PRIORITY

Critical Communications for 5G

Harri Posti

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CWC cwc.oulu.fi CENTRE FOR WIRELESS COMMUNICATIONS University of Oulu

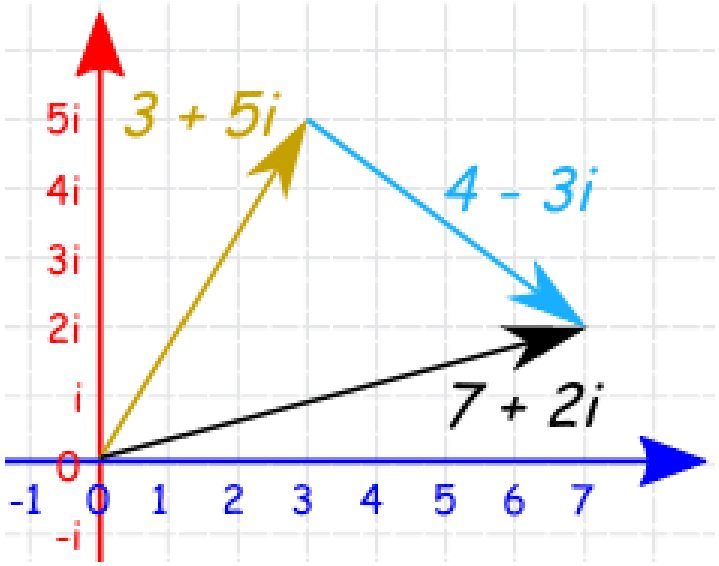
UNIVERSITY of OULU OULUN YLIOPISTO

DEPARTMENT of COMMUNICATIONS ENGINEERING

Global paradigm shift

TETRA 5G

But…



Digital Infrastructure is the New Critical Infrastructure

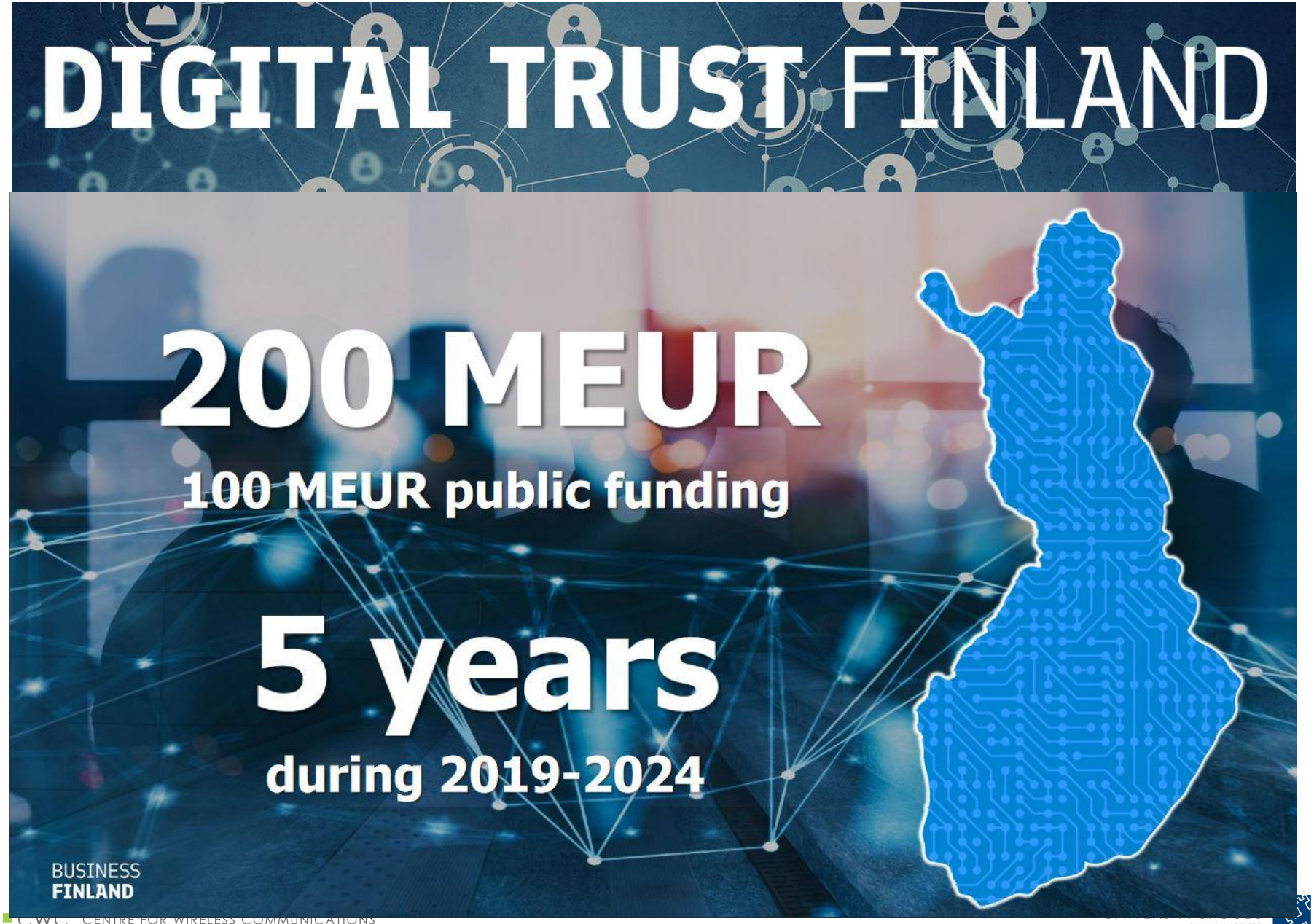
Drivers for Digital Trust

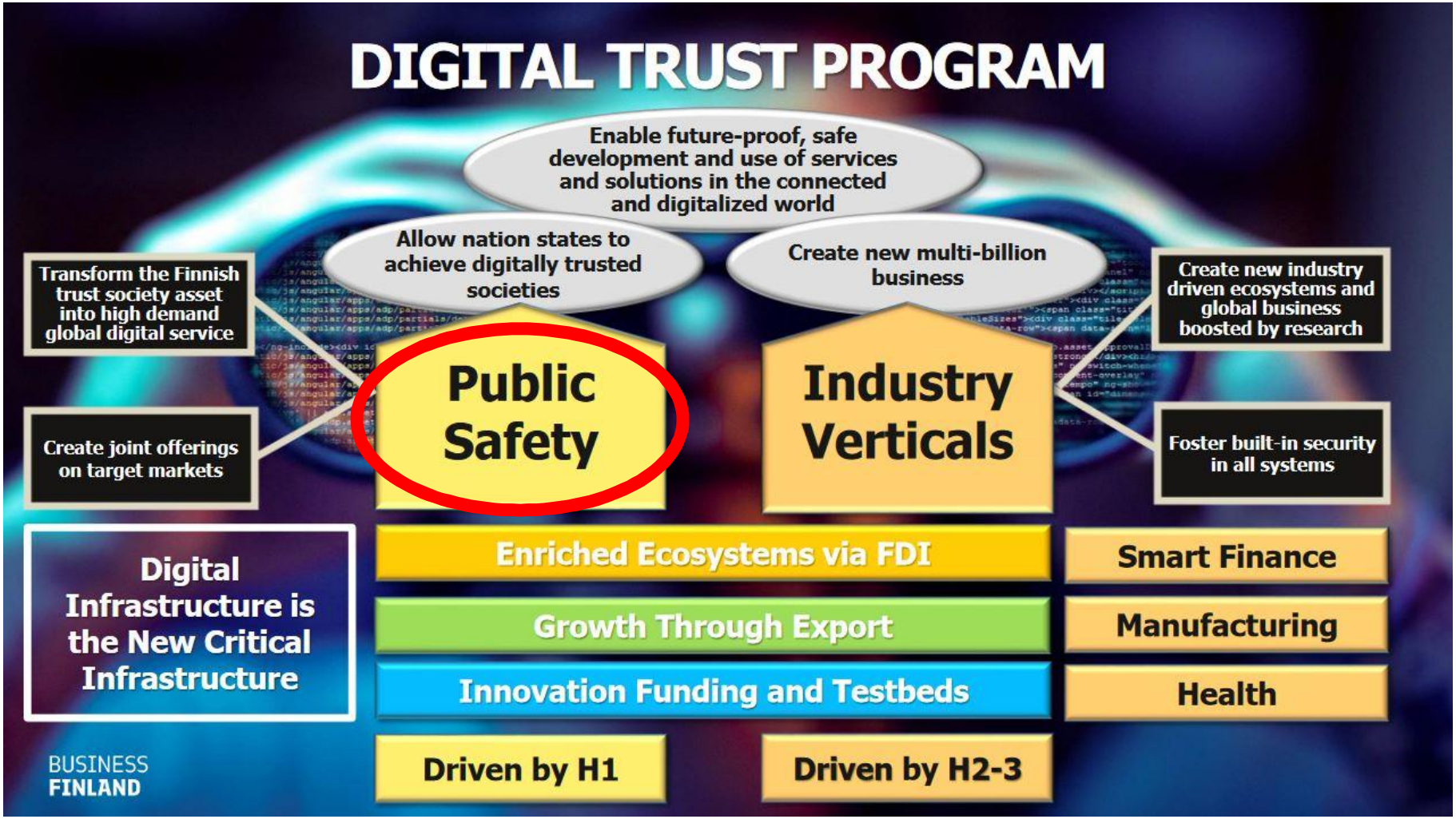
- Cyber threats are the main technological threats for global economy
- Always on – always available connectivity is shaping the society
- Political instability and threat scenarios mean new hybrid threats
- Quantum technologies will shape the future of secured and trusted solutions

Global Market Opportunity

- Global market volume in just cyber security area 240 Bn$ by 2025
- General digitalisation market (798 Bn$ by 2025) and indirect effects even much more

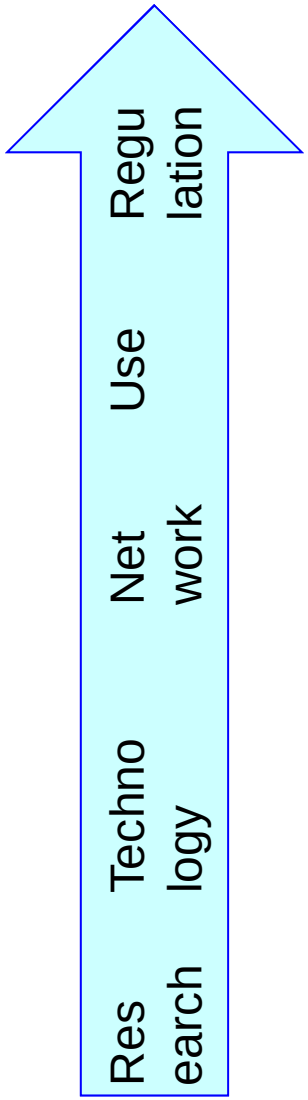
BUSINESS FINLAND


DIGITAL TRUST FINLAND
200 MEUR
100 MEUR public funding
5 years
during 2019-2024
BUSINESS
FINLAND


DIGITAL TRUST PROGRAM
Enable future-proof, safe development and use of services and solutions in the connected and digitalized world
Allow nation states to achieve digitally trusted societies
Create new multi-billion business
Transform the Finnish trust society asset into high demand global digital service
Create new industry driven ecosystems and global business boosted by research
Public Safety
Industry Verticals
Create joint offerings on target markets
Foster built-in security in all systems
Digital Infrastructure is the New Critical Infrastructure
Enriched Ecosystems via FDI
Growth Through Export
Innovation Funding and Testbeds
Smart Finance
Manufacturing
Health
Driven by H1
Driven by H2-3
BUSINESS FINLAND

Hence, PRIORITY

The consortium



Fairspectrum

Viestintävirasto

The Finnish Defence Forces

KESKI-POHJANMAAN JA PIETARSAAREN ALUEEN PELASTUSLAITOS

MTK

porot REINDEERS

ERILLISVERKOT

elisa

DIGITA

EXFO

KEYSIGHT TECHNOLOGIES

Bittium

AIRBUS

Verkotan Full bars ahead

UNIVERSITY OF OULU

Centria RESEARCH AND DEVELOPMENT

VTT

TURUN AMMATTIKORKEAKOULU TURKU UNIVERSITY OF APPLIED SCIENCES

Topics

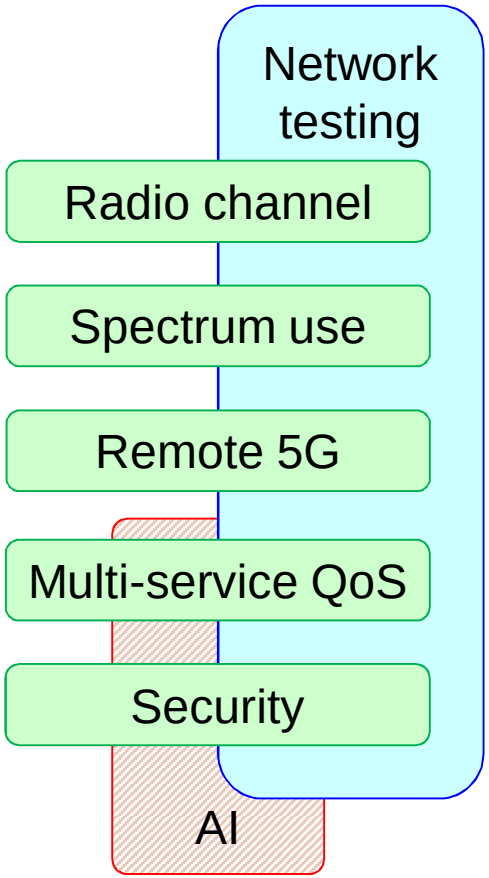
3 scenarios

Scenario 1
Search and capture:
illegal border crossing

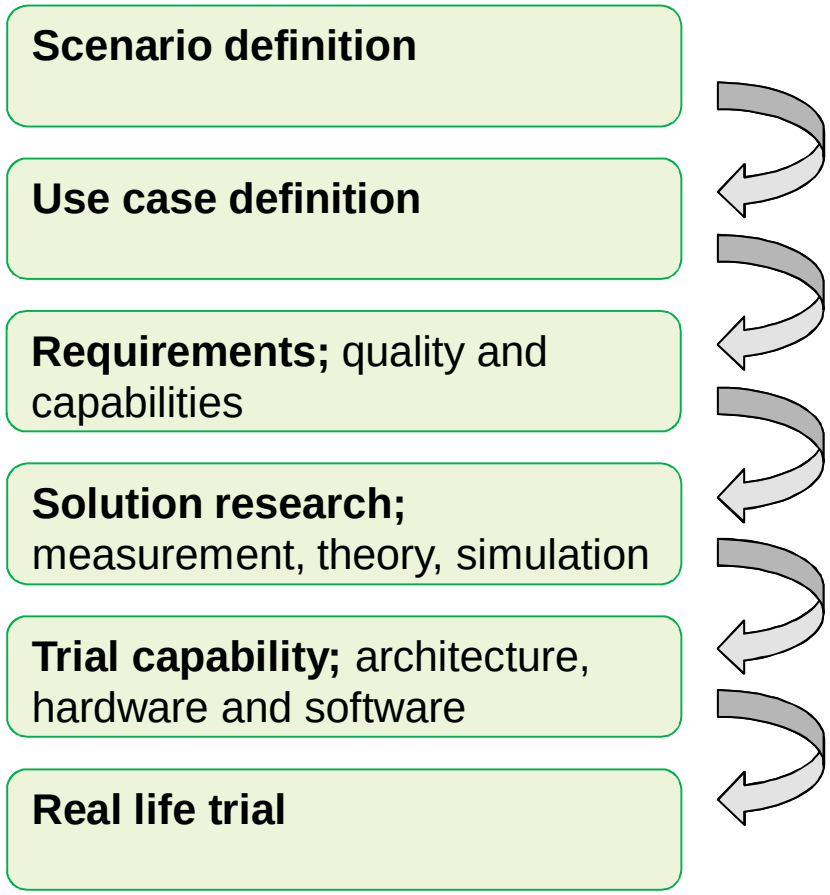
Scenario 2
Smart rural business:
business at a remote location

Scenario 3
Emergency response:
major accident at a remote location

7 research areas



Methodology



Outcomes

- Emergence and evolution of Critical Communication business ecosystems.
- Creation of a strong global position in public safety communications and situational awareness for the partner companies.
- Research results as well as validated technologies and solutions for the partner companies in the area of Critical Communication.
- National security and rural economy.
- Emergence and success of 5G technology, as an enabler for new vertical applications.
- Application of other evolving ICT technologies in Critical Communication solutions.
- Background information for the regulation of Critical Communication and wireless technology.
- Academic success of the research partners.