# Innovations and performance measurement



Anton Mikhailov

# 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

## Firm-level perspective

#### 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

#### Some general facts 2 (according to BCG survey, 2009)

- Companies consider themselves
  - most <u>effective</u> at measuring innovation <u>outputs</u> (revenue growth, shareholder return, brand impact, acquired knowledge)
  - less successful at tracking innovation <u>inputs</u> (people, funds invested)
  - <u>not effective</u> at measuring the quality of their <u>innovation processes (</u> input 
    output)

### Key metrics of innovation measurement

#### Metrics used

- total funds invested in growth projects
- <u>revenue from new offerings</u>
- allocation of investments across projects
- projected VS actual performance
- average development time per project
- number of projects that meet planned targets

### 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)
- □ <u>ROI</u>

## 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

## Industry-level perspective

Measuring technical efficiency of innovation performance

- Industry aspects
- Environmental (institutional) aspects
- Size aspects

Inputs

Weights

#### % 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

# Processes

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

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

# 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

