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Bridging Training and Research for Industry and the Wider Community

Food Science and Technology Excellence
for a Sustainable Bioeconomy

***A methodology to promote business development
from research outcomes in food science and
technology***

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Introduction

Valorization of knowledge is a major challenge for research centers and universities.

Entrepreneurship and business development are ways to create value out of R&D (EC , 2011).

The difficulties of bridging the gap between R&D and innovation.
Barriers to innovation...

The centrality of the Business Plan for thinking in the development of new businesses. One additional barrier for scientists...



Review Contributions

Business Model Generation (Osterwalder, A. & Pigneur, Y., 2010)
to structure and foster the thinking process “from an idea to a business model”.

Customer Development (Blank, S. & Dorf, B., 2012)
to search, validate and create customers for a product or a service,
following a selected business model.

Agile Product or Service Development (Ries, E., 2011)
parallel to the customer development and focused on: individuals
and interactions, prototypes, customer collaboration, responding
to change.



Questions

How to improve the existing knowledge valorization processes?
- concerning entrepreneurship and business development

What can be learned from a Food Sector Business Incubator?

- projects based on research outcomes
- projects based on students knowledge
- projects employing researchers and students



Methodology

Case-study

SpinLogic University Entrepreneurship Initiative
2009-2013

Spinlogic Incubator: Bio-based economy

Pré-incubation Projects: 5 actual (12 out in the market)

Incubation of Start-up Companies: 6

Spin-offs: 4 (1 closed)

Research Center (Food, Nutrition, Health Being and Environment): 100 researchers, 362 papers, 14 patents, 38 PhD completed, 28 industry contracts, 5 teams in the Cotec pipeline



Results

- PhD projects are oriented by relevance and scientific merit but not, in general, participated by companies.
- Applied Research funded projects doesn't show the better company involvement (financial model, size of companies and markets, relevance of the problems/questions). Preliminary results of the evaluation of the last program of incentives to co-promoted projects are in this line (INOVA, 2014).
- When Patents are a possibility, there are little effort made in the potential for its valorizations or commercialization
- Available pipelines for valorization, starting after Patents, could be too late, for people, institutions and IP actives



Results

- Outcomes of research teams are, in general, considered too weak for business evaluation by investors, companies, and IP valorization pipelines
- Competencies of research teams are, in general, considered too weak in what concerns, collaboration, coopetition, social awareness, initiative and entrepreneurship,... (the skills for an economy of collaboration...)
- Most Patents will end public, locally protected for “CV” purposes (an input for open innovation? but in foreign markets...)



Results

- Spin-off projects, intensive in technology and knowledge, that achieve to be companies are in a quite small number and took a long way through...
- Most of the projects and companies, from students and researchers, developed in the Incubator are low or medium technology intensive. 60 % are based on services.
- There is a need for suitable methodologies fostering the business thinking of researchers



Conclusions

Contributions for an integrated approach to knowledge valorization in applied R&D projects:

- A necessary early articulation between research projects, industry and investors:
 - *research plans presented to industry (month 6);
 - *research outcomes presented to industry (year 2, year 3);
 - *research outcomes presented to investors (year 3).
- Integration of a business development workpackage in an applied research plan.



Conclusions

- It seems there is a role to medium and large companies on leading industry participation in R&D projects
- There a need to better specialized risk capital investors

Contributions for the knowledge valorization out of applied R&D projects:

- Researchers don't need to be business managers!
But some skills should raise the value of their knowledge: like “wikiskills”, collaboration, coopetion, social awareness, initiative and entrepreneurship (Wikiskills Project, 2012).



Conclusions

- Ability to exploiting open innovation with potential benefits for researchers, institutions and society
- Ability to innovate by collaboration with business professionals and within the entrepreneurial ecosystem, by coopetition in the market, by co-creation with customers, ...
- The relevance to structure a framework: from business model generation to client development, in parallel , when possible, with an agile product/service development and prototyping



Knowledge Valorization: steps for all

From Business Model Generation

to

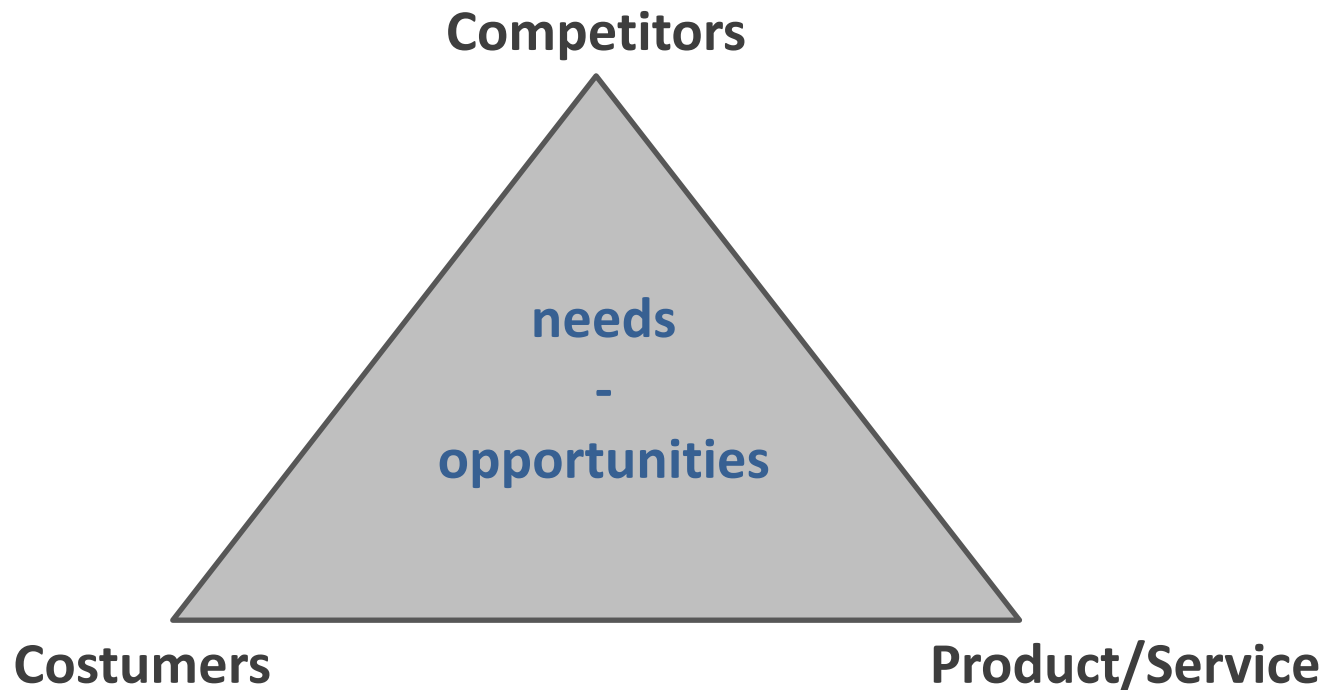
Customer Development

in parallel with an

***Agile Product/Service Research and
Development***

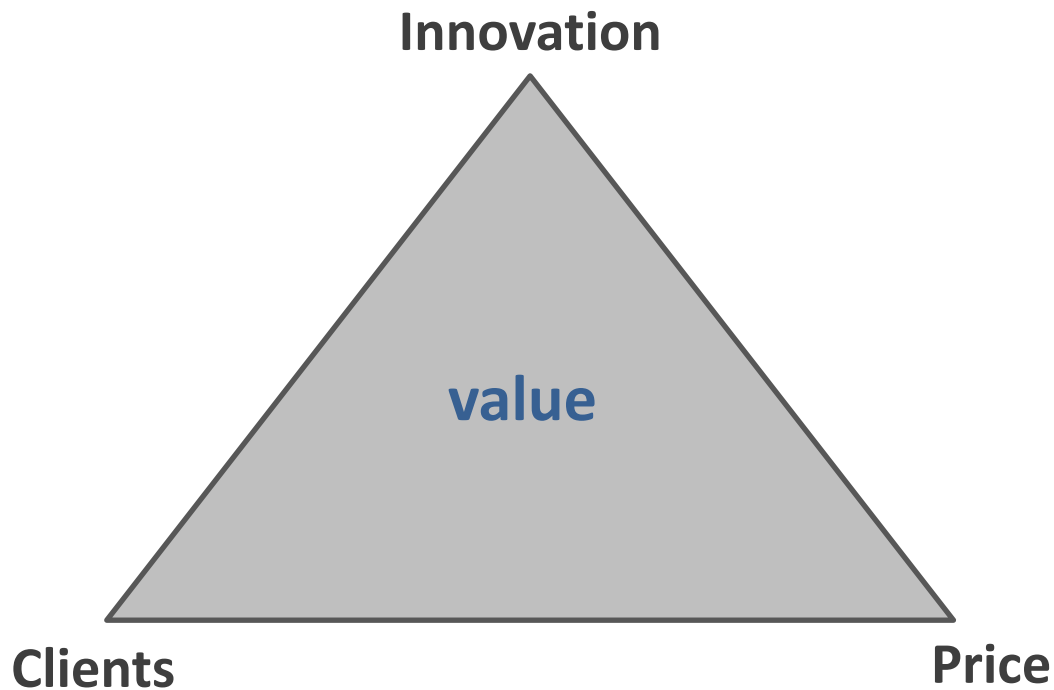


From Business Model Generation to Customer Development





From Business Model Generation to Customer Development





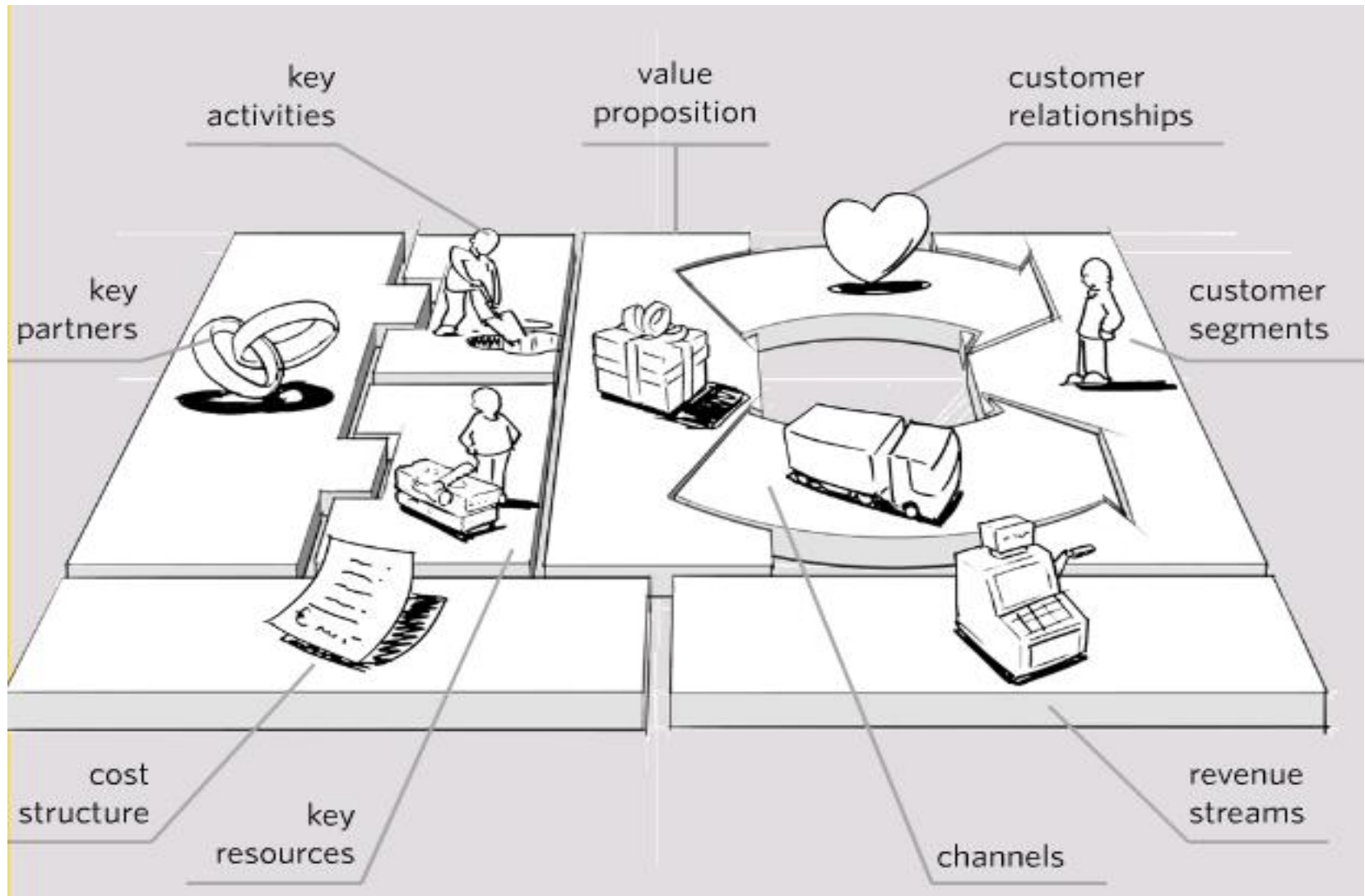
Business Model

“A business model describes the rationale of how an organization creates, delivers, and captures value”

Business Model



The 9 Building Blocks:

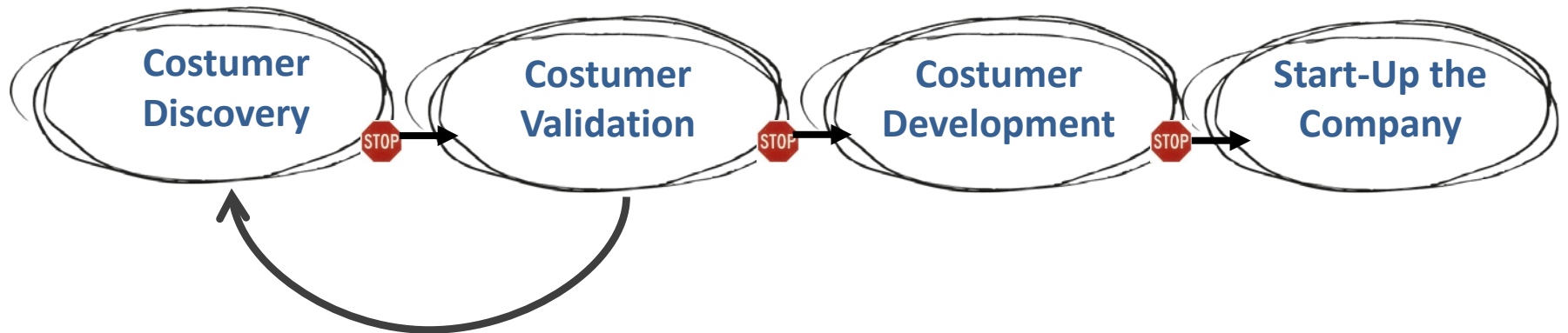




Customer Development

DISCOVER

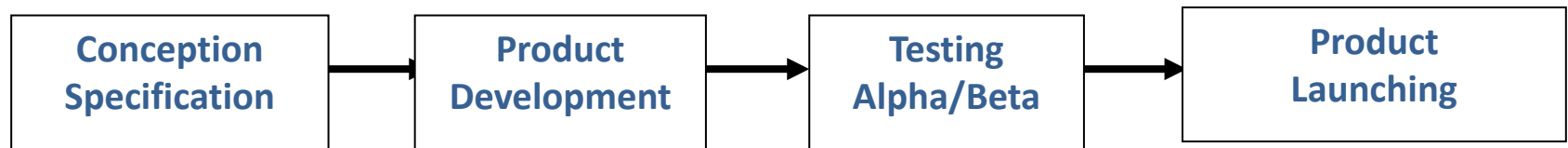
EXECUTE



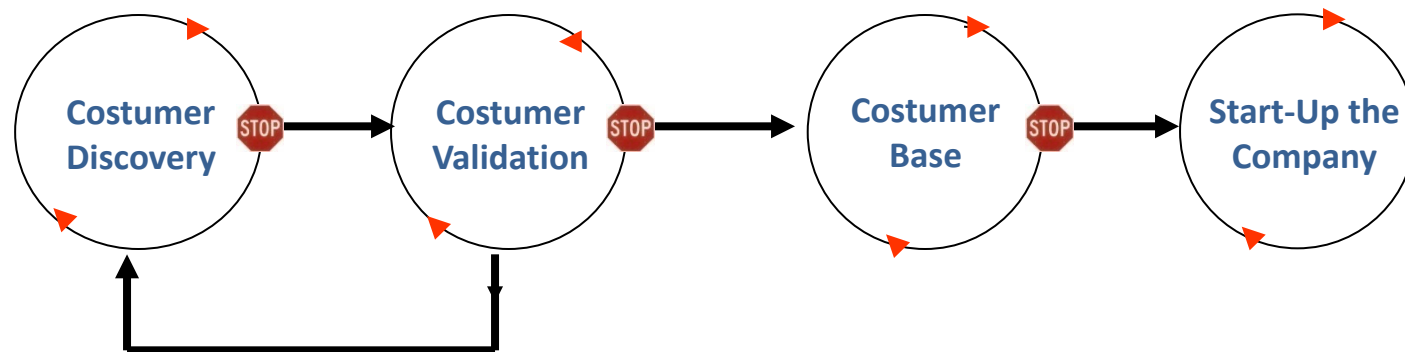


Customer Development versus Product Development

Product/Services Development



Customer Development





Bibliography

- Blank, S. & Dorf, B. (2012). *Start-up Owner's Manual*. K&S Ranch Inc.
- Lurie M. (2012). *What is a business model? A new approach*. Blue Mine Group.
- Ries, E. (2011). *The Lean Start-up: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*. Crown Business.
- European Commission (2011). *The entrepreneurship action plan*. Brussels: EC.
- Osterwalder, A. & Pigneur, Y. (2010). *Business Model Generation*. Wiley.
- Tapscott, D. & Williams, A. (2006). *Wikinomics*. Penguin Group.
- Blank, S. (2005). *Five Steps to Epiphany*. K&S Ranch Inc.
- Wikinomics Project (2013). Wikinomics Concept. Available online.

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Wikinomics Project – LLProgram EU

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