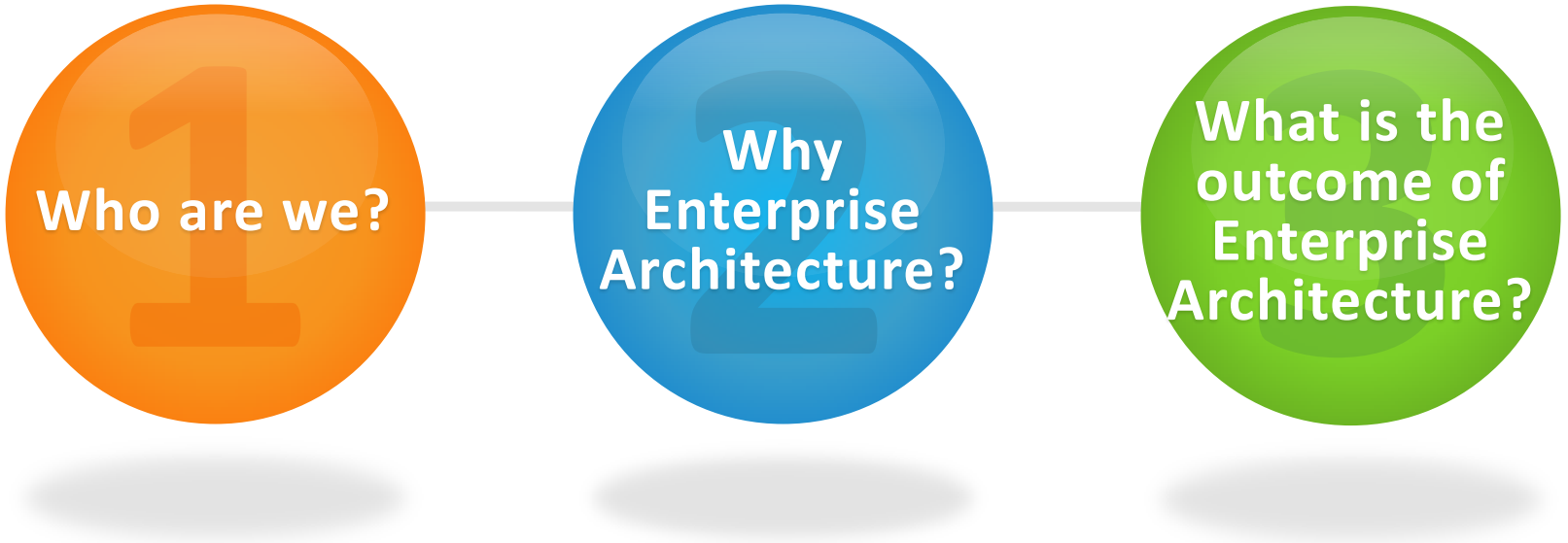
6 Mar 2012

LTC Edlin Tan (ACIO NS Matters)
Tan Song Beng (Senior System Architect)
Elton Lim (System Architect)

The Evolution of Enterprise Architecture in the Ministry of Defence, Singapore

Agenda of presentation



…. journey to the Enterprise Architecture Evolution……

1

Introduction

……from the humble beginning ……..

Introduction

- Singapore
  - Area Size: 704 km^2 , half the size of London
  - Population: 5 million
- MINDEF Information Systems Division (MISD)
  - LT COL Edlin Tan
- DSTA Masterplanning & System Architecting (DMSA)
  - Mr Tan Song Beng
  - Mr Elton Lim

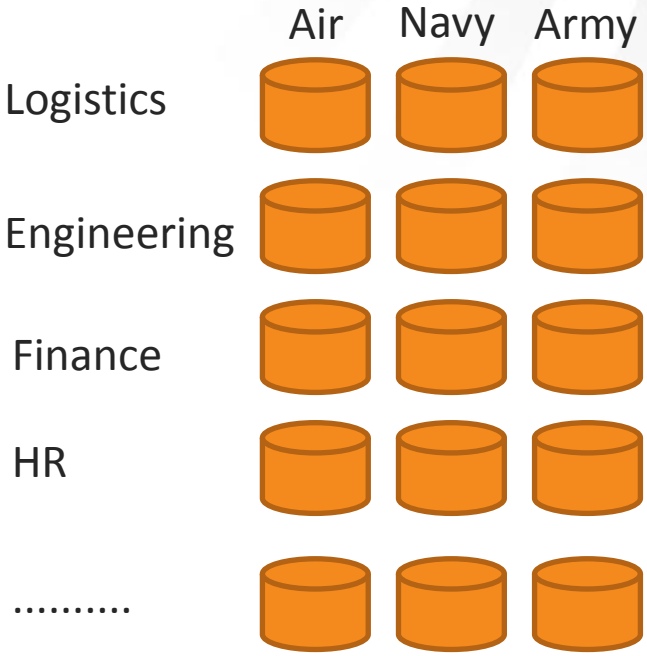
Why Enterprise Architecture?

The journey of a thousand miles must begin with a single step……

Why Enterprise Architecture?

IT Automation

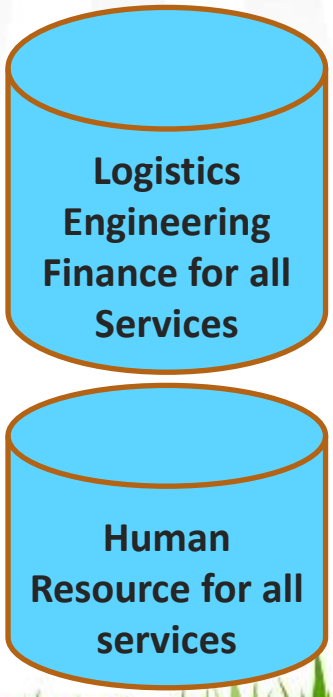
(Thousand flowers bloom)



Towards Enterprise -

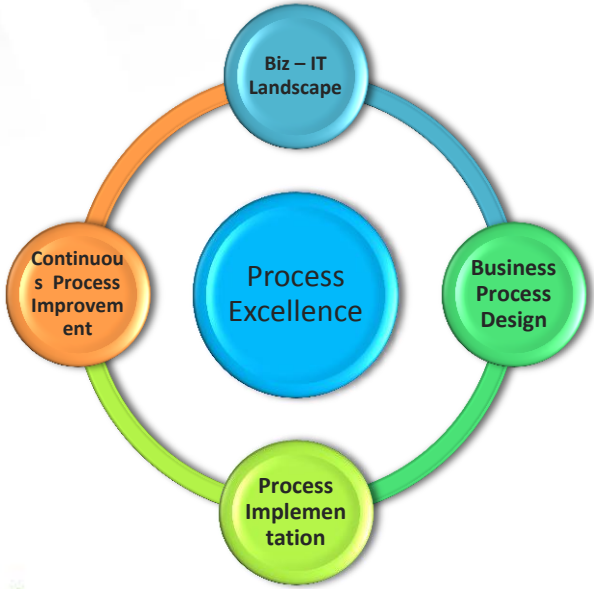
(Birth of EA)

1) Process Standardisation - BA
2) Data Integration - IA
3) System Consolidation - SA
4) Technology Management - TA



Process Excellence

1) Oversight Capability
2) Insight Capability
3) Foresight Capability
4) Line-of-Sight Capability



Common Challenges

C
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S

Lack of **Oversight**

- Do we have an overall view of our business and IT landscape?
- How do we know we meet the end objective?

Lack of **Insight**

- Do we know exactly what is the impact of a change in our **P**olicies, **P**rocesses, **P**eople, **S**trategies & **S**ystems?
- Are our resources optimised?

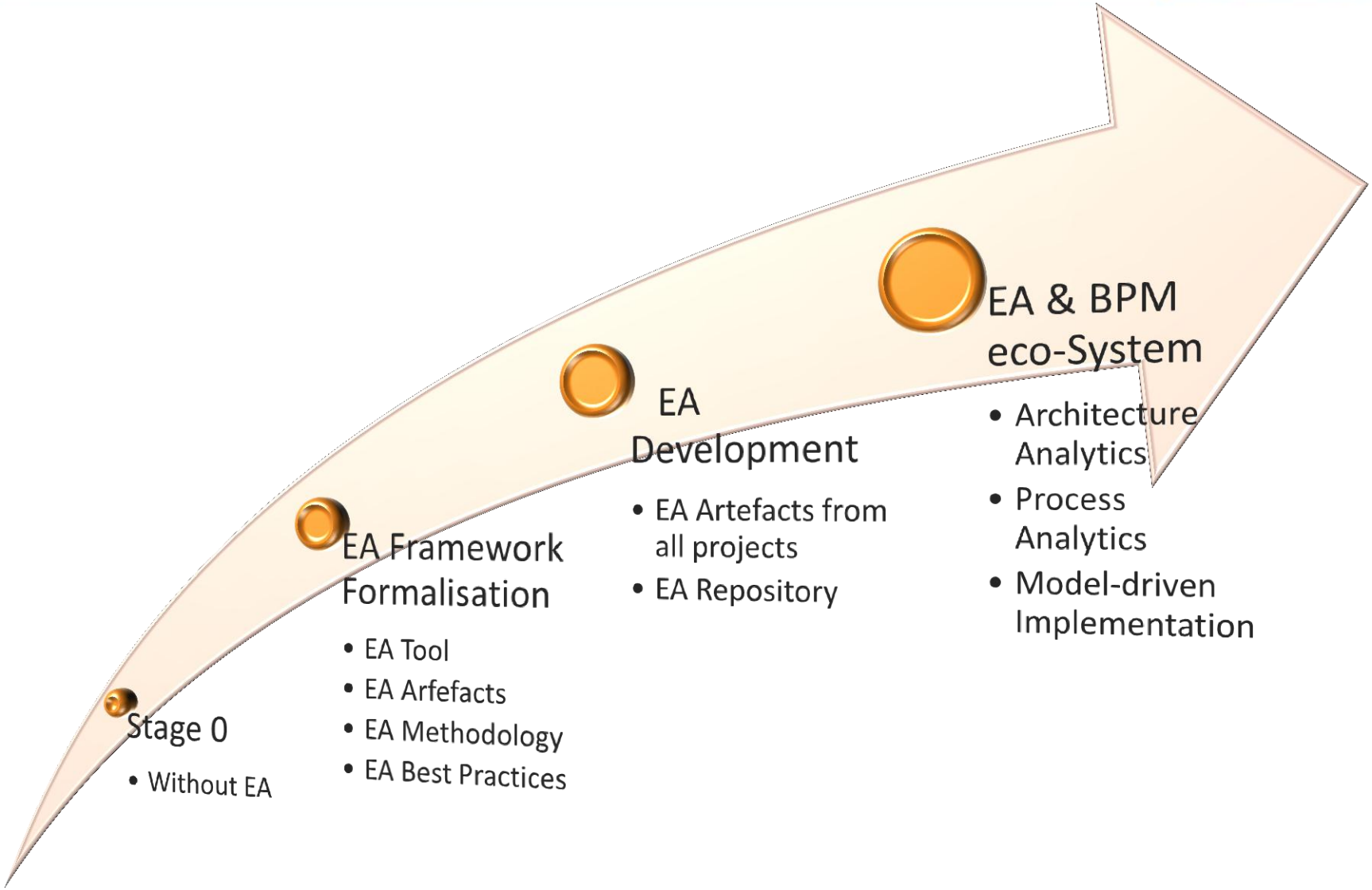
Lack of **Line-of-sight**

- Is the solution in our mind equal to what is going to be implemented?
- Are the processes executed according to design?

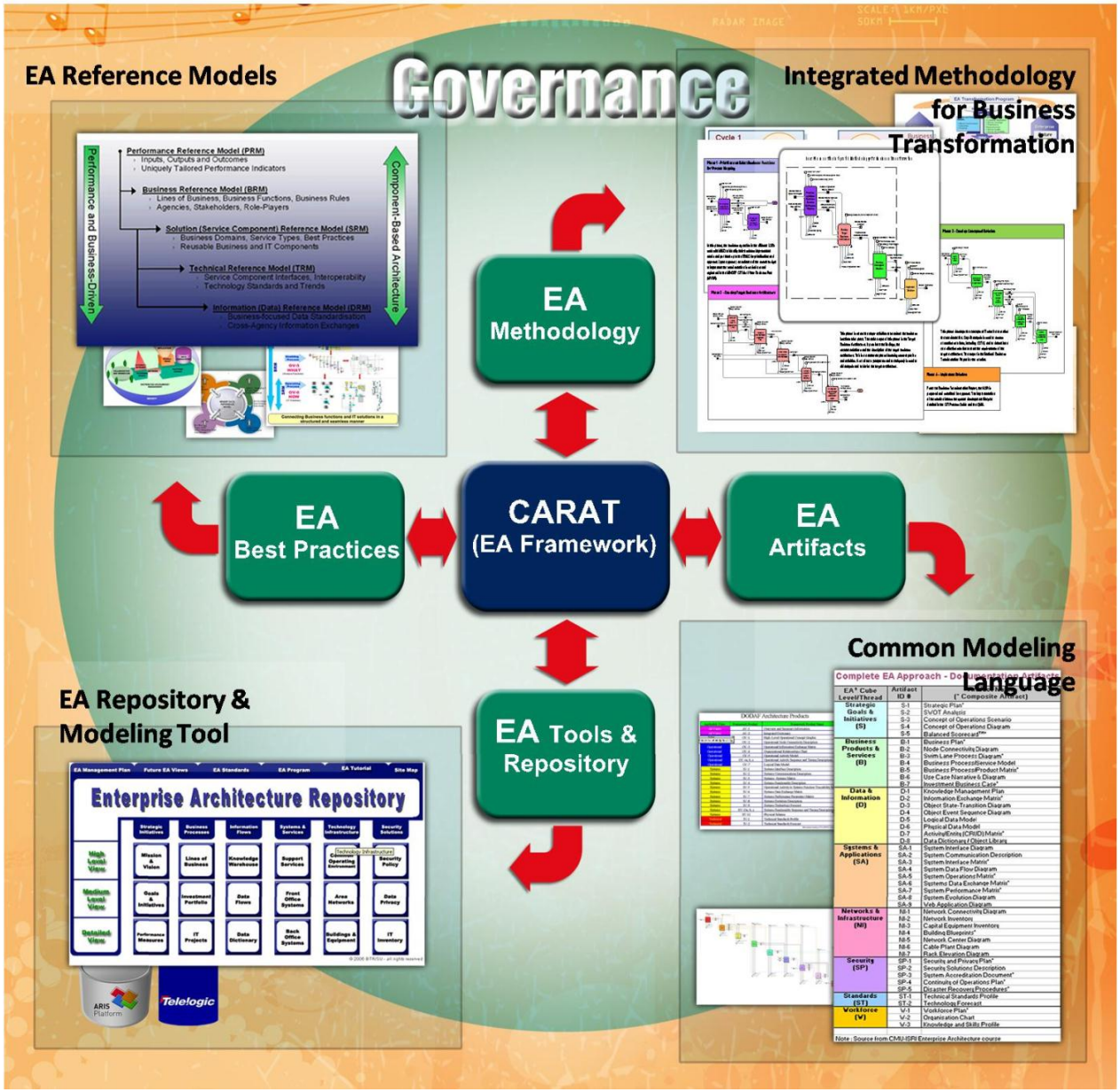
Lack of **Foresight**

How can we be sure that our dream will be materialised before the deployment of people and system?

Evolution of EA



EA Framework - CARAT

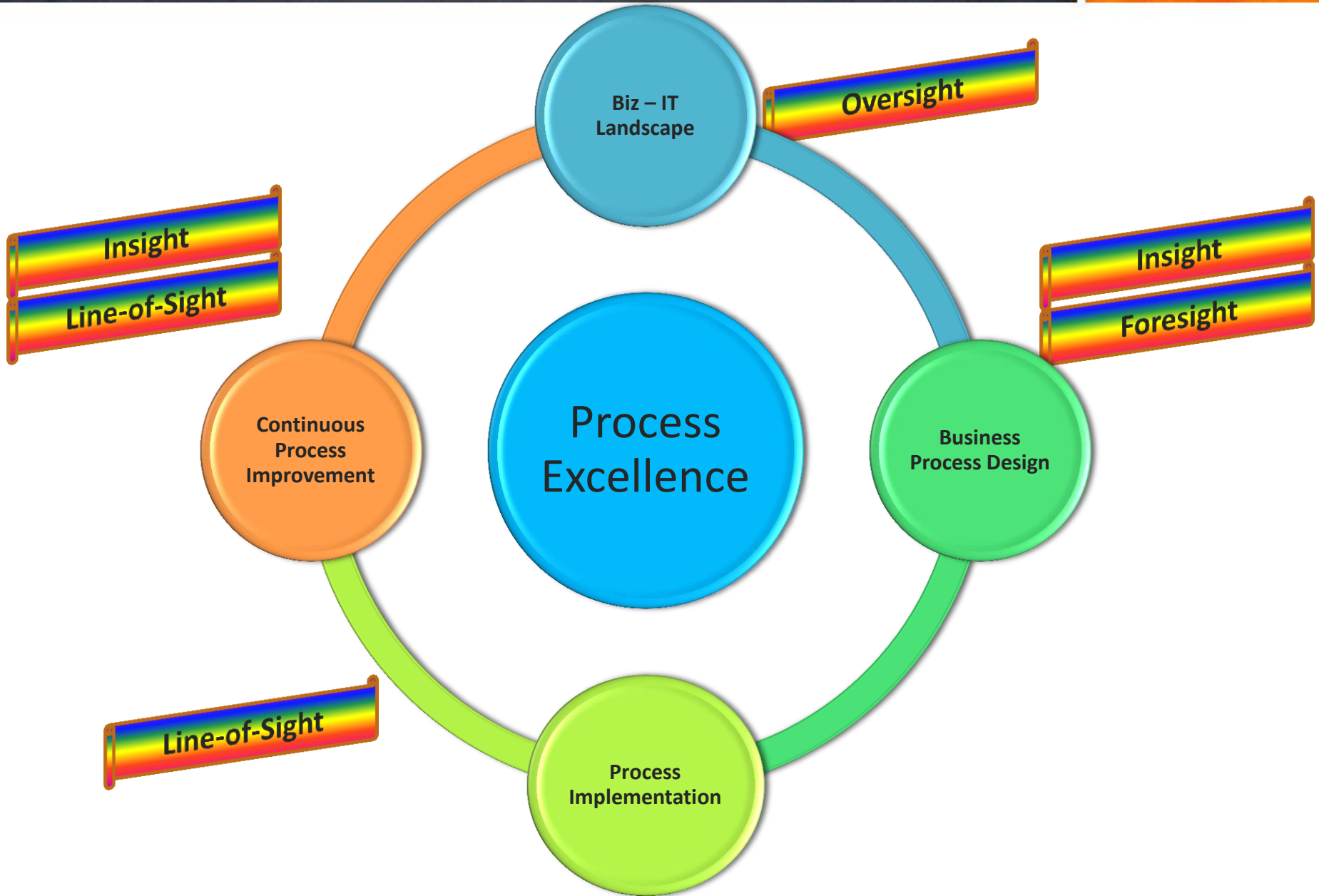


What is the outcome of Enterprise Architecture?

Doing the right things and doing things right…

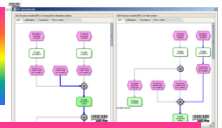
Process Excellence eco-System

Process Excellence eco-System



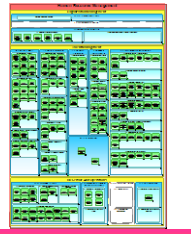
Process Excellence eco-System

Process Discovery



Process Benchmarking

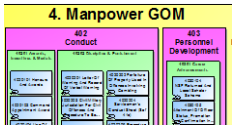
Social Networking



Biz Landscape

Trend Analysis

Strategy



Policy

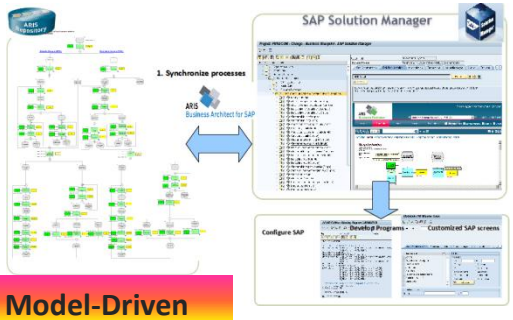
Biz – IT Landscape

Business Process Design

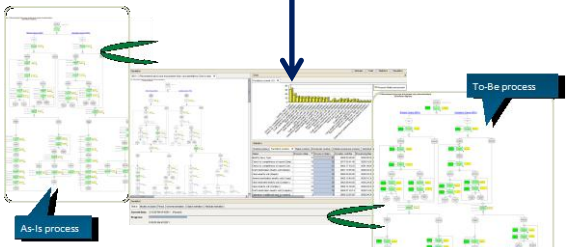
Process Implement-ation

Continuous Process Improve-ment

Process Excellence

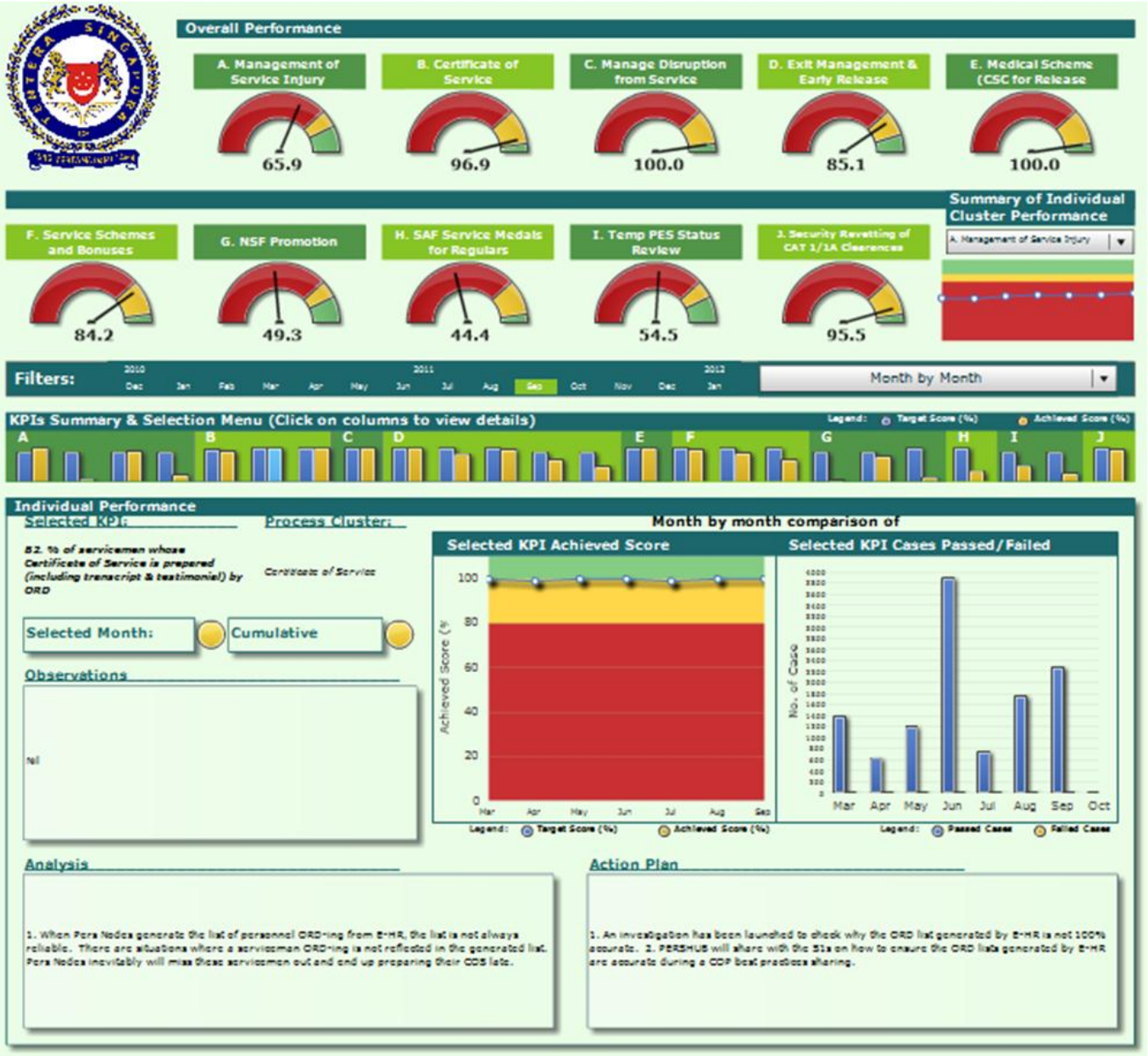


Model-Driven Architecture



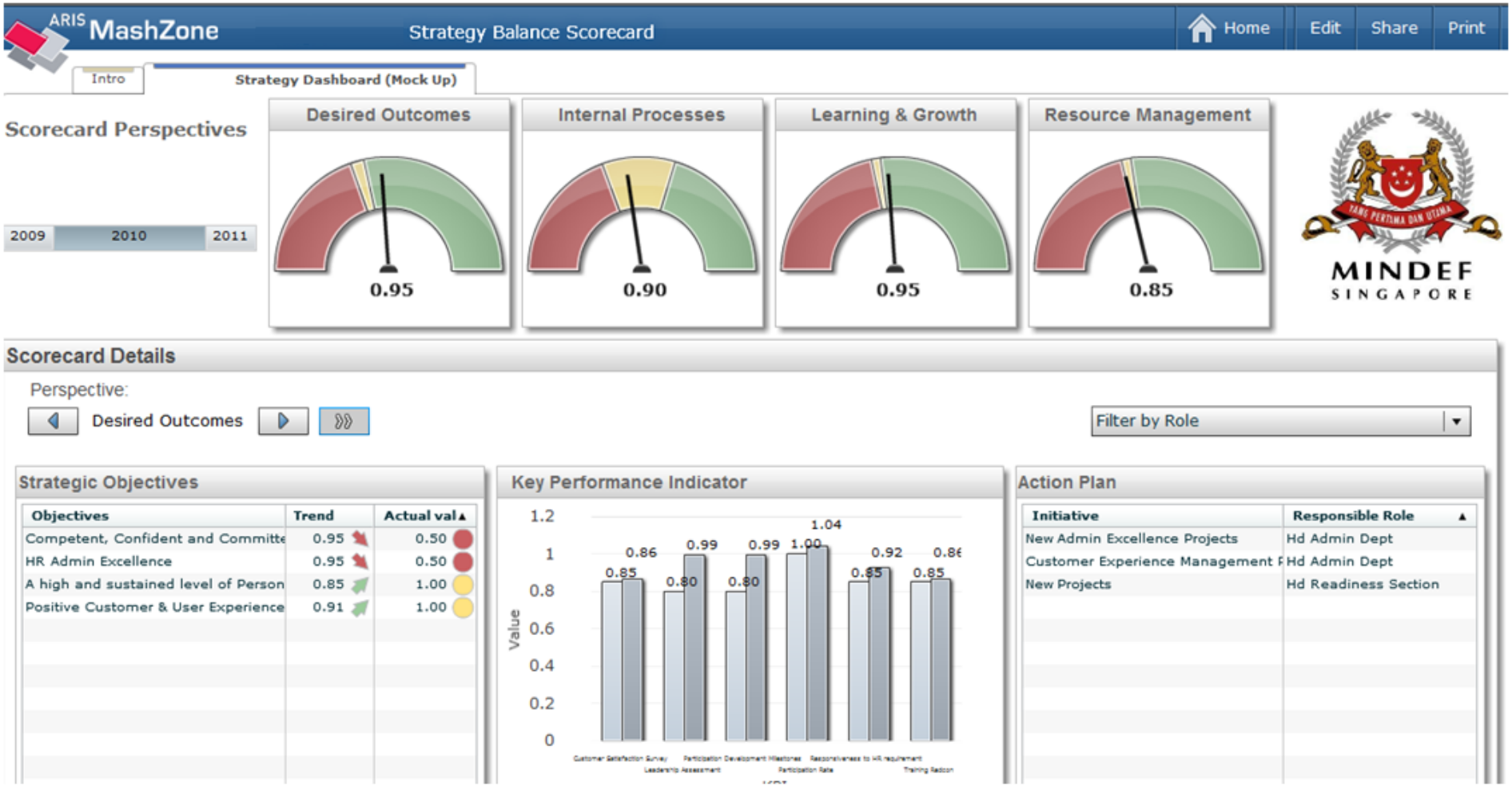
Process Modelling, Improvement & Simulation

Oversight: Performance Dashboard



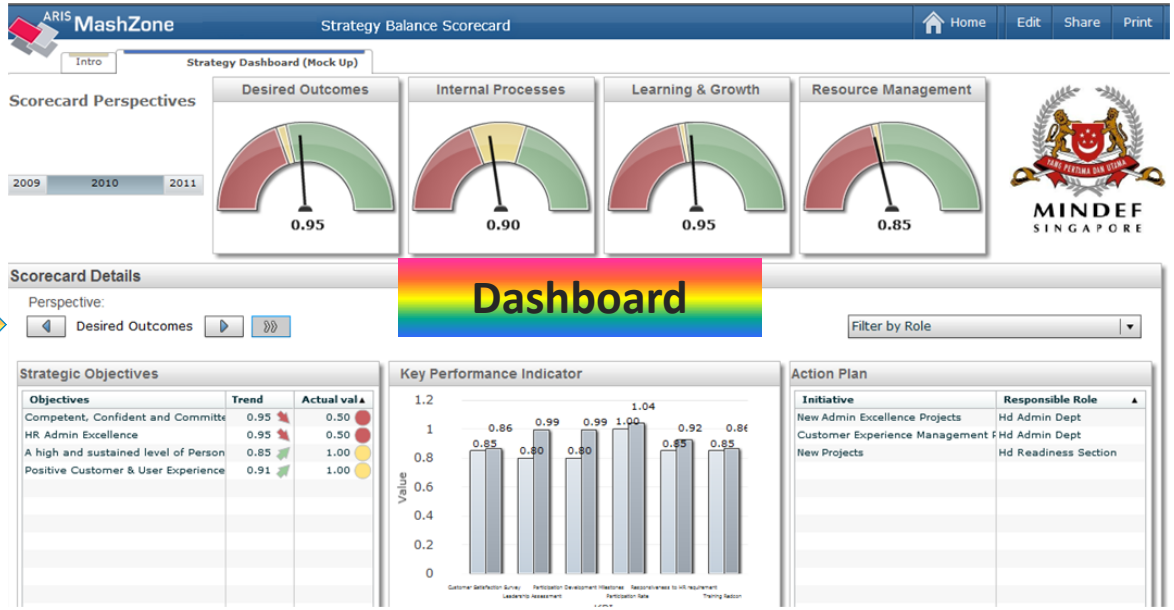
- A dashboard that is opened to everybody to monitor process performance.

Oversight – Balanced Scorecard Dashboard



Oversight – Balanced Scorecard Dashboard

Planned

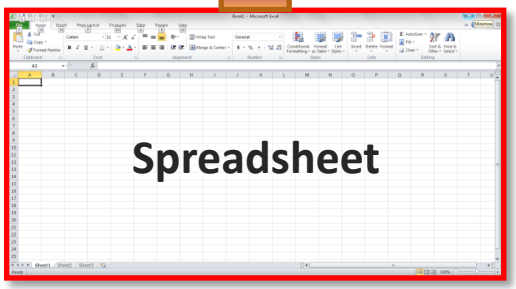


Dashboard

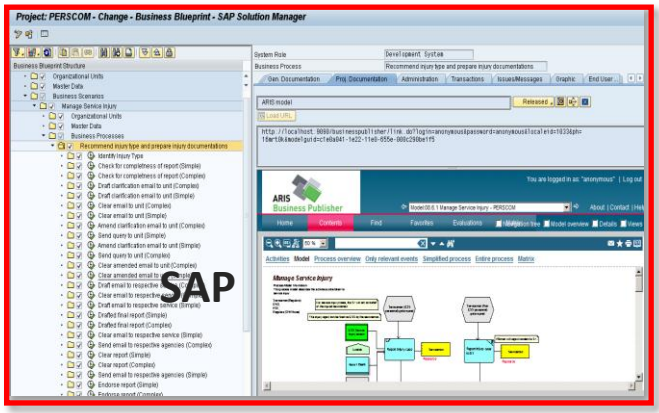
Executed

EA Repository

Executed

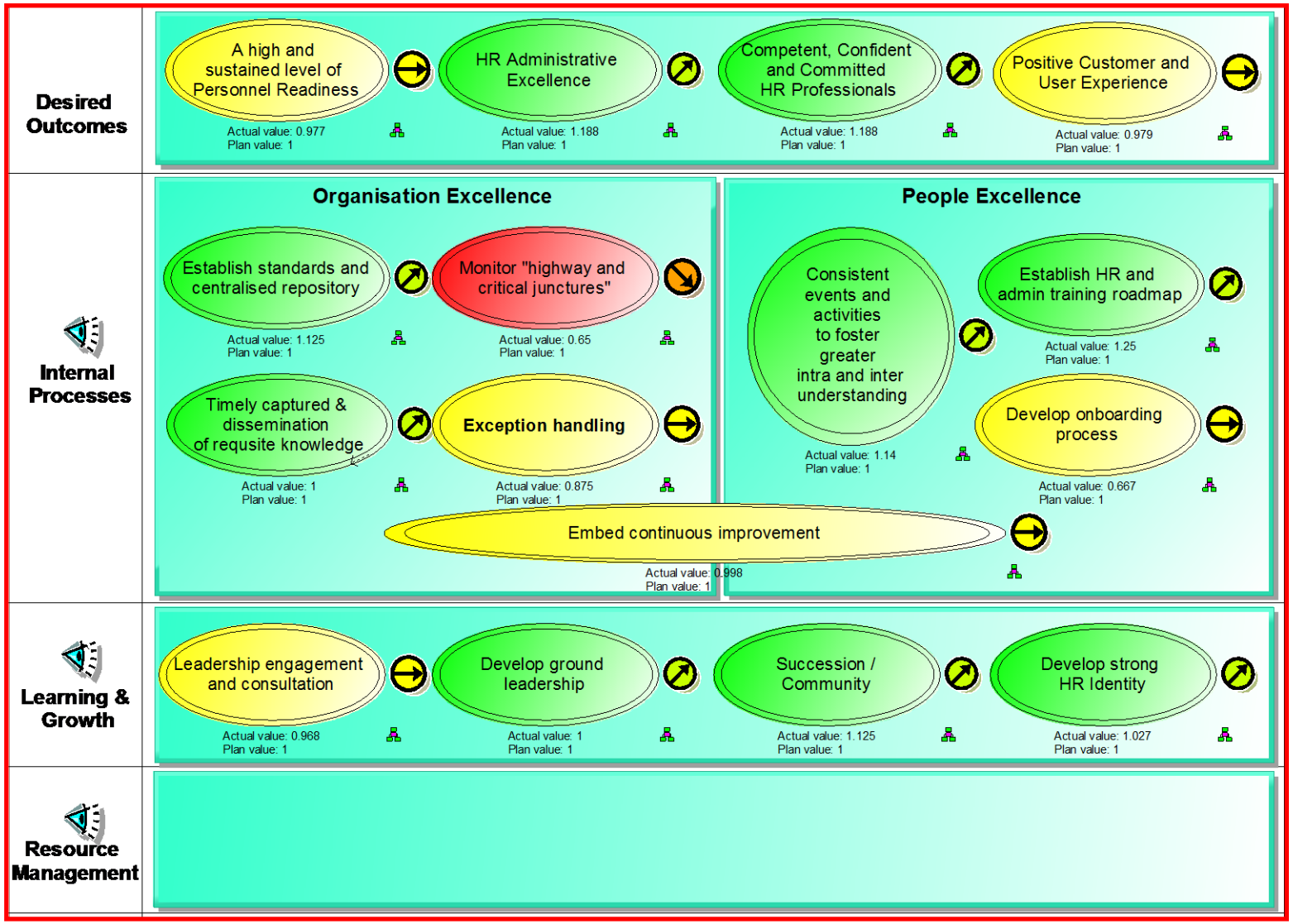


Manual Input

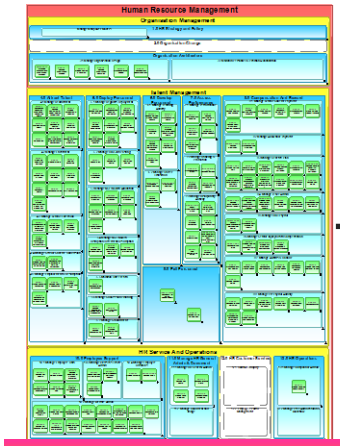


E-HR System

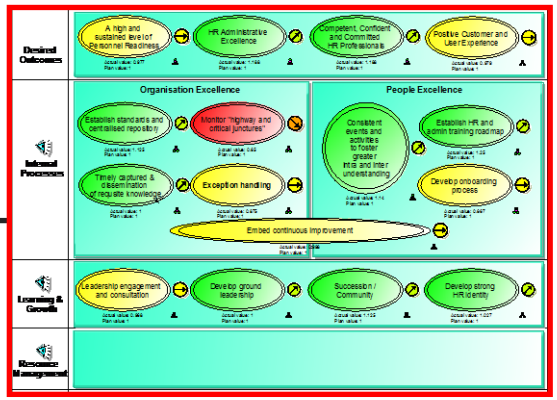
Oversight – Balanced Scorecard Analysis



Oversight: Business Architecture



Biz Landscape



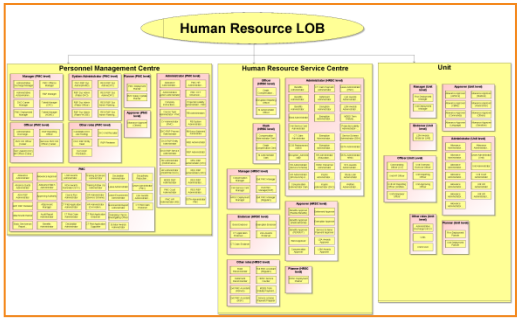
Balanced Score Card

Strategy

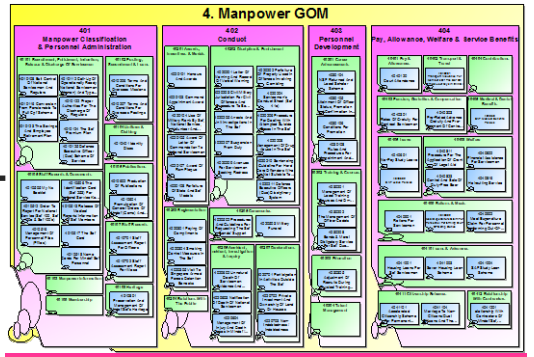
Process

People

Policy

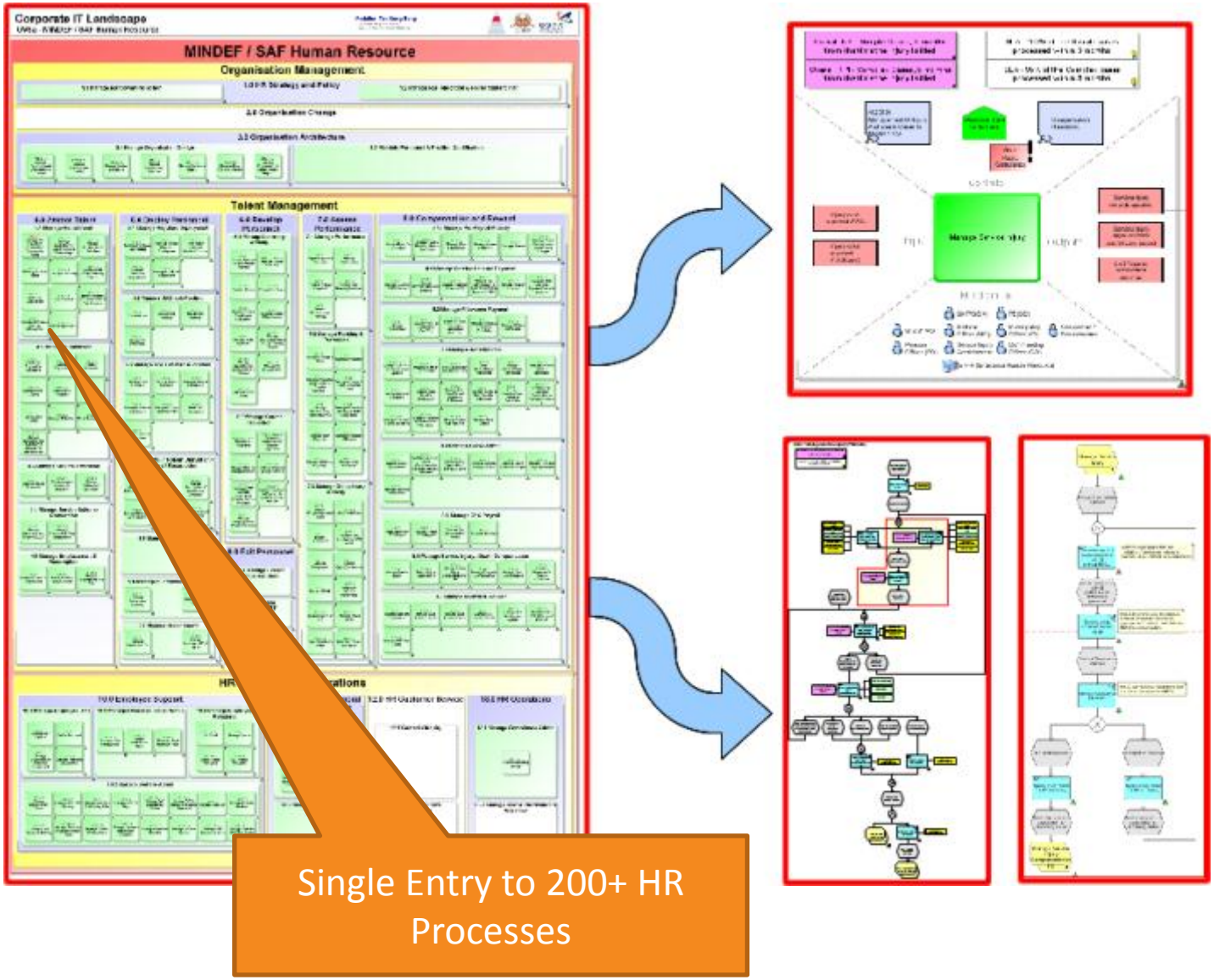


Org & Role Chart

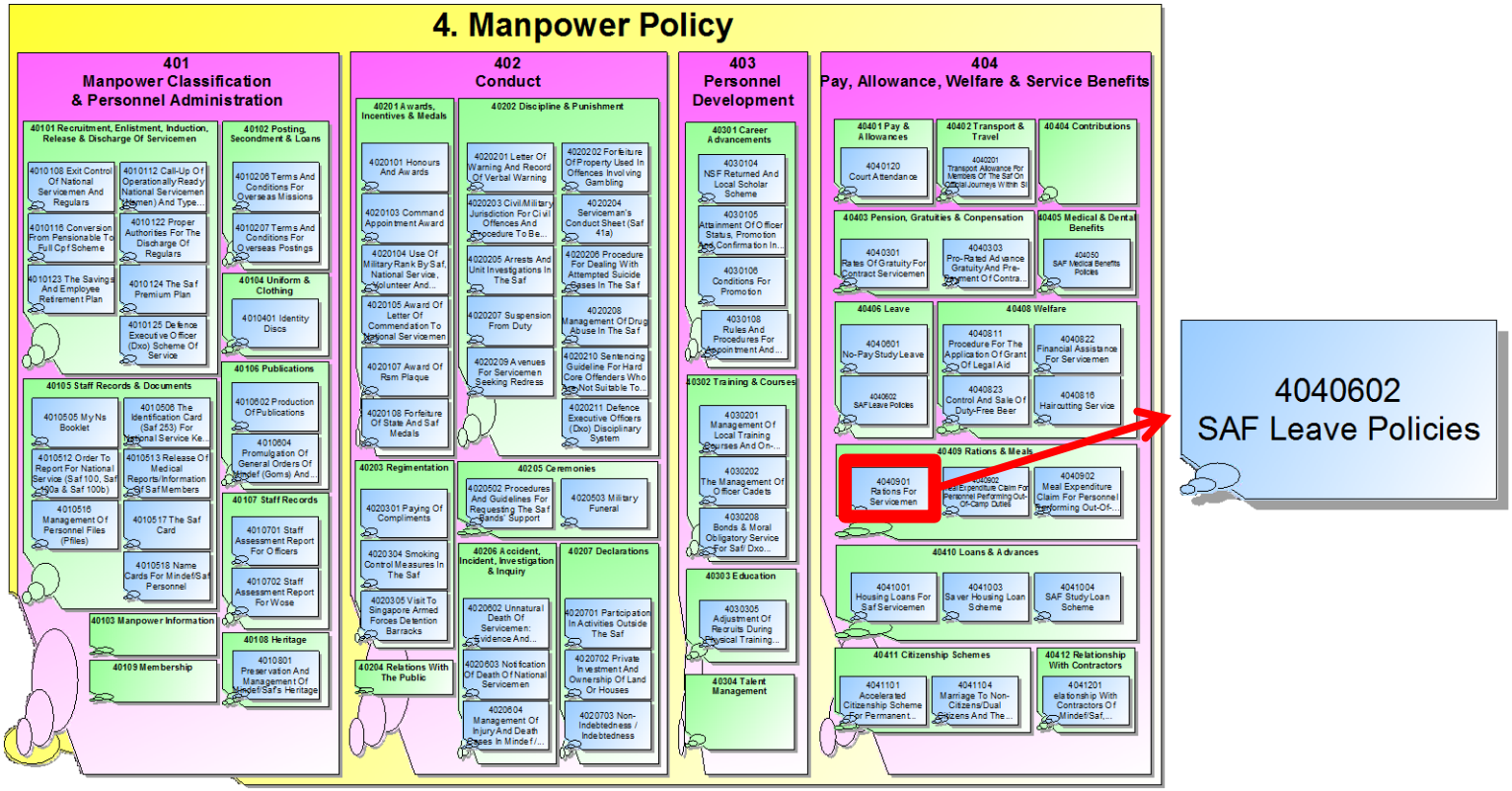


Directives & Guidelines

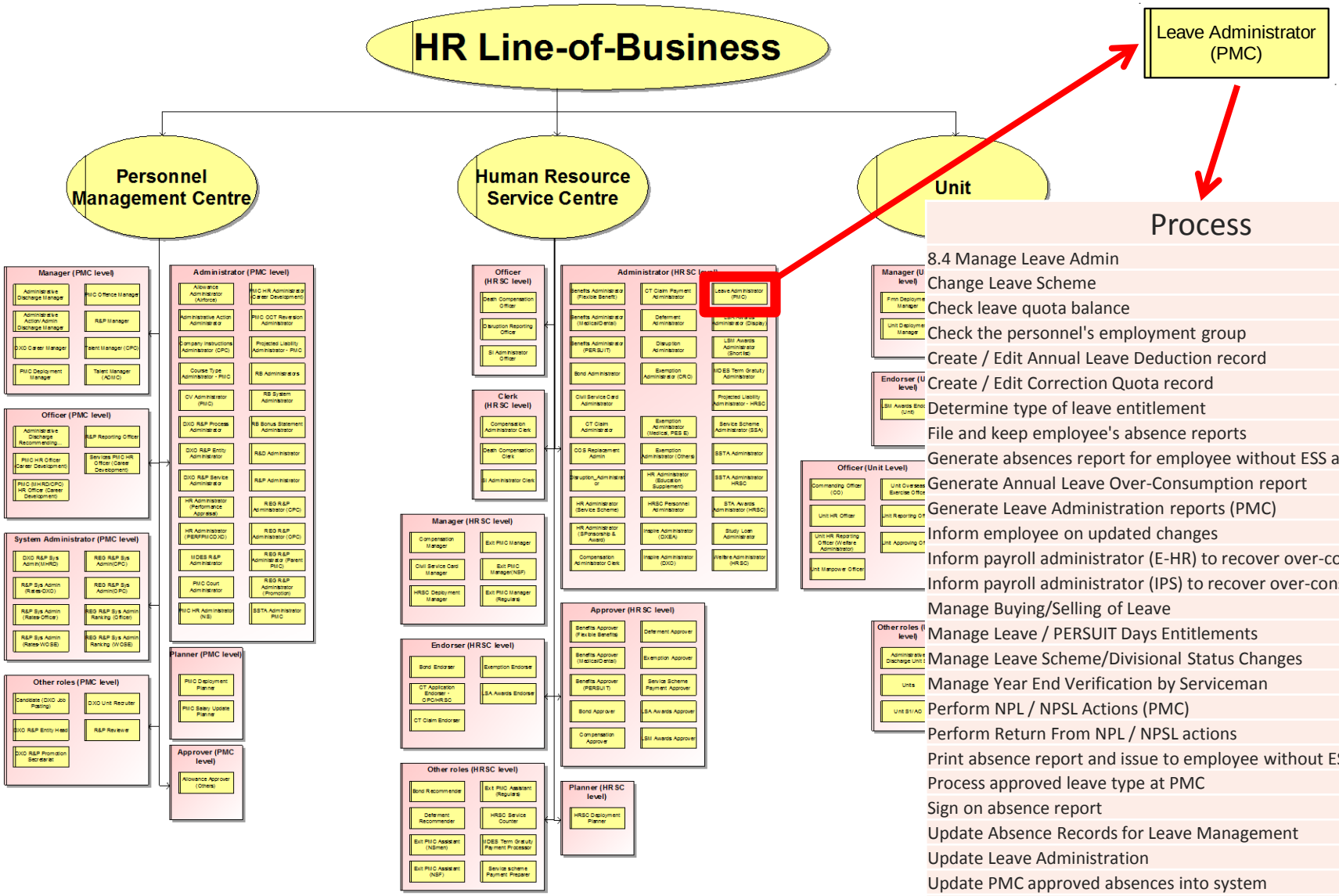
Insight (1 of 3) – Impact Analysis for **Process Owners**



Insight (2 of 3) – Impact Analysis for **Policy Owner**



Insight (3 of 3) – Impact Analysis for Appointment Holder



Process

- 8.4 Manage Leave Admin
- Change Leave Scheme
- Check leave quota balance
- Check the personnel's employment group
- Create / Edit Annual Leave Deduction record
- Create / Edit Correction Quota record
- Determine type of leave entitlement
- File and keep employee's absence reports
- Generate absences report for employee without ESS access
- Generate Annual Leave Over-Consumption report
- Generate Leave Administration reports (PMC)
- Inform employee on updated changes
- Inform payroll administrator (E-HR) to recover over-consumed leave
- Inform payroll administrator (IPS) to recover over-consumed leave
- Manage Buying/Selling of Leave
- Manage Leave / PERSUIT Days Entitlements
- Manage Leave Scheme/Divisional Status Changes
- Manage Year End Verification by Serviceman
- Perform NPL / NPSL Actions (PMC)
- Perform Return From NPL / NPSL actions
- Print absence report and issue to employee without ESS access
- Process approved leave type at PMC
- Sign on absence report
- Update Absence Records for Leave Management
- Update Leave Administration
- Update PMC approved absences into system
- Update Quota by PMC Leave Administrator
- Verify Personnel's absences and quota

Line-of-Sight

Process Intelligence

Designed Process

≠

Implemented Process

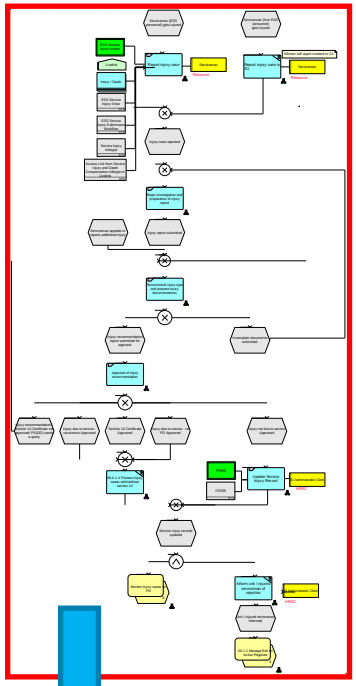
≠

Executed Process

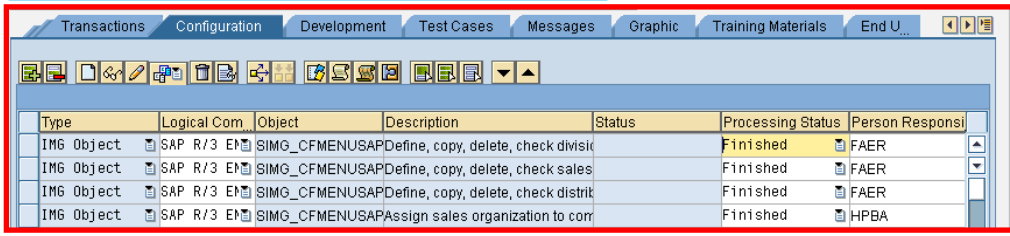
Model-Driven Architecture

Line-of-Sight – Model-Driven Architecture

Model

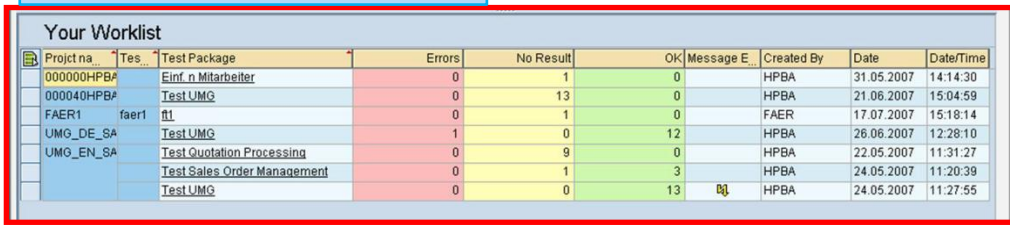


Model-Driven Development



Type	Logical Com...	Object	Description	Status	Processing Status	Person Responsi
IMG Object	SAP R/3 EN	SIMG_CFMENUSAP	Define, copy, delete, check divisi		Finished	FAER
IMG Object	SAP R/3 EN	SIMG_CFMENUSAP	Define, copy, delete, check sales		Finished	FAER
IMG Object	SAP R/3 EN	SIMG_CFMENUSAP	Define, copy, delete, check distrib		Finished	FAER
IMG Object	SAP R/3 EN	SIMG_CFMENUSAP	Assign sales organization to com		Finished	HPBA

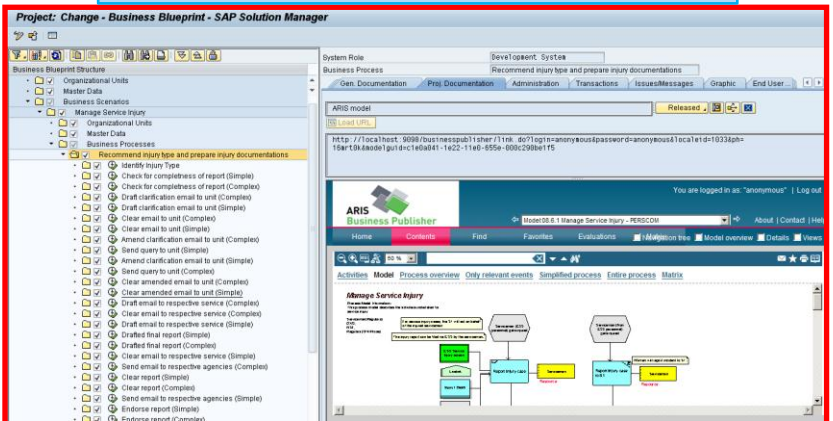
Model-Driven Testing



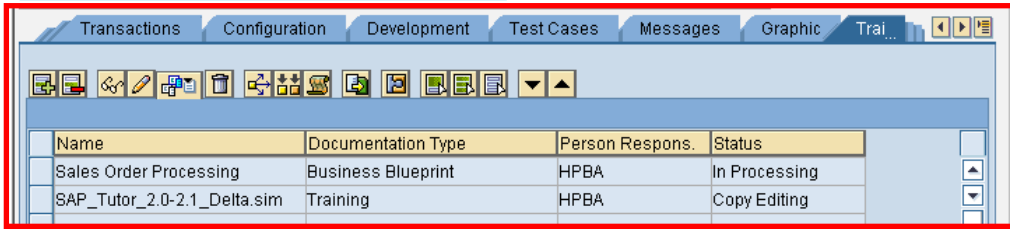
Your Worklist

Projct na...	Tes...	Test Package	Errors	No Result	OK	Message E...	Created By	Date	Date/Time
000000HPBA		Einf. n Mitarbeiter	0	1	0		HPBA	31.05.2007	14:14:30
000040HPBA		Test UMG	0	13	0		HPBA	21.06.2007	15:04:59
FAER1	faer1	ft1	0	1	0		FAER	17.07.2007	15:18:14
UMG_DE_SA		Test UMG	1	0	12		HPBA	26.06.2007	12:28:10
UMG_EN_SA		Test Quotation Processing	0	9	0		HPBA	22.05.2007	11:31:27
		Test Sales Order Management	0	1	3		HPBA	24.05.2007	11:20:39
		Test UMG	0	0	13		HPBA	24.05.2007	11:27:55

Model-Driven Documentation

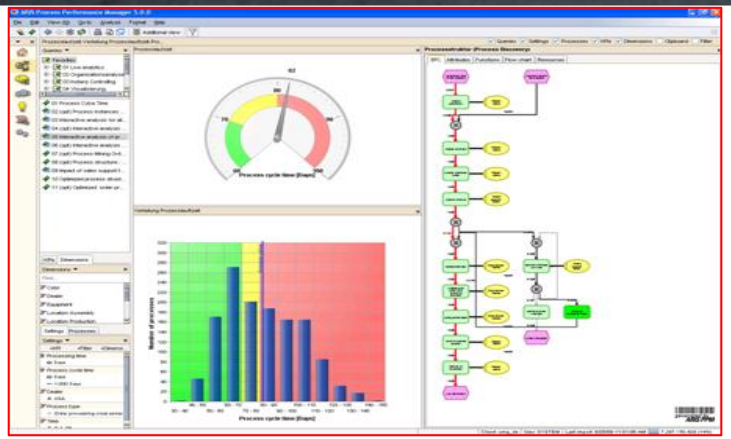


Model-Driven Training

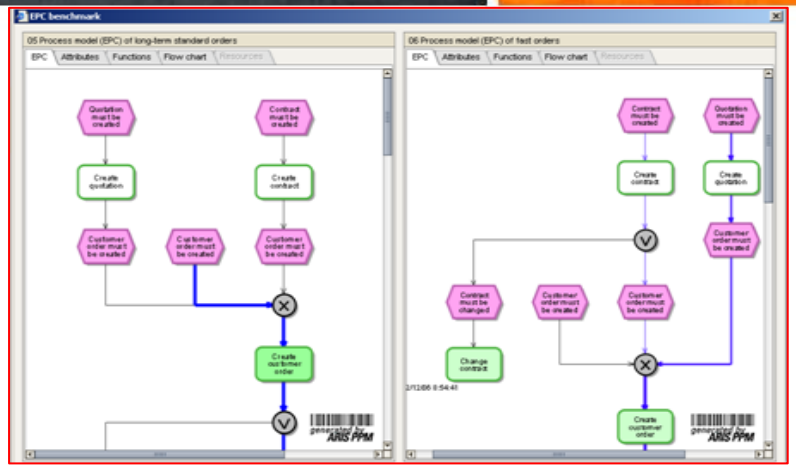


Name	Documentation Type	Person Respons.	Status
Sales Order Processing	Business Blueprint	HPBA	In Processing
SAP_Tutor_2.0-2.1_Delta.sim	Training	HPBA	Copy Editing

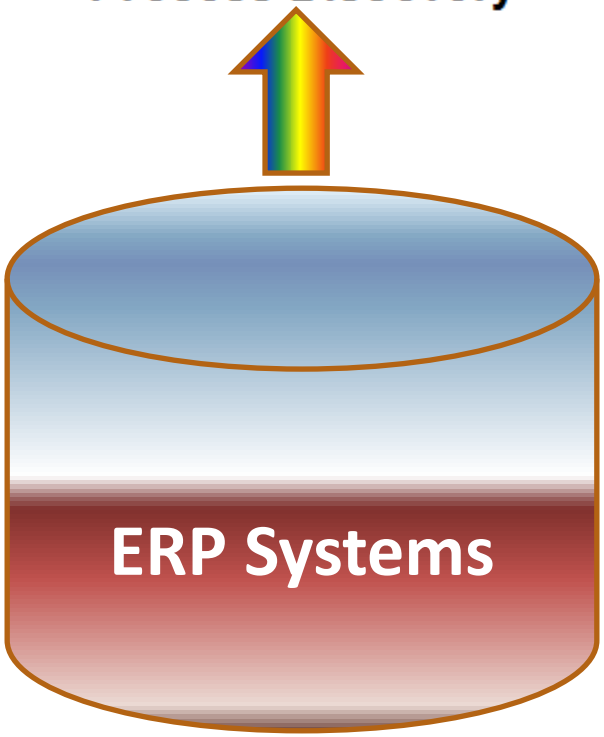
Line-of-Sight – Process Intelligence

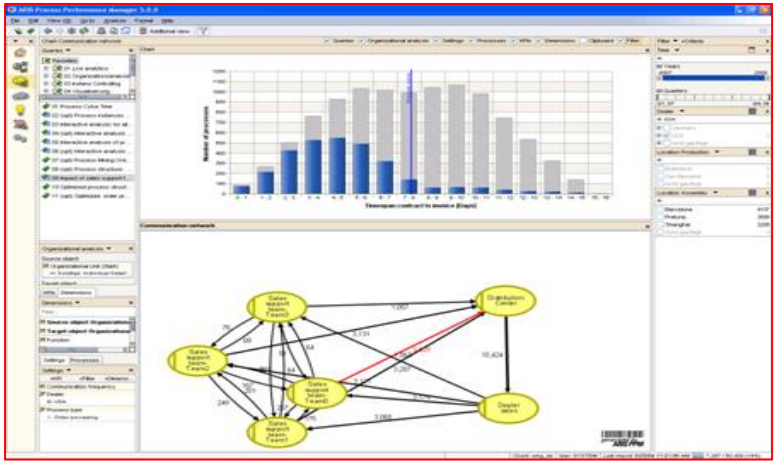


Process Discovery



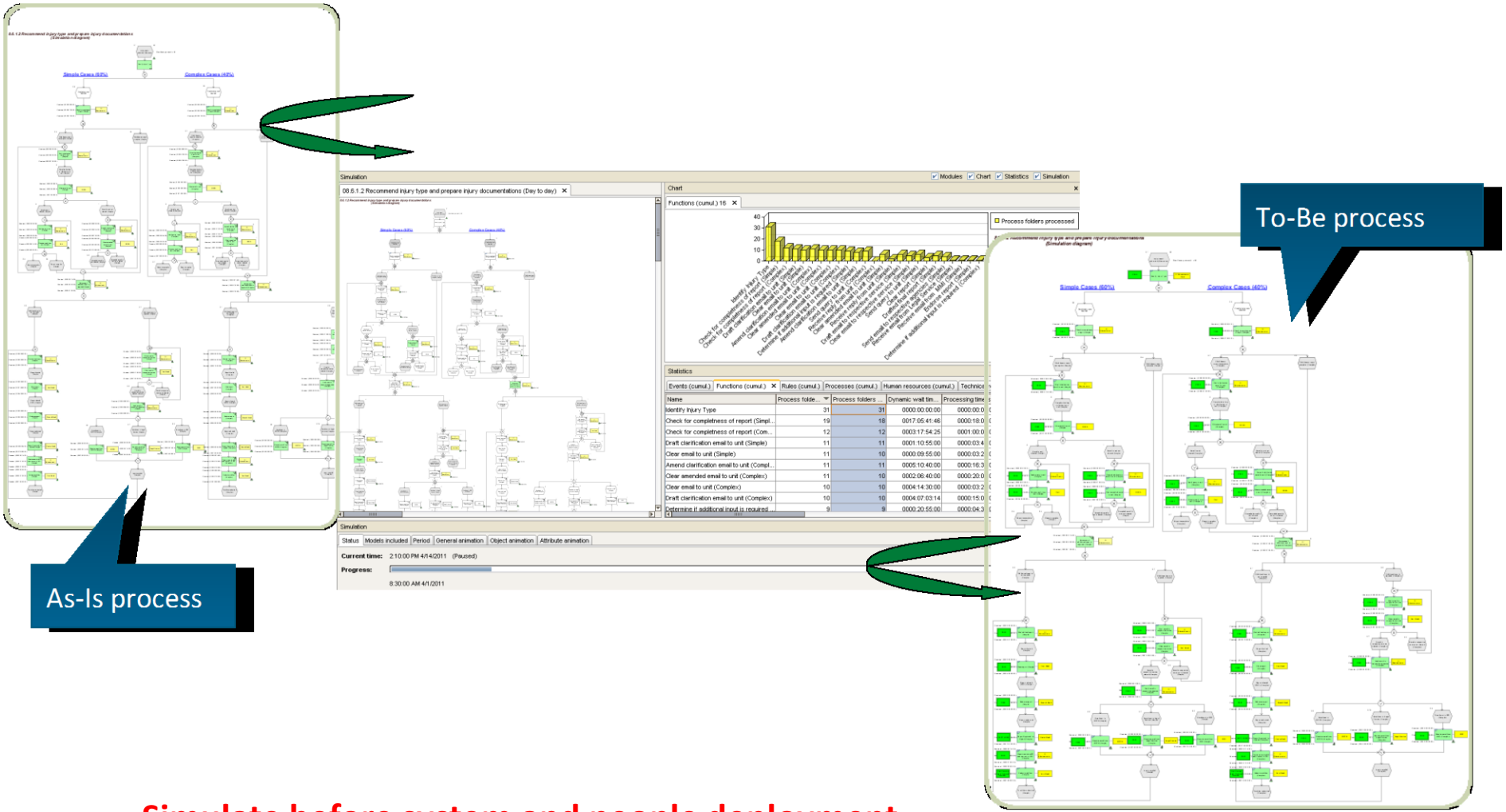
Process Benchmarking





Social Network Analysis

Foresight – Process Simulation



Simulate before system and people deployment.

Contact List

Name	Appointment	Email Address	Mobile
Mr Poon See Hong	Head BPMD	Poon_See_Hong@mindef.gov.sg	+65 96658164
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Mr Tan Song Beng	Senior Systems Architect	Tan_Song_Beng@dsta.gov.sg songbeng@msn.com	+65 98222045
Mr Elton Lim	Systems Architect	ljoonann@dsta.gov.sg eltonlimja@gmail.com	+65 81839211

The End