Managing (Open) Innovation Projects

HENDRO WICAKSONO

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What is Innovation?

Strategic Advantages Through Innovation

Mechanism	Novelty in product/ service offering	Strategic Advantages	Offering something no one else has offered	Examples	Introducing the first Walkman, camera, mobilephone,...
	Novelty in process		Offering it in innovative ways (faster, lower cost, more customized)		Internet banking, online book selling
	Legal protection of intellectual property		Offering something others cannot do unless they pay a license		Blockbuster drugs (e.g. Zantac, Prozac)
	Rewriting the rules		Offering something new which is more efficient and makes the old products redundant		Typewriters vs. computer word processing Ice vs. refrigerator
	Reconfiguring the parts of the process		Rethinking the way bits of the system work together, e.g. effective networking, outsourcing, etc.		Clothing: Zara, Benetton
	Robust platform design		Platform on which other variations and generations can be built		Boeing 737 (50 years old) Intel and AMD processor

Innovation 4P

Example of Innovation 4P

Innovation Type	Incremental	Radical
Product	<ul style="list-style-type: none">▪ Windows 10 replaced Windows 7▪ VW EOS replaced Golf	<ul style="list-style-type: none">▪ First speech recognition program▪ Toyota Prius (hybrid engines)
Process	<ul style="list-style-type: none">▪ Improved fixed-line telephone service▪ Extended range of stock-broking services	<ul style="list-style-type: none">▪ Skype and other VoIP systems▪ eBay▪ Youtube for music industry
Position	<ul style="list-style-type: none">▪ Häagen Dasz changed market from children to consenting adults▪ Low cost airlines	<ul style="list-style-type: none">▪ Tata Nano targets huge but poor Indian market▪ Microfinance
Paradigm	<ul style="list-style-type: none">▪ Bausch and Lomb moved from eye wear to eye care▪ IBM	<ul style="list-style-type: none">▪ iTunes – a complete system of personalized entertainment▪ Cirque du Soleil – redefining circus (No elephants—just a tent, clowns and acrobats)

Innovation Management Processes

Organization paradigm fostering innovation

(Arthur D Little 2018)

How to search for innovation?

Example of Innovation Funnel

Open Innovation Model

(Tidd & Bessant, 2009)

II. Innovation Ecosystem in Germany

Triple Helix Innovation Model

Model 1

Model 2

Model 3

(Etzkowitz & Leydesdorff 2000)

Triple Helix Implementation in Germany

1: University Spin-Off

Bundesministerium
für Wirtschaft
und Technologie

eXIST
Existenzgründungen
aus der Wissenschaft

Startup founder scholarship

Grants for transfer from research to start-up

Support of start-up culture in university

Example of
successful startups

OPENEXPERIENCE

SHAREMAC

PHYSEC
security for things

vilisto
einfach Wohlfühlklima

NosoEx[®]
powered by GWA Hygiene

Transformation of University Program

Image: HS Karlsruhe

- Integration of startup programs in university's curricula
- Startup activities substitutes courses credits

2: Open Research and Innovation Projects

Project Examples

3: Strategic Alliances and Innovation Clusters

Source: BMWi

4: Collaborative innovation labs: Industry 4.0 implementations

- Small and Medium Enterprises
- University Research
- Research Outside University
- Large Companies

Testbeds

Source: Plattform Industrie 4.0

Triple Helix Model 3 Requires Transformation of All Parties

From teaching to **research and innovation** university

From closed to **open innovation**, from one-man show to **ecosystem of global village**

From top-down to **bottom-up** policy making

Indonesia: Quintuple Helix?

(based on Carayannis et al 2012)

III.

Implementation of Research and Innovation Projects

Types of Projects

Project Example

- Objective: Development of Demand Response System for manufacturing
 - Forecast models for decentralized energy generation systems.
 - Dynamic electricity price models
 - Semantic middleware for data communication between energy producer and consumer
 - Integration of price signals into production planning for efficient use of resources.
 - Transfer of planning data from the industry to the energy producer / network operator, which includes the implementation of further demand-response readiness analyzes.

Workpackage Dependencies

IP Management

- **Background IP:** all Intellectual Properties belonging to or controlled by either Party, (i) developed, conceived, obtained or acquired prior to the agreement/ project or (ii) developed, conceived, obtained or acquired independently of the agreement/project or not as part of the approved project statement.
- **Foreground IP:** means any Intellectual Property arising from the project;

Conclusions

- Innovation requires strategies on corporate level
- Open innovation can shorten innovation funnel
- Open innovation requires ecosystems: triple helix model 3
- Triple Helix Model 3 requires transformation of all parties
- Open innovation projects require clear governance structure and communication flow
- Open innovation projects require data and intellectual property right management

Thank You

LinkedIn

<https://www.linkedin.com/in/hendrowicaksono/>

Facebook

<https://www.facebook.com/hendro.wicaksono.9>

Email

h.wicaksono@jacobs-university.de
hendro.wicaksono@genolife.org
hendro.wicaksono@green-indonesia.com

Homepage

<http://indeed.user.jacobs-university.de/>