HO21 Project: Dagens Forsknings- og innovasjonssystem

HO21 Workshop Report

Start Workshop on Trends and Challenges – 19 June 2018

Introduction

Recently, as part of the Health&Care21 (HO21) project; "Dagens forsknings- og innovasjonssystem, the Norwegian Research Council hosted a workshop about trends and challenges influencing the Norwegian health research and innovation system.

The workshop was planned and facilitated by leading staff from the consultant team consisting of DAMVAD Analytics and University Cambridge (CSaP). A total of 15 participants from research, enterprises, academia, policy and government institutions as well as the Research Council of Norway offered their insight in the workshop.

This note provides a brief record of the day. It has been prepared by Torben Bundgaard Vad, the project leader from DAMVAD Analytics. It captures the views and ideas generated and discussed between participants during the workshop. The purpose of the workshop was to get the participants views on the key factors influencing the ability of the Norwegian health research and innovation system to develop high quality, cost-effective, fast and sound results. In addition, the workshop should give suggestions on what steps can be taken to increase the performance of the health research and innovation system. The workshop should hence help the consultant team focus its research in the coming months of the project period.

To warm up and to prepare for the workshop the consultant team sent out five questions for the participants to consider beforehand and at the workshop:

1) What are the strongest trends, nationally and internationally, that will influence the ability of the Norwegian health research and innovation system to develop high quality, cost-effective, fast and sound results over the course of the next 10 years?
2) What are the biggest problem areas in the health research and innovation system?
3) How do we know that the problem actually exists, what do we know/assume about causes?
4) What steps can be taken to increase the performance of the health research and innovation system?
5) What would success look like – and how would it be measured?

Programme

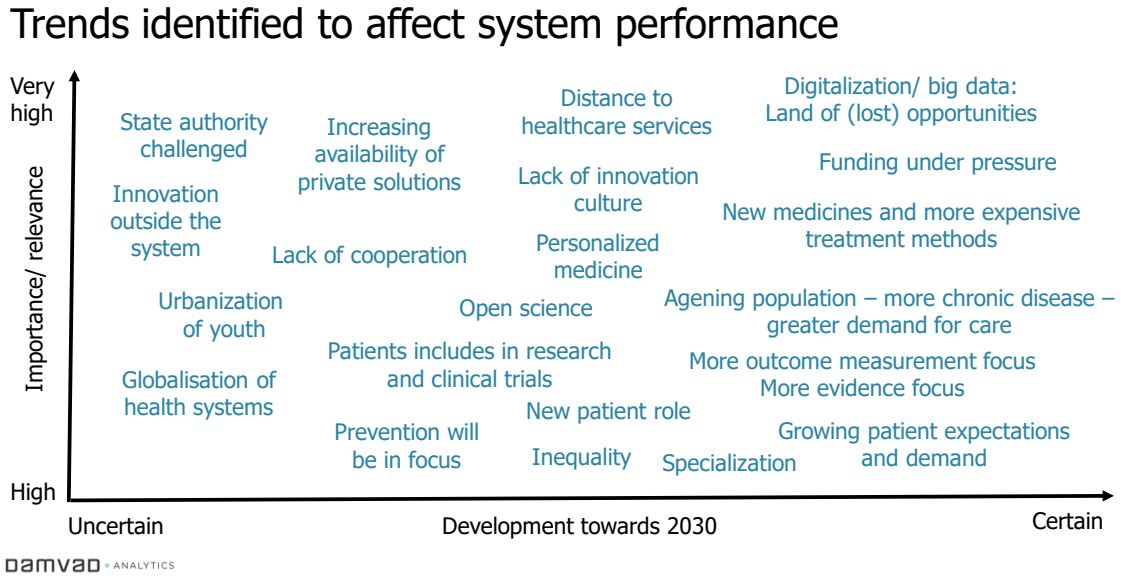
The workshop followed the programme below.

Time	Content
09:30 – 10:00	**Coffee and Croissants**
10:00 – 10:10	**Welcome and introduction** *Torben Vad, DAMVAD Analytics & Research Council of Norway*
10:10 – 11:45	**Trends and problem areas affecting the Norwegian health research and innovation system** Group session • 10:10 – 10:30: Initial presentations by Torben Vad, DAMVAD Analytics and Steve Wooding, Cambridge University • 10:30 – 11:15: Discussion in 4-5 groups • 11:15 – 11:45: Plenum. Each group presents Posters to each group to fill in and capture discussions
11:45 – 12:15	**Continued debate over lunch**
12:15 – 13:30	**Identifying solutions and considering strategic dilemmas** Group session • 12:15 – 13:00: Discussion in 4-5 groups, • 13:00 – 13:30: Plenum. Each group presents Posters to each group to fill in and capture discussions
13:30 – 14:00	**Summing up – what have we learned and what should we look more into?** *Torben Vad and Steve Wooding*

Presentation of results from first round of interviews and desk research

After a brief welcome, participants listened to a presentation of the results of the first round of interviews and document studies. The purpose was to structure and inspire the discussions in the groups. The groups were asked to comment on and complement the identified trends.

The trends identified on a scale of importance and certainty are summarised with keywords below. The trends listed and the placing in the scheme should not be seen as a final product but rather as work in progress. Nevertheless, it shows the influencing trends that were identified in the first round of interviews and later complemented in the workshop.



Group Sessions: Selection and description of problems and solutions

The group sessions started with a presentation of the 20 problem areas shown below. The problem areas had been identified in 29 personal interviews with key stakeholders in the Norwegian health research and innovation system as well as thorough document studies.

1) Too much time spent on research applications – lack of risk willing capital and lack of international businesses
2) Not enough public-private cooperation – private companies are not invited in
3) Leading research communities in Norway are not sufficiently prioritised
4) Low investment level compared to Danmark and Sweden
5) A lot of data but it is not kept up to date and usability is less in focus
6) National health data is not sufficiently explored - Researchers experience difficulties getting access to health data
7) Different patient journals and health records are spread
8) Data management is too manual
9) A large diversity in services between many small municipalities – lack of central responsibility and coordination
10) The municipalities lack the capacity and competencies to be involved in research and innovation collaboration
11) There is almost no research on implementation and usability
12) A lot of guidelines are published, but they are not all known or being used at the regional and local level
13) New guidelines are developed without solid evidence and with considerable disagreement in professional communities
14) Lack of interest and incentives for cooperation between the UoH sector, helseforetak, institutes and municipalities
15) Helseforetak are too autonomous with relatively isolated strategies for research, innovation and digitalisation
16) Method evaluation of equipment is slow and rigid and equipment manufacturers are not sufficiently prepared
17) Helseforetak represent very large purchasing volume, but they are not purchasing innovative solutions from SME's
18) New hospitals are designed like the already existing hospitals
19) The financial scheme is not promoting the development of new innovative solutions
20) Patient groups are involved but do not have the capabilities to contribute.

The groups were then asked to pick the problem areas they would prioritize and work on first and describe these on a poster. Once the groups had described one prioritized issue they would return to get the next one. The aim was to have each of the three groups

discuss and describe at least two issues. Also, the groups could suggest additional issues or problem areas. The problem areas picked, discussed and described by the groups are highlighted below.

Problem areas prioritized and described by the groups in the workshop

1. Too much time spent on research applications – lack of risk willing capital and lack of international businesses
2. Not enough public-private cooperation – private companies are not invited in
3. Leading research communities in Norway are not sufficiently prioritised
4. Low investment level compared to Danmark and Sweden

5. A lot of data but it is not kept up to date and usability is less in focus
6. National health data is not sufficiently explored - Researchers experience difficulties getting access to health data
7. Different patient journals and health records are spread
8. Data management is too manual

9. A large diversity in services between many small municipalities – lack of central responsibility and coordination
10. The municipalities lack the capacity and competencies to be involved in research and innovation collaboration
11. There is almost no research on implementation and usability
12. A lot of guidelines are published, but they are not all known or being used at the regional and local level
13. New guidelines are developed without solid evidence and with considerable disagreement in professional communities

14. Lack of interest and incentives for cooperation between the UoH sector, helseforetak, institutes and municipalities
15. Helseforetak are too autonomous with relatively isolated strategies for research, innovation and digitalisation

16. Method evaluation of equipment is slow and rigid and equipment manufacturers are not sufficiently prepared
17. Helseforetak represent very large purchasing volume, but they are not purchasing innovative solutions from SME's
18. New hospitals are designed like the already existing hospitals
19. The financial scheme is not promoting the development of new innovative solutions
20. Patient groups are involved but do not have the capabilities to contribute

21. Lack of career paths for research and innovation beyond PhD

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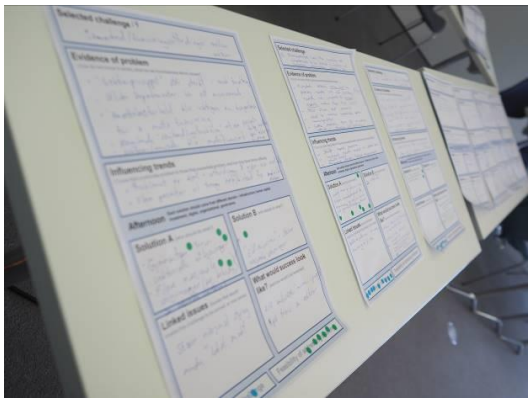
After the lunch break the groups were mixed and the new groups were asked to discuss and describe possible solutions to the problem areas. Both problem areas and solutions were presented by the groups in plenary sessions. Finally, the participants circulated and voted on the feasibility of each set of solutions described on the posters. A total of nine specific problem areas/ challenges were picked from the list of 20. Of these three problem areas received the most votes, namely number;

10. The municipalities lack the capacity and competencies to be involved in research and innovation collaboration.

11. There is almost no research on implementation and usability.

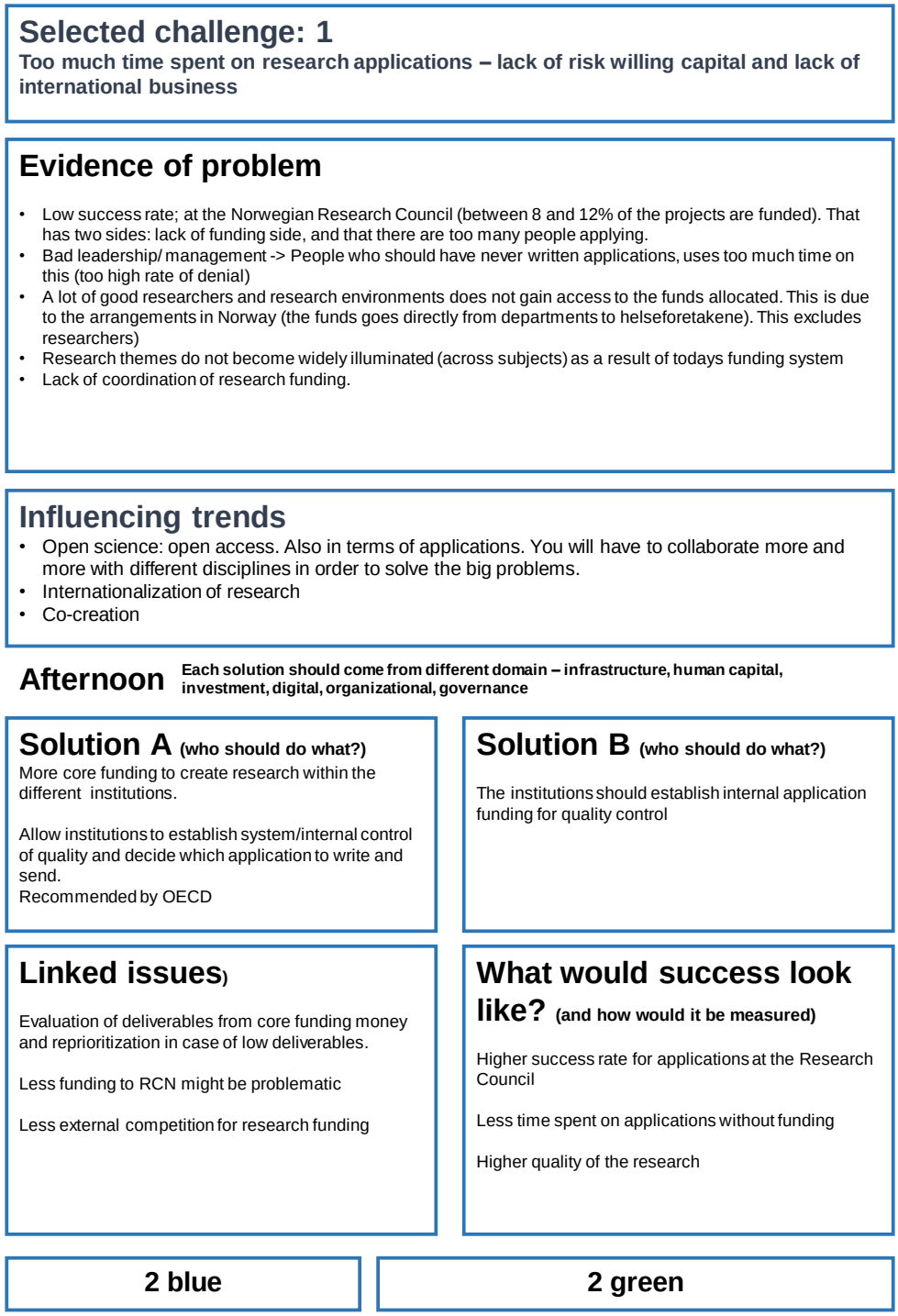
14. Lack of interest and incentives for cooperation between the UoH sector, helseforetak, institutes and municipalities.



The posters with the selected problem areas and solutions described by the groups are shown below. The filled-out posters will help steer what challenges are perceived as most

important. They will inspire the selection of problem areas and help to structure the up-coming analyses in the project.

Posters



Selected challenge: 1

Too much time spent on research applications – lack of risk willing capital and lack of international business

Evidence of problem

- Low success rate; at the Norwegian Research Council (between 8 and 12% of the projects are funded). That has two sides: lack of funding side, and that there are too many people applying.
- Bad leadership/ management -> People who should have never written applications, uses too much time on this (too high rate of denial)
- A lot of good researchers and research environments does not gain access to the funds allocated. This is due to the arrangements in Norway (the funds goes directly from departments to helseforetakene). This excludes researchers)
- Research themes do not become widely illuminated (across subjects) as a result of todays funding system
- Lack of coordination of research funding.

Influencing trends

- Open science: open access. Also in terms of applications. You will have to collaborate more and more with different disciplines in order to solve the big problems.
- Internationalization of research
- Co-creation

Afternoon

Each solution should come from different domain – infrastructure, human capital, investment, digital, organizational, governance

Solution A (who should do what?)

More core funding to create research within the different institutions.

Allow institutions to establish system/internal control of quality and decide which application to write and send.
Recommended by OECD

Solution B (who should do what?)

The institutions should establish internal application funding for quality control

Linked issues)

Evaluation of deliverables from core funding money and reprioritization in case of low deliverables.

Less funding to RCN might be problematic

Less external competition for research funding

What would success look like? (and how would it be measured)

Higher success rate for applications at the Research Council

Less time spent on applications without funding

Higher quality of the research

2 blue | **2 green**

Selected challenge: 2

Not enough public-private cooperation. Private companies not invited in. We do not lift initiatives to a globally competitive level

Evidence of problem

- Academia – pharma not included in good research projects.
- Lack of transparency on data sharing both ways. Start-ups have problems in testing and implementing in their home country, so its hard for them to sell anything outside of the country, or to get started at all.
- Untampered potential for investment in Norway
- We don't push initiatives to a globally competitive level by not having this cooperation

Influencing trends

- GDPR
- Sourcing R&D from academia etc. Externalization: going out of own organizations to get resources/opportunities.
- IoT/AI disrupt value change.

Afternoon

Each solution should come from different domain – infrastructure, human capital, investment, digital, organizational, governance

Solution A (who should do what?)

Life science Park. Clustering; industry, academia and educational parts under same roof.

Solution B (who should do what?)

Start-ups to generate more industry. The new procurement alternatives like the innovative procurement and innovative partnerships: this will force public sector to think differently.

- Innovative procurement & innovation partnerships
- IKT/ welfare technology

Linked issues (issues that would enable this challenge to be solved, or vice versa)

Coordination of funding agencies (funding from IN, RCN, etc.)

What would success look like? (and how would it be measured)

- Norwegian manufactures become global brands.
- Change of mind set. That it is ok for the public sector to work with the Industry.
- More inward investments

3 blue	3 green

Selected challenge: 6

National health data is not sufficiently explored - Researchers experience difficulties getting access to health data

Evidence of problem

- Too many registries within (small "kingdoms"? And small biobanks that seems to be owned by the researchers) HF'erne -> coordination needed
- Time consuming to get access to these resources e.g. SSB, etc. (receipt registries)
- Risk to be outcompeted by US/UK/Asian biobanks/initiatives; we're losing our cutting edge.
- RWD not "good enough"
- Norway needs a national infrastructure – there is no critical mass in Norway
- No homogenous data infrastructure

Influencing trends

- Lot of things are happening on the Watson/AI/big data side
- Core journals: start of a trend. National core journal will make some data more accessible (patients journals/ records)
- Preventive medicine, "position" medicine; huge potential

Afternoon

Each solution should come from different domain – infrastructure, human capital, investment, digital, organizational, governance

Solution A (who should do what?)

Solution B (who should do what?)

Linked issues (issues that would enable this challenge to be solved, or vice versa)

What would success look like? (and how would it be measured)

1 blue

Feasibility of addressing challenge

Selected challenge: 7

Different patient journals and health records are spread

Evidence of problem

– how do we know it exists, what do we know/assume about causes?

- Different journals/records on patients do not communicate
- Different systems in different health regions, in municipalities, at doctors and primary care.
- Everyone should use the same system
- Initiatives comes from the regions. No one is thinking national level. The regions are doing what they want.
- Big investment in the middle of Norway to buy new electronic record system, which is a national pilot. But the rest of the regions have already bought different systems.
- We should be able to talk across sectors and registries – but with different programs/systems that is difficult.
- This has to be a top-down vision.

Influencing trends

- Regional autonomy – lack of demand about shared action

Afternoon

Each solution should come from different domain – infrastructure, human capital, investment, digital, organizational, governance

Solution A (who should do what?)

Demand on compatibility with a golden standard necessary for a build in journal

Solution B (who should do what?)

A national journalizing/record system

Don't tell municipalities which system to get, but what system they have to be compatible with

Linked issues (issues that would enable this challenge to be solved, or vice versa)

Patients and data safety
Complexity

What would success look like? (and how would it be measured)

(Kari/OLA) everyone can move where they want to in Norway – same journal.

Data easily accessible across systems and professions for research and innovation

Priority of challenge

Feasibility of addressing challenge

Selected challenge:9

Large diversity in services between many small municipalities – lack of central responsibility and coordination

Evidence of problem

– how do we know it exists, what do we know/assume about causes?

- Little or none research competencies in municipalities and little research based products/services-> different service levels and quality of different services in the different municipalities
- Difficult to implement guidelines as a result of autonomy in municipalities
- A lot of projects/pilots. But too little that progresses on further/ taken the next step -> this means a lot of money is being spent without any gain
- Lacking purchasing capacity/competencies in the municipalities (order research and procurement)

Influencing trends

The patient in focus/centrum

Development of technology: hopefully it will be easier to get access to the same tech that other municipalities have developed.

Afternoon

Each solution should come from different domain – infrastructure, human capital, investment, digital, organizational, governance

Solution A (who should do what?)

Funding initiatives/ financial incentives that promotes cooperation.

Focus should be on implementation of "Best practice" for the specific problems for the single municipalities

Solution B (who should do what?)

Clear goals/measures that have to be reported so that it can be seen whether solutions work.

Linked issues (issues that would enable this challenge to be solved, or vice versa)

This will somehow challenge the municipal autonomy.

What would success look like? (and how would it be measured)

Better public health (measurable)

2 blue

Feasibility of addressing challenge

Selected challenge: 10

The municipalities lack the capacity and competencies to be involved in research and innovation collaboration

Evidence of problem

- Mismatch between money used in primary health care and secondary health care, compared to funded research within the two. It's a 50/50 funding within health care, but only (10/90) within research.
- That is a challenge when it comes to how to best share best practice
- Need to increase capabilities within municipalities; to increase research activity of the GP's
- Little research from GPs on patients without a diagnosis (RCT, epidemiology)

Influencing trends

- Shifts towards preventism
- Ambulant services, patient empowerment
- Increased research needed on patients before hospital/diagnosis

Afternoon

Each solution should come from different domain – infrastructure, human capital, investment, digital, organizational, governance

Solution A (who should do what?)

- Problem: No law saying municipalities should take part in research. Should be same for primary and secondary health care system.
- Statutory responsibility for research and education.
- -Establish cooperation organs to communicate and to coordinate with special services
- To connect universities and municipalities.

Solution B (who should do what?)

One health/care service

There has been funding for a large project called "praksisnært", where it is possible now to recruit patients among GP's. this is very positive. 75 mill. In funding.

Linked issues (issues that would enable this challenge to be solved, or vice versa)

We need to build the competencies for research in the municipalities from scratch.

The funding has to be figured out

What would success look like?

Measurable data on increased research in the primary health services

Measurable clinical outcomes
- Readmissions
- Reduction of lifestyle diseases
- Reduction in use of antibiotics
- Better nutritional status
- Access to health services sos/øk

9 blue

Feasibility of addressing challenge

Selected challenge: 11
Little knowledge of usability in health services / implementation

Evidence of problem

- Few evaluations of public health initiatives
- New initiatives are implemented without sufficient knowledge or follow up research
- Good research based on initiatives does not become implemented
- Little knowledge on geographical differences in health services

Influencing trends

- Bigger demands on "impact" and social benefit of research
- Bigger demands for evaluation and follow-up research. We need more data on the initiatives.
- Increase access to health

Afternoon

Each solution should come from different domain – infrastructure, human capital, investment, digital, organizational, governance

Solution A (who should do what?)

Get it integrated into the education system -> KD (evaluation, research competencies). So make it a mandatory thing to learn about health care.
Cooperation between institutes and commerce about practice

Solution B (who should do what?)

SFI (The model in healthcare) should do action based research to help bridge and promote implementation.

Health atlas has been started). It is also related to nr. 12.

Linked issues (issues that would enable this challenge to be solved, or vice versa)

What would success look like?

- Accessible research results for everyone -> should be put to use in practice
- Competencies for everyone that is in HO
- System for the implementation of SFI's new solutions
- Have to put a system in place for how to measure innovation and such, to monitor it.

9 blue

Feasibility of addressing challenge

Selected challenge: 14

Cooperation / problems with funding between sectors

Evidence of problem

- Everyone is pointing towards “intersectionality” to solve future problems, but in Norway there’s the “sector principle”, which is strong in Norwegian government. Each ministry is funding it’s own sector, and that is where the money stays. So if you are going to solve future problems you have to have a better cooperation between the ministries and let the people who can answer the questions apply for the money. It shouldn’t be where you work, that define if you can apply for money, but your problem solving capacity. It has to be raised as a political issue.
- Different ministries/ departments have their own areas of responsibility
- Place of employment becomes more important than competencies for obtaining funding.
- Lack of “Shared action research” (“Samhandlingsforskning”)
- Sectors and areas becomes underfunded
- Lack of national coordination: a strong united voice of the sector within the ministries.

Influencing trends

- The problem is known – the challenge is doing something
- More patients will need help/ aid from different sectors

Afternoon

Each solution should come from different domain – infrastructure, human capital, investment, digital, organizational, governance

Solution A (who should do what?)

- The sector principle is not going to disappear, we have to live with it.
- Conduct intersectoral announcements
- More national announcements (at the expense of regional “overlæger”?)

Solution B (who should do what?)

- EU mission – bigger national initiatives
- The mission approach is going to be a taken up by the research council. To solve big problems you need this approach.
- Related problems: you need to take researchers from other parts of the system and make those parts weaker.

Linked issues (issues that would enable this challenge to be solved, or vice versa)

More national steering vs. Less local power

What would success look like? (and how would it be measured)

2-4 ambitious “mission-projects” across sectors.

6 blue

6 green

Selected challenge 21: NEW
Lacking career paths for researchers/ inefficient use of human capital

Evidence of problem
– how do we know it exists, what do we know/assume about causes?

- A lot of young with PHD's working in ministries and not becoming researchers.
- Relationship between PHD, POST DOC and researchers are unbalanced
- Badly planned career paths: but at the same time pressure to take long educations
- Lacking incentives for young researchers
- Lacking cross sector career paths
- There are incentives to produce PHD candidates but from there it is too difficult getting positions in universities, and institute sector as well. This is a mismatch.
- Not good enough absorption capacity within businesses to take PHD's?

Influencing trends
(Those that ameliorate problem & those that exacerbate problem, and how they have those effects)

Afternoon
Each solution should come from different domain – infrastructure, human capital, investment, digital, organizational, governance

Solution A (who should do what?)

Solution B (who should do what?)

Linked issues (issues that would enable this challenge to be solved, or vice versa)

What would success look like? (and how would it be measured)

1 blue

Feasibility of addressing challenge

Workshop participants

1) Bjørn Gustafsson, NTNU

2) Alexander Opdahlshei, Kreftforeningen

4) Kari Hengebøl - C3 | Centre for Connected Care

5) Kristin Skogeng – Helsedirektoratet

6) Jutta Heix – Oslo Cancer Cluster

7) Roar Samuelsen – FHI

8) Ninia Johnsen - FHI

9) Ingvild Eide Graff, Uni Research

10) Agnes Landstad, Abelia

12) Jon Magnussen, NTNU

13) Cathrin Carlyle, UNN

14) Kristian Kise Haugland, Mental helse

15) Robert Hvad Straumann, Virke

16) Jan Petter Akselsen, Legemiddelverket

17) Frederik Syversen

18) Irene Olaussen, Direktoratet for e-helse

19) Hilde G. Nielsen, Norges Forskningsråd

20) Steven Wooding, Cambridge University

21) Torben Bundgaard Vad, Damvad Analytics