Horizon Scanning
Why & how to launch it in Lithuania?

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Outline

On VTT’s foresight & innovation solutions

On horizon scanning & foresight processes and concepts

On healthcare innovations & horizon scanning: The CfWI case

On healthcare innovations & horizon scanning: The VTT Lighthouses case

On why and how to launch a horizon scanning system in Lithuania?
On VTT’s foresight & innovation solutions

- A leading R&D organisation in Nordic countries
- We contribute to better understanding of the societal, economic and policy context of innovation activities and research work. Business, innovation and foresight research is our focus area, supported by both qualitative and quantitative methodological competences, as well as the technology know-how of the VTT team. On customer side, we provide evidence-based decision-making support, strategy work and agenda creation for governmental actors like the Finnish ministries and international organisations like the European Commission.

TOP 1
VTT is the most active patenting organisation in Finland (2017)

36% of Finnish innovations include VTT expertise

We use 4 million hours of brainpower a year to develop new technological solutions.
On horizon scanning & foresight processes and concepts
**Foresight** is a future oriented SMART process

**Foresight** is a systematic, participatory, prospective and policy-oriented process which, with the support of environmental / horizon scanning approaches, is aimed to actively engage key stakeholders into a wide range of activities **anticipating**, **recommending** and **transforming** (ART) technological, economic, environmental, political, social and ethical (TEEPSE) futures.

- **Key/Emerging/Frontier Issues**
  - Environmental Scanning
  - Horizon Scanning

- **ART**
  - Anticipating
  - Recommending
  - Transforming

- **TEEPSE futures**
  - Technological
  - Economic
  - Environmental
  - Political
  - Social
  - Ethical

Source: R. Popper (2011)
On healthcare innovations & horizon scanning: The CfWI case
The main objective of the health Technology Horizon study was:

- To identify technologies that may have high impact on the services delivered by the health and social care workforce, and analyse their future implications.

The exercise helped to anticipate future workforce demands and brought into the focus the workforce related discussions important policy aspects about education and training requirements, as well as ethical concerns.
UK Healthcare Horizon Scanning

The process of ‘The technology horizon’ exercise

- 300+ emerging technologies
- 198 emerging technologies
- 12 strategic implications
- 10 key technologies
- Implications of technologies for future health, social care and public health agendas
- Key considerations for workforce development strategies

1. Organisational
2. Preventive
3. Enabling
2. Diagnostic
2. Therapeutic
The results were reported in ‘The technology horizon: preliminary review on technologies impacting the future health and social care workforce’ (2013).

The report informed multi-level advice and thinking on the future of health and social care technologies, thus contributing to define workforce related policy priorities by anticipating potential changes in education or training.

The study was structured into 5 technology areas:

- Therapeutic
- Diagnostic
- Enabling
- Preventive
- Organisational

### Top 10 health technologies

**Therapeutic technology**
- Regenerative medicine
- Minimally invasive procedures

**Diagnostic technology**
- Nanotechnology
- Point-of-care (POC) diagnostics

**Enabling technology**
- Mobile technology
- Wearable health monitors
- Assistive technologies

**Preventive technology**
- Genomics
- Gaming and education

**Organisational technology**
- Integrated big data
The Health Technology Horizon

**Tools** of ‘The technology horizon’ exercise

A wide range of stakeholders have contributed future-looking ideas. Here you can review and comment on existing ideas and add your own. Use the search and filters to explore the bank.
On healthcare innovations & horizon scanning: The VTT Lighthouses case
Growing healthcare costs together with aging population demand for a paradigm shift for prevention of non-communicable diseases and a new kind of participatory healthcare.

Disruption of work – robotization beyond factories is making many current jobs obsolete. The overload of human-technology relation, manifesting itself clearly in the gadgets we use in our work and free time, is increasing stress when it should make life easier. Urbanization and strained infrastructures pose pressures towards design of our living environment.

Finland has the ability to answer these challenges because of well educated population, high trust level in society and a number of growth oriented companies. VTT develops new technology, service concepts and business models for the benefit of the individual in the future society.
Citizen centric care

**ENABLERS**

- Artificial intelligence
- Big Data

**DRIVERS**

- Increasing cost of healthcare
- Aging
- Chronical diseases
- Obesity
- Depression
- New clinical procedures
- ICT technologies

**OPPORTUNITY PATHWAYS**

- Self-diagnostics and home monitoring
- Personalized nutrition
- Decision support systems for citizens
- Technologies for behaviour change

- Point-of-care diagnostics
- Disease risk assessment
- Bio-info-banking
- Predictive health management services

- Evidence-based cost-effectiveness assessment
- Lean healthcare process
- Decision support systems for healthcare professionals and policy makers
- Virtual hospitals

**TIME - AMBITION - VALUE ADDED**

- Preventive health support
- Predictive diagnostics and care
- Healthcare process optimization

**MUST WINS:**
Ensure health data analytics competence and capacity, clinical validation of technologies already during research projects, interplay between medical, bio- and ICT technology developers
On why and how to launch a horizon scanning system in Lithuania?
On why & how to launch a horizon scanning system in Lithuania?

- Healthcare and social care workforce, as well as service users will need to develop new skills for data gathering, analysis and management.
  - Need for new education and training curricula

- Technological and infrastructure convergence will need to be carefully planned (possibly at local, national, European or global levels) and managed.

- Multi-disciplinary and multi-functional teams will be needed to successfully integrate Future Emerging Technology (FET) solutions into healthcare and social care system.

- Professional and peer-led information will need to be well identified and managed.
Thank you

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