Technology transfer for academic research
A company of the LifeScience Foundation

ascenion

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Just licensing is not enough

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ASTPPROTON
KNOWLEDGE TRANSFER EUROPE

Ascenion - Life Sciences into Business

Technology transfer for academic research

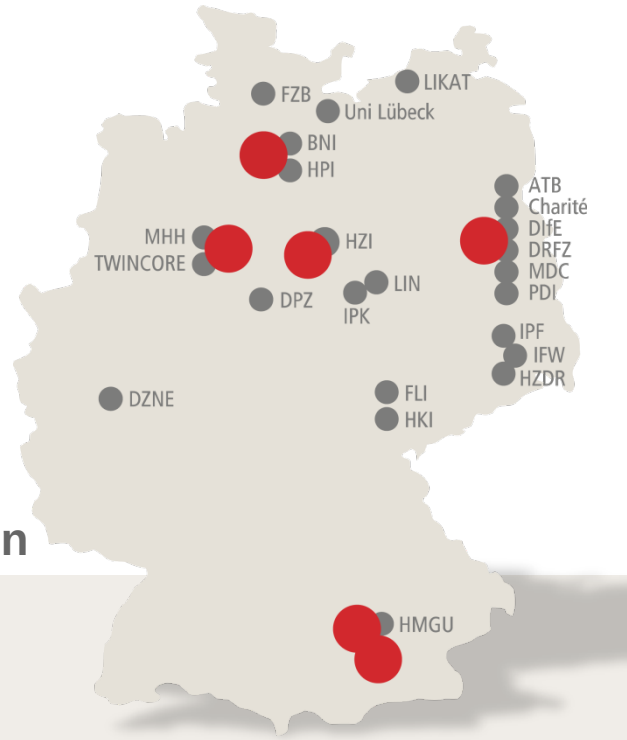
Focus on Life Sciences

Partners:

- 19 institutes of Helmholtz and Leibniz Association
- Medical schools: Charité, Hannover Medical School
- Mouse Genetics Cologne Foundation

Technology transfer services from A to Z

Tools / initiatives: for all steps of the early value chain



- **100 invention disclosures***
- **70 patent applications***
- **80 revenue-carrying agreements***
- **2–3 spin-off projects* and equity in 20+ start ups**
- **Several products in market**
- **IP portfolio: 750 technologies and materials**
- **Revenues for research: EUR 61 million since 2002 / EUR 7 million ***

***average per year**

Still licensing or developing already?

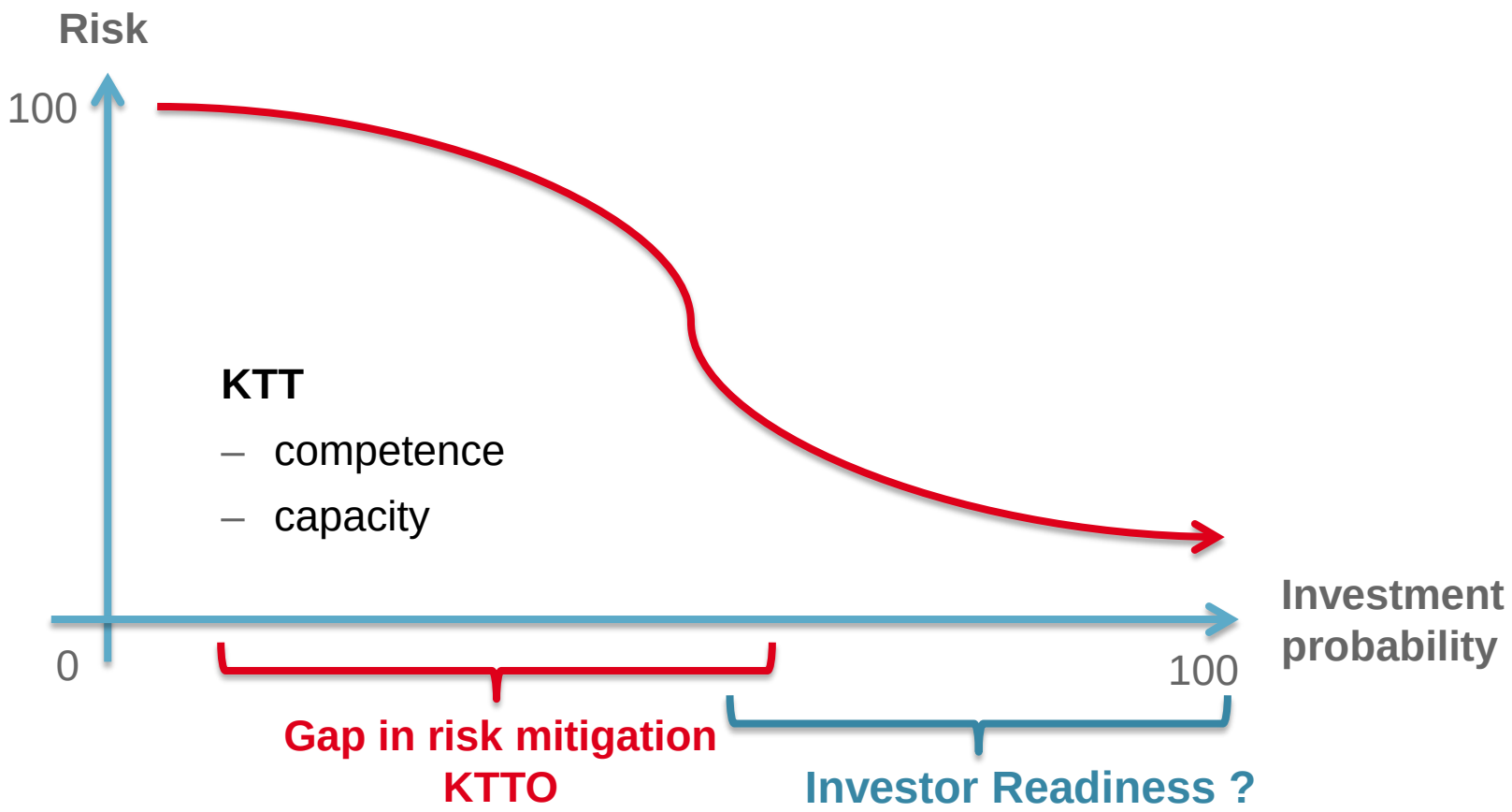
- Technology transfer is transforming rapidly

- Commercial exploitation of research results is based on
  - receiving returns on tax payers money into research
  - Not distorting the market through arbitrary decisions in commercial exploitation process (fair market value)

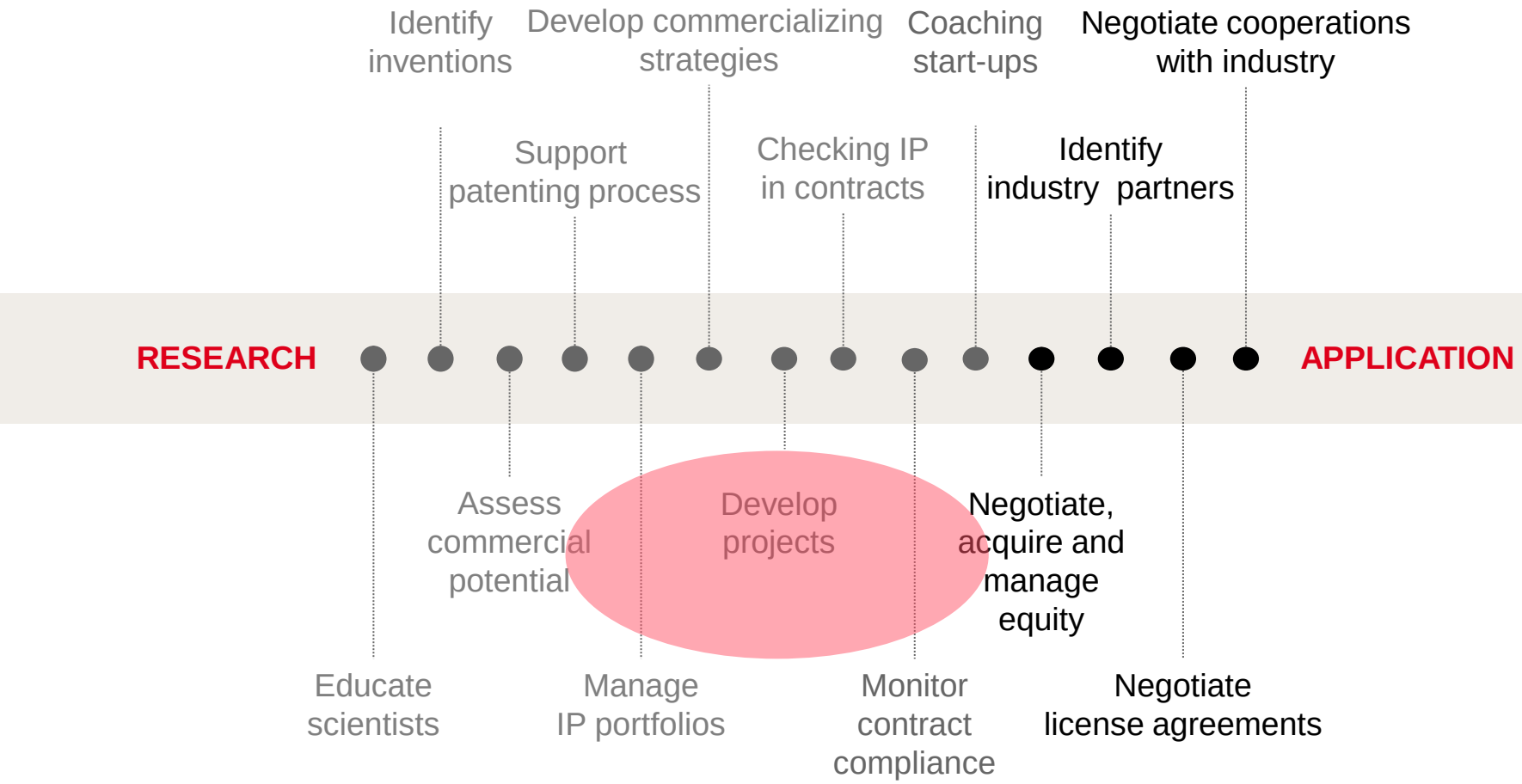
- But: The final goal of technology transfer is not to maximize profits
- Instead:
- **The mission of technology transfer is to help research results from academic research into application to the benefit of society**
- And to support the core mission of every academic institution to create impact on society through their work
- This means techtransfer core activities are changing

Advancing technologies into application

Risk mitigation as a central TT task

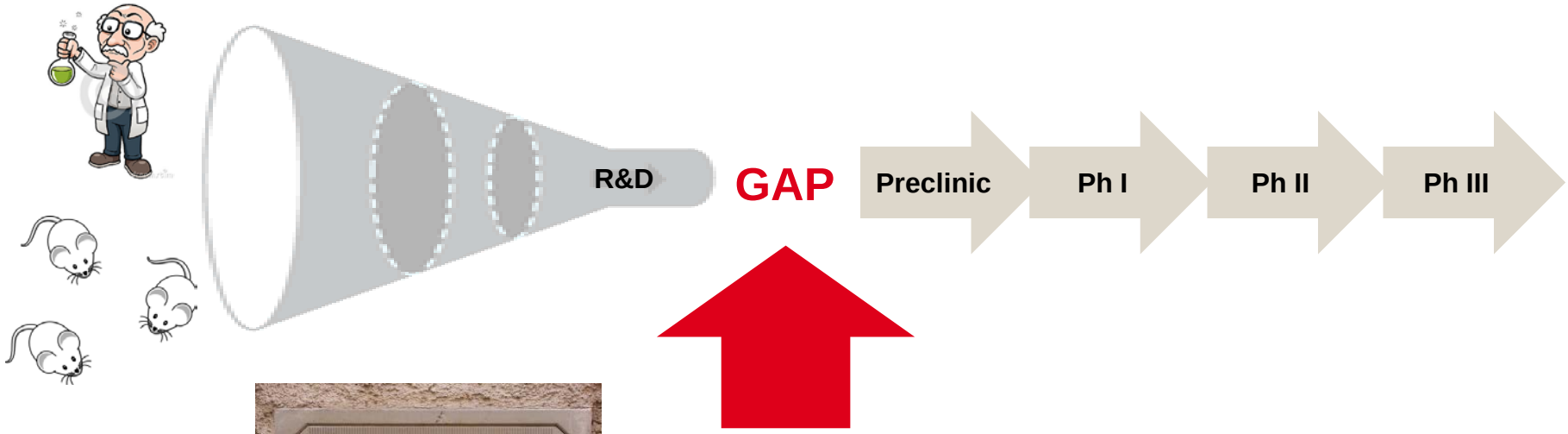


Focus of techtransfer: project development



Grey: consulting, black: commercialization

Key challenges for early technologies in Life Science



Expertise
- Discovery & Development
- Market relevance / industry interest

People
- No project "champion"

Financing
- Too early / too risky for most VCs (time to market)
- Grants – too long time between application and approval (if successful)

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Challenges in the development of early academic projects

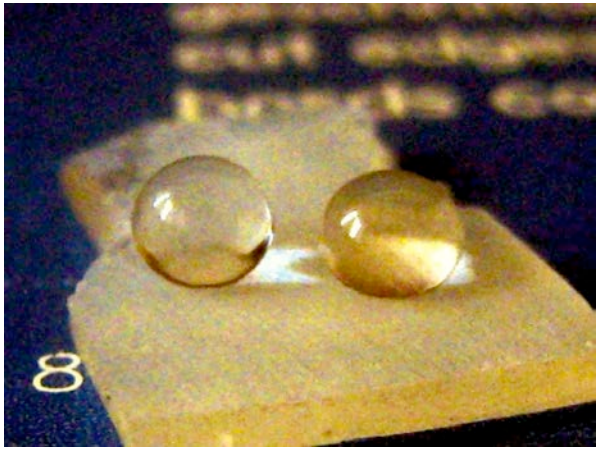
- Research orientated to publishing not drug development
- Funding dedicated to research not development
- Scientists not experienced in drug development
- Cultural challenges - thinking from the end (target product profile: TPP), project planning
- Labs not organized for professional drug development (documentation, QM…)
- Hardly any time for proper drug development between lab, clinic, conferences, teaching …
- Limited financial resources for IP filing at institutions
- PoC@academia: data limited and hardly sufficient to attract industry

➡ **Many good ideas fail to get off the ground because academic researchers find it difficult / are not incentivised to turn their discoveries into innovations**

➡ **Excessive/precious time lost in initial development to the detriment of commercialization**

Moving excellent science towards a product

Lotus effect 2.0
Rapp et al., KIT, Karlsruhe

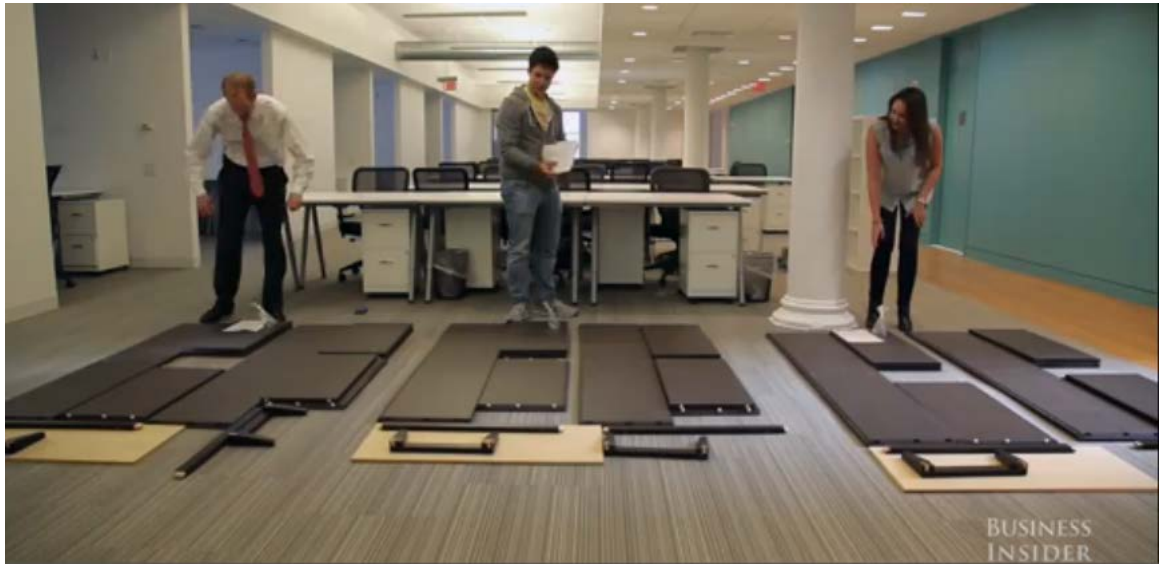


What is necessary?

Expertise

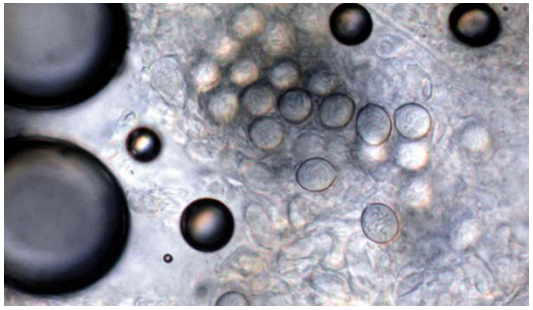
Capacity

Capital



Spinnovator: Innovative Transfer Tool

- Development of promising academic technologies into “ready to invest” spin-offs or projects
- Hands-on project development and coaching by dedicated Ascenion team
- Supporting development of strategy, project/business plan and fundraising



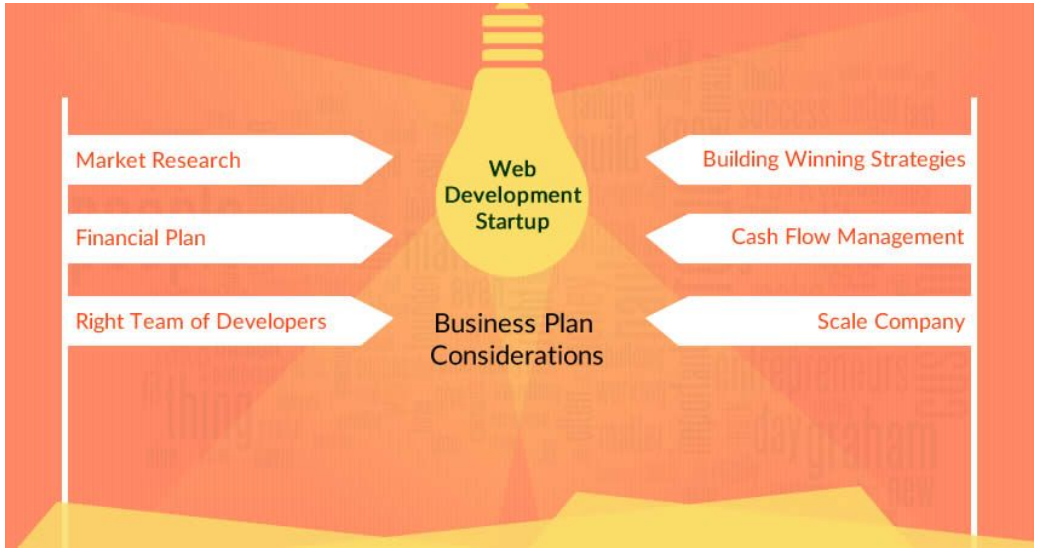
More expertise

Networks of experts

- Industry, key opinion leaders (KOL)
- Feedback on development steps

Development plan

And which one is the right business model?



Example: “Asset centric” company model

- Virtual spin-offs (instead of fully-formed, “capital-hungry” companies)
- Focus on developing a single product candidate into asset
- Project Manager experienced in discovery and development running 1-2 „companies“ (incentivized by fund)
- Strong collaboration with external parties for discovery & development
- Cost-efficient (financing of development not personnel, infrastructure ….)
- Time-efficient set-up (and close-down)
- Only risking limited amount of capital needed to reach next milestone / inflection point
- Forcing early “killer experiments” to counter human tendency to delay tough decisions: Fail early and cheap
- De-risking by diversification on fund level

Ressources

Fund the gap

Technology Transfer Funds

- Mid sized funds ~EUR 60m; some PoC funds with just ~EUR 1-2m
- Frequently run by techtransfer offices
- Focus on IP from associated / selected research institutions/ universities
- TT responsible for IP management and out-licensing as well as for project development, spin-offs and fundraising
- Investment size and duration varies from financing initial PoC up to clinical candidate and sometimes beyond (EUR 15.000 – EUR 15m)
- Patient capital / strategic investors (universities, endowments, corporate VCs/pharma industry, …)

European Life Science/Biotech Funds (integrated models)

- Leuven CD3, Belgium
- Louvain Vives, France
- Karolinska Development, Sweden
- Kurma BioFund I, France
- Rotterdam Erasmus MC Biomedical Fund, NL

Patience

- **difficult for Investors (e.g. VCs) due to their timelines**
- **Easier for universities and research institutions**

- **This is a great chance, because aims of VCs, industry and techtransfer are different**
  - Major upside for VC: exit from startup
  - Acadmia: licensing contract (product on market)
  - Industry: product revenues

Therefore early techtransfer funds are essential within the value chain for innovation thus helping Germany and Europe to stay competitive.

Lemony Snicket (Daniel Handler, *1970)

“Are you ready?" Klaus asked finally.

"No," Sunny answered.

"Me neither," Violet said, "**but if we wait until we're ready we'll be waiting for the rest of our lives,**
Let's go.”

Investor ready *versus* licensing ready ?

The inflections point for Investor readiness is not a reliable constant: market fashions, regions, investors, market robustness, industries …

Thank you for your attention!

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