

# The overview of Estonian biotechnology sector (2012)

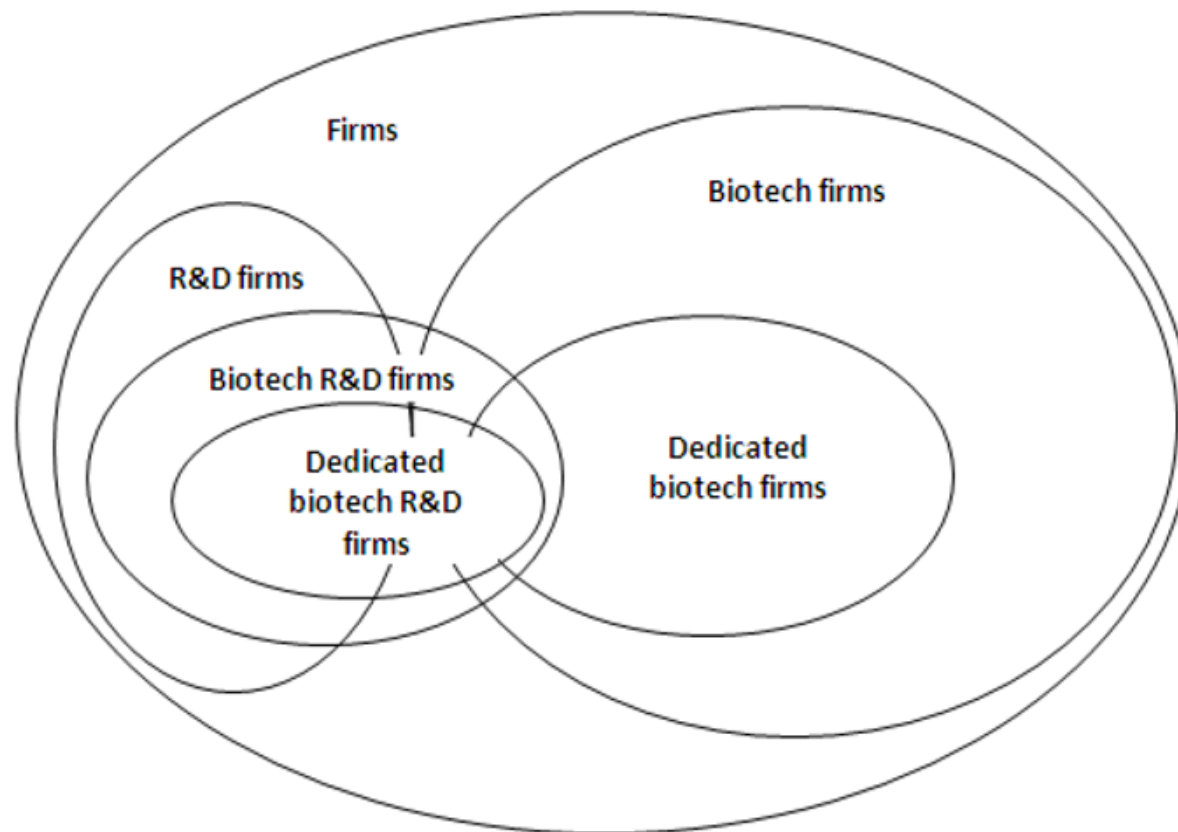
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15.06.2012, Tallinn

Bioeconomy in the Baltics. Inspiration conference.



# Defining the biotechnology sector

Always necessary prior to specify the scope for the accuracy of the statistics and in order to avoid overestimation of the sector.



# Definition of a biotechnology firm (by OECD)

1. Dedicated biotechnology firm: defined as a biotechnology firm whose **predominant activity involves the application of biotechnology techniques** to produce goods or services and/or to perform biotechnology R&D.
2. Biotechnology R&D firm: defined as a firm that performs biotechnology R&D. **Dedicated biotechnology R&D firms**, a subset of this group, are defined as firms that **devote 75% or more of their total R&D to biotechnology R&D**.



# The case of Estonian biotechnology sector: choosing the narrowest scope for definition

Estonia has so far completely excluded from statistics:

- **wholesale companies** of medical devices or laboratory equipment;
- **consultancy companies**, intermediating clinical research projects, but not performing them;
- **the branches of pharmaceutical companies**, who are performing projects of clinical research in Estonia;
- **the hospitals**, though they have some collaboration with biotech firms;
- **traditional industries** (e.g. food industry using biotech applications).



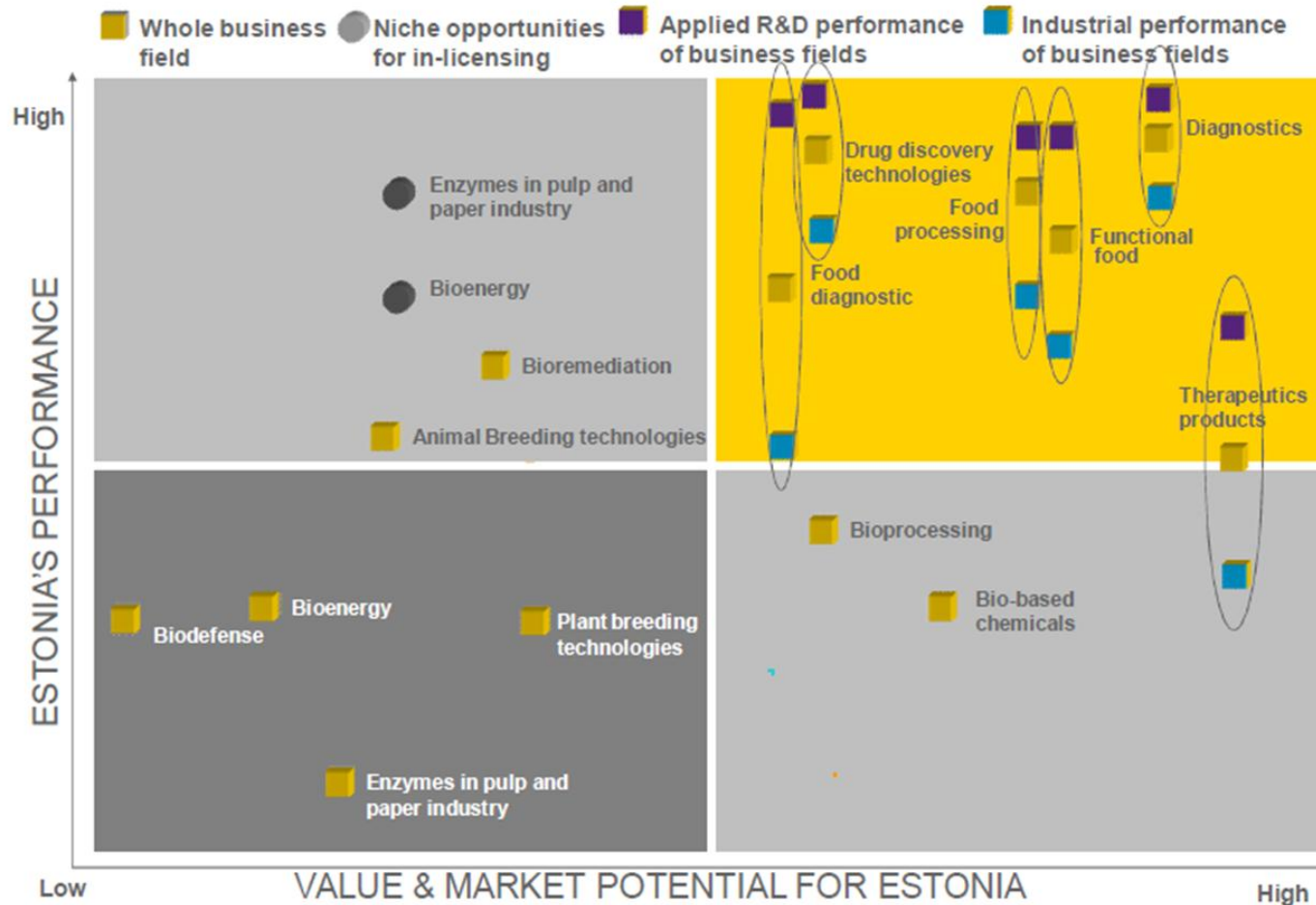
# Feasibility Study For an Estonian Biotechnology Programme

[www.eas.ee/biotech](http://www.eas.ee/biotech)

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# The potential of biotechnology in Estonia (Ernst & Young, 2009)



# Statistics of Estonian biotechnology sector (2010)

- Biotech companies: ~ **55** (dedicated R&D biotech companies: ~ **30**)
- Employees: ~ **500** (dedicated R&D biotech companies: **472**)
- Total turnover\*: ~ **19,2 million €**, with export volume: **6,9 million €**
- Average growth rate of dedicated R&D biotech companies: ~ **28,3%** per a year (2004-2008)
- Intellectual property\*\*: patents **20**, pending patent applications **65**
- The revenues of universities from intellectual property: **2 million € annually**
- Majority of companies active in **red biotechnology**
- Majority of business activities: provision of services
- Economic contribution of biotechnology: ~ **0,13% of GDP**

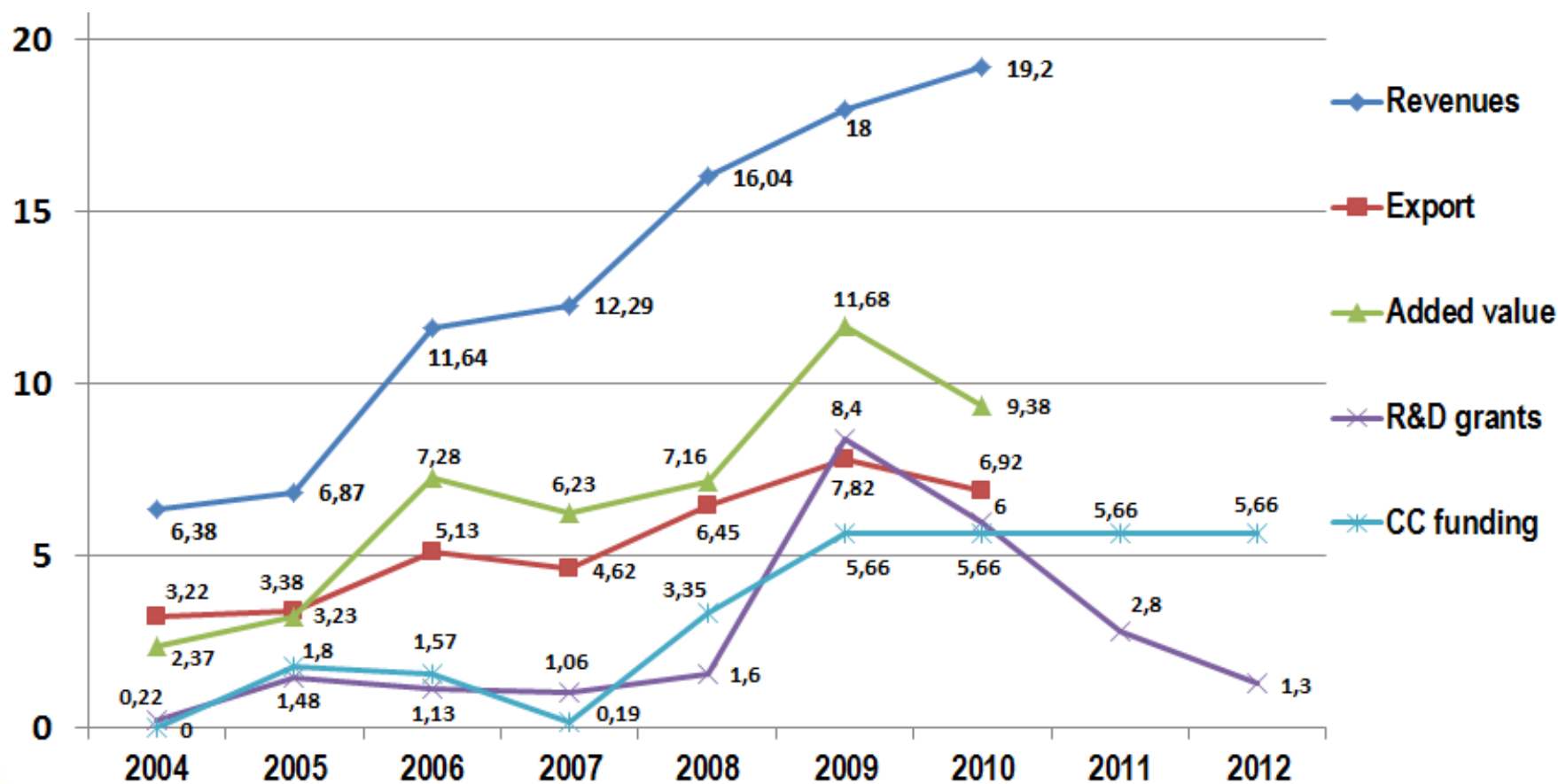
\* Data by Ministry of Economic Affairs and Communications

\*\* Data by Estonian Biotechnology Association

\*\*\* Data by Enterprise Estonia



# The trends about Estonian dedicated biotech R&D firms (million euros, 2004-2012)





# The objectives of Estonian Biotechnology Programme

- To **accelerate and maximize economic impact** in biotechnology sector: to increase the volume of sales revenue, export, added value and R&D investments in biotech sector by 2013 at least 3-4 times.
- To **initiate and broaden the usage of biotechnology** in Estonian traditional industries.
- To **foster deeper co-operation** of biotech sector between different ministries, industries, universities, R&D institutions and international partners.



# Main emphasis and activities of Estonian Biotechnology Programme

DIAGNOSTICS and DRUG DISCOVERY:

to improve business skills of bio-business managers.

Bio-entrepreneurship training courses

FOOD TECHNOLOGIES and FUNCTIONAL FOOD:

- to enhance awareness and R&D capabilities of companies

Seminars about biotech applications and networking events

- ME-3 probiotic bacteria used in dairy products, recently on the market in South-Korea.
- Bacteria in cheese (TENSIA), lowering blood pressure.



# The funding for Competence Centers (CC) in the field of biotechnology (2008-2015)

- Competence Centre for Cancer Research (**8,94** million €)
- Competence Centre on Reproductive Medicine and Biology (**7,66** million €)
- Competence Centre of Food & Fermentation Technologies (**7,24** million €)
- Bio-Competence Centre of Healthy Dairy Products (**7,50** million €)



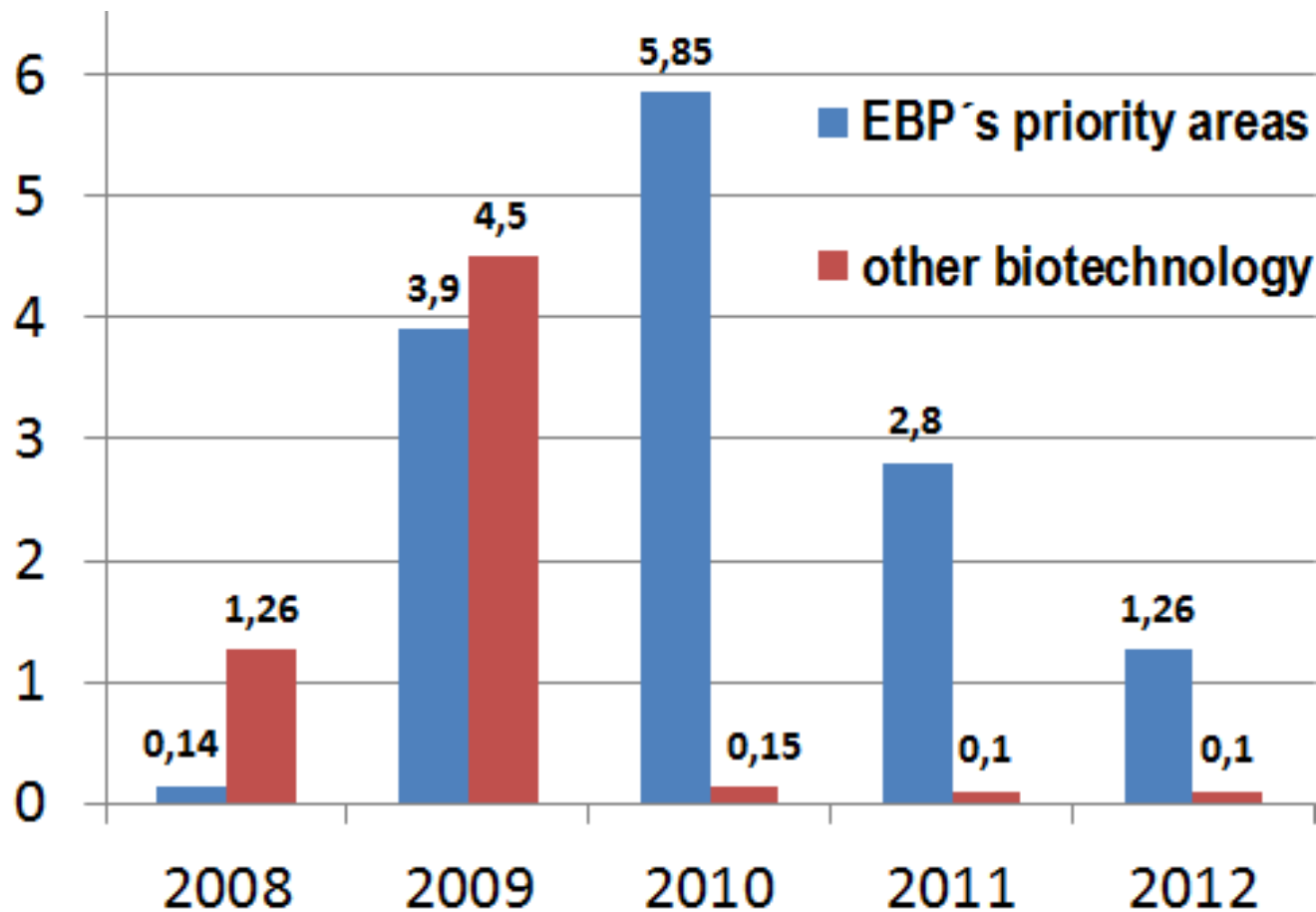
# Minimum amount of public funding for implementation of Estonian Biotechnology Programme (2010-2013)

- **Applied research funding of programme topics: 9,3 million €**
- **Product development grants: 8 million €**
- Special applied research grants of functional food: **6,4 million €**
- **The development of human resources: 5,1 million €**  
(top scientists, postdocs, PhDs, apprentices, mobility in academia etc)
- Secondment of development personnel: **2,6 million €**
- Export and marketing support: **1,3 million €**



# Re-allocation of R&D grants as a result of Estonian Biotechnology Programme (EBP)

(million €, Enterprise Estonia)



# Thank you!

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