



BC & RM approach to highly critical services in Telco environment : an experience

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The problem

To what degree do you consider these specific risks during business planning ?

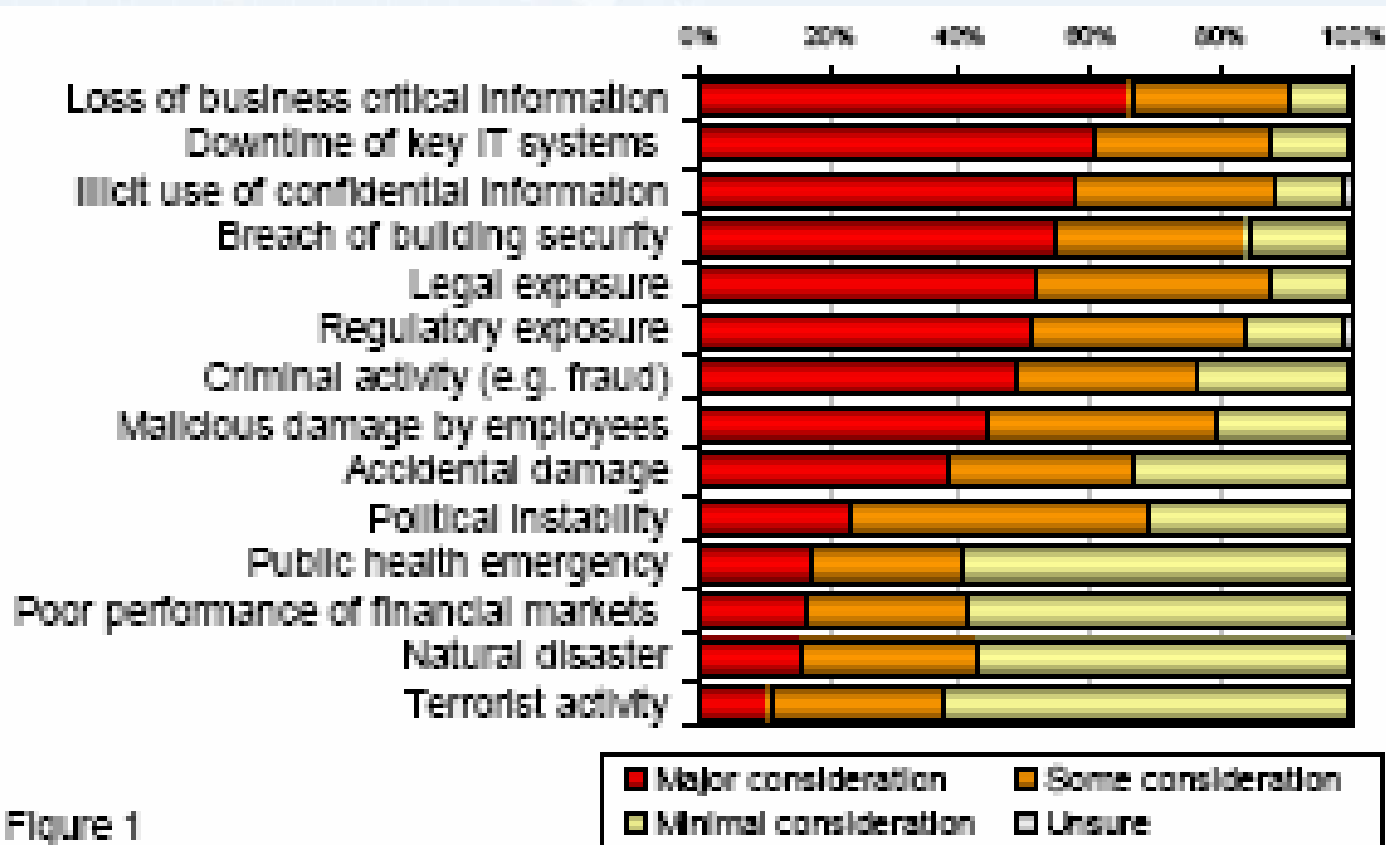


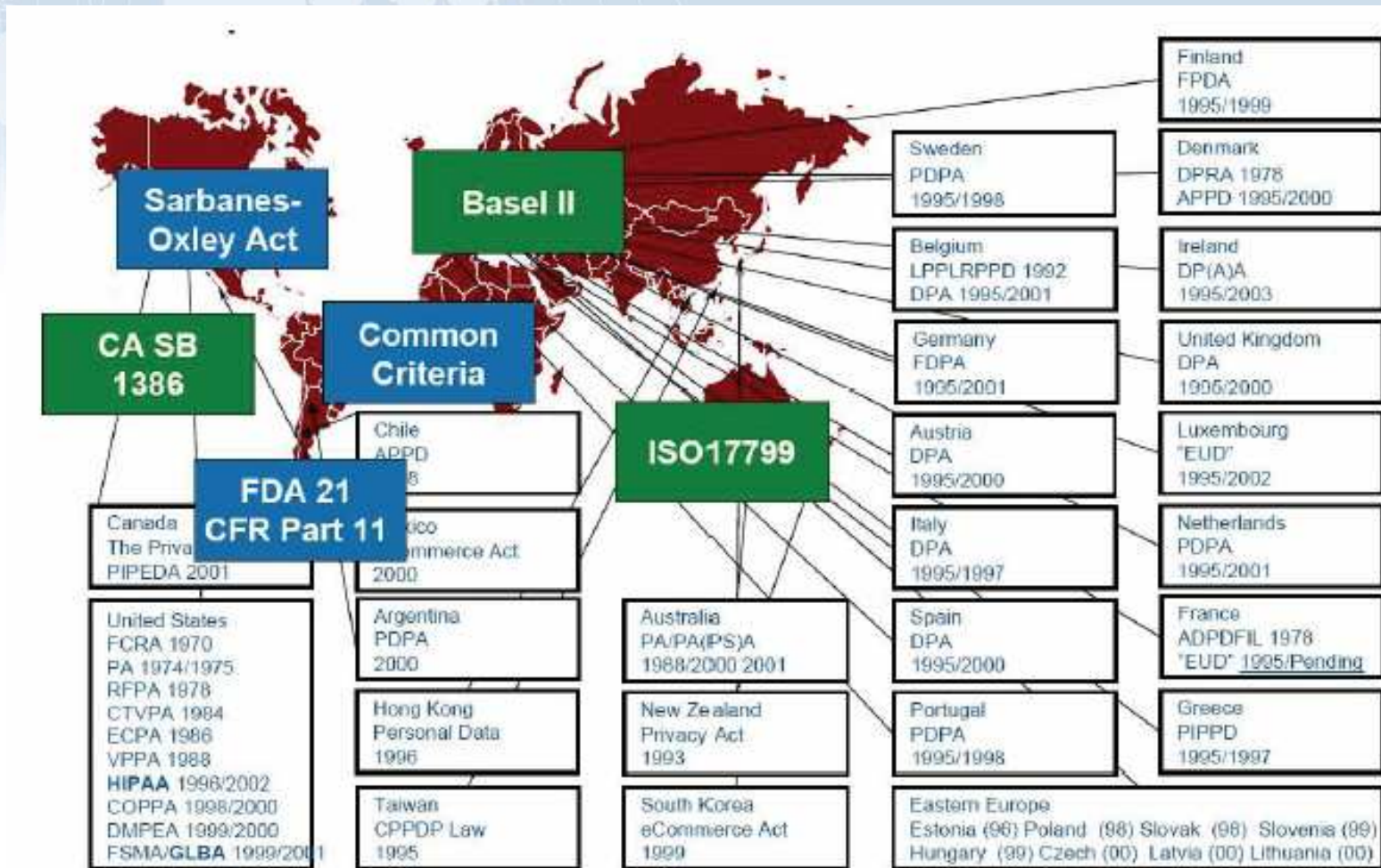
Figure 1

Source FreedomDynamics, February 2007

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Regulatory Compliance Jungle



Source: Kerry Shackelford -www.KLSConsultingLLC.com

... regulatory compliance should not be the only driver



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The Question



- ❑ What is the effect of a **downtime** in my business critical services ?
- ❑ How can I guarantee **SLA** to my customers without penalty in service management ?
- ❑ Which **countermeasures** do I implement to protect my assets from different kind of threats ?
- ❑ Can I affect of **competitiveness loss** due to external or internal damaging events ?

Business Risk Awareness



Italtel Highlights

Activities

Italtel designs, develops and implements IP-based **Next-Generation Network solutions and services** as well as services to support customers' business and activities.



To become a reference **partner** for telecom operators, large enterprises and the public sector in the creation of **IP-based Next-Generation Networks** and in the implementation of **convergent multimedia services**.

Mission

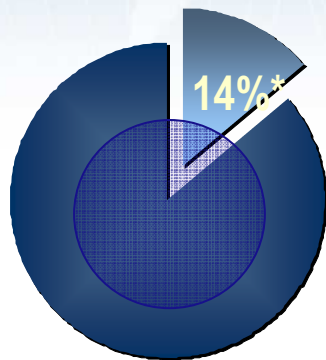
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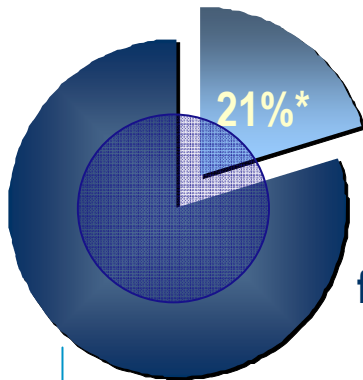
Highlights

Technological leadership

Italtel's technology is the base for telecom networks of 40 operators worldwide



**INNOVATIVE
NGN
SOLUTIONS:
EMEA leader
in 2006**



**SOFTSWITCH:
4th place
worldwide (6%),
EMEA leader
for the third year**

*market share



Presence in 20 countries worldwide

In Italy Italtel is located in **Settimo Milanese (Milan), Rome e Carini (Palermo)**. In Settimo there is also ONE-ANS, Italtel's main subsidiary.

Development & Innovation professionals are more than **1000**

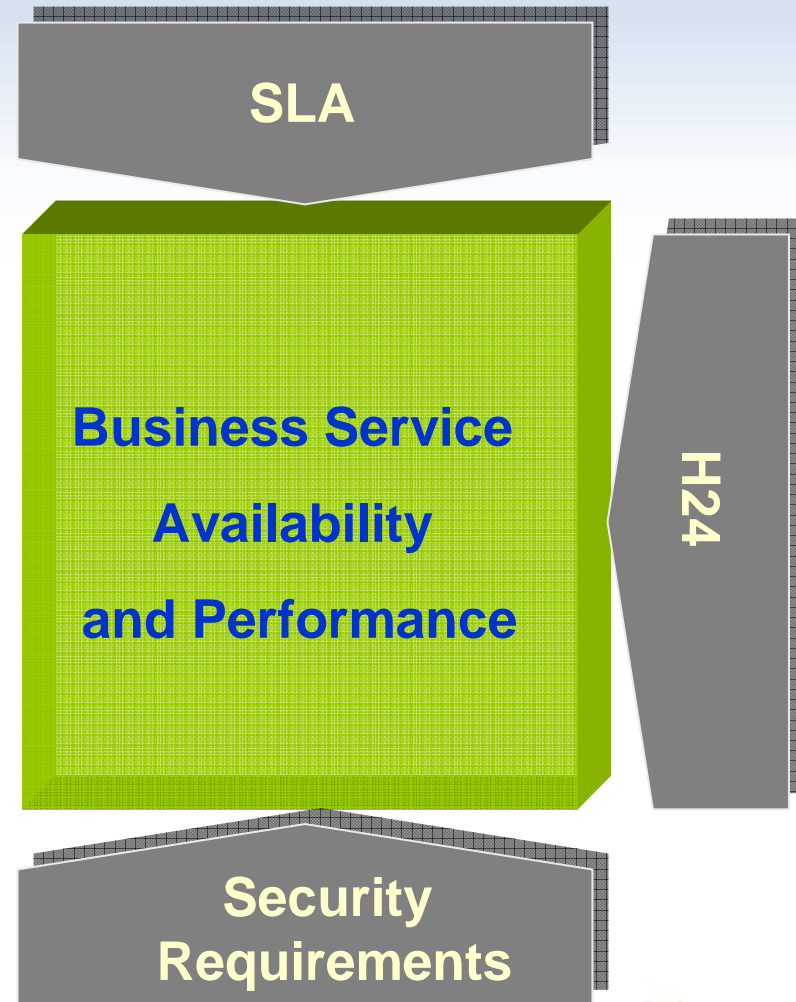
2,400 employees

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Business Critical Services

- ❑ **Network Service Operation** supports domestic and international Customers to **startup and maintain operational activity on their Telecommunication Networks**, ensuring high availability of customer mission critical infrastructures and applications.
- ❑ **Security Service Operation** supports Customers in **monitoring and management activities on security infrastructures** (Firewall, IDS, VPN) through a wide set of services based upon a **proactive approach** and a **dedicated operational structure**.



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Business Critical Numbers

- “Five nines availability” (99,999 %)

- Managed Networks

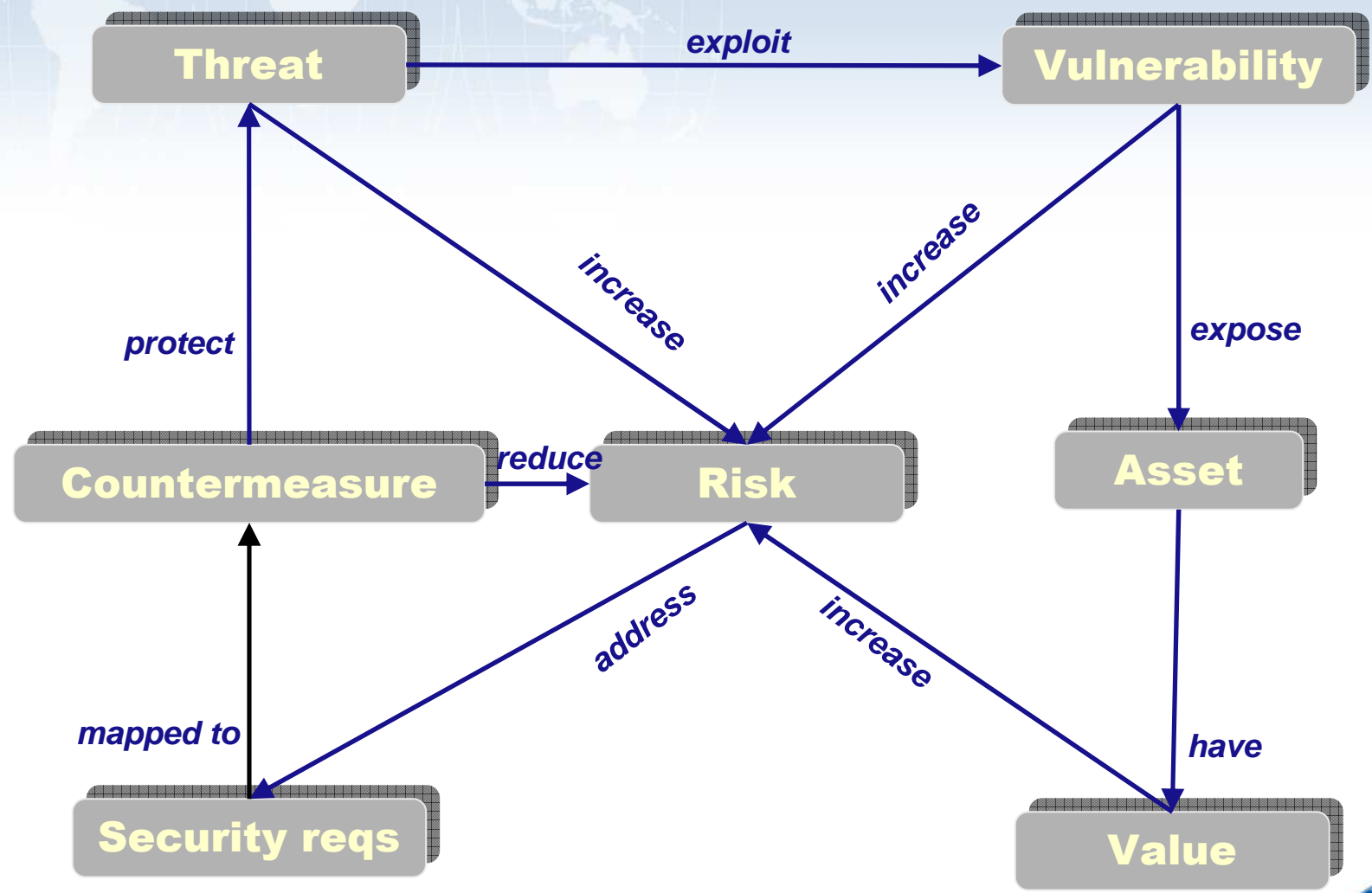
 - Public Switches 833 of which 330 International

 - IP POPs 7731 of which 59 International

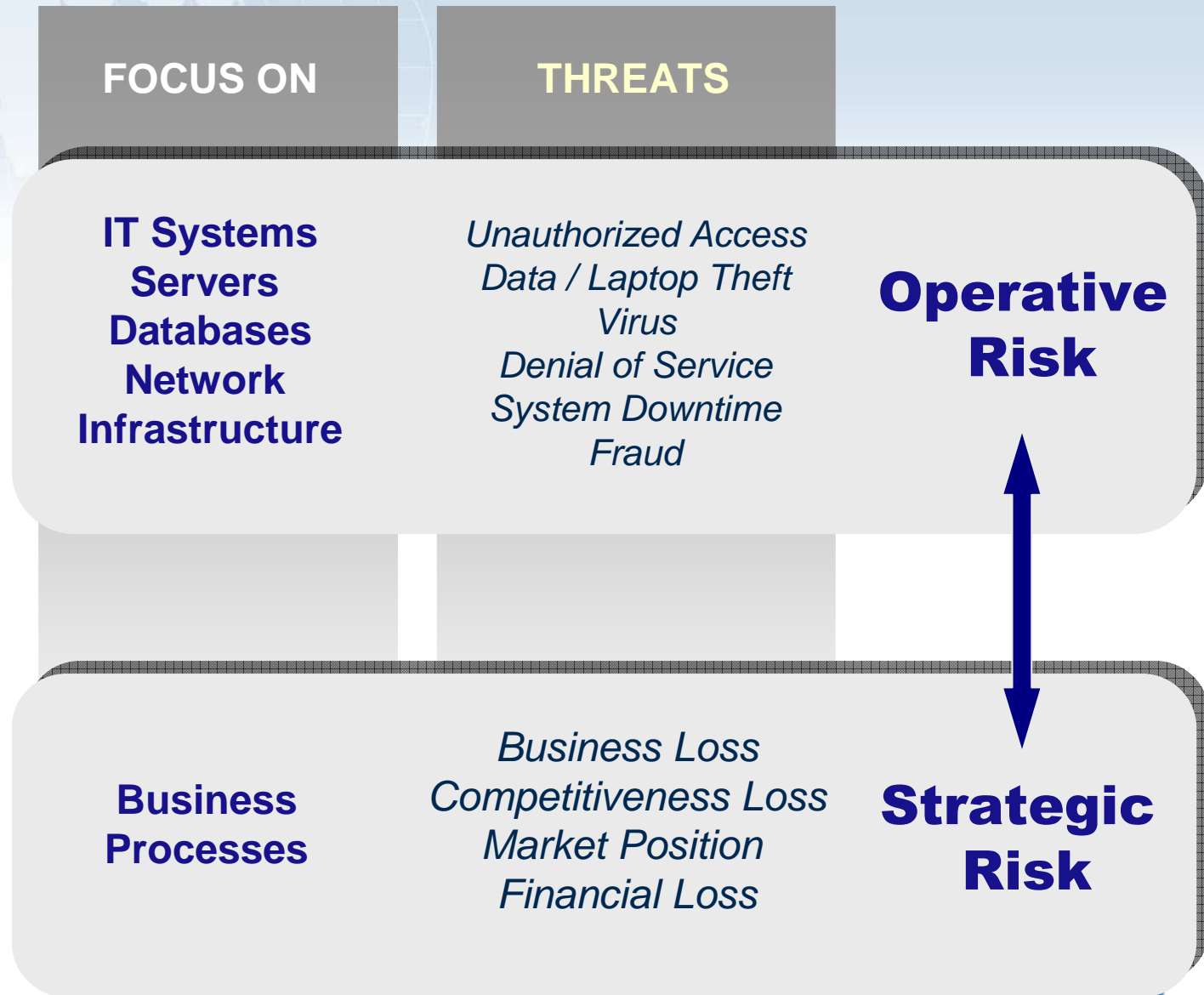
- Cases

 - More than 10000 / year (Trouble Tickets)

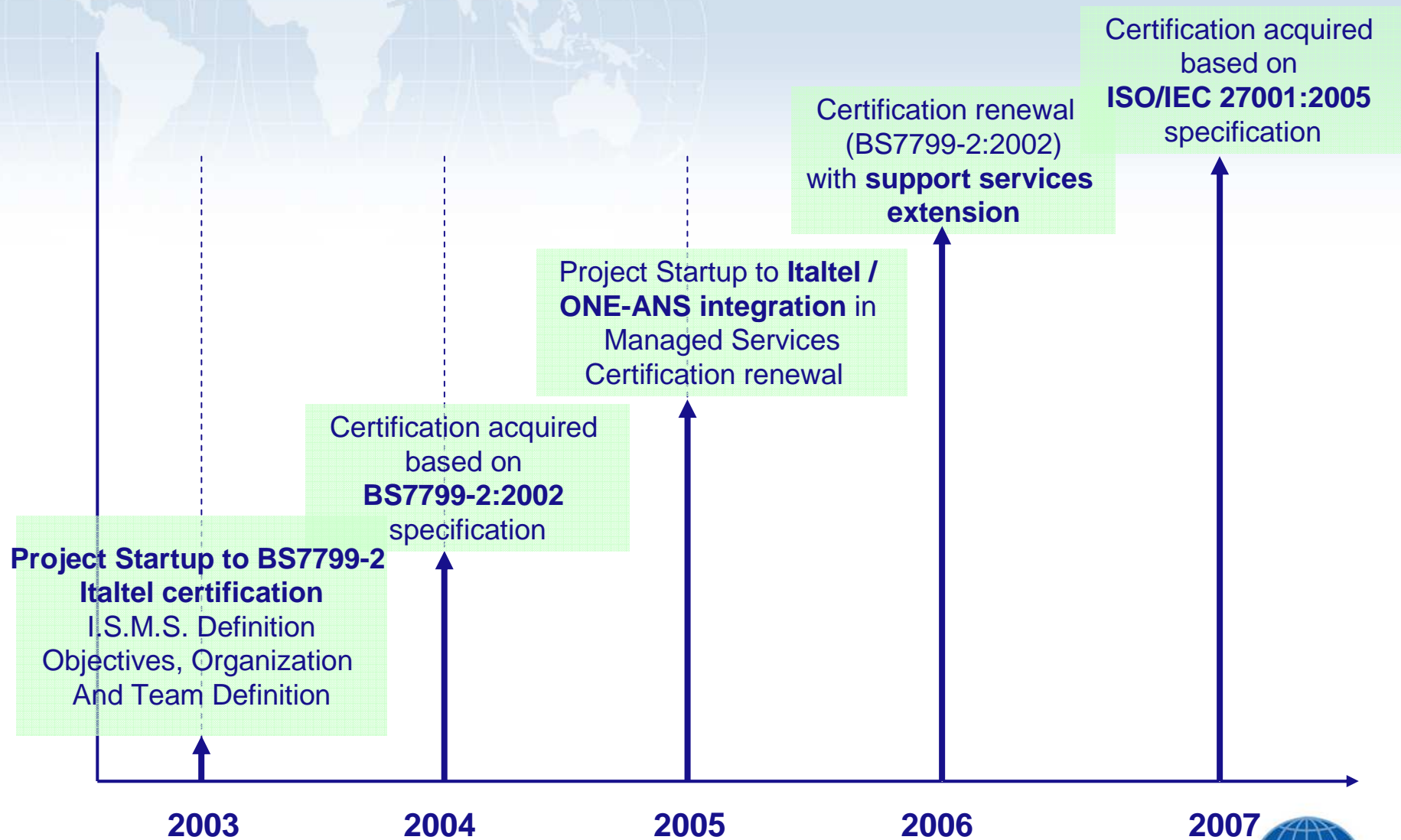
Risk Management : relationship matrix



Risk Management : from theory to practical



Italtel Experience – A route to ISO/IEC 27001



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The approach

FOCUS ON

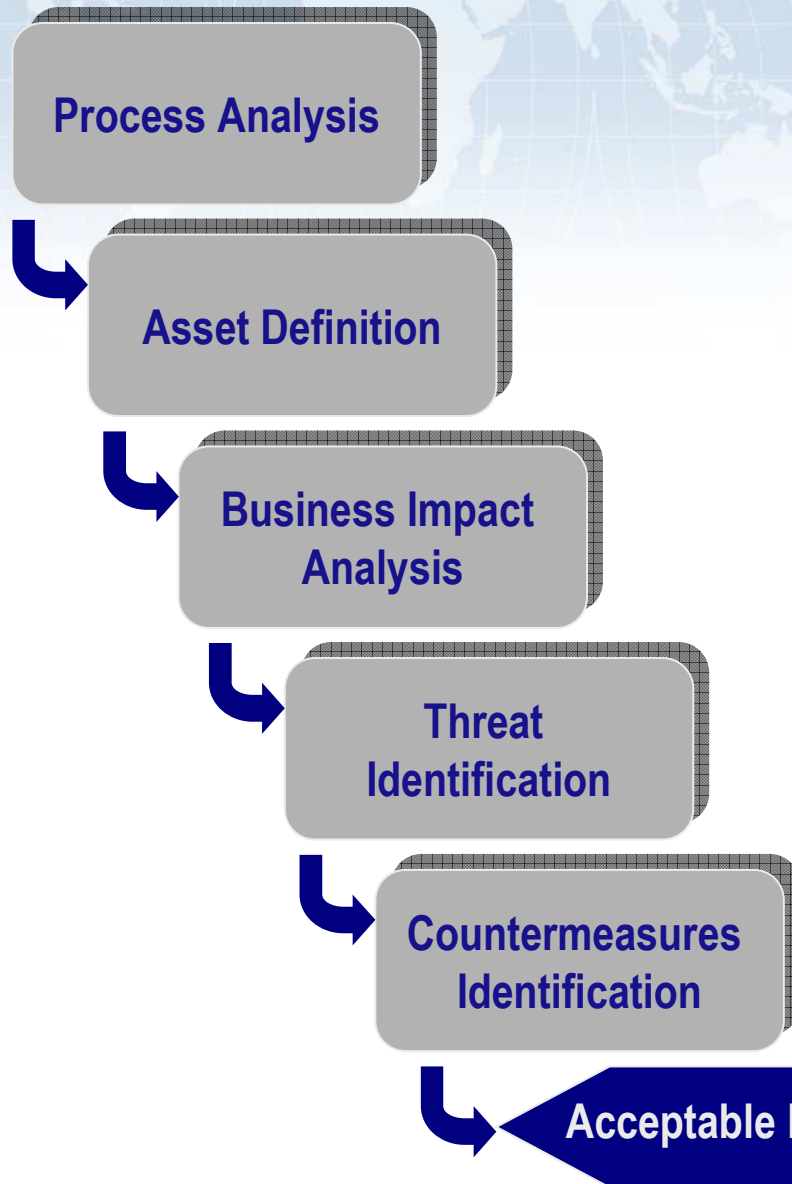
Confidentiality

Integrity

Availability

- ❑ Strategic risk estimated for each operative threat
- ❑ Operative risk estimated for each component in IT environment
- ❑ Services are defined by *relevance* level
- ❑ System value is defined by the value of the most mission critical supported process
- ❑ Objective metrics based on real potential impacts
- ❑ ... don't forget Regulatory Compliancy

The process



Process and subprocess in organization are described.
Business critical for company mission are identified.

A **mapping is created between each process and a set of systems**, applications and infrastructure used in the process, data required to complete it and human resources involved in it.

For each process **defines the impact on business**: it describes the relationship between the “value” of the process / data and the “sensitivity” level in terms of CIA.

Analysis and **classification of threats** to which assets are exposed in organization.
Specific mapping on CIA for each process is performed.

Enforcement **criteria definition** and **implementation directives** to address security requirements against potential threats and known vulnerabilities

Process and asset description - Methodology

PROCESS / SERVICE	ASSETS					
	DATA	APPLICATIONS	SYSTEMS	NETWORK INFRASTRUCTURE	PHYSICAL INFRASTRUCTURE	PEOPLE
Operation Request						
Escalation						
Customer Network Access	Customer support H24 Plan (Shift, Technicians, Supervisor - Mobile phone numbers) Managed devices passwords	Remote Connection Client Managed system client	PC Desktop PC Laptop (technicians) Help Desk Desktop Managed Customer Client	Remote Access Intranet Italtel Telephony (fixed and mobile)	Service Area Help Desk Area	NC Operator - Technician
Technical Assistance						
Activity Reporting						

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Risk Factor and Business Impact

PROCESS	RELEVANCE		SCOPE		OPERATIONAL IMPACT		FINANCIAL IMPACT		TOLERANCE		Notes
LAN Connectivity											
WAN Connectivity											
Internet Access	Determinant		Company mission		Disruptive		> 1.000 K		0		Infrastructural service to support core business
	Relevant	x	Support mission	x	Degenerative	x	500-1.000 K		< 4h	x	
	Influent		Support mngt		Influent		100-500 K	x	< 24h		
	Little influent		Control Structure		Little influent		< 100 K		< 48h		
	Marginal		General Structure		Marginal		0		< 1 week		
									more		
Antivirus Service											



Risk Distribution – A snapshot



I.S.M.S. : Italtel Numbers

- ❑ Organization
 - I.S.M.S. Forum : Board and Top Management
 - Operative Team : all involved departments represented
- ❑ 18 Resources involved
- ❑ 7 Departments involved
 - HR, Security, Quality, ICT, Facility Management
 - Network Service Operation, Security Service Operation
- ❑ 50 Processes / Sub-processes analyzed
- ❑ 20 IT Services evaluated, all Sites covered
- ❑ Methodology and tools
 - CRAMM, SSM (Security Scalable Model)

From Risk Management to Business Continuity

FOCUS ON

Confidentiality

Integrity

Availability

Business activity that can define the strategic and operational framework to review the way your organization provides its products and services and increases its resilience to disruption, interruption or loss.

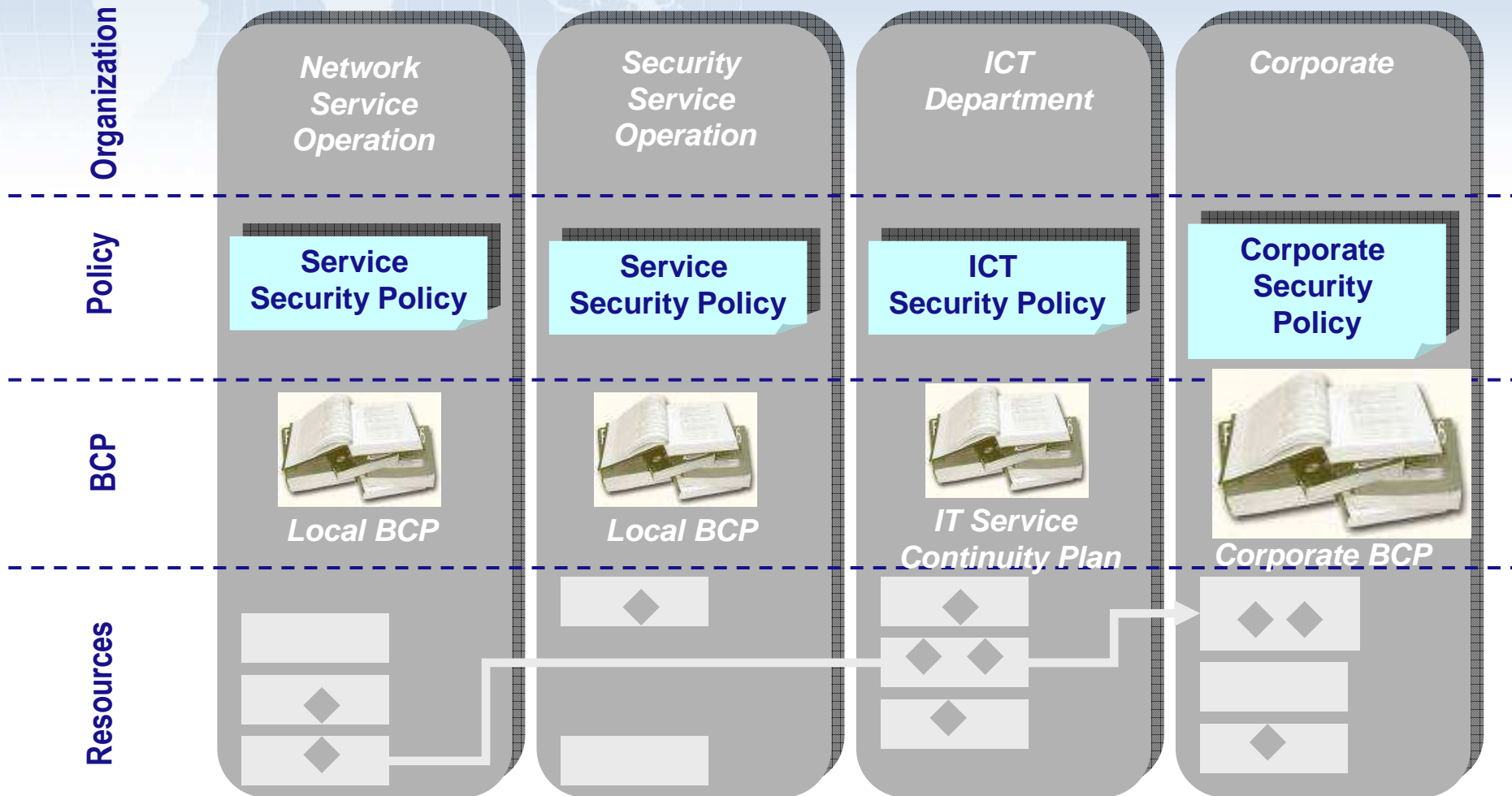
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Italtel BCP Application

- ❑ Process definition to develop and maintain continuity in business services included in I.S.M.S. scope
 - Plan implementation, testing and update required
 - Responsibility and coordination assignment
- ❑ Strategic Plan for Business Continuity
 - Risk evaluation based
 - Process relevance driven, not only IT systems focused
- ❑ Plan and Procedures Definition and Implementation
 - Contingency Plan (Operative, Roles and Time Plan)
 - Procedures documentation, testing and update
 - Human Resources Training
- ❑ Regular Testing of Emergency Plans
 - Simulations, operational tests, recovery tests on different sites, general testing

BCP Approach



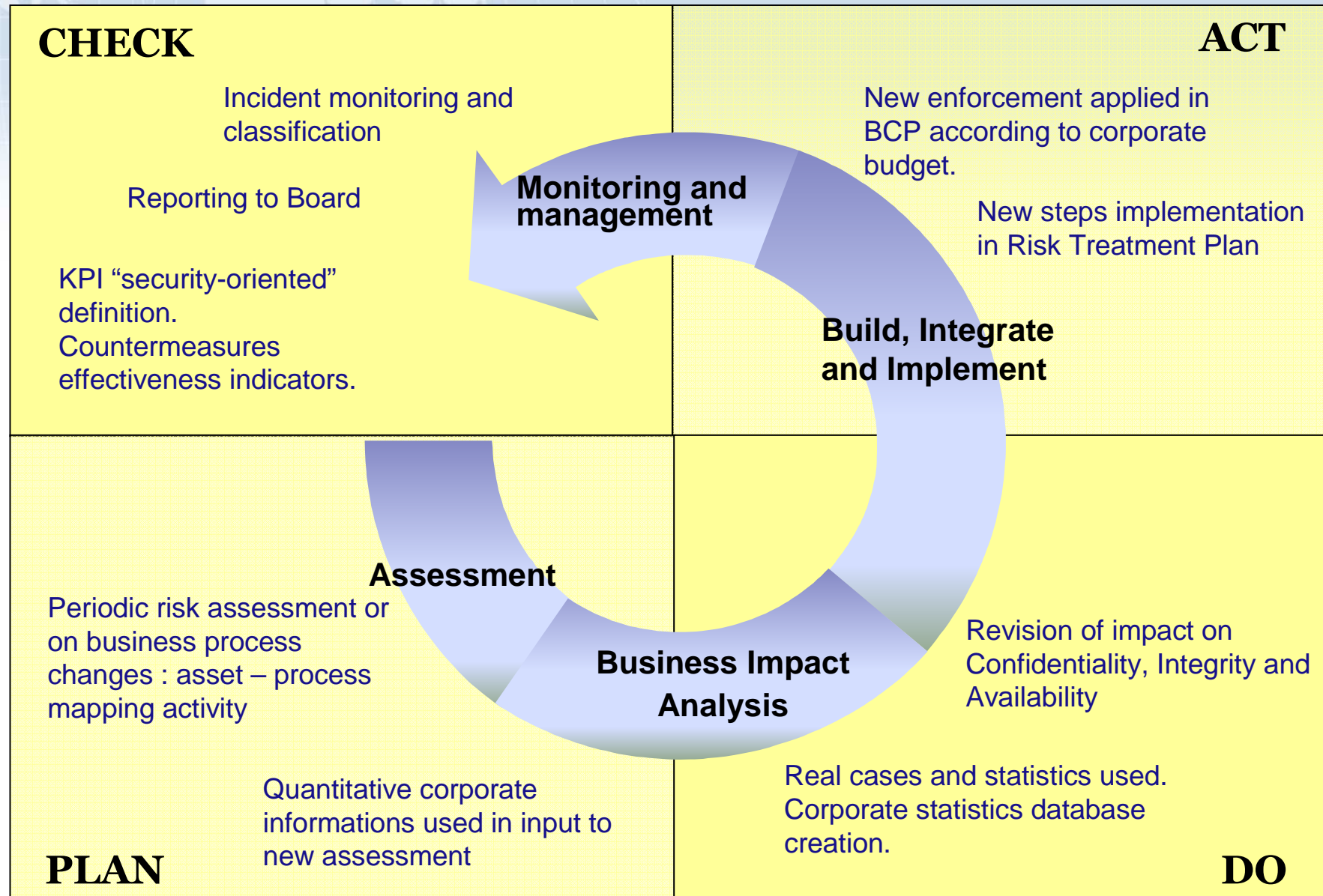
◆ resource

— critical process

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A process in “continuum”



Lesson Learned



- Risk Awareness
- Investment Effectiveness and Efficiency
- Board commitment and involvement
- Organization first
- Simpler is better
- Security in depth
- People



ITALTEL
Roots to the future



Thank You