Communications for Defence

IS SCA ALLIGNED?

Bussiness approach to Software Defined Radio development.

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indra

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INTRODUCTION

> "…if you can't measure *it* you can't control *it*, and if you can't control *it* you can't manage *it*"

Never truer than when it means IT

IT Governance & Software Radio Problems

Technology language & complexity

The inability to define value delivered by IT

INTRODUCTION

'IT service delivery problems' is one of the main risk in the companies

Insufficent number of staff

➡ **IT Service delivery problems**

Staff with inadequate skills

High cost of IT with low or uproven ROI

Problems with outsourcers

Lack of agility/development problems

Source: IT Governance Global Status Report

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ITIL Governance Framework

"Somewhere today, a project is failing"
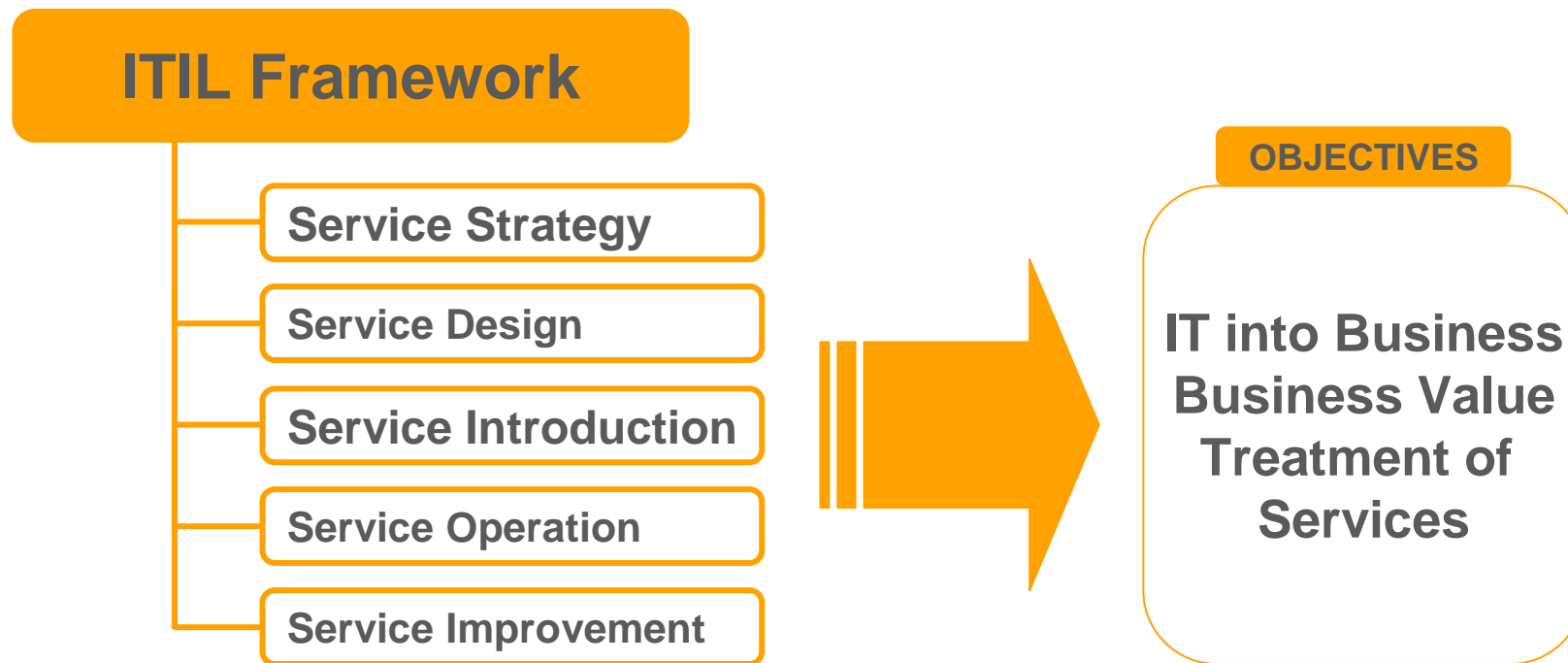
ITIL Framework

- Service Strategy
- Service Design
- Service Introduction
- Service Operation
- Service Improvement

OBJECTIVES

IT into Business
Business Value
Treatment of
Services

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ITIL Governance Framework

Complementary Publications

Service Strategy	**Service Design**
Service mngt	Service Catalog mngt
Demand mngt	Service Level mngt
Financial mngt	Applications mngt
Service Portafolio mngt	Availability mngt
	Service Continuity mngt
	Information Security mngt
	Requirements mngt

Continual Service Improval

Service Strategy	**Service Transition**
Technical mngt	Transition mngt
Service desk mngt	Service Release mngt
Service Request mngt	Change mngt
Problem mngt	Configuration mngt
Incident mngt	
Event mngt[0]	

Web Support Services

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CobIT: Controlling IT Governance

CobIT
Control Objectives for Information & related Technology

Good practices across a domain and process framework

Strongly focused more on control, less on execution

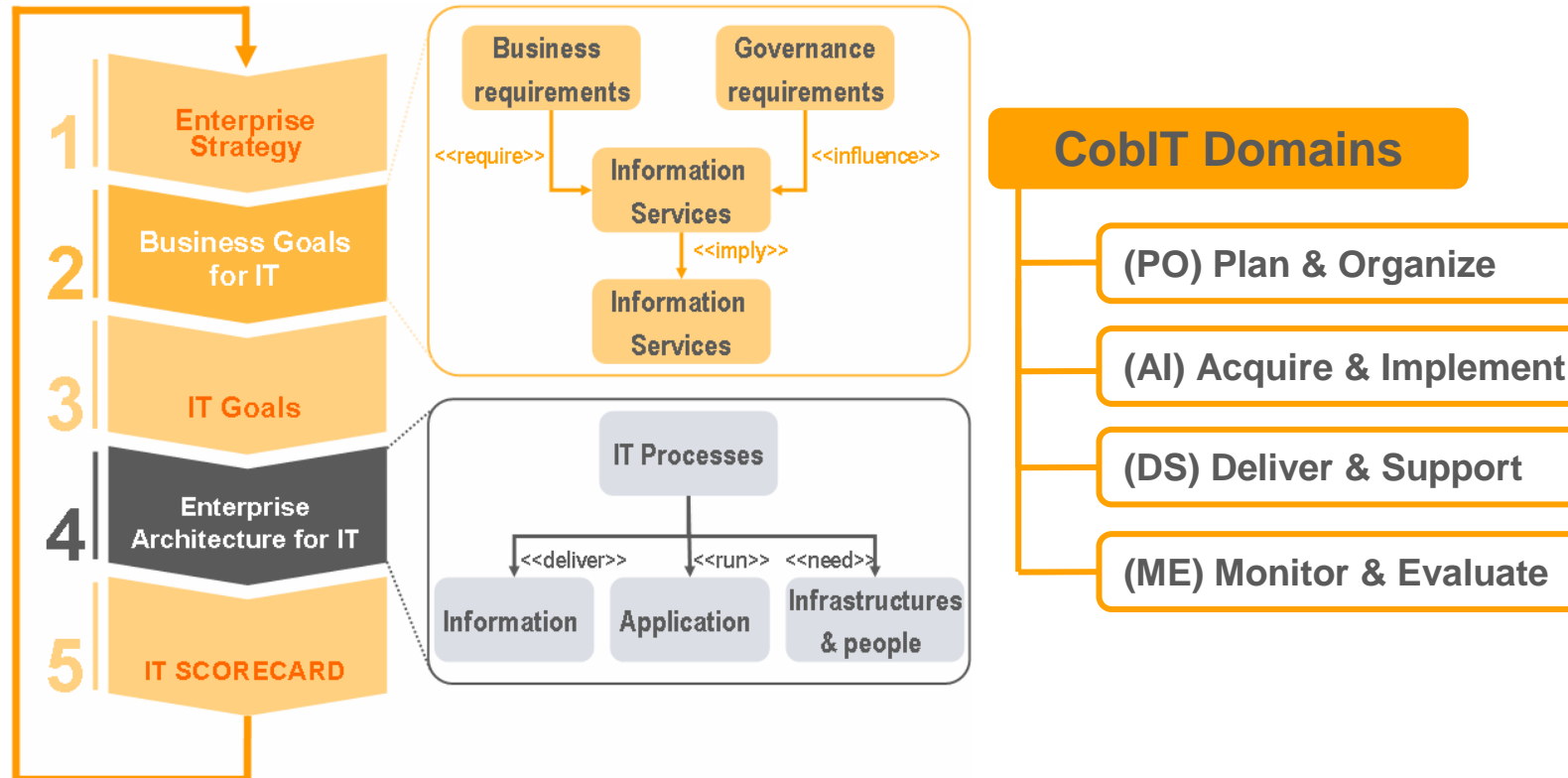Bridge the gaps between business risks & control needs

CobIT Mechanisms

Internal control system to manage business requirements

Ensure diligence by all individuals involved in mngt

Enable development of policies and good practice for IT

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CobIT: Controlling IT Governance

1 Enterprise Strategy

2 Business Goals for IT

3 IT Goals

4 Enterprise Architecture for IT

5 IT SCORECARD

Business requirements

Governance requirements

<<require>>

<<influence>>

Information Services

<<imply>>

Information Services

IT Processes

<<deliver>> <<run>> <<need>>

Information

Application

Infrastructures & people

CobIT Domains

(PO) Plan & Organize

(AI) Acquire & Implement

(DS) Deliver & Support

(ME) Monitor & Evaluate

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Getting the best of both worlds

Implementation guidance

Awareness of the business purpose of best practices

Supporting decision making on which practices to use

Tailoring to suit specific organizations' requirements

ITIL and CobiT will be mapped through its core components, corresponding each other in a high degree

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Getting the best of both worlds

ITIL	CobiT
Service Desk	DS8 Assist and Advise costumers DS7 Educate and train users
Incident Management	DS10 Manage Problems and Incidents
Problem Management	DS10 Manage Problems and Incidents
Configuration Management	DS9 Manage Configuration
Change Management	AI6 Manage Changes AI3 Acquire and Maintain Technology
Release Management	AI6 Manage Changes DS9 Manage Configuration
Service Level Agreement	DS1 Define and Mange service levels M3 Obtain independent assurance
Financial Management	DS6 Identify and Allocate cost M2 Monitor the processes
Capacity Management	DS3 Manage Performance and Capacity
Continuity Management	DS4 Ensure continuous service AI6 Manage Changes
Availability Management	DS3 Manage performance and capacity AI2 Acquire and maintain Applications

Mapping ITIL & CobIT

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Facing the problem

NEW GENERATION RADIOS
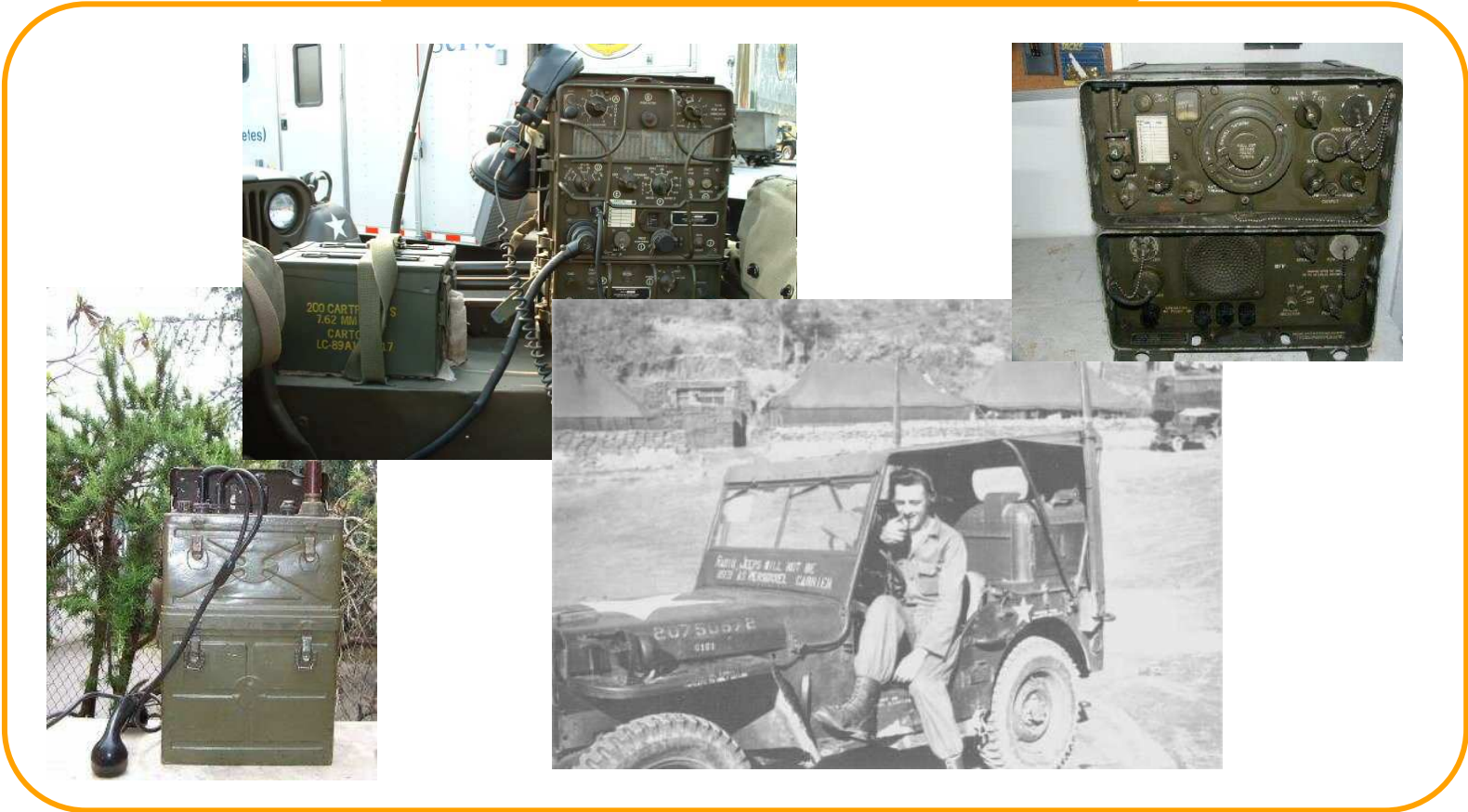
Facing the problem

Technical point of view

During Software Defined Radio business definition

(operational modes, physical restrictions, etc.)

there are unrealistic expectations of Service Level.

VS

Business point of view

It's hard to have commitments on SDR Service Levels

How the SDR dev handle on controlling its expenses

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ITIL in a Radio Environment

One of the most important problems that SDR development has to deal with is how to clearly specify the service level that the system will provide

Service Strategy

- (SLA) Service Level Agreement
- (UC) Underpinning Contracts
- (OLA) Operational Level Agreement

Catalog of Services

"The radio will interconnect with different kind of networks (ISR, NIRIS, POS, MIP Database Instance), providing capability to interoperate with different kind of data (GMTI and imagery, air tracks, emitter detections and identifications, Blue Force data)"

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ITIL in a Radio Environment
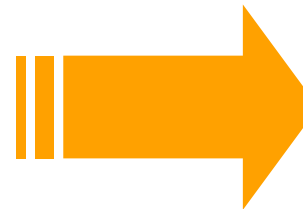
Service Transition

Radio starting up & deployment

Managing the catalog of hardware and software components (FGPA, DSP, licenses, computers, radios, etc.) your organization has

Service Operation

Day by day of released Radios

Definition of a service desk to gather the problems appeared in a radio or waveform

Improving Radio lifecycle

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Measuring how good the radios are defined

Define a framework to measure how good (or bad) the service is delivered (depending the Level defined)
Key Performance Indicators and Key Goals Indicators have to be defined over the SDR development lifecycle

Business Level

Both indicators will be related to the strategy required by the company to develop it services

KGI: Achieve successful interconnectivity within all the networks

KPI: Number of failures the radio has trying to connect to a different network

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Measuring how good the radios are defined

IT / Tactic Level

required IT mechanisms to implement the strategy defined previously

KGI: Use SOA to achieve the interconnectivity among all the networks

KPI: Delay in seconds measured from the transmission of a message and the reception of it

SDR Development Level

SDR implementation decisions that was taken to achieve the goals defined in the Strategy Level

KGI: Use XML as a language for exchanging data through the different networks

KPI: Number of times the networks is collapsed due to overhead prompted by the use of XML

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Mixing everything to create an aligned cocktail

ITIL & CobIT for SDR Governance

PLAN — Cover the whole process of deliver SDR to business and how business needs are transferred to SDR

DEFINE — How the ITIL model will be implanted in the organizations developing SDR?

ENABLE — How the people in the organizations will be involved in the change?

MEASURE — Refine the IT governance model. Metrics defined to provide feedback to the whole process

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Mixing everything to create an aligned cocktail

Success on SDR Governance

Business Engagement	**IT and the organization share a common vision and strategy**
Delivering Value	**IT has been able to achieve a dialogue and agreement of the business value that IT delivers**
Managing Change	**IT and the business are jointly being responsible for aligning people and for delivering services which work and reliably help people do their jobs better**

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Mixing everything to create an aligned cocktail

Link the Business KGI with SDR Development KPI

Present the value of the IT decisions taken in a development phase to the business board

Tactic / IT, and Business strategies can be refined, based on SDR Development

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Conclusions

Hardware Components

Power Comsumption, Antennas

Software Components

CORBA for FPGA & DSP

Software Development

Rapid App Development

IT Governace

ITIL, CobIT, PMP

SDR Development

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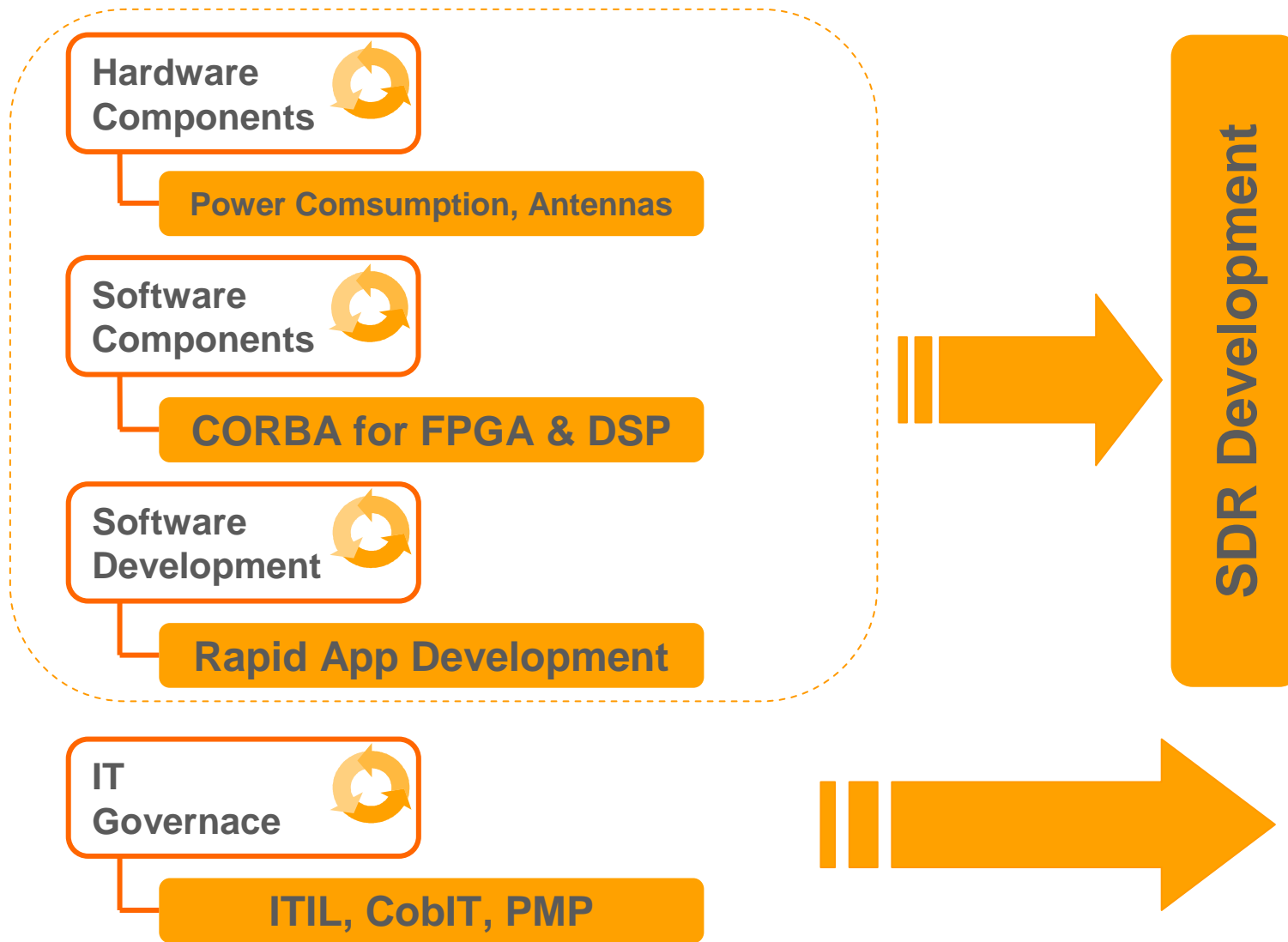
Conclusions

Still too few companies that have been successfully implemented, in their management models, best practices and govern in IT & Business Levels

SDR Governance

Increasing number of companies that are in process of implementation best practices on IT Governance

Link the performance in the IT processes with the decisions that have been taken in a Business Strategy Level

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Questions & Answers

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