

# Strategic Innovation Fields, Innovativeness and Firm Performance

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Dr. Soeren Salomo  
Professor for Innovation Management, DTU Danish Technical University

## Business Week Top 100 Most Innovative Companies

1. **Apple**      *„Has build a culture that encourages innnovation and accepts the risks entailed“\**
2. **Google**
3. **3M**
4. **Toyota**      *„Uses design, technology, manufacturing, and marketing for maximum market penetration“*
5. **Microsoft**
6. **GE**
7. **Procter & Gamble**      *„High patent rate“*
8. **Nokia**
9. **Starbucks**
10. **IBM**
- ⋮
17. **BMW**      *„Has become a leader in automotive telematics“*
- ⋮
48. **Bang & Olufson**
- ⋮
52. **Siemens**
- ⋮
100. **McDonald’s**



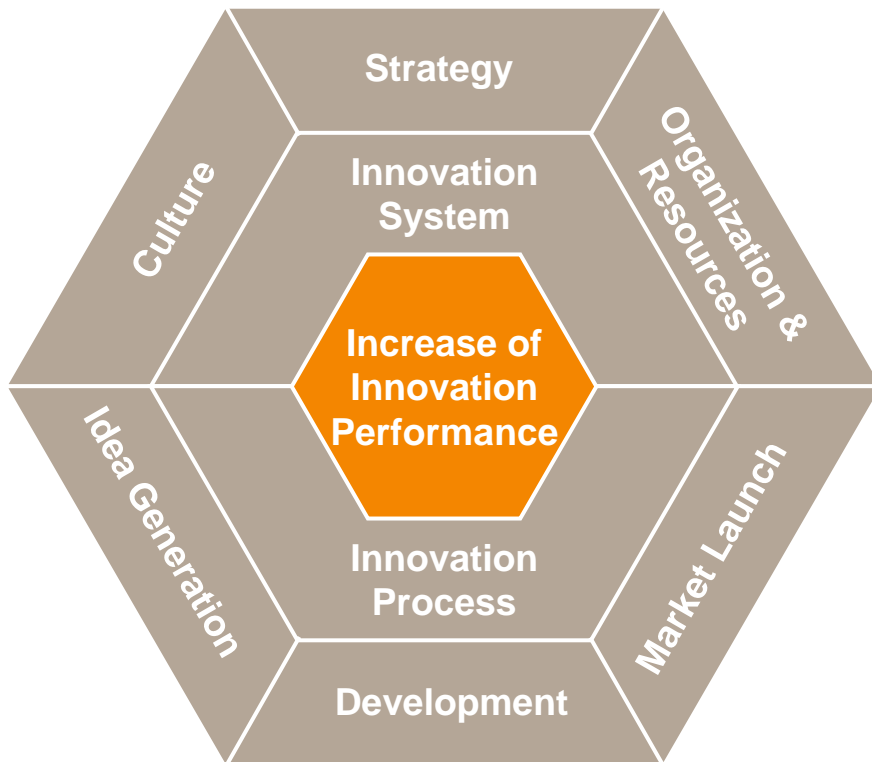
# innovate! austria. is an initiative aiming at improving the innovative performance of Austrian firms





# The Innovation Excellence Model as conceptual basis for innovate! austria. secures comprehensiveness and relevance

## Innovation Excellence Model



### 3 buiding blocks define the excellence model

- **Innovation performance** covers the firm's bottom line effect of the new products and processes introduced over a certain period of time
- **Innovation system** equals the firm's innovation DNA. The elements of the innovation system form the fudament of all innovation activities in the firm.
- **Innovation process** covers activities in innovation projects and is structured into 3 generic process stages.



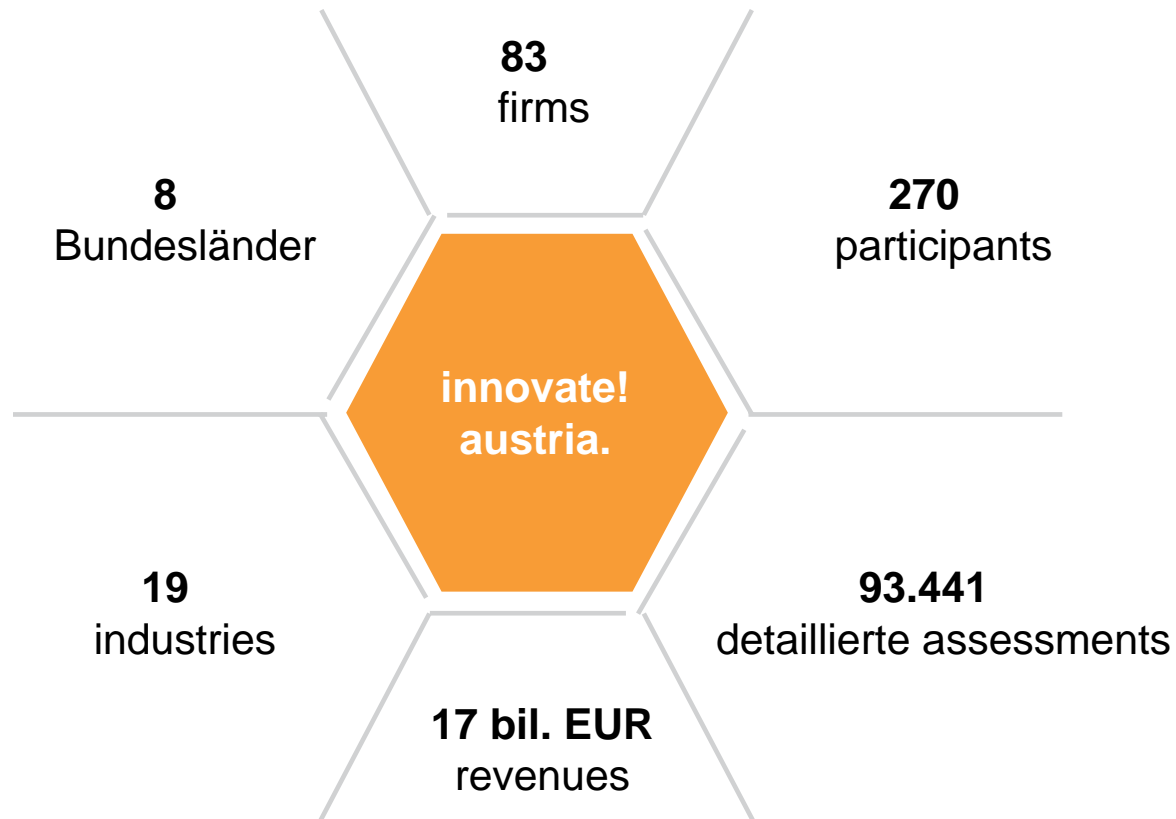
# Some of the leading Austrian firms have participated in innovate! austria.



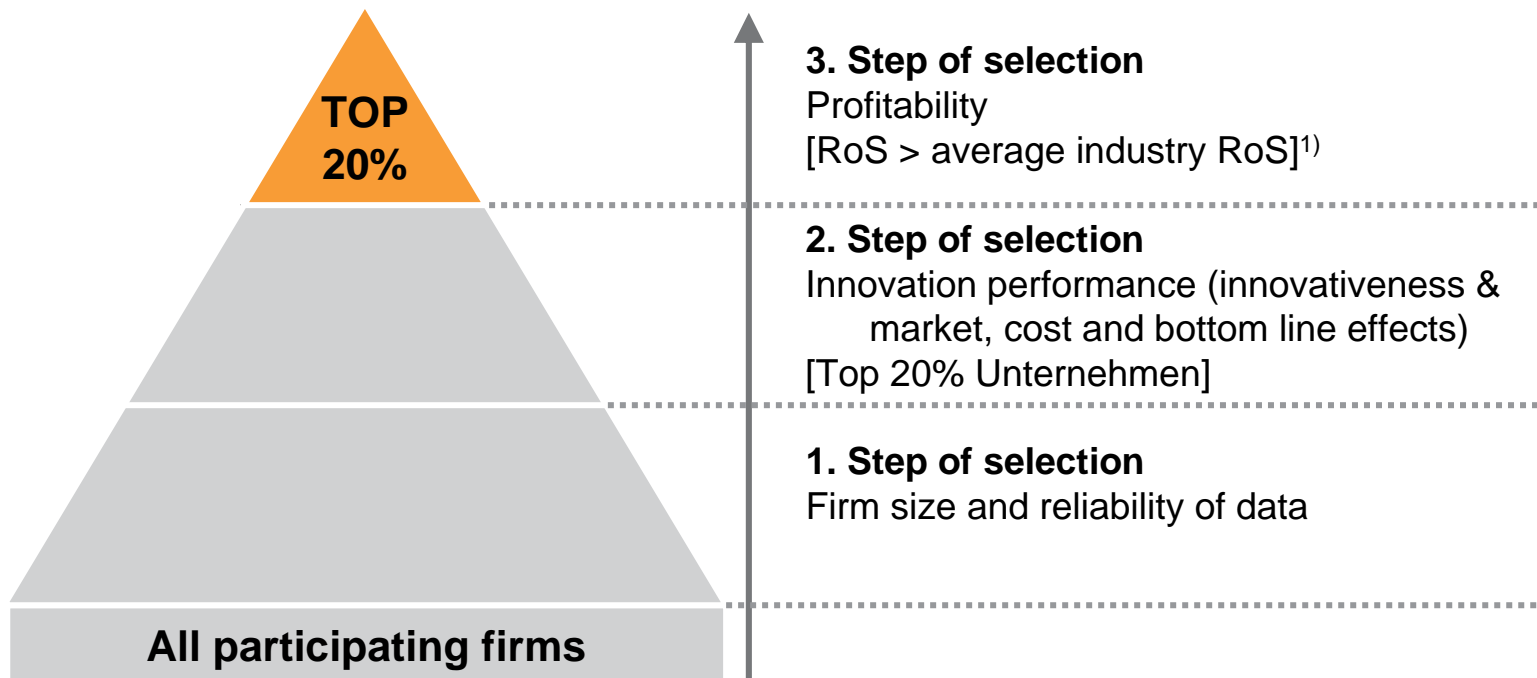


## Broad database of innovate! austria secures valid assessment

innovate! austria. – snapshot



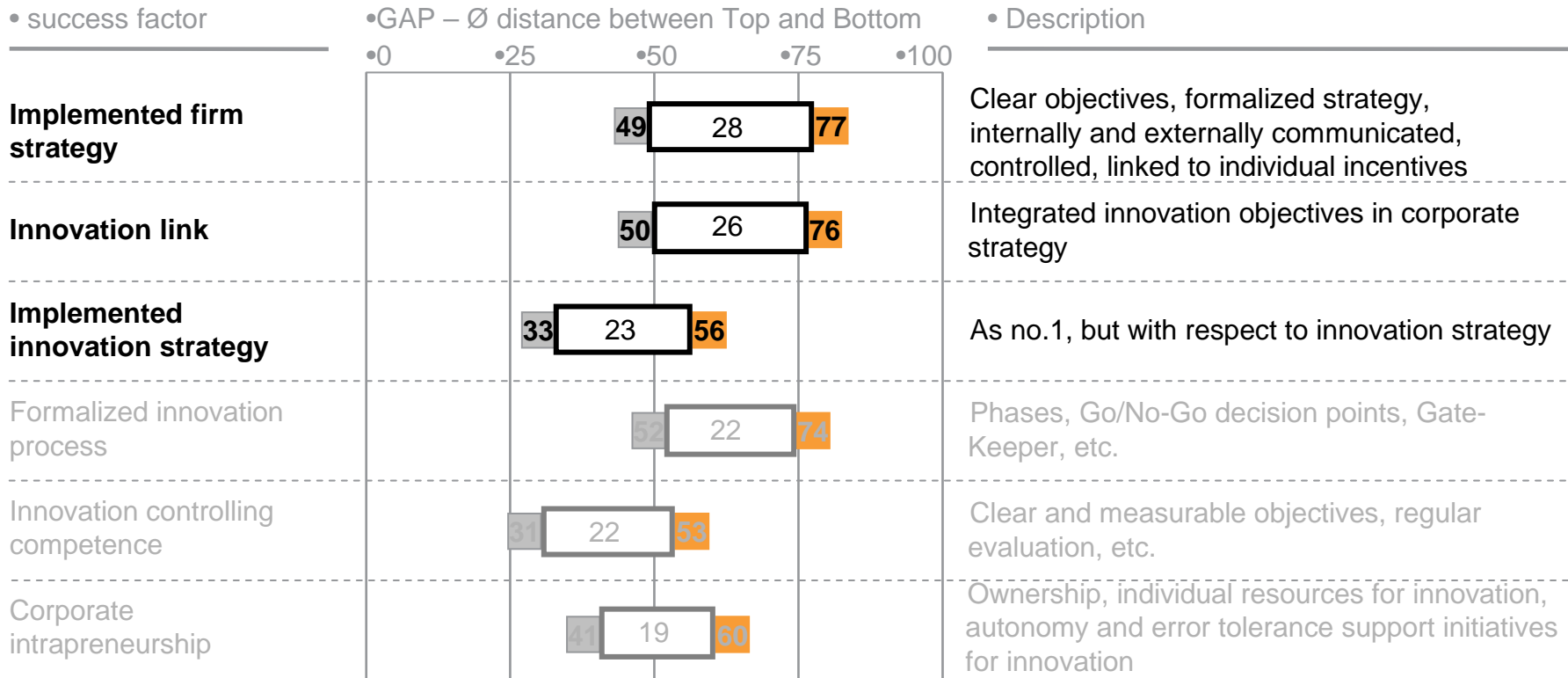
## Benchmarking firms were selected according to their superior innovation performance in several dimensions



1) Ø industry RoS over past 3 years  
(industry average: European Central Bank, Statistische Sonderveröffentlichung 6 - Januar 2007)



# Implemented Innovation Strategy and its link to Corporate Strategy discriminate top-performer firms



# Strategic Innovation Fields: Example from corporate practice



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## Innovations



### Domains

Driving Assistance	Powertrain Efficiency	Comfort Enhancement
 <p>DRIVING ASSISTANCE</p>	 <p>POWERTRAIN EFFICIENCY</p>	 <p>COMFORT ENHANCEMENT</p>
<p>Solutions for safer vehicles. <a href="#">&gt;read more</a></p>	<p>Solutions for cleaner, more efficient and more economical vehicles. <a href="#">&gt;read more</a></p>	<p>Solutions for more comfortable vehicles. <a href="#">&gt;read more</a></p>

“**Comfort Enhancement** means making the life of the consumer as pleasurable as possible. This Domain covers both vehicle access and safety, on-board comfort and the well-being of both the driver and all passengers.”

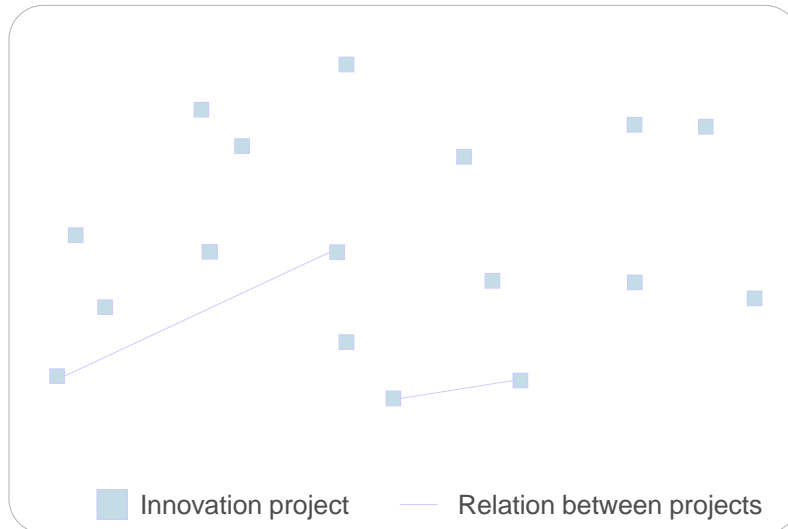
One theme, several projects

3 innovation fields - defined along customer needs + core competencies

Beyond product lines & BUs

# Strategic Innovation Field: What is it?

## Traditional Approach

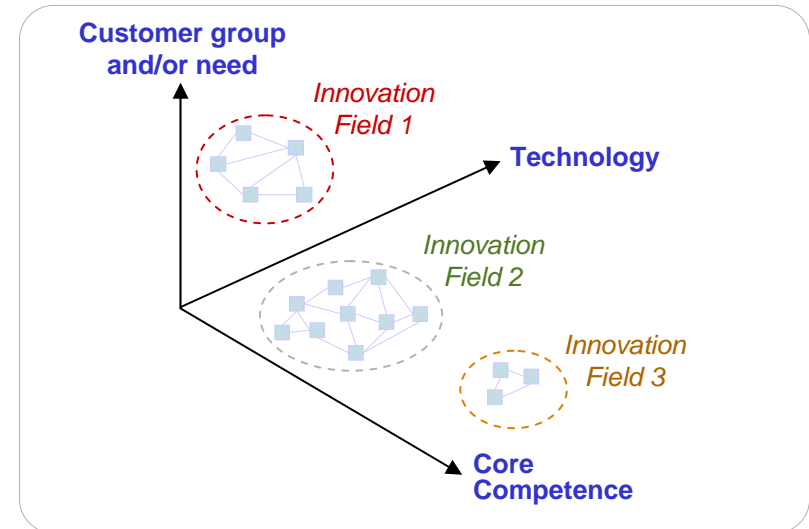


- Firm pursues multitude of **innovation projects, with no or few relations** between the projects



**No focus of innovation activities & few or no synergies between projects**

## Strategic Innovation Fields

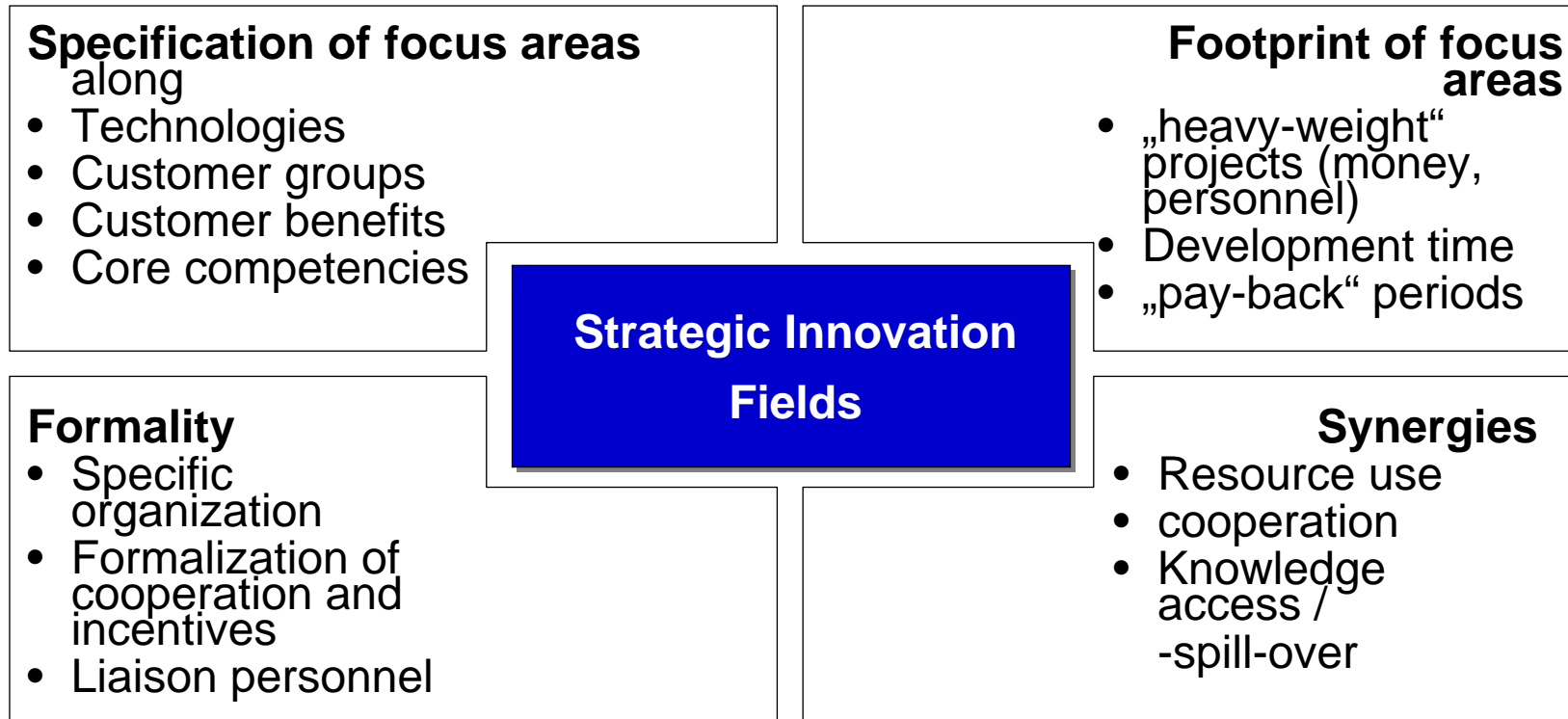


- Innovation fields consist of **multiple, thematically related projects** and are ideally defined along several criteria, e.g. customer aspects, technologies, core competences

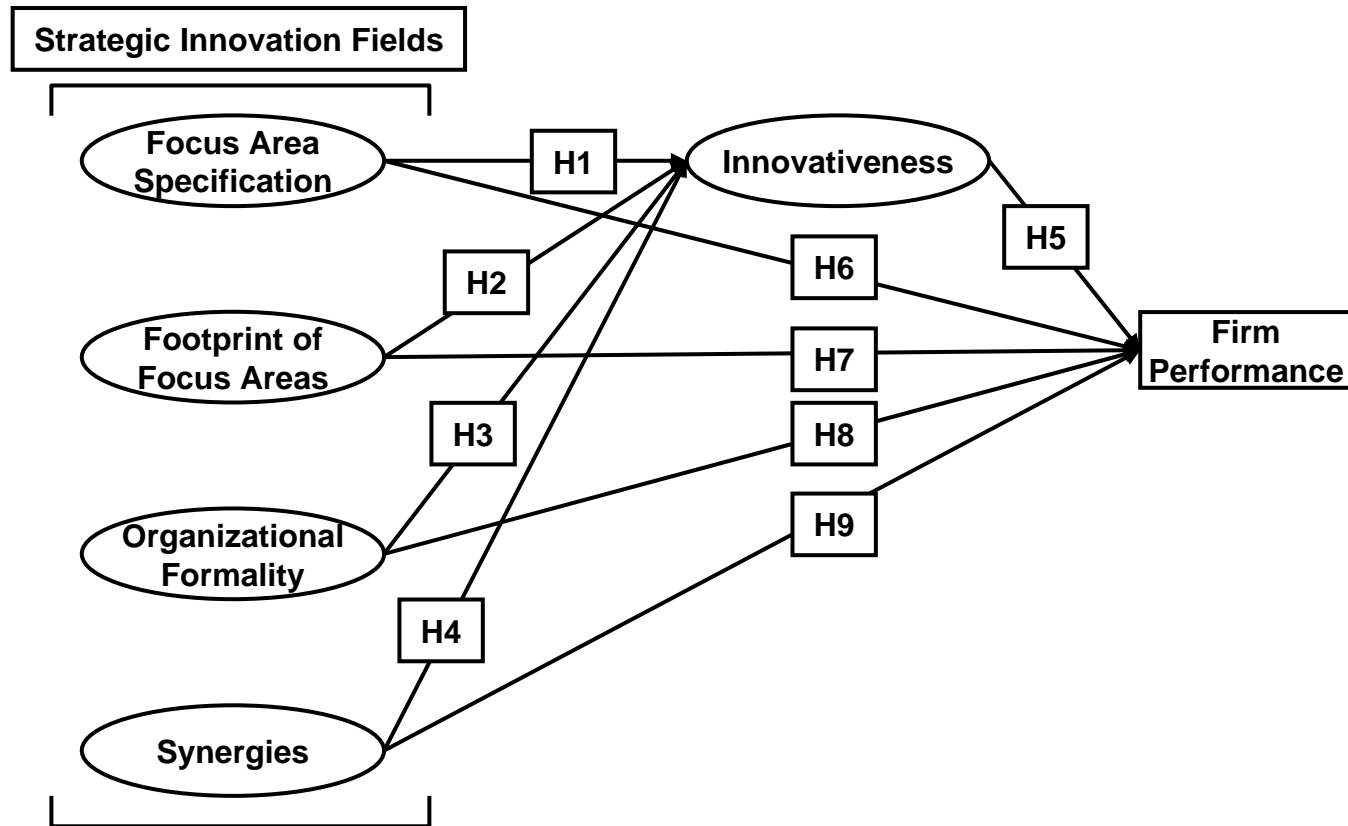


**Focus and synergies between projects**

## Strategic Innovation Fields



# Strategic Innovation Fields, Innovativeness and Firm Performance



# Overview of Research Design

## Sample

### Criteria:

- Publicly listed on stock exchange
- Manufacturing sectors
- Single or dominant business firms<sup>1</sup>



### Sample:

- 122 firms (319 contacted, 40% response)
- 10 manufacturing sectors
- 79% European, 18% North American, 3% rest of world
- Heads or leading employees of innovation, R&D, business development, marketing; CEOs

## Research Methodology

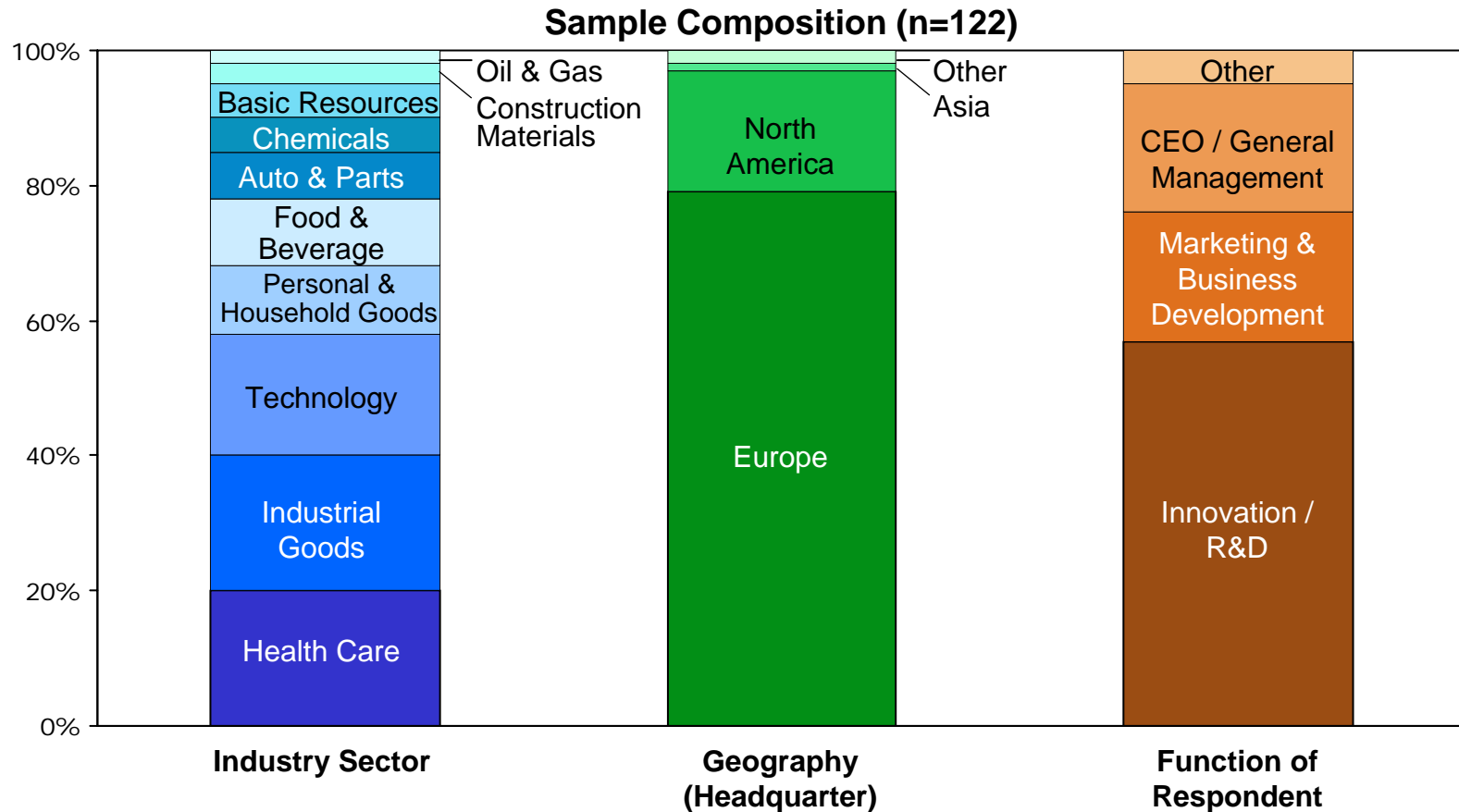
### Quantitative empirical investigation:

- **Written survey:**
  - *Independent var.:* innovation strategy
  - *Dependent var.:* innovation performance
  - Predominantly existing measures; pre-tests
- **Document analysis:**
  - Validation of survey data
  - Qualitative content analysis<sup>2</sup>
  - Annual reports, firms' websites
  - Multiple raters
- **Financial databases:**
  - *Dependent var.:* firm performance (Tobin's q)<sup>3</sup>
  - *Control variables*
  - Datastream and STOXX (Dow Jones)

<sup>1</sup> Rumelt (1974).

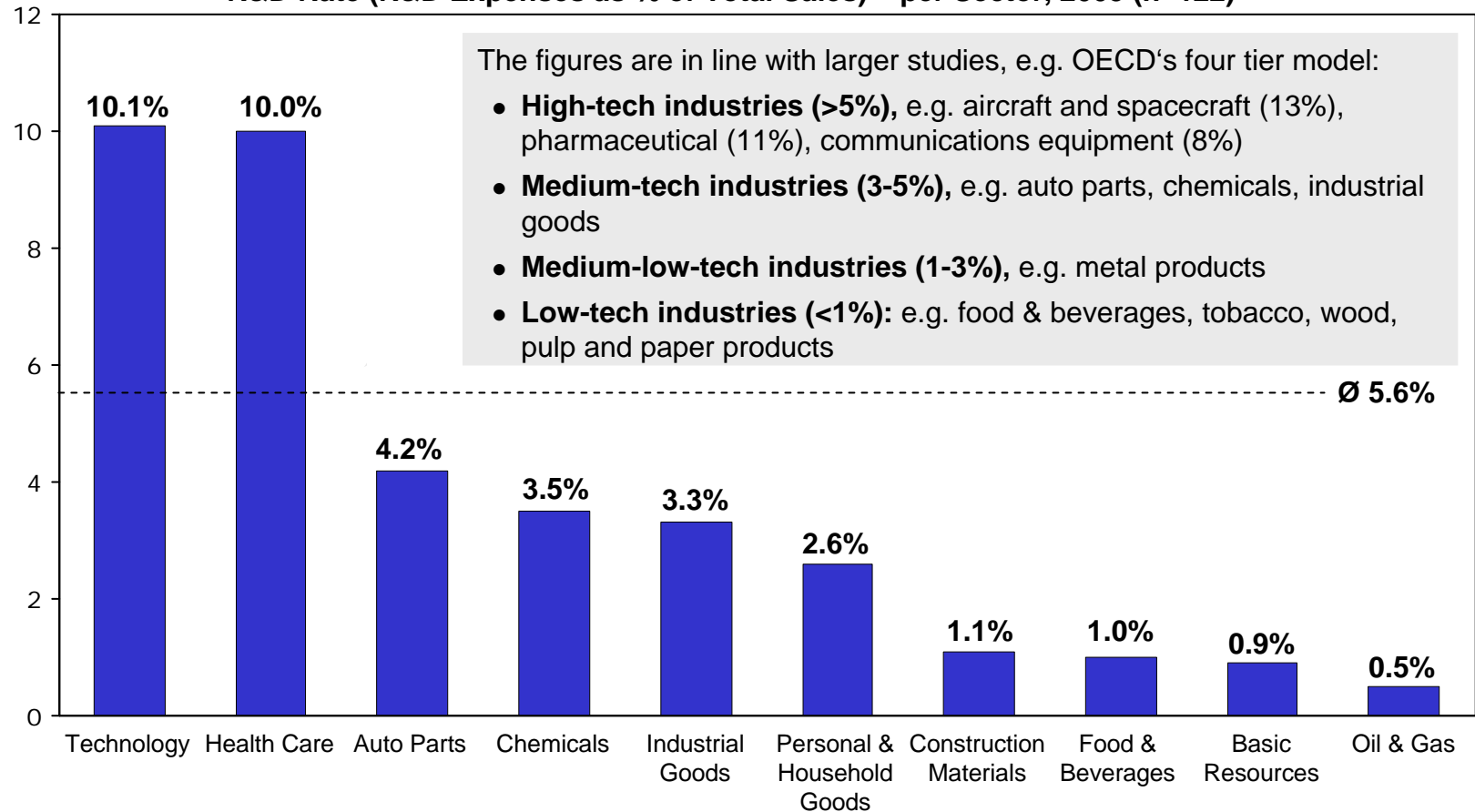
<sup>2</sup> Mayring (2002). <sup>3</sup> Tobin/Brainard (1968), Chung/Priutt (1994).

Participating 122 firms originate from 10 manufacturing sectors and are predominantly headquartered in Europe and North America



## The R&D rate also varies significantly across sectors

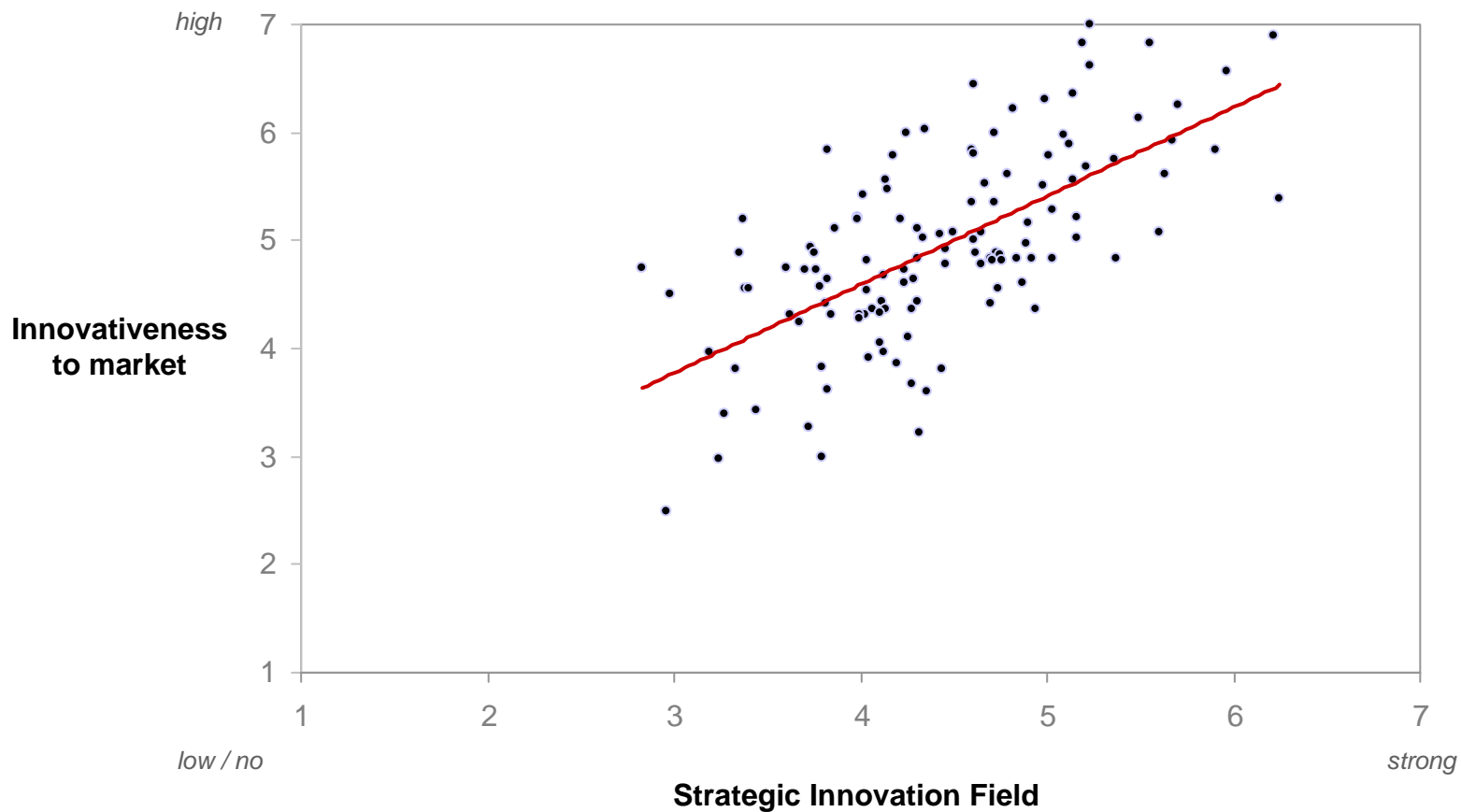
R&D Rate (R&D Expenses as % of Total Sales) – per Sector, 2005 (n=122)



Source: Strecker/Salomo (2008) For graph: sample data from Datastream / Thomson Financial.  
OECD information from, OECD, Science, Technology and Industry Scoreboard 2001.

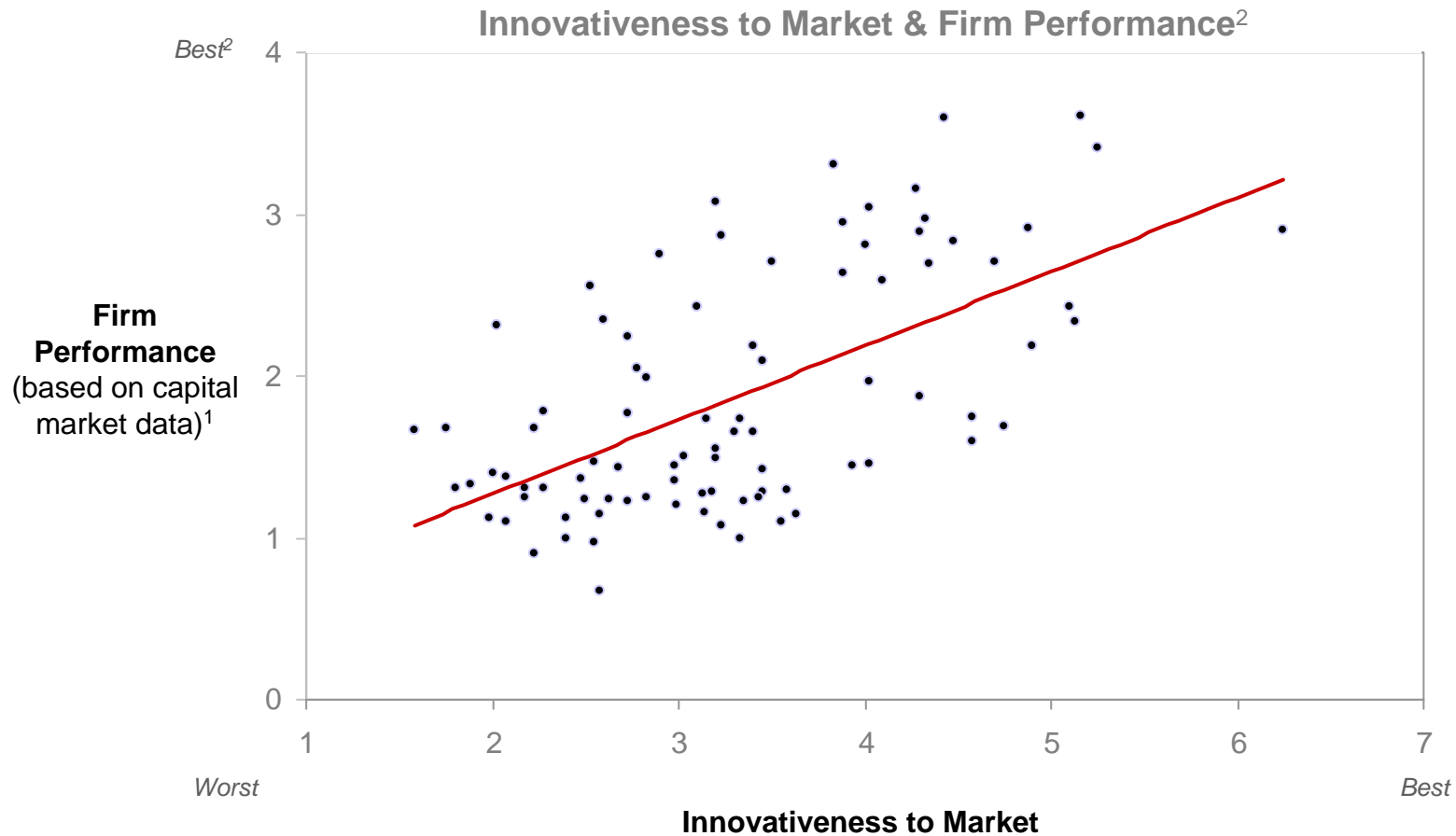
# Innovation Strategy and Innovation Performance

*The more pronounced a firm's innovation strategy is in terms of innovation field orientation, the better its innovation performance*



# Innovativeness to Market and Firm Performance

*The more innovative a firm's new product portfolio is relative to the market (= competitors' products), the more successful a firm is overall*



<sup>1</sup> Firm performance was measured via Tobin's q, a capital market based performance metric, well established in strategy research.

<sup>2</sup> The overall sample size is n=122 - cleaned for extreme outliers.

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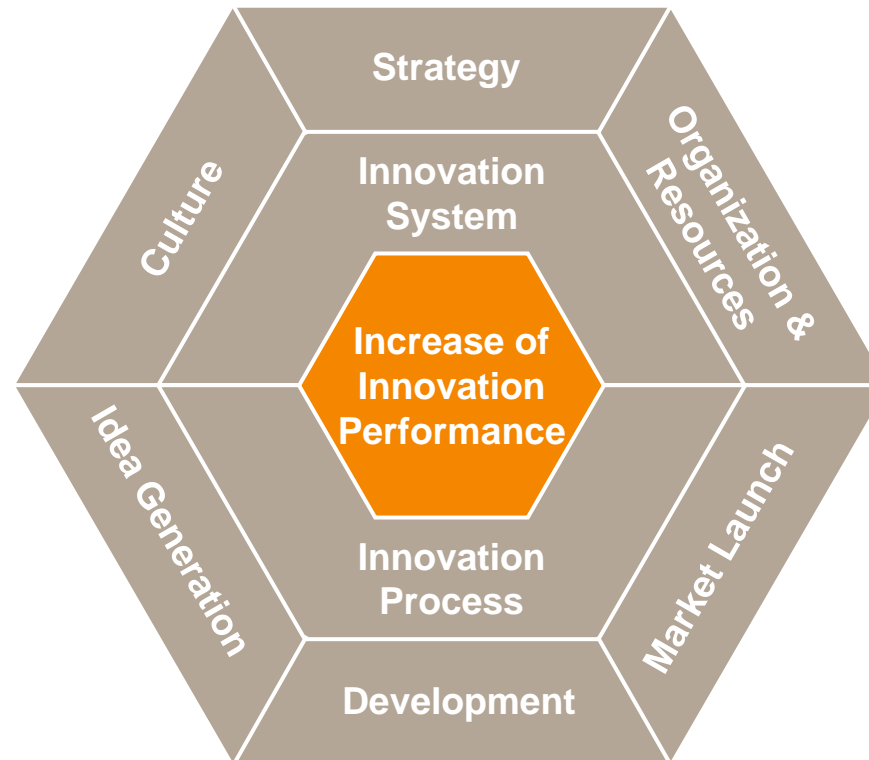
## *Innovation Field Orientation: Key Findings*

- Star performers consider **customer aspects, technologies and own core competences when defining their focus areas**. Taking into account all three criteria *together* seems to make a crucial difference
- **Successful firms have 5-6 focus areas**. This suggests that neither having one or two, nor 10 or 20 fields is most effective
- **Star performers include significantly more projects (around 10) per innovation field**. This implies more focus, given a larger number of resources work on related topics. Also, more projects allow more cross-fertilization and synergies
- **Successful companies pursue mightier projects**, which are endowed with significant financial resources and several full-time project members (or equivalent)
- Concerning organizational support for innovation fields, the main difference between stars and laggards is that **stars not only offer incentives for individual innovation projects, but also for the success of the entire focus area**



***Star performers take a more comprehensive approach to innovation field orientation. They have several aspects in place simultaneously!***

## Innovation Excellence Model explicitly accounts for interdependencies!



salomo@tem.dtu.dk