



The role of design in internationalization/ creation of economic value

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€ Design | Measuring Design Value
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Hungarian Intellectual
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Is the role of Design relevant in internationalization?
Is the role of Design relevant in creating economic value?

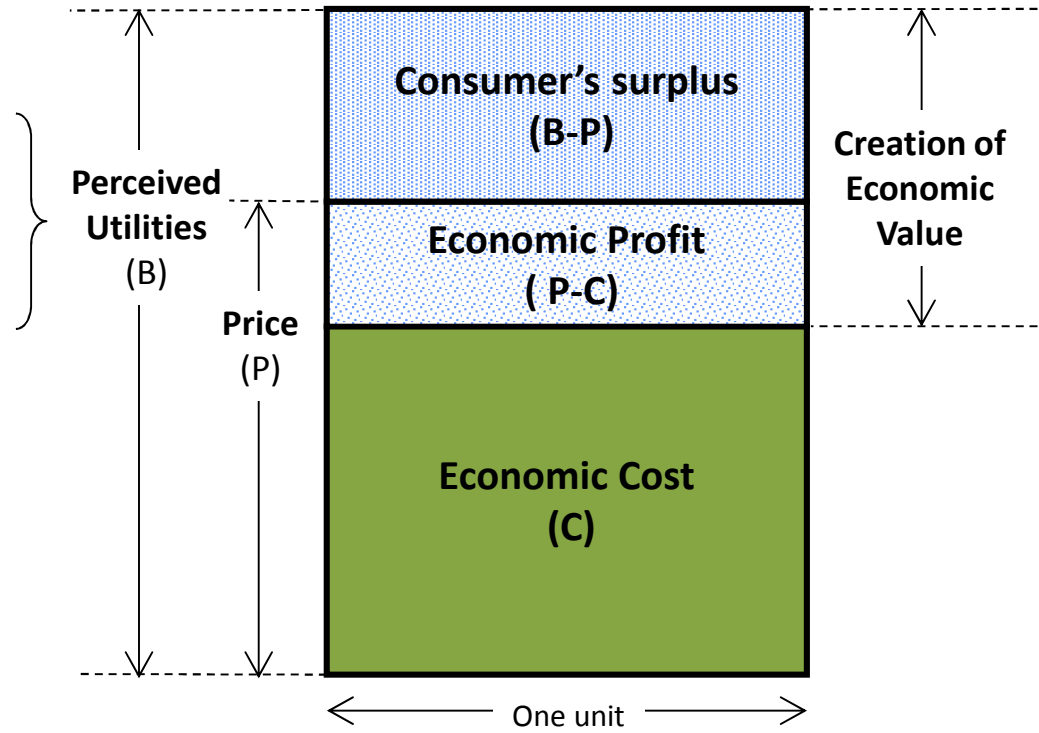


It depends

The economic and social dimension of design as styling add-on is marginal compared with the economic and social contribution of design in systemic innovation, as an integrator of emotions, performances and experiences.

Conceptual foundations for defining Design as an economic factor of production

SOCIAL Utilities
EMOTIONAL Utilities
FUNCTIONAL Utilities



Thus, if design is to play a role in the creation of economic value, design shall have a role in satisfying better

Functional utilities

what functions can be performed

Emotional utilities

how does it make me feel

Social utilities

what does it say about me to others

And/or to reduce costs



- *To design is [to focus on] the integration of functional, emotional and social utilities.*

Design as integrator

€Design 2013

Design as integrator, at the very outset of systemic innovation

- Integration of:**
- SOCIAL** Utilities
- EMOTIONAL** Utilities
- FUNCTIONAL** Utilities

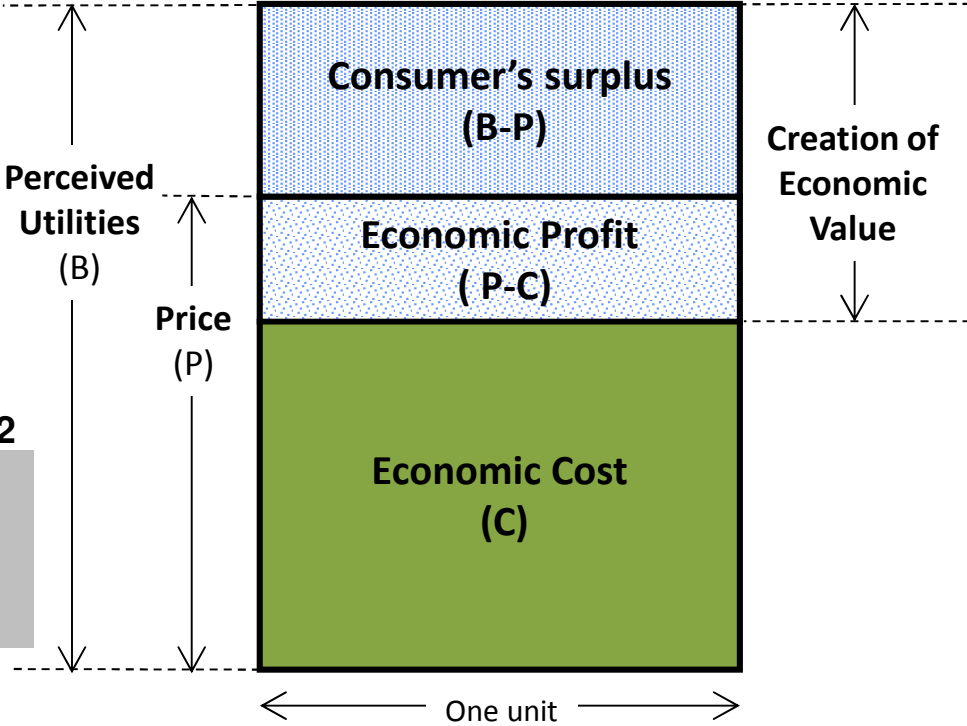
Oslo Manual 2005

Design as Marketing innovation if changes in product form and appearance (par. 172)

Product innovation if functional changes (par. 162)

Frascati Manual 2002

Design as plans or drawings to define functional issues (par. 124, 125)



Frascati Manual

PROPOSED STANDARD
PRACTICE FOR SURVEYS ON
RESEARCH AND EXPERIMENTAL
DEVELOPMENT



2002

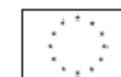
The Measurement of Scientific and Technological Activities

Oslo Manual

GUIDELINES FOR COLLECTING
AND INTERPRETING INNOVATION DATA

Third edition

A joint publication of OECD and Eurostat



ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT
STATISTICAL OFFICE OF THE EUROPEAN COMMUNITIES

- Oslo Manual 2005 addresses the systemic dimension of innovation, the importance of linkages and their measurement.
- No longer perceives innovation as a linear phenomenon beginning with technology development, but as a complex and systemic phenomenon. Under this perception, the focus shifts towards an emphasis on linkages and integration.
- EC Staff Working Document 'Design as a driver of user-centered innovation' 2009 addresses the view of design as a strategic, cross-functional and multidisciplinary innovation activity.
- Accordingly, in €Design framework:
- **to design is to integrate functional, emotional and social utilities as a complex and systemic phenomenon.**

The complex relationship between economic value creation and design

- There is no evidence of causality between the cost to generate an intangible asset and its resulting economic value.
- There is currently no empirical evidence that the economic value creation by design may be a linear system where outcomes are directly proportional to inputs
- The 2005 Oslo Manual (§ 253) raises the importance of innovation linkages ... The importance of government programs to encourage greater knowledge sharing or diffusion.

a small change in a flow or stock within a non-linear system may cause an important impact in the output result

a small design effort may cause an important increase in economic value creation

€Design hypothesis

Design, understood as an integrator of functional, emotional and social utilities at the very outset of systemic innovation, may be a key factor enabling important non-linear efficiencies in the economic and social value creation of firms and GDP growth of nations.

Is design relevant in internationalization?

The economic and social dimension of design as styling add-on is marginal compared with the economic and social contribution of design in systemic innovation, as an integrator of emotions, performances and experiences.

1-Technology based internationalization

Technology push innovation model

Research

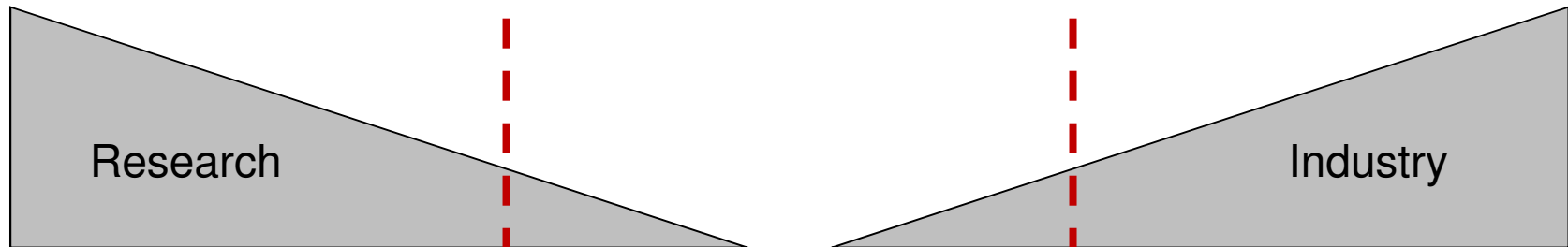
Creative work undertaken on a systematic basis in order to increase the stock of knowledge

Development

Use of stock of knowledge to devise new applications, prior to commercialization

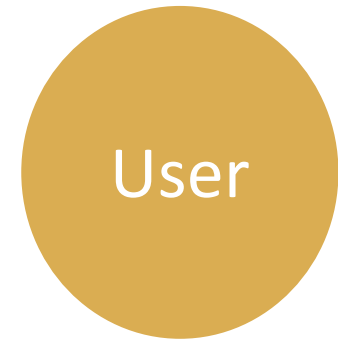
Innovation

Implementation of a new or significantly improved product, process, marketing method, or new organizational method



00's / 000's
New technologies,
inventions, discoveries

Short distance between
invention and product

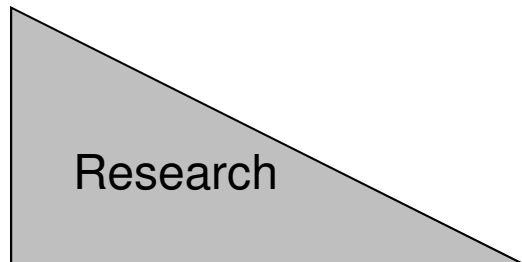


- According to the final report dated June 2013 of the European Commission “Knowledge Transfer Study 2010-2012”(page 127):

Biomedical IP is the largest generator of license revenue, accounting for 87.0% of the total license revenue for 2011

Research

Creative work undertaken on a systematic basis in order to increase the stock of knowledge



00's / 000's
New technologies,
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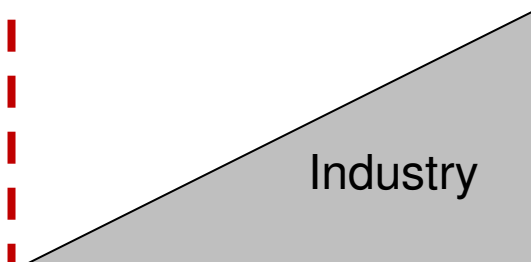
Development

Use of stock of knowledge to devise new applications, prior to commercialization

**Distance too large for
TTO capabilities**

Innovation

Implementation of a new or significantly improved product, process, marketing method, or new organizational method



- Final report dated June 2013 of the European Commission “Knowledge Transfer Study 2010-2012”(pages 122 and 127):

... it costs universities on average €84.8 million research expenditures to earn €1 million euro of license income in 2010 and €91.8 million in 2011.



- Investment in research is an important priority to increase the stock of knowledge of mankind.
- But when the distance is too complex between invention and product demanded by the market, then the results of technological research directly reaching industry are marginal. The economical contribution of research outputs is via knowledge spillovers, although they are hard to monitor and to evaluate.
- Technology push is fundamental for innovations focusing on new or better technological functions or performances and when the distance is short between the new invention and the new good, service or experience desired or needed by the user/customer/buyer
- Technology push is fundamental for technology based internationalizations.

2-User based internationalization

Systemic innovation model

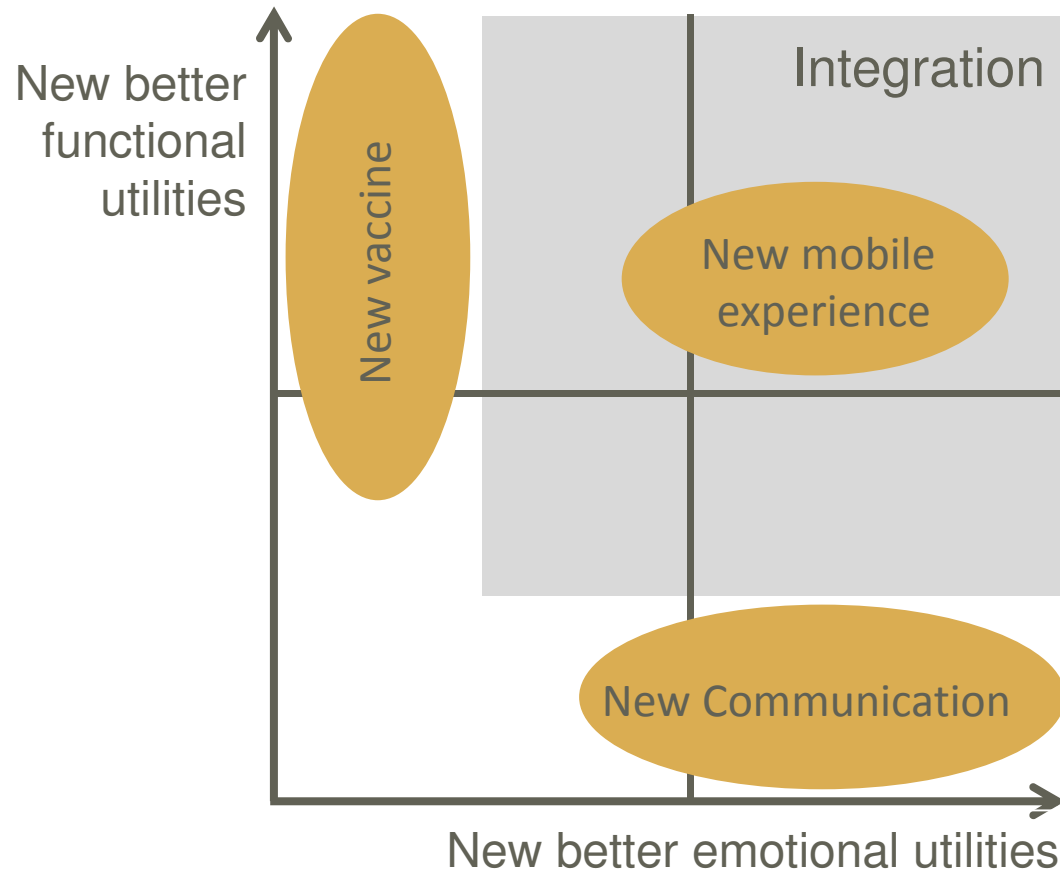


HE-MED

1/3rd – 1/10th

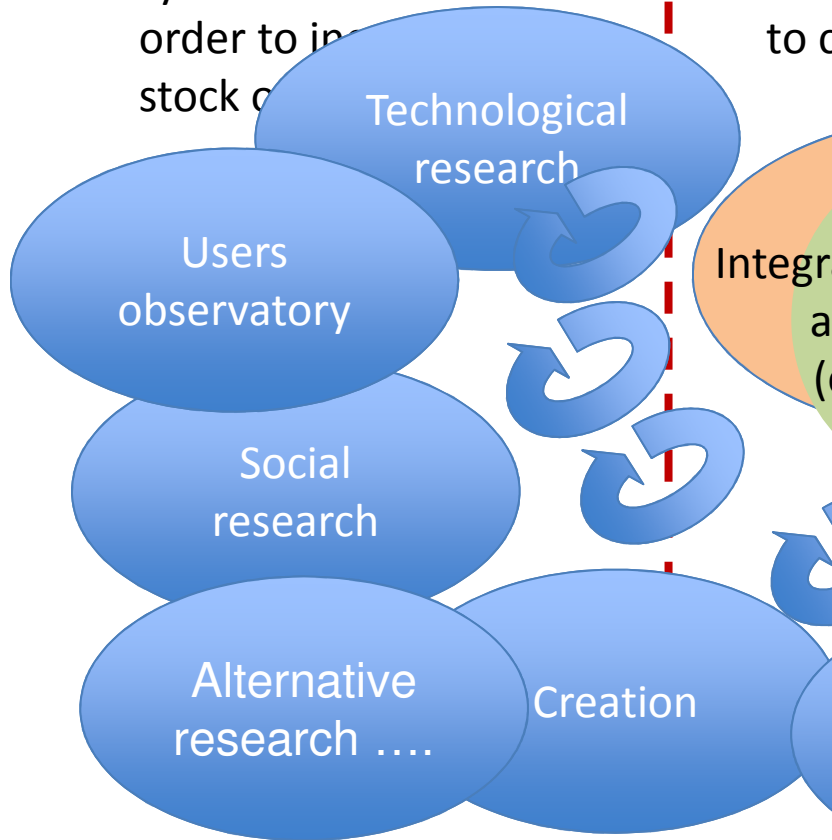
Current energy needs

From a patent to a new fresh water paradigm



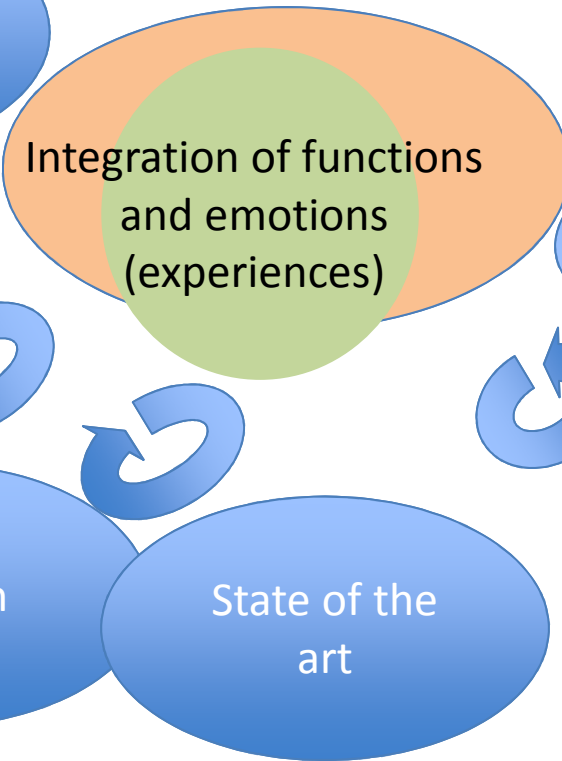
Research

Creative work undertaken on a systematic basis in order to increase the stock of



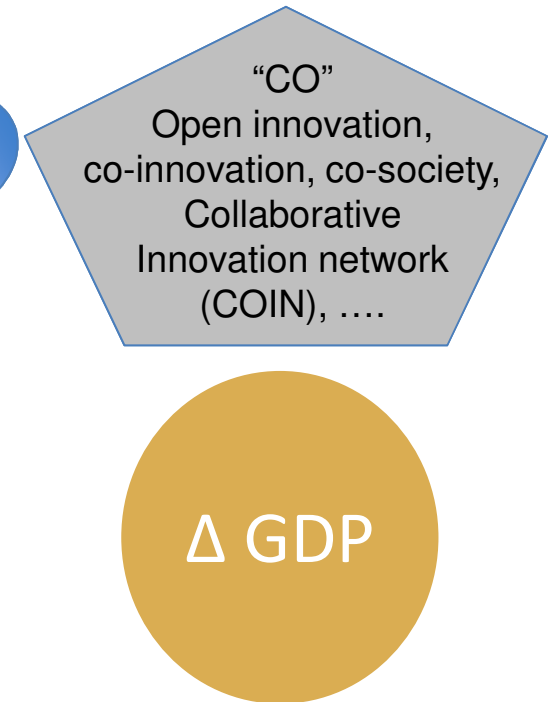
Development

Use of stock of knowledge to devise new applications, prior to commercialization



Innovation

Implementation of a new or significantly improved product, process, marketing method, or new organizational method



C4VI Network

Barcelona

Stockholm

Vienna

Beijing

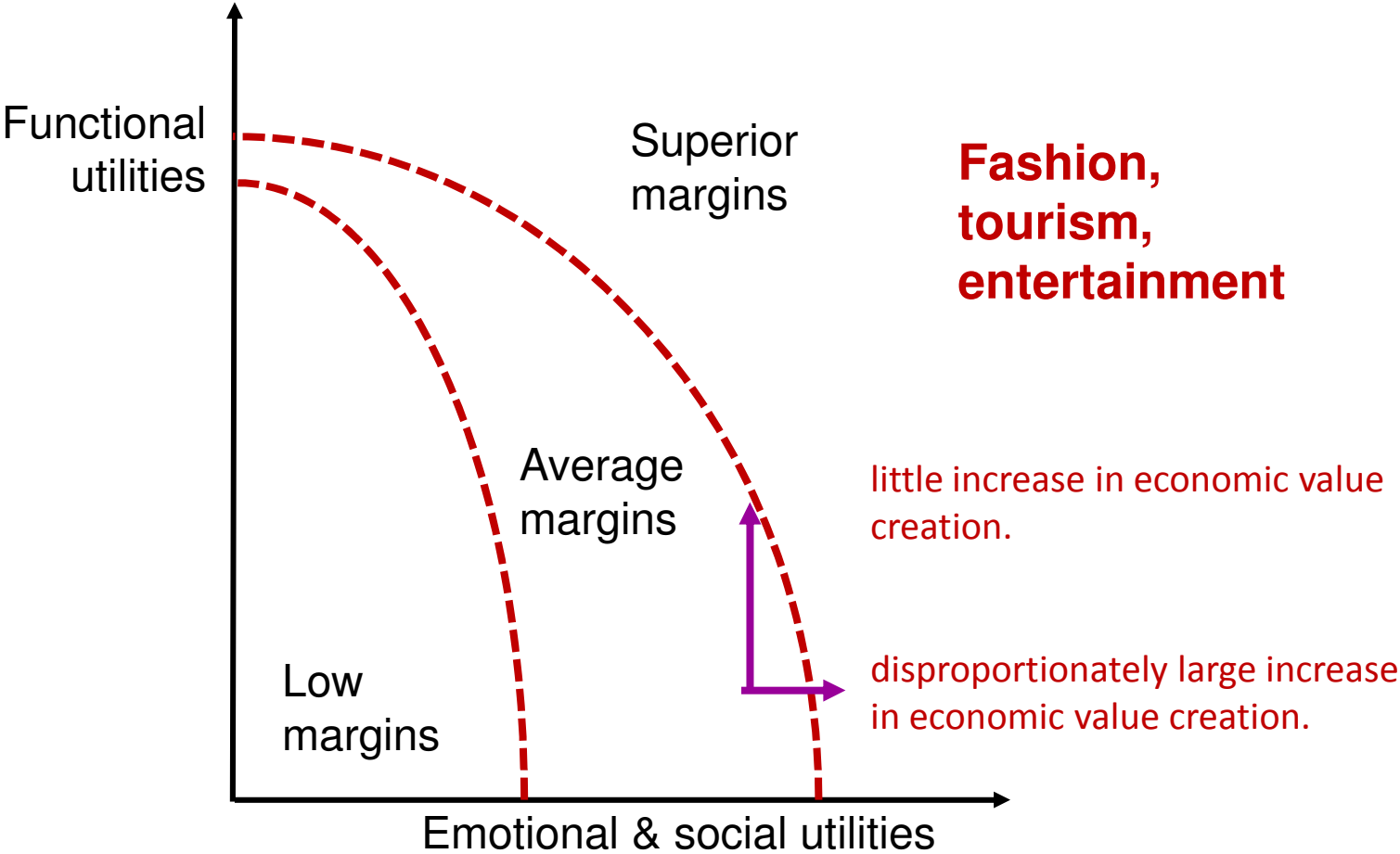
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- Communication
- Training
- Implementation

Fit between public /business policies and innovation models

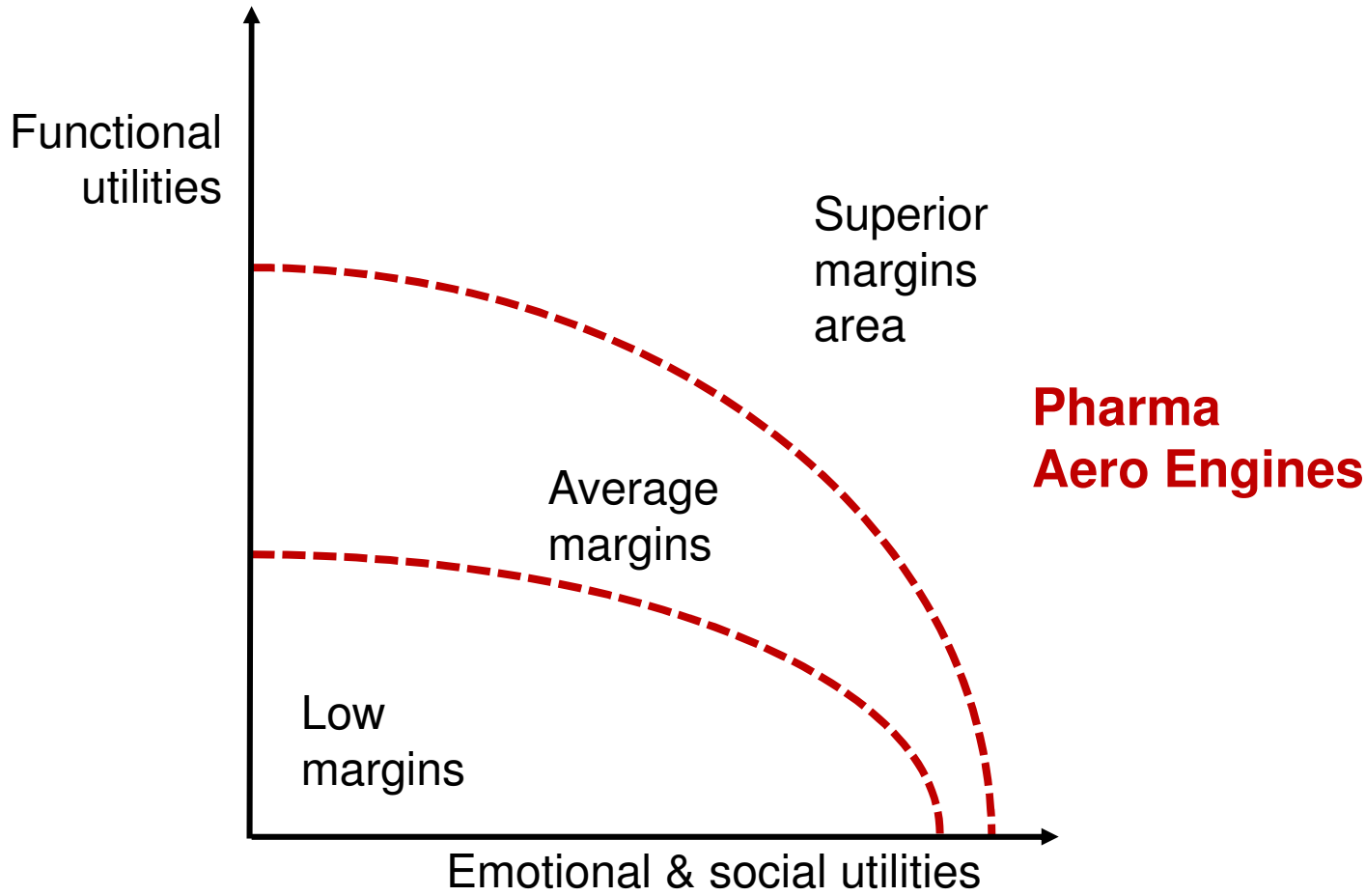
Mapping industries.

1- Prevailing emotional/social needs and wants



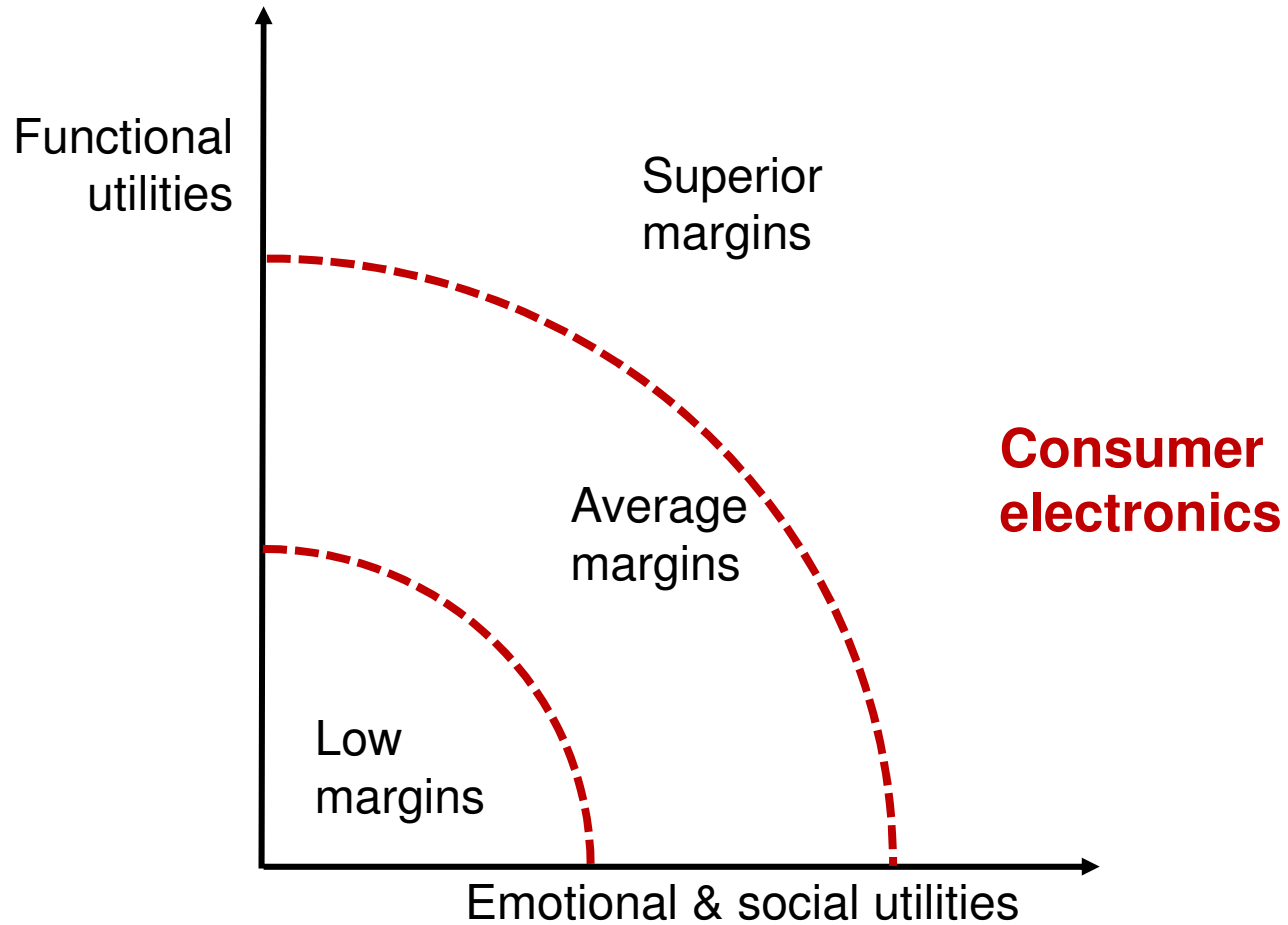
Mapping industries

2- Prevailing functional needs and wants

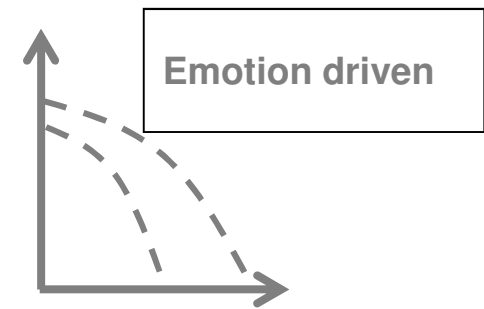
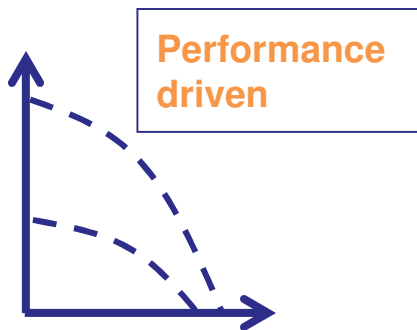
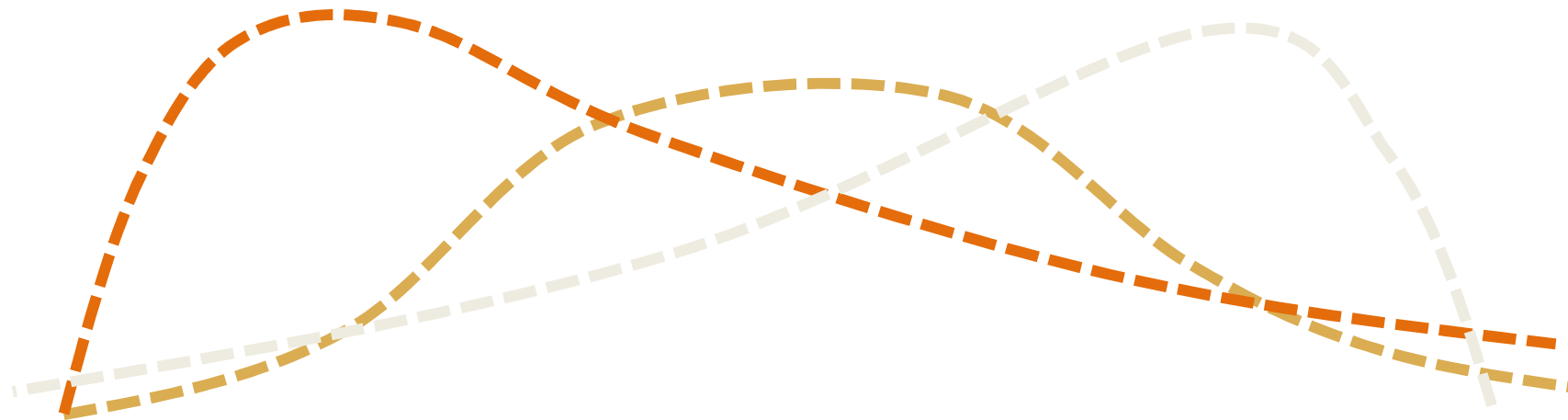


Mapping industries

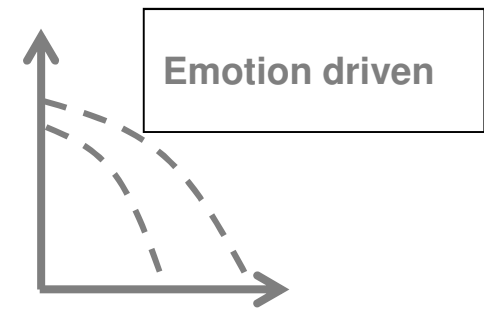
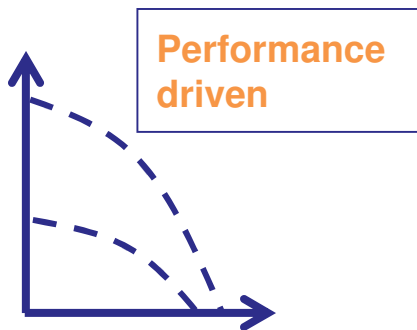
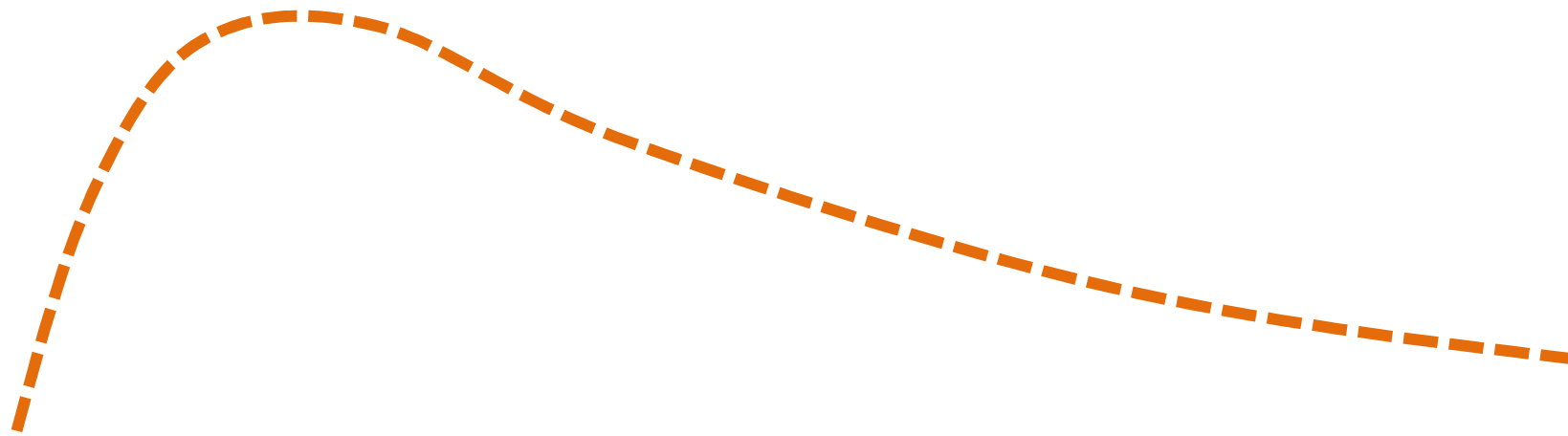
3- Balance between emotions and performance needs and wants



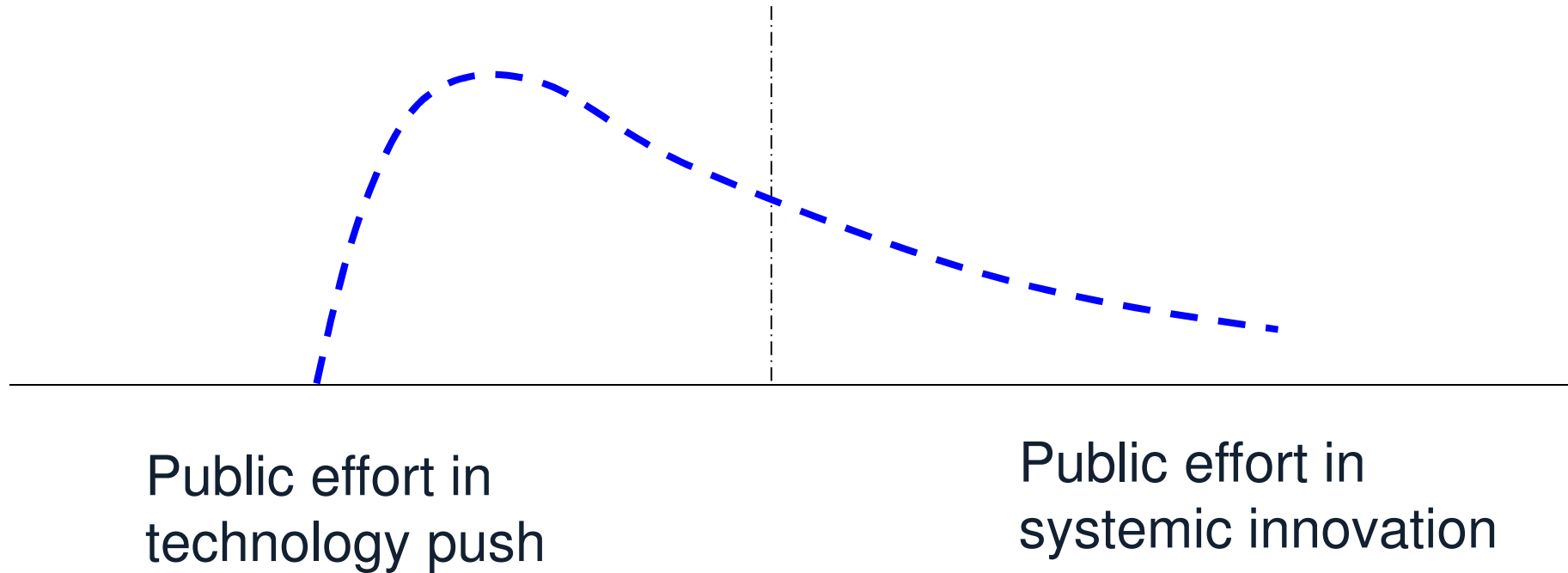
Mapping ...



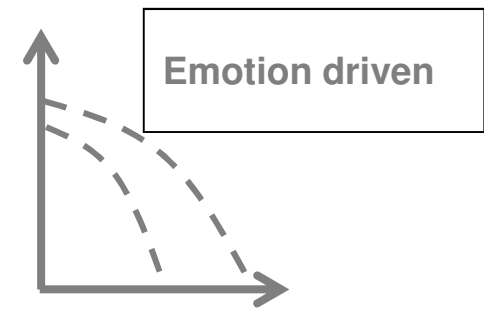
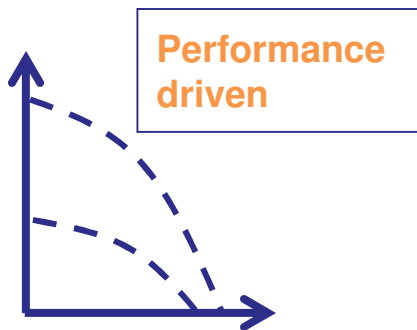
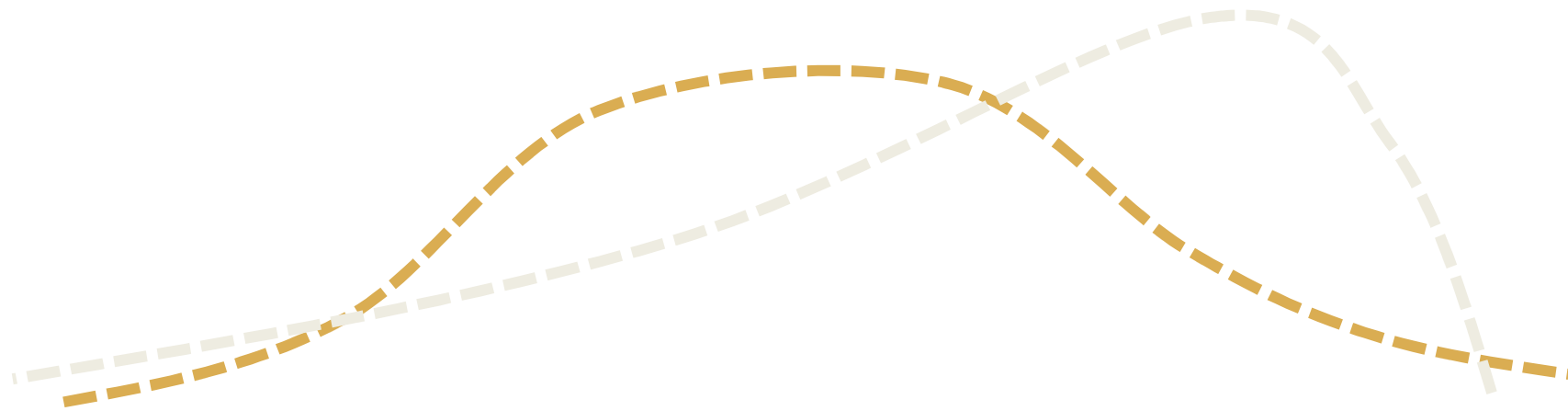
Aligning public policy ...



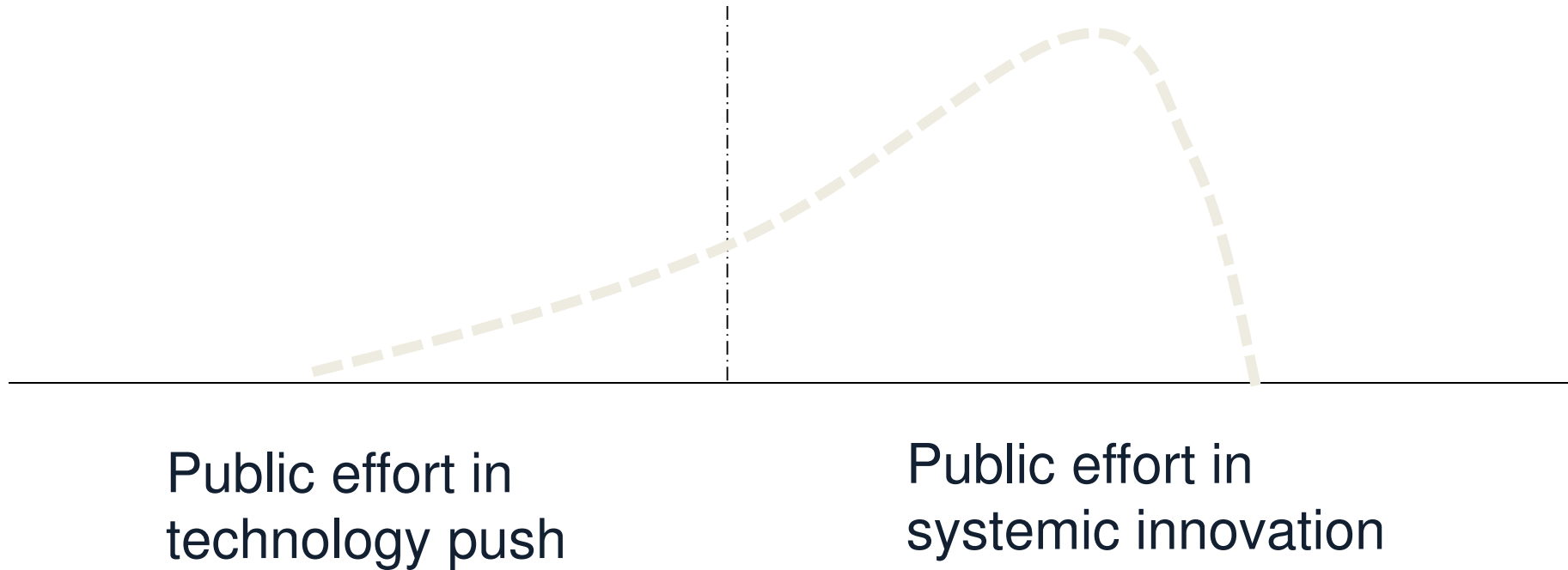
Aligning public policy ...



Aligning public policy ...



Aligning public policy ...



Conclusion

Technology/performance based internationalizations

Design as styling add on in a technology push model of innovation

Design follows innovation needs, that follows R&D breakthroughs

Legal protection of appearances

Lack of data for policy makers on systemic innovation... lack of alignments

User based internationalizations

Design as an integrator of F/S/E utilities at the very outset of systemic innovation

Applied R&D follows innovation to provide answers to user's needs. Design at the very outset of systemic innovations

New/complex approach to legal protection

Data on the role/contribution of design in systemic innovation... alignment