



European Regional Development Fund Managing Authority

Peter Larsson

2022-01-20



Swedish Agency for Economic and Regional Growth

Government agency with about 500 employees (more during the pandemic) within 9 offices

Our mission:

- Sustainable growth and competitive companies in all parts of Sweden

Our “tools”:

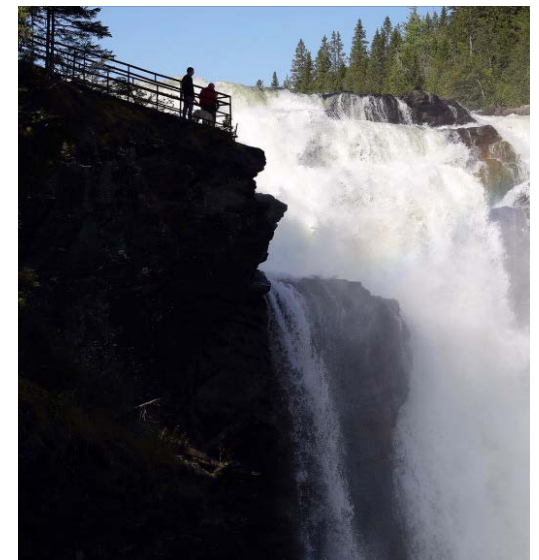
- Knowledge
- Network
- Funding



Sweden

Strengths and challenges

Some of the strengths: Natural resources, energy production, forest, minerals, steel, pulp, export, higher education, technology/innovation/testbeds, cultural sector, tourism.



Some of the challenges: Sparsely populated areas, cold climate, long distances, internationalization, talent attraction, getting more international employees in SME, building sustainable eco-systems/clusters (triple helix), proactively attract international establishments and investments. SME more strategical and “scale up”-thinking.

Some of the cultural characteristics: Flat organizations, titles are not important, multilevel governance, lots of teamwork, can take a long time before things start to happen, often everyone needs to have their say before a decision is made.

European Regional Development Fund

9 program, 1 national and 8 regional

At the end of the ongoing program 2014-2020 (ends oct 2023), and soon about to start the program for 2021-2027

2014-2020, 1.300 project 900 M EUR (+950 M EUR co-financing)

Our unit, Regional growth north Sweden, work in the four northern counties, which contains about 50% of the Swedish area and 10% of the population.

Two NUTS-2 areas (two county each), Upper North 220 projects (200 M EUR + 210 M EUR co-financing) and Middle North 170 (140 M EUR + 150 M EUR co-financing).

Prepare organizations/stakeholders for applying for funding with more competition (Horizon, COSME etc.).



EUROPEAN
UNION
European Regional
Development Fund



Swedish Agency
for Economic and
Regional Growth

European Regional Development Fund

ERDF 2014-2020

Middle North 140 M EUR (+ 150 M EUR co-financing)
within 5 focus areas.

Addresses challenges and opportunities:

Research & Innovation (18%),
ICT, broadband and Services (20%),
SME, competitiveness (36%),
CO2 reduction (5%),
transport infrastructure (17%),
(OH 4%).

170 projects (97 in progress, 73 completed)



EUROPEAN
UNION
European Regional
Development Fund



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for Economic and
Regional Growth

Managing Authority

Some of our assignments

Managing/facilitation of the program in close contact with the regional representatives, and the regional partnership that prioritize witch project application getting funding.

Making calls customized according to the current situation.

Strategic and tactical advise to stakeholders/organizations before applying for their project ideas.

Administration, follow up project results, if needed decide about project changes, and make payments during the project period.

Have dialogue with EU if there is requests for program changes.



Managing Authority

Challenges and opportunities

Multilevel governance – takes a long time to make things happen but also provides opportunities for increased participation.



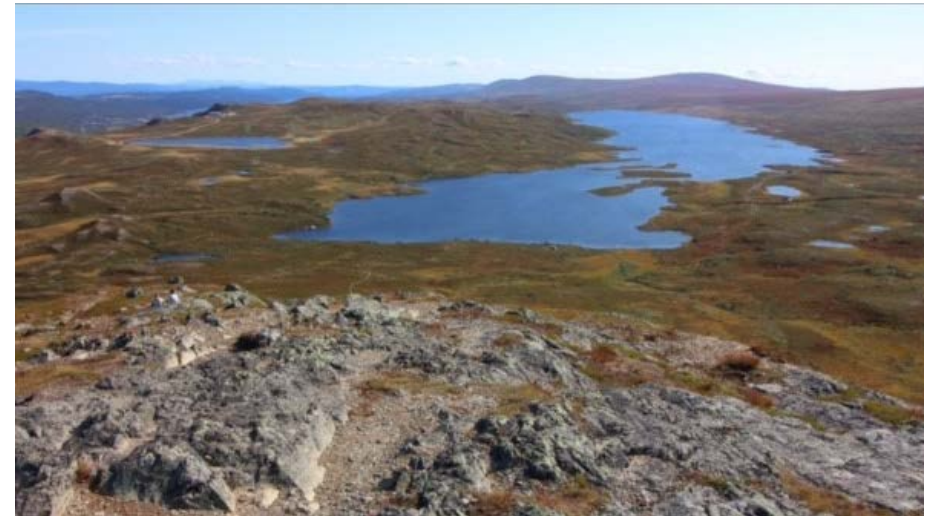
Different perspectives and ways of looking at things (driving forces) - business, political, academic, governmental etc. Can create conflicts and also increase the common understanding and building trust.

Two counties within our program area with different governance and agendas. The program will be an incentive to cooperate, which can be difficult and also be useful in other contexts where cooperation is required.

Summing-up

Swedish Agency for Economic and Regional Growth

- Sustainable growth and competitive companies in all parts of Sweden through knowledge, network and funding.
- Managing Authority is the facilitator of the program.
- The EU Regional Development Fund addresses challenges and opportunities in the regions.
- Most important building trust and understanding for sustainable cooperation.



Thanks for your attention!

peter.Larsson@tillvaxtverket.se

Risk and Crisis Research Centre (RCR)



Researching risk, crises and sustainability

One of Mid Sweden University's profiled areas

Interdisciplinary – researchers from nine different fields

Societal focus

Roughly 40 members:

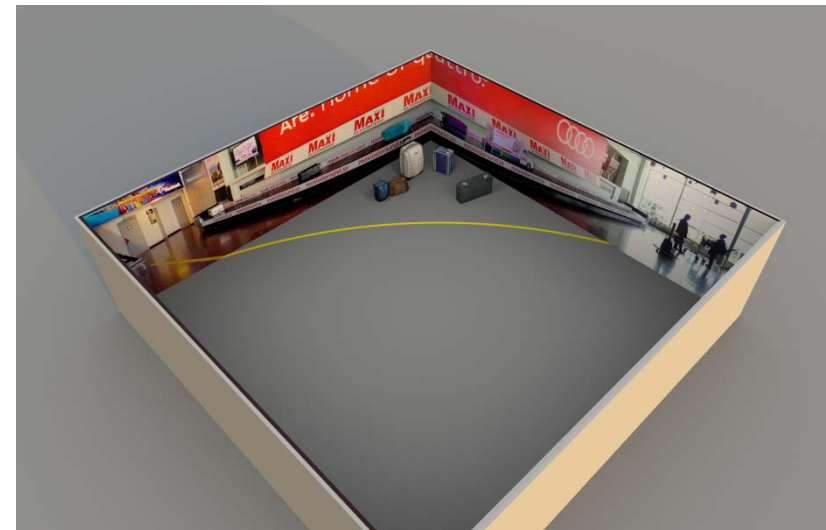
- 25 researchers
- 10 doctoral students

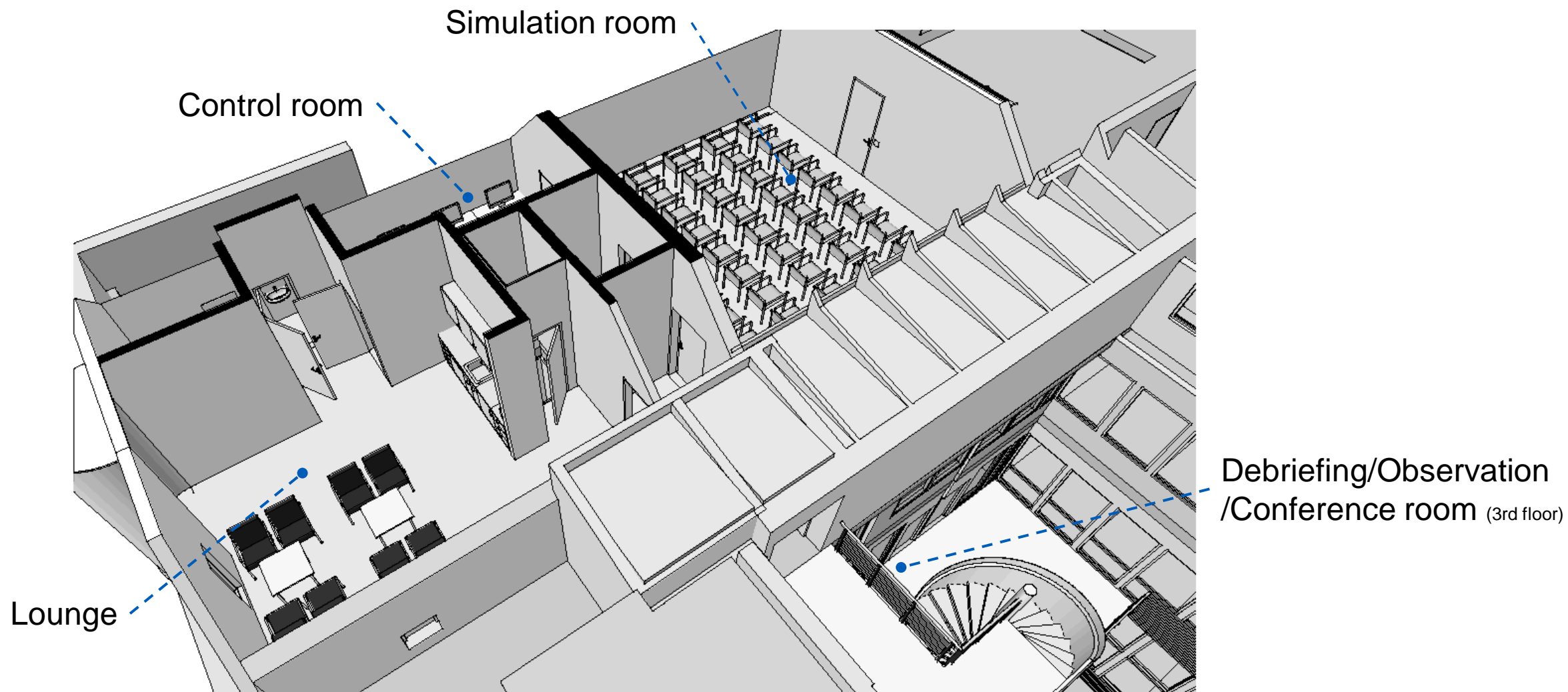


Risk and Crisis Research Centre (RCR) Simulation Lab

**A creative immersive simulation environment for research, learning
and innovation.**

≈ 1 million euro (ERDF) technical infrastructure and project activities
≈ 1 million euro (local council and university funding) physical construction





Fire and Rescue Service Mass Casualty Violence Training Exercise





Why is RCR Simulation Lab included as an example?

- allows for new ways to answer research questions
- physical hub where research and practice can meet
- allows for research and training hybrids
- flexibility – uses, subjects, methods, private/public
- tenacity
- iterativity in carrying out project activities

Additional photo to come

Challenges

during the project period...

- partnering SMEs
- project staffing at small percentages
- teething issues

ahead?

- stable financing post project
- transitioning mindset from project completion to viable independent unit
- engaging small and medium sized enterprises (concretising the value of the lab for businesses without understanding their key challenges/opportunities)
- ongoing effects of pandemic
- utilisation, threshold for new activities to take place in the lab

”RCR Simulation Lab will be the obvious choice for knowledge building, learning and development, solving problems and experiencing situations with the help of innovative methods in an immersive simulation environment.”

Questions?





Mittuniversitetet
MID SWEDEN UNIVERSITY

Collaboration agreements between municipalities and the Mid-Sweden University

Prof Hans-Erik Nilsson





History

- **Östersund** – 48 msek, 2019-2022 (Start 2011)
- **Sundsvall** – 40 msek, 2018-2021 (Start 2014)
- **Härnösand** – 14 msek, 2016-2020
- **Timrå** – 8 msek, 2018 – 2021
- **Örnsköldsviks kommunkoncern**, 4 (kommun) + 2 msek (bolag), 2019-2022





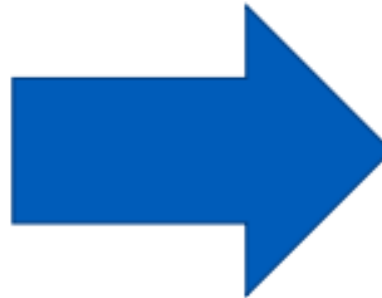
Development of the collaboration

2014



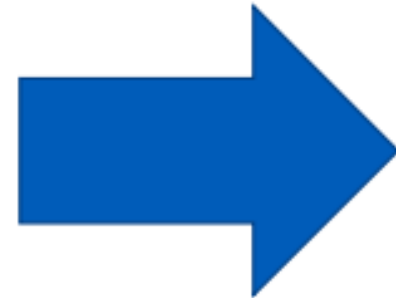
- Developing a good practice for initiation and review of research actions
- Mostly pre-study project

2016



- Wider mix between pre-study projects and larger project
- First projects shared between municipalities

2020



- Research programs including several municipalities
- Expansion of number of agreements



Current status

- New periods for agreements have been signed for the all municipalities
- New agreement with the municipality of Sollefteå and ongoing discussions with Nordanstig municipality
- Process to form larger common research programs in the area of health care and education
- A new process for collaboration and knowledge sharing of R&D between municipalities



Research programs

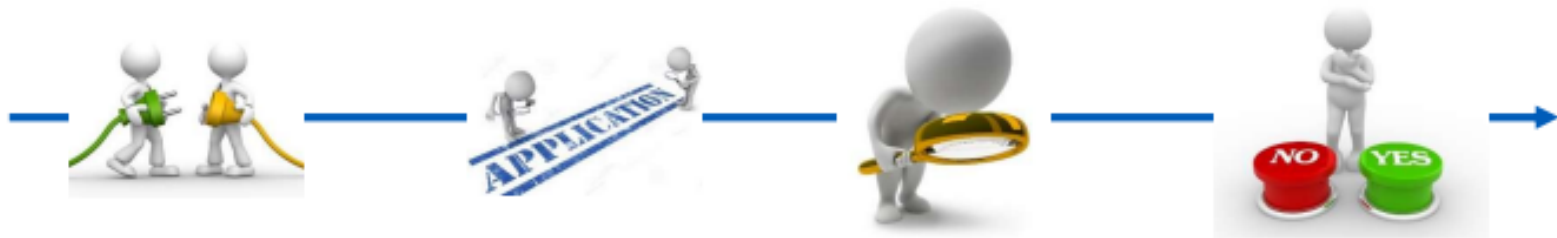
- Building strong research environment in important service sectors for the municipalities
 - Focus on building a common R&D culture
 - Portfolio of projects selected to build quality and best practice as well as provide a strong position of the academic research
 - National visibility
 - Funding for research
 - Attracting talent to the region
 - Stronger recruitment to education programs
 - Competence development for all partners



Clustering of subjects into thematic research areas

- Research centers
 - DEMICOM – media and communication
 - STC – Industrial IT and sensor technology
 - FSCN – Forest industrial research
 - STRC – Sports technology
- Thematic research
 - KOD - Quality management and digitalization
 - NHU - Natural science and sustainable development
 - MOD - Mathematics and didactics
 - DES – Design and art

Formal initiation and decision process



Dialogue

- Organizational need
- Academic challenge and relevance
- Leadership
- Long term vision

Proposal

- Objectives and deliverables
- Co-financing
- Long term effects
- Future work

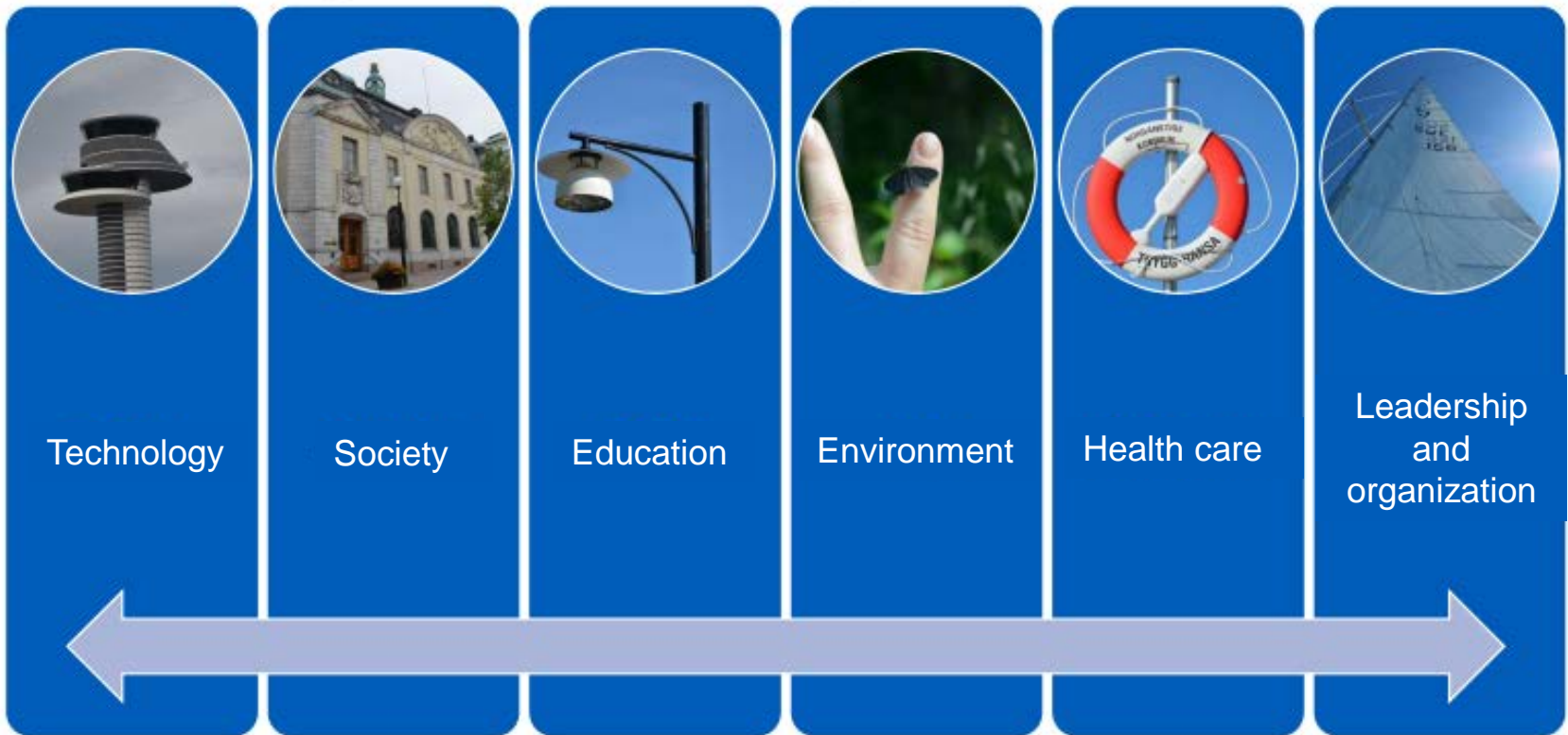
Quality process

- Presentation
- Research relevance
- Implementation
- Benefits for society
- Profiling and long term vision

Decision

- Collaboration board
- Consensus
- Review
- Vice chancellor and chair of the municipality gets the final word

More than 80 projects/pre-studies over a wide range of fields





Between 2014-2020 spin-off projects with a turn over of 280 MSEK



Some examples

- BioRem Fiber

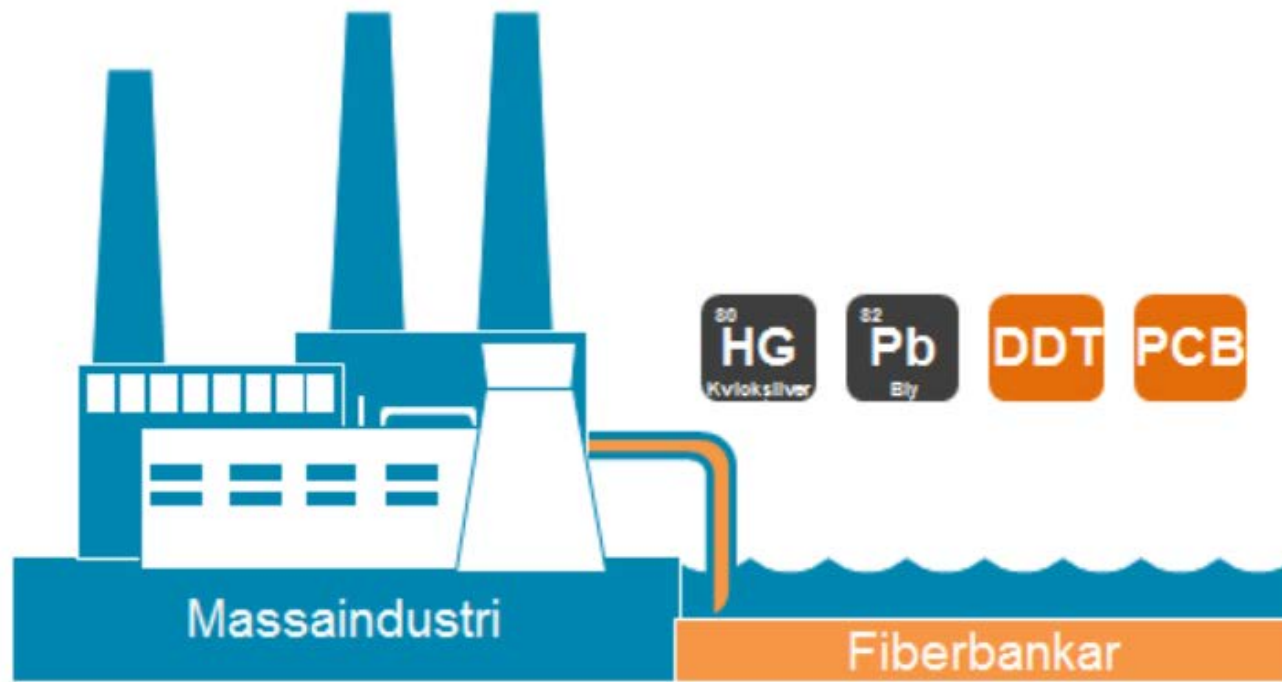


Within the BioRem Fiber research project, the goal is to develop market-adapted environmental technology to clean up fiber banks along the coast of Västernorrland with the help of fungi, plants and bacteria, so-called bioremediation.



BioRem Fiber

- The fiber banks have been formed through emissions of contaminated process water from the wood and pulp industry and contain environmentally hazardous heavy metals and organic pollutants.



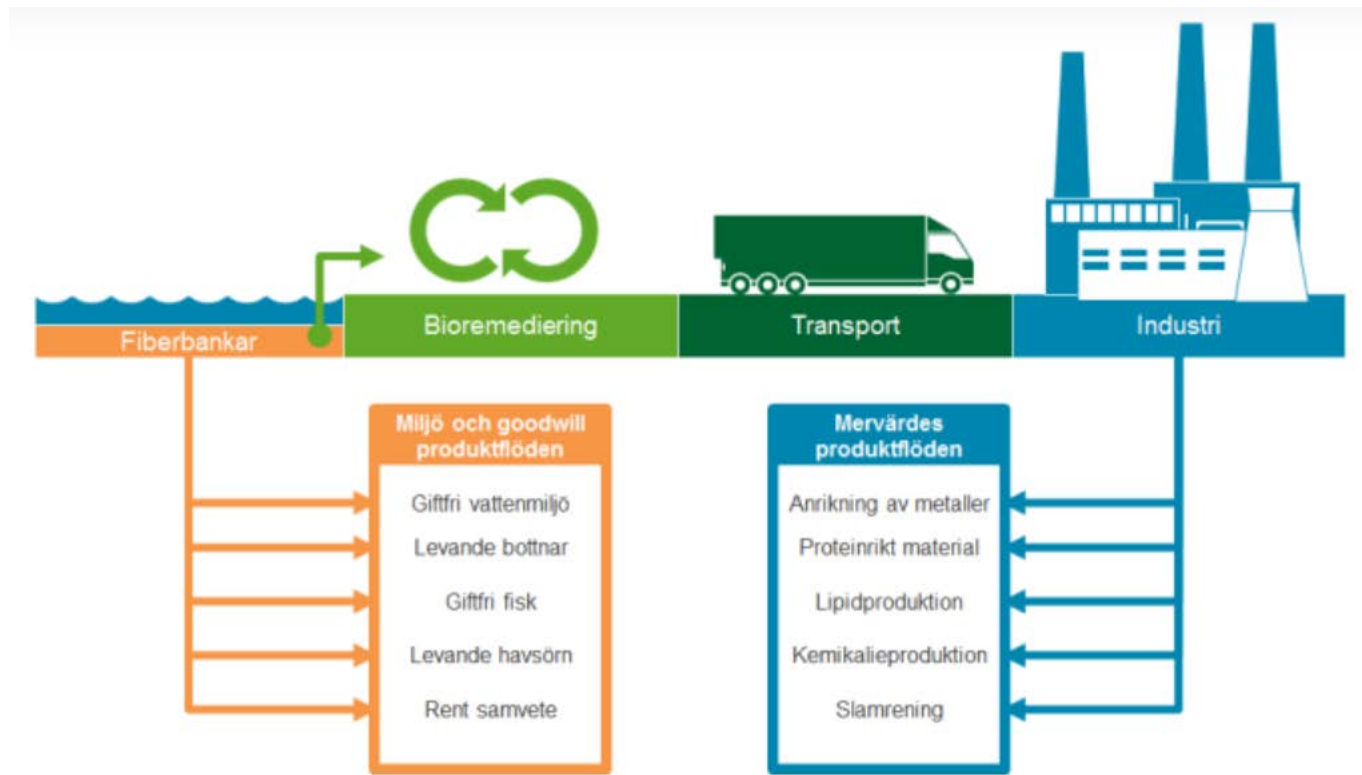


BioRem Fiber

- The toxic content of the fiber banks has been mapped by, among others, the County Administrative Board of Västernorrland and Sweden's geological survey and now the next step needs to take.
- The project target to contribute to a sustainable environment while developing processes for detoxification of the fiber bank material as well as production of value-added products from the detoxified material.
- Joint efforts between the Mid-Sweden University, municipalities, industrial partners and the county environmental authorities.



BioRem Fiber





National impact

- Academic research – publications and knowledge creation
- Development and evaluation of CleanTech procedures by industrial partners
- Influence authorities and companies on the importance of addressing environmental problems related to fiber banks
- Attracting national and international funds for R&D to handle different aspects of the environmental challenge

From pre-study program to a national research program

- Mid Sweden University receives SEK 17.3 million from state research funder Forte to study local labor market programs for six years in the research program "Local labor market programs - Challenges of and for an inclusive labor market".
- - We hope that with our research we will find ways and means that help groups that are far from the labor market to enter working life and get their own livelihood.
- The researchers focus on local initiatives in Västernorrland and the Gothenburg region, with a special focus on municipal initiatives.



Mittuniversitetet
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Thank you !

ETOUR Research Centre

Director Robert Pettersson



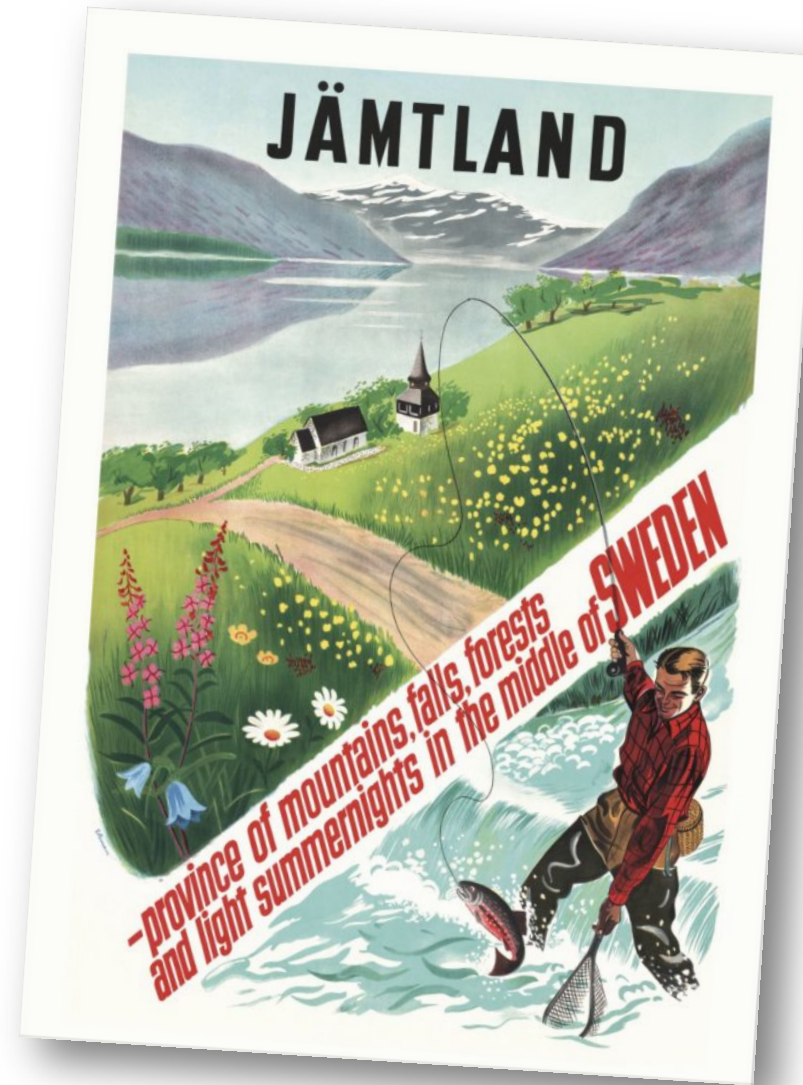
PART OF  MID SWEDEN UNIVERSITY

Established 1997 as a EU Structural Fond Project

Located in a Tourism Region



Mittuniversitetet
MID SWEDEN UNIVERSITY



Development

- Integrated into the University
- Closer to education
- Broader funding
- Larger and more international
- Still close to the tourism industry and the region



Funding

	2014	2015	2016	2017	2018	2019	2020	2021
External funding	9 489	8 792	10 685	9 795	4 936	3 821	7 029	12 929
Internal funding	6 790	5 439	5 983	6 621	6 570	6 978	9 546	9 099
Total funding	16 279	14 230	16 669	16 416	11 506	10 799	16 575	22 028
External funding	58%	62%	64%	60%	43%	35%	42%	59%

External Funding	
Research Councils (VR, Forte, Formas etc.)	Low, but increasing
Swedish Foundations (e.g. Wallenberg, SSF, Vinnova, RJ, KK, Swedish Energy Agency etc.)	High - Main Founding source
EU	Today low - None to the center, sometimes to individual projects
Other public bodies (e.g. county councils, municipalities, etc.)	Medium and increasing
Direct external funding from industry.	Medium and increasing
Others (please specify)	Low

Severael Sources of EU-Funding

- EU Structural Funds
- Interreg
- Northern Periphery Program
- Horizon 2020



SAINT - Slow Adventure in Northern Territories



STC - IoT, AI och Sensorer som möjliggörare

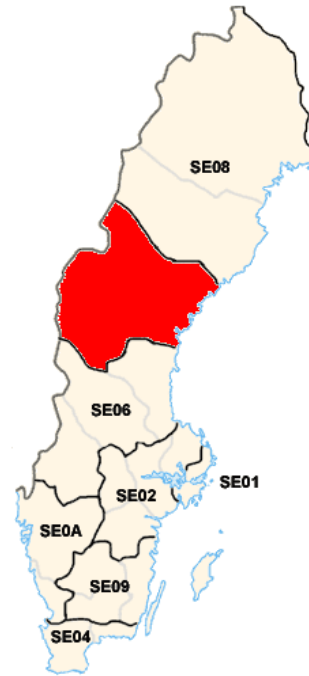
Mattias O'Nils

~100 forskare med
profil inom IoT

~20 professorer
(11 gästprofessor)



Context



STC

Sensible Things that
Communicate

AI, IoT and Sensors

100 researchers

Bron Innovation

Innovation and competence
cluster in IT/digitalization

90+ companies

Projects

- Main objective:
 - Build regional attractiveness in IoT/AI/Sensors (research excellence)
 - Strengthen regional companies to be strong enough to compete for national/international funding
 - Not by confirming there needs -> By challenge there needs
 - SMART -> Generated 80 MSEK (170% of ERUF funding)
 - MiLo -> Generated 50 MSEK national funding (178% of ERUF funding)
 - IoT Testbed (Generated 17,6) ongoing project
 - AI – competence (Generated 5 MSEK) ongoing project
- 

Key enablers

- To be able to build excellence in research (attractiveness)
 - Efficient project structure and organisation
 - Reporting organisation that captures progress and communicate success in all aspect without heavy overhead
 - Put hard goals on ourself outside the ERUF goals
 - Scientific goals
 - Goals to generate new funding, at least as much new funding (national/international) as granted
- Work systematic with communication and evaluation



Ny AI-lösning godkänd för virkesmätning

17.9.2021 13:00:00 CEST | [Biometria](#)



Biometria har utvecklat en ny AI-lösning för att automatiskt bestämma virkestravars volym. Lösningen, som fått namnet ASTA (AI-stödd travmätning), kombinerar bilder på virkestravar med data från skogsmaskiner och viktdata från fordonsvåg. På sikt kommer ASTA att bidra till sänkta kostnader för virkesmätning.



Ånge är pilot för smartare snöröjning

För att behålla livskvaliteten i landsbygder behövs fler innovativa lösningar. Ånge kommun har valt att utöka sitt digitaliseringsarbete med fokus på sakernas internet. På så sätt ska de kunna utveckla servicen de erbjuder sina invånare, exempelvis med smart snöröjning.



IT-innovation sparade 500 000 liter bränsle för bussbolag



Effects

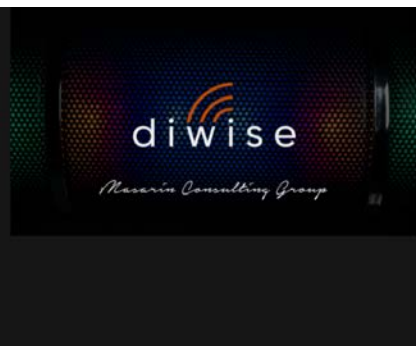


Starbit AB

Diwise – en plattform som förändrar Sverige

14 april 2021

Dela på [Facebook](#) [LinkedIn](#)



Välkommen *diwise*! Om sakerna omkring dig kunde prata, vad skulle de säga? Det är frågan som möter besökaren på [IoT Sveriges](#) webbplats. Det är en spännande fråga som väcker många tankar såväl som idéer. Men det finns också några intressanta följdfrågor, som vad du skulle göra med informationen, hur du skulle vilja svara tillbaka och vilken nytta



Effects

New products/services

New competence

National Center in IoT

10 000+ Persons

250+ Companies

New/better education

Industrial PhD students

Academic merits
(Attractiveness/Excellence)

International colab.

New PhDs

100s of research articles

New international/national funding



A study visit with InnoHEIs, in Östersund 2022-01-19--20

EU ProjectCentre – RJH / Project Office

CORE TEAM OF EIGHT EMPLOYED + RESOURCES



Marie Sherman

Strategist / Project
Coordinator

RJH / Project Office

EU ProjectCentre



Ioannis

Amantidis

Horizon Grants Expert

EU ProjectCentre

RJH / Project Office

Commission 2014: Let Region Jämtland Härjedalen become a testbed arena and let healthcare be the engine for regional development!

- **Let our problems be opportunities!**

 - Healthcare becomes more advanced

 - Right to equal healthcare - even in rural areas

 - Region Jämtland Härjedalen has a demographic advantage

 - We need more cost-effective healthcare

- **Thus...**

 - We need external funding to drive innovation and development

 - Let EU contribute with venture capital to our development

 - We need to collaborate with business, academia, municipal care and end-users

- **How?**

 - Horizon 2020 programme: Research – Innovation – Societal challenges: Health, demographic change and wellbeing

 - Part of high-quality international research innovation and holistic projects developing our future healthcare



EU ProjectCentre
RJH / Project Office



EIP on AHA Reference Site – "3 Star"
ERRIN InDemand Community
EHTEL member





ProjectCentre's contribution to RJH's development

One EUC project planned:

"All roads lead to: Highway to Integrated Care and Regional growth!"

2014

"Let Region Jämtland Härjedalen become a testbed arena and let healthcare be the engine for regional development!"

" Let EU contribute with venture capital to our development"

2014-2020

4 Vinnova projects

- Compensation models
- Pre-study Testbed Stroke rehab
- Pre-study UDI RINALDO
- Orderly Introduction of Digital Services and Products

2 INTERREG projects

- Pre-study Welfare Technology
- VäITel 1.0

4 Other projects

- ERUF - Pre-study 0,1-1,0 SME / R&D
- Medtech4Health – Pocket-seized ECG
- SWELife – Integrated Biobanking
- AMIF - AMIR

1 Horizon 2020

- C3-Cloud

1.657.617 EUR

2018-2024

1 Ministry of Social Affairs

- Good and Near Care in rural areas

2 ERUF-projekt

- Regional ResourceCentre
- eHealth Centre

6 Horizon 2020 projects

- HSMonitor
- AdLife
- mHealth Hub
- dRural
- INCAREHEART
- Medical 1st Responder Training using MR

Awards / Networks

EIP on AHA Reference Site – "3 Star "

ERRIN InDemand Community

ETHEL - Collaborating for Digital Health and Care in Europe

5.944.333 EUR

Funding for RJH 7,6 MM EUR

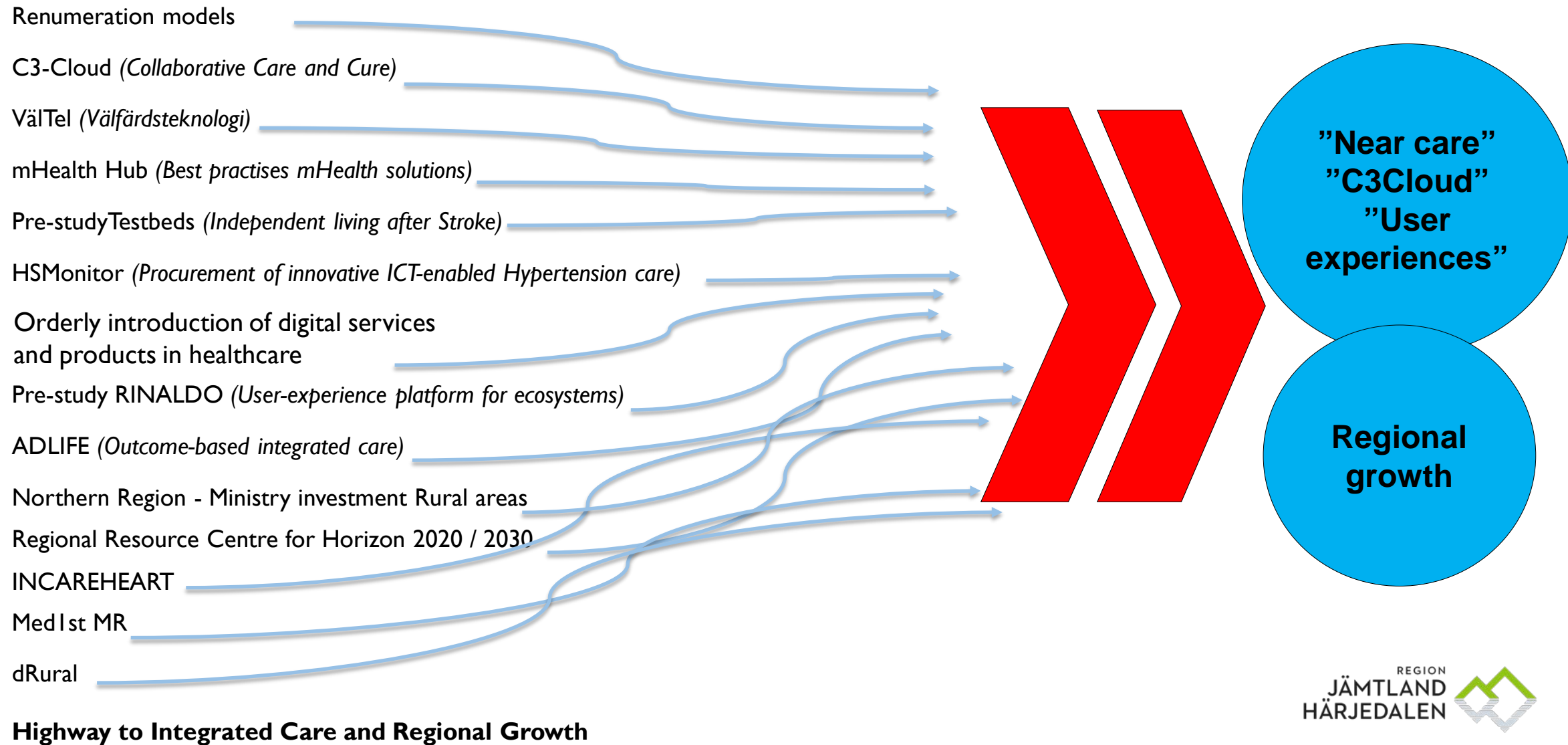
Salaries for 7 of 8 PC employees;
Overhead costs;

Other funding to business sector to develop R&D solutions

Know-how assets for development

Networks

All roads lead to: Highway to integrated care and regional growth!

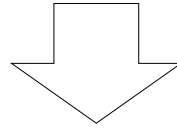


Jämtland Härjedalen's contribution to EU's transformation

Invest in Innovation / PEAK Region AB

Purpose:

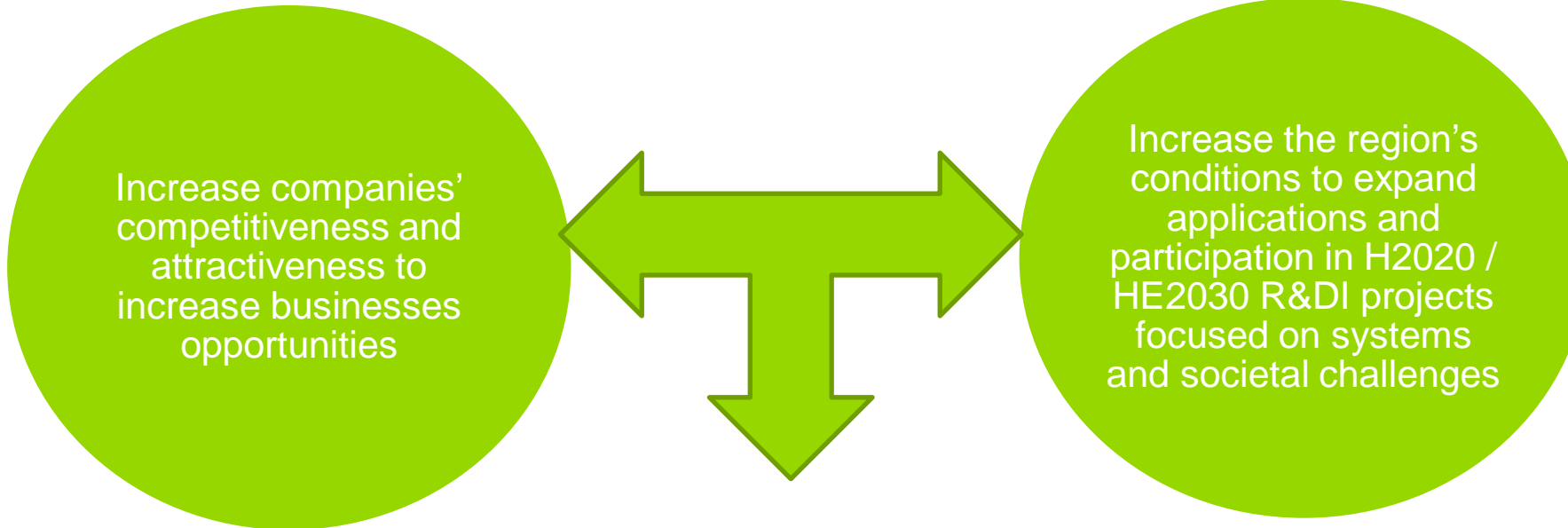
Support companies with their internal R&I and R&D projects



Regional ResourceCentre for Horizon 2020 / 2030 / RJH

Purpose:

Network and spread expert knowledge to increase applications and participation in Mid Northern Region



Long-term common outcome of the projects:

Permanent Regional Innovation – Resource Centre providing broad excellence that strenghtens the region's participation by business and public sectors in EU's programmes for innovation and development

Published Articles

■ C3-Cloud

C3-Cloud personalised care plan development platform for addressing the needs of multi-morbidity and managing poly-pharmacy: Protocol for a pilot technology trial

JMIR Research Protocols: July 01, 2020

Malte von Tottleben, Katie Grinyer, Ali Arfa, Lamine Traore, Dolores Verdoy, Sarah N. Lim Choi Keung, Igor Larranaga, Marie-Christine Jaulent, Esteban De Manuel Keenoy, **Mikael Lilja**, Marie Beach, Christopher Marguerie, Mustafa Yuksel, Gokce B. Laleci Ertukmen, Gunnar O. Klein, Pontus Lindman, Dipak Kalra, Theodoros N. Arvanitis

Localisation, Personalisation and Delivery of Best Practice Guidelines on an Integrated Care and Cure Cloud Architecture: the C3-Cloud Approach to Managing Multimorbidity

30th Medical Informatics Europe conference (MIE 2020)

George DESPOTOU, Gokce B. LALECI ERTURKMEN, Mustafa YUKSEL, Bunyamin SARIGUL, Pontus LINDMAN, Marie-Christine JAULENT, Jacques BOUAUD, Lamine TRAORE, Sarah N. LIM CHOI KEUNG, Esteban DE MANUEL, Dolores VERDOY, Antonio DE BLAS, Nicolas GONZALEZ, **Mikael LILJA**, **Marie SHERMAN**, Malte VON TOTTLEBEN, Marie BEACH, Christopher MARGUERIE, Liran KARNI, Gunnar O. KLEIN, Dipak KALRA, Rong CHEN, and Theodoros N. ARVANITIS

User-Centered Design of the C3-Cloud Platform for Elderly with Multiple Diseases – Functional Requirements and Application Testing

MEDINFO 2019: Health and Wellbeing e-Networks for All

Lamine Traore, Ariane Assele-Kama, Sarah N. Lim Choi Keung, Liran Karni, Gunnar O. Klein, **Mikael Lilja**, Isabella Scandurra, Dolores Verdoy, Mustafa Yuksel, Theodoros N. Arvanitis, Rosy Tsopra, g, Marie-Christine Jaulent

A Collaborative Platform for Management of Chronic Diseases via Guideline-Driven Individualized Care Plans

Computational and Structural Biotechnology Journal 17 (2019) 869–885

Gokce B. Laleci Erturkmen, Mustafa Yuksel, Bunyamin Sarigul, Theodoros N. Arvanitis, Pontus Lindman, Rong Chen, Lei Zhao, Eric Sadou, Jacques Bouaud, Lamine Traore, Alper Teoman, Sarah N. Lim Choi Keung, George Despotou, Esteban de Manuel, Dolores Verdoy, Antonio de Blas, Nicolas Gonzalez, **Mikael Lilja**, Malte von Tottleben, Marie Beach, Christopher Marguerie, Gunnar O. Klein, Dipak Kalra

Personalised Care Plan Management Utilizing Guideline-Driven Clinical Decision Support Systems

2018 European Federation for Medical Informatics (EFMI) and IOS Press

Gokce Banu Laleci Erturkmen, Mustafa Yuksel, Bunyamin Sarigul, **Mikael Lilja**, Rong Chen and Theodoros N. Arvanitis

■ HSMonitor

A digitally-enabled health service for the integrated management of hypertension: a participatory design process

Authors: Vincenzo De Luca and Vanja Lazic, Strahil Birov, Klaus Piesche, Ozan Beyhan, Martino Pengo, Marcello Melgara, **Marie Sherman**, **Mikael Lilja**, Antonija Balenovic, Maria Triassi, Raffaele Izzo, Guido Iaccarino, Maddalena Illario



Success factors



Challenges



Future positioning

SUCCESS FACTORS

TEAM culture – Tested working method (coordinators – not project leaders)

RESOURCES – Skills: healthcare, research, law, procurement, IT – eHealth, business, EU administration, deployment, organisational transformation, communication

TRACK RECORD / TRADEMARK – Internal and partners', Results in many areas,

STRATEGIC & OPERATIONAL – Combine research – evidence-based practice - tacit knowledge, Cross-professional / sectorial competences

COLLABORATIONS – Strong regional, national, international

DRIVE – Sheer doggedness,

FOCUS – No Grants office, Working model: Network - Apply - Manage - Follow-up – Implement, Holistic view – minimise silos, Think and act outside of the box!

CHALLENGES

IMPLEMENTATION – Remove Implementation Gap*! *gap and lack of coordination between implementation research and the good project results

ORGANISATIONAL - Innovation & Management = internal contradiction, Lack of integration within and between caregivers, Plethora of legal interpretations

LEADERSHIP CONTINUITY – Differing levels of "understanding", Reorganisations, OK to re-evaluate agreements?

FUTURE POSITIONING

NEW ORGANISATIONAL AFFILIATION – Growth crises?

BLUEPRINT MODEL – Northern Sweden / mega testbed to be scaled up in EU & Ready to lead the development of a larger Competence and Resource Centre

TARGETED FUNDS – Mega EU project ("All roads lead to: Highway to Integrated Care and Regional growth!")



A Federated Collaborative Care and Cure Cloud Architecture for Addressing the Needs of Multi-morbidity and Managing Poly-pharmacy

Goals

- develop personalised care plans
- develop individually structured decision support for caregivers based on evidence and supported by information technology tools
- develop combined treatment guidelines for multimorbidity - target polypharmacy

Consortium

UK

University of Warwick – **Coordinator**
South Warwickshire NHS

Sweden

Region Jämtland Härjedalen
Örebro University
Cambio

Spain

Osakidetza
Kronikgune

Turkey

SRDC

Germany

empirica

France

Inserm
EuroRec

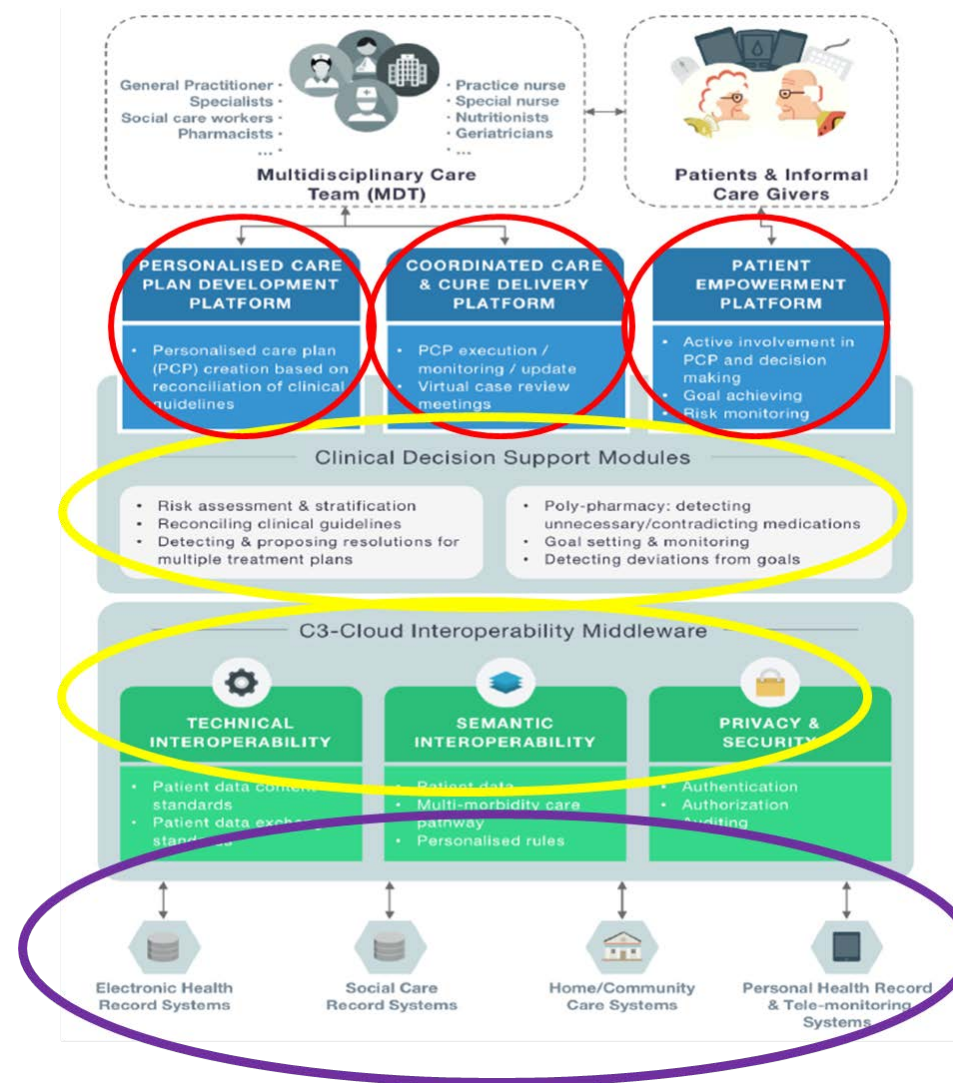
Finland

Medixine

A Federated Collaborative Care and Cure Cloud Architecture for Addressing the Needs of Multi-morbidity and Managing Poly-pharmacy

C3-Cloud Overall Architecture

- >55 age
- At least two:
 - Diabetes type 2
 - Depression (mild / moderate)
 - Heart failure (mild / moderate, NYHA I/II)
 - Kidney failure (moderate, eGFR 30-59)
- Also hypertension and lipids



European innovation and knowledge mHealthHub including evidence for the integration of mHealth in the healthcare systems

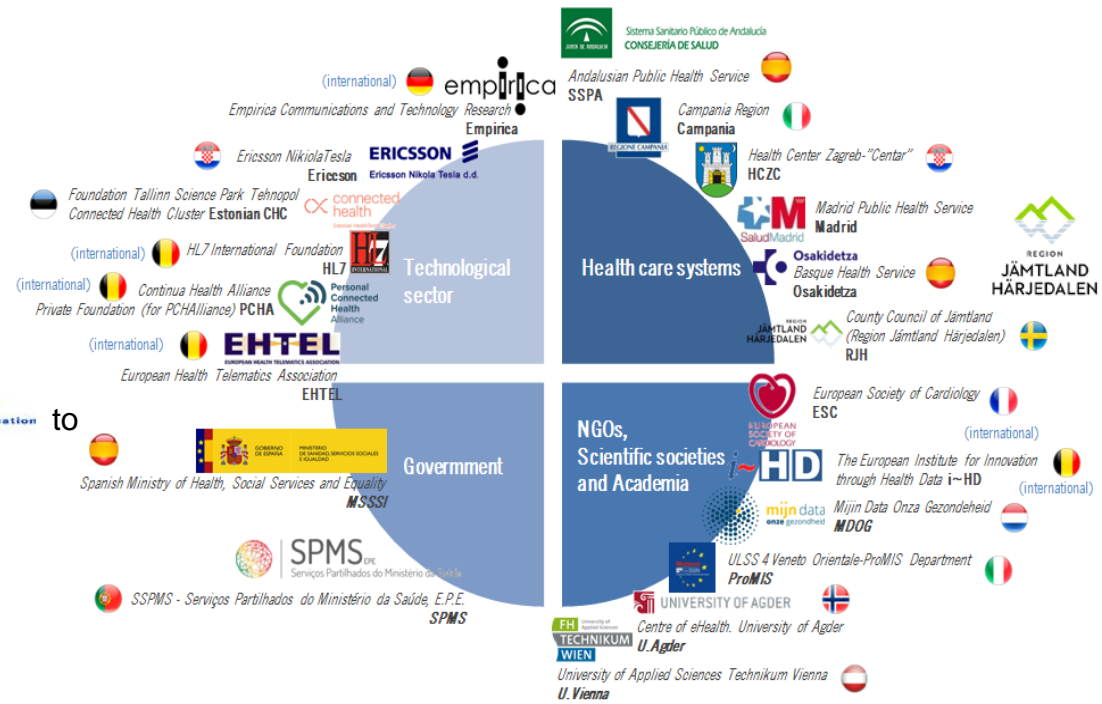
Goals

- serve as a focal point for expertise and assist countries in implementing mHealth strategies
- act as facilitator of innovation in mHealth
- produce Knowledge Tools for health systems and services on NCDs
- provide a code of ethics for mHealth data

Consortium

An initiative by  World Health Organization and  ITU International Telecommunication Union to establish a permanent European mHealthHub

20 consortium members in 11 countries



European innovation and knowledge mHealthHub including evidence for the integration of mHealth in the healthcare systems

Work areas:

- mHealth assessment frameworks
- Evidence-based mHealth solutions on NCDs
- Integration of mHealth into health systems
- Support for large-scale implementation of mHealth programmes
- Contributions to policy frameworks on mHealth topics
- Ethics, code of ethics for mHealth data

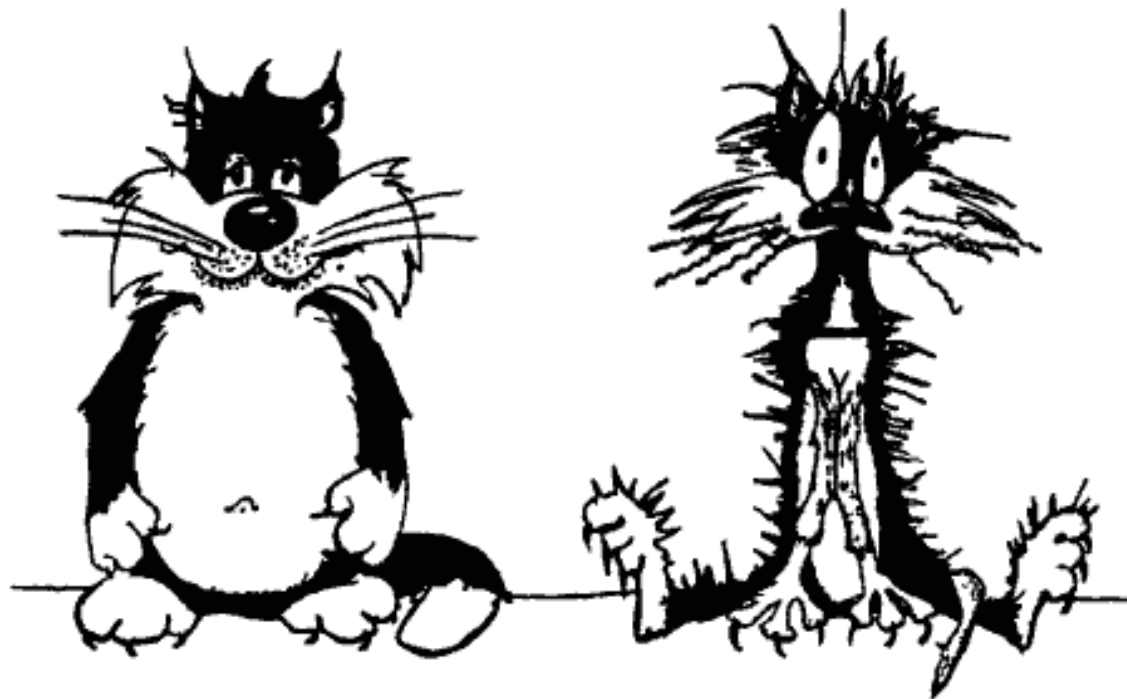
Ready:

- KT1: Health apps assessment frameworks
- KT2: mHealth intervention programme on diabetes
- KT3: on integration of mHealth into health systems
- 21 Health apps repositories – 9 countries across EU
- 3 case studies (IT,AT,PT) – contribution to policy frameworks on mHealth topics
- Hub Talks 2021 – webinar series
- Recommendations on privacy, security, transparency
- Ethics guide in mHealth service provision
- Tailored support on implementation of mHealth to Hungary and Czech Republic

Under development:

- Czech Republic supporting - final workshop, 20 Jan. 2022
- Final workshop “Implementation Support for Hungary: Co-design of an implementation guideline for mDiabetes applications”, 25 Jan. 2022
- Hub service portfolio – permanent model - governance – resources – financing – business model

The goal is that the Hub will become an independent and self-sufficient entity. Sustainability Leadership Team (SLT) is onboard to lead mHealthHub to a transition period. RJH participates in the SLT.



Before Work

After Work