



Introducing a roadmapping-based IP strategy development tool for early stage deeptech startups

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About me

Started part-time MPhil in Mid January 2022

BSc. Industrial Engineering, Karlsruhe Institute of Technology about the Validation of a Design Artefact with a Single Case Study

Previously MSt. Entrepreneurship Cambridge Judge Business School, transferred to IfM for MPhil

Work Experience:

- **2.5 years Investment Management, Family Office, Baden-Baden, GER**
- **1 year CIRC, e-scooter startup, Berlin, GER**
- **YCombinator**
- **1.5 years LEA Partners, Private Equity and Venture Capital fund, Karlsruhe, GER**



2



Problem: Why focus on IP tools for DeepTech Startups – Research Gap



What are DeepTech (software and hardware) startups:

- Significant upfront investment in money and time
- IP harvested → IP strategy from day one



Research Gap:

- Alignment of IP strategy with corporate strategy early on
- Consideration of multiple functions that IP can support (barrier of entry, etc.)
- Complementary consideration of formal and informal IP assets



The Research Question

Can we develop a practical IP roadmapping tool/workshop that is focussed on helping deeptech-startups develop a thorough IP strategy?

A practice-focused approach for developing effective IP strategies based on several years of research

~ 20 workshops + expert interviews



Examples:

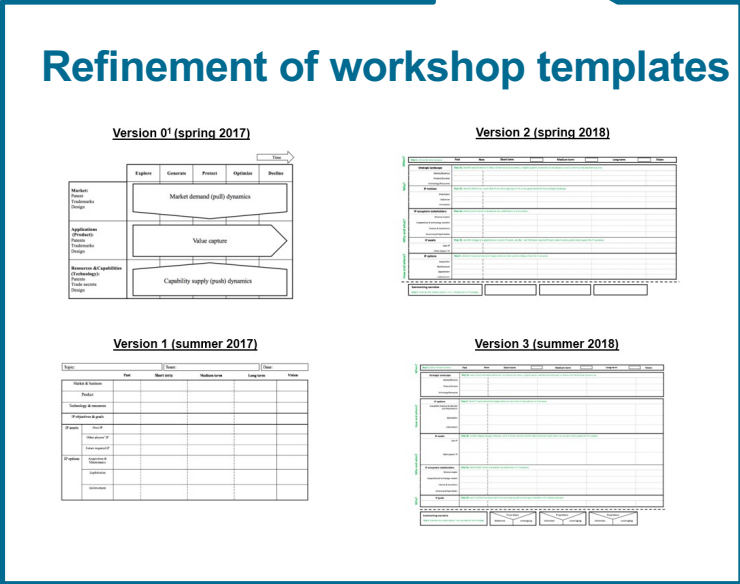
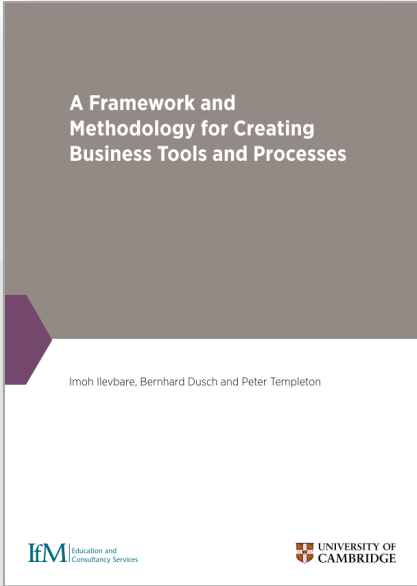
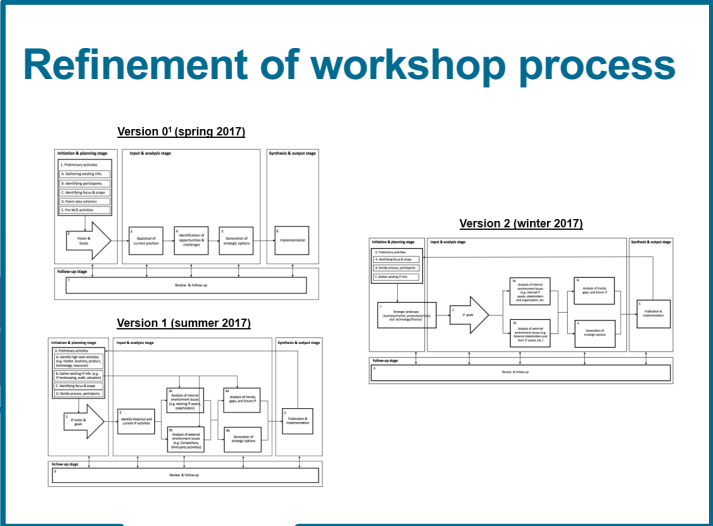



Figure B2.1 – Iterative business tool design and test

Slide Source: Dr Frank Tietze

A research backed tool for IP strategy formulation

Tietze, F. (2019). From innovative ideas to viable businesses: How an IP strategy can help. The Manufacturer. UK: 31-34.

Bluemel, J., R. Phaal and F. Tietze (under review). "Formulating IP strategies for service-intense business models: A roadmapping approach for product-service systems " World Patent Information.

Wang, T. (2019). Roadmapping for Intellectual Property Strategy Formulation: A Conceptual Framework and a Practical Process. Department of Engineering, Institute for Manufacturing, Innovation and IP Management (IIPM) Laboratory. Cambridge, University of Cambridge. PhD.

Wang, T., F. Tietze and R. Phaal (2018). Intellectual property strategy development through roadmapping. RnD Management Conference. Milan.

Wang, T., F. Tietze, R. Phaal and N. Athanassopoulou (2017). Roadmapping for Strategic Management of Intellectual Property. RnD Management Conference. Leuven, Belgium.

Slide Source: Dr Frank Tietze



Workshop process (min. 2 hours, max. 3 hours)

Requirement / prerequisites:

- Some understanding of business strategy / objectives
- IP basics

Introduction:

- Workshop process
- IP strategy concept

Step 1: Summarize business strategy

Step 2: Identify business objectives that can be supported by IP

Step 3: Identify relevant IP assets to support each/ the core business objectives

Step 4: Identify how IP assets should be used

Step 5: Synthesise IP strategy for different time horizons

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Together, we will fill out the following template, furthermore, guidance in discussion and supplementary material is given through a powerpoint presentation.



Topic:

Team:

Date:

		Step 1a Define time horizon				
		Past	Now	Short-term	Medium-term	Long-term
Strategic Landscape		Step 1b Define funding rounds				
<p><i>Business Objectives (Market, Products, Services, Technology, Solutions)</i></p> <p><i>IP Supported Business Objectives</i></p>		<p>Step 1c Market-, business drivers and client's needs</p> <p>Step 1d Product-Service System strategy with aligned technology & resource strategy</p> <p>Step 1e Specific business objectives, IP can support</p> <p>Step 1f Choose from above posts, mark them with a dot</p>				
Operational IP Strategy		Layer 3: Identify IP options/tactics/strategies which are best suited to help achieve the objectives.				
<p><i>Acquisition</i> Develop IP internally or get it from outside</p>	Internal					
	External					
<p><i>Exploitation</i> Out-licensing, etc.</p>		<p>Step 4a Operational IP strategies to determine how IP assets can be used to meet business objectives</p>	<p>Step 4b Check and correct the timing of IP actions and their alignment with business objectives and top-layer strategy</p>			
<p><i>Maintenance & Enforcement</i></p>						
IP Assets		Layer 2: Identify linkages and gaps between current IP assets, and then identify future required IP assets which can be used to best support the IP roles.				
	<p><i>Own IP</i> Formal IP (patents, trademarks, copyrights...) Informal IP (Trade secrets, data, algorithms)</p>	<p>Step 3c Identify formal and informal IP, suitable to support the business objectives identified in Step 1f</p>				
	<p><i>Other players' IP</i></p>	<p>Step 3d Externally existing relevant IP assets with positive and negative effect on business objective</p>				



Step 3a
Use linking-grid to identify potentially relevant IP types.

Step 3b
Fill out IP circle map with formal and informal IP suitable to support the business objectives identified in Layer 1

Summarizing narrative	Short term	Medium term	Long term
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**Curious to participate?
Feel free to write me**

