

Norwegian strategic priorities in marine biotechnology

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Agenda

- Background
- Technology platforms and infrastructure
- Business development

Marin bioprospecting



Collecting samples



Systemize in biobanks
and research

Develop products



Background, creating a strategy for marine bioprospecting

- Focused priority since 2002, particularly through the establishment of MabCent, a center for research driven innovation, and Marbank, a biobank for marine specimens.
- Working group established consisting of people from the Research Council, Innovation Norway and SIVA
- Launch of the Government's strategy in September 2009 that builds up under the Northern Strategy, Innovation Report, Whitepaper for Research, and investment in the marine sector
- The Research Council, Innovation Norway and SIVA have developed a joint strategic plan to coordinate the implementation of the Government's strategy

Framework of challenges

- Little national coordination and cooperation
- Get "success" stories
- Challenges with respect to the commercialization of the results and market demand
- The balance between long-term capacity building and short-term business
- Lifting the Northern part of Norway, but contribute to national ownership

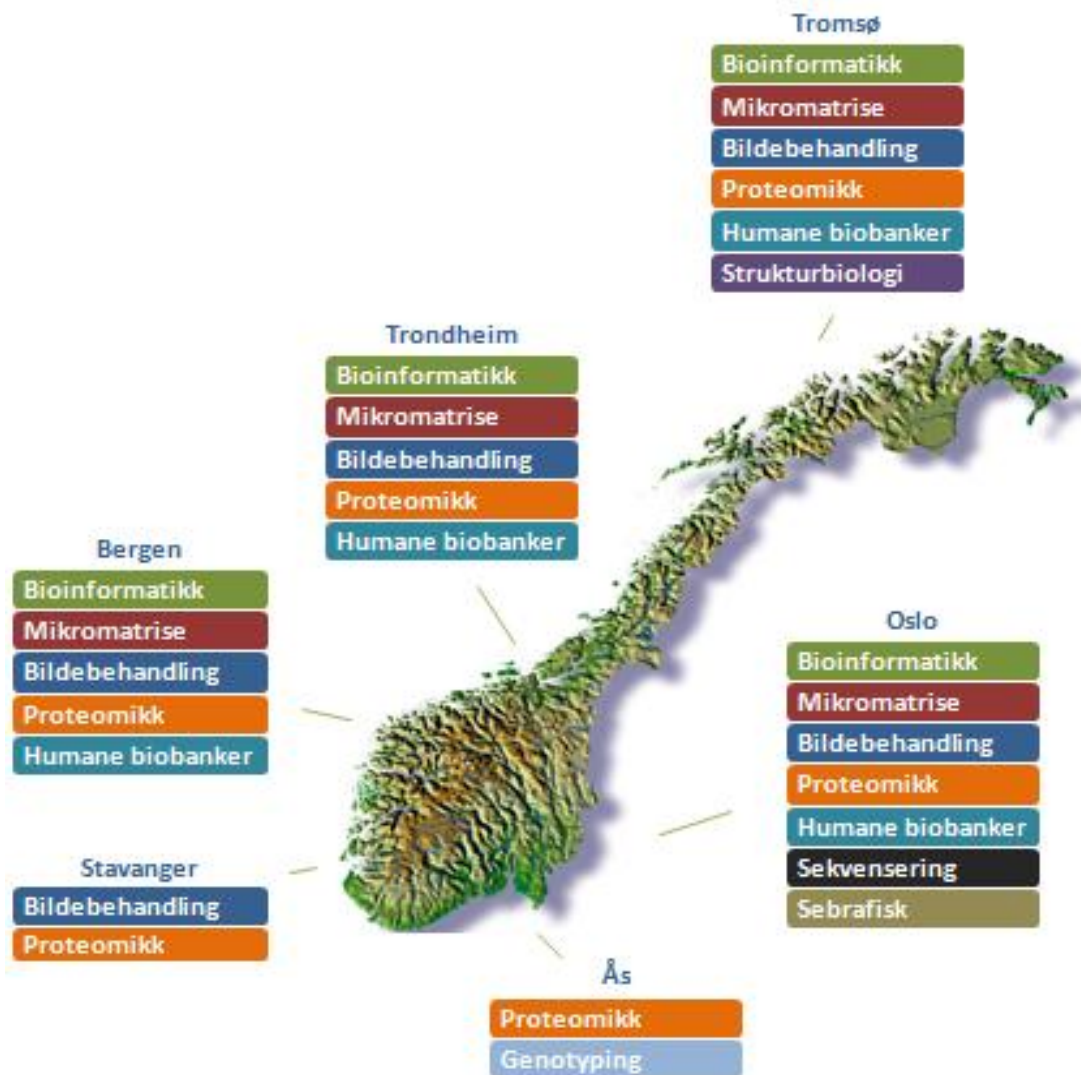
Common ambitions

- Better use of national marine resources
- New businesses and jobs in rural areas
- A national initiative specifically to enhance value creation in the North
- Broaden value creation opportunities
- National coordination of marine collections
- Increased quality of research and methodological expertise
- Increased international cooperation

Actions

- Building in parallel the initiative's three main pillars: 1) business 2) research / technology and 3) marine collections
- Research and methodological skills demanded by industry
- International expertise- and resource cooperation
- Cooperation between actors
- Coordination of funding agencies
- Research quality is a prerequisite

Technology Platforms



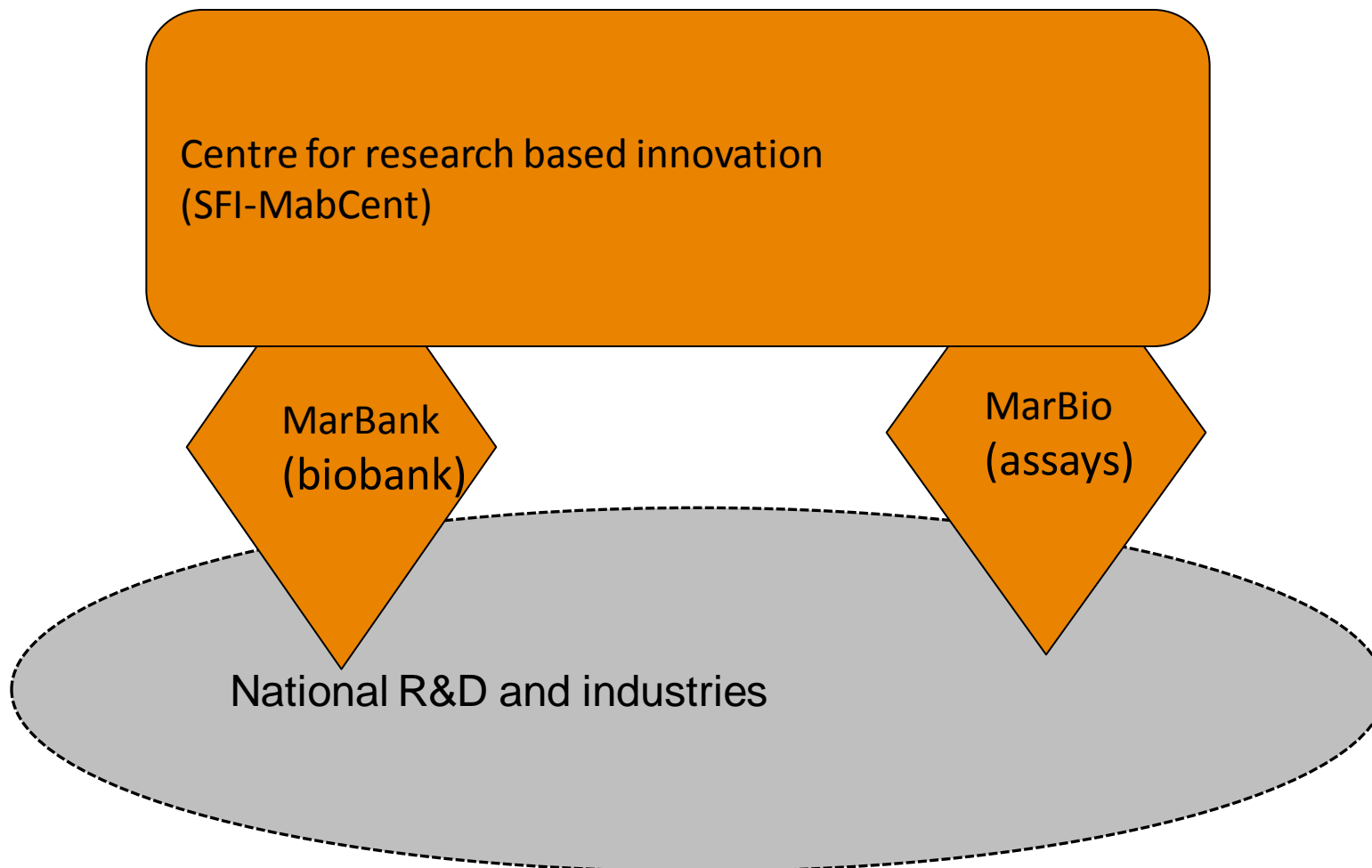


FUGE: Norway's endeavour in biotechnology



- Duration: 2002 - 2011
- Total budget:
1,6 mrd NOK / 190 mill €
- Organised nationally with
infrastructure and tasks
- 10 nationally available
technology platforms

Tromsø



Management of marine biobanks

- National coordination and collaboration
- Availability
- A national node (MarBank)
- Professional organization and clear rules for use of the biobanks
- Increased international competence building through collaboration
- *Clear juridical framework*



Marine biobanks are potentially valuable!

Prerequisites
for value creation :

- Quality
- Availability
- Benefit sharing (juridical framework)



Business development and priorities

- New SMBs patents and products
- More FoU performed by businesses
- Utilize results from research
- Strengthen technology transfer from academia to industry and collaboration between these.
- Increase international industry colaboration.



Possible business areas

- **Medicine**
 - **Drug development**
- **Food**
 - **Functional foods**
 - **Feed**
 - **Exploitation of bi products for food and feed**
- **Process industry**
 - **Bio refining- bio fuel**
- **Better oil and gas industry**
- **New tools and methods**

GOAL:

**A source for new and viable
wealth creation**

Business development

Research, technology and
competence

Management of the
marine biobanks

Make the biological material available for research, documentation of biological diversity and commercial exploitation.

Exploit the commercial potential by stimulating the cooperation between academia, companies and The Research Council.

Build and strengthen research competence and relevant national infrastructure to secure capacity, quality and method competence stimulating increased research activity.

Actions

- Actively mobilizing existing businesses
- Research support to SMBs
- Support for development of new business through technology transfer

- *Evaluation of market potential*
- *Evaluate the establishment of a new innovation network*

Types of technologies from marine bioprospecting

| TTO | Medical technology | Industrial technology |
|-------------------------------|--------------------|-----------------------|
| Bergen Teknologioverføring | 8 | 6 |
| Norinnova | 2 | 3 |
| NTNU TTO | 5 | 0 |
| Sinvent | 10 | 0 |
| Campus Kjeller | 3 | 3 |
| Inven2 | 1 | 0 |
| SUM | 29 | 12 |

How do we reach our goals?

- Establish a powerful network of researchers , and SMBs, so that both those who are already active in the research field and others can mobilize a coordinated effort.
- Strengthening cooperation between academic institutions, research institutes and R & D activity in SMBs.
- Facilitate the technology transfer and commercialization of research results.
- Initiate research on relevant ELSA challenges.
- Ensure that the infrastructure and expertise that is established will benefit research and business development related to marine bioprospecting.
- Identify and establish new infrastructure and expertise. (Biobanks, analytical capacity, etc)
- Collaboration between different funding agencies to reach a common goal

CSA (Coordinating) in Marine Biotechnology - MARINEBIOTECH

