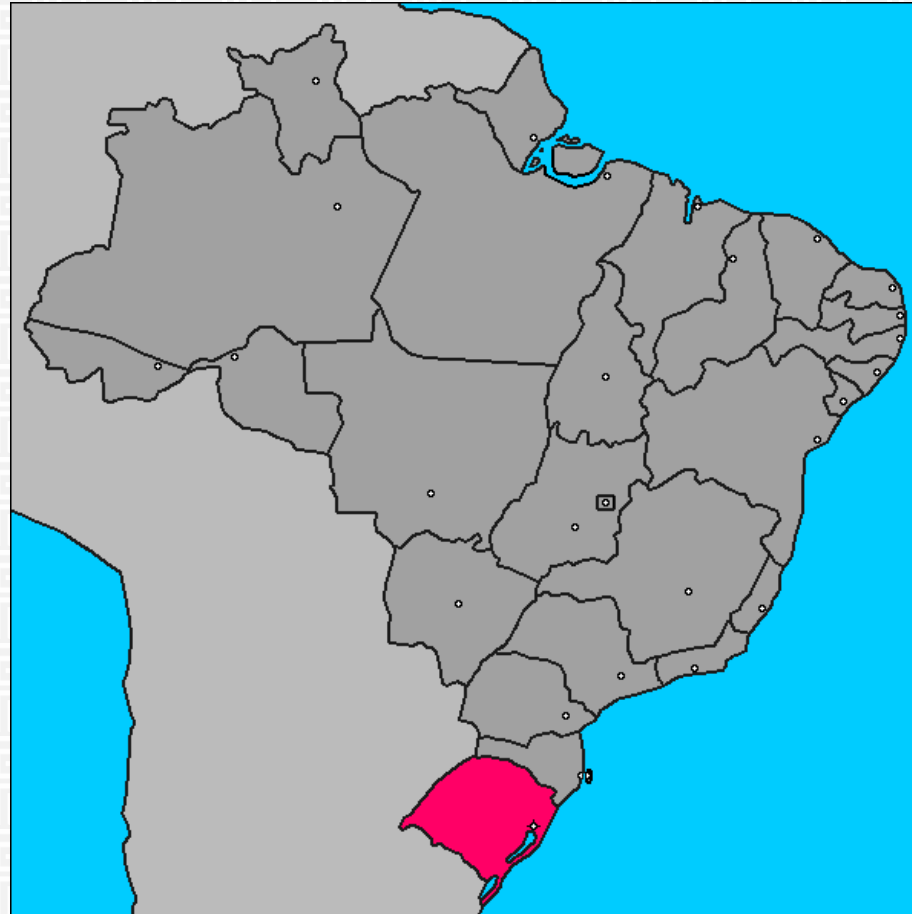


CADMC 2013  
CAMBRIDGE

**GUIDELINES FOR THE PROPOSAL OF A SYSTEM OF  
DESIGN MANAGEMENT INDICATORS IN PRODUCT  
DEVELOPMENT COMPANIES**

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# PORTO ALEGRE — RIO GRANDE DO SUL



# UFRGS — FEDERAL UNIVERSITY OF RIO GRANDE DO SUL



|                |  |
|----------------|--|
| First school   | 1895   |
| Admin. staff   | 4,494  |
| Undergraduates | 24,567   |
| Postgraduates  | 8,415  |
| Campus         | 371,742 m <sup>2</sup> of constructed area     |
| Website        | <a href="http://www.ufrgs.br">www.ufrgs.br</a> |

# WHY THIS RESEARCH IS IMPORTANT TO BRAZIL?

ICD Project: Innovation, Competitiveness and Design – [www.ufrgs.br/icd](http://www.ufrgs.br/icd)

Guidelines to enhance the competitiveness of the Brazilian Industry through the management and development of innovative products

Five large Brazilian product development companies

At the end of 2015

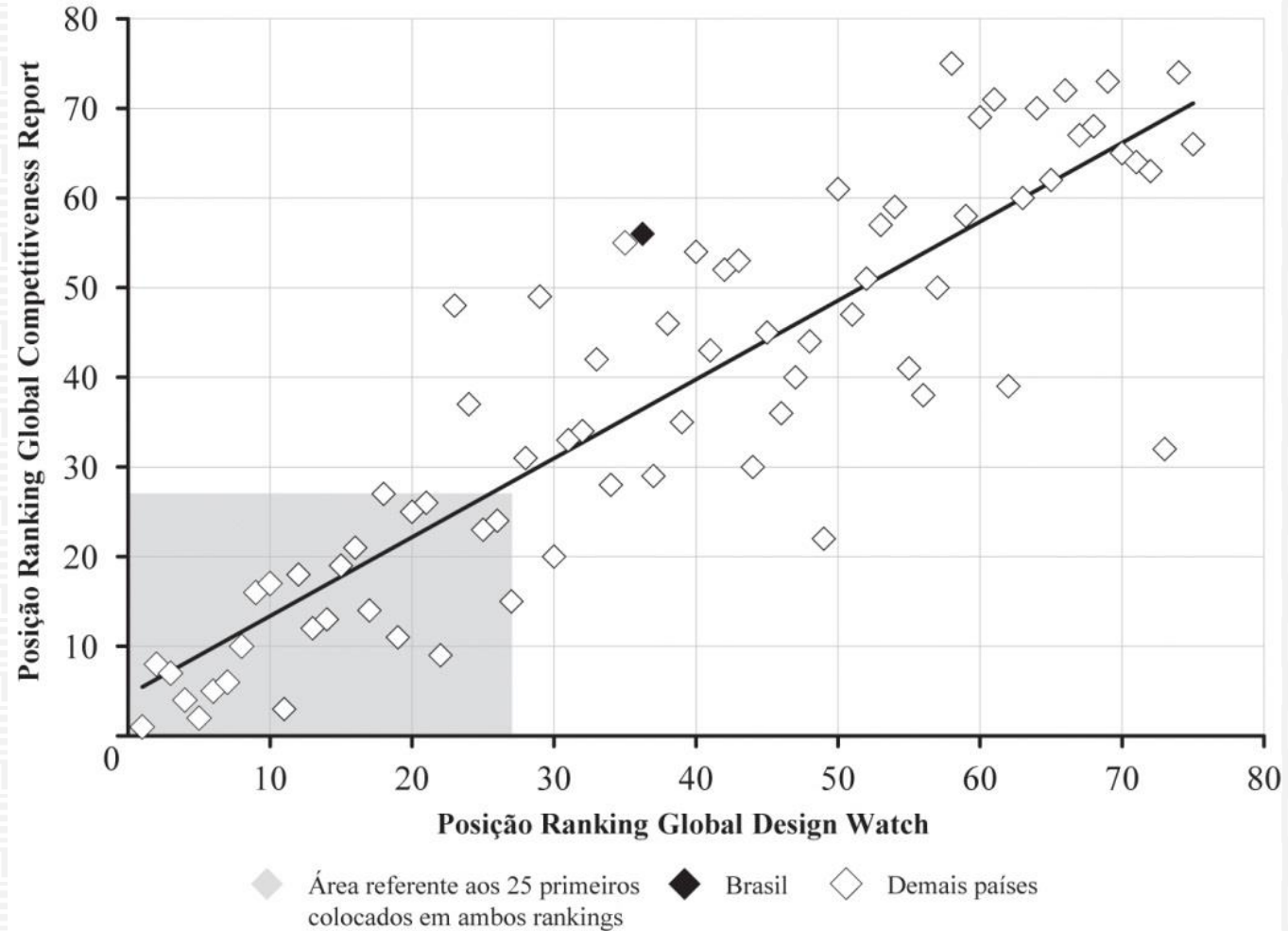
4 Doctorate students

5 M.Sc. Students

Other four Brazilian Universities joined the project

2 professors of the Institute of Design /IIT - Chicago

# INTRODUCTION



# RESEARCH METHOD

Investigation in a three companies study cases

Interviews with the designers and people connected with them and also with the product development process

Way of understanding the routines and environment in which the company are inserted

Research protocol based on Kaplan & Norton (1997); Nixon (2002); Oliver (2002); Lockwood (2008); Andrew et al. (2009); Viladàs (2009); Borja de Mozota (2003)

# COMPANIES SELECTION CRITERIA

The main activity of the companies should be product development

The companies should be located in the state of Rio Grande do Sul

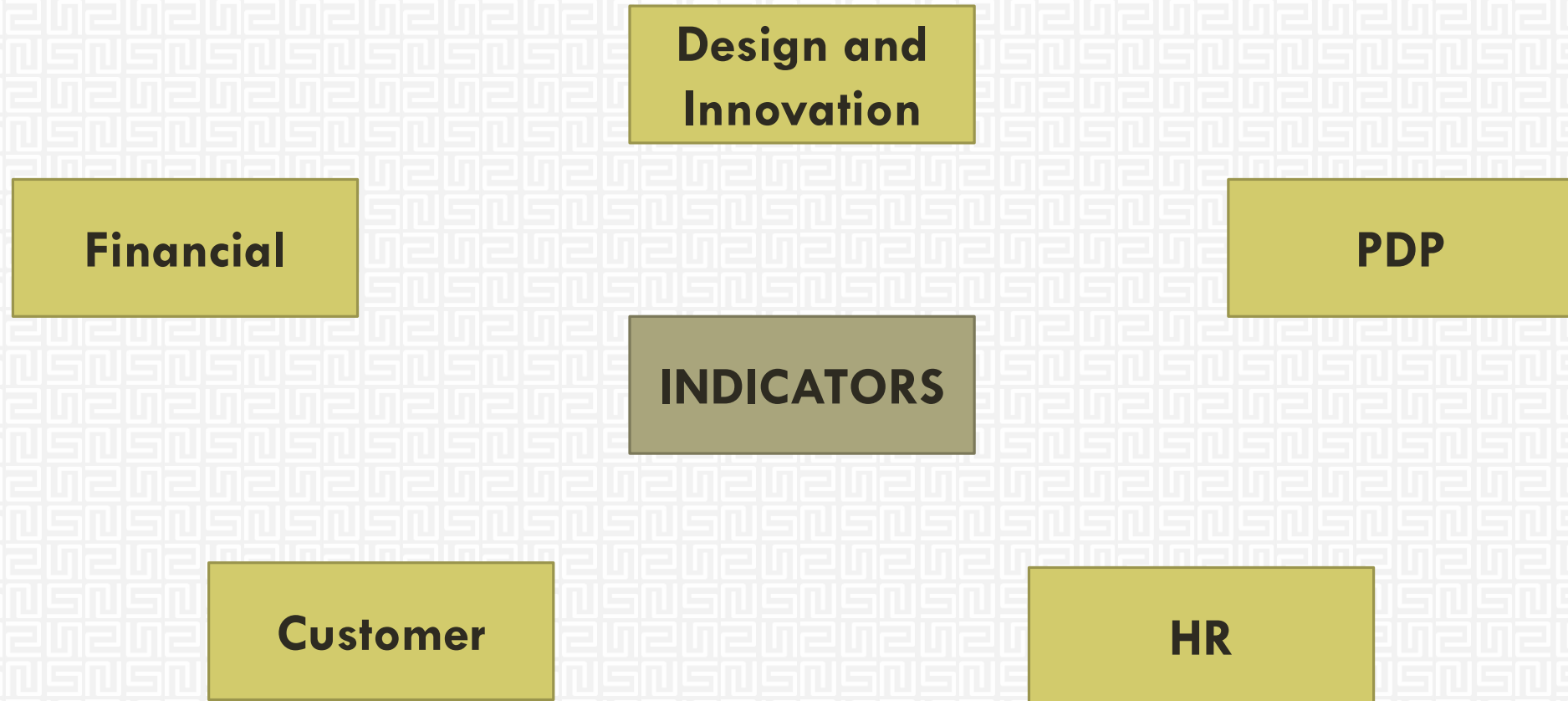
The companies should have an internal department in charge of product development, with at least one professional working as a designer

# RESEARCH PROTOCOL

- 1 – Schedule interviews with designers and/or design coordinators of the companies and ask them to select the indicators from the chart that they regard as important in their company context.
- 2 – After the selection of each indicator, the respondent should justify his or her choice. This reason will characterize the criterion for selection.
- 3 – After the selection of the indicators, each respondent should select the three indicators that he or she finds more relevant than all the others selected.



# RESEARCH PROTOCOL



# RESEARCH PROTOCOL — EXAMPLES OF INDICATORS

**Design and  
Innovation**

Number of new projects per year

**Financial**

Profitability per product

**PDP**

Mean time of product development

**INDICATORS**

**Customer**

Customer retention

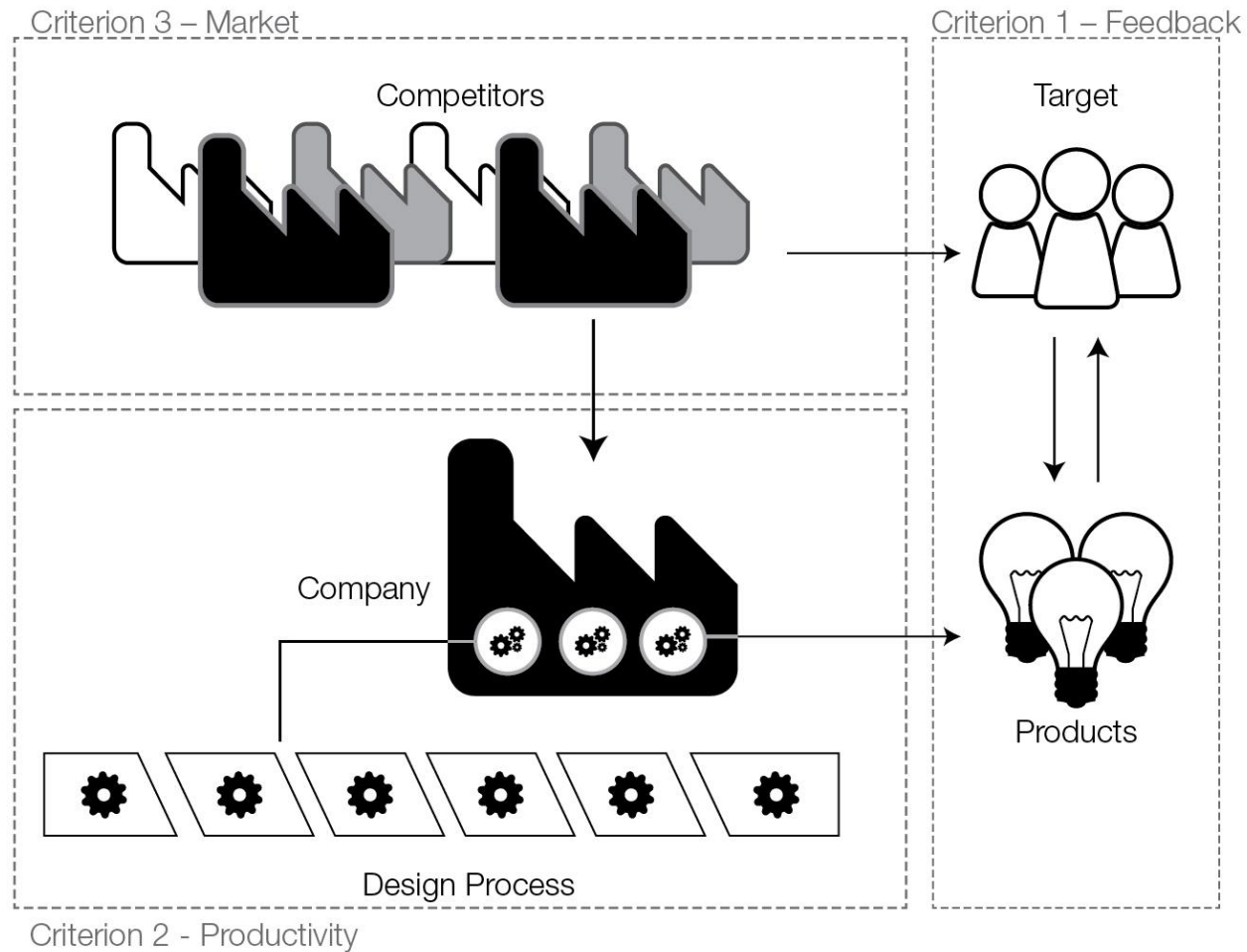
**HR**

Internal customer satisfaction

# CRITERIA CHOOSEN BY COMPANY

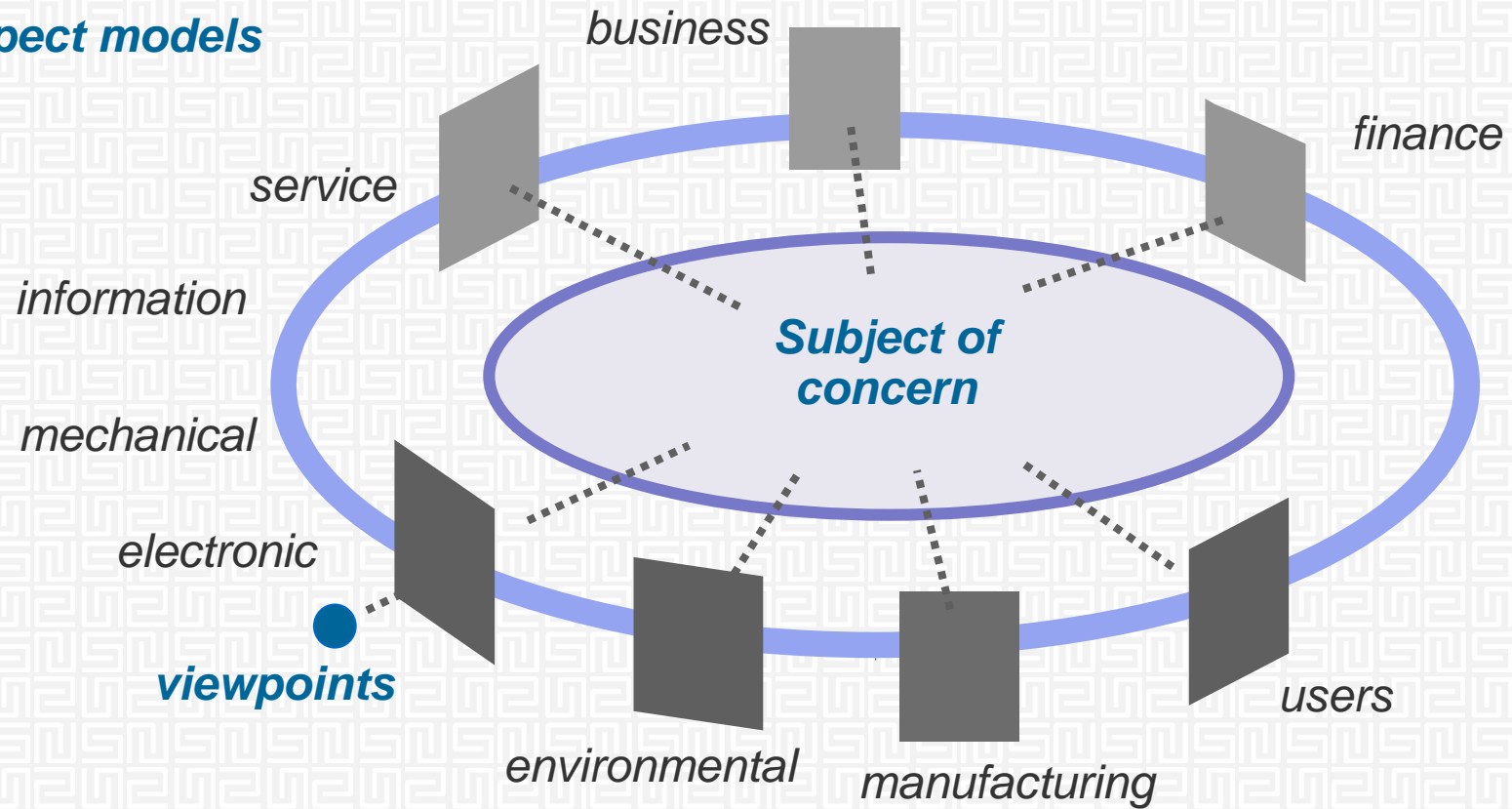
|          | Company A        | Company B                     | Company C        |
|----------|------------------|-------------------------------|------------------|
| Criteria | Feedback         | Financial return              | Financial return |
|          | Productivity     | Reduction of production costs | Feedback         |
|          | Development time | Product performance           | Competitors      |
|          | Competitors      | Productivity                  | Productivity     |

# CRITERIA FOR THE SELECTION OF INDICATORS



# DIFFERENT VIEW POINTS

*aspect models*



# GUIDELINES

## FROM THE POINT OF VIEW THE PRODUCT DEVELOPMENT DEPARTMENT

1. Alignment between indicators and the business strategy
2. Balance between the results, performance and market indicators
3. Establishing relationships between indicators
4. Easy indicator collection
5. Selection of indicators and the action plan
6. Shared vision by the users of the indicators system
7. Preparation for the implementation

# NEXT STEPS

1. Focus group with experts to choose indicators
  - Use of the Guidelines
  - Competitiveness
  - Innovation
2. Indicators System Conception
3. Implementation and Standardization
4. Development of a Benchmarking web-based platform

# DOUBTS

1. How to define or propose indicators to measure competitiveness in a market that the companies do not know even their marketing share?
2. Considering that each company can have different strategic objectives, how to propose a standardized indicator system in order to check their competitiveness degree?