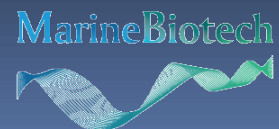
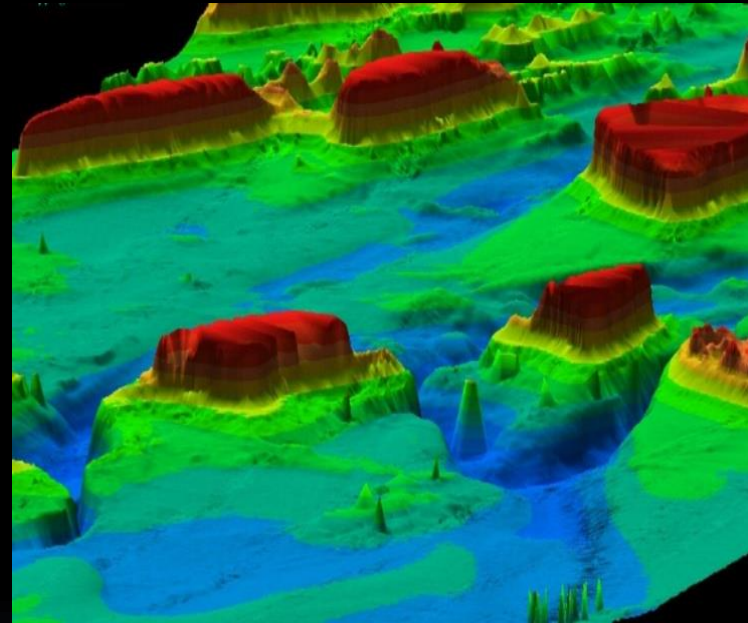


ERA-MBT marine biotechnology

# CHALLENGES FOR A STRATEGIC ROADMAP FOR MARINE BIOTECHNOLOGY



# What is a strategic roadmap?



.....is a plan that defines the goals and strategies for the future of a business

The strategic road map will

Guide us to move from where we are, to where we want to be – but!

**BUT**

Where are we?

Where do we want to be?



# Where we are coming from?

## BREMEN 2007



What is the 'State of the art' of marine biotechnology research in Europe and how do we compare with the rest of the world?

How may the future work programmes of FP7 be modified to maximise the opportunity for beneficial collaboration and sharing of resources and facilities between Member States?

Is there scope for developing a wider Strategic Research Agenda that would be helpful to both private and public sectors throughout Europe?

How may the potential benefits of marine biotechnology be realised and key obstacles to further developments be overcome?

Do issues such as Intellectual Property Rights (IPR), innovation and availability of finance need special attention?



# Key findings from Bremen

## European marine biotechnology research will be best served by.....

Making a commitment to large-scale marine science research, including deep sea exploration;

Defining and prioritising Europe's future marine science and marine biotechnology research activity;

Securing a greater participation by industry as a potential user of outputs from marine biotechnology research;

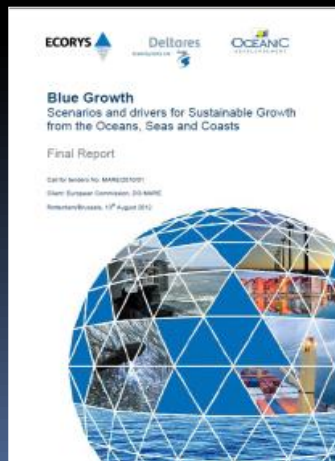
Stimulating scientific research in areas that underpin marine biotechnology;


Improving the funding and co-ordination of marine science and targeting resources at marine biotechnology;

Ensuring Europe's traditional marine science laboratories continue to contribute to the development of marine biotechnology research activity; and

Encouraging Europe's best scientists to engage in marine biotechnology research.

# Progress from Bremen





**Progress is impossible without  
change, and those who cannot change  
their minds cannot change anything.**

*George Bernard Shaw*

# So what are the challenges?



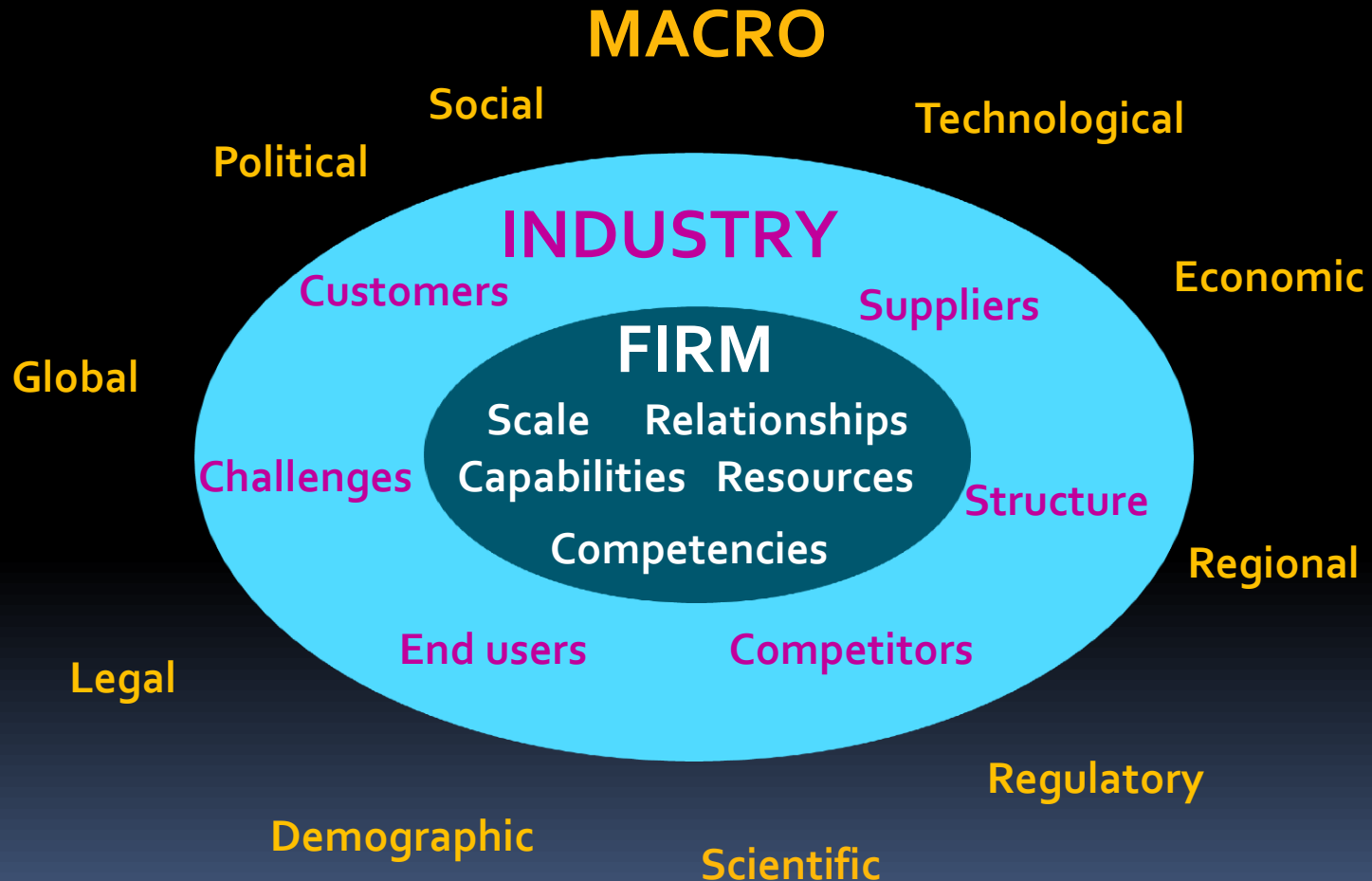
- Gather insights to the future
- Define the environment we operate in
- Understanding of marine biotechnology
- What's happening at the level of the firm?
- What are the opportunity areas?

# We have to anticipate the future

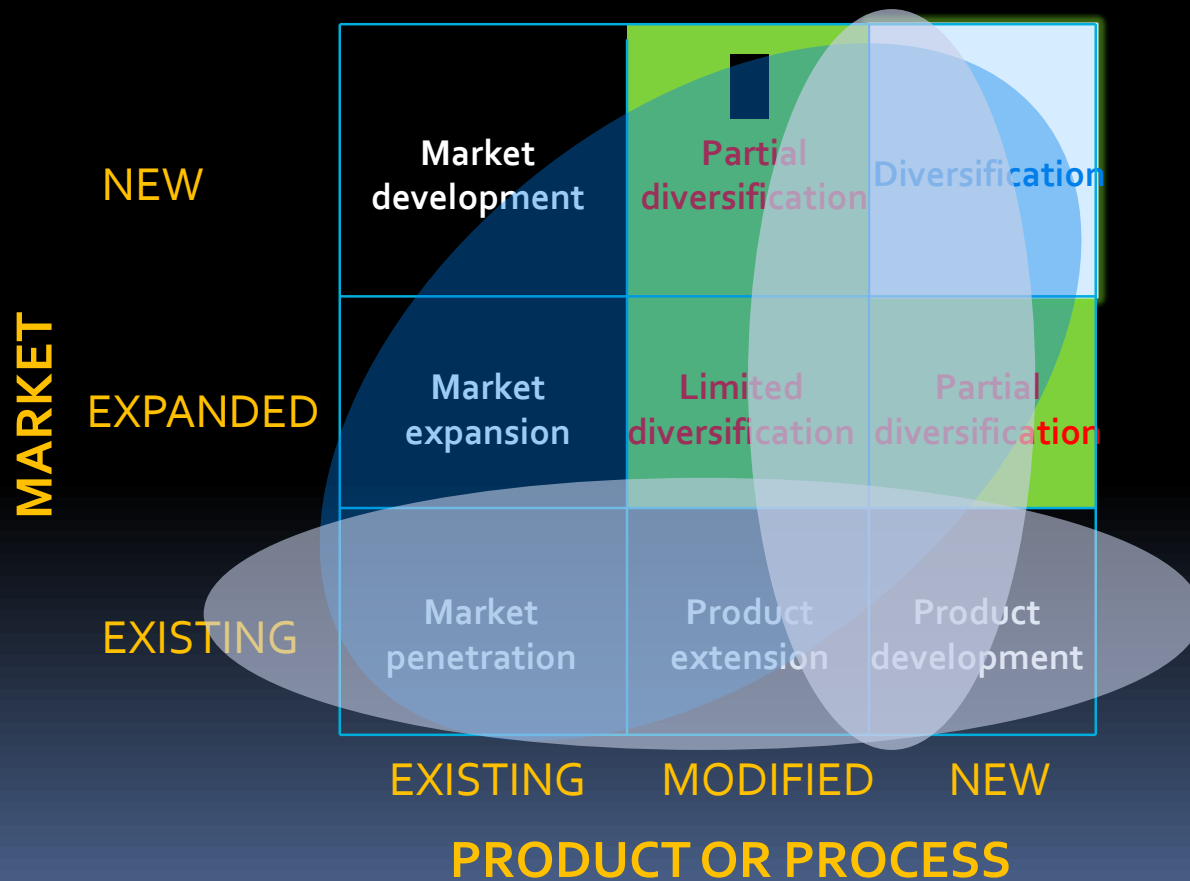
- **Changing demographics**
  - World population to exceed 8 billion by 2030
  - Living longer = ageing populations (median age 34y by 2030)
- **Globalisation**
  - Strong market growth in BRIC and ASEAN
- **Scarcity of resources**
  - Rising food demand, food security issues
  - Materials shortages
- **Climate change**
  - Loss of biodiversity
- **Science and technology**
  - Impact of innovation
  - Age of the life sciences



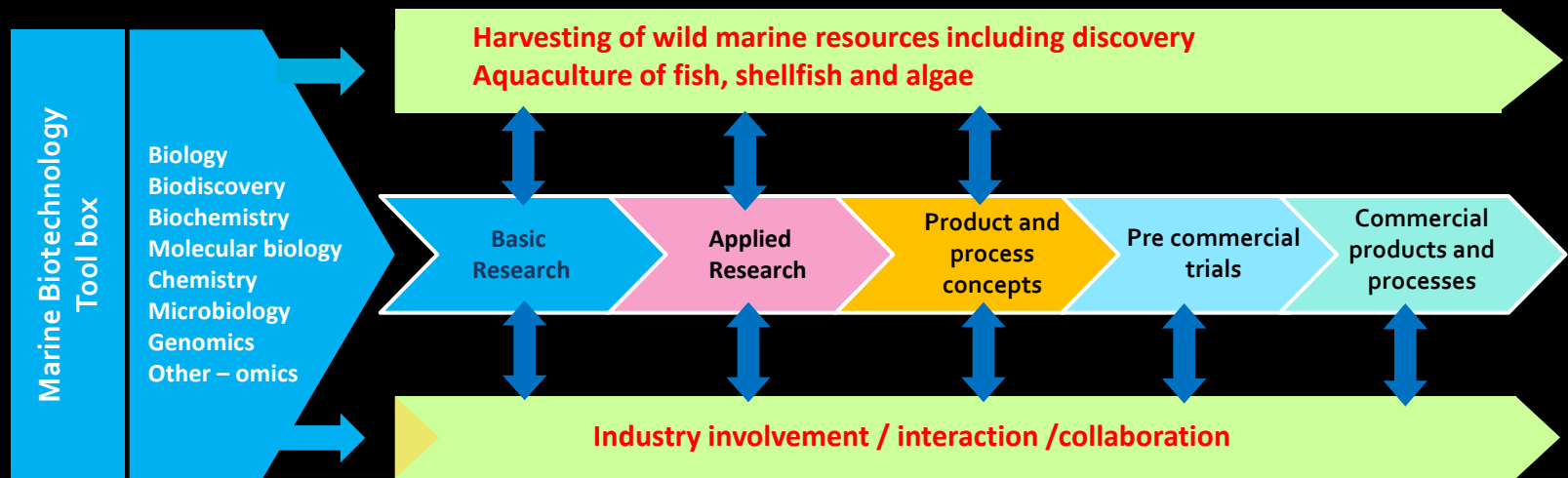
# Understand the environmental factors



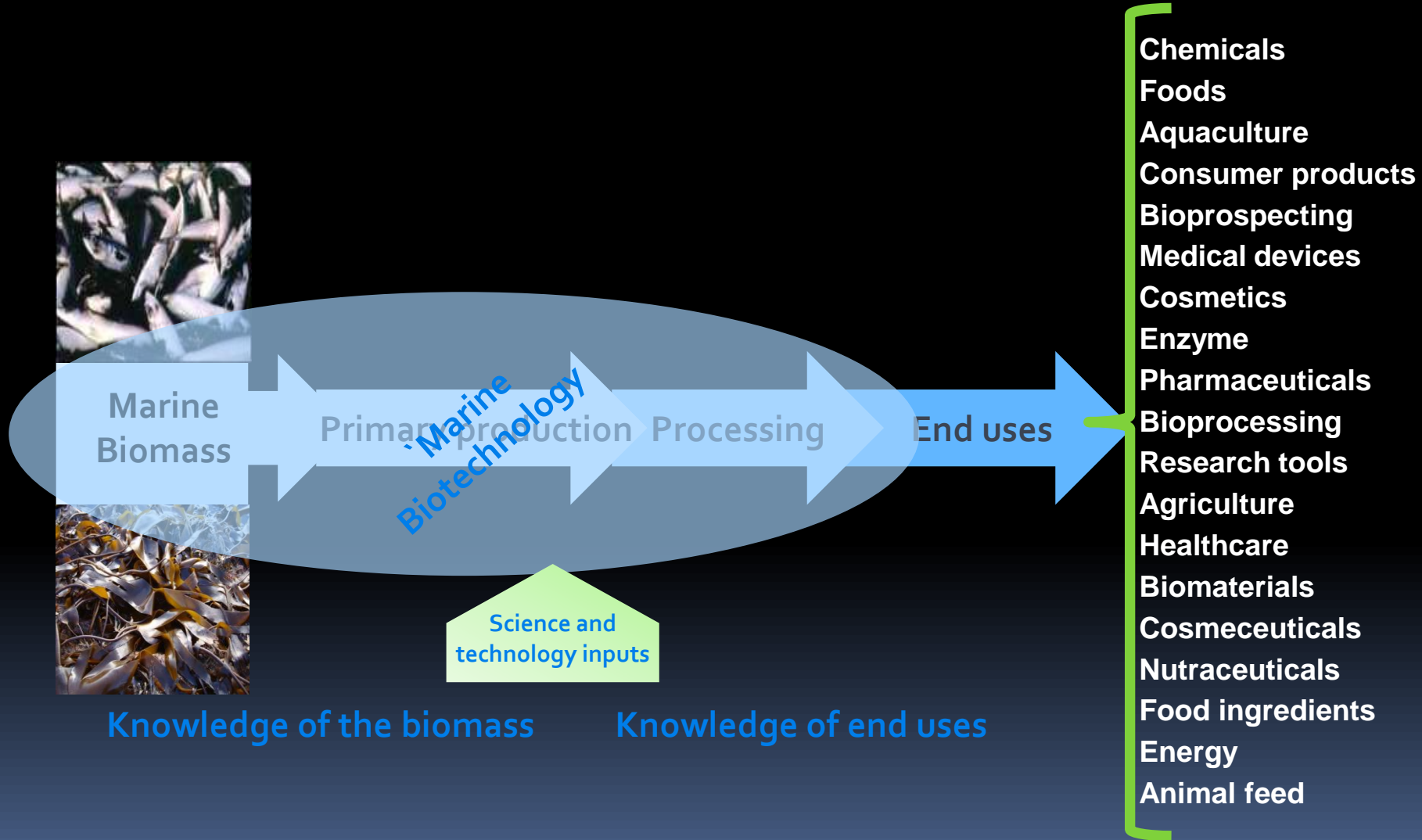
# Understand MBT in the market place



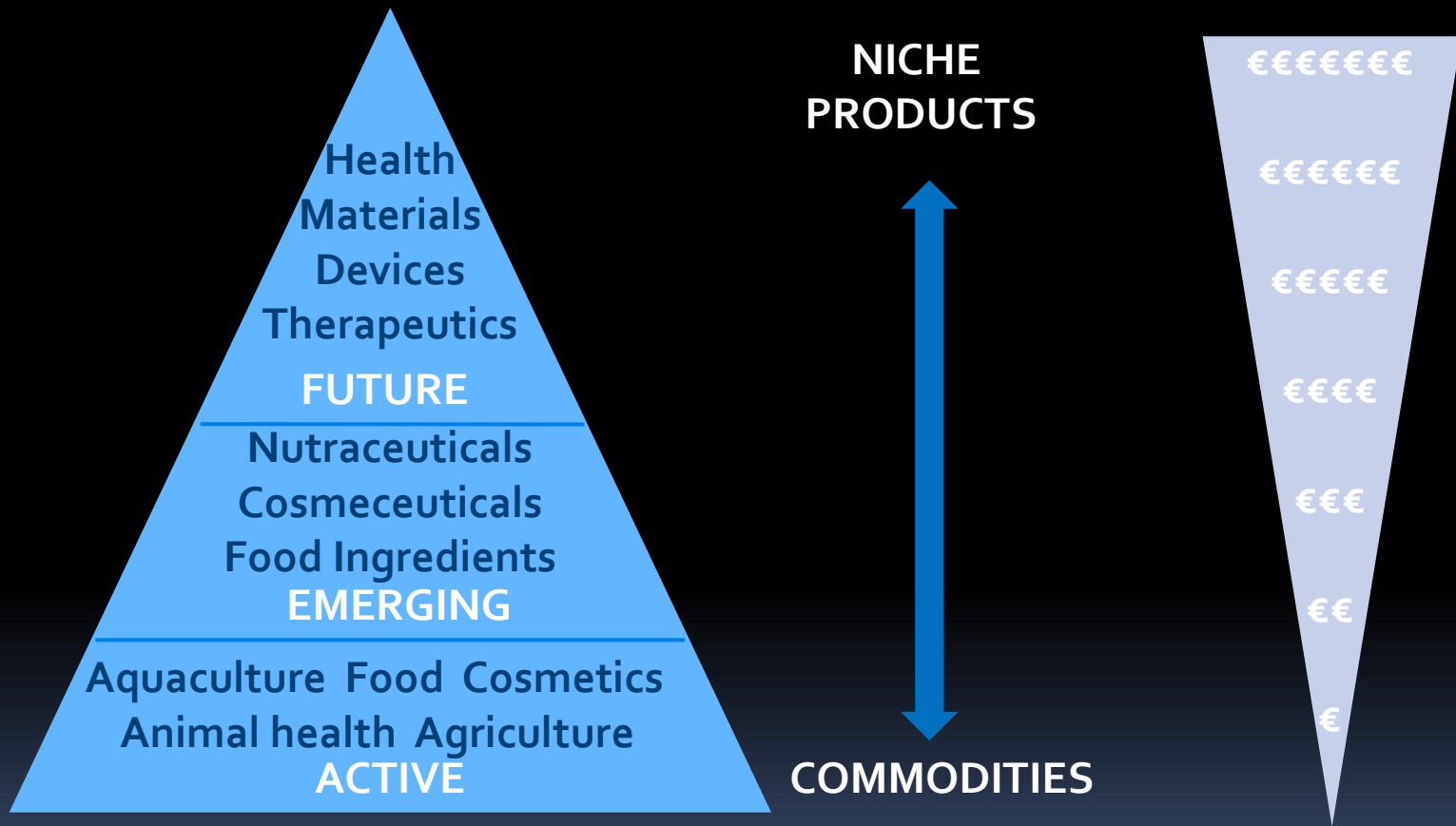
# Understand MBT inputs to the value chain



# Industry sector or process?



# Understand the opportunities



Informing where funds could support future research and innovation

# The case of Omega-3

## The Omega-3 market

- Omega-3 ingredients growth 18% per annum
- Global Omega-3 market to reach €25 b by 2016
- Expansion of health claims associated with Omega-3
- Applications in food, pharmaceuticals, nutrition, cosmetics
- Intense competition and a source of innovation



Acquisition of Pronova, Ocean Nutrition, Martek and Equateq > €1.88 billion

*".. grow is omega-3, especially when we talk about highly concentrated omega-3 and trying to create new white spaces next to pharma which would be human nutrition"*  
Walter Dissinger, President BASF Nutrition and Health



**Thank you**