



Presenter: Elisabeth Eppinger

IPACST – Intellectual Property Models to accelerate Sustainability Transitions

An Analysis of Sustainable Business Models for High Impact Areas including Clean Energy and the Circular Economy

Presentation at the T2S Workshop June 3rd 2020

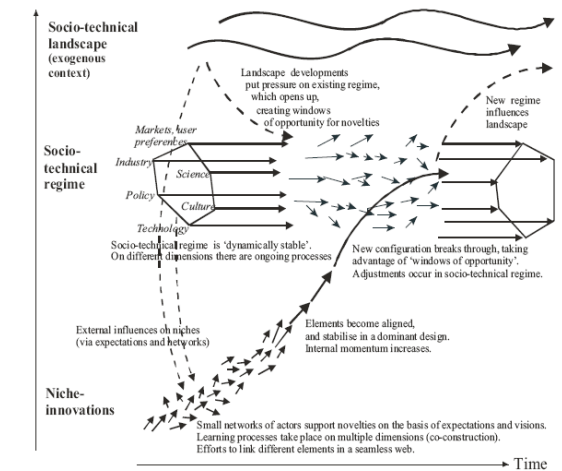
IPACST – Setting and Assumptions



- Transition to Sustainability
- New technologies, business models, services, organizational forms required to transform industry sectors towards „sustainable“ economies *Source: Hargroves et al (2005)*
- Intellectual Property (IP) and Intellectual Property Rights a key component of innovation
- Shift from neo-classical economics to ecological economics
 - From growth to development *Source: Le Blanc et al. (2012), Constanza et al (2012)*
 - Questioning „trickle down“ assumption
 - Quest for balancing property rights
- Open vs. closed debate:
 - Sharing IP beyond organizational boundaries to accelerate innovation
 - IP and IPR to attract investments and gain competitive advantage



Increasing structuration
of activities in local practices



Source: Geels and Schott 2007

Source: e.g. Wiens (2014), Vimalnath et al. (2019)

IPACST – Objectives



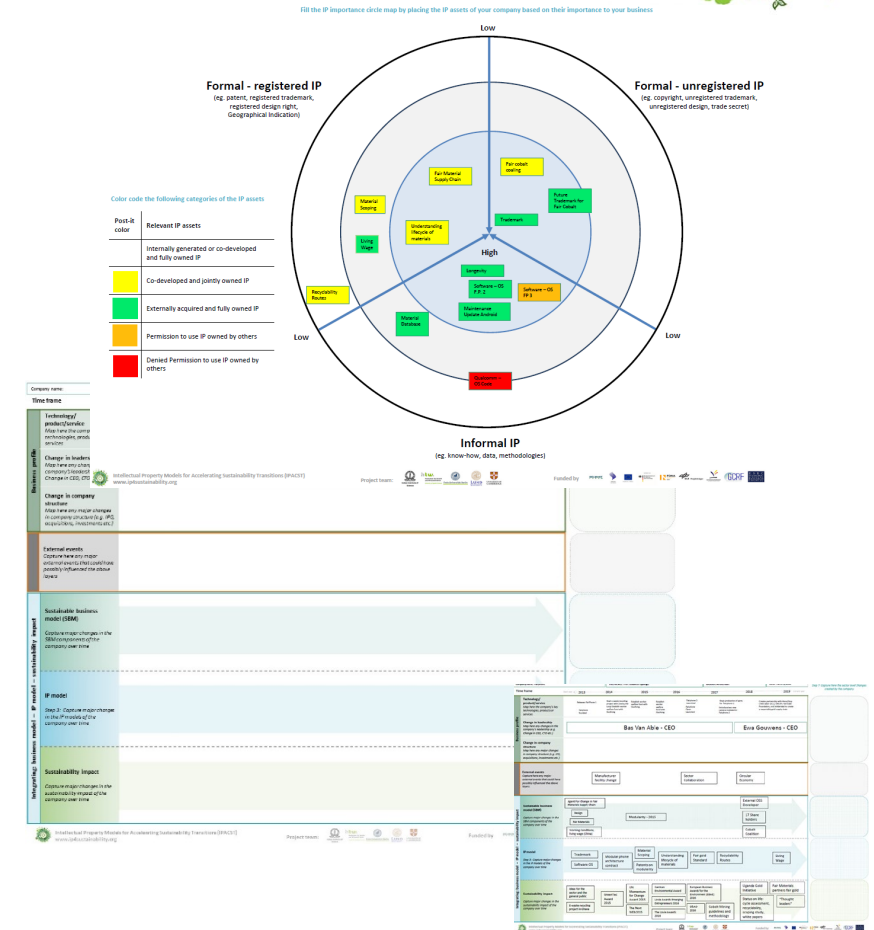
- **Evidence-based view** on different **IP models** and the circumstances under which they successfully **accelerate** or **delay the development and diffusion of sustainable business models**, innovations, technologies and products more broadly
- **Interdisciplinary: Create a bridge** for sustainability research and IP research
- **Transdisciplinary: Help stakeholders**, such as inventors, business leaders, funding agencies and policymakers choose **appropriate IP models that accelerate sustainability transitions**



IPACST – Methodology and Workplan



- Case studies with sustainable businesses and businesses in the transition towards sustainability
- Framework development: Based on empirical evidence with theory guidance
 - IP Model Typology
 - Sustainable Business Model Typology
 - Framework Conditions – How to achieve Sustainability Impact with what
- Framework evaluation
- Transdisciplinary Development of Dissemination Tools (for different stakeholder groups)



Exciting Learnings (and Questions)



- Sustainability? Bridging different perspectives on transformation and sustainability
- Explicating context and conditions: Providing a more nuanced view to the open vs. closed debate (what works when for whom)
- Change vs transition: How to find evidence and measure effects when transition has not been accomplished?
- Change and impact rather than transition
- Joint interdisciplinary qualitative research
- Transdisciplinary: Learning and Sharing

Company name: _____ Interview designation: _____ Location: _____ Date: _____

Sustainability Impact Assessment – Interview Protocol II

Step 1: From the following list of sustainable practices, select areas and respective identifiers (numbers) where your organization contribute more or has higher impact

Environmental	Select areas (✓)	Social	Select areas (✓)	Economic	Select areas (✓)
1. Waste generation & disposal management		1. Providing employment opportunity		1. Contribution of sustainable technologies in profit & sales	
2. Overall reduction in consumption (energy, water, etc.)		2. Ensuring employee health, safety and equity		2. Re-investment of profit in sustainable technologies	
3. Use of renewable material		3. Internal training and awareness programs on sustainable practices		3. Change in raw material cost for same output	
4. Reduction in emission of Green House Gas and other ozone depleting substances		4. Employee's representation in trade unions (Human Rights)		4. Penalty paid for environment violation	
5. Increased efficiency (less input per unit of output)		5. Stakeholder's involvement in business decisions		5. Recycling cost to profit ratio	
6. Recycling, reuse and recovery		6. Partnerships for sustainable practices		6. Expenditure on environment and clean-up initiatives (it may include expenditure on reuse and recycle)	
7. Supplier's assessment for sustainable sourcing		7. Organization of sustainability related campaigns, projects or events in local community		7. Capital investments in sustainable and renewable technologies	
8. Implementation of environment management system		8. Undertaking other community development programs (health, sanitation, education etc.)		8. Investment in sustainability based training and development programs	
9. Environment improvement above compliance level		9. Type of consumers addressed (when before not served, e.g. low cost water filtration)		9. Expenditure on community programs (health, education etc.)	
10. Reduction in number of environmental violations/allegations		Others _____		Others _____	

Project based by: Funded by:

Opportunities and Challenges



- Practical Challenge: Time, Access to cases, building trust in „virtual“ world
- Methodological Question: how to account for unfolding global economic consequences
 - increase in risk aversion among investors (Reinhart, 2020)
 - Crash in oil price – clean energy returns & investments?
 - Crash in commodity prices – export of emerging markets?
 - Financial support by governments and China’s role as manufacturing bench?
 - China’s role as lender to developing countries (Horn et al., 2019)
- Opportunity: Increased stakeholder awareness regarding importance of IP (sharing)
- Opportunity: New approaches for sharing and technology transfer
- Opportunity: Novel case research approaches

Thank you, and the IPACST team, research participants, advisors, and funders!



I am grateful to the deep dedication, inspiring contributions and discussions of my research team: Anjula Gurtoo, Akriti Jain, Pratheeba Vimalnath, Viola Prifti, Chea, Carsten Dreher, Frank Tietze, Lars Strupeit, Roberto Hernandez, the participating firms, and our advisory board members.

The project IPACST is financially supported by the Belmont Forum and NORFACE Joint Research Programme on Transformations to Sustainability, which is co-funded by DLR/BMBF (FONA), ESRC, VR, and the European Commission through Horizon 2020.



Project no.: 730211



References



Eppinger, E, Gurtoo, A., Bocken, N., Tietze, F., Dreher, C. (2018) IPACST: Intellectual Property Rights Models to Accelerate Sustainability Transitions. Poster presentation, Transition to Sustainability, Fukuoka, 22-24 Sept. 2018.

Geels, F. W., & Schot, J. (2007). Typology of sociotechnical transition pathways. *Research Policy*, 36(3), 399–417. <https://doi.org/10.1016/j.respol.2007.01.003>

Hargroves K. Smith M. (2005) *The Natural Advantage of Nations: Business Opportunities, Innovation and Governance in the 21st Century*, Earthscan/James and James Publishing, London.

Le Blanc, D. et al. (2012) *Bach to Our Common Future: Sustainable Development in the 21st century (SD21) project*, Summary for Policymakers, United Nations, available online: https://sustainabledevelopment.un.org/content/documents/UN-DESA_Back_Common_Future_En.pdf

Ritala, P., Huotari, P., Bocken, N., Albareda, L., & Puumalainen, K. (2018). Sustainable business model adoption among S&P 500 firms: A longitudinal content analysis study. *Journal of Cleaner Production*, 170, 216-226.

Vimalnath, P., F. Tietze, E. Eppinger and J. Sternkopf (2019). Open, semi open or closed? Towards an intellectual property strategy framework. Accepted for presentation at the 19th European Academy of Management (EURAM) Conference, Lisbon (Portugal), 26-28 June 2019.

Reinhart, C. M. (2020, March 23). This Time Truly Is Different | by Carmen M. Reinhart. *Project Syndicate*. <https://www.project-syndicate.org/commentary/covid19-crisis-has-no-economic-precedent-by-carmen-reinhart-2020-03>

Wiens K. (2014 June 4). *Intellectual property is putting circular economy in jeopardy*. The Guardian. Available from: <https://www.theguardian.com/sustainable-business/intellectual-property-circular-economy-bmw-apple>