



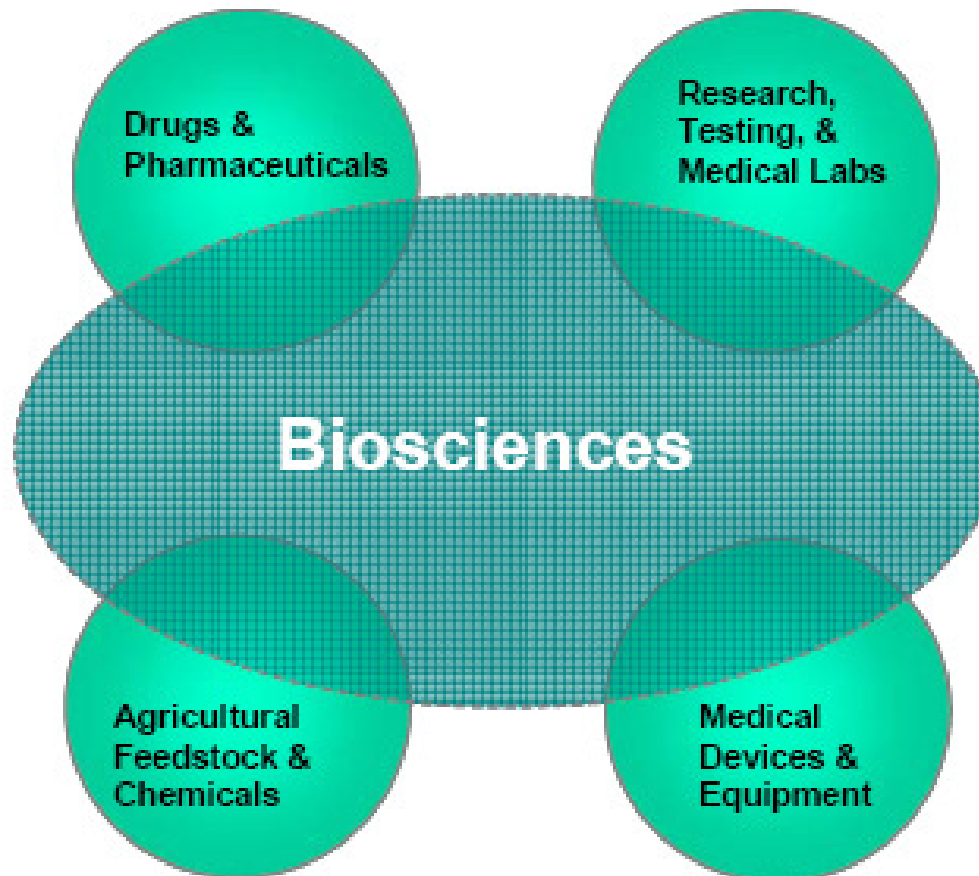
Regions and Clusters in Globalizing World

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CLEO conference

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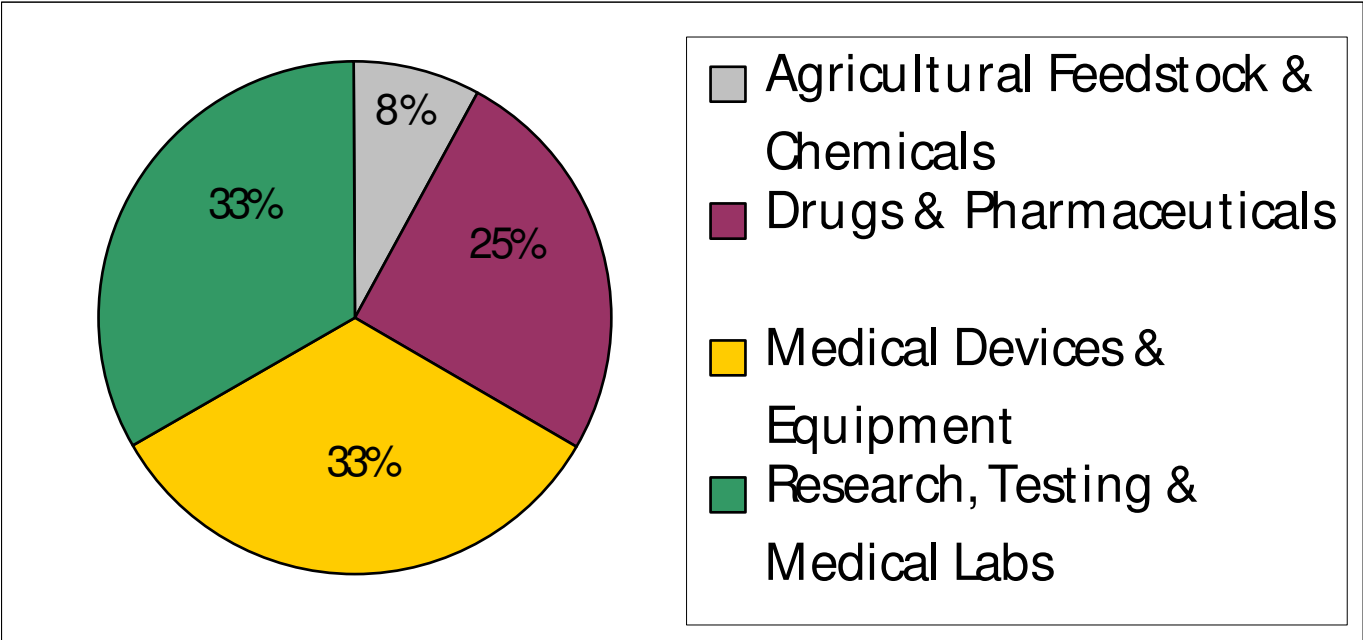
Bioscience subsectors (US)



Bioscience subsectors (EU)

Activity	Includes
AgBio and Environmental	Veterinary healthcare, biopesticides, plant agriculture, food technology, biocleaning, bioremediation, water & effluent treatment, waste recycling, <u>white biotech</u> , <u>green biotech</u>
Biodiagnostics	Environmental diagnostics, industrial diagnostics, <u>healthcare diagnostics</u>
Human healthcare	Biomaterials, drug delivery, drug discovery, gene therapy or cell therapy, genomics, vaccines, <u>red biotech</u>
Service	<u>Bioprocessing</u> , chemicals, <u>contract research</u> , <u>contract manufacturing</u> ; bioinformatics, <u>functional genomics</u> , <u>high throughput screening</u>

U.S. Employment division among Bioscience subsectors (2004)



Employment
1 243
110

Establishments
40 455

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“Batelle Report, 2006”

“If you aggregated the cost of these (enciting array of available venture capital, loans, grants, low-cost real-estate, and other incentives) **attraction efforts, you could write a \$40.000 check to every bioscience employee – globally”**

Why are the regions competing?

U.S. Average Annual Wages per Employee, 2004	
Drugs & Pharmaceuticals	\$ 79,303
Finance & Insurance	\$ 69,889
Total Biosciences	<u>\$ 65,775</u>
Research, Testing, & Medical Laboratories	\$ 65,414
Agricultural Feedstock & Chemicals	\$ 63,383
Professional, Scientific, & Technical Services	\$ 62,411
Information	\$ 60,530
Medical Devices & Equipment	\$ 56,449
Manufacturing	\$ 47,705
Construction	\$ 40,297
U.S. Total Private Sector	<u>\$ 39,003</u>
Transportation & Warehousing	\$ 38,758
Real Estate & Rental & Leasing	\$ 37,167
Health Care & Social Assistance	\$ 36,606
Retail Trade	\$ 24,337

Europe vs USA - 2004

	Europe	USA
No of Companies	2 163	1 991
Employment	96 500	190 500
R&D expenditure (bn EUR)	7,6	21,0
Revenues (bn EUR)	21,5	41,0
VC investments (bn EUR)	1,1	2,5
Raised equity (bn EUR)	2,1	7,8
Raised debt (bn EUR)	1,8	6,6
Raised capital total (bn EUR)	3,9	14,4

Critical factors in re-location and start-up decision making

In 2006, NYCEDC conducted a study, where 600 executives and key persons were interviewed in 18 countries

The scope of the survey was:

- What does it take to build a sustainable cluster?
- Is the race over or can regions still join?

It appeared that the cluster emerge if critical assets exist

Proximity to (world class) research centers

Share of Quattromed revenues based on licences/know-how obtained from Tartu University:

1999-2005	90-100%
2006+	40-45%

IPR portfolio: 3 out of 4 patent families come directly from Tartu University

“I can go to lab next door and ask for advice”

We have to obtain the technologies from the University in premature phase

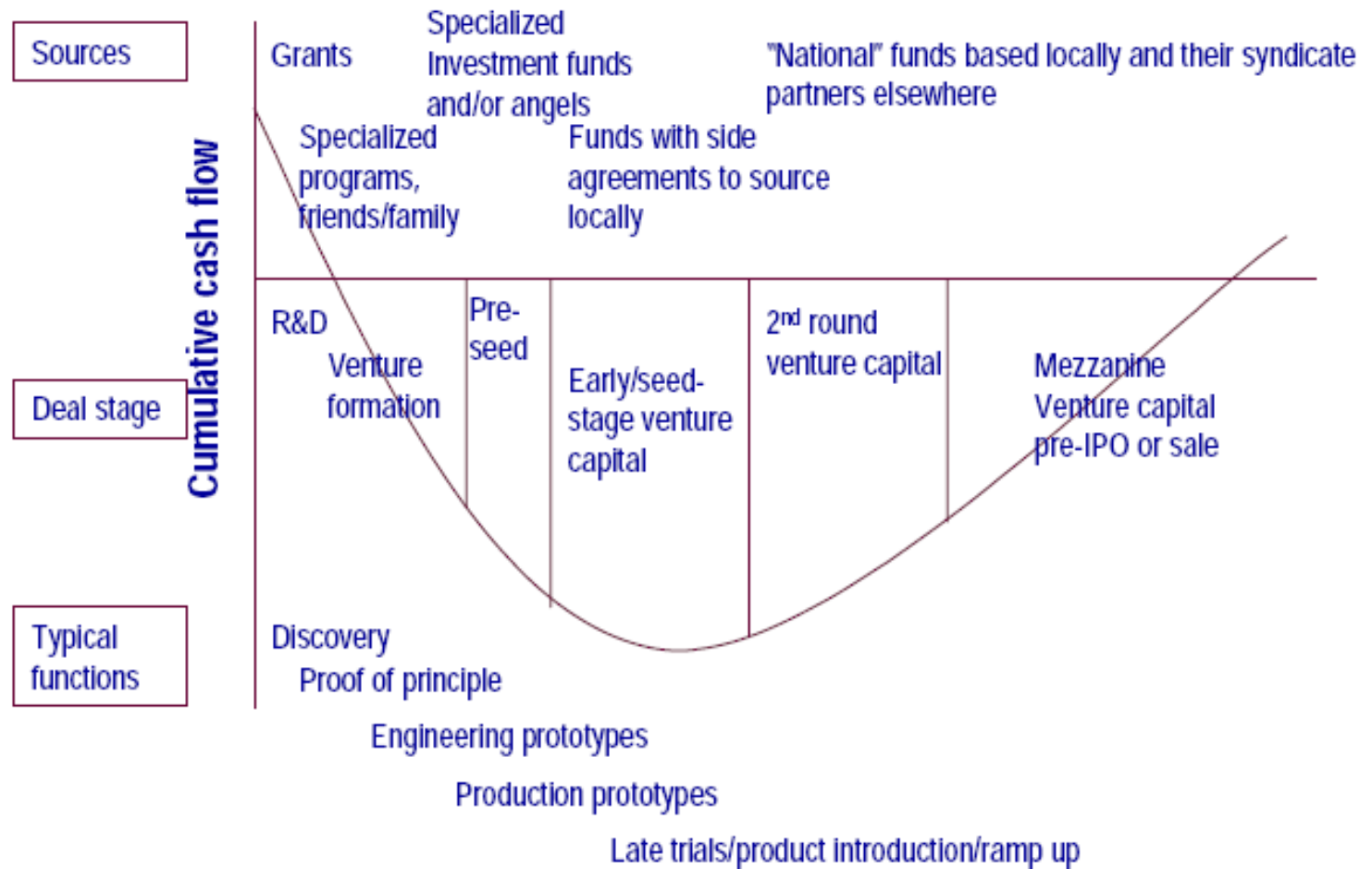
Access to talents

Start-up phase – founders of the Company had
“two lives”

From 2000 to 2005 – 12/20 employed scientific
personnel came directly from Tartu
University (total employment was 30)

30% of our budget is allocated to salary
expenses

Access to funding



Access to funding

QM has raised EUR 200 000 from shareholders and EUR 1 million as loans

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The type of available capital determines the ambition and growth of the Industry as the partnership with the financial partner is viewed as long-term partnership

4 VC placements into Estonian biotech Companies in 1999-2006

There are high barriers for capital to move from other sectors to biotech

Quality of Life factors

Physical infrastructure

Connection to “hubs”

Nature and climate

Imago of the region

Culture and other recreation

Segmentation needed

Appropriate, adaptable, affordable lab and office space

Usually, the Companies need the lab space “tomorrow”

From identification of need to re-location:

- in Tallinn, Tehnopolis 10 months
- in Tartu, Science Park 5 months
- in Tartu, Tartu University 24 months

Average monthly rent for space (excl utilities):

- 2 EUR in 1999
- 9 EUR in 2007

Entrepreneurial environment

Availability of managers with previous
Industry experience

After graduation, young people go to
Tallinn

Competition very limited – easy to
achieve the “natural monopoly” in
Estonia

Informal initiatives are extremely
important



Availability of support service providers

In the start-up phase people tend to overlook these issues

QM General Councillor of corporate governance and business law – Raidla&partnerid (Tallinn)

QM General Councillor of IP – Dodds&Associates (Washington DC, USA)

European patents are handled by Seppo Laine Patenttitoimisto (Helsinki, Finland)

Municipal initiatives don't bring any direct business benefit (municipal trade missions etc)

Access to patients and markets

Our initial revenues came from Tallinn – doctors in Tartu started to accept our approach in 2002

Today, 65% of diagnostics revenues come from Tallinn region and 40% of employees are located in Tallinn

The need to move closer to our customers is very strong but they act together with other factors

Favorable incentives and tax treatment

During 1999-2006, Quattromed has generated:

- Revenues – EUR 5,7 million
- Grants – EUR 1,0 million

Income tax system favourable

VAT system for healthcare very unfavourable

No incentives compared with other industries –
resources transition problem

Critical factors in re-location and start-up decision making

Proximity to (world class) R&D centers

Access to talents

Access to funding

Quality of Life factors

Appropriate, adaptable, affordable lab and office space

Entrepreneurial environment

Availability of support service providers

Access to patients and markets

Favorable incentives and tax treatment



THANK YOU!

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