ERM-ICS :A STRATEGIC APPROACH

BASICS :

-INTRODUCTION TO RISK MANAGEMENT

-MISSION-VISION-STRATEGY

-THE « BASE INDUSTRIAL CASE» OF RISK AND CONTROL GOVERANCE IN INFRASTRUCTURE PROJECTS

-APPENDIX

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Introduction to Risk Management

The company, in its continuing work, is faced with a variety of situations characterized by uncertainty and lack of predictability. These may question the achievement, in the short term, of an appropriate balance economic and financial and, in the medium/long term, the value creation and the survival of the company.

RISK COMPANY

Pure risks

Risks which may result in only a financial loss for the company

Ex: Risks that cause material damage to the property of the company; Risks of civil responsability

Speculative risks

Risks which may result in both profits losses both for the company

Ex: Market Risk; financial risks; risk of production; Political risks; Risks of innovation

In the following will be discussed pure risks, for which, by their nature, will have to transform the risk profile in the environment in a more consistent with corporate objectives

Relationships between the risk management principles, framework and process

a) Creates value

b) Integral part of organizational processes

c) Part of decisional making

d) Explicity adresses uncertainty

e) Systematic, structured and timely

f) Based on the best available information

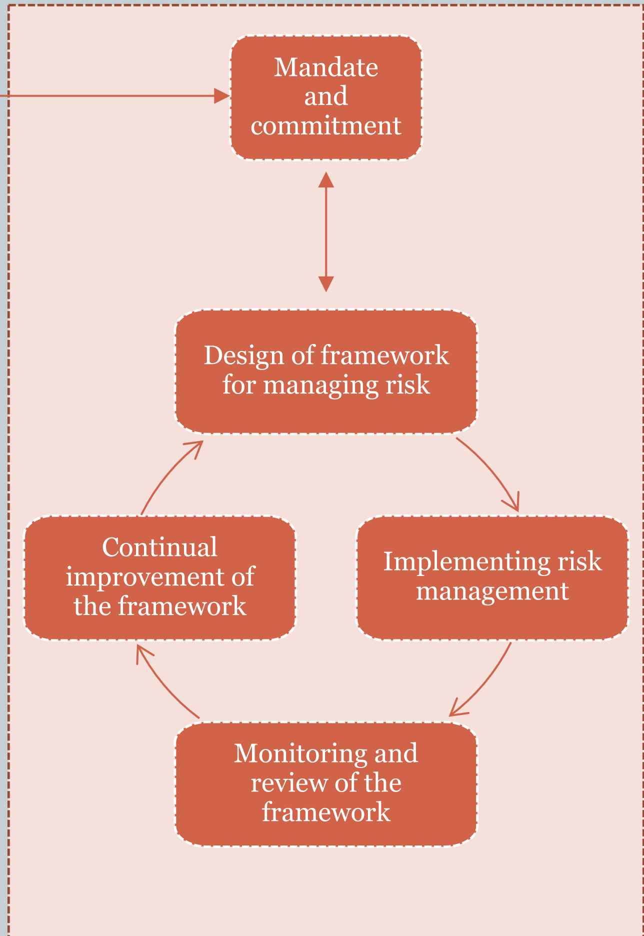
g) Tailored

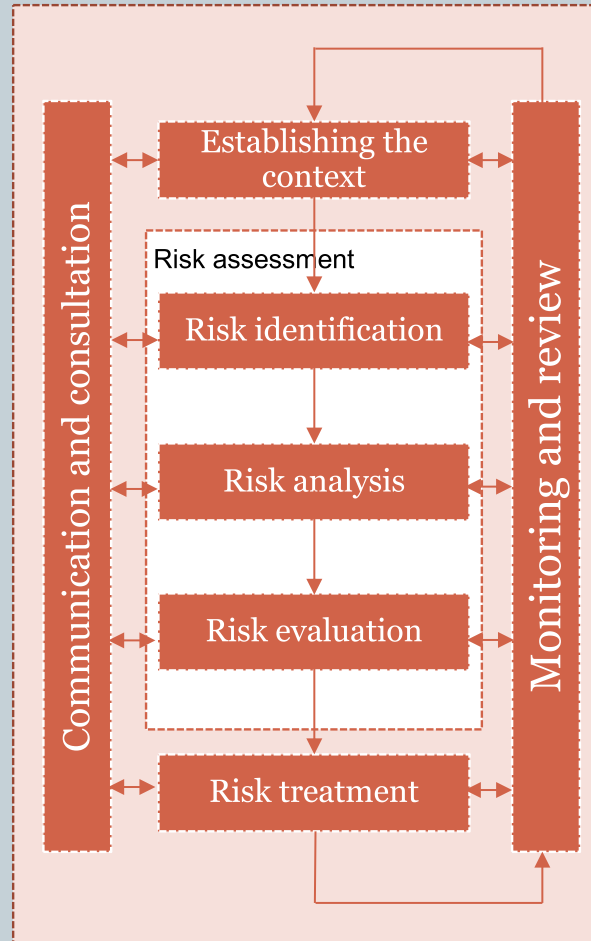
h) Takes human and cultural factors into account

i) Transparent and inclusive

j) Dynamic, iterative and responsive to change

k) Facilitates continual improvement and enhancement of the organization





Competitors between Mission and Competitive Strategy

Mission

Satisfying customers' needs, achieving growth targets to increase company value and providing the market with a suitable response: C1 has been committed to **creating ongoing progress.**

COMPETITOR 1

Strategy

The future is equal to growth. A growth that is set to be solid since it is based on a business model and organizational structure able to react to the effects of the crisis, and able to be proactive even in difficult situations.

Our plans include consolidation of the Group's leadership in Italy and strengthening of international positioning.

In Italy we will focus on identifying new opportunities, with a selective approach in order to maintain the margins of projects in progress. At a global level, we will aim at consolidating our role in foreign markets where already present, and especially Turkey, Canada, Russia, Peru and Chile.

Growth will take place in the name of an increasingly integrated offer, supporting the construction sector which continues to be our core business. Growth aimed at diversifying business activities and consolidating synergy and complementariness between construction and concessions.

We will continue along the path already embarked on with creation of the Corporate Project Management Department in order to incorporate into our projects a modus operandi (culture, values, organisation and project management models) able to accompany the complete contract life cycle with the same standard of quality.

In order to achieve our plans, financial management focused on generating cash flows and diversifying sources of financing will be needed.

We will continue to invest in all our tangible and intangible assets. We will increase our know-how. We will mould the managers of the future, supporting knowledge sharing and lifelong learning.

We will make sustainability and respect for the planet a flywheel for development.

Competitors between Mission and Competitive Strategy

COMPETITOR 2

Vision

Shaping the future through the development and operation of sustainable infrastructure s and cities. Committing to the highest level of operational excellence and innovation. Creating value for society and for our customers, investors and employees.

Strategy

C2 strategy translates into four pillars:

1. Profitable growth through the combination of organic growth and selective acquisitions;
2. The internationalisation, which has allowed C2 to consolidate a significant presence in five stable geographies: Spain, the US, the UK, Canada and Poland;
3. Operating excellence and innovation, as a fundamental lever for the management of complex operations and in the search for differential solutions for Ferrovial's clients;
4. Financial discipline through diversification of sources of funding, together with liquidity management, has led to an improvement in the company's credit ratings and in its solvency.

COMPETITOR 3

Strategy/Vision

Through our strategy, we **create added value** for our shareholders, clients, partners and the Groupalike. We focus on **profitable**, **low-risk** services and new solutions related to our core construction portfolio, operating successfully in **promising markets** and in the **fast-growing concessions business segment**.

Ourvision:

C3 is building the future. Along with our partners, we expand horizons, link people and organizations, **create new ways to think and act**, and continually enhance the values entrusted to our care.

Competitors between Mission and Competitive Strategy

COMPETITOR 4

The C4 Charter of Values and Mission Statement forms a common and federative base for all Eiffage entities, and was first introduced throughout the Group in 1991. The Charter lists the Group's objectives in terms of customer satisfaction, fair treatment of employees, a balanced relationship with shareholders, and responsiveness to the expectations and demands of C4 external partners (business partners, suppliers, subcontractors, public authorities, associations, local residents, etc.). It is distributed to every new employee, and to all staff at every level, within each of the Group's divisions.

- **Responsibility** towards employees, managers, customers and partners
- **Trust** in all employees, and trust between Group business lines and between operational and functional staff
- **Transparency** , which is a prerequisite to the values of trust and responsibility, and which underpins employees' duty to alert, as well as justifies tighter audit and control procedures and requires each employee to contribute to such procedures
- **Integrity** of managers and officers. This includes fair and respectful treatment of customers, employees, suppliers and partners; avoidance of conflicts of interest; and a commitment to keeping operating costs and business expenses within reasonable limits
- **Realistic appraisal** of the development and future prospects of C4's markets
- **Determination and courage**, which are needed when business is less dynamic than usual.

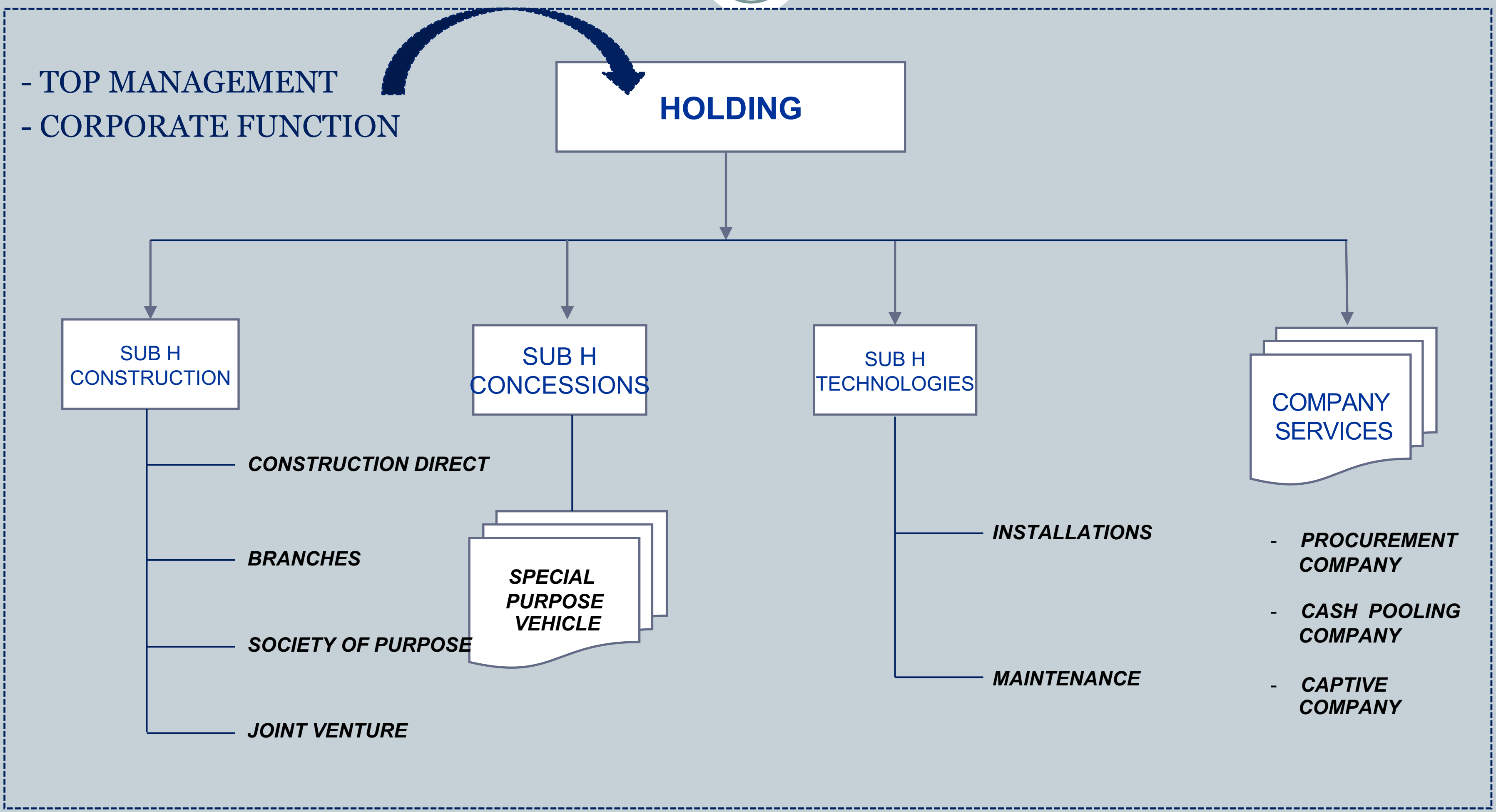
Definition of competitive strategies for the sector of infrastructures contracts

STRUCTURAL FEATURES	TYPE OF WORK
✓ MULTI-YEAR TERM	✓ RAILWAYS
✓ DIMENSION	✓ METROPOLITAN
✓ UNPREDICTABILITY	✓ HIGHWAYS
	✓ PORTS
	✓ AIRPORTS
	✓ DAMS
	✓ HYDRO
	✓ HOSPITALS

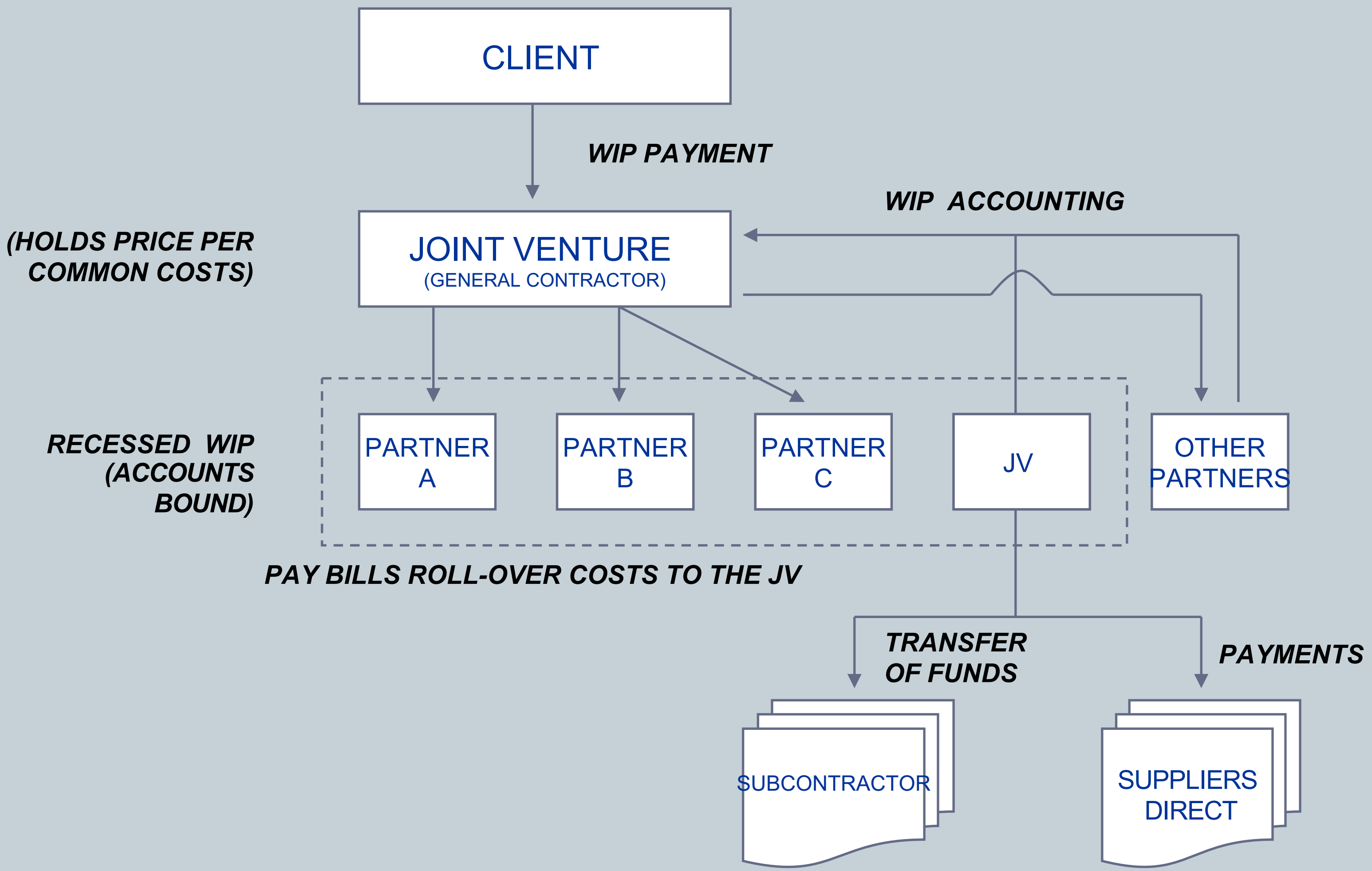
Evolution of the competitive scenario

	IN THE PAST	TODAY (AND PERSPECTIVE)
MARKET	HOME	GLOBAL
APPLICATION (Public)	IN EXPANSION	DOWN (FISCAL RESTRICTIONS)
TECHNOLOGIES	CONSOLIDATED	PRODUCT INNOVATION AND PROCESS
COMPETITORS	NATIONAL	INTERNATIONAL
CRITICAL SUCCESS FACTORS	•RELATIONS •TECHNICAL EFFICIENCY	• PRICE • CAPACITY OF GOVERNMENT • **FINANCIAL STANDING**

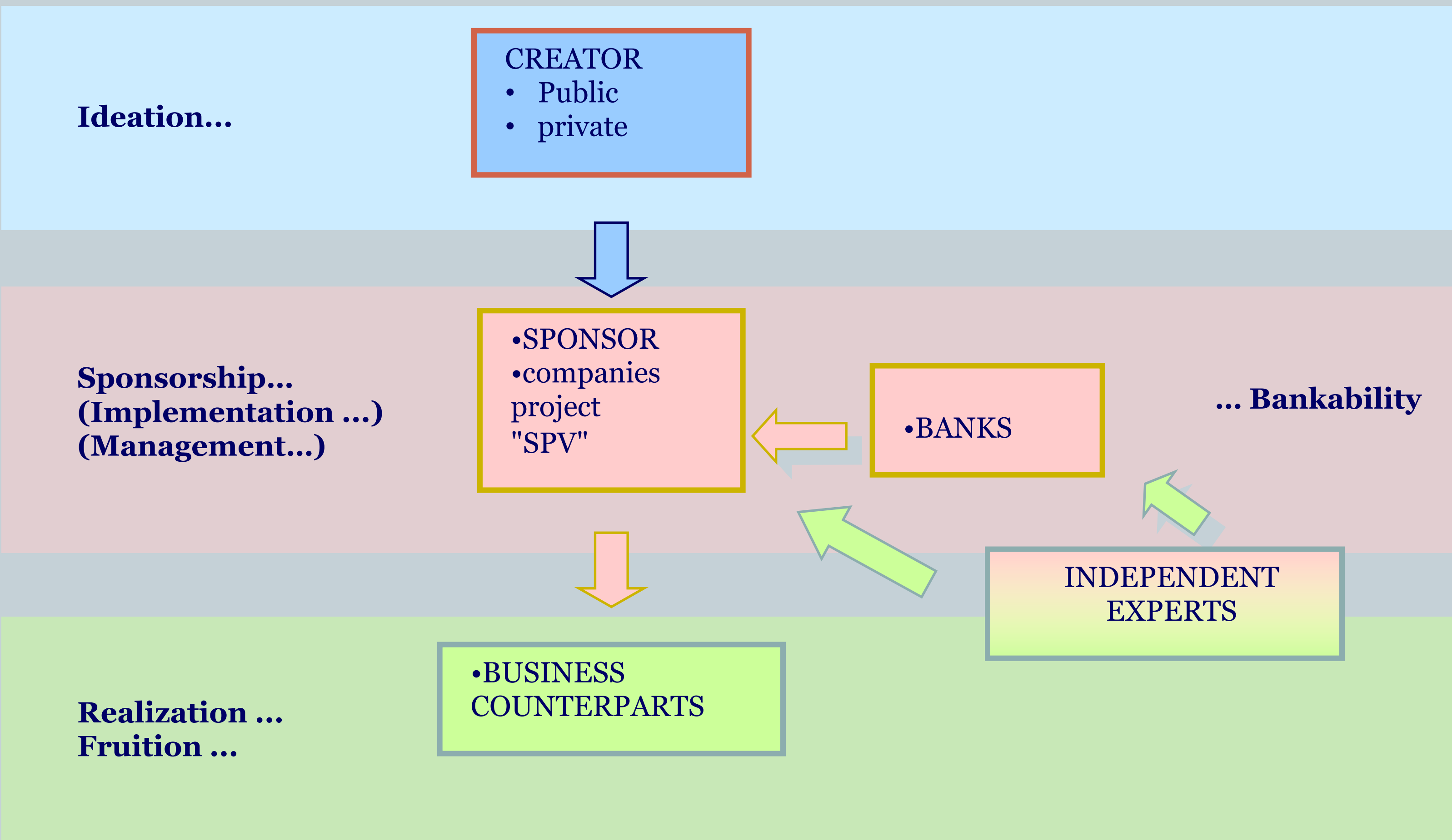
Example of group company General Contractor



EPC (ENGINEERING – PROCUREMENT CONSTRUCTION) CONTRACT – example



Project Finance – EXAMPLE



Risk Management in the sector of infrastructures contracts

- **Elimination / reduction:** operate at the root of loss event

- **Transfer / retain:** take precautions against the probability that an loss event comes true

<u>**In case of transfer of insurance:**</u> the occurrence of an loss event, as giving the right to compensation or loss (within the maximum amounts and considering the allowances) determines however damage within the organization as a whole, with obvious costs (or underwater) of commercial, technical, organizational.

Risk Management in Project Finance

The application to a project of a specific model of operation of PF (BOO, BOT, DBFO, etc.) implicitly involves choices regarding the allocation of responsibilities and consequently the allocation of risks between the different actors involved :

- The definition of an appropriate architecture contract is the starting point so that they are adequately defined the legal relationship established between the different players and, therefore, the risks are allocated between them.

- The same is necessary to analyze all the risks with regard to the various construction phases that may have consequences on time / cost of delaying achievement of expected cash flows and assume the resulting corrective solutions.

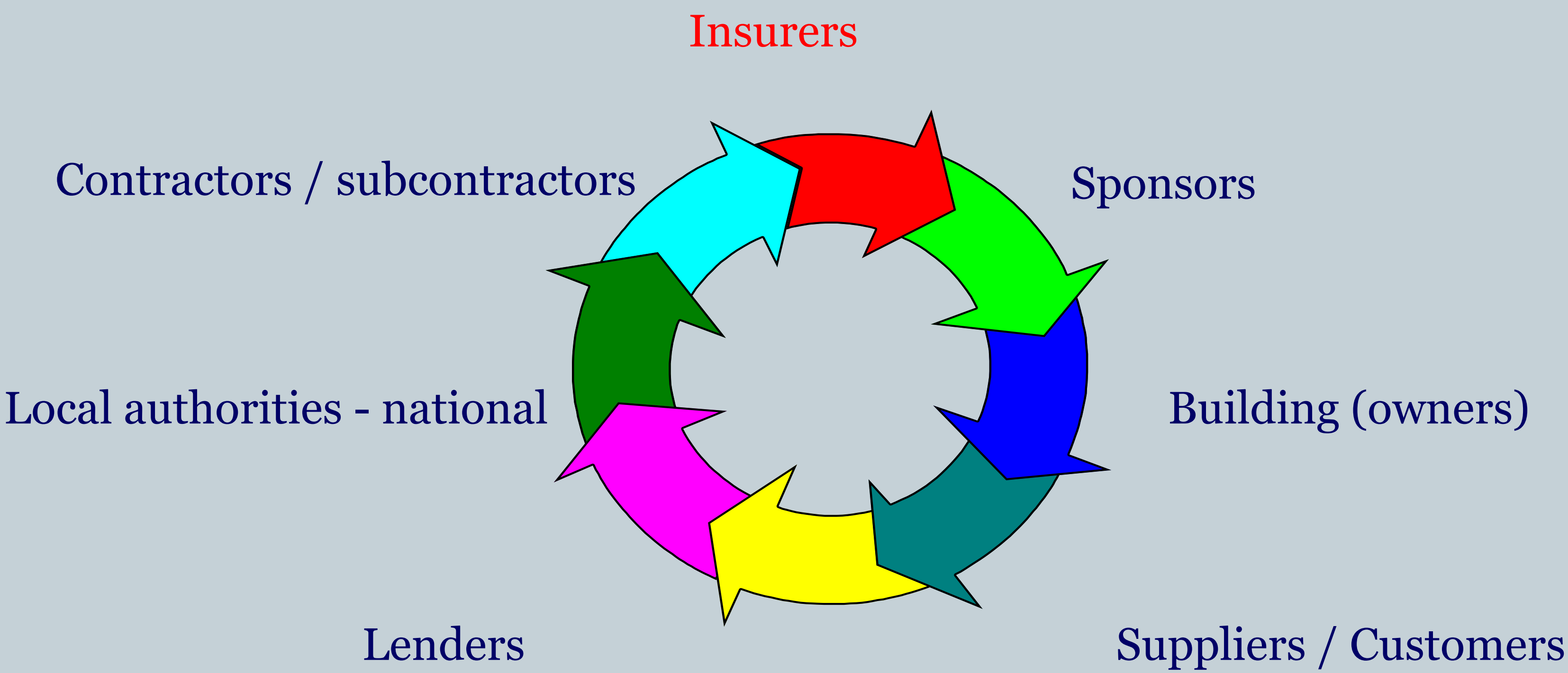
Risk Management in Project Finance
Project Risks and Security Package

- The key success of an operation of PF is realized through a coordinated and harmonized contracts that makes up the "Security Package". SP is defined more precisely the set of all the "rules of behavior" made up of commitments and guarantees specifically related to the project. SP has the primary function to mitigate or share risks related to the project among all participants.

- A well structured SP allows, in case of contingencies, to ensure the continuity of the initiative, with potential employment in their own control by the lenders

Risk Management in Project Finance

The players and the risk allocation



Risk Management

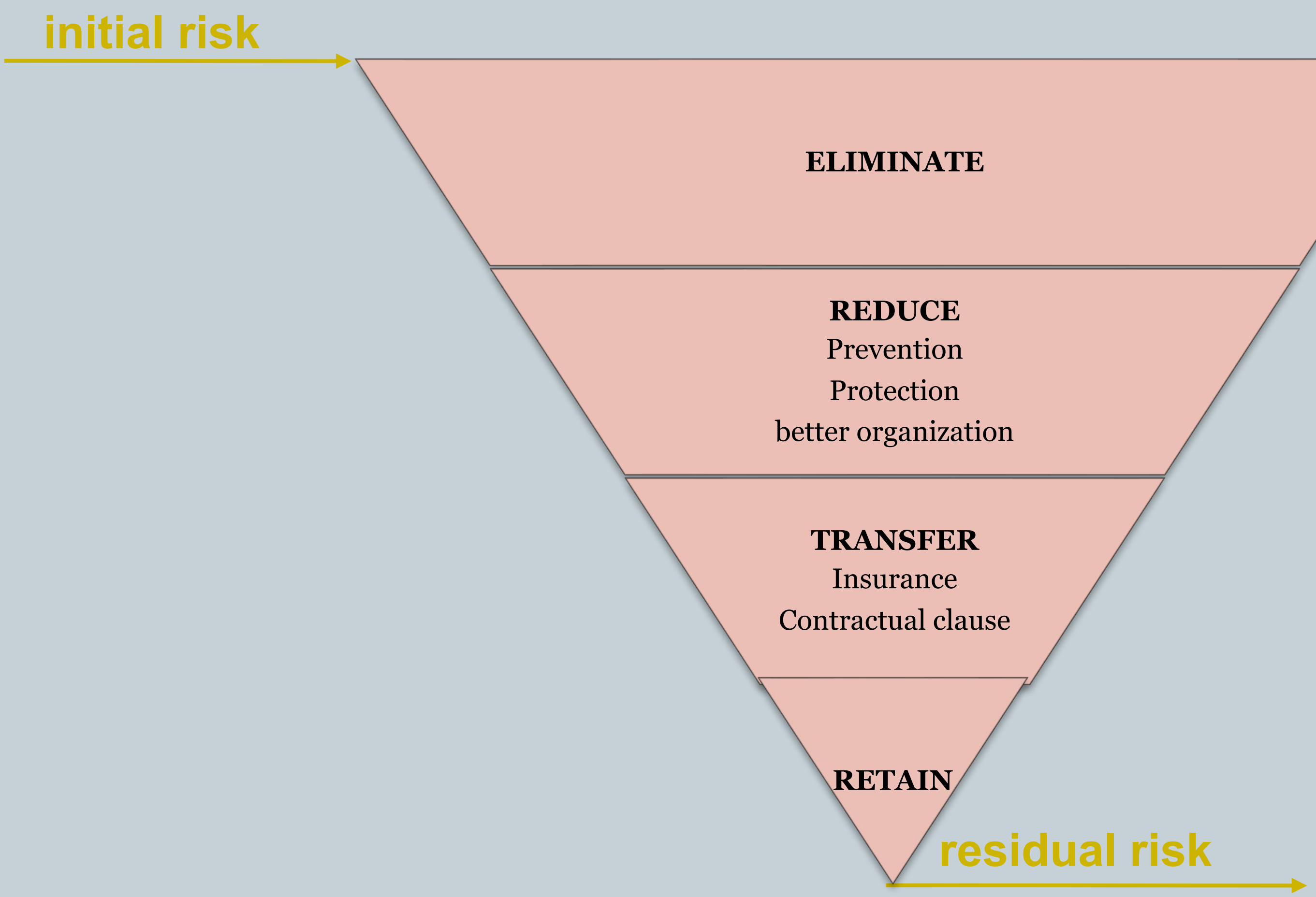
What are the risks to be allocated?

As business risks, the risks of the project are:

- ✓ Identified
- ✓ Analyzed
- ✓ Rated

- ➢ With detailed classifications:
  - completion risk pre / post completion
  - with reference to the different stages of the life cycle of the project
- ➢ With appropriate methodological tools:
  - risk assessment matrix (project) by measuring probability / impact on the cash flow of the contract

Evaluation and treatment of risk



Example of Risk Response in Project Management

Solution	Example
remove	environmental risk
reduce	prevent injuries
	protect assets
	organize processes
transfer	A third party (ex. subcontractors)
	To insurance companies
retain	% presumed loss of assets

Instruments

Example of Risk Response in Project Management

Solution	Example	Instruments
remove	environmental risk	Variations to the project
reduce	prevent injuries	System safety
	protect assets	Supervisory system
	organize processes	Internal control system
transfer	A third party (ex. subcontractors)	Terms and conditions / guarantee
	To insurance companies	insurance policies
retain	% presumed loss of assets	Provisions for impairment losses (commodity, credits)

The life cycle of projects (PROJECT FINANCE)

- ✓ **DESIGN**
- ✓ **CONSTRUCTION**
- ✓ **TESTING**

PRECOMPLETION RISKS

- ✓ **MANAGEMENT**

POST COMPLETION RISKS

Design

CRITICAL ISSUES	ACTION
HIGHER COSTS	ADVISOR
DELAYS	CIVIL LIABILITY DESIGNERS

Construction

CRITICAL ISSUES	ACTION
ENVIRONMENTAL	ADVISOR
BUREAUCRACIES	PROJECT MANAGEMENT – CONTROL
FINANCIAL	COMMITMENT CONTRACT BUILDER
TECHNOLOGICAL	COVERAGE OF EXCEPTIONAL EVENTS
ORGANIZATIONAL	
CATASTROPHIC	

Testing

CRITICAL ISSUES

UNUSED OF THE WORK (partial or total)

HIGHER COSTS

DELAYS

ACTION

FINANCIAL SECURITY OF ADVISORS

WARRANTY OF RECOVERY VS PROMOTERS

WARRANTY OF RECOVERY VS THIRD

INTERVENTION OF EXTERNAL ADVISERS

COMMITMENT CONTRACT BUILDER

PERFORMANCE BOND

INTERVENTION IN THE SUPPLY CONTRACTS

Management

CRITICAL ISSUES	ACTION
HIGHER COSTS DELAYS	FINDING EX ANTE OF THE MANAGEMENT DEFINITION OF OPERATING STRUCTURE COMMITMENT TO PROVIDE EXPERT CONTRACTS WITH EXPERTS CONSULTANTS MAINTENANCE CONTRACTS (LONG TERM) SUPPLY CONTRACTS (LONG TERM) MAINTENANCE BOND STAND-BY ARRANGEMENT OF FACILITIES COVERAGE OF EXCEPTIONAL EVENTS

APPENDIX ON STRATEGY AND PERFORMANCE

The new release of COSO ERM framework (2017) links Enterprise Risk management to strategy and performance

How?

In order to understand it, firstly we must to drilldown some fundamental concepts about

STRATEGY and PERFORMANCE

Strategic Planning - Introduction

Definition of the Mission and Objectives of the Company

Analysis of the initial situation

Environment and competitive scenario (opportunities and threats) ⟷ internal resources (strengths and weaknesses)

strategic gap

Formulating strategies

Creation of alternative strategies

Evaluation of alternative strategies

Selection of corporate strategies

Preparation of the Strategic Plan

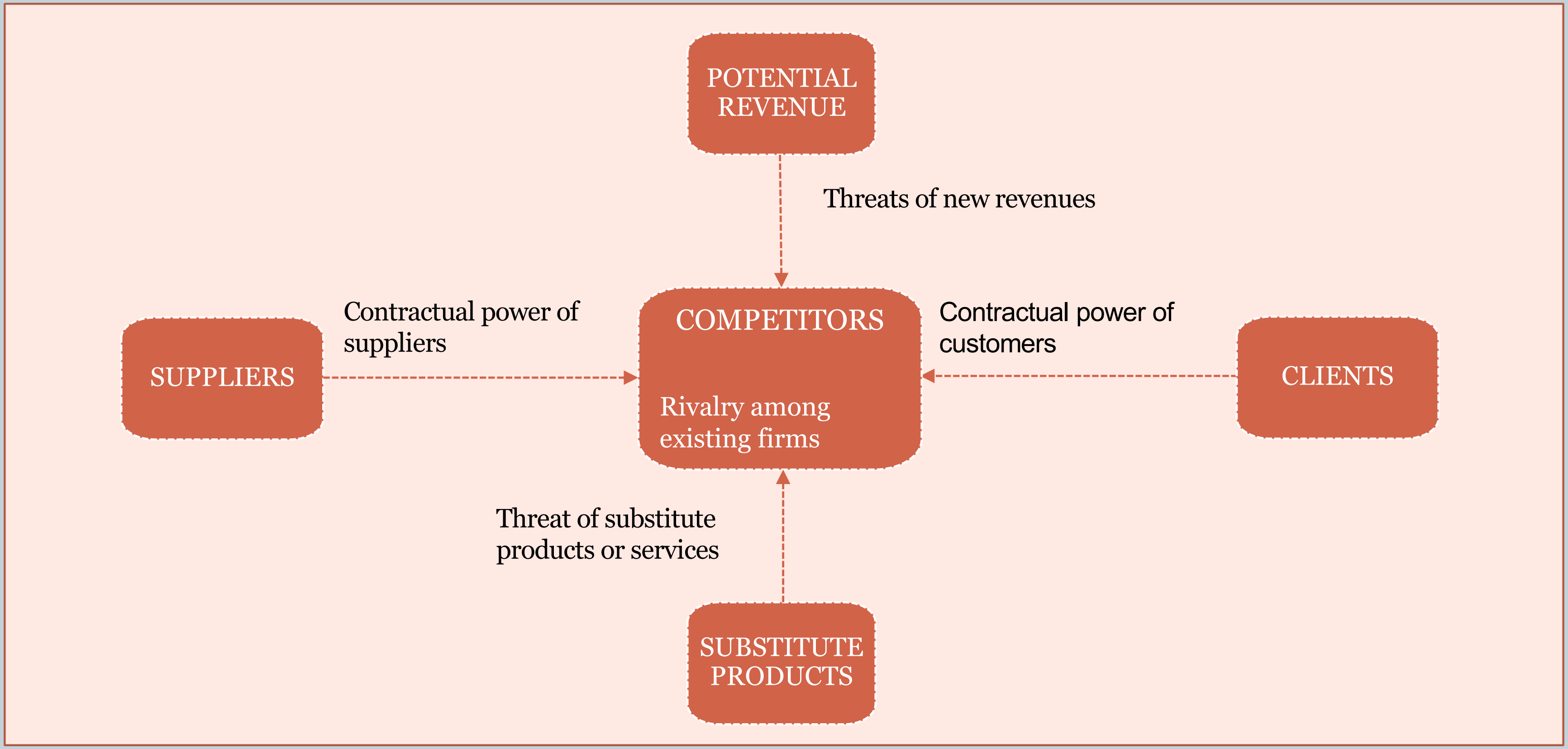
Strategic Planning - Introduction

The strategies should be:

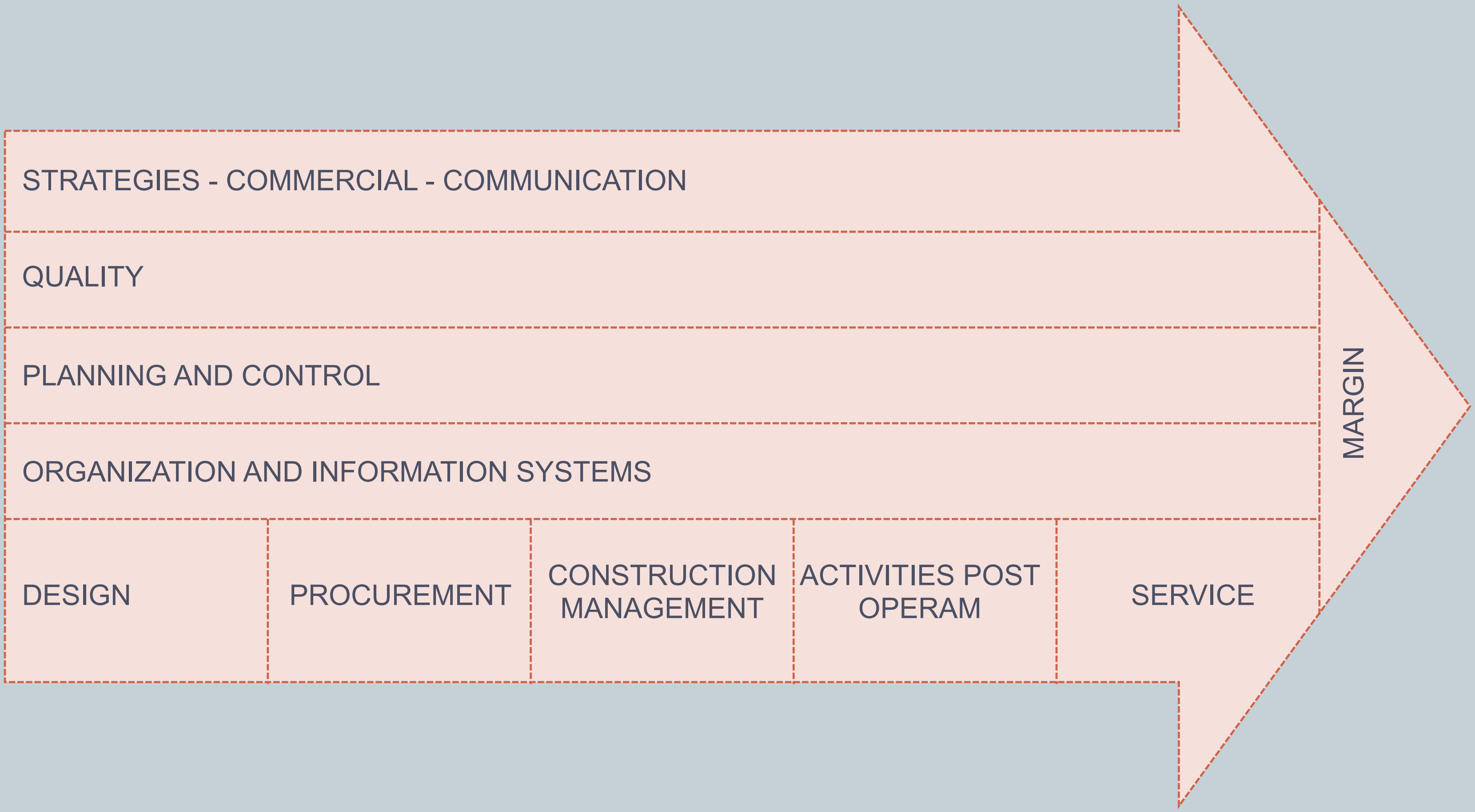
- Consistent with the mission and the internal culture
- Shared by different business actors
- At the heart of the organization
- Consistently and promptly translated into operational terms
- Integrated with the principles, guidelines and mechanisms of accountability of managers towards the various stakeholders of the company

The strategic model of Porter

The first key determinant of the profitability of a business is the **ATTRACTIVENESS** of the sector. The competitive strategy must come from a thorough understanding of the rules of the **COMPETITION** that determine the attractiveness of the area where you want to be competitive.
The attractiveness of any sector is the result of five fundamental forces:



Value Chain



STRATEGIES - COMMERCIAL - COMMUNICATION
QUALITY
PLANNING AND CONTROL
ORGANIZATION AND INFORMATION SYSTEMS
DESIGN
PROCUREMENT
CONSTRUCTION MANAGEMENT
ACTIVITIES POST OPERAM
SERVICE
MARGIN

The basic competitive strategies

To meet the 5 fundamental competitive forces and achieve a competitive advantage, the company can choose the following three strategies:

1) **Cost leadership** (cost levels lower): pursuing economies of scale, use of advanced technologies, low distribution costs

2) **Differentiation:** design, customer service, long experience in the field or ability to create create technological links

3) **Focus:** the company aims to achieve the best results in a restricted area of competition

competitive environment

	low cost	High diff.
large	**1) Cost leadership**	**2) Differentiation**
close	**3a) Focusing on costs**	**3b) Focusing on differentiation**

Competitive advantage

Strategic Planning VS Risk Management

Risk Governance in balance with strategy

Fonte: C.A. Dittmeier