MarineBiotech

MBT-ERA WP3

Interaction with industry

Results of a stakeholder survey

28/29 October 2014 Lisbon, Portugal

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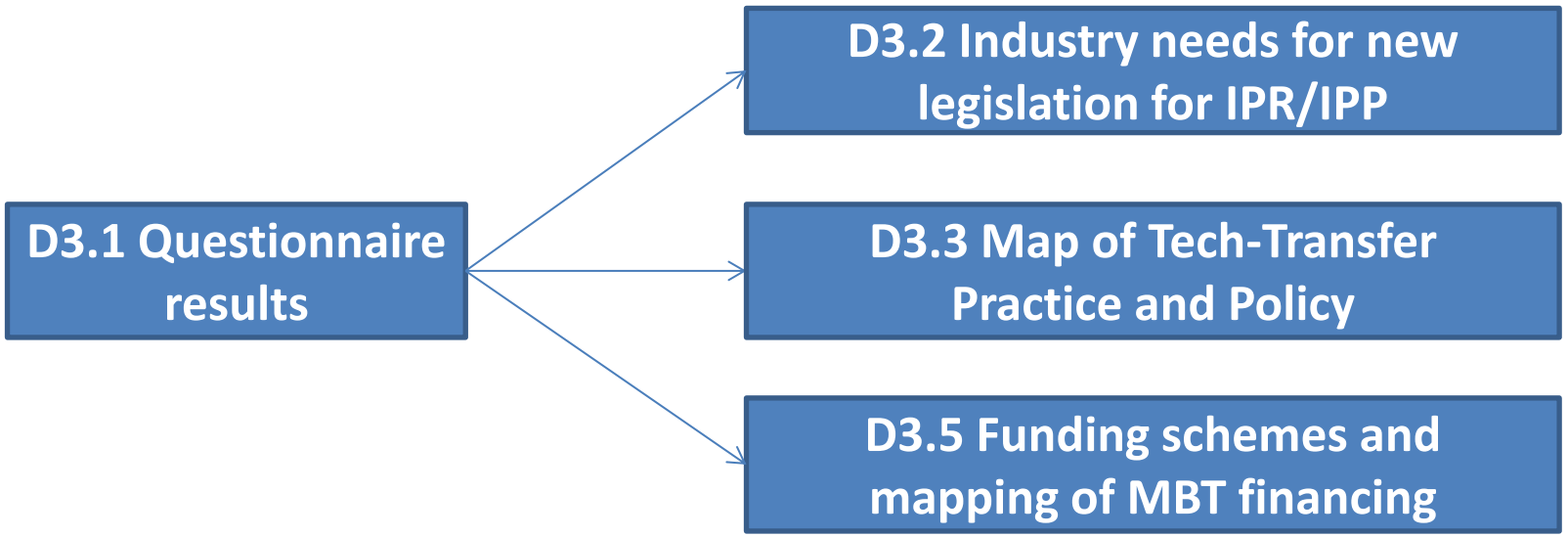
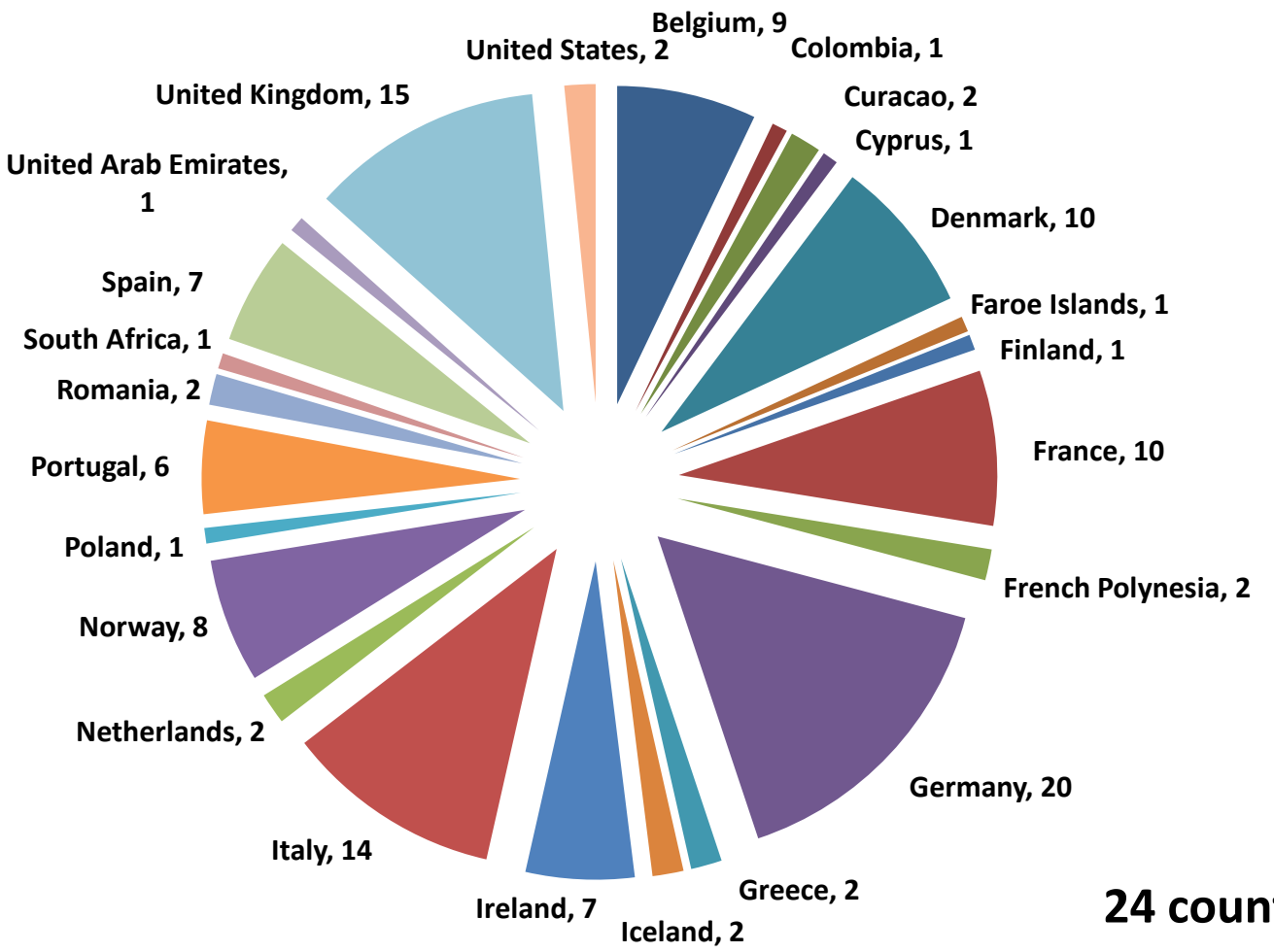
Content and results

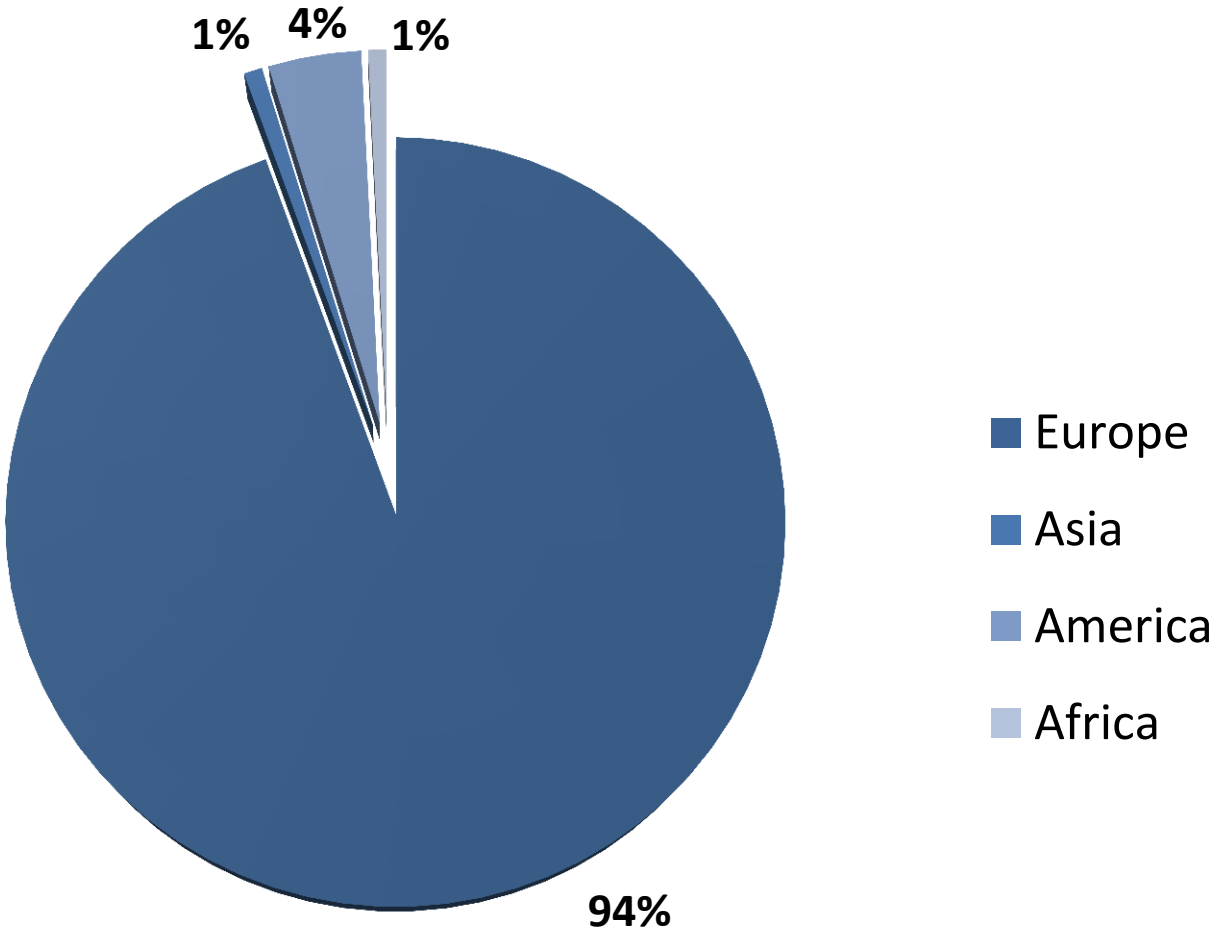


Responses by country



24 countries

Responses by continents



Respondents – by type

Stakeholder type	%	Count
Larger industrial company (international)	4,7%	6
SME		
Industry clus		
Industry ass		
Industry net		
Consultant		
Technology		
Regional org		
European organisation	3,1%	4
National organisation	28,3%	36
Funding agency/venture capital provider	3,9%	5
Other	38,6%	49
Blank		5

Private sector is about one third and majority indentify themselves as SMEs (>80%)

Public sector about two third

Other: Almost all from governmental agencies, research institutes and universities

Regions of operation

Row Labels	Column Label EU		Global		National		Total Count of Large	Total Count of SME
Belgium						1		2
Colombia								1
Curacao								1
Cyprus								1
Denmark							3	1
Faroe Islands								
Finland								1
France								
French Polynesia								1
Germany								5
Greece								
Iceland								
Ireland							1	
Italy								6
Netherlands								2
Norway								1
Poland								
Portugal								2
Romania								
South Africa								
Spain							2	
United Arab Emirates								1
United Kingdom		1		1		2		4
United States								
Grand Total		9	6	15		5	6	29

Most of the companies regard the region which they operate in (their market) the EU zone or global.

Those classified as “national” are from America (3) and the UK (2).

Activities

Marine biotechnology activity	Count
We use raw material from marine biomass	22
We use marine related bioinformations for development of products/services	19
We develop product/services for use in marine bioenvironment	17
We do not have any marine biotech activity	4
Blank (did not mark any of the above)	1

Type of biomass

Marine biomass used for R&D or production	Count
Fish	15
Molluscs	11
Microalgae	14
Macroalgae	14
Bacteria	12
Does not use raw material from marine sources	2
Other	7
Blank (did not mark any of the above)	5

Fungi, Sponges, invertebrates like jellyfishes and worms.

Target market

What is the main target market for your marine related products?	Count
Food	16
Feed	13
Energy	7
Materials	12
Cosmeticeuticals (e.g. skincare)	13
Health (e.g. food supplements)	13
Pharmaceuticals	12
Environment and monitoring (e.g. biosensors, anti-fouling technology, bioremediation....)	14
Production of commodities or services other then above	4
Blank (did not mark any of the above)	5

Overview

- Conclusions from stakeholders section
  - This is a European survey, some 5% of responses are outside Europe
  - The MBT environment is dominated by national and research institutions
  - The MBT industry is relatively immature, most companies are SMEs
  - About a half of the SMEs produce directly from marine biomass, others are in marine related services
  - The market is mainly food/feed and health/cosmetic

Large industrial companies

- Conclusions from stakeholders section
  - Raw material:
    - Four out of six base their production on macroalgae
    - Two base their production on fish and bacteria
  - The main market:
    - Food and Feed
    - Pharmaceuticals
    - All regard their market as global

SMEs

- Conclusions from stakeholders section
  - Raw material:
    - Half utilises marine biomass directly
    - The other half is in MBT related services
  - The main market:
    - Cluster of Food and Feed
    - Cluster of Cosmeticeuticals, Health and Pharmaceuticals
    - Environment and Monitoring
    - Their market is more regionally based

D3.2 Industry needs for new legislation for IPR/IPP

IPR/IPP

Are there specific technical IPR/IPP issues for marine biotechnology?

	%	Count
Yes	45%	42
No	55%	52

- Verbal comments were very general, quoting ‘uncertainty in IPR/IPP questions’, ‘unclear legal aspects’, ‘fuzzy rules concerning the property of the bio-resources’, …
- There are three comments categories; a) Nagoya and related issues and national rights, b) Don‘t care/don‘t know and c) other
- In general not much new knowledge surfaced in the answers to this question. Maybe an indication of little concern on the matter, or no specific issues for MBT

Study

- MBT companies, industry organisations and patent offices were interviewed:
  - No apparent problems with legislation
  - No specific problems related to marine biotechnology
  - All agreed that it is complicated and expensive to apply for patents
  - Unitary patents and EU patent court are on their way, which is a great advantage

Conclusion

- It is important to educate MBT companies about IPR/IPP
- There is no need for specific new legislation for IPR/IPP at this time
- Simplification of the patent application process is on-going

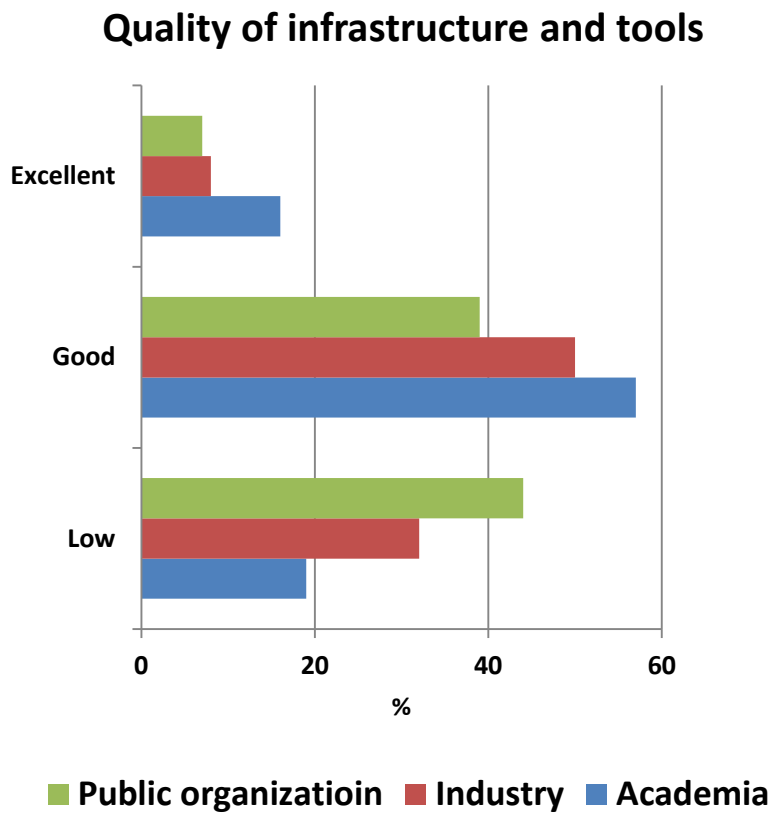
D3.3 Map of Tech-Transfer Practice and Policy

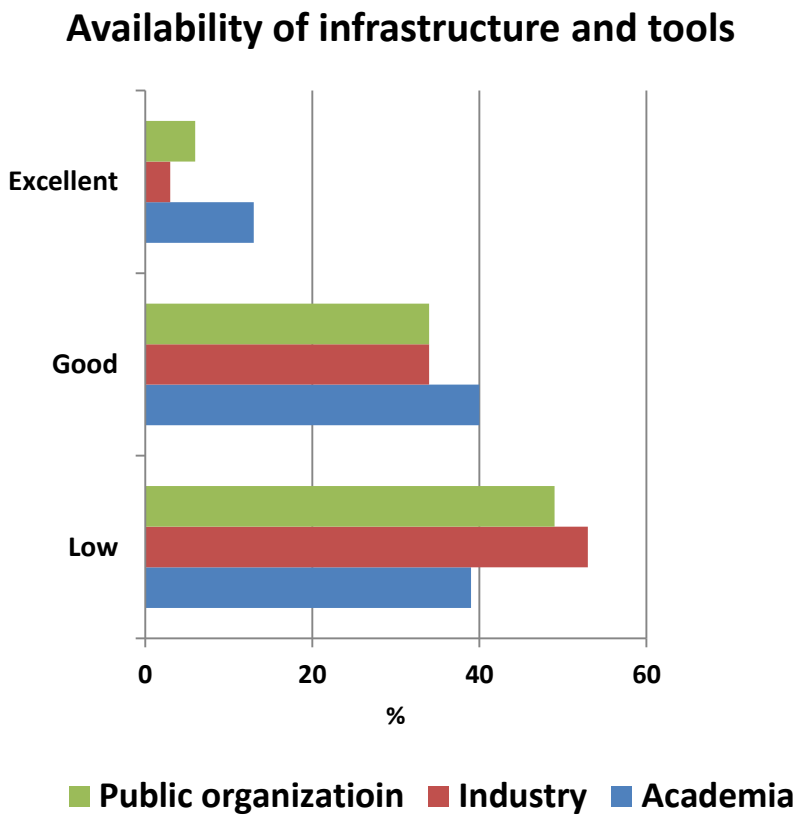
Tech-transfer priorities

Main issues	Priority 1	Priority 2	Priority 3	Total
Level of public funding to bridge the gap between academia and industry	28	21	8	57
Insufficient co-operation between academia and industry	28	17	8	53
Lack of incentives for PP collaboration and problems associated with such partnerships	5	19	22	46
Lack of national policy and strategy for tech transfer and start up companies	14	18	7	39
Limited access to resource material for R&D and pilot studies	9	3	19	31
IPR issues - Benefit sharing	2	9	11	22
Other	8	4	9	21

- The main conclusion is that there are numerous issues limiting the technical transfer from academia to industry
- There is a gap between academia and industry and little incentive is present to facilitate bridging the gap

Infrastructure and tools





Comments

- Larger industries have reasonably good infrastructures. SMEs have to collaborate with academic institutions to get access to infrastructures
- Infrastructure is scattered in Europe and there is a considerable lack of collaboration and cooperation in utilising existing infrastructure and tools
- The quality and availability of infrastructures and tools varies in different European countries

D3.5 Funding schemes and mapping of MBT financing

Main source of funding

Main funding	Public	Industry	Total
Domestic public funding	34	7	41
EU / international funding	17	15	32
Venture capital	2	5	7
Other	3	5	8
Total	56	32	88

Company revenues or own contribution

From companies

- For industries their main funding source is EU / international funding
- Venture capital and own contribution are also important source of funding for industries R&D
- For the public sector the main source of funding is domestic public funding

Main bottlenecks

Bottlenecks	Public	Industry	Total
Access to domestic public funding	33	8	41
Access to EU / international funding	20	18	38
Access to venture capital	11	9	20
Availability of funding for infrastructure and tools	20	10	30
Successful public-private partnership funding	24	11	35
Access to charity foundation (NGOs) funding	0	1	1
Other	3	4	7
Total	111	61	172

- For industries the main bottleneck is more access to the same type of funding that is already their main source, i.e. EU funding and Venture capital
- The availability of both infrastructure and PPP funding is an issue (see also low availability of infrastructure as identified the tech-transfer chapter)

Main bottlenecks #2

Bottlenecks	Respondent type									
	Large industry	SMEs	Industry clusters	Industry networks	Consultants	Tech transfer agencies	EU & regional organisations	National organisations	Funding/VC providers	Others
Access to domestic public funding								■	■	■
Access to EU or international funding	■	■	■			■	■	■	■	■
Access to venture capital		■				■	■			
Availablity of funding for infrastructure		■		■			■	■		■
Successful PPP funding	■	■	■		■	■	■	■		■

- Access to EU or international funding and PPP funding is highlighted by the different repondent types.

Findings - Industry

- Domestic public funding:
  - More emphasis needed on technical transfer
- EU / International funding:
  - More technical transfer is needed
- Public Private Partnership:
  - Companies should have increased control over practical results
- Venture capital:
  - Biotech is a high risk domain in a need of patient investors
- Other bottlenecks:
  - ERA-MBT could pull together relevant experts, synergising them with the industry

Findings - Public

- Domestic public funding:
  - A message to Politicians; „put your money where your mouth is“
- EU / International funding:
  - The whole procedure needs streamlining
- Public Private Partnership:
  - Need for training and support in establishing PPP
- Venture capital:
  - Does not fund early stage research – how to increase interest?

The survey was conducted during June and August.

So what can we read out of the survey?

What are the actions needed?

Some actions

- We need to bridge the gap between academia and industry (Tech-transfer)
- Educate the industry about IPR/IPP
- Better access for SMEs to existing infrastructures
- Increased funding for infrastructure
- More interest, especially from venture funds and public funds, are needed
- ???

We are here on Earth to do good to others.
What the others are here for, I do not know.

W H Auden