



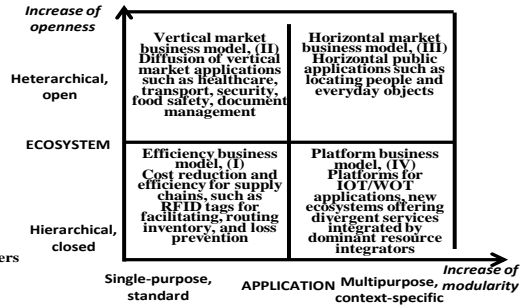
## Timeline 2012-2014

Framework for analyzing diverse IOT business models (Leminen et al., 2012).

Open networked	I Intelligent logistics in the future car production and logistics	III Traffic safety services Car2gether
ECOSYSTEM	II Current RFID usage in car production and logistics	IV Tracking and tracing in car logistics Car2Go
Closed private	Business	CUSTOMERS Consumers

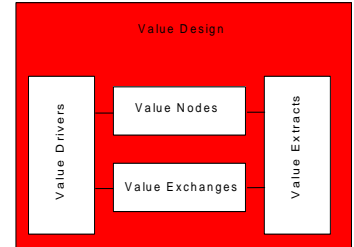
- Towards IOT Ecosystems and Business Models 2012 (Published)
- MPY Business Case
- Delphi Study 1<sup>st</sup> round

Key pillars of a BM design tool for IoT ecosystems (Leminen et al., 2012).



- MPY Business Case
- Ericsson Business Case
- Delphi Study 2<sup>nd</sup> and 3<sup>rd</sup> round

Key pillars of a BM design tool for IoT ecosystems (Westerlund et al., 2014)



- 2-3 company workshops
- Strategic Planning - Student project
- Customer Relationship Management - Student project
- Current Business Issue - International student project

### One industry BMs

### Networked BMs, cross-industry & industry change

### BM in ecosystem

2012

2013

2014



Leminen, Westerlund, Rajahonka, Siuruainen



## IoT 2015 LAUREA: ACTOR ROLES IN INTERNET OF THINGS ECOSYSTEMS

Our findings suggest that **business model challenges in emerging ecosystems are at the ecosystem level**. However, we also suggest that a company can choose the ecosystem it wants to be part of, and its role in it. Therefore there are different perspectives (or roles) to exploitation of the IoT that the companies can use, namely:

**Butterfly focuses on relatively compact issues, and this configuration leads to limited but rather safe business model choices for a company.** It recognizes the nodes (customers) and flows (possible products and services) of the new business model. There is not a need for a specific IoT ecosystem because the IoT solutions are add-ons offered in prevailing ecosystems.

**Ant and greenfly refers to that a company (ant) will lock itself into a larger ecosystem (greenfly), as soon as it has been established.** A company views and compares a variety of supplementary modules and connections between companies that are not used in the particular moment. Ant wants to understand the motivations and business logics of

different actors, but several actors and particularly intermediaries are still missing in the emerging ecosystems.

**Spider weaves its own network in an IoT ecosystem.** It aims to become a hub or leading part of the system. Later it can become a focal actor, or take any role in the ecosystem.

**New kinds of value designs may emerge for a swarm of bees.** For example, **bottom-up models may arise from the IoT developer and user communities**, in which the users share their own expertise and knowhow and become producing actors.

Leminen, S., Rajahonka, M., Westerlund, M. (2015), "Actor roles in the Internet of Things ecosystems", XXV International Conference of RESER, Service development and innovation for prosperity and human well-being in the 21st century, September 10th-12th 2015, Copenhagen, Denmark.

### IOT RELATED COURSES (INCLUDING COMPANY ASSIGNMENTS Helvar, Ericsson, TeliaSonera):

- REVOLUTION OF IOT AND FUTURE BUSINESS MODELS - COURSE
- INTEGRATED MARKETING COMMUNICATION AND BRANDS - COURSE

Business Cases: Helvar, Ericsson, PVP

