

Business Auditing

Enterprise Risk Management - Case study

18 December 2015



Building a better
working world

Premises

The recent turmoil in the **international economic scenario** has increasingly revealed the **weaknesses** of **Risk Management** and **Internal Control Systems** to business operators. This scenario is characterized by:

Exogenous factors

- ▶ Sudden **fluctuations** in demand
- ▶ **Volatility** of **financial markets** and in the **prices** of raw materials
- ▶ Strong **regulatory measures** of Supervisory Authorities
- ▶ **Financial collapses** of world-leading companies

Compliance vs Business

- ▶ **Risk governance** models are generally built around **regulatory compliance requirements**, and operate through a series of uncoordinated controls and systems, that are not functional to the needs of performance-based analytical prediction and monitoring.
- ▶ Focus on business, operations, performance planning and control, thus becoming the core elements for a structured approach to implementing **Enterprise Risk Management (ERM)**.



Evolution

The ability of each player to **comprehend and manage risks** is critical in order to **identify** and **exploit opportunities**.

To formulate and implement **successful strategic decisions** within complex ecosystems, operators must therefore ensure that their **Risk Management Model** is efficient and constantly updated.

Risk Management

Regulatory framework

Below the main **normative requirements** for the definition and implementation of **Risk Management Models**.



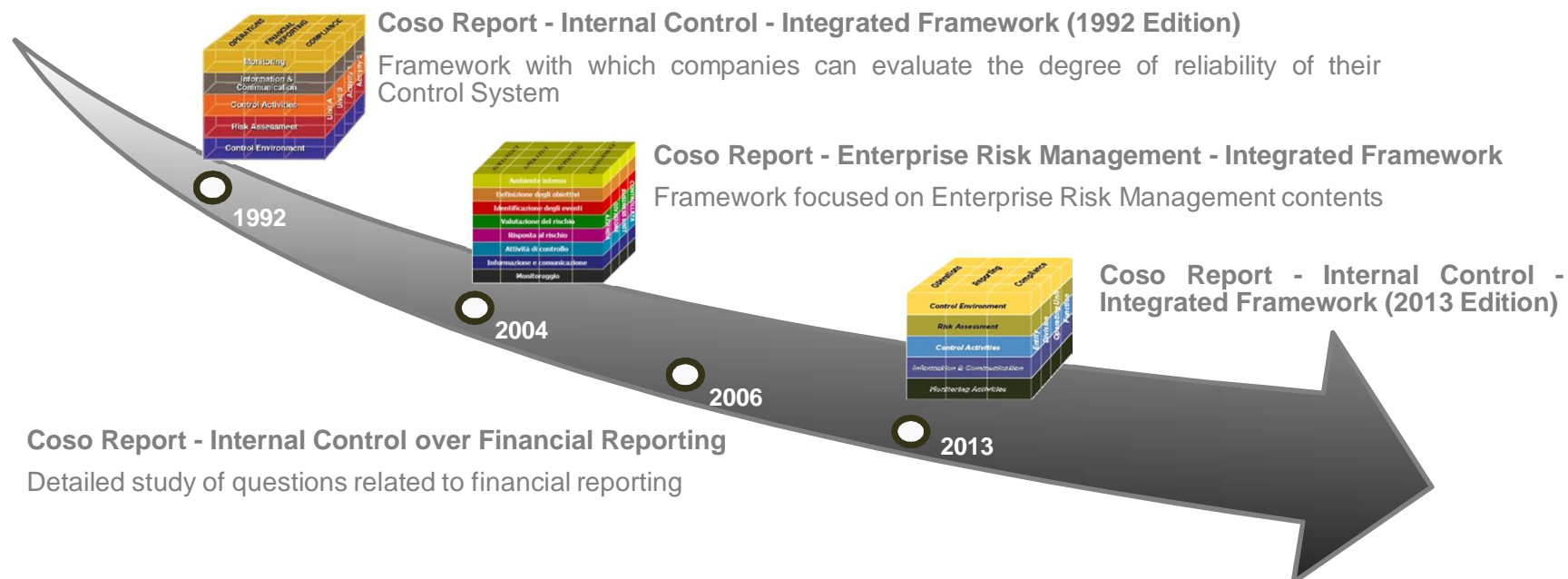
International Organization for Standardization (the most important globally recognised organization for definition of technical standards) issued the following reports:

► **ISO 31000:2009**, Risk management - Principles and guidelines and the following standards:

- **ISO Guide 73:2009**, Risk management - Vocabulary
- **ISO/IEC 31010:2009**, Risk management - Risk assessment techniques



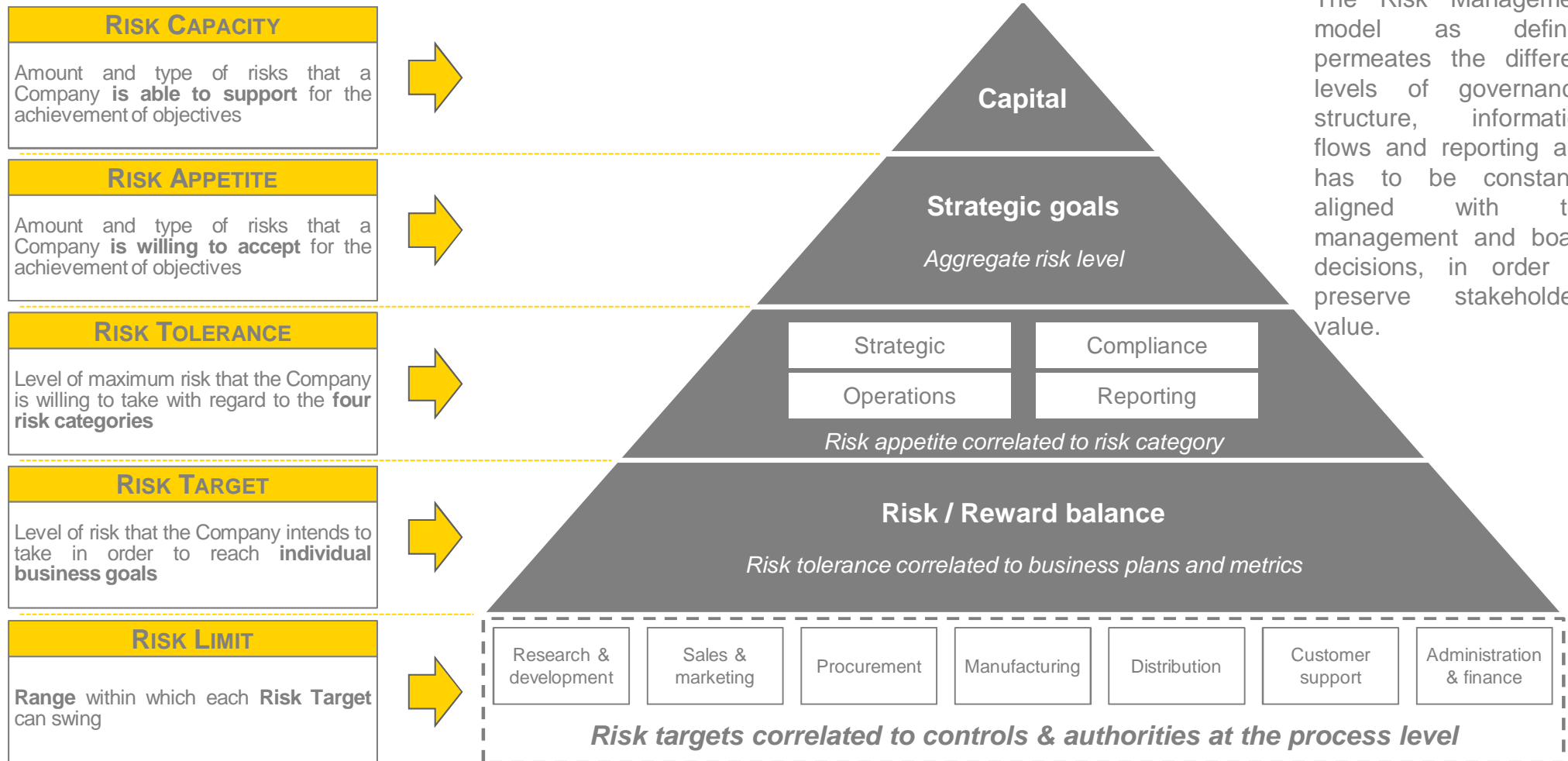
Committee of Sponsoring Organizations of the Treadway Commission (worldwide organization for the development of frameworks and guidelines in the field of Enterprise Risk Management, Internal Audit and Anti-Fraud) issued the following reports:



Risk Management

Risk analysis and its impact - Risk levels

A good **Risk Management System** does not require the total elimination of risks, but a coherent and systematic management of them. At each stage of Company's life, it is necessary to know and evaluate the **Risk Capacity, the Risk Appetite, the Risk Tolerance, the Risk Target and the Risk Limit**.



Risk Management

Risk analysis and its impact - Types of Risk

Business risks can be classified as follows:

Compliance

- ▶ Risks of incurring **legal or administrative sanctions, financial losses or reputational damage** as a result of violations of laws, regulations or self-regulations.

Reporting

- ▶ Risks concerning **accuracy of information** communicated externally and within the company. These risks include Liquidity risk, Credit risk, risks of financial markets, risks relating to the accuracy and integrity of communications to the market and generally risks associated with **Financial Management**.

Operative

- ▶ Risks that derive from **inadequacy or malfunction of business processes**, because of the ineffective and inefficient use of resources.

Strategic

- ▶ Risks that could **threaten the current competitive position of the Company** and the **achievement of strategic objectives**. They may result from:
 - changes in the operating context;
 - inadequate or untimely decision making in relation to the competitive and dynamic business context;
 - exposure to exogenous factors.

Risk Management

Risk analysis and its impact - Methodological approach process based

Below the **methodological approach** for Risk Assessment execution, finalized to the construction of **Risk Management Model**.

Mapping of Process Model/Value Chain

- Identification of **Process Model/Value Chain**
- Identification of **roles and responsibilities**



Identification and classification of risks

- Identification and **preliminary evaluation** of risks
- **Risks classification** according to the macro reference category (compliance, operations, strategic, financial) and **qualification of the economic - financial impact**
- Identification of **controls**



Risk Management

- **Positioning of risks** inside the matrix
- Identification of **priorities for action** in terms of **Assessment** and **Action Plan**

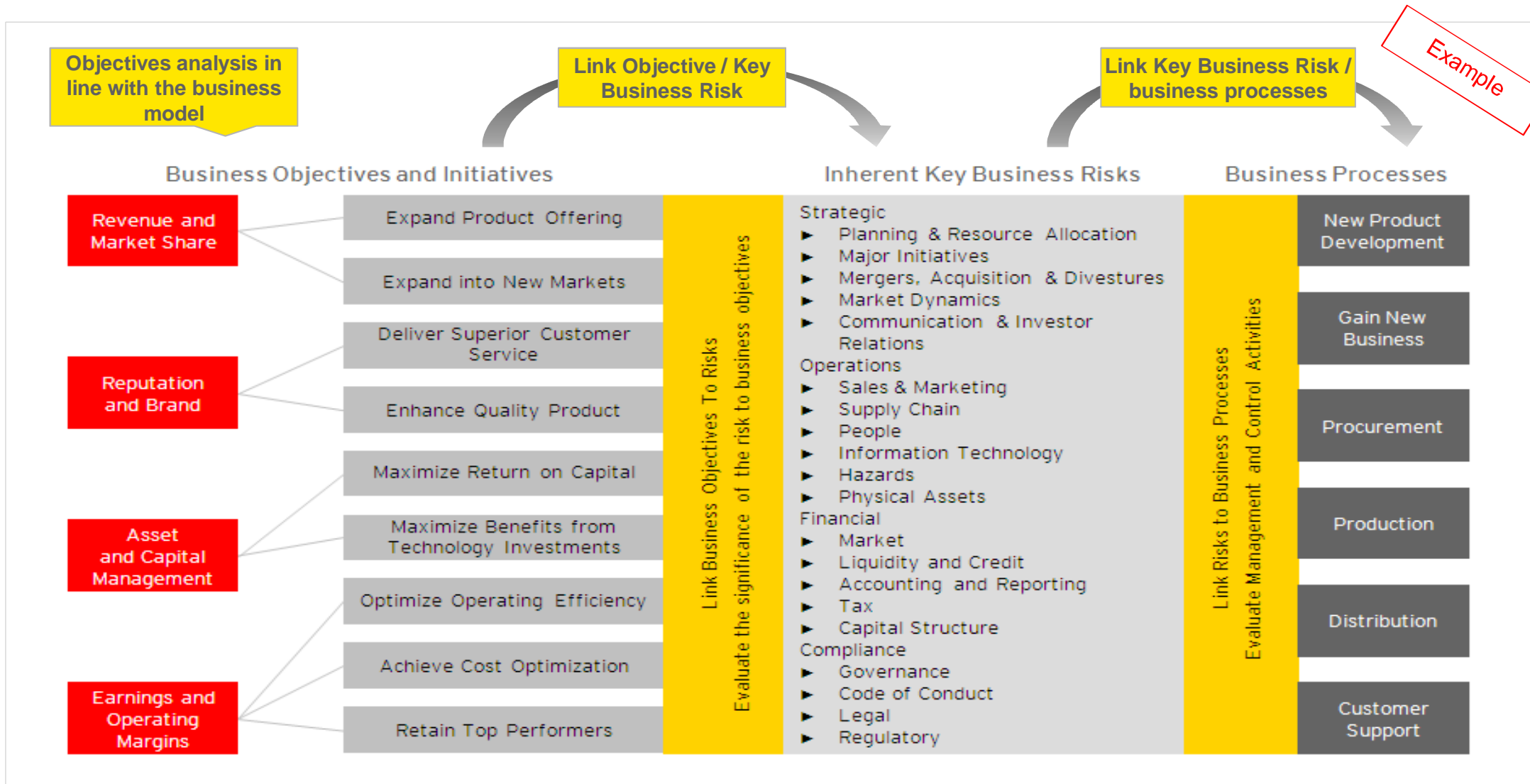


Risk Management

Methodological approach process based - Mapping of Process Model/Value Chain



The **Risk Identification Process** is closely related to the analysis of Company's **business targets**.



Risk Management

Methodological approach process based - Risk Universe



The results of **business targets** analysis and underlying risks are used to define the **Risk Universe** of the Company.



Risk Management

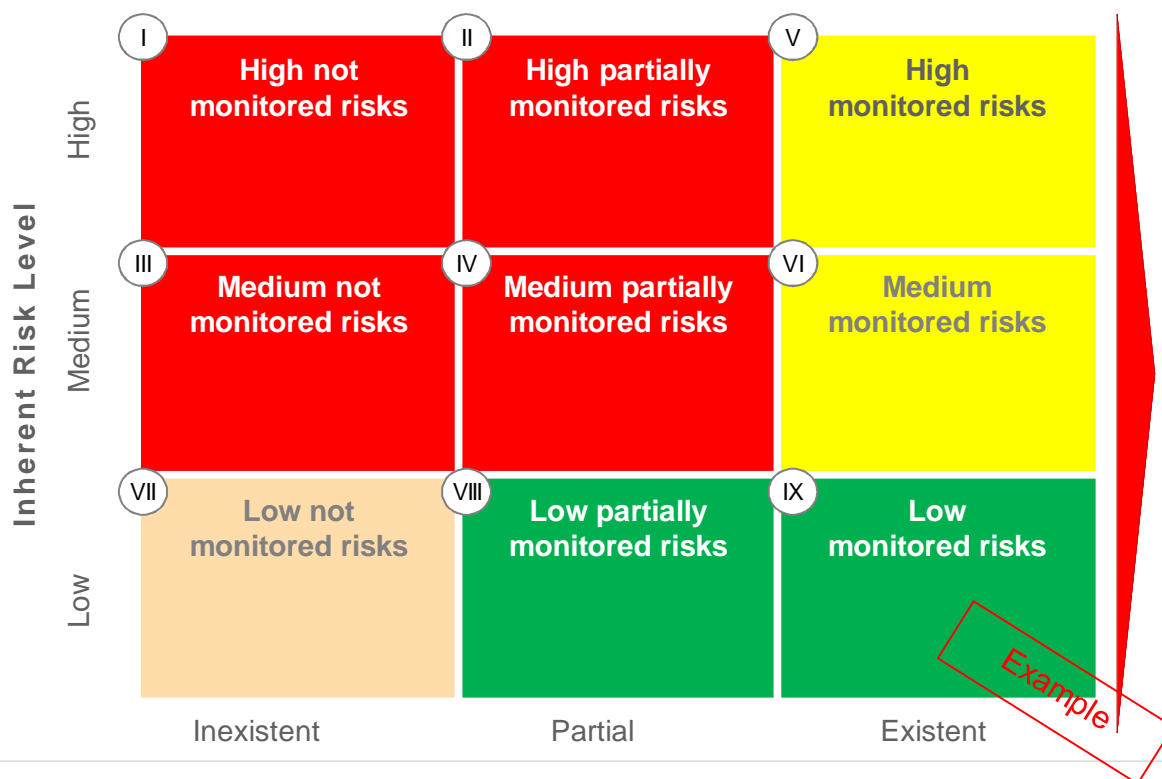
Methodological approach process based - RCP



The table below shows an **ERM methodology** aimed at determining the priorities of intervention in Risk Management.

The **positioning of risks** within the **Risk & Control Panel** is defined on the basis of:

- **Vertical Positioning: level of inherent risk**, determined on the basis of **qualitative and quantitative variables** (when available) and emerging by the considerations of the management during the interview. The positioning of risks will be confirmed / modified in accordance to the **analysis of the documentation requested**. ([See annex](#))
- **Horizontal Positioning: level of monitoring**, determined on the basis of the information revealed during the **meeting** and to confirm / modify depending on the status of monitoring tasks appropriately documented



Quick Hit Action Plan
For not adequately monitored medium and high risks, measures are needed in order to reduce identified risks to an acceptable risk level I II III IV
Assessment
Identified monitoring tasks related to high and medium risks should be evaluated in terms of adequacy and operativeness. V VI
Cost-benefit analysis
For non-monitored low risks a cost-benefit analysis based on the management's risk acceptance should be carried out VII

ERM Process reengineering

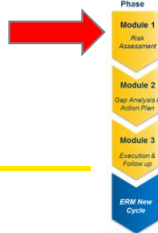
Project Phases

Below, as an example, a **successful case followed by EY** (primary operator of the industry Telecommunications) regarding an **Enterprise Risk Management project** for the construction of the **Risk Management Model**, highlighting the objectives and results achieved:

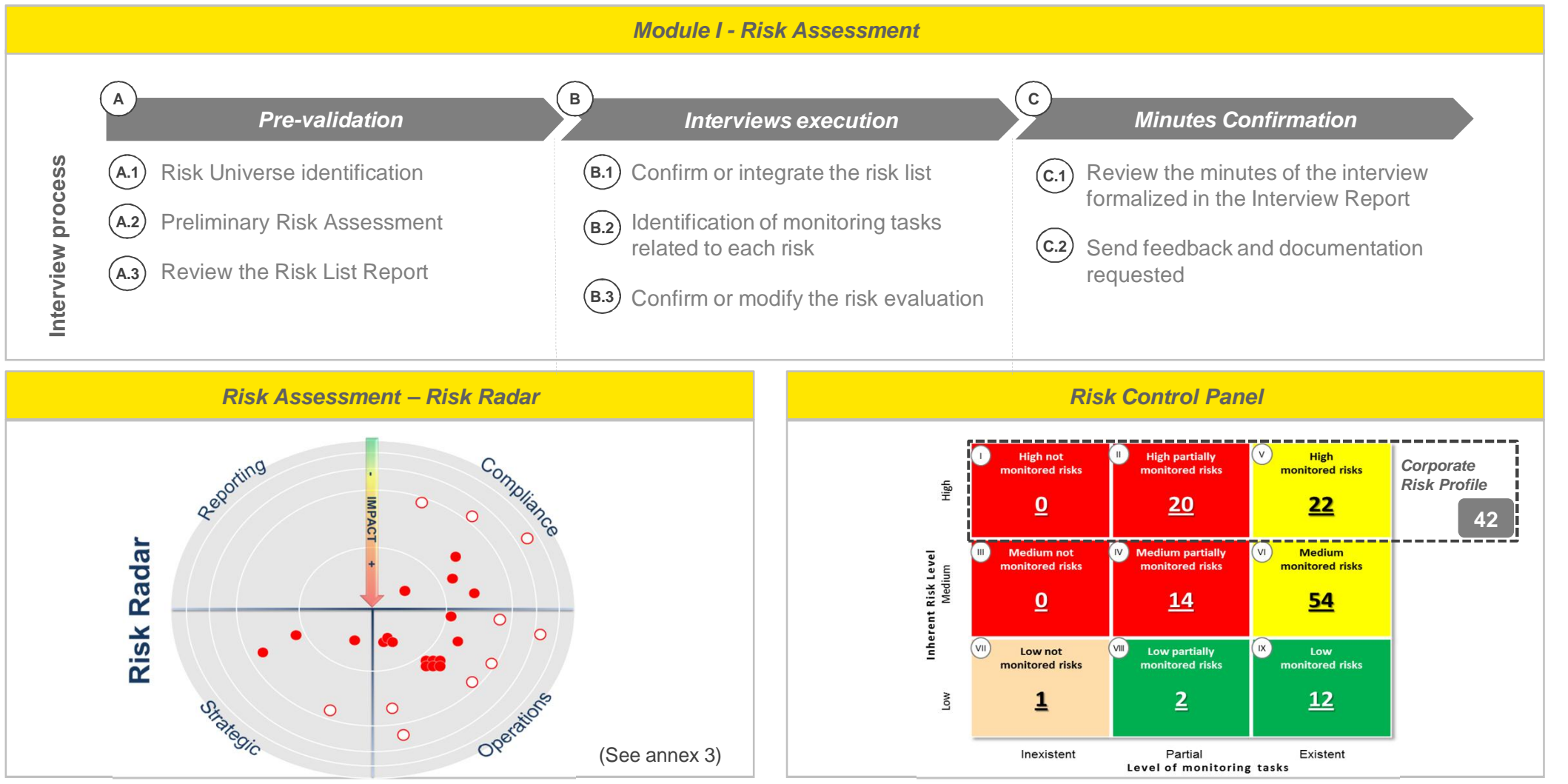
Phase	Objectives	
Module 1 <i>Risk Assessment</i>	Identify the main Risks (Corporate Risk Profile) that could impact on the realization of Strategic, Operative, Financial and Compliance objectives, through the following phases: <ul style="list-style-type: none"> ▪ Risk Identification ▪ Risk Classification ▪ Risk Positioning 	
Module 2 <i>Gap Analysis & Action Plan</i>	Identify the Gaps and the related Action Plans starting from the Risks positioning on the Risk & Control Panel: <ul style="list-style-type: none"> ▪ For high, partially monitored Risks ▪ For medium, partially monitored Risks 	
Module 3 <i>Execution & Follow up</i>	Execution and follow up of the Mitigation Actions aimed at mitigating High and Medium Risks that are not adequately monitored, guaranteeing the <u>coherence and correctness</u> of the objectives pursued and the <u>efficiency and effectiveness</u> of information flows between all the actors involved	
ERM New Cycle	Starting of ERM Cycle 2015 in order to identify: <ul style="list-style-type: none"> ▪ main Risks (Corporate Risk Profile) that could impact on the realization of Strategic, Operative, Financial and Compliance objectives ▪ main actions aimed to mitigate Relevant Risks that are not properly monitored 	

ERM Process reengineering

Module 1



The following describes an overview of the “Risk Assessment” phase:



ERM Process reengineering

Module II

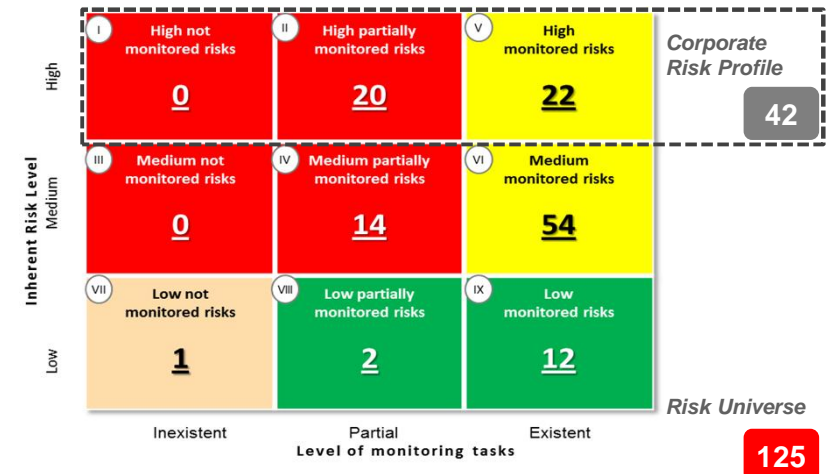
Below is an overview of the “Gap Analysis and Action Plan” phase:

Quick Hit Action

For not adequately monitored medium and high risks, measures are needed in order to reduce identified risks to an acceptable risk level

Assessment

Identified monitoring tasks related to high and medium risks should be evaluated in terms of adequacy and operativeness.



Quick hit Action

1. Identification of the Process Owners involved



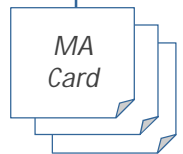
For **medium**, partially monitored risks

For **high**, partially monitored risks

2A Definition of Action Plans in terms of objectives and milestones

Action Plan 1

3A Elaboration of Mitigation Action Cards



2B Conduction of table meetings in order to identify/share GAPS through Root-cause analysis aiming at identifying causes of faults or issues of the GAP and solutions that prevent recurrence of issues



GAP 1

3B Definition of Action Plans in terms of objectives and milestones

Action Plan 1

4B Identification of Action Projects



Legend



Table Meetings with identified owners

ERM Process reengineering

Module III



Below is an overview of the “Execution & Follow up” phase:

1. **Supporting** to the implementation of Action Projects
2. **Monitoring** and elaborating evidence of the progress of each Action Projects and Action Plans
3. **Analyzing and managing results**, fine tuning of Action Projects and reporting to Top Management

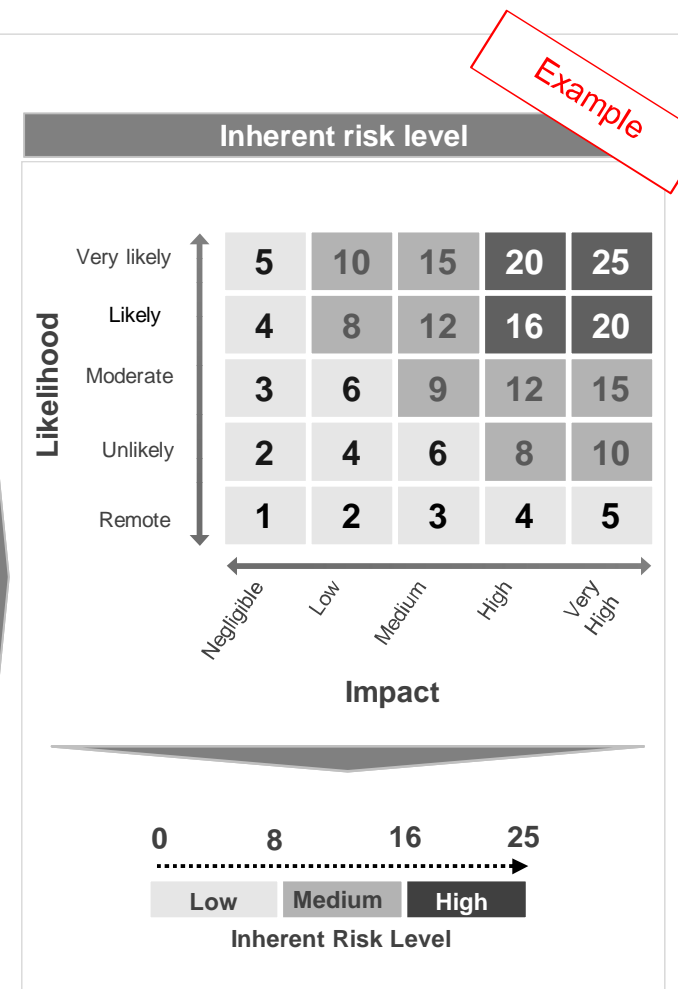
Phase	High Risks			Medium Risks		
Module 1 <i>Risk Assessment</i>	<div>High, partially monitored risks</div> <div>20</div>			<div>Medium, partially monitored risks</div> <div>14</div>		
Module 2 <i>Risk Response</i>	Activity	Tot	Status	Activity	Tot	Status
	Area of intervention designed (in terms of Gap Analysis, Root Cause Analysis, Action Plan)	11	Completed	Mitigation Action Card drafted (in term of missing monitoring task and objectives to be achieved)	14	Completed
Module 3 <i>Monitoring & Control</i>	Action Projects designed	17	Completed	Action Plans designed (2 action plan integrated within Action Project)	12	Completed
	Activity	Tot		Activity	Tot	
	Action Projects started	10		Action Plans started	4	
	Action Projects completed	7		Action Projects completed	7	
	Total	17		Total	12	

Annex 1

Vertical positioning within RCP

Below are **parameters and drivers** (during the project- Client Telco) for the likelihood and impact evaluation in order to determine inherent risk level.

Parameters and evaluation drivers		LIKELIHOOD	VERY LIKELY (5)	LIKELY (4)	MODERATE (3)	UNLIKELY (2)	REMOTE (1)
		Uncertain context	It is expected that the event / risk will occur frequently during the coming year	It is expected that the event / risk will occur several times during the coming year	It is expected that the event / risk will sometimes occur during the coming year	It is expected that the event / risk will occur frequently during the next 3 years	It is expected that the event / risk will not occur frequently during the next 3 years
		Predictable context	The event / risk occurred very frequently during the last year	The event / risk occurred several times during the last year	The event / risk sometimes occurred during the last year	The event / risk sometimes occurred during the last 3 years	The event / risk did not occurred during the last 3 years
		Measurable context	The event / risk occurs in more than 50% of cases	The event / risk occurs between the 20% and 50% of cases	The event / risk occurs between 5% and 20% of cases	The event / risk occurs between 1% and 5% of cases	The event / risk occurs in less than 1% of cases
		IMPACT	VERY HIGH (5)	HIGH (4)	MEDIUM (3)	LOW (2)	NEGLECTIBLE (1)
Qualitative Drivers	Economical driver	Potential damage caused by the event higher than 5% of FCF (over 230MR\$)	Potential damage caused by the event between 2,5% and 5% of FCF (From 115 to 230MR\$)	Potential damage caused by the event between 1,5% and 2,5% of FCF (From 69 to 115MR\$)	Potential damage caused by the event between 0,5% and 1,5% of FCF (From 23 to 69MR\$)	Potential damage caused by the event lower than 0,5% of FCF (Less than 23MR\$)	
	Operativity	Threat to business continuity . Very negative impact on the achievement of objectives. Long interruption of key processes. Significant loss of services quality.	Impact over 5-6 business processes. Negative impact on goals achievement. Long interruption of some key processes . Relevant loss of services quality.	Impact over 3-4 business processes. Medium impact on goals achievement. Short interruption of some key processes . Moderate impact on services quality.	Impact over 1-2 business processes. Low impact on goals achievement. Short interruption of some processes . Low impact on services quality.	Negligible impact on goals achievement. Negligible impact on services quality.	
	Reputation	Very high potential impact on the image and on the national and international reputation	High potential impact on the image and on the national and international reputation	Moderate potential impact on the image and on the national and international reputation (for example, relevance in the national level press)	Low potential impact on the image and on the reputation in Italy (for example, relevance in the national level press)	Negligible potential impact on the image and on the reputation	
	Compliance	High potential administrative sanctions and criminal penalties for companies and individuals	High potential administrative sanctions	Medium sized potential administrative sanctions	Small sized potential administrative sanctions	Negligible sized potential administrative sanctions	



Annex 2

Risk Assessment Methodologies

The following are, as an example, some techniques that can be used for risk assessment.

QUALITATIVE SCORING

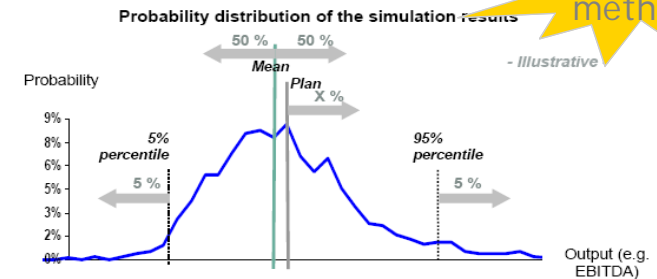
SCORE	RATING	FINANCIAL	OPERATIONS	COMPLIANCE	REPUTATION
		EBIT / EPS	Value	Disclosure	Scope
5	Critical	> 25% EBIT / EPS	> 25% Loss of Market Value	Fiscal Year Restatement	Enterprise-wide; inability to continue normal business operations across all business units
4	Significant	> 20% EBIT / EPS	> 20% Loss of Market Value	Fiscal Quarter Restatement	3 Business Units; Significant interruptions to business operations within 3 or more business units
3	High	> 15% EBIT / EPS	> 15% Loss of Market Value	Significant Deficiency	2 Business Units; Moderate interruptions within 2 or more business units
2	Moderate	> 10% EBIT / EPS	> 10% Loss of Market Value	Control Weakness	1 Business Unit; Interruptions restricted to 1 business unit
1	Low	> 5% EBIT / EPS	> 5% Loss of Market Value	Additional Risk Disclosure	Limited interruptions within 1 business unit

Qualitative methods

Qualitative application of risk assessment by assigning a severity score to impact and probability drivers, according to uniform and shared logics

OPERATIONAL VALUE@RISK (Net Risk evaluation)

Quantitative methods



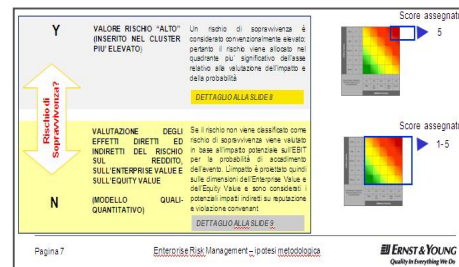
Application of the @Risk methodology for assessing the potential loss (through detection of time series or estimate of loss data). Methodology applicable to operational risk assessment

STOCK EXCHANGE MULTIPLES MODEL

Projection of impacts on EBIT - EV - EQV, with logic of stock exchange multiples (for listed companies)

Mixed methods

- CALCULATION OF EFFECTS ON EBIT
- PROJECTION ON ENTERPRISE VALUE (STOCK EXCHANGE MULTIPLES MODEL)
- EVALUATION AND CALCULATION OF EFFECTS ON NFP
- ESTIMATE OF INDIRECT IMPACT OF EQUITY VALUE RISK RESULTING FROM:
 - REPUTATIONAL DAMAGES
 - EFFECTS RESULTING FROM COVENANT VIOLATION



CASH FLOW SCENARIOS MODEL

Analysis of the impact on cash flow ("worst scenario" approach)

Cash Flow	2015	2016	2017	2018
PNM (Cassa e Servizi Iniziati)	102.211	93.841	226.626	184.889
EBIT	79.091	99.827	150.776	162.441
Imposta Effettiva	(2.765)	(7.785)	(18.262)	(20.765)
NPFLAT	76.326	92.042	132.514	141.676
Impostazione	7.715	(1.231)	(3.222)	(4.117)
NPFLAT (Cassa e Servizi Iniziati)	84.041	93.273	129.292	137.559
PNM (Cassa e Servizi Iniziati)	102.211	93.841	226.626	184.889
EBIT	79.091	99.827	150.776	162.441
Imposta Effettiva	(2.765)	(7.785)	(18.262)	(20.765)
NPFLAT	76.326	92.042	132.514	141.676
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Imposta Effettiva	(2.765)	(7.785)	(18.262)	(20.765)
NPFLAT	76.326	92.042	132.514	141.676
Impostazione	7.715	(1.231)	(3.222)	(4.117)
NPFLAT (Cassa e Servizi Iniziati)	84.041	93.273	129.292	137.559

$$VA = C1 (1+i)^1 + C2 (1+i)^2 + C3 (1+i)^3 + \dots$$

The projection of the impact on Net Profit, NFP and on the expected flows allows you to update the Expected Value of cash flows (e.g. Time horizon assumed Industrial Plan)



Annex 3

Risk Radar

Below is the Risk Radar (emerged during the project- Client Telco):

► **Reporting threats** stemming from volatility in the markets and in the real economy

► **Compliance threats** originating in politics, law, regulation or corporate governance

► **Strategic threats** related to customers, competitors and investors

► **Operational threats** impacting the processes, systems, people and overall value chain of a business

Risk Radar

