IT Risk and Control Framework

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ISACA
Trust in, and value from, information systems
Dhaka Chapter

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Session Objectives

- IT opportunities and risks
- Global concern/incidents
- Bangladesh perspective
- Best practices frameworks/standards
- ISACA COBIT framework
- Summary

Information is the key

- Information is the key resources
- We create information
- We use and store information
- We destroy information
- IT plays a key role in these activities
- Our duty is to protect these information asset

*http://www.dailytech.com/Worlds+Data+to+Reach+18+Zettabytes+by+2011/article11055.htm

Technology creates opportunities

- Business online
- Education online
- Government online
- Provide E-health service
- Buy electronic contents(e-books, software, music etc)

We can rich the whole world in a finger move

Opportunity creates Risk

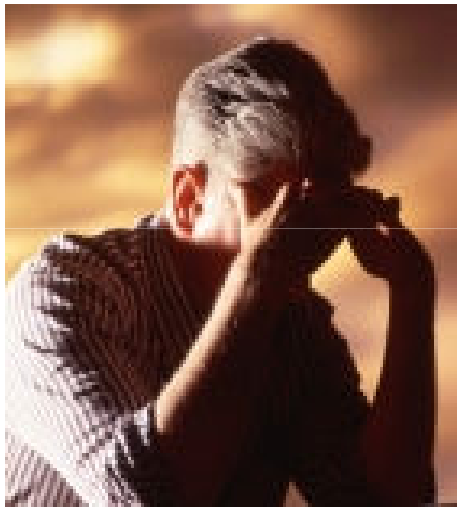
Opportunity and Risk are two sides of the same coin

What are the IT Risks?

- Email password may be disclosed
- Facebook account may be used by someone else
- Credit card information may be disclosed
- Customer information may be stolen
- IT Service delivery to the customers may be poor
- IT systems may be obsolete
- IT projects may be late or fail
- IT systems do not provide any business benefit
- Risk of non-compliance with the regulator
- Own people may harm the systems

IT risk is business risk

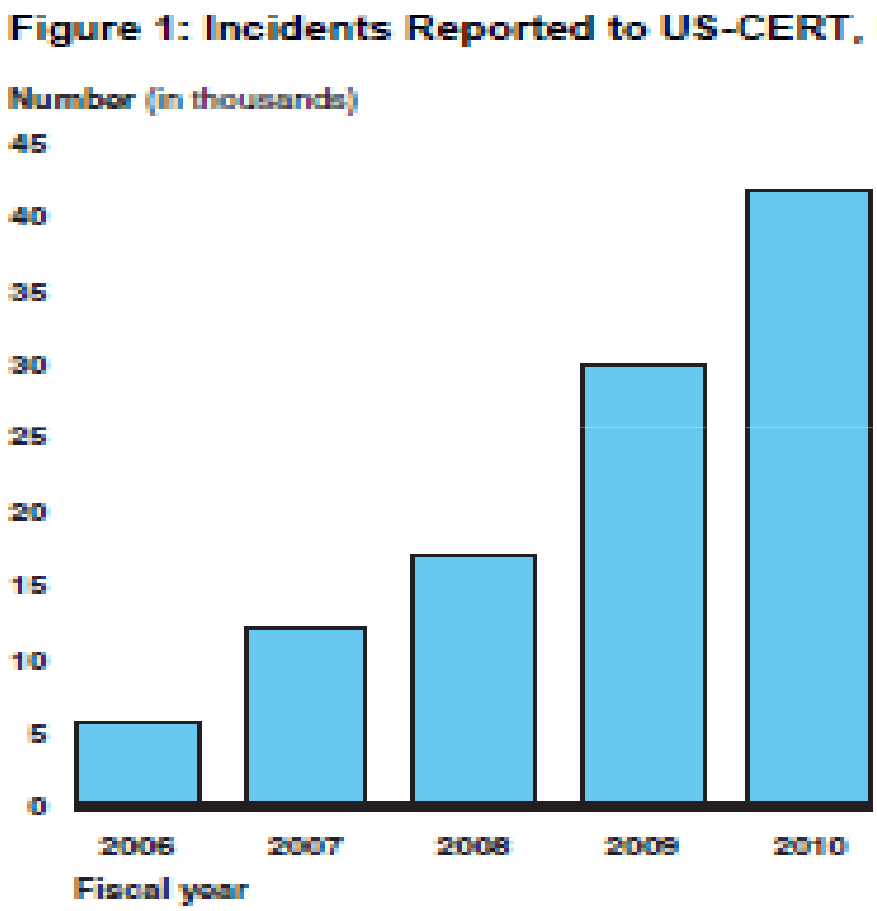
A Study in Project Failure



- Only one in eight IT projects can be considered truly successful (in terms of time, cost and quality)
- The cost of project failure across the European Union was €142 billion in 2004

Source: http://www.bcs.org/content/ConWebDoc/19584

Incidents Reported by US Federal Agencies



http://www.gao.gov/products/GAO-12-137

KPMG e-Crime Survey (2011)

- E-crime is no longer driven by profit alone
- Hackers are now state-sponsored and politically motivated
- Simply defending systems against attack is not a sufficient strategy for today's threat environment.
- A complete approach needs to cover defence, detection, reaction and recovery

"The complexity of security challenges created by technology is only increasing"

http://www.kpmg.com/UK

Recent Cyber crime news

- Department of Homeland Security website hacked
- NASDAQ Site was track down with DDOS Attack
- Cyber attack crashes Irish government website
- Hackers Attack Second Brazilian Bank's Website
- Ukraine Govt retreats after massive cyber-siege
- Zappos.com hacked; 24 million customers affected
- VeriSign Hit by Hackers in 2010
- Saudi hacker publishes Israeli credit card details
- Websites of 2 Palestinian news agencies brought down by cyber attack

Source: http://www.infowar.com/

ISACA Survey (2011)

- Increasing IT costs — 42%
- Insufficient IT skills — 33%
- Problems implementing new IT systems — 30%
- Problems with external IT service providers — 29%
- Serious operational IT incidents — 21%
- Return on investment not as expected — 19%
- IT security or privacy incidents — 18%

http://www.isaca.org/Knowledge-Center/Research/ResearchDeliverables/Pages/ITGI-Global-Survey-Results.aspx

Bangladesh Scenario

Achievement

- Ranked 134 in UN E-Gov survey in e-gov development category
- Some quick win projects by Government
- Bangladesh is on the list of top 30 destinations for global IT outsourcing for 2010-11(Garter)

Challenges

- Ranked poor in language, infrastructure and data and intellectual property security (Gartner)
- Lack of sustainability of IT Systems
- Lack of ownership of IT systems
- Inadequate Human resources
- Poor IT management
- Increased cyber incidents
- No National BD-CERT

The impact of IT risks

- No organization is unaffected
- Businesses are disrupted
- Privacy is violated
- Organizations' suffer direct financial loss
- Reputation is damaged

What is the solution

- No 100% solution
- We can not solve all the problems
- We can reduce to an acceptable level only
- Use best practices

Advantage of using Best Practices

- Better accountability and responsibility (ownership)
- No blame game
- Better management
- Better benefits from IT investments
- Better Compliance
- Better monitoring
- Compare with others

Some examples of best practice

- COBIT
- ITIL
- ISO 27001/2
- COSO ERM
- PRINCE2
- PMBOK
- Six Sigma
- TOGAF

About COBIT

- COBIT is a comprehensive IT governance and management framework.
- Accepted globally as a set of tools that ensures IT is working effectively and efficiently
- Addresses every aspect of IT
- Ensure clear ownership and responsibilities
- A common language for all
- Improves IT efficiency and effectiveness
- Better management of IT investments
- Ensure compliance
- Complementary copy is available (www.isaca.org/cobit)

COBIT Coverage

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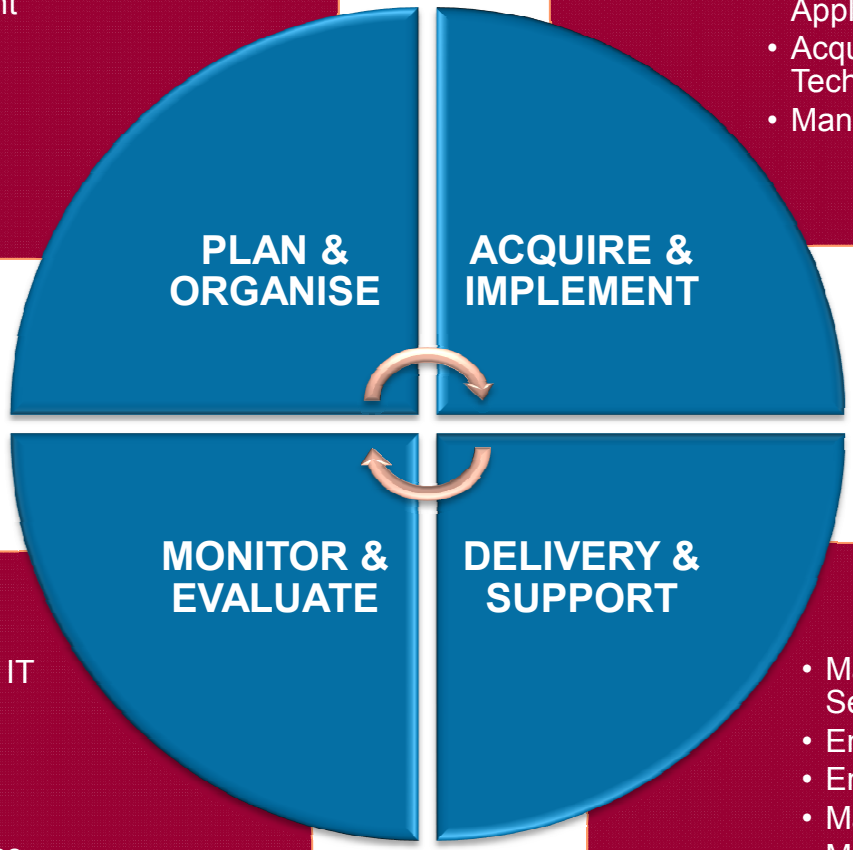
- Strategic IT Plan
- Manage IT Investment
- Manage IT Human Resources
- Manage IT Risks
- Manage Projects

- Acquire & Maintain Application Software
- Acquire and Maintain Technology Infrastructure
- Manage Changes



- Monitor and Evaluate IT Performance
- Monitor and Evaluate Internal Control
- Ensure Compliance
- Provide IT Governance

- Manage Third-party Services
- Ensure Continuous Service
- Ensure Systems Security
- Manage Incidents
- Manage data
- Manage Operations

COBIT Define Responsibility & Accountability

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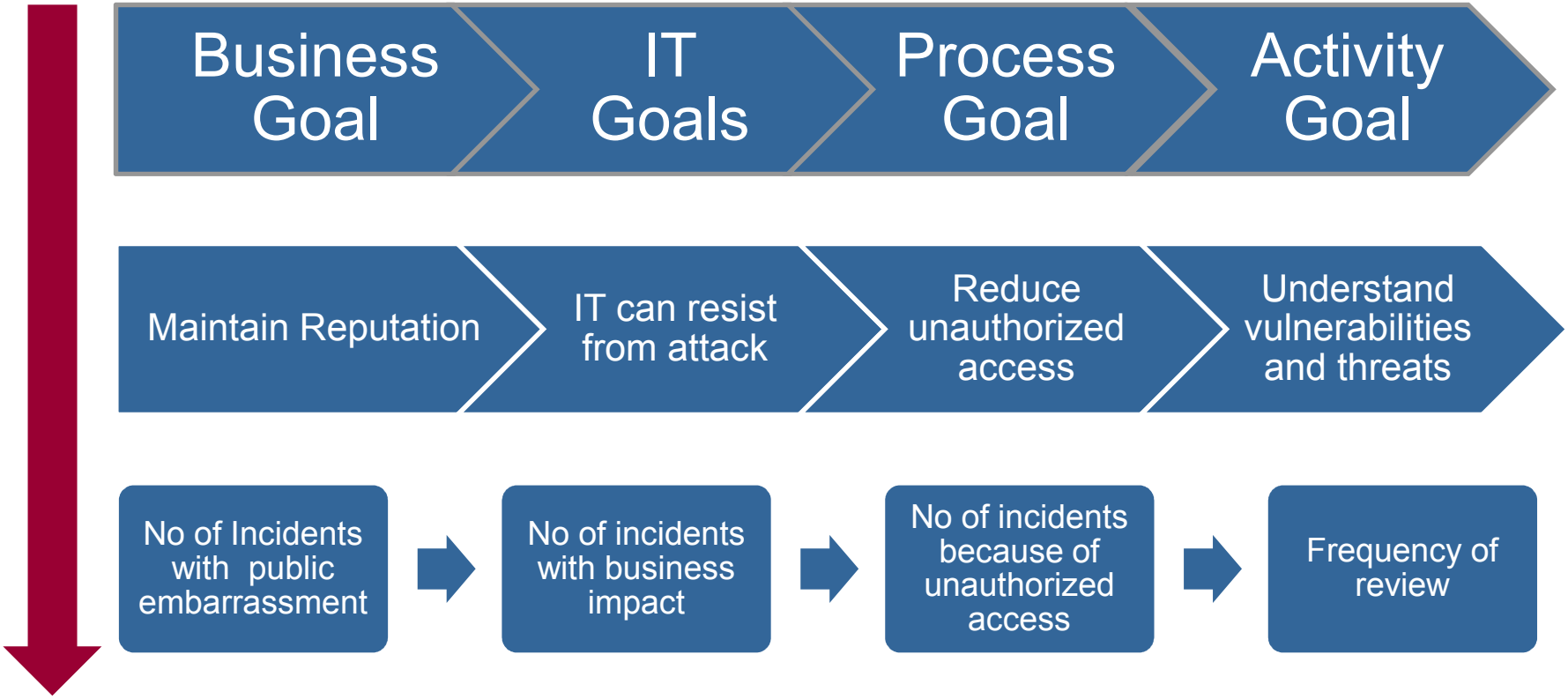
RACI Chart

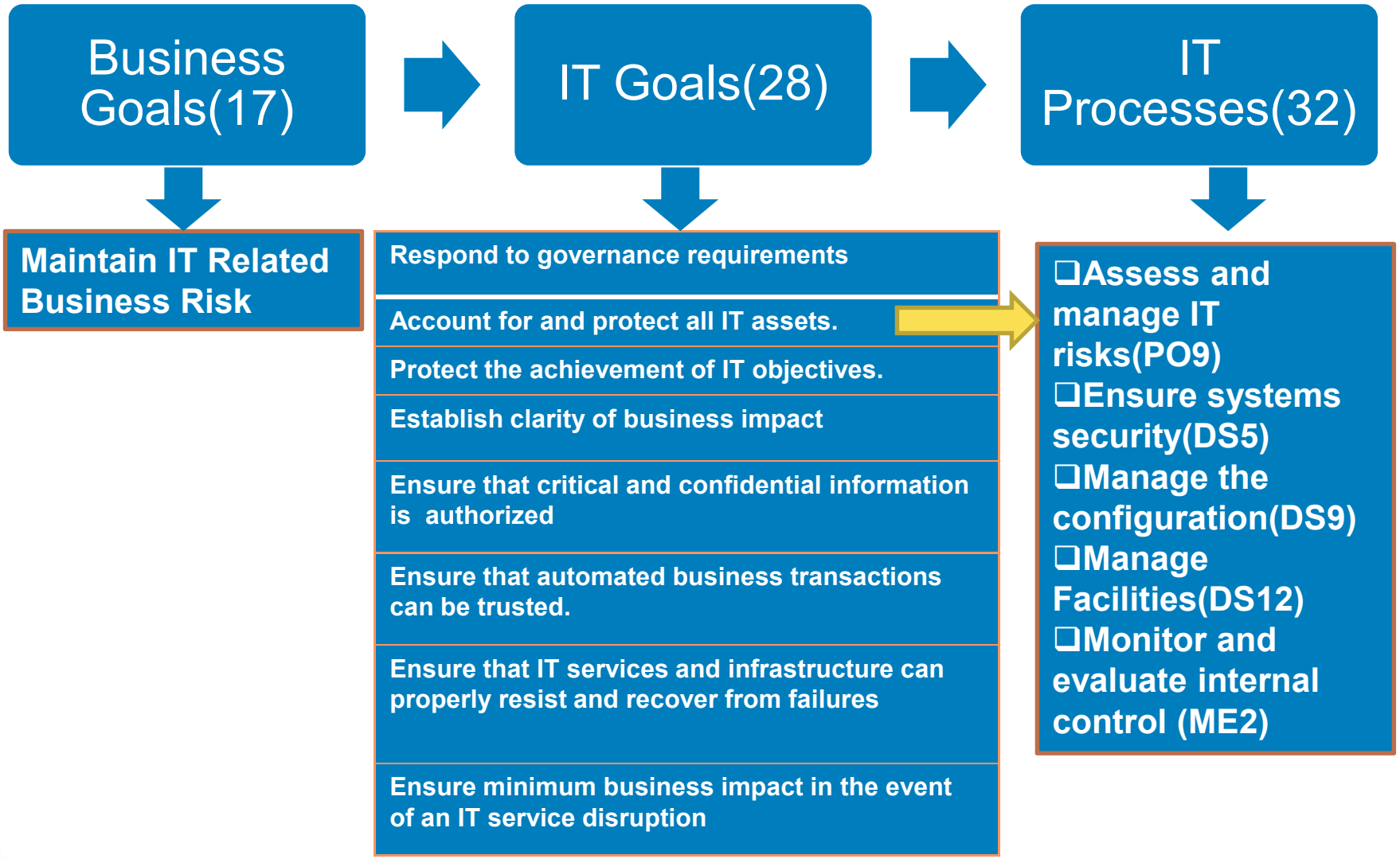
Activities \ Functions	CEO	CFO	Business Executive	CIO	Business Process Owner	Head Operations	Chief Architect	Head Development	Head IT Administration	PMO	Compliance, Audit, Risk and Security
Link business goals to IT goals.	C	I	A/ R	I	C						
Identify critical dependencies and current performance.	C	C	R	A/ R	C	C	C	C	C		C
Build an IT strategic plan.	A	C	C	R	I	C	C	C	C	I	C
Build IT tactical plans.	C	I		A	C	C	C	C	C	R	I
ENSURE SYSTEM SECURITY (DS5)											
Define and Maintain IT Security Plan.	I	C	C	A	C	C	C	C	I	I	R
Conduct regular vulnerability assessments.		I		A	I	C	C	C			R

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

Define Goals and Metrics



COBIT links Business goals to IT Process



COBIT maps other frameworks

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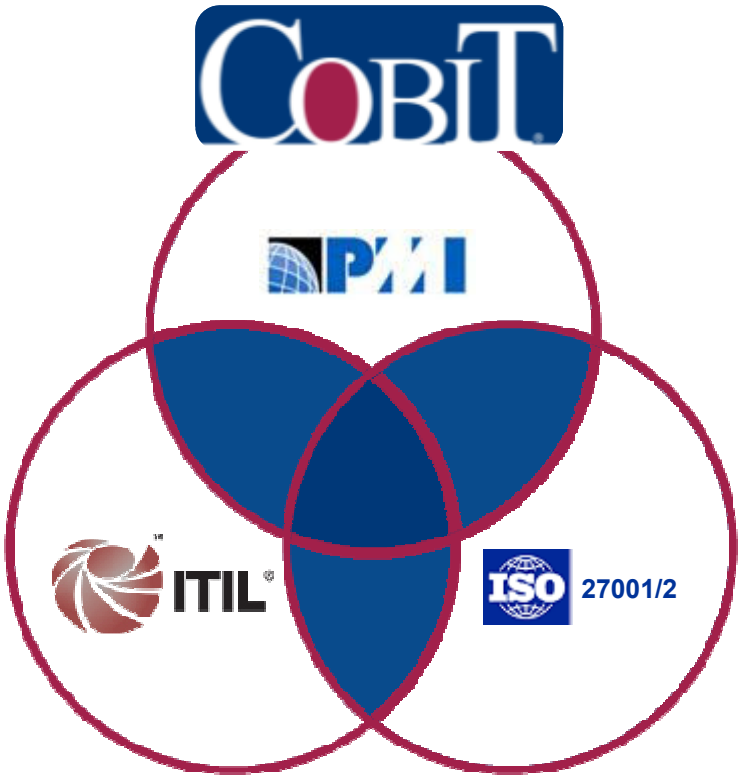
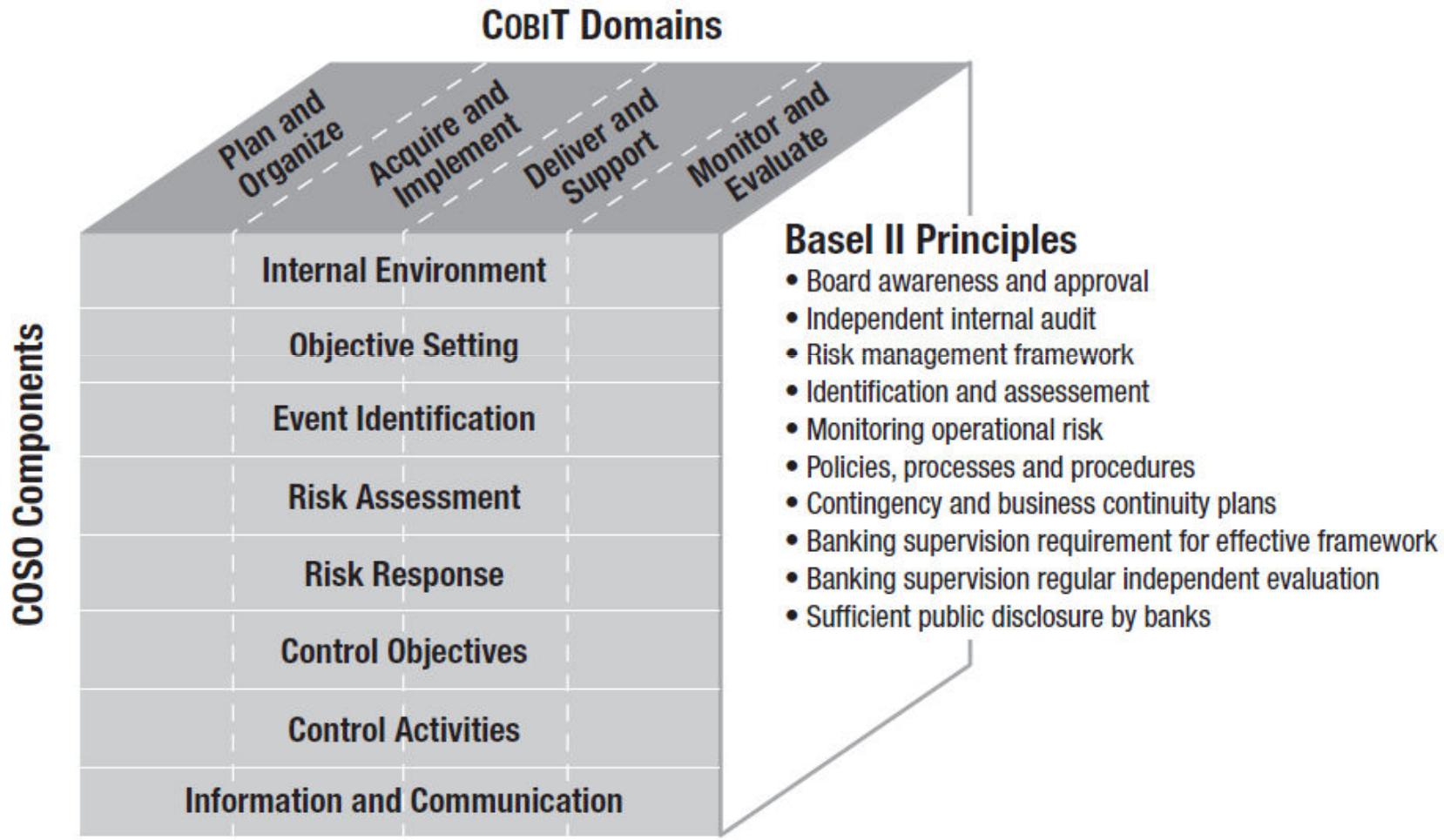
- ITIL
- ISO 27001/2
- ISO 20000
- PMBOK,
- TOGAF
- CMMI
- COSO



COBIT maps with Basel II



Source: IT Control Objectives for Basel II

Summary

- Use Best practice such as COBIT to minimize IT Risks
- Start with basic processes
- Form a high level IT Strategy Committee headed by CEO/Head.
- Formulate and implement IT Strategic Plan and IT policies.
- Allocate resources (People, infrastructure,)
- Assign roles and responsibilities, authority and accountability (Use RACI Chart)
- Make IT a regular board agenda.
- Regularly assess, review and monitor IT Risks.
- Establish a national BD-CERT(by gov)

Thank You!

Questions?