



A decision making framework for a business group

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Agenda

1. Motivation
2. Theoretical foundations
3. Framework development
4. Case studies
5. Concluding remarks



This paper is about

- The development of a 6-steps framework to facilitate decision-making for a business group;
- It is not about a particular application of OR/MS tools;
- It emerges from the group's interest in improving its decision-making practice, in general.



Firm's motivation

- Top management felt that:
 - Important decisions were made with not enough rigour and in a non-systematic way;
 - Financial measures were perceived insufficient to decide about the attractiveness of future business projects;
 - Decision relevant issues were not always taken into consideration at the right moment;



Researchers motivation

- Is it possible to develop a unique framework to structure all major strategic decisions in a systematic way?
 - OR/MS provides a large number of methodologies, sometimes with overlapping objectives;
 - Rather than solving just a particular problem, the aim of this work was to develop an overarching framework to improve strategic decision-making;



Theoretical foundations: related papers

- Tools for strategic decision making
 - Montibeller & Franco (2011), Franco & Montibeller (2011), Ram et al. (2011)
- Surveys of OR/MS for supporting strategy
 - O'Brien (2011), Munro & Mingers (2002), Stenfors et al. (2005), others
- Multimethodology practice
 - Howick & Ackerman (2011), Munro & Mingers (2002), others



Field work and sources of information

- The purpose was to identify the group's needs in decision-making
- Data collection
 - Survey,
 - Focus groups,
 - Unstructured interviews



Findings: problems and decisions nature

- Typical activities
 - Generation of strategic initiatives;
 - Assessment of internal and external environment;
 - Evaluation of strategic initiatives.
- Requirements of decisions
 - Decisions along the firm strategic objectives
 - Increase awareness of uncertainty
 - Common grounds for all decisions



Proposed framework

Step 1: Problem
definition

MAPPING

Step 2:
Objectives
coherence

Step 6:
Managing
uncertainty
MCDA-SCENARIOS

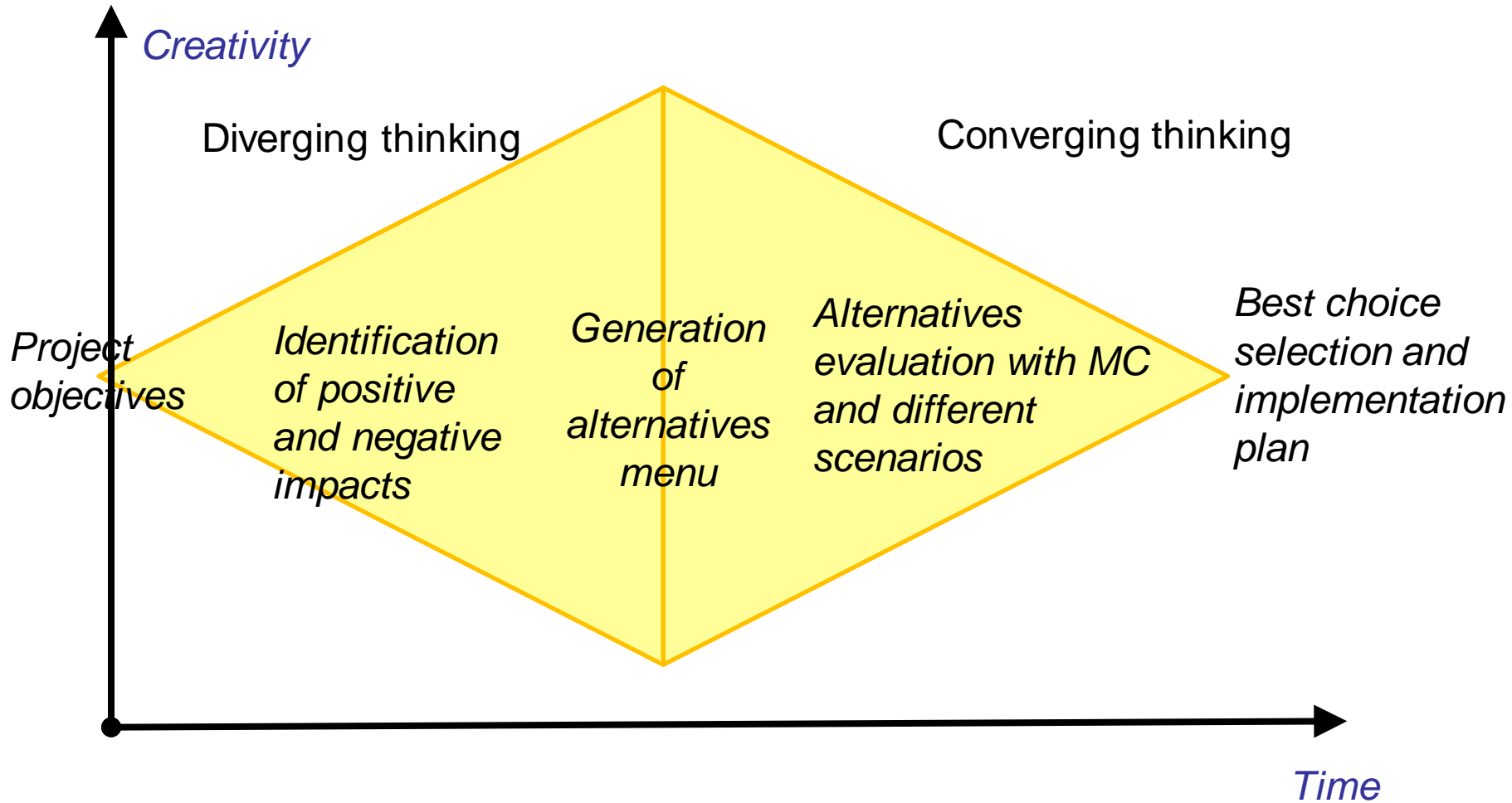
Step 3:
Environmental
analysis
SWOT-StH

Step 5:
Evaluation of
alternatives
MCDA

Step 4:
Alternatives
generation
SCA



Underlying dynamics



Structure of the intervention

Howick & Ackermann (2011)

- Context of integration
 - Large for profit firm
 - Objective:
 - To develop a FW for DM
- Nature of intervention (1 year)
 - Facilitators
 - Team of 2 researchers
 - OR and finance
 - Top and middle mgmt
 - Tools
 - Survey
 - Unstructured interviews
 - Seminar
 - Workshops
- Type of integration
 - Qual-quant
 - Sequential-interactive
 - Rich pictures,
 - SWOT analysis
 - SCA
 - MCDA
 - Scenario analysis
- Effects of intervention
 - Three applications
 - Guidelines
 - Commitment for transferability



CASE STUDIES / APPLICATIONS



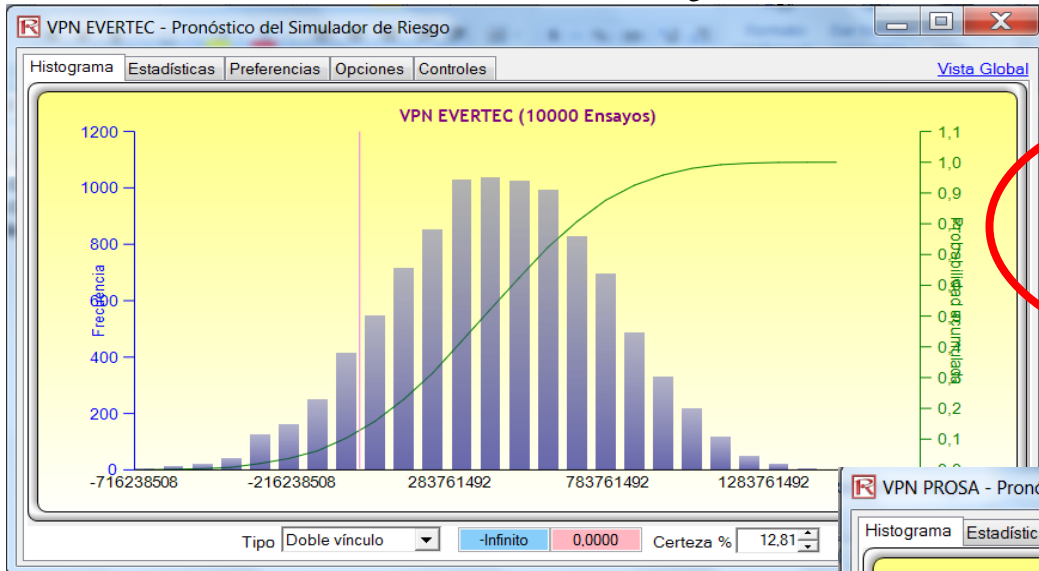
Applications

- 3 major corporate decisions have been undertaken:
 - Portfolio prioritization
 - 100 projects, 5 different types, 5 year horizon
 - Partner selection for a new venture
 - Technological supplier for a new financial service venture
 - Disposal of a failed initiative
 - Country club with a golf course and real estate development

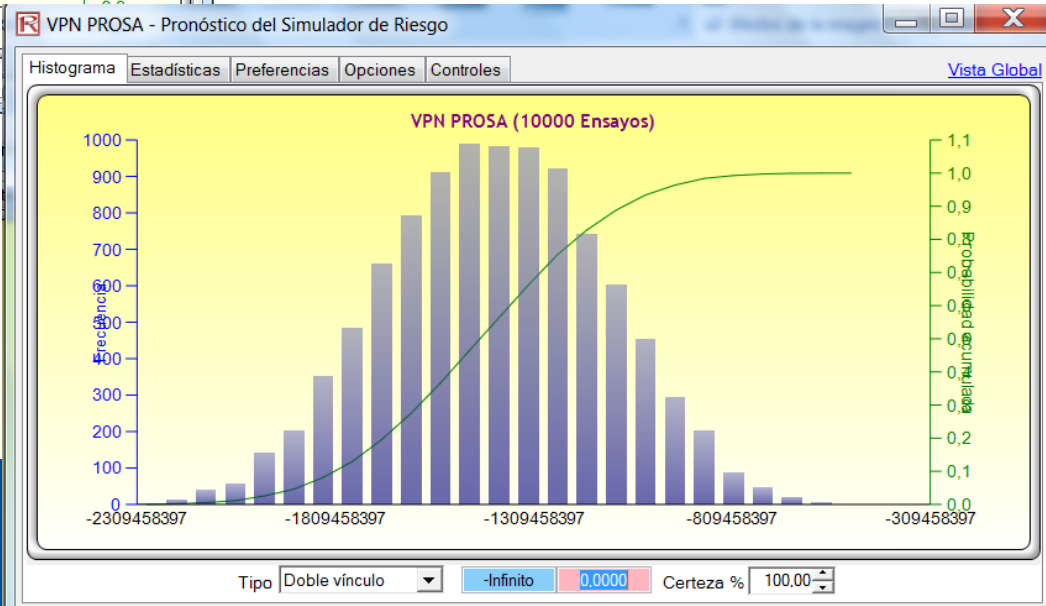


Technological supplier

- Financial analysis:



Supplier 1 Avg \approx
\$ 391'630.075



Supplier 2
Avg \approx \$ -1.446'414.142

Disinvestment

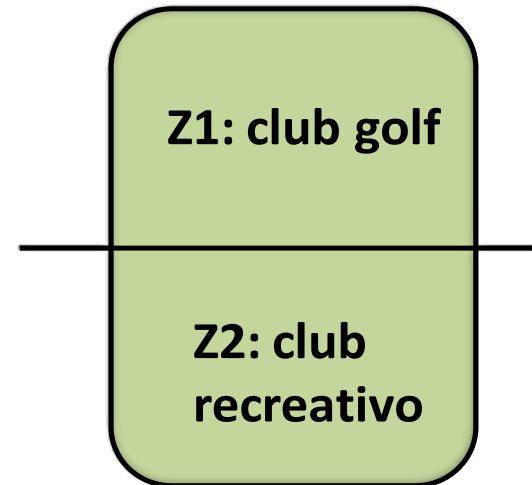
Club completo o sin separación

- **Venta al inicio Z1 y Z2 (2013)**



Club con separación

- **Venta al inicio Z1**
- **VF – arriendo 3ro (est 5,6) 4%**



- **Venta al inicio Z2**
- **VF – Club (arrienda y opera el club), est 3,4**

Framework application

	Problem definition	Objectives coherence	SWOT/ Stake	Alternatives generation	Alternatives evaluation	Uncertainty
	1	2	3	4	5	6
Prioritization	√	√			√	
Business opportunity	√	√	√		√	√
Disinvestment	√	√	√	√	√	√



CONCLUDING REMARKS



Discussion issues

- The framework has to balance the structured decisions that top management demands, with the adaptability to deal with the different problems that complex organizations face;
- **Incommensurability** – no evidence: The linear nature of the framework reduces this problem;
- **Cultural barrier** - to adopt new ways of thinking;
- **Cognitive difficulties** – knowledge transferability;



Lessons learned

- Seminars for top management should be focused on the expected outcomes of the framework
- Seminars for middle management should be focused on the design and construction of the framework steps
- Step 1: Top management should be involved
- Step 4: SCA (alternatives generation) can be messy, a facilitator could speed up the process
- Step 5: Complex projects are best served using specialized SW



Conclusions

- The engagement with top management made possible that a year long intervention produced 3 tangible outcomes
- Key decision makers should “buy” the new approach to ensure success
- The main challenge is to ensure the transferability of the framework: its application after the facilitators leave



What's next

- Further research:
 - Survey of OR/MS within the context of Latin-American firms;
 - Applicability of the framework at different firms/contexts;
 - A research question:
 - Will more sophisticated quantitative techniques be a surplus or a dead weight for the success of the framework?



What's next for the firm

- Meetings with top management to create mechanisms that ensure the integration of the framework in the company's culture
- The creation of a second level team in charge of the technical aspects of the framework, which support...
- The availability of a set of tools, software and guidelines to facilitate that all new major decisions and projects meet the new standard.



THANK YOU!

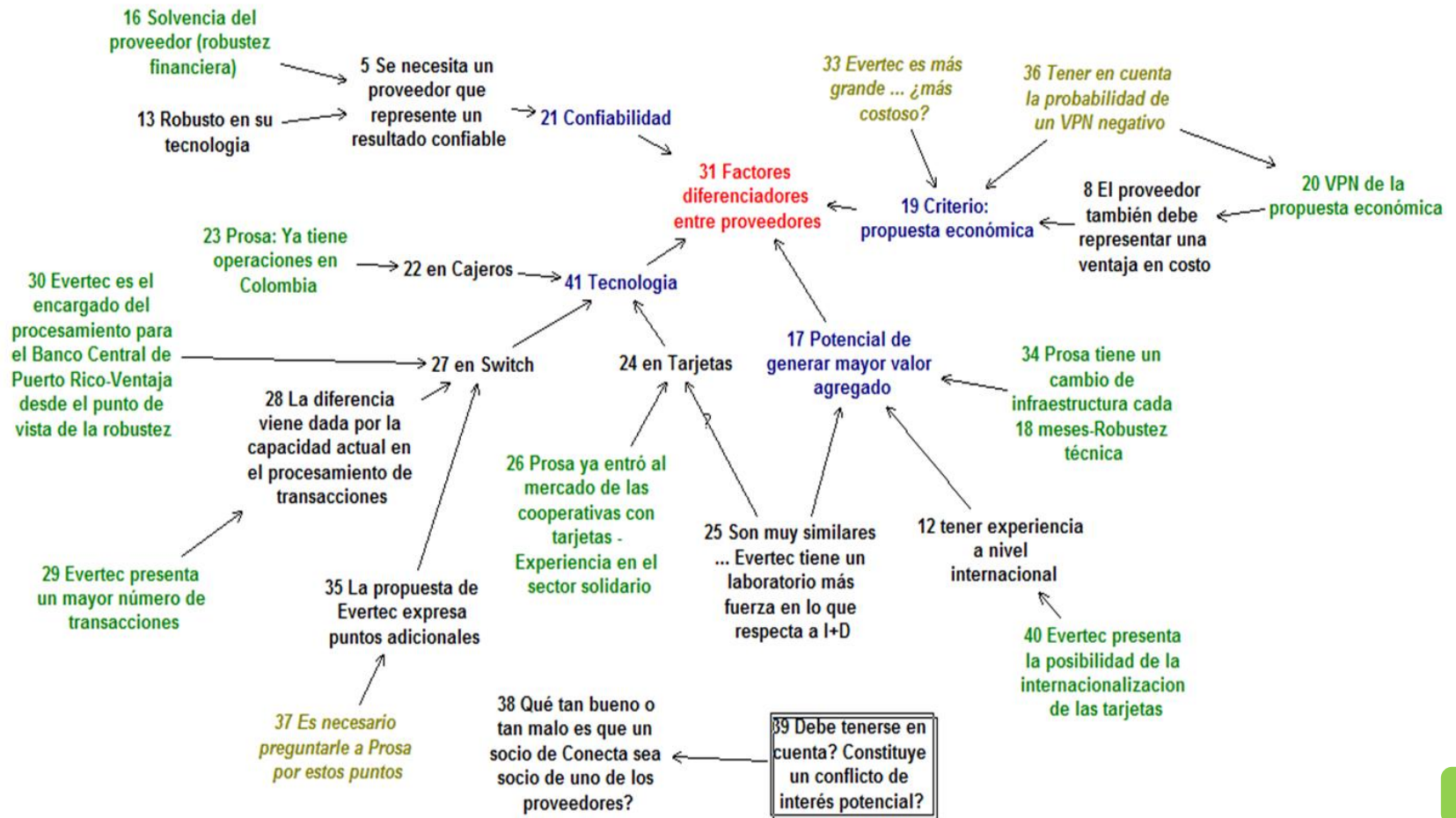


Step 1: Decision type definition

- What we want to do?
- How we want to do it?
- Why we want to do it?
- Mapping techniques:
 - Mind mapping, cognitive mapping, rich picturing



Step 1: An example



Step 2: Objectives coherence

- Coherence Matrixes

	Obj. Area 1	Obj. Area 2	Obj. Area 3	Obj. Area 4	Obj. Area 5	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
Obj. Decision 1		√				√	√			
Obj. Decision 2			√					√		
Obj. Decision 3		√		√					√	
Obj. Decision 4										
Obj. Decision 5			√							√

B



Step 3: Threats and opportunities

- Identification

		External aspects to consider					
		Politic	Economic	Social	Techno logical	Environ ment	Legal
Opportunities							
Threats							

- Relevant for criteria definition



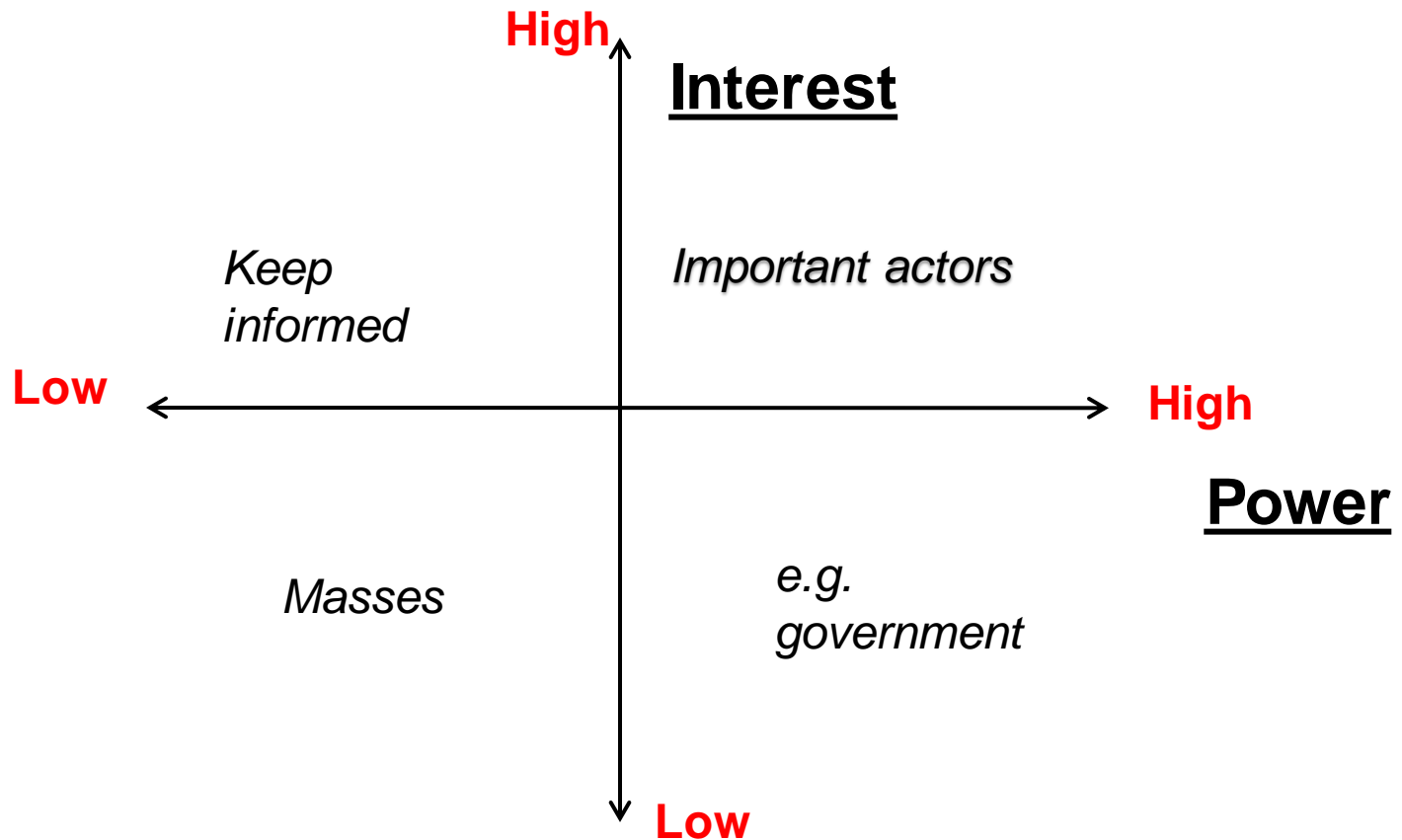
Step 3: Strengths-weaknesses (Resource analysis)

- Affecting the decision or the project
- Add to produce relevant criteria, in terms of the efficient use of resources

Resources	What we have?	What we require?
Physical		
Economic / financial		
Tecnological		
Human / knowledge		
Managament		



Step 3: Stakeholders analysis



B

Step 4: Alternatives generation

- Strategic choice approach:
 - AIDA: Analysis of interconnecting decision areas
 - Decision areas
 - Options

Zones
Zone 1: Golf club
Zone 2: Social club
Integration

Term-Management
Sale right away
Lease contract-sale at the end
Own operation-sale at the end

Services
High end
Working class
Both

B

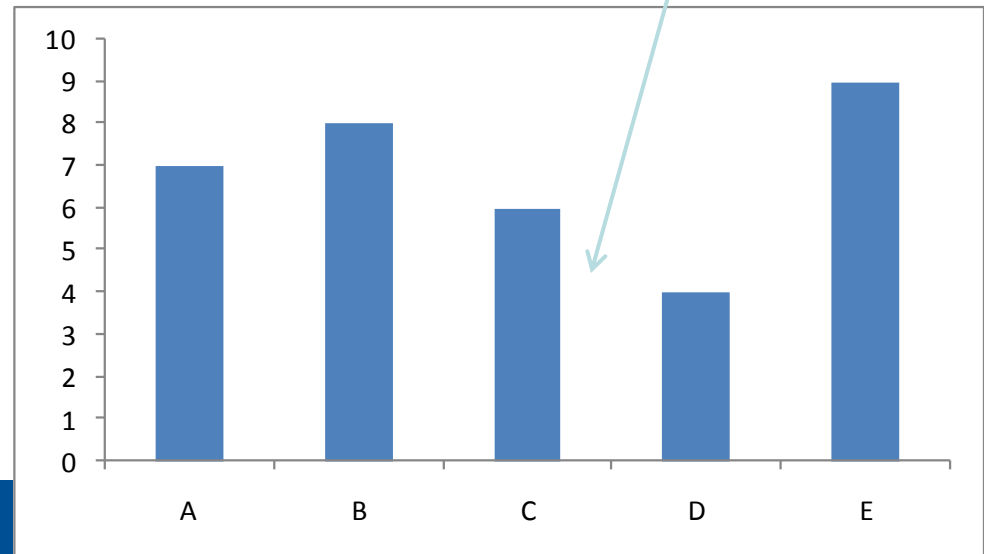
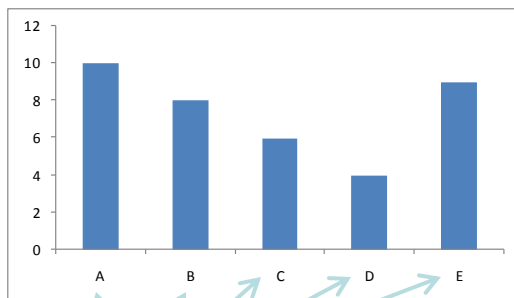
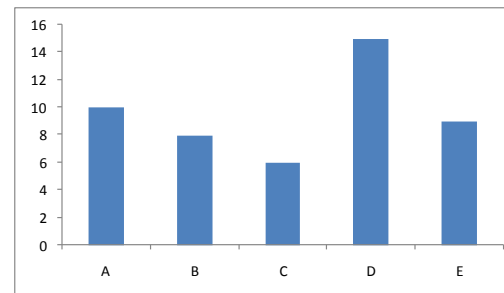
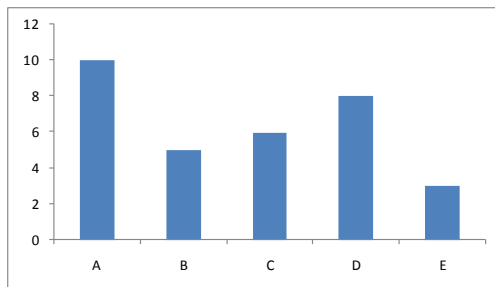
Step 5: Alternatives evaluation with multiple objectives

- MCDA
 - Development of a criteria tree
 - Calculation of criteria for all the alternatives
 - Definition of criteria weights
 - Evaluation
 - Sensitivity analysis



Step 6: Managing uncertainty

Competitors agresiveness



Scenarios

Economic activity

Alternatives

Step 6: Managing uncertainty

- Alternative strengths
 - Regret
 - Risk
 - Robustness

