

University Spin-offs

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COSS D03

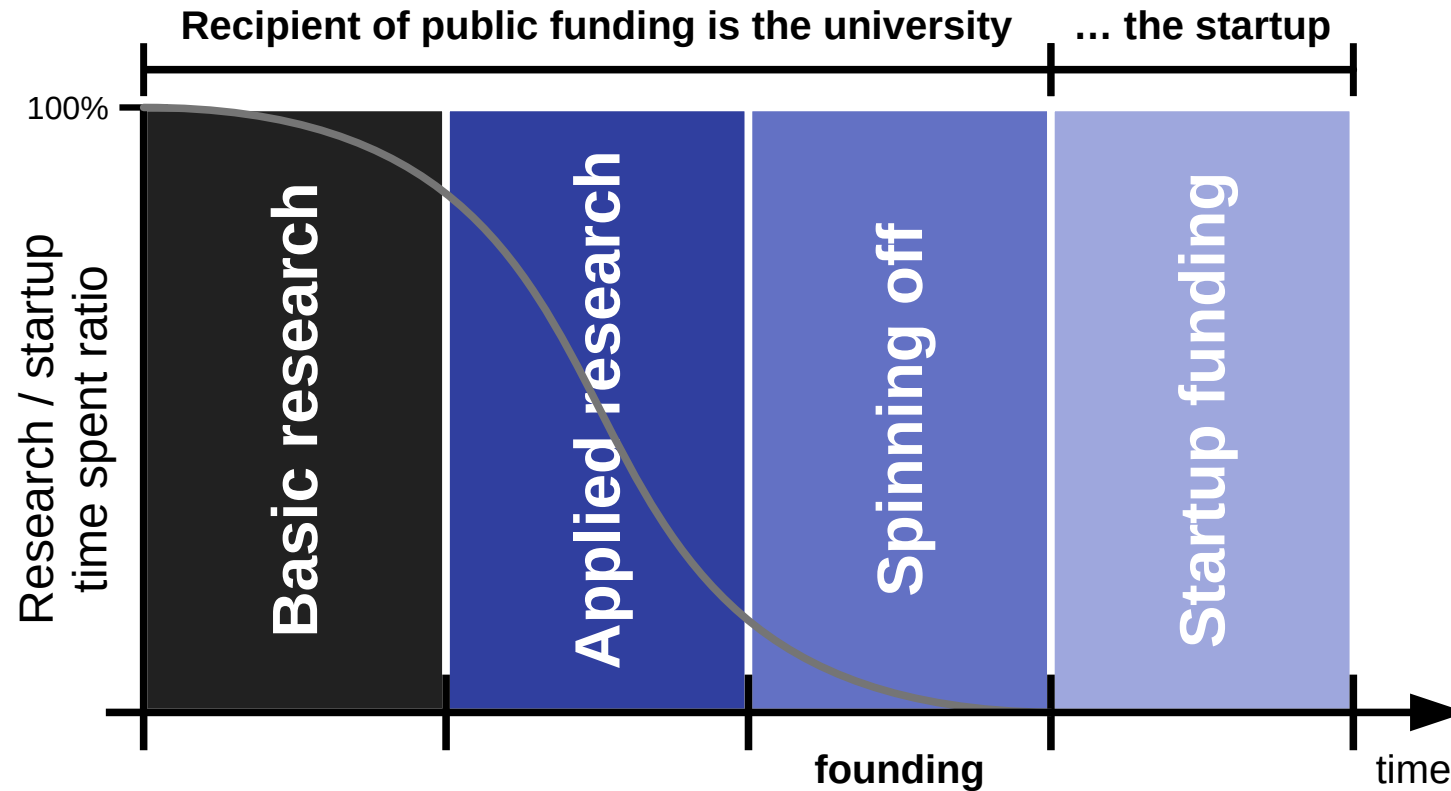
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Agenda

1. Phases and public funding
2. The applied research phase
3. The spinning-off phase
4. IP rights management
5. The role of the university

1. Phases and Public Funding

Overview of Phases and Funding Recipients



Forms of Public Project Funding

- Public grants [1]
 - Grants to university
 - Basic research funding
 - Applied research funding
 - Innovation / startup funding
 - Grants to startup
 - Direct startup funding
 - Pre-competitive research
- Contract research [2]

[1] German: “Antragsforschung”

[2] German: “Auftragsforschung”

Phases with Example Funders and Programs

#	Phase	Funder	Program	# Persons	Amount [PM p. P.]
1	Basic research	DFG ERC	Sachbeihilfe Advanced Grant	1-3 (up to 6)	36
2	Applied research	BMBF BMWi	VIP+, START interaktiv Various	1-4	18-36
3	Spinning-off	BMWi	EXIST Forschungstransfer	3-4	18
4	Starting-up	BMWi	EXIST II	3-4	6
5	...	BMWi	KMU Innovativ	...	12-24

Phase / Maturity / Readiness Name Equivalencies

Phase	Maturity	Technology Readiness Level (EU)
Basic research [1]	Research	TRL 1 (basic principles observed) TRL 2 (technology concept formulated) TRL 3 (experimental proof of concept)
Applied research [2]	Validation	TRL 4 (technology validated in lab) TRL 5 (technology validated in relevant environment)
Spinning-off [3]	Exploitation	TRL 6 (technology demonstrated in relevant environment)
Starting-up	Exploitation	TRL 7 (system prototype demonstration) TRL 8 (system complete and qualified)

[1] Grundlagenforschung

[2] Angewandte / industrielle Forschung

[3] Experimentelle Produktentwicklung / Prototyping

2. The Applied Research Phase

The Applied Research Phase

- Takes place at the university
 - Follows the basic research phase
 - Funded through validation projects

Example Funding for Applied Research

- Funding source
 - Funder: BMBF
 - Program: START interaktiv Module 1
 - Content: 3-4 people up to 3 years
- Grant process
 - Requires team and innovation
 - Two-stage process
- Does not require incorporation

3. The Spinning-off Phase

The Spinning-off Phase

- Starts at university and transitions to startup
 - Follows the applied research phase
 - Turns the research project into a product

Steps for Spinning-off

- Acquire funding
- Found company
- Acquire IP rights
- Build out product
- Acquire funding

Example Funding for Spinning-off

- Funding source
 - Sponsor: BMWi
 - Program: EXIST Forschungstransfer
 - Content: Four people for up to 18 months
- Grant process
 - Apply with team and business plan
 - Get invited to pitch to jury
- Requires incorporation

Startup Incorporation

- Needs to happen during the spinning-off phase
- At this stage, all IP is still owned by the university

4. IP Rights Management

Who Holds Which Rights?

Degree Program			
		The individual	The university
Bachelor or Master	Student in class / thesis		Student Helper [1]
Doctoral	Doctoral student		Graduate researcher [2]

Copyright Ownership

[1] German: “Studentische / wissenschaftliche Hilfskraft”

[2] German: “Wissenschaftliche Mitarbeiter:in”

Bachelor and Master Students

- In student role, students
 - Own the rights to anything they do voluntarily and for free, including
 - Course work, final theses, volunteer (outside) work
- In party-to-a-contract role, students
 - Can transfer IP rights to university if compensated for it
 - Work-for-hire: Student job [1]
 - Work contract [2]

[1] German: “Arbeitsvertrag resp. Dienstvertrag”

[2] German: “Werkvertrag”

Graduate Researchers / Doctoral Students

- In doctoral student role, they
 - Own the rights to what they do if
 - The professor gave them time off from project work
 - It falls within the scope of their dissertation topic
- In employee of the university role, they
 - Transfers the IP rights to the employer (the university)
 - German Urheberrecht stays with researcher, but is inconsequential

Ensuring a Clean Intellectual Property Situation

- Acquire IP rights in advance
 - Pay for work
 - Work-for-hire
 - Work contract
 - Contributor license agreement
- Acquire IP rights after the fact
 - Letter of forfeiture
 - Work contract
- Document no IP rights claimed
 - Confirmation letter

5. The Role of the University

Transfer of Intellectual Property

- For the startup to proceed, it needs to acquire the IP rights from the university
- **What the university can offer**
 - Exclusive rights to closed source
 - Non-exclusive rights to open source
 - Rights to other intellectual property
- **What the university may ask for**
 - Lump-sum payment (unlikely)
 - Incremental conditional payments
 - Share of founders' equity
- Commensurate with the (as assessed) value of the intellectual property

Valuation of Intellectual Property (to Transfer)

- Pricing strategies
 - By assumed value (using outside assessor)
 - By labor spent on it (replacement cost method)
 - By lines of relevant code (pricing by line of code)

Incremental Conditional Payments

- Structure total payment into sequence of payments
 - Dependent on external events (revenue, profits, acquisition)
 - Until total value is reached

Share of Founders' Equity

- The University may ask for founders' equity
 - A request for equity is possible, not always likely
 - Holding an equity stake requires attention, adds complexity
 - If it takes equity, it is still unlikely to play an active role
 - It may want a board seat though in the beginning
- No good formula for amount of equity
 - If only code, in the low single digits (2-5% of total equity)

Summary

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2. The applied research phase
3. The spinning-off phase
4. IP rights management
5. The role of the university

Thank you! Questions?

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