



Norwegian University of
Science and Technology

Implementering av strategi:

1 milliard kroners spørsmålet

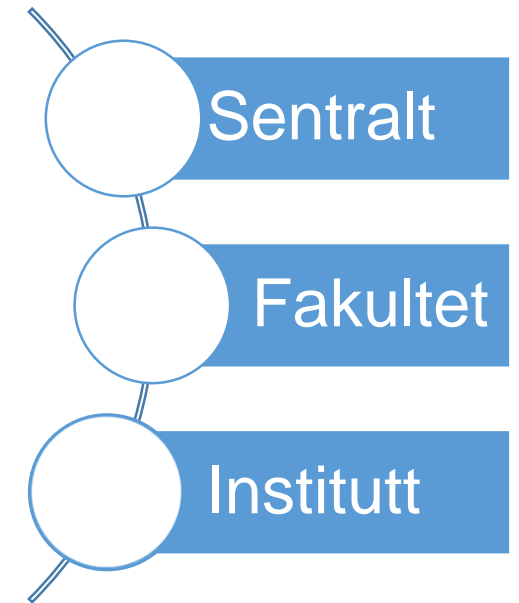
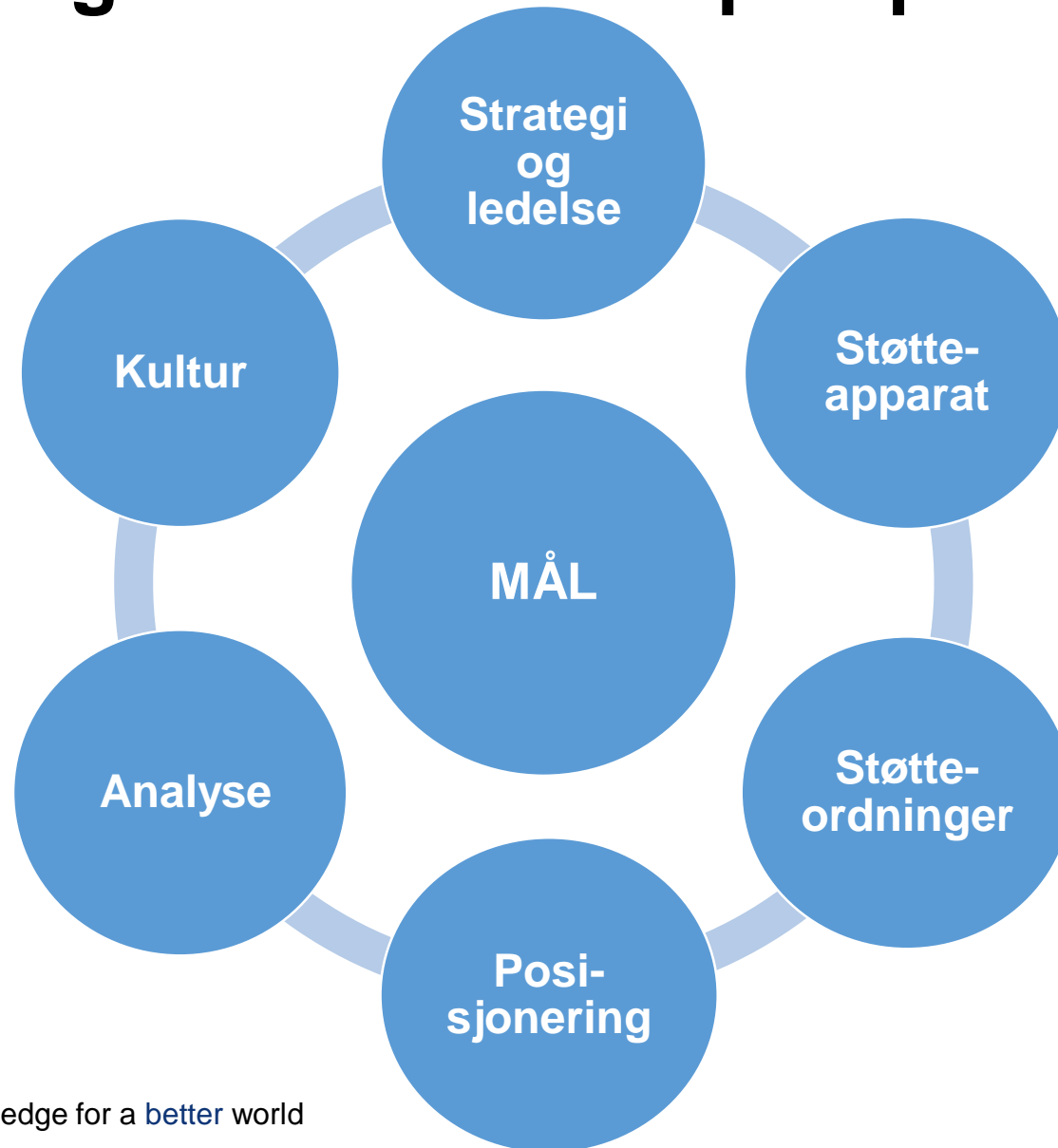
Nina Sindre, Internasjonal koordinator, NTNU



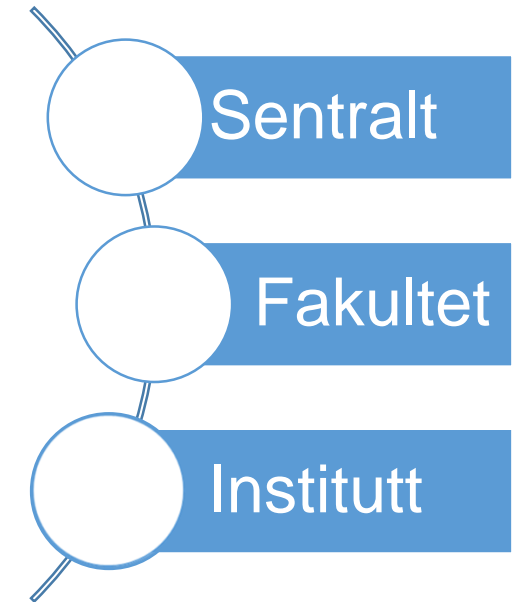
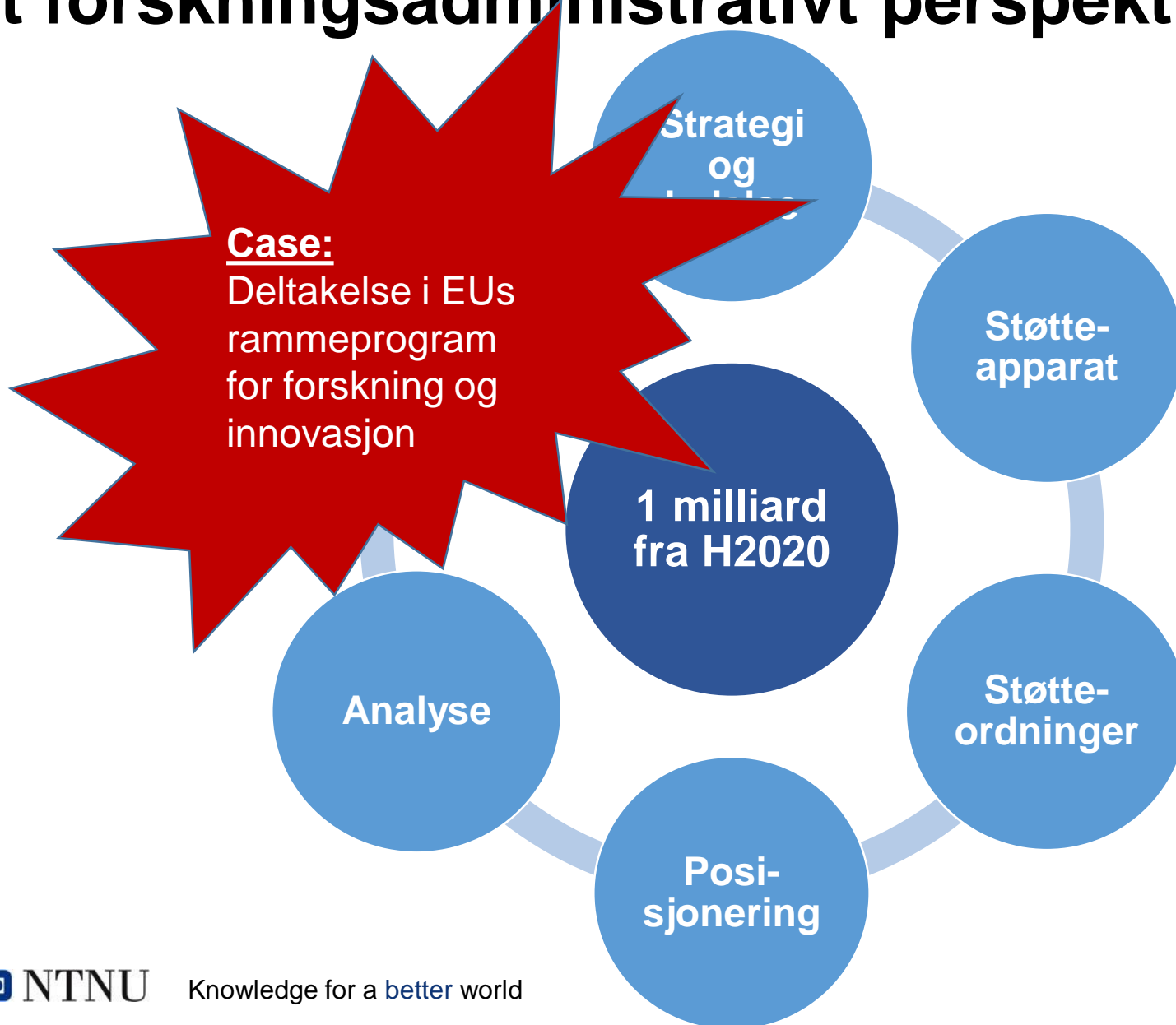


NTNUs Internasjonale handlingsplan 2018 - 2021:
1 milliard NOK fra Horisont 2020

Implementering av strategi og bidrag til måloppnåelse: Et forskningsadministrativt perspektiv



Implementering av strategi og bidrag til måloppnåelse: Et forskningsadministrativt perspektiv





«Vi skal flytte
komma på EU!»

CHALLENGE
THIS MAN

KUNNSKAP FOR EN BEDRE VERDEN

Norges teknisk-naturvitenskapelige universitet – NTNU

Vedtatt av NTNUs styre 06.12.2017



Internasjonalisering

NTNU er internasjonalt orientert og betydelig bidragsyter i den globale kunnskapsutviklingen. Internasjonalisering er integrert i den faglige aktiviteten i alle fagmiljøene våre.

Utviklingsmål

- **øke utnyttelsen av EUs virkemidler** for forskning, innovasjon og utdanning for å sikre høy kvalitet og relevans i virksomheten vår
- **etablere strategiske partnerskap** med utvalgte institusjoner globalt
- **styrke rekrutteringen av fremragende forskere** internasjonalt og øke den internasjonale mobiliteten for våre ansatte
- **øke andelen gradsstudenter** som tar et studieopphold ved et utenlandsk lærested



EUs rammeprogram for forskning og innovasjon Horisont 2020 og Horisont Europa

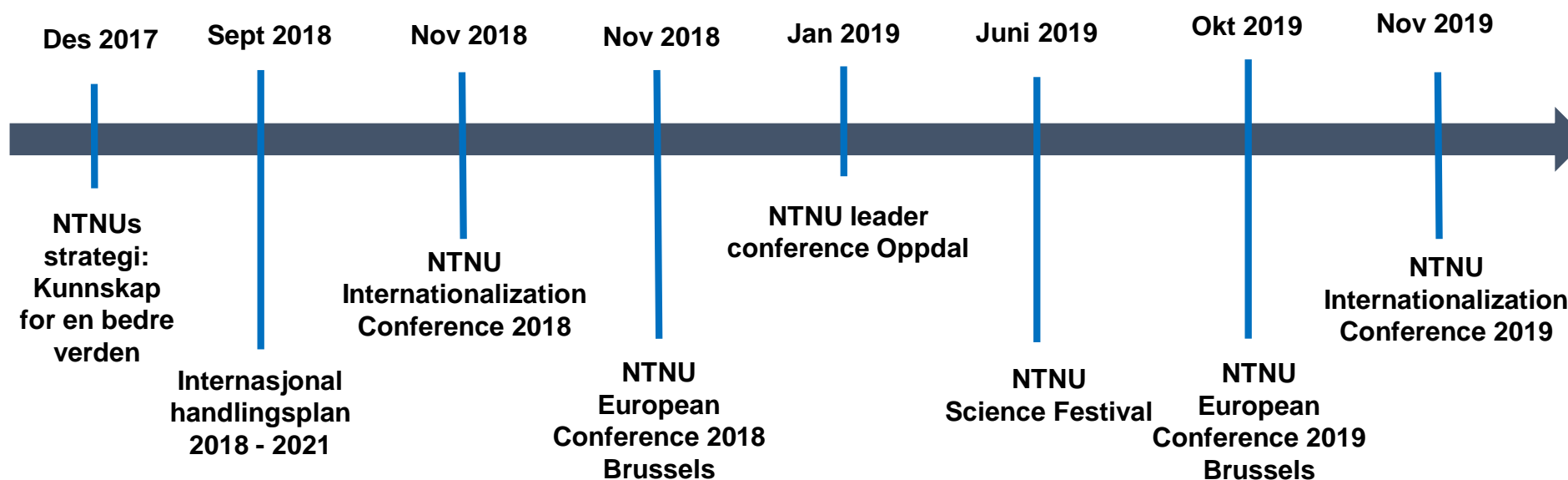
Strategi
og
ledelse

MÅL

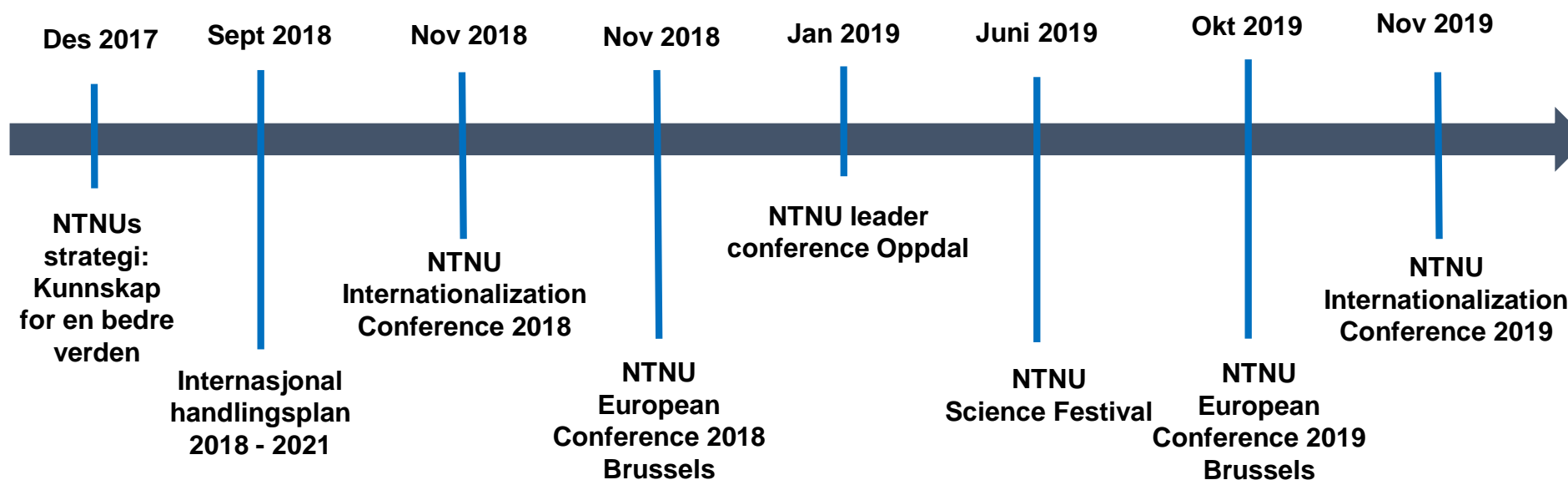
NTNUs deltakelse i EUs rammeprogram for forskning og innovasjon Horisont 2020 bør ha et omfang som tilsvarer en inntekt fra programmet på minst 1 milliard kroner samlet for programperioden.

NTNU bør være blant de tre beste nordiske universitetet i de tematiske programmene under Horisont 2020.

NTNUs internasjonaliseringsår 2018/2019



NTNUs internasjonaliseringsår 2018/2019



Dessuten: Internasjonalisering og EU tema i Dekanmøtet, Forskningsutvalget og Rektors møte med instituttlederne

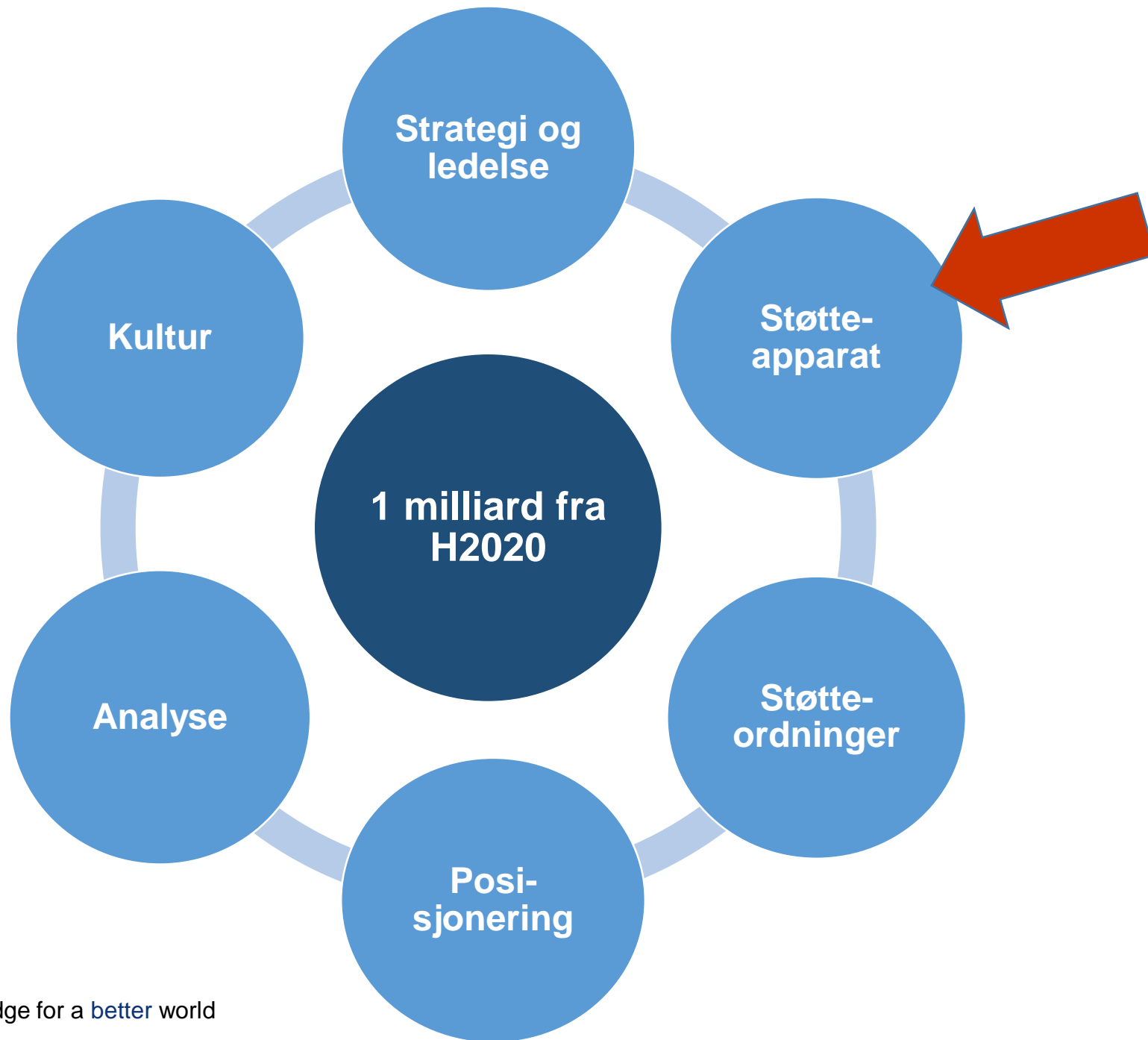
Strategi og ledelse

Status:

- Har strategi med et tydelig budskap og klare prioriteringer
- Har sterk ledelsesoppmerksomhet

Tema:

- Forankring av strategien i hele organisasjonen
- Tydelige strategieiere med myndighet og ansvar
- Operasjonalisering i tiltak
- Ressurser for implementering



EU Støtteapparat: Aktuelle modeller

Støtte-
apparat

Modell 1:

Full desentralisering:
Alle oppgaver ligger
til fakultet, ingen
koordinering

Modell 2:

Full sentralisering:
Etablering av EU-
kontor sentralt som
løser alle oppgaver

Modell 3:

Desentralisert og
koordinert:
De fleste oppgaver
ligger til fakultet,
men støtteapparatet
er samordnet

EU rådgiverne

Støtte-
apparat

AD



Håvard Wibe



Tone Woie
Alstadheim

HF



Chamila T.
Attanapola



Hanne Silje
Hauge



Thomas
Sørli
Hansen

IE



Ida Lerheim



Filip Jessen

IV



Andreas
Møllerløkken



Ingunn S.
Bøgeberg

MH



Emma
Walton



Boukje Ehlen

NV



Bjørn Steinar
Tanem



Thais Mothe-
Diniz

SU



Bård Li



Jens Rohloff

ØK



Hilde
Røysland

VM



Ingrid
Salvesen



Solveig
Bakken



Rektors stab



Nina E. Sindre

Leder EU Forum

ERC



Øyvin Sæther

MSCA

CLIMATE



Patrick Reurink

FET

INFRA

NTNU Brussel's Office



Massimo Busuoli



Sina T.B. Prestmo

EU Økonomi



Andreas V. Ellefsen

Jurister



H2020 Local Contact Points



Anastasios Lekkas

Oceans



Yngve Sommervoll

Health



Eleni Patanou

Energy



Hilde Røysland

Socio-economic

EU Forum

Støtte-
apparat



Kompetanse i støtteapparatet

Støtte-
apparat



Patrick Reurink @preurink · 28 Nov 2018

EU-forum @ntnu spending two days @ucl and @KingsCollegeLon to get inspiration to develop & deliver the best possible services for our researchers for proposals & projects in @EU_H2020 & @eu_fp 🇳🇴 🇪🇺



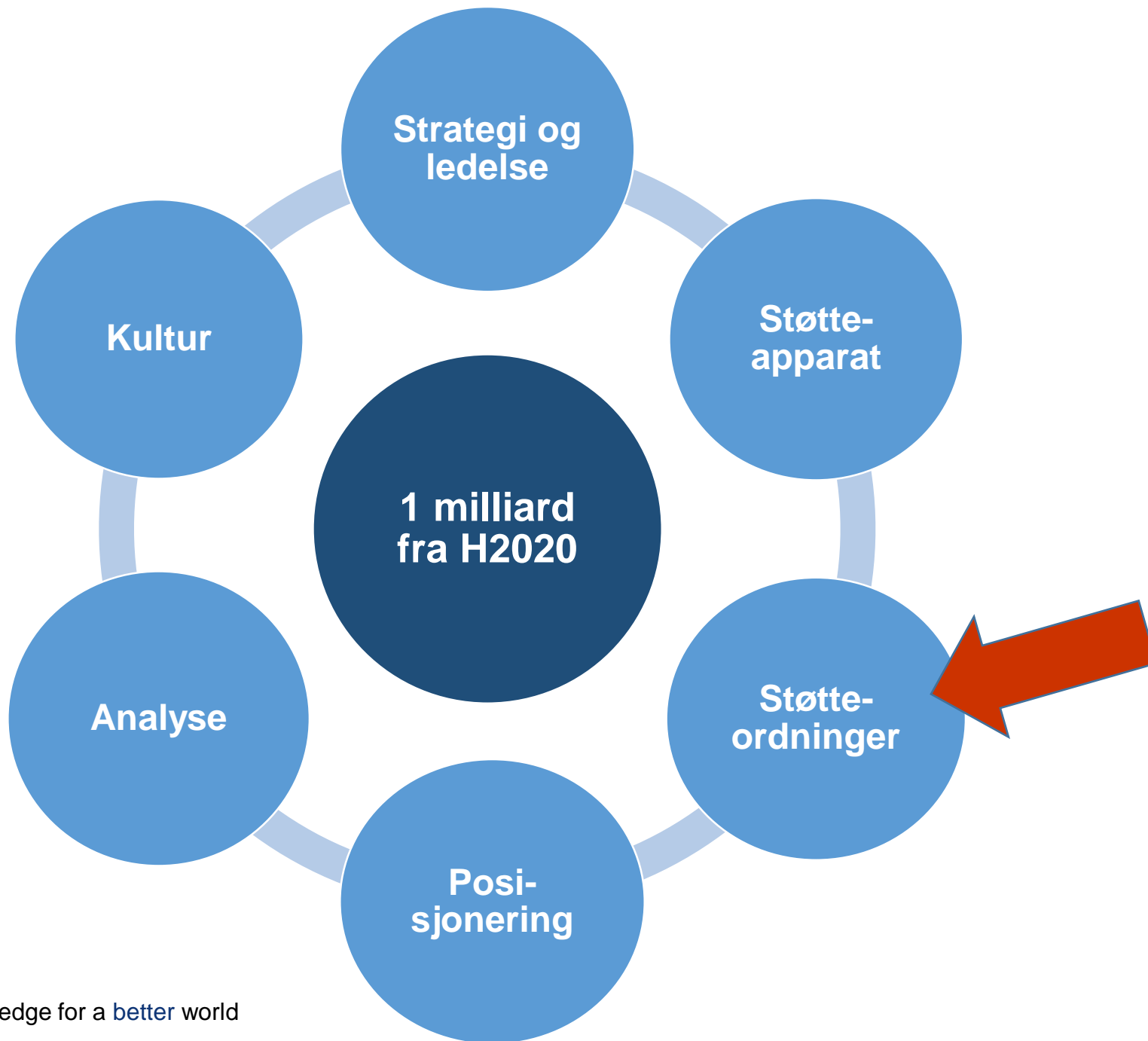
Støtte- apparat

Status:

- Har høyt kompetente EU-rådgivere ved alle fakulteter nær fagmiljøene og den strategiske og faglige ledelsen ved fakultetene
- Har spesialisert kompetanse sentralt
- EU-forum er møteplass for koordinering og deling

Tema:

- Effektiviteten, robustheten og kvaliteten i støttetjenestene
- Mulighet til å utvikle spisskompetanse
- Administrative rutiner versus strategisk tilnærming
- Bygge og bevare kompetanse ved utskiftning



H2020 Gullkort: Internalisering av kunnskap og kompetanse, tilførsel av ressurser

Støtte-
ordninger





Wiki > Horisont 2020 > Horisont 2020 - insentivordninger

← Horisont 2020 - insentivordninger

NTNU har to insentivordninger for deltakelse i Horisont 2020, og enkelte randsoneaktiviteter:

- Tilleggsfinansiering for prosjekter som får innvilget støtte
- Stipendiat- eller postdoc-stilling til NTNU-koordinerte samarbeidsprosjekter, og ERC-prosjekter

Støtte-
ordninger



MARIE CURIE **ACTIONS**

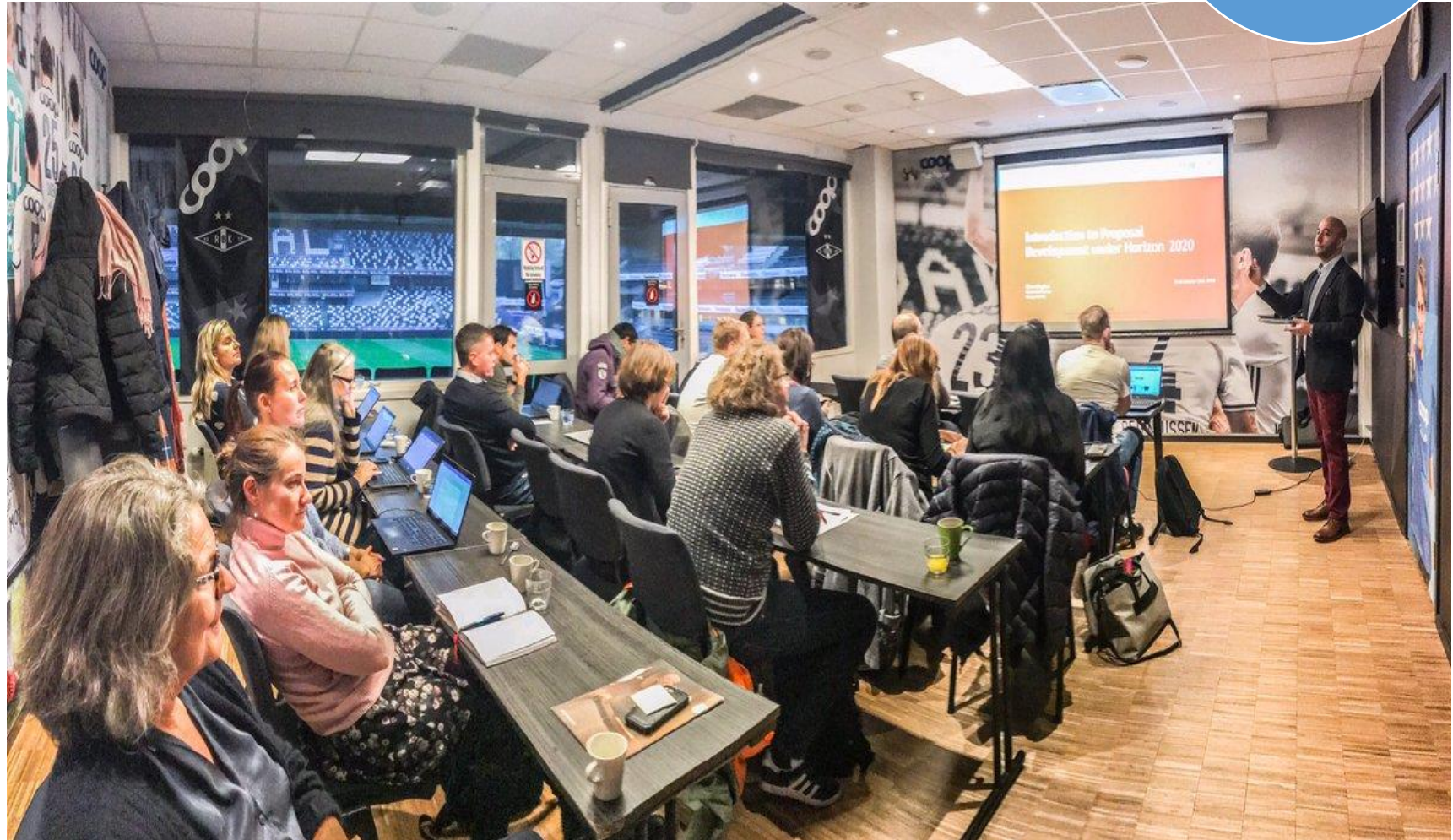
MSCA topp-
finansiering

Kompetansebygging

Støtte-
ordninger



Yellow Research 



Prosjektetableringsstøtte – PES2020

Horisont 2020

Støtte- ordninger

Status:

- Har relativt omfattende støtteordninger

Tema:

- Treffsikkerheten i støtteordninger
- Forholdet mellom sentrale og fakultetsvise ordninger
- Finansiering av støtteordninger
- Løpende evaluering av ordningene



NTNU Handbook of participation in European Platforms, Networks and Alliances

Posi-
sjoning



EIP-SCC
European Innovation Partnership
on Smart Cities and Communities

CESAER

conference of European schools
for advanced engineering education
and research



EERA
European Energy Research Alliance



EFFRA
EUROPEAN FACTORIES OF THE FUTURE
RESEARCH ASSOCIATION



ECS
EUROPEAN CYBER SECURITY ORGANISATION



EASSH
European Alliance for Social
Sciences and Humanities



ERCIM
European Research Consortium
for Informatics and Mathematics



Climate-KIC

Posi-
sjoner



Head of Office
Massimo Busuoli



Internship
Sina T.B. Prestmo



Trainee
Turid Høstmark

NTNU European Conference

Posi-
sjoner

NTNU European Conference

Posi-
sjoner



NTNU European Conference

Posi-
sjoner



NTNU – SINTEF Brussels Conference

Posi-
sjonering



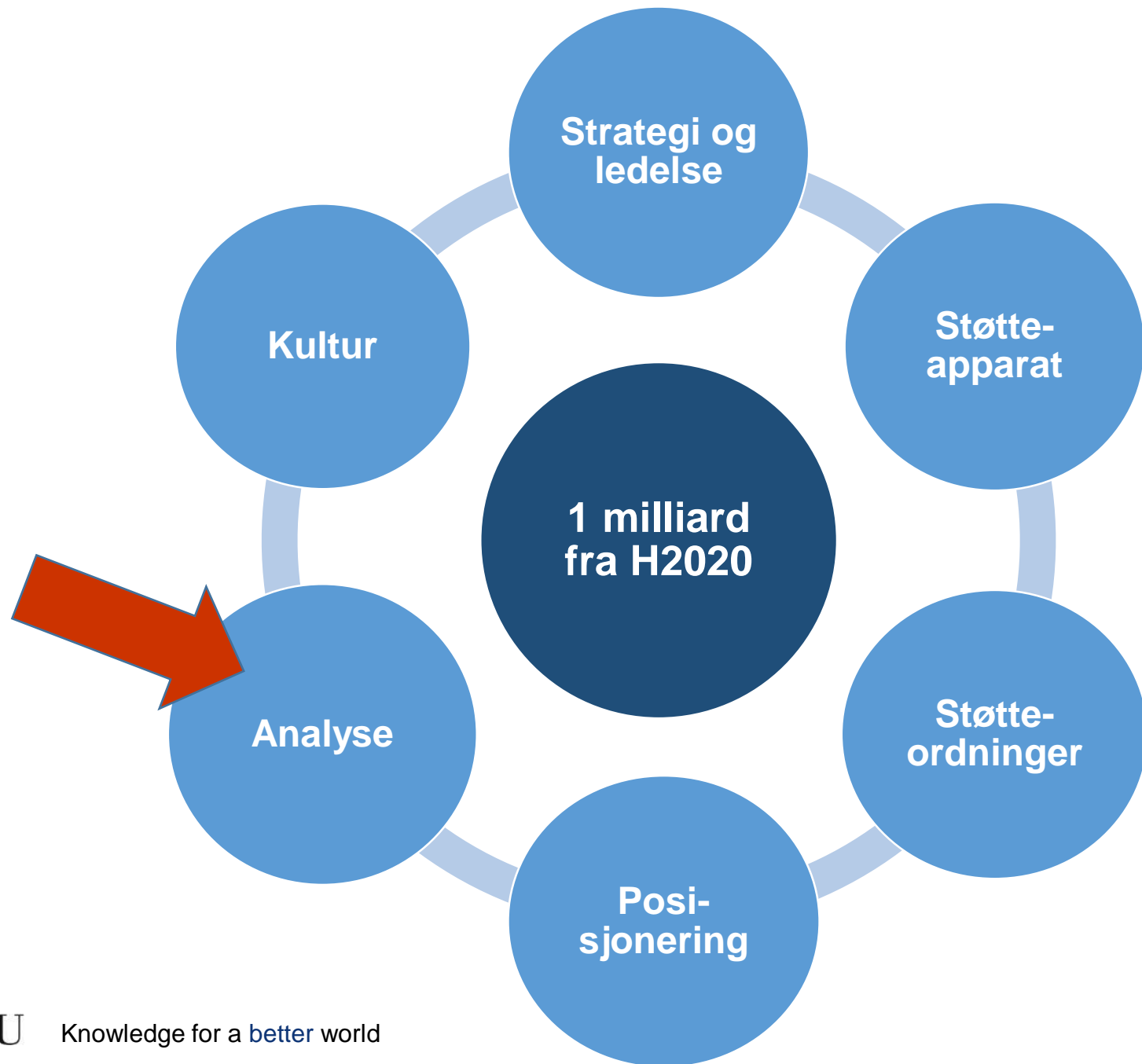
Posi- sjoner

Status:

- Utvikling mot større grad av deltakelse i europeiske allianser, nettverk og plattformer
- Fortsatt for svak tilstedeværelse
- Institusjonell profilering

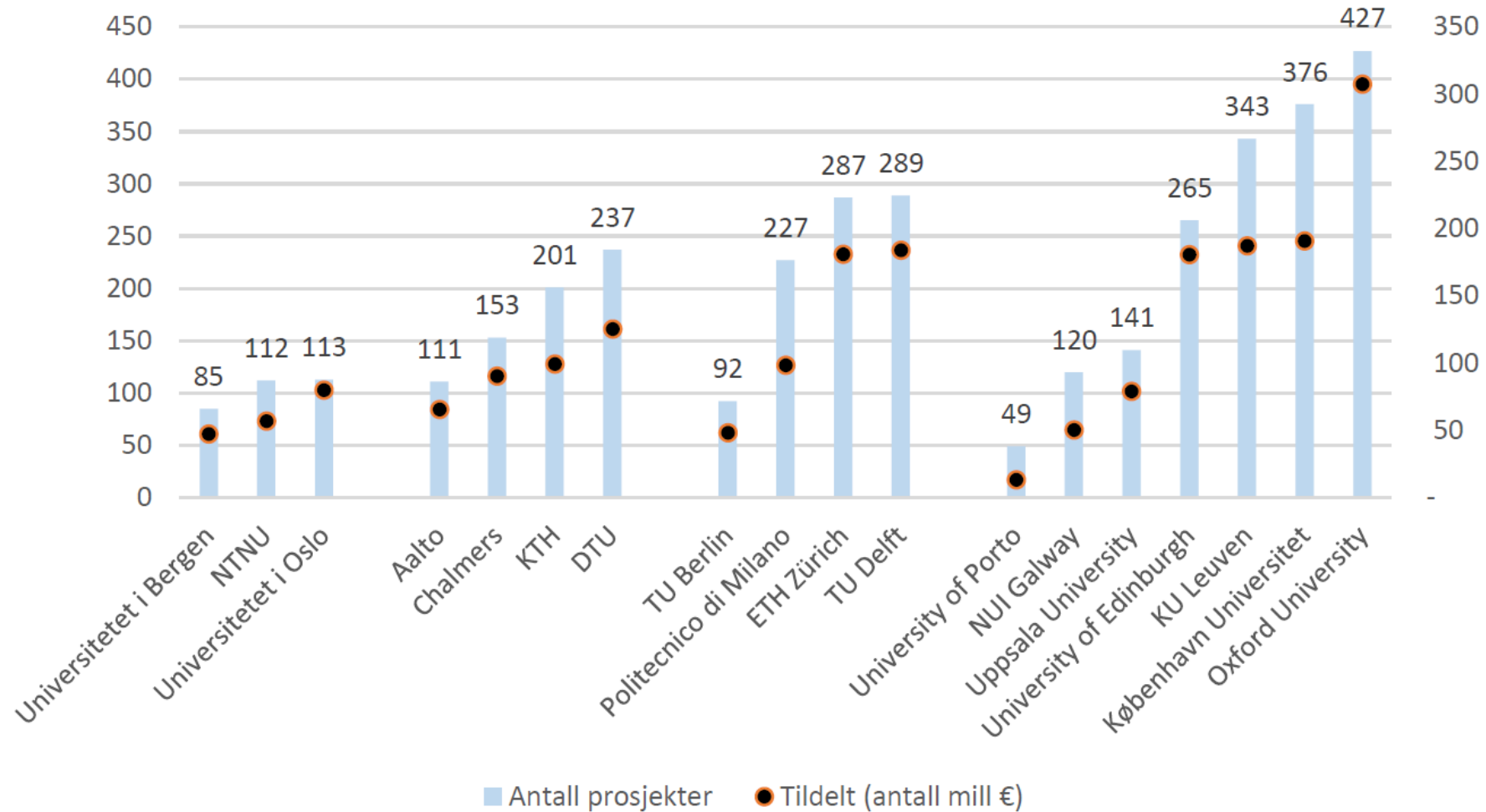
Tema:

- Identifisering av de toneangivende nettverkene
- Støtte til fagmiljø som ønsker aktiv posisjonering
- Kontinuitet i deltakelsen
- Deling av nettverk og informasjon og kunnskap/Avprivatisering av deltakelse



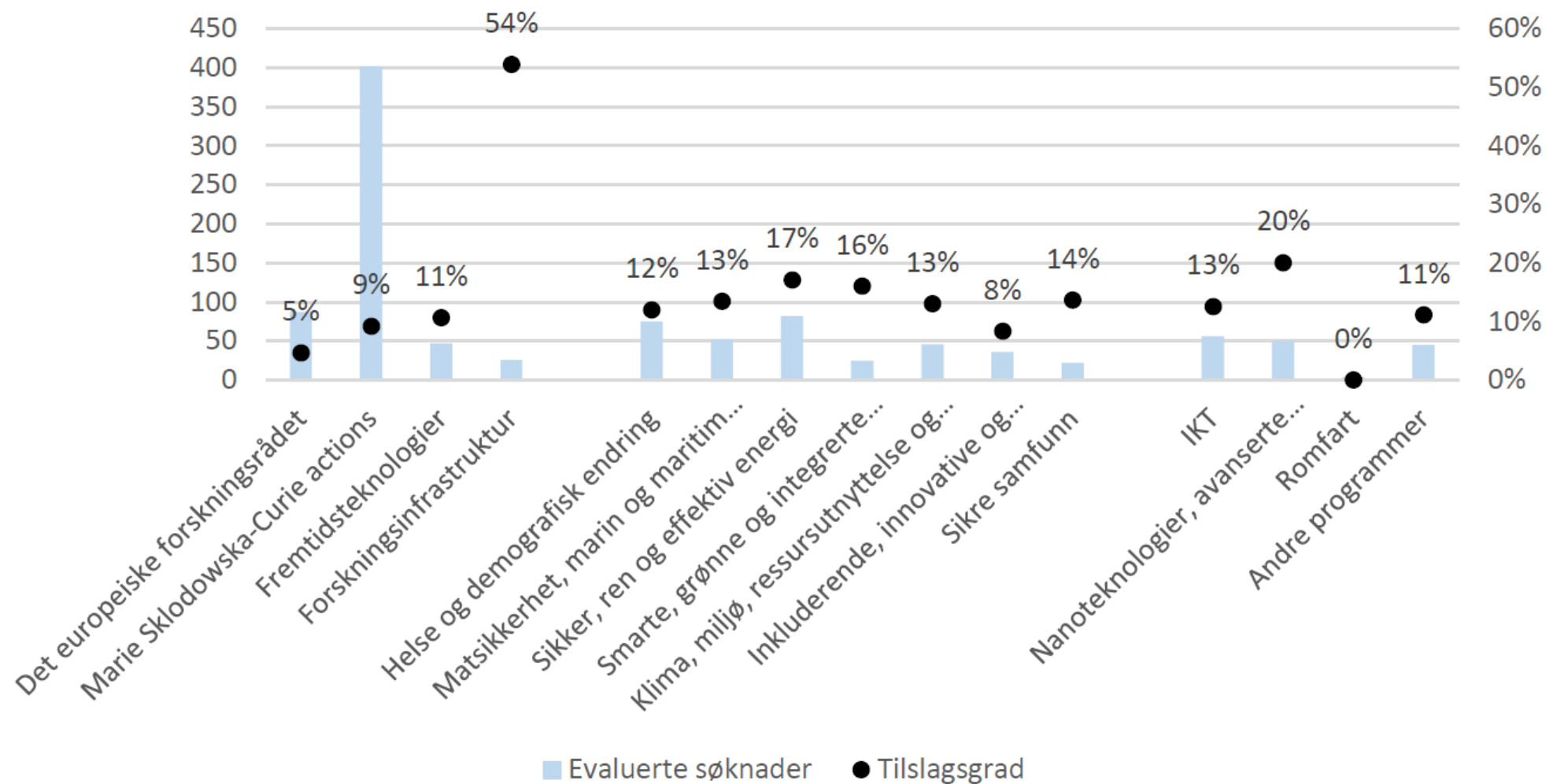
NTNU i H2020, sammenlignet

Analyse



NTNU i H2020, pr program

Analyse



Hvorfor lykkes /mislykkes vi?

Analyse

Proposal Evaluation Form		
	EUROPEAN COMMISSION Horizon 2020 - Research and Innovation Framework Programme	Evaluation Summary Report

Call: H2020-SMEINST-2-2015_18-03-2015
Funding scheme: SME instrument phase 2
Proposal number: 683928
Proposal acronym:
Duration (months): 24
Activity: SIE-01-2015-P

N.	Proposer name	Country	Total Cost	%	Grant Requested	%
1			2,333,716	100.00%	1,633,601	100.00%
Total:			2,333,716		1,633,601	

Evaluation Summary Report

Evaluation Result

Total score: 14.45 (Threshold: 12)

NTNUs handlingsplan for European Research Council Grants 2019–2021



NTNUs handlingsplan for European Research Council Grants 2019–2021/2025

NTNU har høye ambisjoner for forskningen. I NTNUs strategiplan slås fast at NTNU skal holde høyt internasjonalt nivå, og at forskningen skal være konsentrert rundt sterke bidrag i den internasjonale forskningsfronten.

Et utviklingsmål i strategiplanen er å øke suksessen på eksterne konkurransearenaer for fremragende forskning for å bygge kapasitet og utvikle kvalitet i forskningen. European Research Council (ERC) er i så måte en av de viktigste arenaene.

Tildeling av ERC Grants er vesentlig for NTNU som forskningsuniversitet. ERC Grants gir mulighet for å bidra i den internasjonale forskningsfronten og er avgjørende for NTNUs omdømme som et forskningsintensivt universitet.

I NTNUs internasjonale handlingsplan 2018 – 2021 er en økning i antallet ERC grants en prioritet. Internasjonal handlingsplan angir mål og peker på konkrete tiltak for å øke antallet ERC Grants ved NTNU.

I denne handlingsplanen spesifikt for en økning i NTNUs ERC Grants for perioden 2019 – 2021/2015 spesifiseres mål og tiltak ytterligere.

MÅL

Overordnet mål

NTNU skal minst doble sin portefølje av ERC Grants i Horisont 2020 i forhold til EUs 7. rammeprogram. Det innebærer at NTNU tildeles 16 ERC Grants i Horisont 2020.

Delmål 1

NTNU skal øke antallet søknader til ERC slik at antallet søknader pr. år er i størrelsesorden 45 søknader fordelt på ERC Starting Grants med 20 søknader, ERC Consolidator Grant med 15 søknader, ERC Advanced Grant med 10 søknader og ERC Synergy Grant med 5 søknader.

Delmål 2

NTNU skal øke antallet ERC søknader som går til andre runde i evalueringsprosessen slik at i størrelsesorden 3 – 5 søkere går videre til trinn to pr. type Grant hvert år.

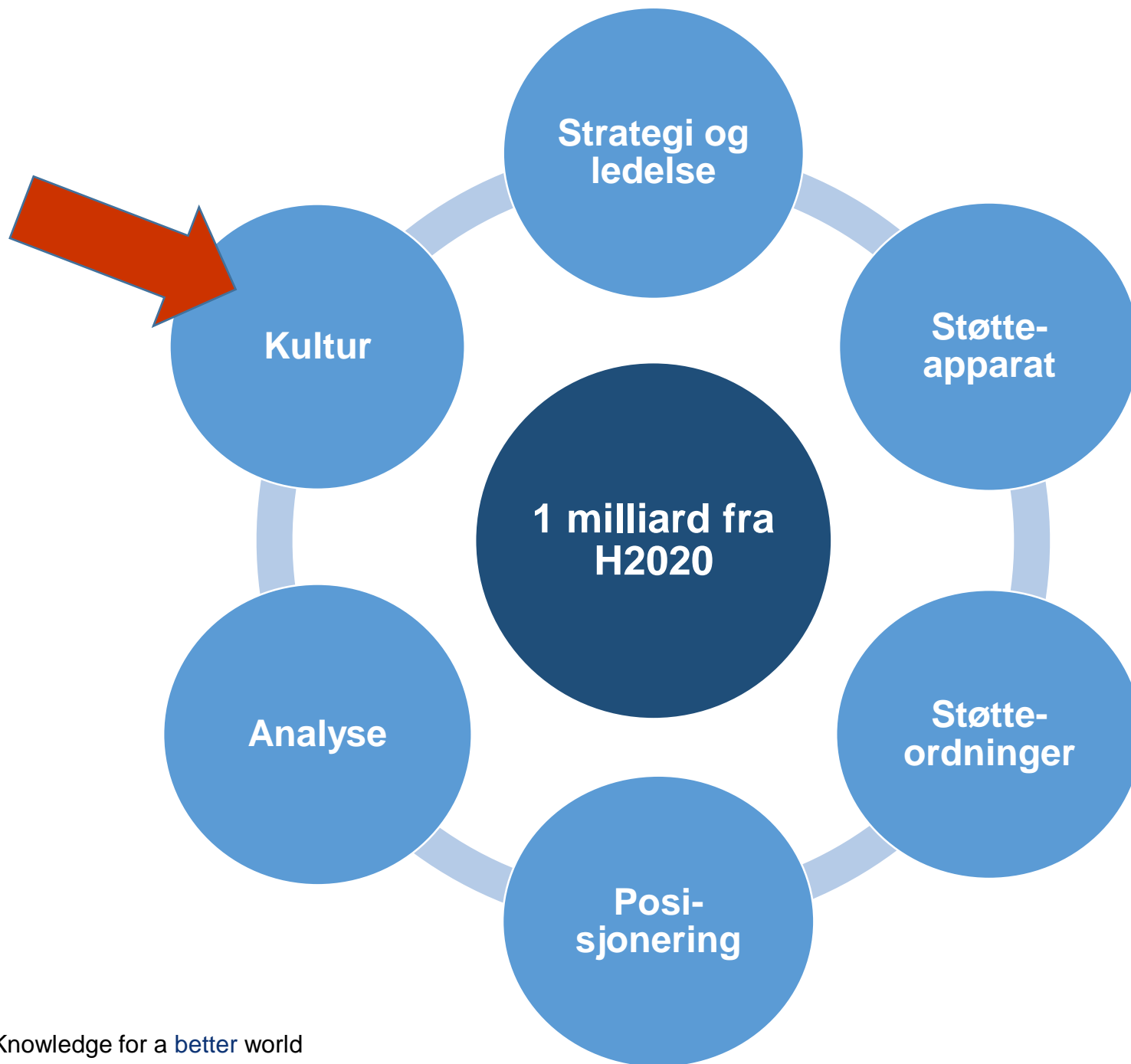
Analyse

Status:

- Har gode data og muligheten for omfattende analyser

Tema:

- Systematisk bruk av analyser for institusjonell læring
- Omsette analyser i gode tiltak



Deling av erfaringer og beste praksis

Kultur



Kollegaveiledning

Kultur



Eksempelets makt

Kultur



Beatrix Vereijken: Why participate?

Cutting-edge research/forefront science

- Access to latest knowledge and newest technologies
- Cross-disciplinary experience *par excellence*
- Tremendous learning experience
- Research and career boost
- Develop and implement your ideas

Extremely fun

Funding for large, international projects



Kultur

Status:

- Kulturen for å delta i europeiske prosjekter er fortsatt svak
- Relativt få forskere/forskergrupper er aktive

Tema:

- Kultur ikke bygd en gang for alle, må bygges igjen og igjen, kontinuerlig
- Universitetskulturen liten tradisjon for deling av kunnskap og kompetanse
- Arenaer for deling av beste praksis

Implementering av strategi: NTNUs EU-satsing



- Tydelig strategi med klare prioriteringer
- Kontinuerlig ledelsesoppmerksomhet
- Forankring av strategi og felles forståelse
- Operasjonalisering
- Tilførsel av ressurser
- Faktabasert kunnskap og analyser
- Utvikling av kultur

BINGO

Bringing INnovation to
onGOing water
management – A better
future under climate
change

Project leader: Tone Merete Muthanna



AWESOME

Advanced Wind Energy Systems Operation and Maintenance Expertise

Project leader: Michael Muskulus



SWARMS

Smart and Networking
UnderWATER Robots in
Cooperation Meshes

Project leader: Ingrid Schjøberg



MarineUAS

Autonomous Unmanned Aerial Systems for Marine and Coastal Monitoring

Project leader: Tor Arne Johansen



QoE-Net

innovative Quality Of
Experience maNagement
in Emerging mulTimedia
services

Project leader: Andrew Perkis



WAVES

Waves and Wave-Based Imaging in Virtual and Experimental Environments

Project leaders: Martin Landrø



CloudLightning

Self-Organising, Self- Managing Heterogeneous Cloud

Project leader: Anne C. Elster



FOCUS

Factory of the Future Clusters

Project leader: Odd Myklebust



AfricanBioServices

Linking biodiversity, ecosystem functions and services in the Great Serengeti-Mara Ecosystem (GSME) - drivers of change, causalities and sustainable management strategies

Project leader: Eivin Røskoft



ALION

High specific energy
aluminium-ion
rechargeable
decentralized electricity
generation sources

Project leader: Anders Hammer
Strømman



DESTinationRAIL

Decision Support Tool for Rail Infrastructure Managers

Project leader: Elias Kassa



COLUMBUS

Monitoring, Managing and
Transferring Marine and
Maritime Knowledge for
Sustainable Blue Growth

Project leader: Bernt J. Leira



Active implants

Engineering microstructures
of functional ceramics for
stimulated bone growth

Project leader: Mari-Ann Einarsrud



ARISE2

Atmospheric dynamics Research InfraStructure in Europe

Project leader: Patrick Espy



AQUAEXCEL2020

AQUAculture
infrastructures for
EXCELlence in European
fish research towards 2020

Project leader: Alexandra Neyts



HYDRALAB-PLUS

HYDRALAB+ Adapting to climate change

Project leader: Jochen Aberle



SugarOsmoSignalling

Analysis of sugar- and osmo-signalling mechanisms in cell wall integrity maintenance

Project leader: Thorsten Hamann



THERMOPLAST

Adaptive plasticity meets unpredictability: how do organisms cope with changing environmental variability?

Project leader: Sigurd Einum



INHERIT

INter-sectoral Health Environment Research for InnovaTions

Project leader: Geir Arild Espnes



MINDMAP

Promoting mental wellbeing in the ageing urban population: determinants, policies and interventions in European cities

Project leader: Steinar Krokstad



INSULATRONICS

Controlling Electric Signals
with Insulating
Antiferromagnets and
Insulating Ferromagnets

Project leader: Arne Brataas



READEX

Runtime Exploitation of
Application Dynamism for
Energy-efficient eXascale
computing

Project leader: Per Gunnar Kjeldsberg



WiBEC

Wireless In-Body Environment

Project leader: Kimmo Kansanen



DCOMM

Deictic Communication - A Multidisciplinary Training

Project leader: Mila Vulchanova



PRONTO

PROcess NeTwork Optimization for efficient and sustainable operation of Europe's process industries taking machinery condition and process performance into account

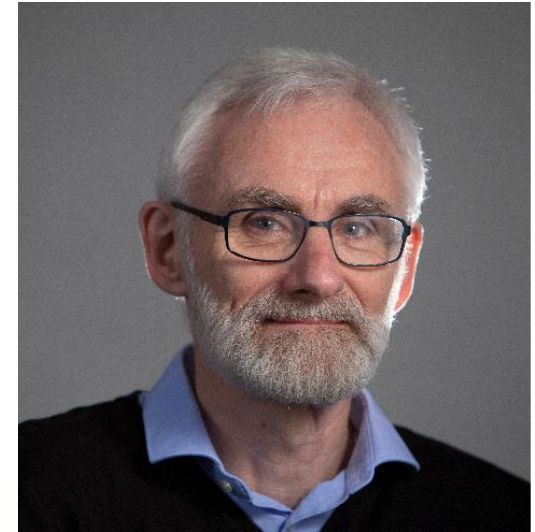
Project leader: Bjarne Foss



ADOPT BBMRI-ERIC

implemEntAtion anD OPeration of
the gateway for healTh into
BBMRI-ERIC

Project leader: Kristian Hveem



ECCSEL

European Carbon Dioxide Capture
and Storage Laboratory
Infrastructure

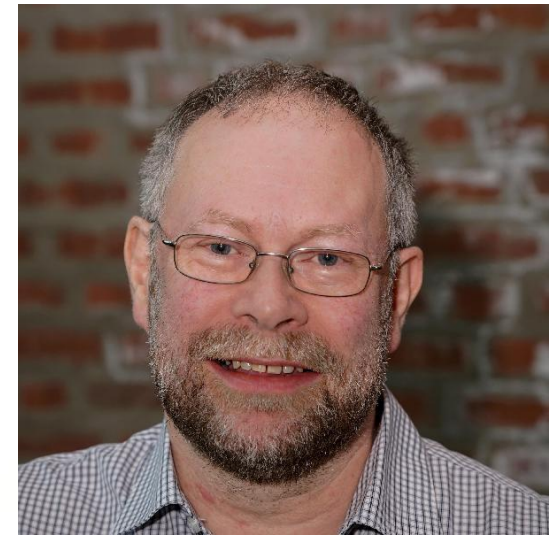
Project leader: Olav Bolland



ELIXIR-EXCELERATE

Fast-track ELIXIR implementation and drive early user exploitation across the life-sciences

Project leader: Finn Drabløs



QUANTUM

Quality management for
building performance -
improving energy
performance by life cycle
quality management

Project leader: Salvatore Carlucci



TAIAC

Breaking the paradigm: A new approach to understanding and controlling combustion instabilities

Project leader: Nicholas Worth



GRACE

Integrated oil spill response
actions and environmental
effects

Project leader: Bjørn Munro Jenssen



VISUALMEDIA

Immersive and Interactive
Real Time 3D Social Media
Graphics Environments for
the Broadcast Industry

Project leader: c



TULIPP

Towards Ubiquitous Low-power Image Processing Platforms

Project leader: Magnus Jahre



SOCRATIC

SOcial CReATive IntelligenCe
Platform for achieving Global
Sustainability Goals

Project leader: Letizia Jaccheri



MICA

Mineral Intelligence Capacity Analysis

Project leader: Daniel Beat Müller



Blue Nodules

Breakthrough Solutions for
the Sustainable Harvesting
and Processing of Deep Sea
Polymetallic Nodules

Project leader: Kurt Aasly



PreventIT

Early risk detection and prevention in ageing people by self-administered ICT-supported assessment and a behavioural change intervention delivered by use of smartphones and smartwatches

Project leader: Jorunn L. Helbostad



selfBACK

A decision support system for self-management of low back pain

Project leader: Paul J. Mork



RISEN

Rail Infrastructure Systems
Engineering Network

Project leader: Elias Kassa



CHiPS

CHallenges in Preservation of
Structure

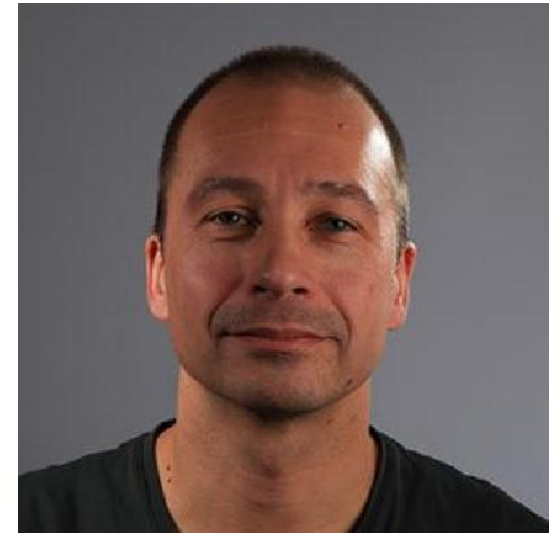
Project leader: Elena Celledoni



SET-Nav

Navigating the Roadmap for Clean,
Secure and Efficient Energy
Innovation

Project leader: Ruud Egging



UMI-Sci-Ed

Exploiting Ubiquitous Computing,
Mobile Computing and the Internet of
Things to promote Science Education

Project leader: Letizia Jaccheri



SINet

Software-defined Intermittent
Networking

Project leader: Yuming Jiang



CADENT

Competitive Advantage for the
Data-driven ENTerprise

Project leader: John Krogstie



METAFLUIDICS

Advanced toolbox for rapid and cost-effective functional metagenomic screening - microbiology meets microfluidics

Project leader: Rahmi Lale



HiPerNav

High Performance Soft-tissue
Navigation

Project leader: Frank Lindseth



MARINET2

Marine Renewable Infrastructure
Network for Enhancing
Technologies 2

Project leader: Lars Sætran



CircEuit

Circular European Economy
Innovative Training Network

Project leader: Casper Boks



FIThydro

Fishfriendly Innovative
Technologies for Hydropower

Project leader: Nils Ruther



ESSENTIAL

Evolving Security Science through
Networked Technologies,
Information policy And Law

Project leader: Katrin Franke



ECHOES

Energy CHOices supporting the
Energy union and the Set-plan

Project leader: Christian A. Klöckner



SAFER-LC

SAFER Level Crossing by integrating and optimizing road-rail infrastructure management and design

Project leader: Elias Kassa



MultiPACK

Demonstration of the next generation standardised integrated cooling and heating packages for commercial and public buildings based on environment-friendly carbon dioxide vapour compression cycles

Project leader: Armin Hafner og Trygve Magne Eikevik



RECAP

Research on European Children
and Adults born Preterm

Project leader: Marit S. Indredavik



SHAPE-ENERGY

Social Sciences and Humanities
for Advancing Policy in European
Energy

Project leader: Marianne Ryghaug



NanoMEMC2

NanoMaterials Enhanced Membranes
for Carbon Capture (NanoMEMC2)
Nanomaterial based membranes and
processes for improved pre/post
combustion Carbon Capture

Project leader: Liyuan Deng



URBAN-EU-CHINA

EU-China Innovation Platform on Sustainable Urbanisation

Project leader: Annemie
Wyckmans



MinFuture

Global material flows and
demand-supply
forecasting for mineral
strategies

Project leader: Daniel Beat Müller



INVADE

Smart system of renewable energy storage based on INtegrated EVs and bAtteries to empower mobile, Distributed and centralised Energy storage in the distribution grid

Project leader: Magnus Korpås



EUMarineRobots

Marine robotics research
infrastructure network

Project leader: Martin
Ludvigsen



CoupledDB

High-Performance Indexing for
Emerging GPU-Coupled
Databases

Project leader: Kjetil Nørvåg



AMADEUS

Next Generation Materials and
Solid State Devices for Ultra High
Temperature Energy Storage and
Conversion

Project leader: Merete Tangstad



TRANSPIRE

Terahertz RAdio communication
using high ANisotropy SPIn torque
REsonators

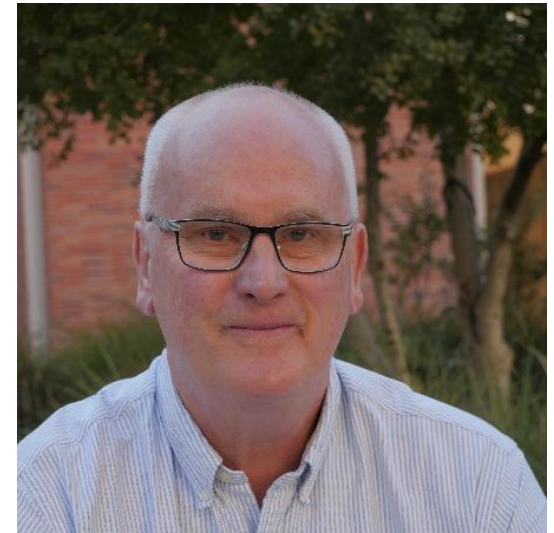
Project leader: Arne Brataas



FIT4RRI

Fostering Improved Training Tools
For Responsible Research and
Innovation

Project leader: Knut H. Sørensen



SMILE

SMart mobILity at the
European land borders

Project leader: Sule Yildirim



GHOST

Safe-Guarding Home IoT
Environments with Personalised
Real-time Risk Control

Project leader: Sokratis Katsikas



ProstOmics

'Tissue is the issue': a multi-omics approach to improve prostate cancer diagnosis

Project leader: May-Britt Tessem



NeuroModSense

Peptidergic Neuromodulation of
Sensory Representation in the
Brain

Project leader: Emre Yaksi



INITIATE

INnovation through big daTa
and social enTrepreneurship

Project leader: Letizia Jaccheri



GlobChangeBehav

Effects of global change on the social behaviour of marine organisms

Project leader: Fredrik Jutfelt



TICOH

Taming Irregular Computations
On Heterogeneous processors

Project leader: Anne C. Elster



SMARTEES

Social innovation Modelling
Approaches to Realizing
Transition to Energy Efficiency
and Sustainability

Project leader: Christian A.
Klößner



UPRIGHT

Universal Preventive Resilience
Intervention Globally implemented
in schools to improve and
promote mental Health for
Teenagers

Project leader: Odin Hjemdal



CLASS

CLear Air Situation for uaS:
Maturing ground based
technologies for a real-time
Unmanned Aerial System Traffic
Management System (UTMS) to
monitor and separate Unmanned
Aerial System (UAS) traffic

Project leader: Tor Arne Johansen



MarketPlace

Materials Modelling Marketplace
for Increased Industrial Innovation

Project leader: Heinz A. Preisig



Nunataryuk

Permafrost thaw and the
changing arctic coast: science for
socio-economic adaptation

Project leader: Knut Vilhelm
Høyland



HydroFlex

Increasing the value of
Hydropower through increased
Flexibility

Project leader: Ole Gunnar
Dahlhaug



EnDurCrete

New Environmental friendly and Durable conCrete, integrating industrial by-products and hybrid systems, for civil, industrial and offshore applications

Project leader: Klaartje De Weerdt



GEOCOG

Cognitive Geometry: Deciphering neural concept spaces and engineering knowledge to empower smart brains in a smart society

Project leader: Christian Doeller



Back-UP

Personalised Prognostic Models
to Improve Well-being and Return
to Work After Neck and Low Back
Pain

Project leader: Paul Jarle Mork



SMARTFISH

Smart fisheries technologies for an efficient, compliant and environmentally friendly fishing sector

Project leader: Martin Ludvigsen



M-GATE

Memory research: Ground-breaking, Applied, and Technological Exchanges

Project leader: Clifford Kentros



IMAGINE

Innovative Method for Affordable
Generation IN ocean Energy

Project leader: Elisabetta
Tedeschi



ENSUREAL

Integrated cross-sectorial
approach for environmentally
sustainable and resource-efficient
alumina production

Project leader: Leiv Kolbeinsen



ImmerSAFE

Immersive Visual Technologies for
Safety-critical Applications

Project leader: Karin Laumann



COSINE

Training network for
COmputational Spectroscopy In
Natural sciences and Engineering

Project leader: Henrik Koch



SIDERWIN

Development of new methodologies for industrial CO₂-free steel production by electrowinning

Project leader: Geir Martin Haarberg



TRANS-URBAN-EU-CHINA

Transition towards urban sustainability through socially integrative cities in the EU and in China

Project leader: Annemie Wyckmans



ANNULIGHT

Annular Instabilities and Transient
Phenomena in Gas Turbine
Combustors

Project leader: James Dawson



RECONNECT

Reconciling Europe with its
Citizens through Democracy and
Rule of Law

Project leader: Pieter de Wilde



GoJelly

A gelatinous solution to plastic pollution

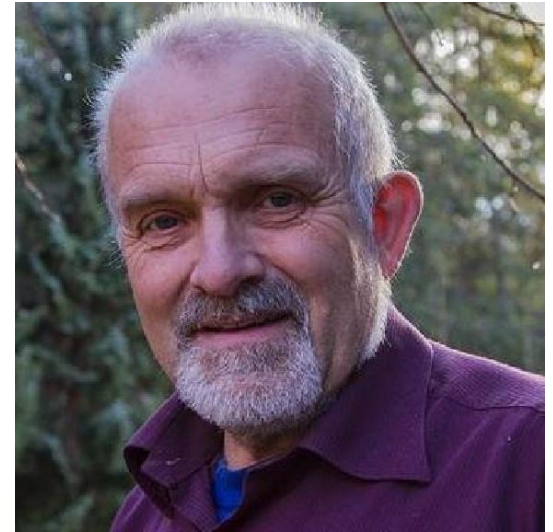
Project leader: Nicole Aberle-Malzahn



Wat-Qual

Water Quality in Drinking Water Distribution Systems

Project leader: Sveinung Sægrov



RemovAL

Removing the waste streams from
the primary Aluminium production
and other metal sectors in Europe

Project leader: Gabriella Tranell



DELTA

Future tamper-proof Demand
rEsponse framework through
seLf-configured, self-opTimized
and collAborative virtual
distributed energy nodes

Project leader: Sokratis Katsikas



CoM_n_Play-Science

Learning science the fun and creative way: coding, making, and play as vehicles for informal science learning in the 21st century

Project leader: Michail Giannakos



iFermenter

Conversion of forestry sugar
residual
streams to antimicrobial proteins
by intelligent
fermentation

Project leader: Nadav Bar



PRACE 4IP

PRACE 4th Implementation Phase Project

Contact person: Bjørn Lindi



PRACE 5IP

PRACE 5th Implementation Phase Project

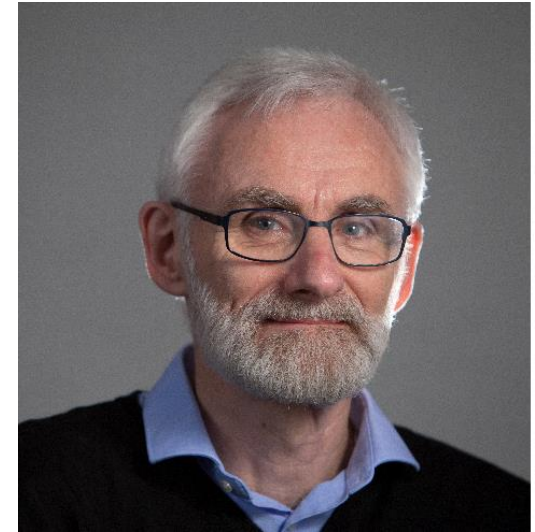
Contact person: Bjørn Lindi



CORBEL

Coordinated Research
Infrastructures Building Enduring
Life-science services

Project leader: Kristian Hveem



CITYCoP

Citizen Interaction Technologies
Yield Community Policing

Project leader: Simon McCallum

