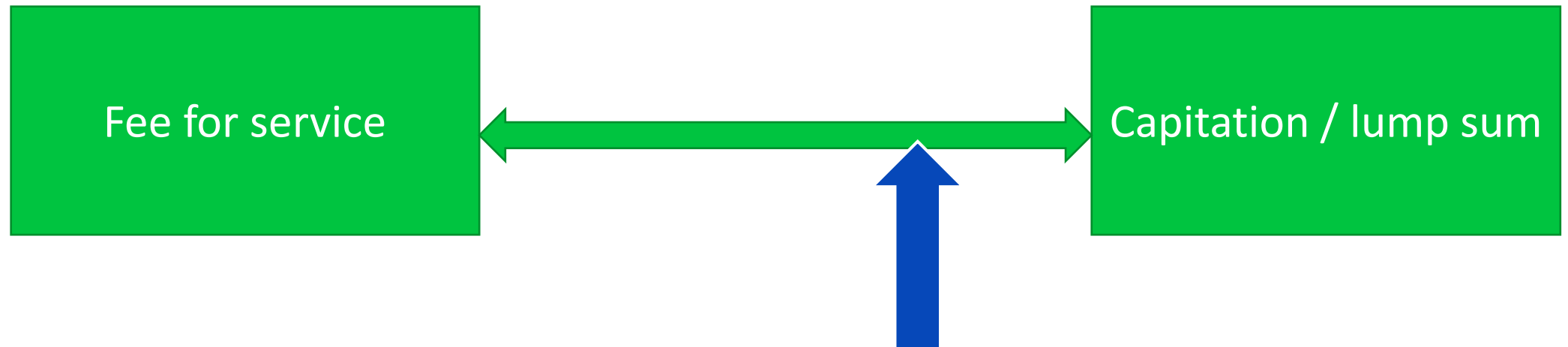
What are the technology trends

- Spreading of powerful end devices
 - New sensors
 - Spreading of capable smart phones
 - Communication
 - Imaging
- AI
 - Not new anymore
 - Return of experience
 - Difficulties to move from AI pilots to AI in production
- Software innovation
 - Aggregation of data
 - Mediation between human operators and complex systems
 - Support for caregivers to focus on what really matters



Trends and Challenges: Value-based healthcare

- Care should have value for the patient
- $\text{Value} = \text{Outcome} / \text{Costs}$
- Measuring (outcomes)



Porter M (2006). [Redefining Health Care](#). Harvard Business Review Press. [ISBN 9781591397786](#).

Trends and Challenges: Value-based healthcare

- Challenges; outcome measures may result in:
 - More administration
 - ICT demands
 - Privacy issues
 - Synchronisation of total care system
- Difficult for comorbidities / multi-organ disease
- Changes for Caregiver, Insurers, Management, Politics
- Changes for pharma, medical device industry

Smart Health customer workshop

In a nutshell

■ Participants

- 16 participants from the healthcare sector
- 10 participants from large industries providing solutions to the healthcare sector
- 10 participants from SMEs that innovate for the healthcare sector

■ Set-up

- Introduction session
- 5 round table sessions
- 4 brainstorming sessions
- 14 ideas proposed
- Closing session

Smart Health customer workshop

Highlights from the brainstorming sessions (1/2)

Telehealth

- Quality of measurement system and of the data transmission
- Personalisation of the monitoring
- Staff training and organisation

Hospital optimisation

- Patient centric approach
- Multi-user platform for care planning and for collaborative decision support
- Therapy automation under human control



Smart Health customer workshop

Highlights from the brainstorming sessions (2/2)

Towards prevention

- Assessing the impact of prevention at personal and global level
- Personalised motivation strategy
- Integration of prevention and healthcare system

Data exploitation

- Integration of data sources
- Privacy and cyber security concerns
- Data management systems

The full detailed report
can be found on the
ITEA Project idea tool

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Smart City Advisory Board meeting



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Smart City Advisory Board (SCAB) meeting

Participants

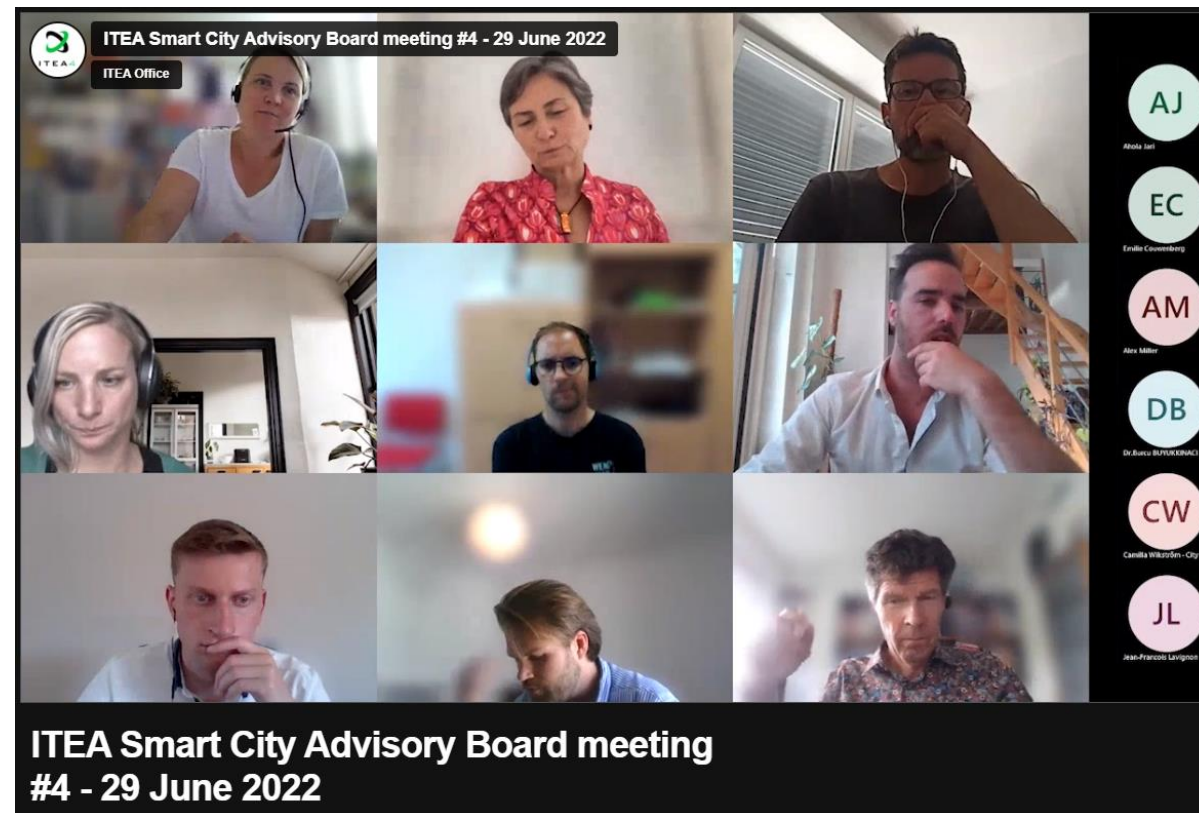
SCAB members attending June 2022 meeting:

- City of Antwerp
- City of Brno
- City of Ghent
- City of Istanbul
- Region of Nordhessen / City of Kassel
- City of Stockholm
- City of Tampere
- City of Zaragoza

Additional cities that joined the meeting:

- City of Eindhoven
- City of The Hague

Keynote presentation by Esri Canada



Smart City Advisory Board (SCAB) meeting

Results

Challenges shared by the city representatives were:

- Mobility in the city
 - First & Last Mile Delivery
 - Data integration for route planner
 - Use of UAV
- Use of new IT tools for fostering citizen engagement
- Customised services (business, pedestrian, students, tourist...)
- Technology demand: data management and digital twin of the city

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Cyber Security Advisory Board meeting



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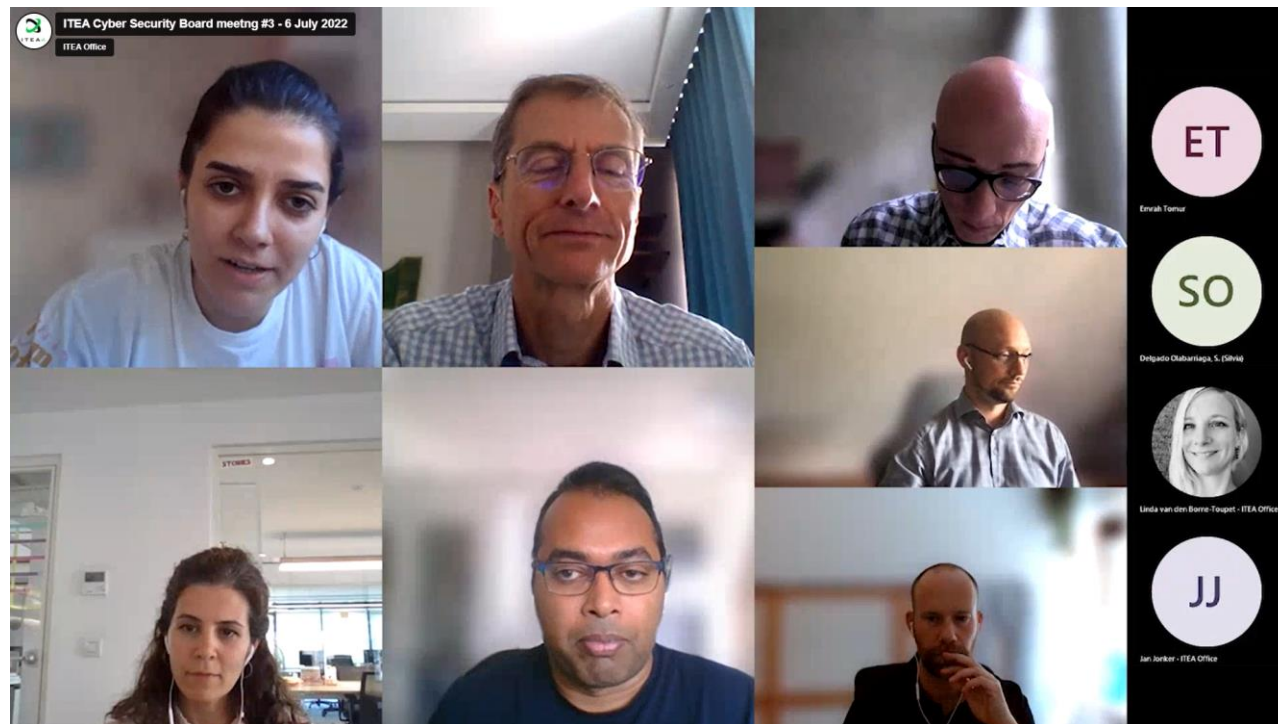


Cyber Security Advisory Board (CySAB) meeting

Participants

CySAB members attending last meeting:

- Amsterdam UMC
- Armengaud Innovate
- Ericsson
- Koç Finans
- Saab
- Siemens Transport
- Signify
- Turkcell



Keynote presentation by Atos

Cyber Security Advisory Board (CySAB) meeting

Results

Challenges shared by the CySAB members were:

- Trust within the supply chain
- Management of multi-stakeholder services
- Real-time detection of threats
- Cloud service management
- Internal attack detection

The full detailed report
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General advices

Impactful ITEA proposal

- Define which impact is targeted (KPIs), for which customers & end users
- Describe clearly your innovation challenge
- Choose a light consortium, no sleeping partners, a partnership with a purpose (extract from the **value chain**)
- Check eligibility for funding with PA
- Don't just collect text from everybody but share a clear and compact, common story
- Use the ITEA project to prepare long-term business partnerships

“If you want to go quickly, go alone. If you want to go far, go together.”

African proverb

Thank you!



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<https://itea4.org>

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