

How can a Centre of Biofilm (CoB) at UMB make a difference for the oil and gas industry?

Director of Research Ragnhild Solheim, UMB



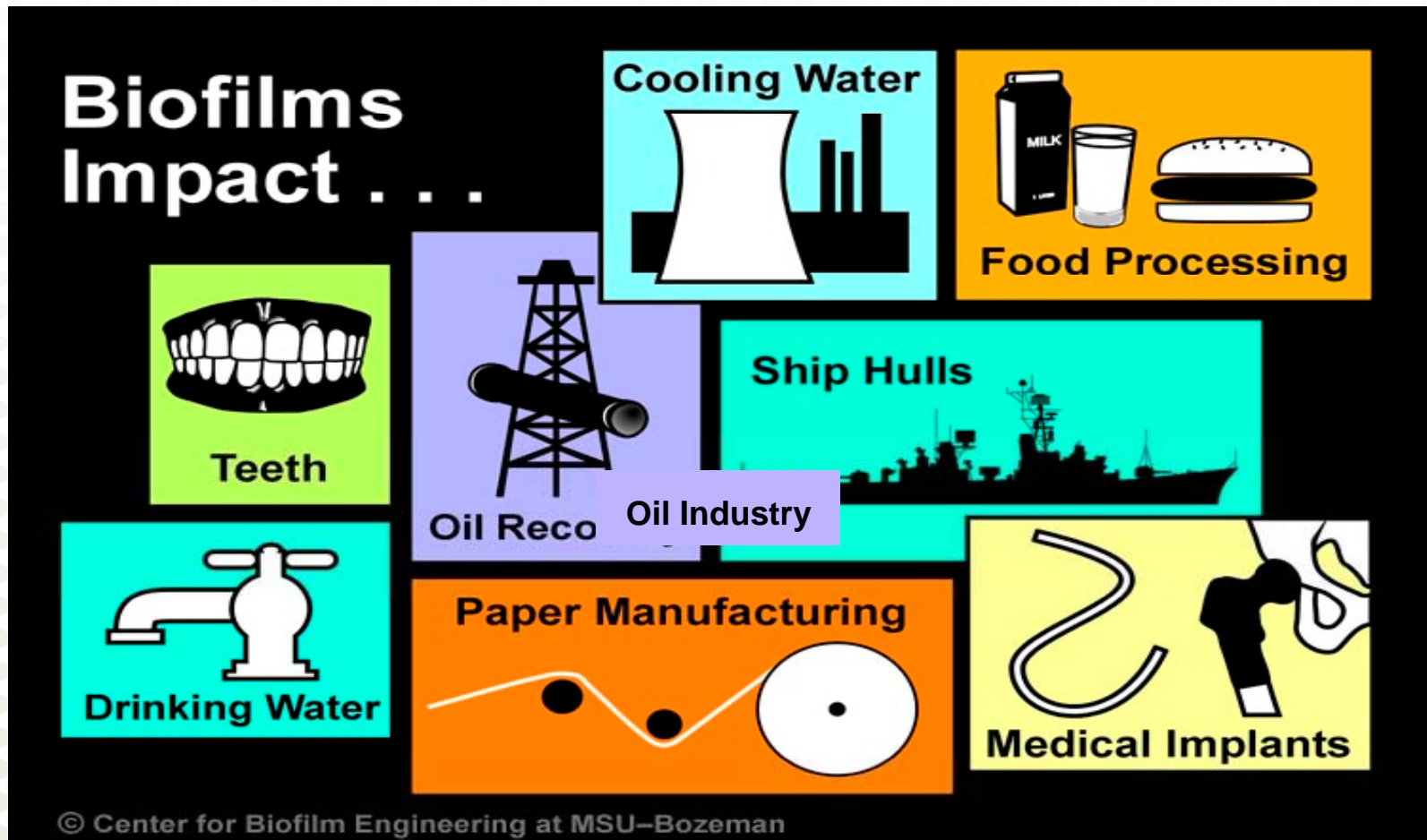
Research centre – why?

- Important means for:
 - Research development
 - Focused research on relevant subjects
 - Establishment of research groups beyond critical mass
 - Recruitment of internationally renowned scientists
- Better opportunities for focussed research
 - Basic and applied
 - Cooperation industry - academia
- The research collaboration and scientific environment within a research centre help to address the most relevant and most important problems
- **Makes the research more visible!**

Centre of Biofilm research

- Biofilm research in Norway today: low number of projects, relatively few scientists
 - Not a main focus in Norwegian Microbiology research
- Coordination of biofilm research in a CoB is very important and will strengthen this scientific field in Norway

Interdisciplinary nature of research on biofilms fits the research centre concept very well



Centre of Biofilm research

- Inspiring research environment for students and scientists
 - Great opportunity in PhD education
 - Research group working towards a common goal
 - Increased motivation, efficiency, production
- Increased visibility in the research environments and in industry
- Realization of the scientific potential among Norwegian scientists on this important field

Biofilm research – what is needed?

- Expertise in basic microbiology
 - Microbial ecology, behaviour, physiology, nutrition
 - Molecular microbial biology
 - Microbiology in diverse and harsh environments
- Chemistry
- Materials science
- Bioinformatics, mathematics, statistics
- Infrastructure and relevant equipment to carry out the research
- Combination of applied and basic research
- Cooperation with industry facing biofilm problems
- **The CoB partners hold this competence!**

The Centre of Biofilm research: Partners

- UMB
 - Microbiology at UMB:
 - Important field of research at UMB
 - Renowned and internationally competitive
 - Basic and applied research
 - Microbial behaviour and ecology
 - Interdisciplinary and disciplinary
 - FRAS Technology
 - Uni Bergen (Centre for Integrated Petroleum Research)
 - STAMI
 - SINTEF
- Strong cluster
 to address challenges
 associated with biofilm
- **Excellent opportunities for knowledge and technology transfer**

Contribution by UMB to a CoB

- The basic microbiology research milieu at UMB has a high international standing and good international network
- UMB possesses relevant equipment for chemical, morphological and genomic characterization of relevant microorganisms
- UMB employs many young scientists (Master, PhD and Postdoc)
- UMB microbiologists are very motivated and eager to build up basic competence within the field of biofilm research, which may lead to applied and environmental-friendly solutions to problems caused, directly or indirectly, by microbial activity (e.g. biofilm formation) in the industry
- The UMB management supports the establishment of a biofilm research centre



Biofilm Research Centre – the goal:

To find the **best solutions to problems** caused by **biofilm formation**, it is necessary to combine applied and basic research.



What is needed to establish CoB?

- Solid industrial partners (“problem owners”) who are interested in (and “understand”) science and can contribute to funding over a 5 years period
- Strong, competitive national and international partners with supplemental competence
 - Premise for high scientific quality
- Collaboration between research organisations, official research funding institutions and relevant industry
- Funding: approx. 100 MKr for 5 years
 - Ensure critical mass of scientists
 - Infrastructure
 - Knowledge production
 - International attractiveness
- Funding similar to NRC funded centres (SFI and FME)

“A unique centre delevering highly valuable knowledge”





THANK YOU!