



WBCInno

# Improvement of Organizational and Financial framework for BI/STP and their Service Program for tenants





**Introduction**

**Definitions**

**Current State of BI/STP in WBC**

**Improvement of organizational and financial framework  
of BIs/STPs**

**TuTech experiences**



Introduction

Definitions

Current State of BI/STP in WBC

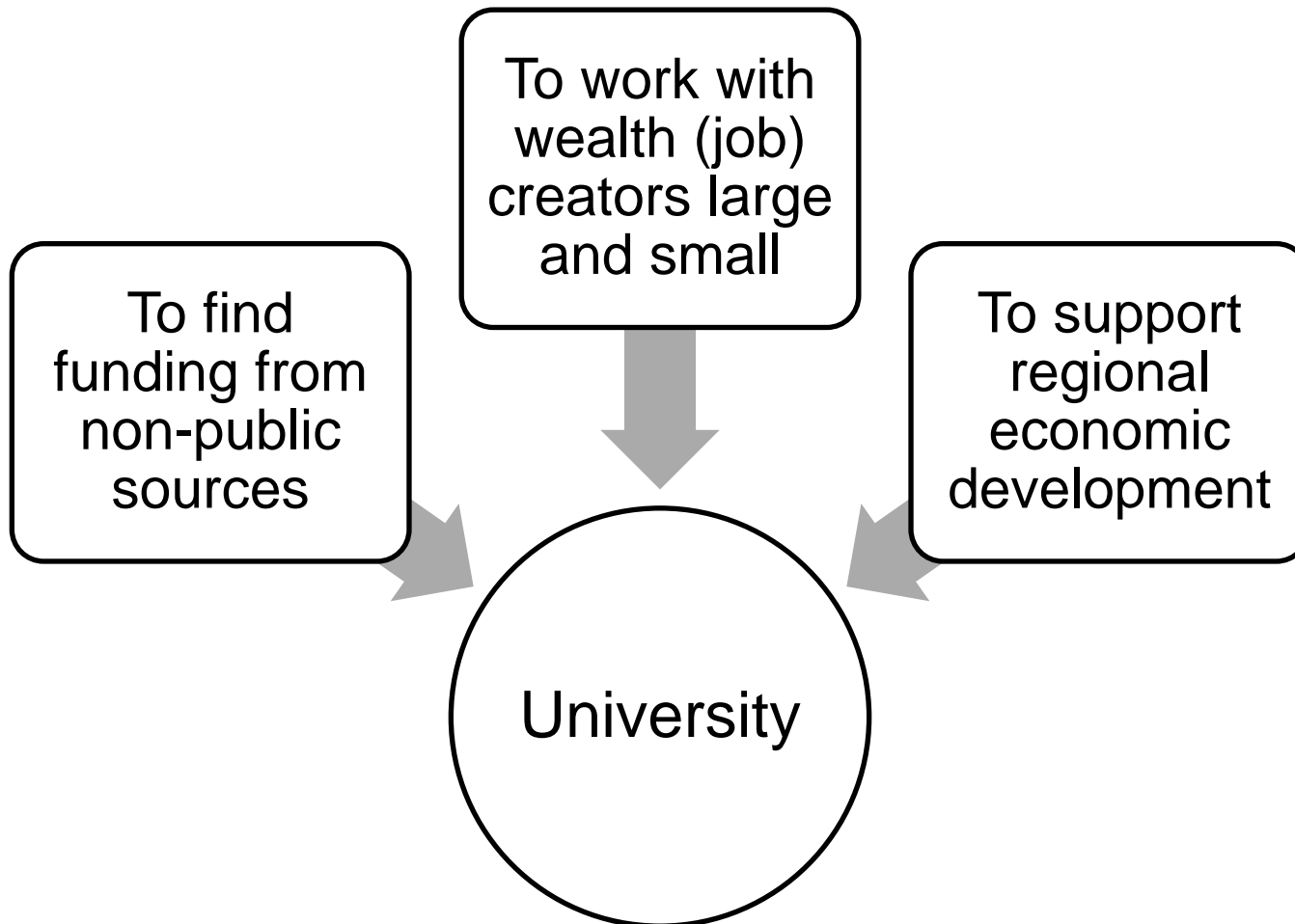
Improvement of organizational and financial framework  
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TuTech experiences





# Pressures on universities



Schofield (2012)

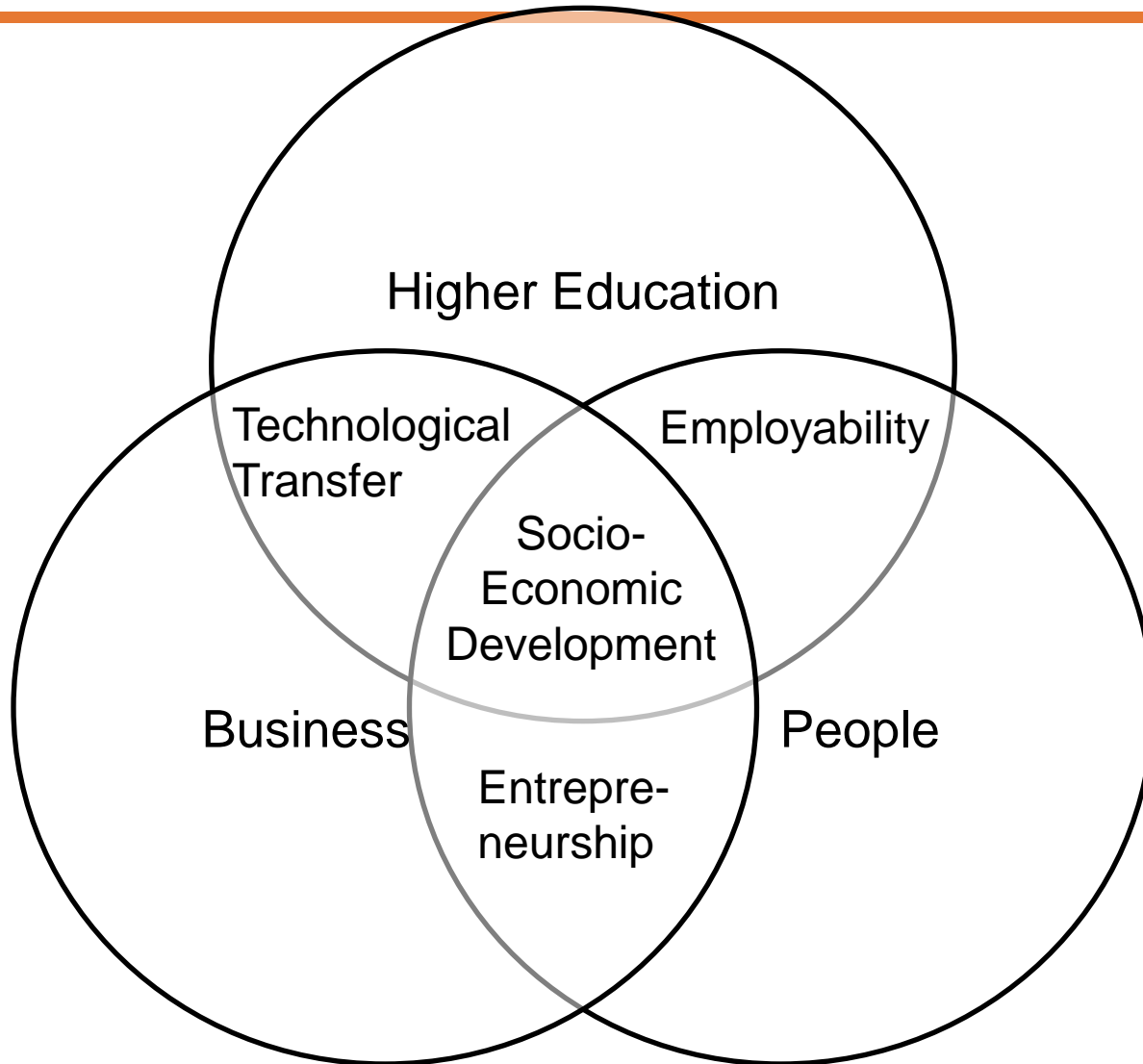




- University cooperations with Business Incubators (BIs) and Science and Technology Parks (STPs) are efficient instruments for enhancing the development of an innovation region.
- In Order to support the sustainable development of BIs/STPs in the WBC region, ten strategic measures were elaborated during the WBCInno project.
- The focus of this presentation lays on the first of the ten measure:  
**The Improvement of organizational and financial framework of BIs/STPs**



# Academic Entrepreneurship Framework



Adriano et al (2013)





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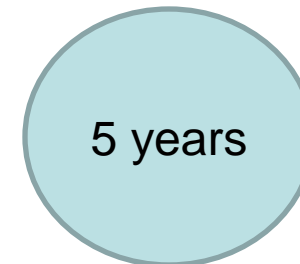
- They are programs that are designed to support the successful development of entrepreneurial companies through an array of business support resources and services.
- Three important components:
  - ✓ Building (business premises)
  - ✓ Business advisory services and other services
  - ✓ Service by management
- Their main activity is to make available office space and to provide administrative, technical or other services to newly-established companies or innovative organizations.





## Common incubator services are e.g.:

- Assistance with business basics
- Networking activities
- Marketing assistance
- Help with accounting/financial management
- Links to higher education resources
- Links to strategic partners
- Technology commercialization assistance
- Intellectual property management
- Office space
- Administrative, technical and other services





# Science and Technology Park (STP)

- A place that supports university-industry and government collaboration with the intent of creating high technology economic development and advancing knowledge.
- Planned, organized and managed better than high-technology business districts or clusters
- Main target is commercialization of research results, different than science centers





## Common Science and Technology Park services are e.g.:

- Programs and collaboration activities, often incubators
- Power supplies and telecommunication hubs
- Management offices
- Bank offices
- Internal transportation
- Parking, restaurants, entertainment facilities and sports facilities





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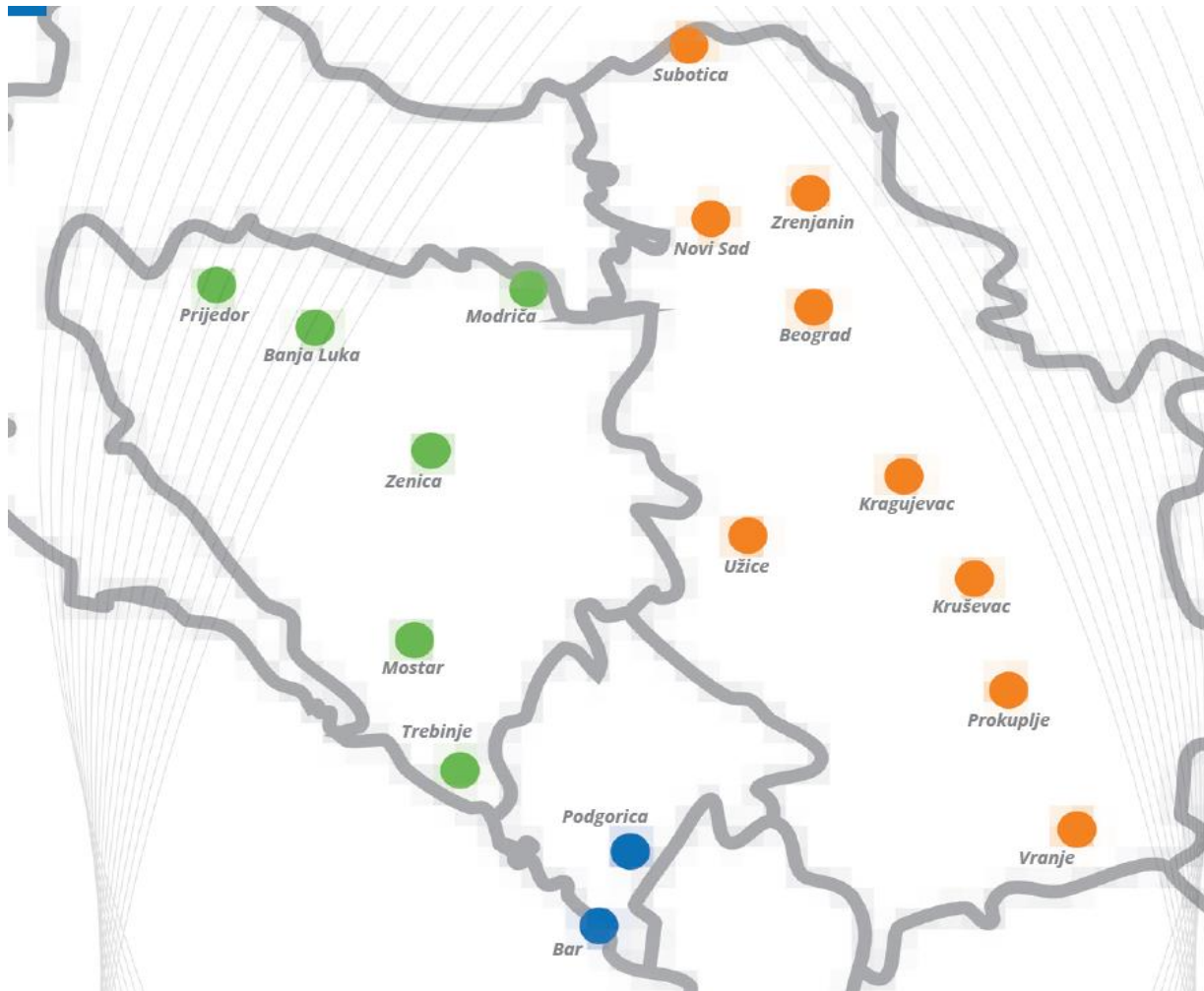
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# Investigation Sample



9 Serbia  
6 Bosnia & Herzegovina  
2 Montenegro





## Common infrastructure and services are e.g.:

- Office space, production space, meeting rooms, training hall, kitchen / cafe, computer rooms, parking
- Servers, storage, broadband internet, ADSL, IT training center, data center with cloud infrastructure, full IT service
- Copy, printer, scanner, lap tops, multimedia equipment, telephone, fax, mail, video conference equipment
- Van, forklift, reception area, security system, fire alarm system, video surveillance, dressing room





# Soft Services





# Reasons why the BIs are not entirely functional

- The biggest BI problem is that there is **no sufficiently developed institutional state support** (except in Slovenia and Croatia) as in the most developed countries.
- They were created ad hoc since there was **no strategic plan for their establishment and development** taking into consideration geographical and economic aspects and regional development.
- Within the structure of the incubators, **“production” incubators are prevailing**, especially in the sectors of low and medium technology level.
- **Only a small number of incubators is connected with universities** which support the development of start-up companies in the high tech sector.
- There is **no state program or fund for BI support**. As a consequence, BIs failed to develop adequate management teams that could provide good services for tenants.
- There is **a lack of understanding the importance of BI development** on a national, regional and local level.
- The **brain-drain from the whole region** causes a lack of high-tech businesses initiated by young people as possible tenants in BIs.







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# Suggested Measures

## BIs / STPs

<b>M1</b>	Improvement of organizational and financial framework of BIs/STPs
<b>M2</b>	Infrastructure development that suited to meeting start-up and spin-off needs
<b>M3</b>	Implementation of collaborative software platforms for improved communication and innovation management
<b>M4</b>	Improvement of services for tenants of BIs/STPs
<b>M5</b>	Application of new incubation models – virtual business incubators

## Universities

<b>M6</b>	Establishment of creative and entrepreneurial framework with schools and universities
	Creation of mechanisms and structures for high-tech innovation in cooperation with universities and research centers
<b>M8</b>	Organization of competitions and awards for best business plans, best student's/researcher's ideas
<b>M9</b>	Improving visibility, promotion and internationalization of BIs/STPs for their sustainable development
<b>M10</b>	Networking among BIs and with STPs and universities on local, regional and EU level



# Recommendation 1

- Managers are necessary for:
  - ✓ Selecting suitable tenant firms.
  - ✓ Providing business and managerial advice to these firms.
  - ✓ Creating links to investors and the wider business community.
- The expertise and commitment of the managers is critical to success.



**The BI/STP management should be of high quality and consist of professionals with business expertise and past work experience in the private sector.**

## Recommendation 2

- A BI/STP is part of the local business infrastructure and, therefore, should be part of a local development strategy.
- There is no need for a BI/STP to replicate services already available in the region.
- The final objective should be that tenant firms have at disposal the widest possible array of services, regardless of whether they are internally or externally provided.



**The BI/STP range of services should complement the offer of support services locally available.**

## Recommendation 3

- Organizational structures and the size of resident companies vary from region to region.
- In order to implement recommendation 2, it is essential that each BI/STP meet particular local development needs, conditions and goals.



**Close linkages with the local business community, training organizations and financial operators are relevant for the success of an incubation program.**

## Recommendation 4

- Established BIs/STPs have to expand their revenue model in order to become sustainable in the long run.
- Internal revenue sources like selling business services to the tenant companies, internal clustering projects or commissions for networking which resulted in profitable businesses for its companies are essential for a BI/STP.



**BI/STP should engage with local universities and thereby promote the transfer of knowledge from university to industry and the commercialization of university research.**

## Recommendations 5 and 6

- In the short term, a BI/STP cannot generate the returns that would attract private investors to own and manage this kind of organizations.
- Therefore, the participation of the public sector plays a main role for the success of a BI/STP.



**There should be close linkages between public institutions that are dealing with the issue of economic, science and technology development and the model for both financial and non-financial support of the BI/STP.**

**National programs and funds to support BI/STP must be made with clearly defined objectives and criteria for measuring success.**

# Recommendations 7

- It is essential that BIs/STPs regionally engage themselves to continuously promote and further develop new organizational and financial models for sustainability.
- This would also lead to better cooperation possibilities in order to receive external funding for projects from the EU, World Bank or similar institutions.



**BI/STP should get more involved in regional cooperation and exchange of good practices.**



## Recommendations 8

- Out of all public stakeholders who contribute to the development of BIs/STPs, the most important contribution is that of the universities, since they are generators of knowledge and research.



**On the occasion of establishing and developing a STP, universities have to be integrated and a process of knowledge and technology transfer must be provided in order not to fall into the trap to make science and technology parks out of science.**



# Summary of the recommendations

- (1) The BI/STP management should be of high quality and consist of professionals with business expertise and past work experience in the private sector.
- (2) The BI/STP range of services should complement the offer of support services locally available.
- (3) Close linkages with the local business community, training organizations and financial operators are relevant for the success of an incubation program.
- (4) BI/STP should engage with local universities and thereby promote the transfer of knowledge from university to industry and the commercialization of university research.
- (5) There should be close linkages between public institutions that are dealing with the issue of economic, science and technology development with the clear model for both financial and non-financial support to BI/STP.
- (6) National programs and funds to support BI/STP must be made with clearly defined objectives and criteria for measuring success.
- (7) BI/STP should get more involved in regional cooperation and exchange of good practices.
- (8) Universities have to be integrated and a process of knowledge and technology transfer must be provided in order not to fall into the trap to make science and technology parks out of science.





# Summary of the recommendations

- The time frame for the improvement of the current model of BIs/STPs is critical to be as short as possible in order to create an environment for further development of existing and the creation of new BIs/STPs.
- The transformation should be done within a period not longer than 3 years because market oscillations and new trends could emerge in the near future.

**The following tables highlight the roles, activities and objectives of the different parties that are involved in the BI/STP development.**



## Local, regional and national government

<p><b>Characteristics</b></p>	<ul style="list-style-type: none"> <li>▪ Can play a key role in partnership formation and organization and delivery of business support programs.</li> <li>▪ Essential partner in applications for significant funding grants from central government or EU.</li> </ul>
<p><b>Possible objectives for involvement</b></p>	<ul style="list-style-type: none"> <li>▪ Economic development by increasing either the number of companies (business incubation and mentoring process) or the size of existing companies.</li> <li>▪ BI/STPs are a key economic development tool and marketing asset.</li> </ul>
<p><b>Financial characteristics</b></p>	<ul style="list-style-type: none"> <li>▪ Take the responsibility for the feasibility phase design.</li> <li>▪ Long-term commitment required for construction payback.</li> <li>▪ Overall legislative and financial framework can foster investment from private operators.</li> </ul>

## Universities or other tertiary institutions

<p><b>Characteristics</b></p>	<ul style="list-style-type: none"> <li>▪ A stable organization with a reputation for reliability.</li> <li>▪ Likely to be short of funds to invest in development of an innovation pole.</li> <li>▪ May have land adjacent to campus to be contributed.</li> </ul>
<p><b>Possible objectives for involvement</b></p>	<ul style="list-style-type: none"> <li>▪ Technology transfer.</li> <li>▪ Move technology up value chain through spin-off companies.</li> <li>▪ Income from contract research or consultancy.</li> </ul>
<p><b>Financial characteristics</b></p>	<ul style="list-style-type: none"> <li>▪ Need of revenue-generating model in order to harness their potential.</li> <li>▪ Major source of spin-off leads.</li> <li>▪ International networking useful to collaborative projects.</li> </ul>

Research centers	
<b>Characteristics</b>	<ul style="list-style-type: none"> <li>Government research centers might establish a park as part of a privatization processor to enhance commercialization activities.</li> </ul>
<b>Possible objectives for involvement</b>	<ul style="list-style-type: none"> <li>Technology transfer to ensure government-founded science base connects more closely to business.</li> <li>Outsourcing of work to spin-off companies created as part of an industrial restructuring activity.</li> </ul>
<b>Financial characteristics</b>	<ul style="list-style-type: none"> <li>Need of revenue-generating model for internal and external clients.</li> <li>Key player in collaborative projects origination and funding.</li> <li>Engineering and prototyping funding needs.</li> </ul>

Tenant companies	
<b>Characteristics</b>	<ul style="list-style-type: none"> <li>▪ Enhance image and reputation of the BI/STP.</li> <li>▪ Accommodation to suit needs as appropriate to stage of development.</li> <li>▪ Motivated to be in a like-minded community and close to host or affiliate university or research center.</li> <li>▪ Customized development possible.</li> <li>▪ Room for growth in a campus style environment.</li> </ul>
<b>Possible objectives for involvement</b>	<ul style="list-style-type: none"> <li>▪ Gain commercial advantage for company.</li> <li>▪ Solve skills shortages.</li> <li>▪ Ready access to technology transfer and problem solving.</li> </ul>
<b>Financial characteristics</b>	<ul style="list-style-type: none"> <li>▪ Early-stage seed funds required.</li> <li>▪ Strong demand for take-up services.</li> <li>▪ Business models to be tested.</li> <li>▪ Coaching services to be provided through innovation vouchers.</li> <li>▪ IPR strategy assistance.</li> </ul>



# Suggested Measures

## BIs / STPs

<b>M1</b>	Improvement of organizational and financial framework of BIs/STPs
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## Universities

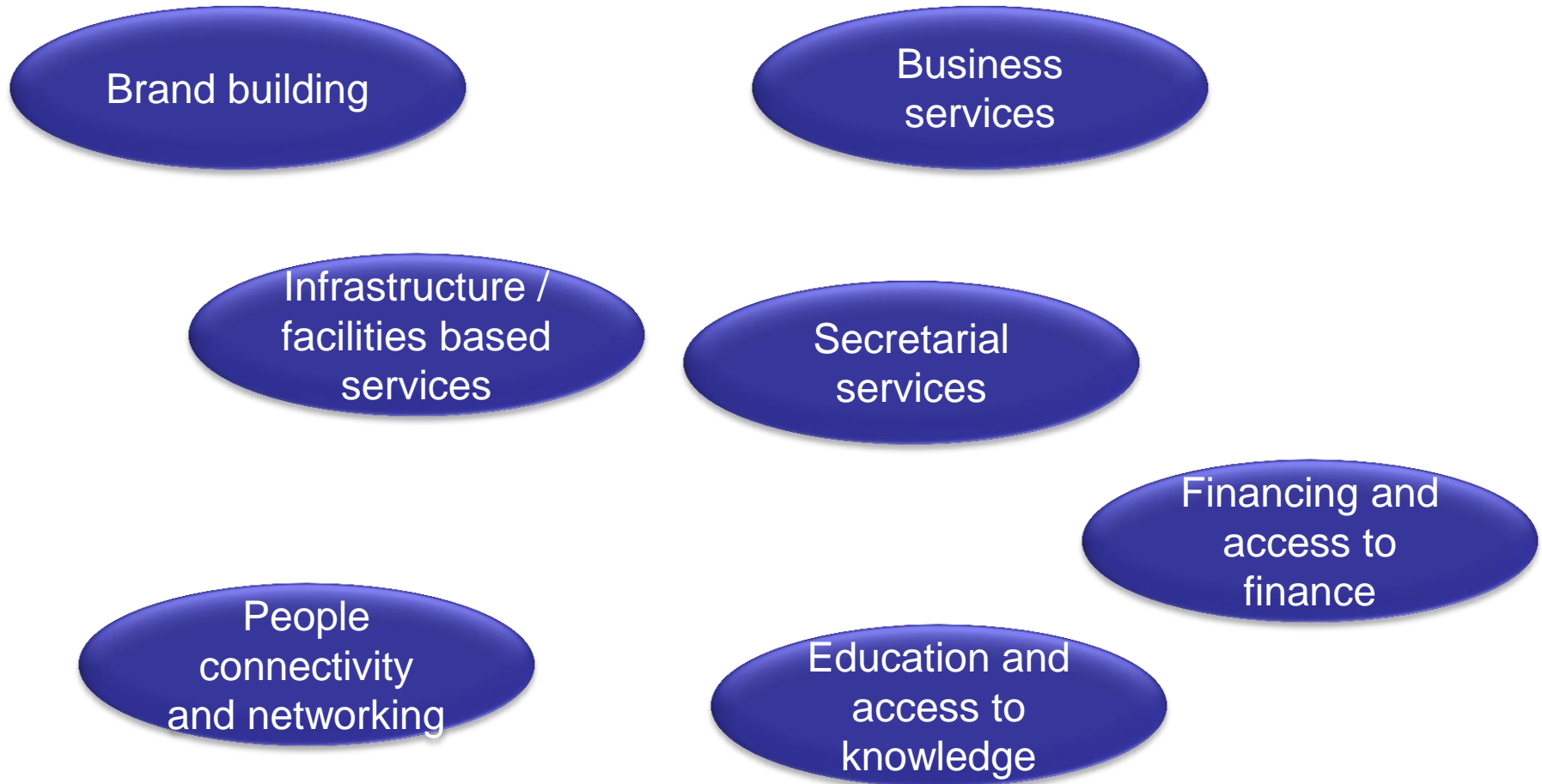
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# 7 Categories of services





# Service program for tenants

- To develop service program in accordance with the BIs/STPs type and mission, and the structure of their tenants
- To improve the delivery of service program to ensure strong impact and sustainability
- To improve the capacity of BIs/STPs staff for implementation of service program



## What is a business incubator?

- A facility is not enough
- A facility with below market rent is not recommended
- A facility offering just shared office practice services and equipment is not enough
- A facility offering management assistance services via referral to other service organizations is not enough
- A facility with a list of tangible office practice services, management assistance and technical services is beginning to warrant the label “business incubator”





# Goals and support actions

## Development of service program

- Basic services (e.g. space secretarial services, infrastructure, IT service)
- Additional services (e.g. consulting & advisory, training, marketing, accounting)
- Advanced services (e.g. specialized equipment / software, IPR, innovation cycle guidance)

## Improvement of the delivery

- Clear descriptions and easy to understand
- Time for service completion
- Easy request for service
- Defined client role
- Monitoring and surveying

## Trainings of staff

- High quality services (no duplication)
- Different specific needs
- Delivery of service customization
- Evaluation
- Cooperation and exchange for e.g. methods and experiences





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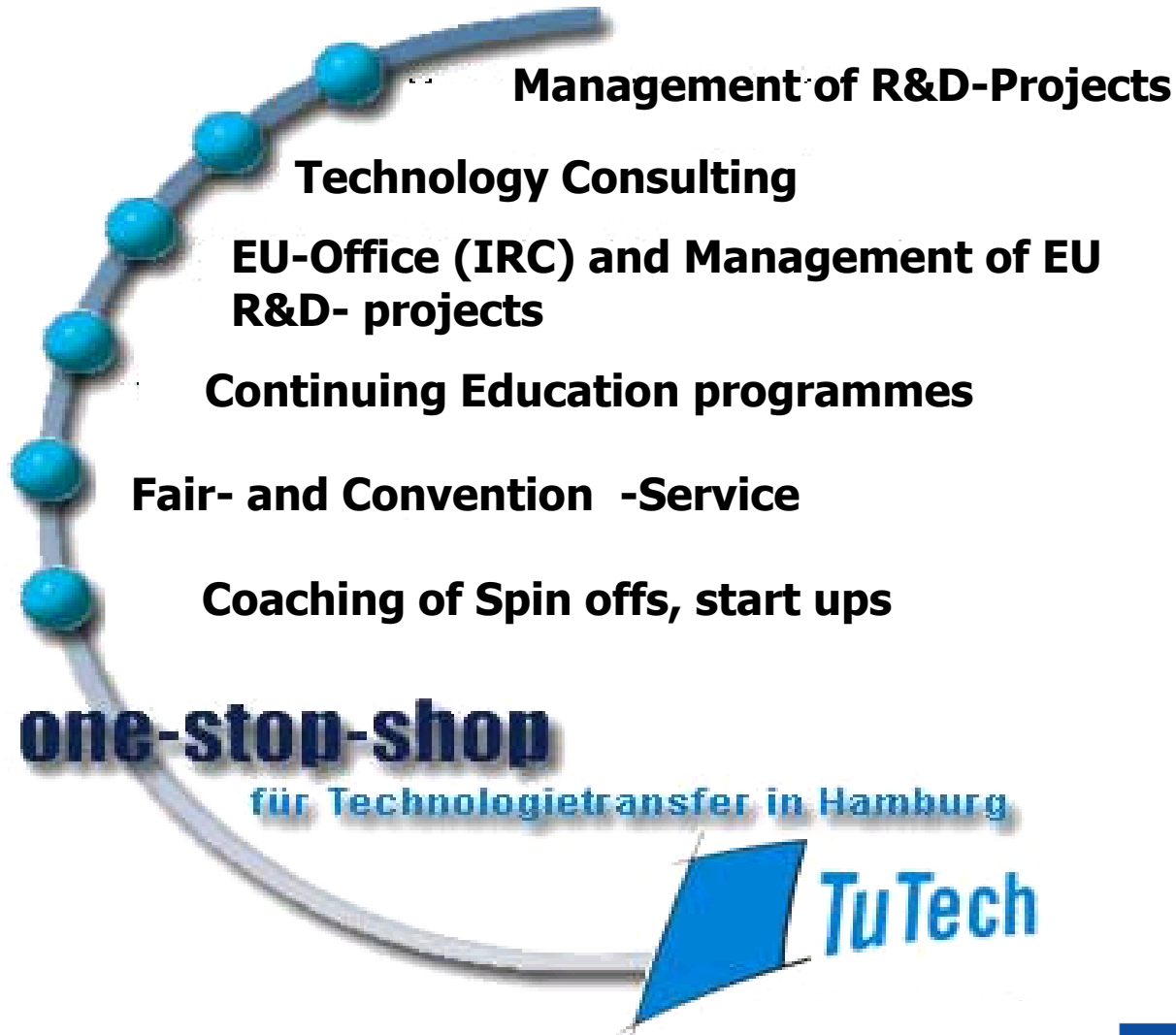


# TuTech Innovation GmbH: Technology Transfer

**... the first  
outsourced  
university  
driven  
company for  
TechTransfer**

**... Best  
Practice  
Example for  
many other  
universities  
in Germany**

**TUHH owns  
51 % of  
the shares**





- 1992 founded as a first university owned technology transfer society in Germany
- Partners: 51% TUHH, 49% Free and Hanseatic City of Hamburg
- Industrial research and cooperations
- Technology consulting and contacting point
- Cluster and joint research projects
- Funding consulting and research proposal supporting
- Competence Center Entrepreneurship
- Patenting and Licensing for Hamburg higher education institutions.





# Skills and services



- R&D collaboration
- International Cooperation & EU Office
- Social Media & Open Innovation
- Training & continuing professional development
- Management & Services
- Patenting & Licensing
- Business start-ups & innovation funding



WBCInno

# TuTech-CCE Competence Centre Entrepreneurship

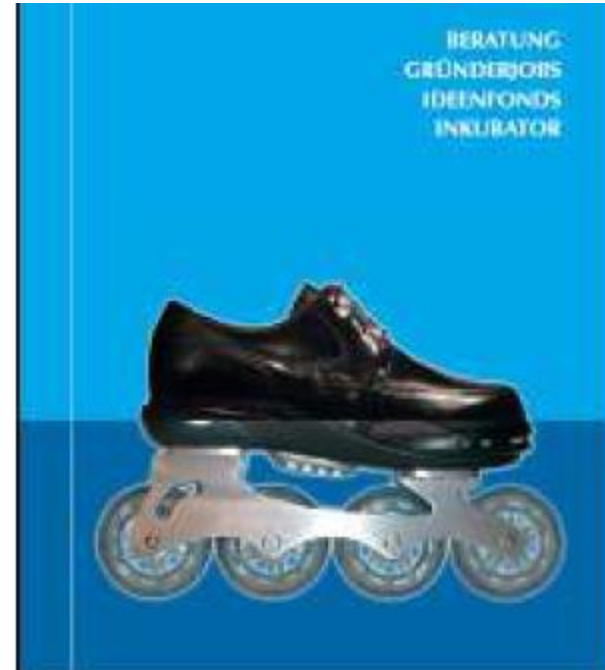
# TUHH

Hamburg University of Technology



Ideen FONDS

Hamburger INNOTECH-Preis





- Intermediation of coaches and financiers (banks, VC, business angels)
- Regular forums and seminars
- Individual counselling, business development
- Connection into a founding network
- Participating in innovative firms as business incubator
- 70 % of start-ups by academics, mostly graduates
- 150 – 200 start-ups since 1999
- More than 450 jobs created
- 80 % still on the market





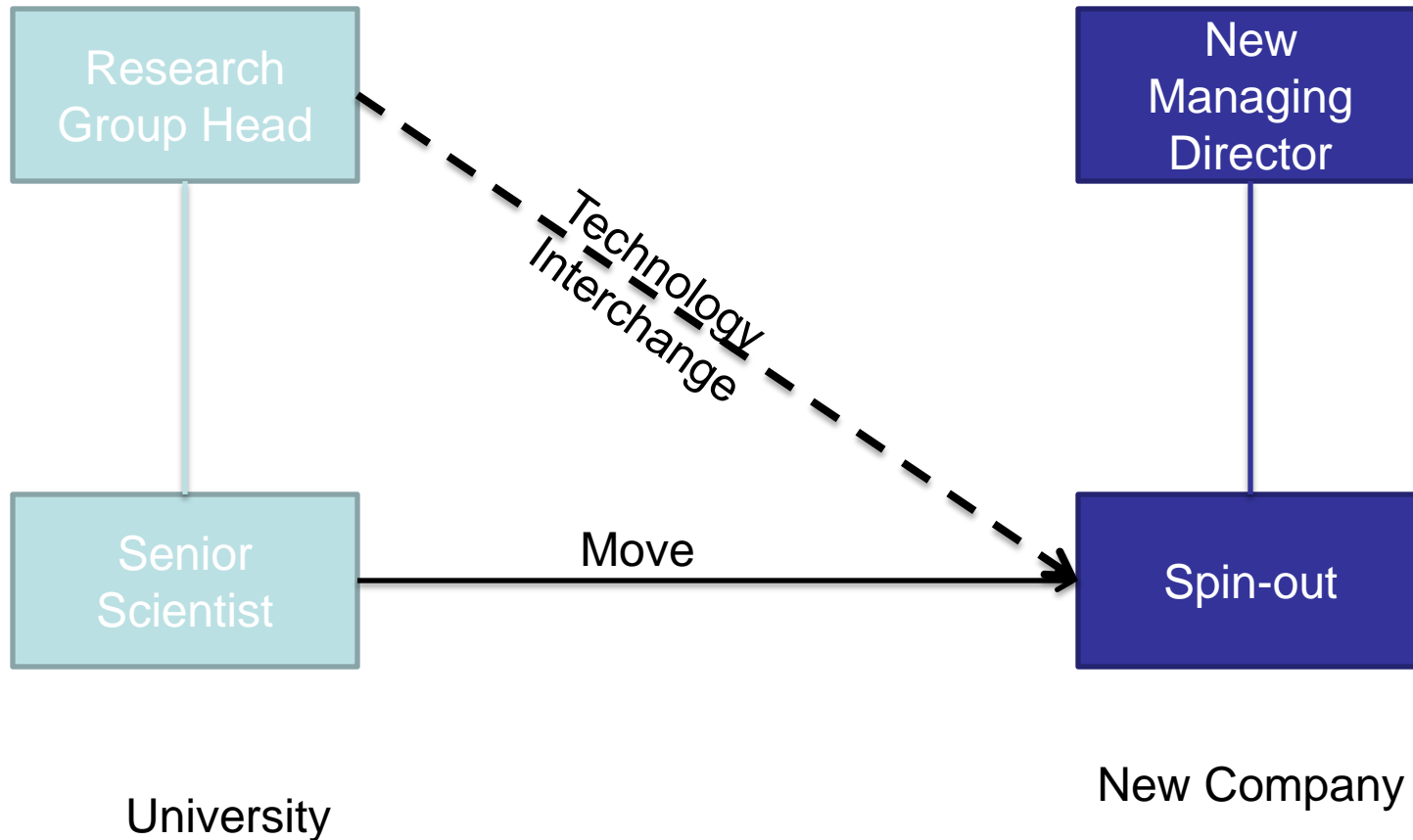
# Start-up (Spin-out)

- Creation of a new independent company based on intellectual property – separate to the university
- A percentage share of the spin-out may be owned by:
  - Founding academics / researchers
  - The University
  - And later on...  
Investors
- Supporting entrepreneurs
  - Networking for entrepreneurs
  - Coaching – workshops
  - Professional support





# Spin-outs



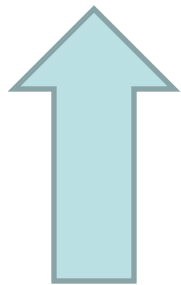
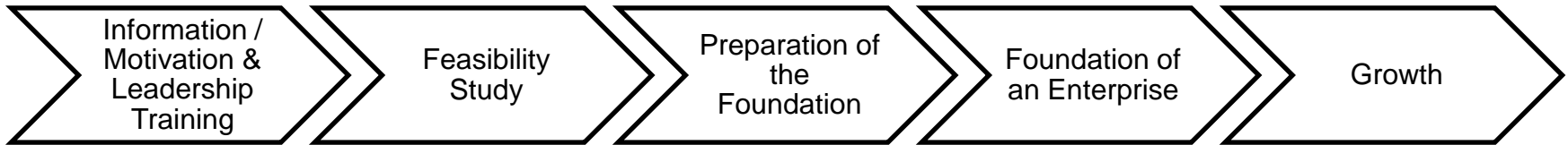
Schofield (2012)





# Start-up Funding

Idea      development      sample/prototype      business plan      capital/financing



Business plan competitions

Pre seed capita

Seed capital

Venture Capital

BG, BTG (Hamburg)  
 KfW (national)  
 VC Fonds  
 Strategic  
 Shareholdings

Schofield (2012)



# Thank you for your attention

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# Critical infrastructure factors

- Renovation / construction
- Optimal size
- Neighborhood
- Tenants/BI/STP
- Facilities for research in STPs
- Administrative and secretarial support
- Information service
- Legal support
- Accounting and financial advice
- Promotion and networking



**Experiences show that a lack of good space conditions may partly be compensated by services and small business can be quickly developed despite the lack of space, while the lack of services (especially the basic level of services) cannot be compensated for by the luxuriously made BI/STP space**



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Specific objectives:

- To promote the incubation concept and to encourage brainstorming and idea generation among university staff, students, researchers, and graduates
- To allow online, easy and efficient tool for collecting and selection of promising ideas and candidates for BI/STP tenants
- To improve control and monitoring benchmarks of performance of innovation projects and tenants' businesses, followed by automatic generation of specific reports
- To enable agile collaboration and inter-communication between BIs/STPs, university staff, students, researchers, investors
- To provide reliable and efficient storing of documentation in the development of innovation





# Suggested Measures

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## Specific objectives:

- To create new employment opportunities and safeguard existing employment through implementation of the capacity building program on entrepreneurship for students, graduates and entrepreneurs and facilitation of the creation of start-ups'
- To improve the competitiveness of enterprises in selected regions through reduction in overhead costs by engaging a virtual office as part of virtual incubation
- Creating and/or improving area-based partnerships for development and/or employment by strengthening ties with the university and other business support institutions
- Supporting new technologies and services to reduce costs, through high tech communication
- Adding value in the production process through efficient and effective use of business locations and premises and
- Encouraging innovative management practices

