

Arctic ICT and Possibilities of Digitalization

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Tekes = Innovation Funding Agency

- Governmental organization supporting Finnish society, economy and welfare
- Funding, servicing and networking enterprises, research organizations and universities nationally and internationally
- Steered by Ministry of Employment and the Economy
- About 400 employees in own office and in regional ELY Centres

We offer funding, expertise and networks



Start-ups
Growth companies
Large companies

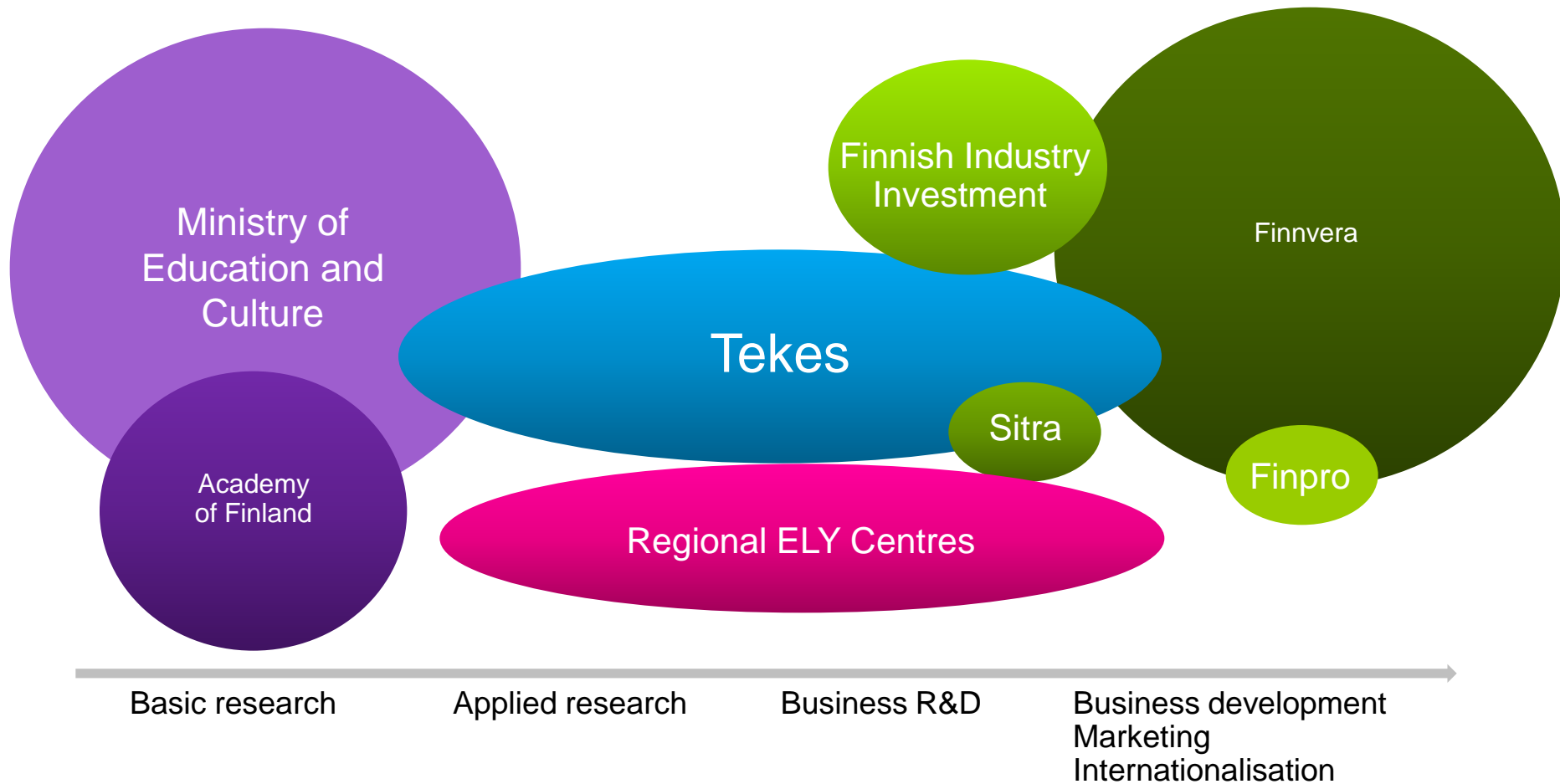


Universities
Research institutes



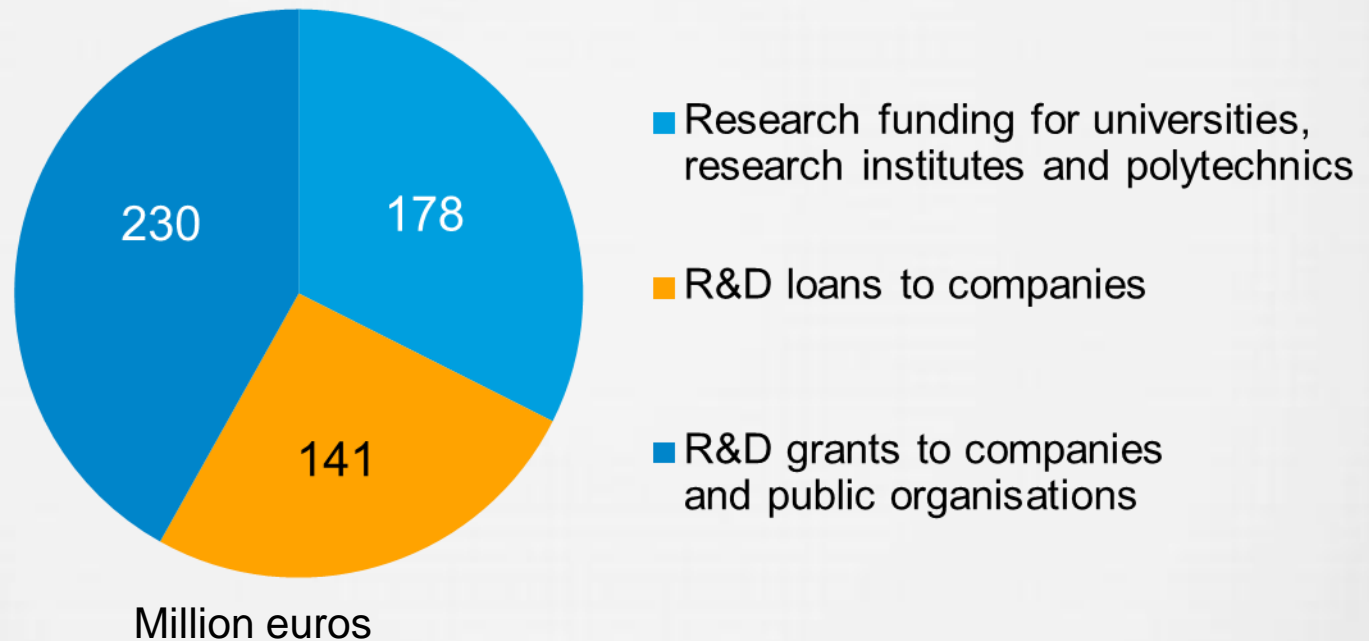
Providers of public services
Cities
Hospital districts

Public funding actors in the Finnish innovation environment



Tekes R&D funding in 2014

Total 550 million euros and 2,750 projects



The funding for R&D includes 2 million euros from EU Structural Funds.

Tekes programmes

Vitality of People

BioIT – 2012–2014

Bits of Health 2014–2018

Innovations in Social and Healthcare services
2008–2015

Learning Solutions
2011–2015

Skene – Games Refueled
2012–2015

Working life

Liideri – Business, Productivity and Joy at Work
2012–2018

Natural resources and sustainable economy

Arctic Seas
2013–2017

BEAM – Business with Impact
2015–2019

Green Growth –
Towards a Sustainable Future
2011–2015

Green Mining
2011–2016

Groove – Growth from
Renewables 2010–2014

Intelligent environments

5thGear 2014–2019

EVE – Electric Vehicle
Systems 2011–2015

Feelings – Intangible Value
Creation and Experienced
Value 2012–2018

Innovative Cities
2014–2020

Industrial Internet –
Business Revolution
2014–2019

Witty City 2013–2017

Smart Procurement
2013–2016

Built Environment
2009–2014

Trial – Environment for
Cognitive Radio and Systems
2011–2014

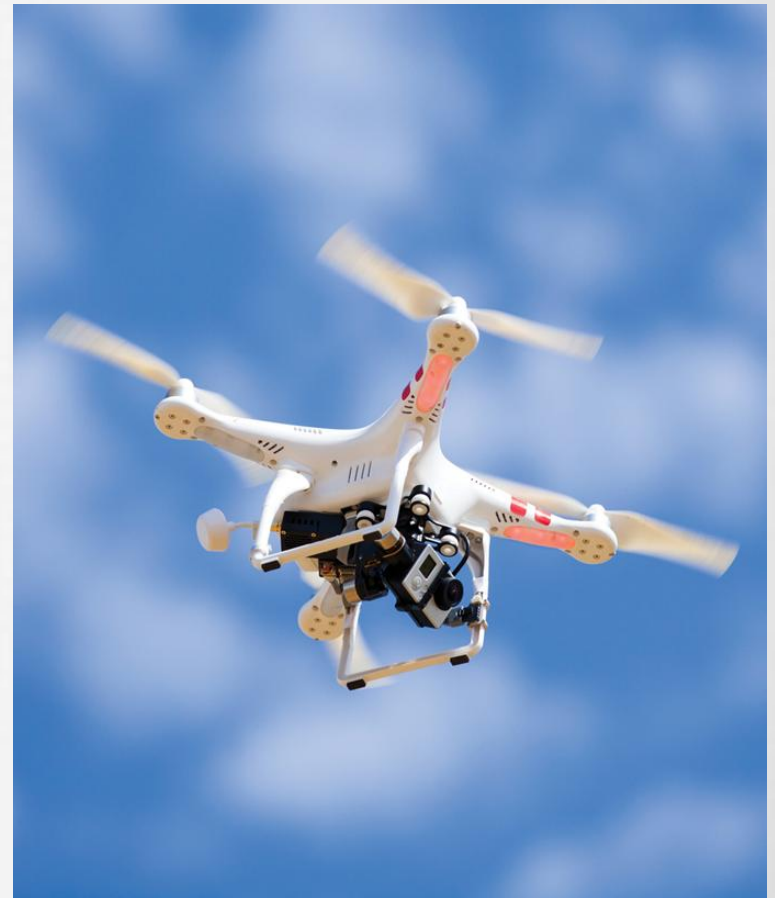
Motivation

- Economy and business have good developing and growing possibilities
- Large investments going on: business in Nordic will be strengthened
- Demanding operational conditions
- Difficult to find skilled personnel
- Some ICT-solutions may have largest added value in Arctic conditions



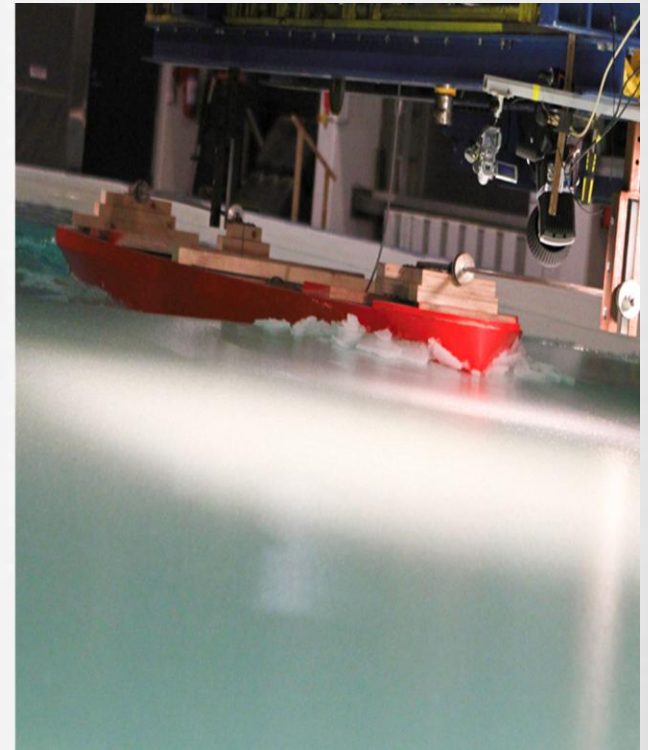
Key themes and digital technologies in arctic conditions

- Communication technologies
- Robotics and automation (UAV, sub sea)
- Winter navigation
- Smart clothing



Arctic knowledge - Finnish opportunity

- Radio and communication technology
- Safety and rescue capabilities
- Arctic oil rescue; cleantech
- Cold climate knowledge: special clothing etc
- Ice loads, formation, simulation, modelling connected to operational conditions



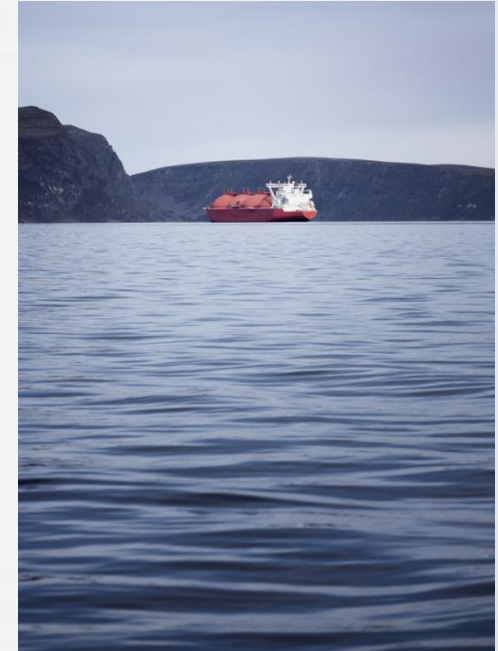
Digital Baltic Sea

- Intelligent network including Finnish navigation actors and authorities
 - Digital information from the vessels will be stored in cloud service
 - Users pick information from the cloud and refine it to business and products
 - Open data is needed for building the digitalization
- In idea and pre-evaluation phase:
 - What is the big business and great benefit in boosting the development?
- Initiated by the Ministry of Traffic and Communications, Tekes supports within our Digital and Arctic Seas programmes
- Tekes is ready to fund innovation projects



Business opportunities of digital technologies in Arctic environment

- Need for enhanced digital technologies is great
- Digitalization has greater impact and added value than elsewhere
 - High performance infrastructure is a current bottleneck of operation
- Automated and remote controlled robotics may provide solutions for economic and safe operation in harsh environmental conditions
- Digital technologies decrease the importance of distance:
 - global business based at Arctic district is possible



Thank you

