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# Innovations and performance measurement



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# Overview

- Firm-level perspective
    - Executive's view on measuring innovation performance
    - Key metrics
    - Systemic view on innovation measurement in organization
    - Example from business – client of BCG
  - Industry-level perspective
    - Factors which matter
    - My conclusion
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*Firm-level perspective*

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## *Some general facts 1 (according to BCG survey, 2009)*

- 73% executives believe measuring innovation is important
  - 32% executives are satisfied with their company's innovation-measurement practices
  - 46% executives said that they actually use such practices
  - 52% executives said they use up to 5 metrics
  - 27% executives attempt to drive innovation by linking employees incentives to innovation metrics
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## *Some general facts 2 (according to BCG survey, 2009)*

- *Companies consider themselves*
    - *most effective at measuring innovation outputs (revenue growth, shareholder return, brand impact, acquired knowledge)*
    - *less successful at tracking innovation inputs (people, funds invested)*
    - *not effective at measuring the quality of their innovation processes ( input □ output)*
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# *Key metrics of innovation measurement*

- Metrics used
    - total funds invested in growth projects
    - revenue from new offerings
    - allocation of investments across projects
    - projected VS actual performance
    - average development time per project
    - number of projects that meet planned targets
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## *Key metrics of innovation measurement*

- **Alternative metrics**
    - percentage of sales derived from new offerings
    - number of senior inventors allocated to each innovation
    - number of patents and awards earned by staff
    - number of project-quality tests passed successfully
    - gains in market share (including cannibalism)
    - ROI
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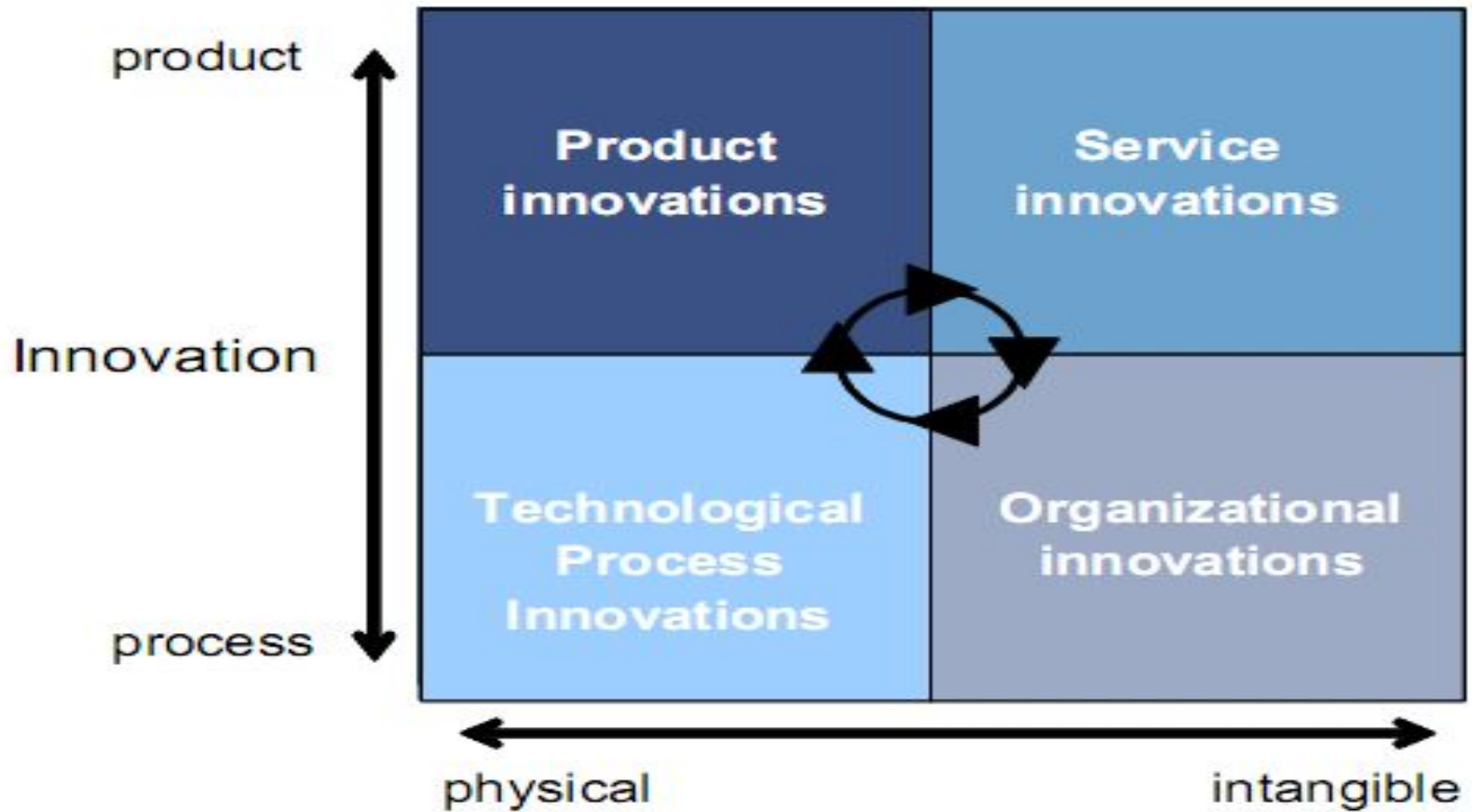
# *A lot of metrics can be introduced*

- Langdon M. “Innovation metrics”, 2008





# *Systemic view on innovation measurement*



# *Example – technological company*



## Inputs

- ◇ Number of new ideas
- ◇ Business-unit investments by type of innovation
- ◇ R&D as a percentage of sales
- ◇ Full-time technical staff and how (and where) it is used



## Processes

- ◇ Idea to decision time
- ◇ Decision to launch time
- ◇ Projects by type and launch date
- ◇ Sum of projected net present values



## Outputs

- ◇ Patents granted
- ◇ Launches by business segment
- ◇ Percentage of sales and profit from new products
- ◇ Innovation ROI

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*Industry-level perspective*

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# *Measuring technical efficiency of innovation performance*

- Industry aspects
  - Environmental (institutional) aspects
  - Size aspects
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## *Inputs*

- % special employees in total staff
- % employees involved in innovative activities
- % time spend on innovative activities
- % employees with masters or university degree
- % employees with training financed by own company
- % companies with relatively more advanced machinery and equipment

## *Weights*

- made use of national innovation and technology subsidies
- has written down innovative plans
- ISO certificate
- cooperate for innovative activities
- measures customer satisfaction systematically

## *Processes*

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# *Outputs*

- number of patents
- new product/services for industry + number of upgrades
- new product/services for country + number of upgrades
- number of different innovative activities

*Eventually, is it possible to try to measure technical efficiency effectively?*

*– My answer is NO,  
we make too many assumptions, and we are exposed  
to subjectivity*

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# Thank You!

- List of information sources
  - A BCG Senior Management Survey, “Measuring Innovation 2009”
  - Fraunhofer Institute Systems and Innovation Research, “Measuring organizational innovation”, 2007
  - R. Kemp “Innovation and firm performance”, 2007
  - Langdon M. “Innovation metrics”, 2008