

BUSINESS FINLAND

HORIZON 2020 AND
NATIONAL FUNDING

PAULI STIGELL

23 MAY 2018





Global growth

OUR MISSION FOR GROWTH, RENEWAL AND SUCCESS

Boosting **innovations** and **exports**
Attracting **investments** and **visitors**

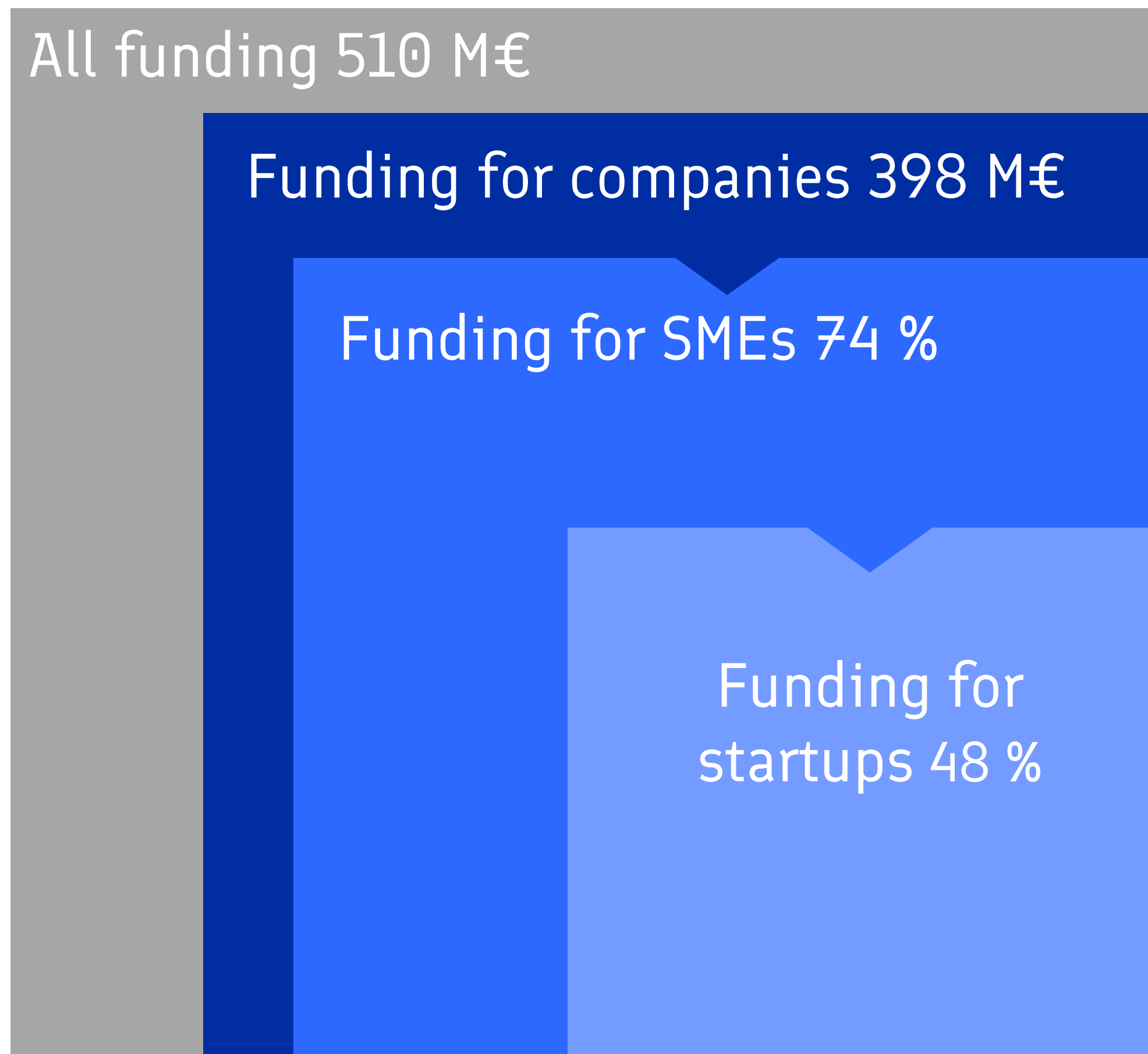


World class
ecosystems

OUR TOOLS

- Research and innovation funding
- Advise and coaching
- Networking
- Expertise and vision of our domestic and international network
- Themes and programs

FUNDING: FOCUS ON SMALL COMPANIES



- All funding 510 M€
- Funding for companies 398 M€ and for **research organizations 112 M€**
- Funding for SMEs 292 M€
- Funding for startups 142 M€
- New company customers 2304

THEMES

Cross cutting

- Digital transformation
- Developing markets
- New value creations
- Arctic



ONE SEA - ECOSYSTEM FOR AUTONOMOUS SHIPS

Finland aims to operate world's first autonomous ship system in 2025



Image © Rolls-Royce

Public funding in the Finnish innovation environment

Ministry of Education and Culture

Academy of Finland

Ministry of Economic Affairs and Employment

Finnish Industry Investment

Finnvera

Tekes + Finpro =
Business Finland

Basic research

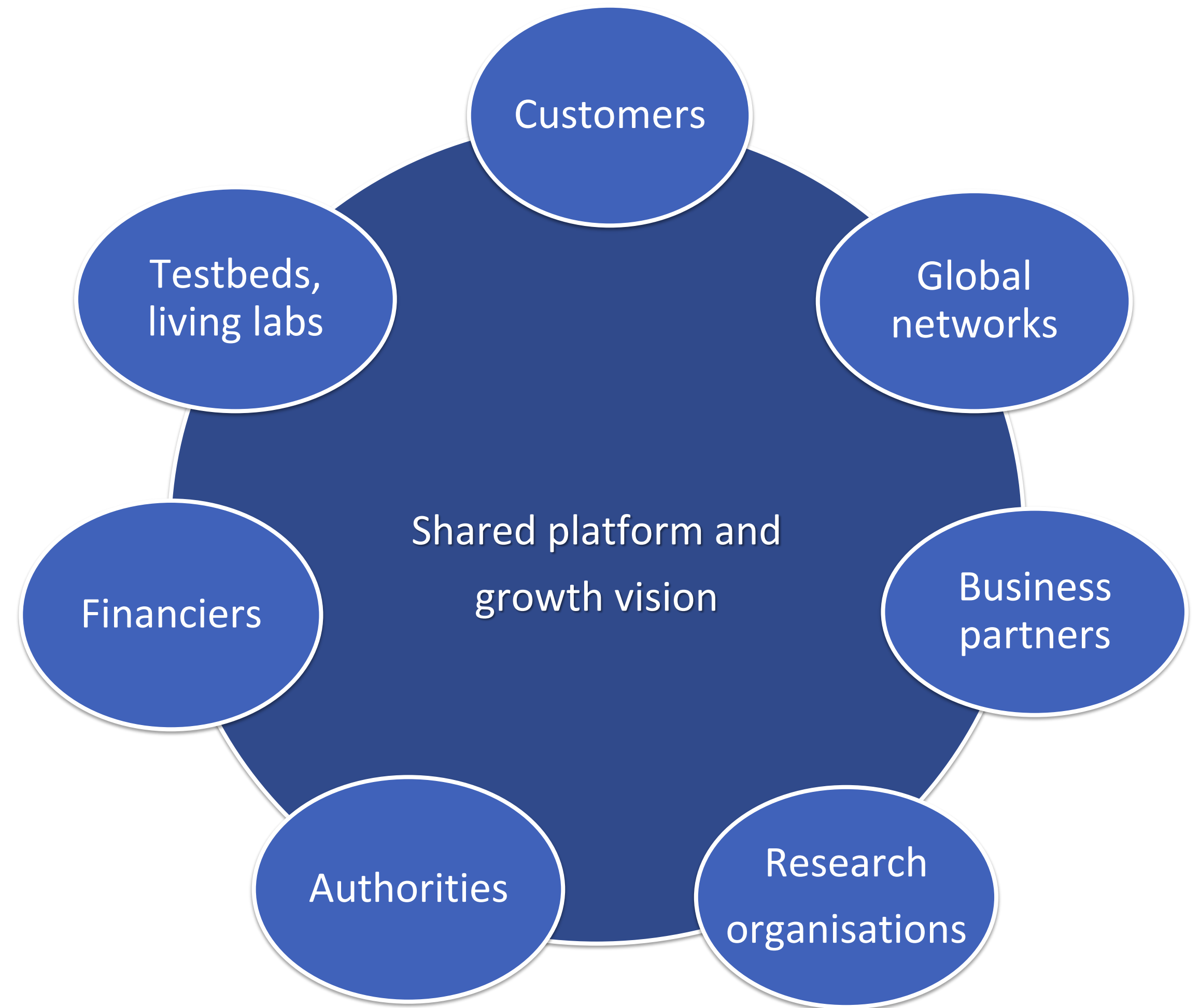
Applied research

Business R&D

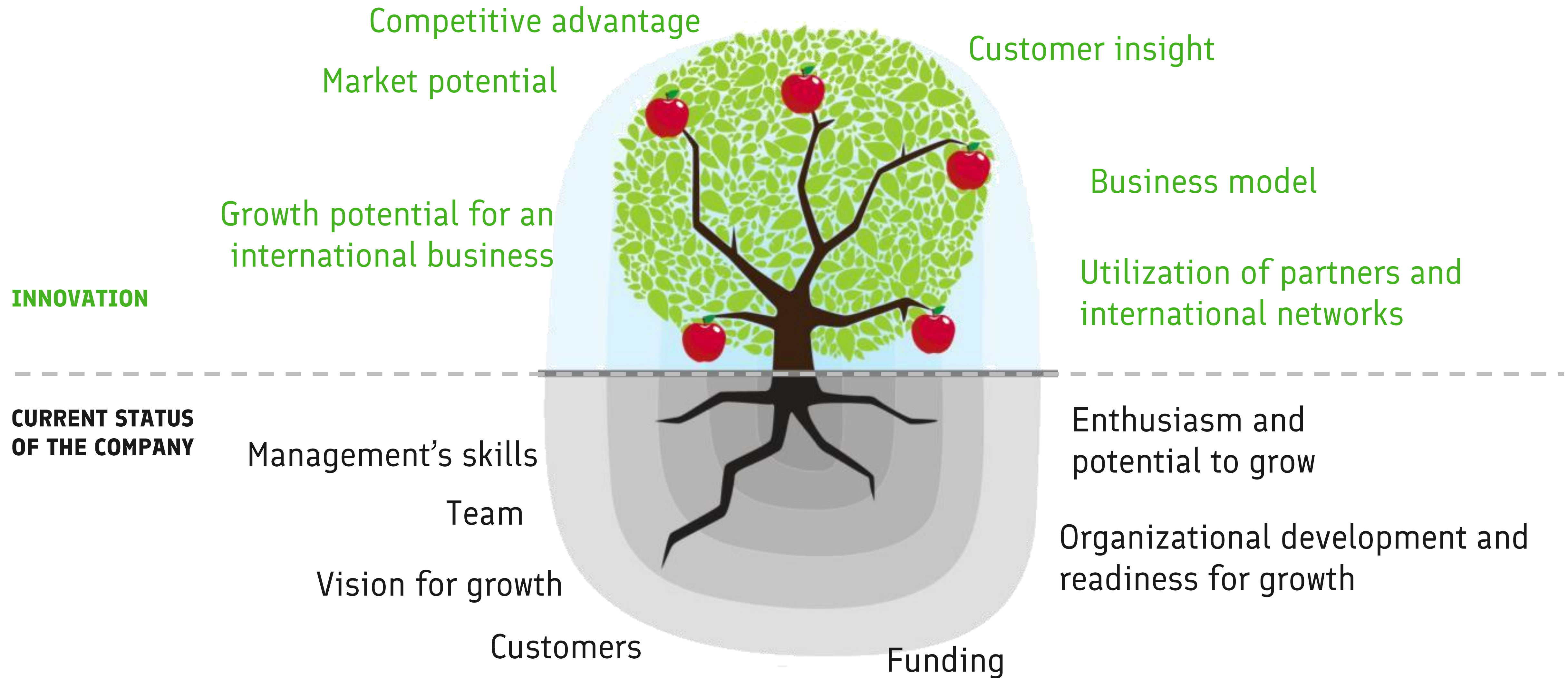
Business development
Marketing
Internationalisation

A new partnership model – Growth Engine

- Business-driven partnerships to create new growth areas
- Commitment of companies and research organizations and public actors in the implementation of a common vision for growth



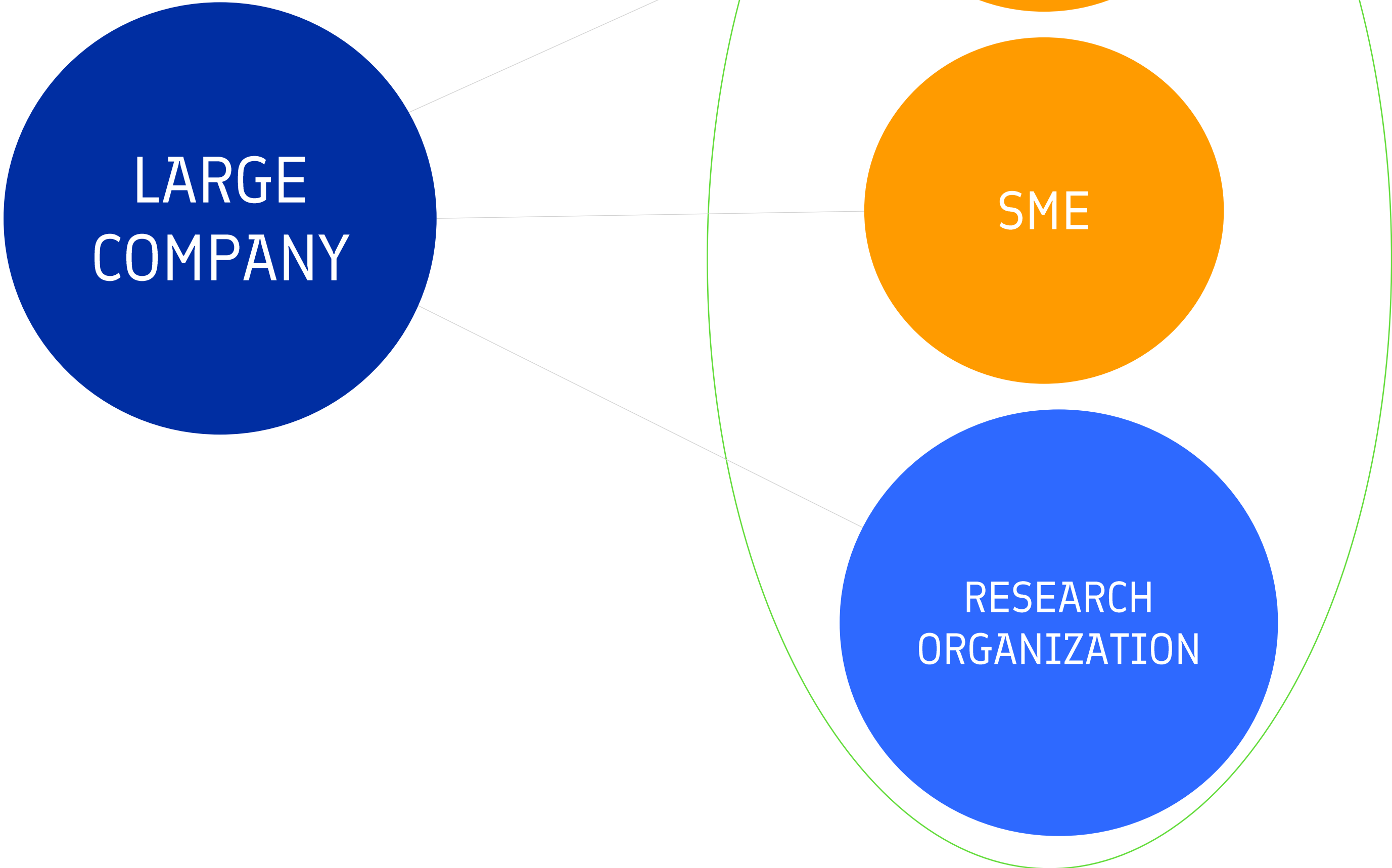
HOW WE EVALUATE



SUCCESS IS ACHIEVED TOGETHER

A large company's own business is boosted when a network develops its business-critical competencies and innovation.

Business Finland can fund a large company or its network.



COMPETITIVE ADVANTAGE ON THE GLOBAL MARKETS THROUGH RENEWAL

For enterprises seeking a global competitive advantage, Business Finland funds challenging research, development and innovation projects with an impact on the renewal of company networks.

Funding of development-focused projects of large companies

- The goal is the development or piloting of a new, innovative product or service
- Business Finland encourages extensive cooperation with SMEs and researchers

FUNDING: LOAN

- Max 50 %
- Network cooperation over 15%

Funding for research-focused projects of large companies

- The goal is the creation of new skills and knowledge, capabilities to engage in business activities of the future
- Business Finland is focused on having strong impact on the company network

FUNDING: GRANT

- Max 40%
- Network cooperation over 40 %



HORIZON 2020 TO BOOST YOUR BUSINESS

€ 80 BILLION FOR 2014 – 2020



HORIZON 2020: EU FUNDING FOR RESEARCH AND INNOVATION

WHY?

New networks, funding (mainly grants with high funding rates of 100%/ 70%), new markets and partners, new knowledge in your team

WHO?

Horizon projects are open to all kinds of partners: enterprises, universities, research organizations, hospitals, associations and various end-users

HOW?

- Mainly collaborative projects with international partners
- Projects of sole participants also possible
- Applications to be sent electronically to the Commission in Brussels

HORIZON 2020: MAIN FUNDING INSTRUMENTS FOR LARGE COMPANIES AND MIDCAPS

Research and Innovation Action, RIA Innovation Action, IA

- ≥ 3 independent entities in 3 different EU MS or Associated Countries
- Funding rate: 70 %, (100 % for non-profit)
- Total EU contribution apprx. 2-5 M€
- Duration: 2-4 years
- Call topics and schedule in H2020 Work Programmes

Fast Track to Innovation, FTI

- Close to market activities
- Company partners required
- Small consortia: only 3-5 entities in 3 different EU MS
- Funding rate 70 %
- Total EU contribution ≥ 3 M€
- Continuously open call with 3 cut-offs in 2016
- No pre-defined topics
- Projects will start in 6 months

Horizon 2020

- Space: 6,3 M€ 2014-2017 to Finland. 4,7 M€ to EO incl. Iceye Ltd. (50%)

R2RAM
SPICES
GAIA-CLIM
PROGRESS
HESPERIA
MACC-III
MyOcean FO
DEMETRA
EOPEN
MySustainableForest
BeyondPlanck
MiGANSOS
BlueSky
ICEYE
TFQD
STRIKE3
AURORA
EOMORES
ESROCOS

- SC5 – Climate action, environment, resource efficiency and raw materials including GEO projects
- 2015-2017 3,7 M€

Integrated Arctic observation system
MArket Research for a Climate Services Observatory
European Market for Climate Services
Arctic Impact on Weather and Climate
European Research Area for Climate Services
The European network for observing our changing planet
Strengthening INternational Cooperation on climatE change REsearch
Observation-based system for monitoring and verification of greenhouse gases
Permafrost thaw and the changing arctic coast: science for socio-economic adaptation
Coordinated Research in Earth Systems and Climate: Experiments, kNowledge, Dissemination and Outreach

Horizon 2020 – last Calls

- Space
 - [DT-SPACE-01-EO-2018-2020: Copernicus market uptake](#) 12 March 2019 closing
 - [LC-SPACE-04-EO-2019-2020: Copernicus evolution – Research activities in support of cross-cutting applications between Copernicus services](#)
 - [LC-SPACE-05-EO-2019: Copernicus evolution – Research activities in support to a European operational monitoring system for fossil CO2 emissions](#)
 - [LC-SPACE-14-TEC-2018-2019: Earth observation technologies](#)
- 2021-27
 - 14-16 billion euro to Copernicus, Galileo, SST, technologies
 - FP9 Horizon Europe – independent space programme?
- SC5 – Climate Action/GEO
 - [SC5-16-2019: Development of commercial activities and services through the use of GEOSS and Copernicus data](#) 19.2.2019 closing
 - 2020 not defined yet
- FP9 Horizon Europe (2021-27)
 - GEO likely to continue

Group on Earth Observations:

<https://www.earthobservations.org/>

FIND MORE INFORMATION ON HORIZON 2020

- Horizon liaison office EUTI at Business Finland:
www.horisontti2020.fi/en
- Horizon national contact points NCPs:
www.horisontti2020.fi/yhteystiedot
- Events:
www.horisontti2020.fi/ajankohtaista/tapahtumat
- Subscribe to newsletter (in Finnish):
www.horisontti2020.fi/ajankohtaista/uutiskirje



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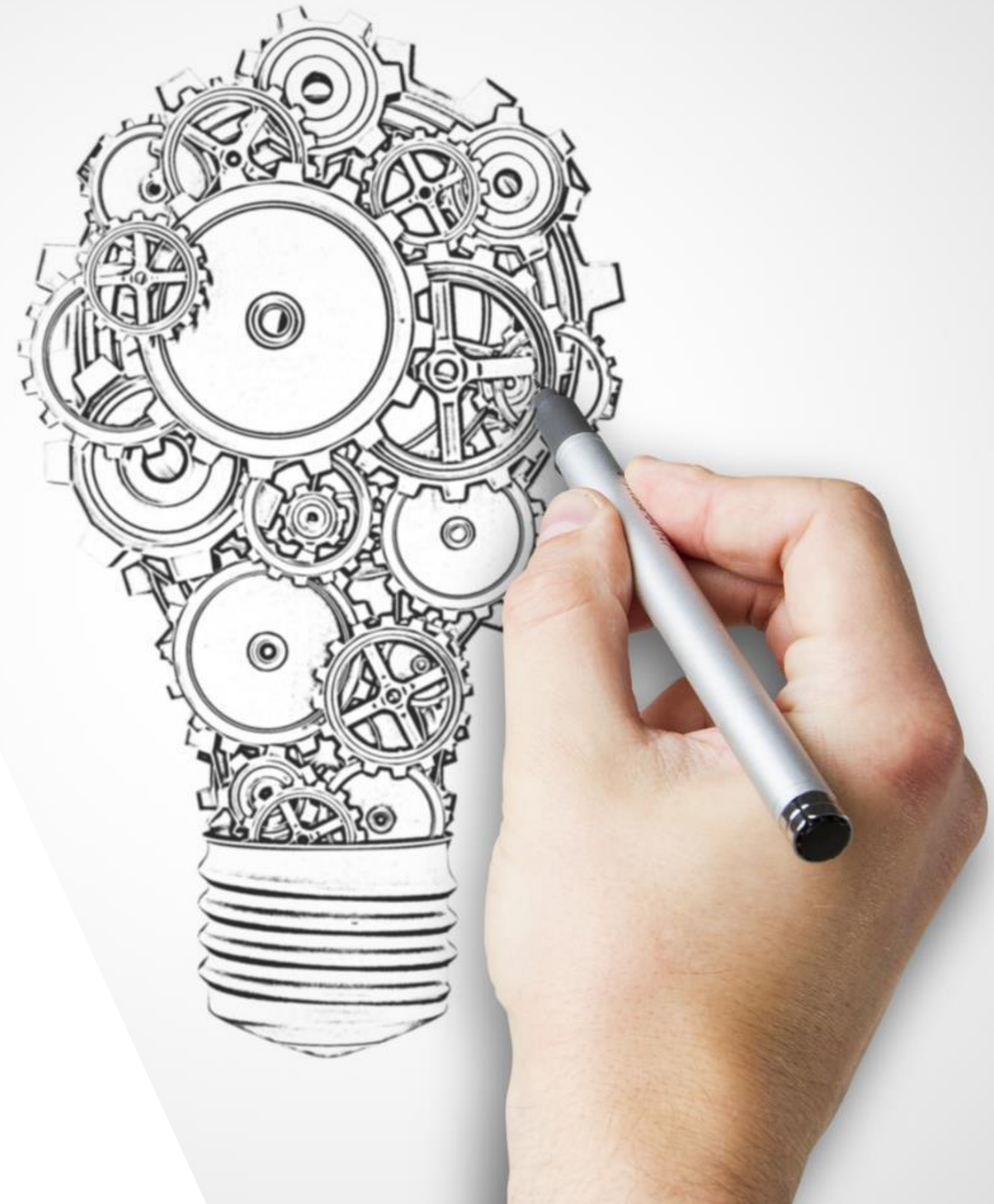
BUSINESS FINLAND
RESEARCH FUNDING SERVICES

30.5.2018



Research Funding - to speed up the use of research results in business

- co-creation and co-innovation projects
- commercialization based on research ideas



Research funding services

Co-Creation

Develop a research idea, build on cooperation

Research organizations and companies develop the research idea.

The funding will ensure the demand and suitability of a new research goal (problem to be solved) to businesses and construction of a new co-operation.

Co-Innovation

Search for solutions with the help of research, cooperate and develop new export products

Research organisations develop new knowledge and solution models for new business purposes and companies develop innovations for the global market.

Funding advances the use of research knowledge, increases the creation of new Finnish export products and strengthens networks in ecosystems.

New business from research ideas (TUTLI)

Create new knowledge and business applications from research ideas

Research organisations prepare an idea for business purposes.

Funding advances the commercialisation of research ideas.

International and other special calls (ESA, ERDF, Eureka etc.) have their own specific criteria

Two paths to funding

If you have a new idea that could open up significant business opportunities for companies and you want to

- Investigate and develop the idea and its potential together with companies
- Create a consortium required for work and engage companies in development work

First contact the Research Funding Team of Business Finland for feedback on the idea. You may want to apply for **Co-Creation** funding.

If you already have the necessary companies committed to the project and development work already in the consortium, and you will be able to demonstrate the problem associated with the issue and the impact of its solution to the emergence of a significant business.

First contact the Research Funding Team of Business Finland for feedback and sparring. You may want to apply for **Co-Innovation** funding.

Research organisation

Carry out high-level public research and simultaneously cooperate with companies

Company

Renew your business activities by working closely together with researchers



**BUSINESS
FINLAND**

NEW SPACE ECONOMY





WHY NEW SPACE?

A universal growth business

A new global phase underway, with transformation of space industry actors, roles and methods

Already 200 Finnish companies engaged in the manufacturing and application of space technology

International investors interested in Finland: manufacturing and business application of drones and small satellites



WHAT'S NEW SPACE ECONOMY?

The new paradigm

New Space Economy = **Faster Cheaper Better**

New Space Economy = **Growth & Employment**

New Space Economy = **Platform Economy**

THE PROGRAM

Funding, networks and export services

New Space Economy program takes advantage of growth opportunities and highlights Finnish expertise globally

The program offers innovative growth companies funding, networks and helps to access New Space market

Funding vol. in total EUR +100 million/5 years (ESA incl.)

Supported by the ESA Business Incubation Centre in Otaniemi, the program provides a platform for 50 companies to international markets

Significant results with impact on economic growth and employment via networks and new business models



THE PROGRAM

Turning an industry into new business

New Space Economy program will renew the space sector and help high-tech manufacturing companies to seek growth and businesses utilizing space and drone based data

The program aims to double the exports of participating companies, while achieving an annual turnover of at least EUR 600 million in services within the sector

Public sector role remains active as regulation continues to develop and renewed investments for the infrastructure

Innovative public procurements needed for supporting lead market development and references

Spin your business

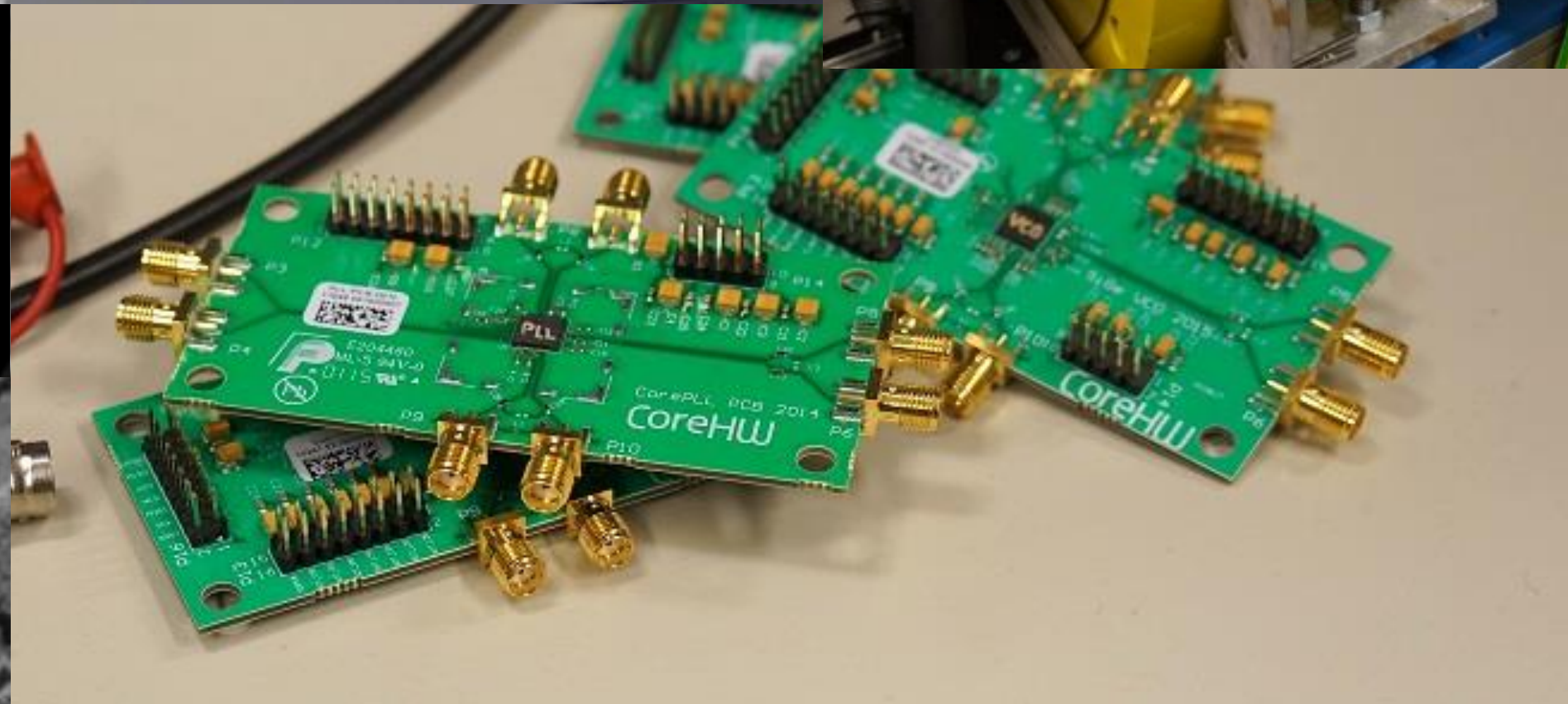
From **EARTH** to **SPACE**

From **SPACE** to **EARTH**

→ START-UPS

Register now and we'll send you
the next steps

Stellar space know-how from Finland



Body

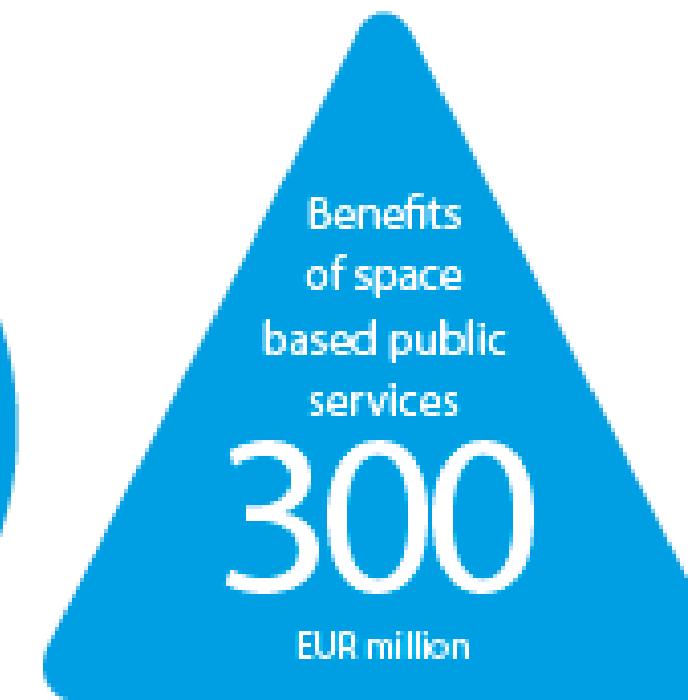
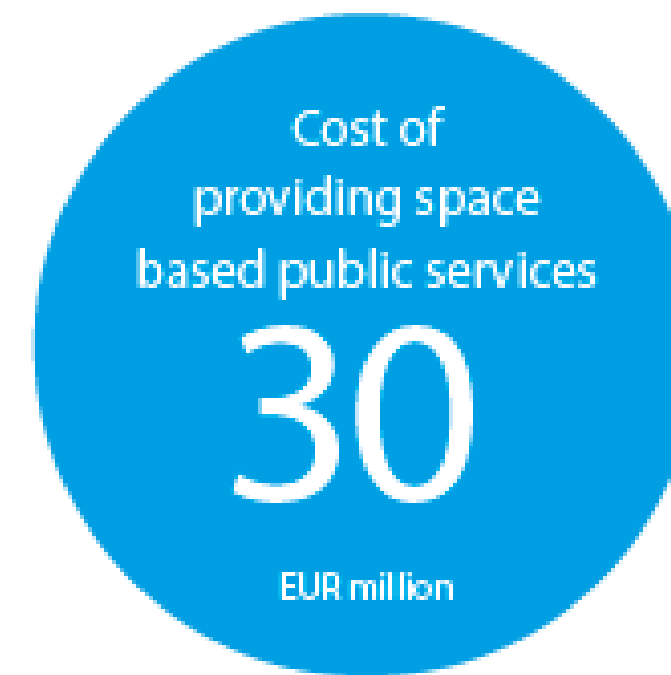
Get space-ready. Set your own goals. Push yourself.



The beauty of radar is that it sees the surface even at night and through cloud

Finland's Space Activities 2016

Public sector



Space systems and applications industry



European Space Agency



A modern glass skyscraper at night, illuminated from within, with the words 'BUSINESS FINLAND' displayed on its facade. The building is set against a dark, cloudy sky. In the foreground, a city street is visible with light trails from traffic and streetlights.

**BUSINESS
FINLAND**

Many ways to promote innovations

Business Finland funds business development projects and shares product development risks also in space

We fund high-quality scientific research associated with a vision of possible applications in business or society

Networking:

ESA's technology programmes open doors to European space activities

We coordinate the cooperation between Finland and ESA and fund Finland's ESA participation

We advocate the interests of Finnish companies and research in ESA and in EU's space programs

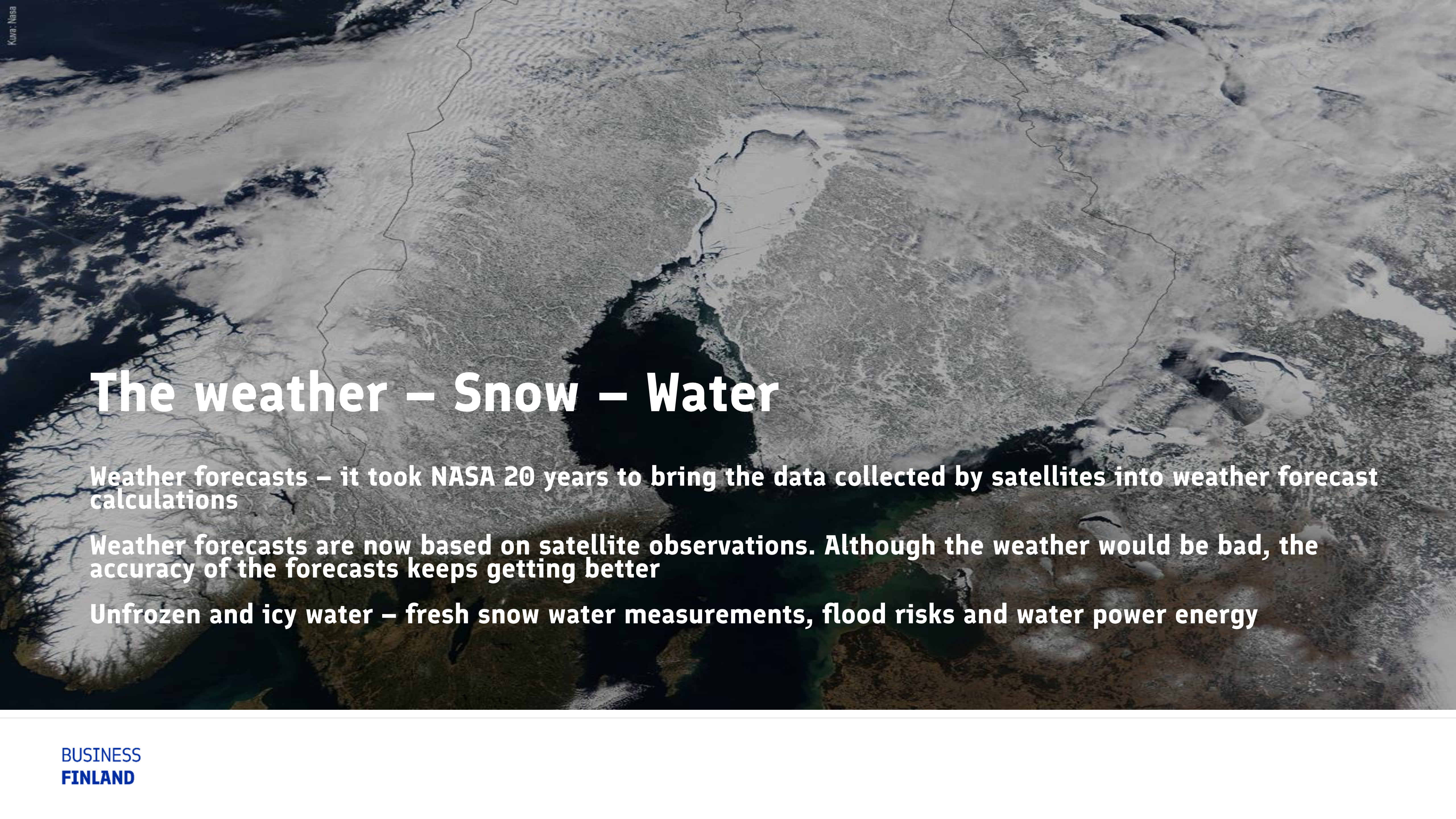
CONTACT US!

We'll help your company to grow

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www.businessfinland.fi/en/space

www.spacefinland.fi



Kuva: Nasa

The weather – Snow – Water

Weather forecasts – it took NASA 20 years to bring the data collected by satellites into weather forecast calculations

Weather forecasts are now based on satellite observations. Although the weather would be bad, the accuracy of the forecasts keeps getting better

Unfrozen and icy water – fresh snow water measurements, flood risks and water power energy



Satellites assist icebreaking

All Finnish ports freeze nearly every winter. A vast portion of the Foreign trade moves by sea

More than 20.000 vessels visit Finland in the winter

The Ice Service transmits real-time information about sea ice to shipping

The first ESA satellite images came into use of the Ice Service in 1992



An aerial photograph of a vast forest landscape during autumn. The trees display a mix of green, yellow, and orange hues. A layer of mist or fog hangs in the valleys between the hills, creating a soft, ethereal atmosphere. The lighting suggests a bright day, with sunlight filtering through the trees.

Satellites measure the condition of forests and the number of trees

Finland has evaluated the state of its forests for over a century, nowadays with laser scanning and radar satellites

Thanks to remote sensing, the amount of information on climate change, the condition of forests and their utilization has grown significantly

GPS tracking is a significant cost saver in timber harvesting and logistics

Forests are essential for the climate: forest felling for arable land and raw material can be monitored

SPACE FINLAND

SUOMI AVARUUDESSA

LIIKETOIMINTA JA TUTKIMUS

IN ENGLISH

OTA YHTEYTTÄ / CONTACT US

#SpaceFinland
www.spacefinland.fi

Verkkouutiset: Suomesta maailman tarkin
avaruuden olosuhteita mallintava simulaatio

28/03/2018

Markus Ranne appointed as
the New Space Economy
Program Manager

22/03/2018

Esittelemme Suomen
avaruusnaisia – lue juttu ja
katso video

08/03/2018

Kaleva: Wärtsilä
avaruusbisnekseen
yhteistyössä SpaceX:n kanssa

14/02/2018

Probably the best satellite data
and AI based service for the
forestry industry – see yourself

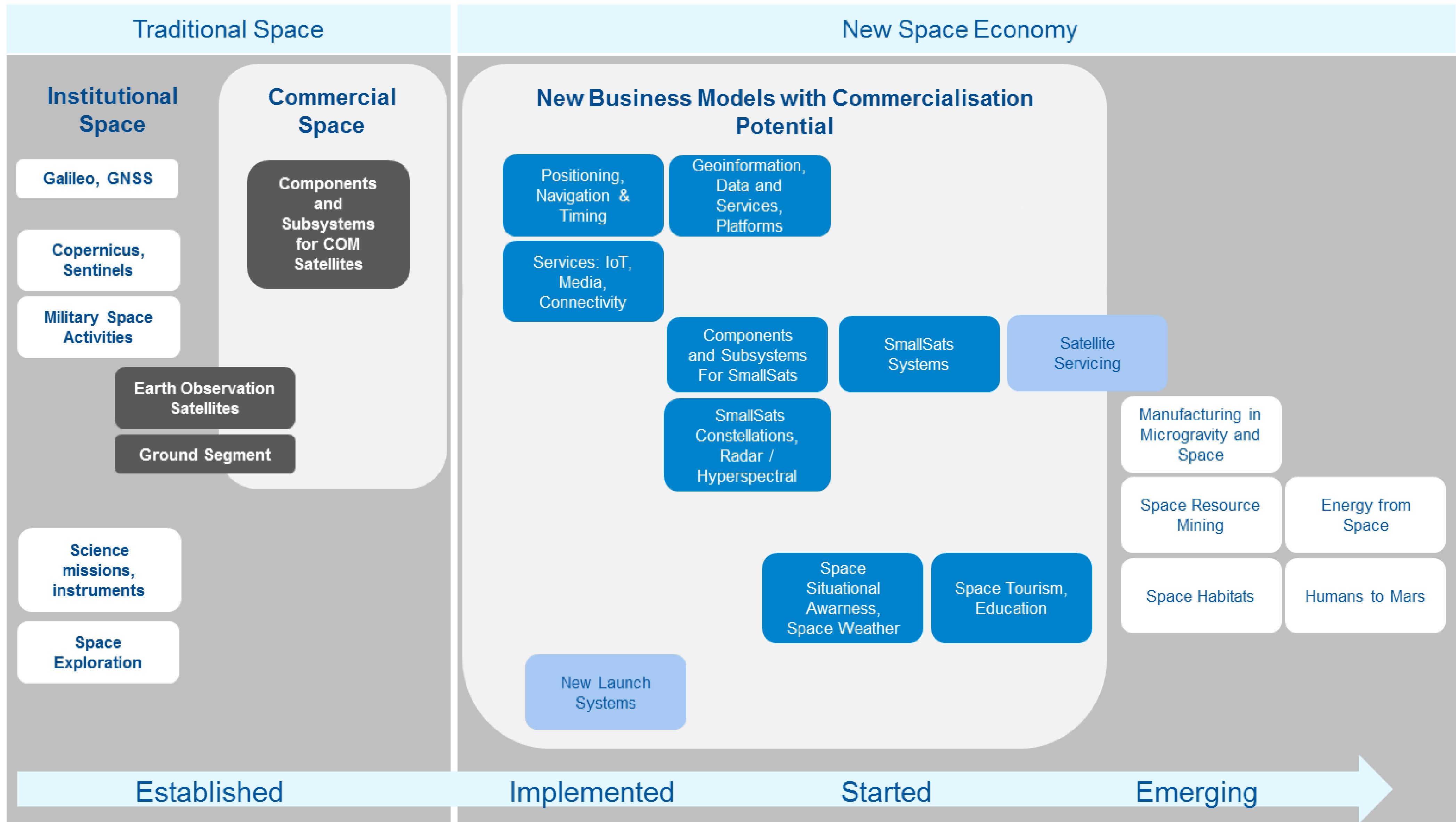
06/02/2018

NEW SPACE ECONOMY = FASTER CHEAPER BETTER

+

NEW SPACE ECONOMY = GROWTH & EMPLOYMENT

NEW SPACE ECONOMY = PLATFORM ECONOMY



Modified from Space Tec report "NewSpace – New Business Models at the Interface of Space Industry and Digital Economy", 2016

WORLD IDEAS