25th anniversary
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Seattle, WA
July 13 - 16, 2015

A Business Process view of Software:

An effective measurement model to assess the operations readiness of software under construction

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Context

- **Delays are common in large Software development projects**

- **Delays can result in** –
  - Loss of market share
  - Loss of reputation
  - Reduced motivation / morale of employees
  - Increased costs (project & maintenance)

- **Brooks' law** is a claim about software project management according to which ***"adding manpower to a late software project makes it later."***

Problem Scenario

- **What options are available to the Business, when a delay is imminent on a time-to-market sensitive project?**

1. **Provide more schedule time to complete the project (and compromise on the envisaged Time-to-Market advantages)**

2. **Roll out the software into production with manageable impact to project objectives (due to Delay-to-Market)**

Challenge

- **At a juncture where there is delay in the project and the business has to go ahead with the rollout decision, the business needs a good understanding of -**

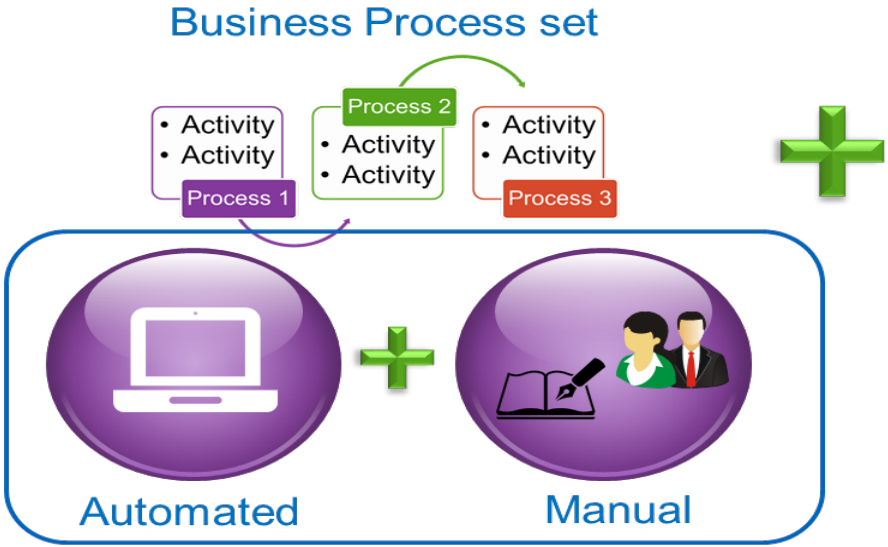
1. **The impact of the delay on the business objectives related to the project (Business usually has the means to understand this).**

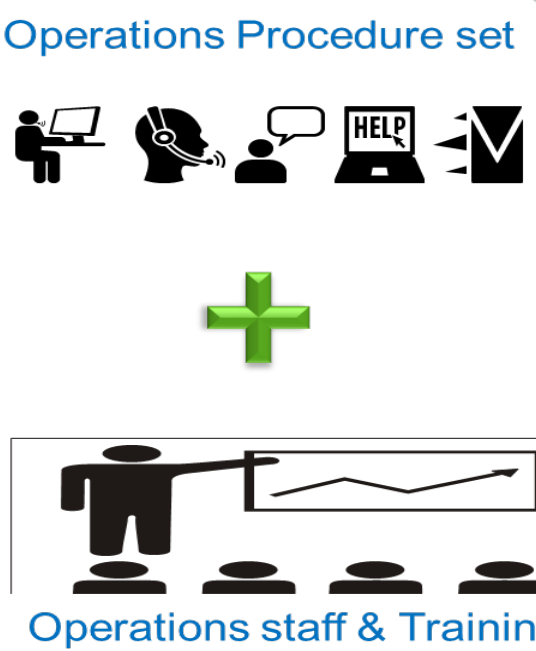
2. **Operational readiness of the Software that is being developed. Ie; the ability to use the software in operations and deliver on the objectives**

Quantifying and representing the readiness in operations terms is the challenge

Challenge....contd;

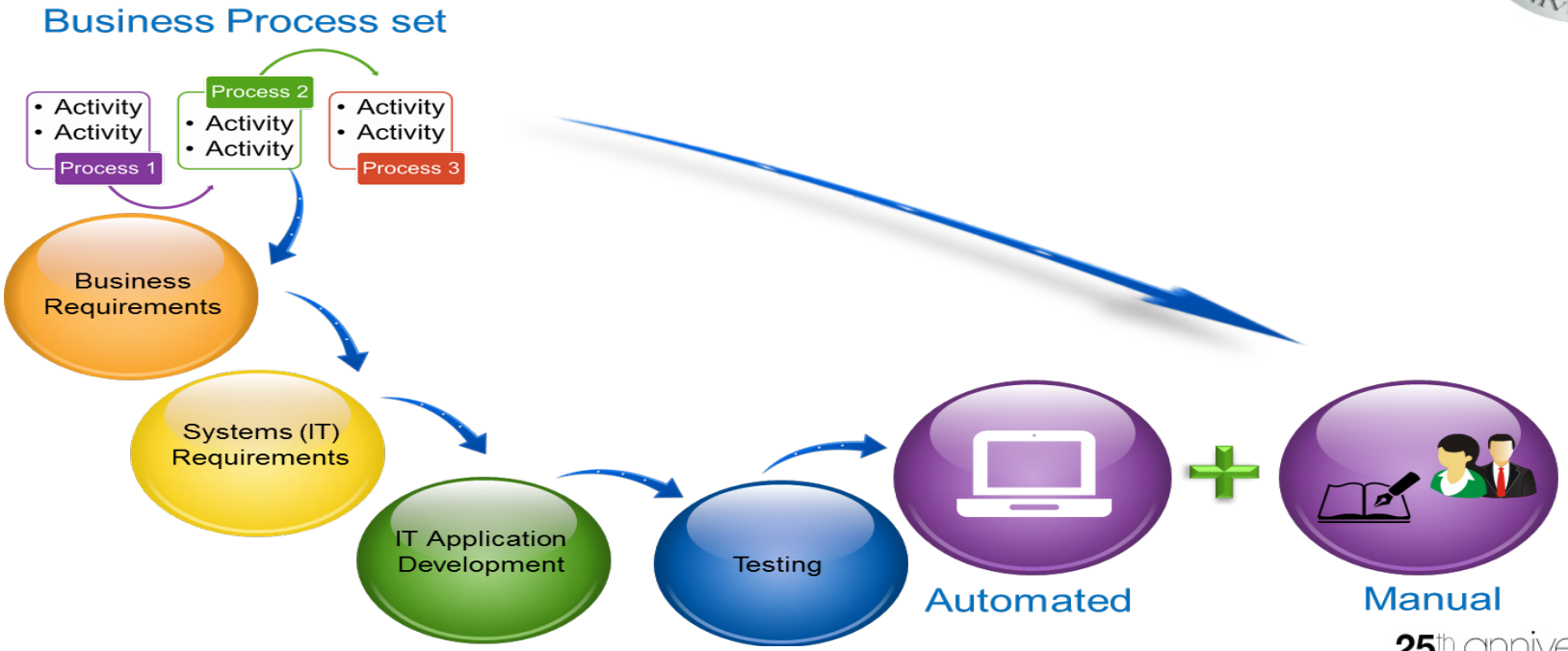
Business operations can be understood in simple terms as





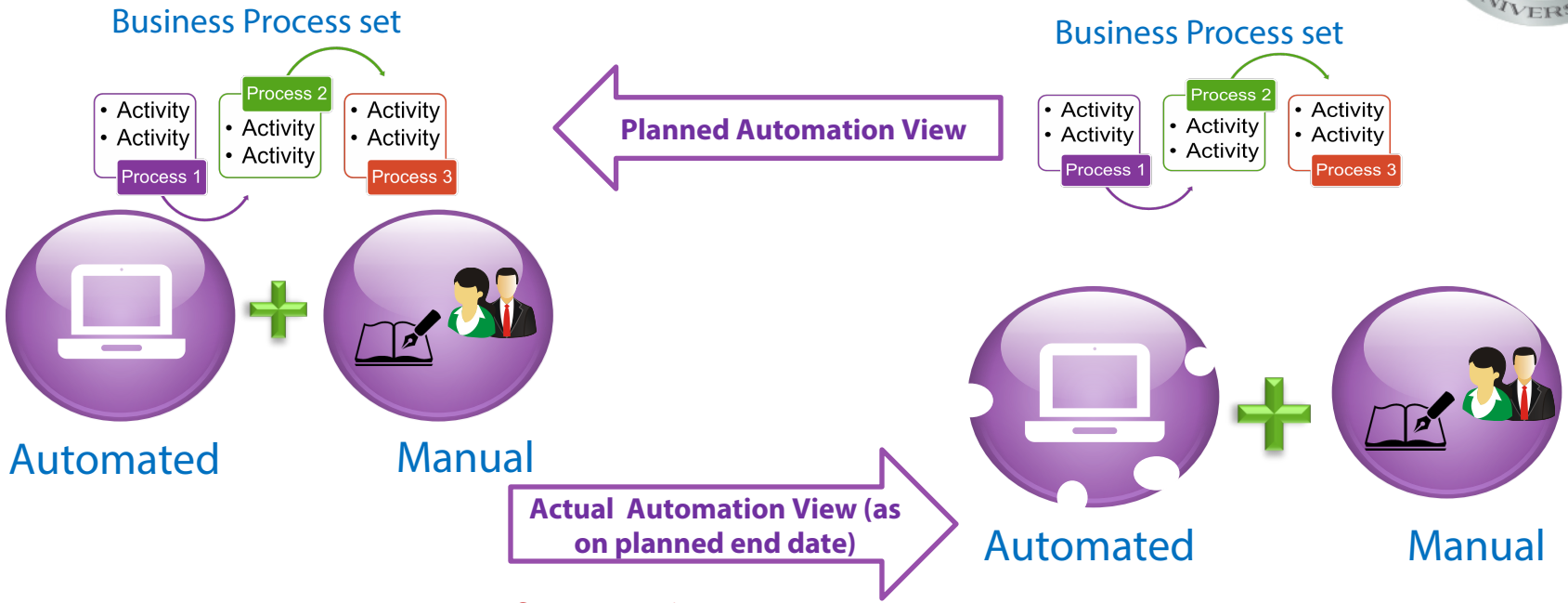
Challenge....contd;

IT application delivers the automated part of Business Process



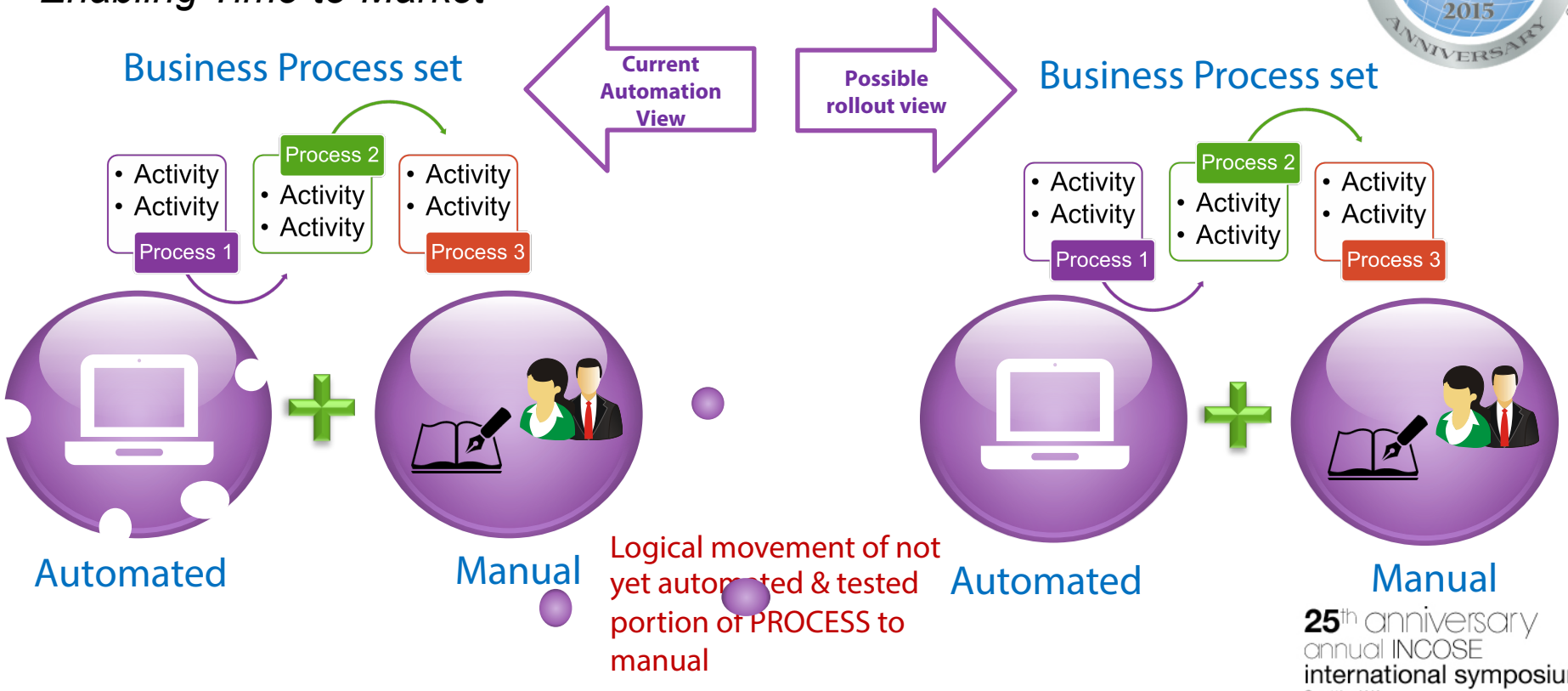
Challenge....contd;

Delivery challenges : Planned vs Actual



Solution

Enabling Time-to-Market



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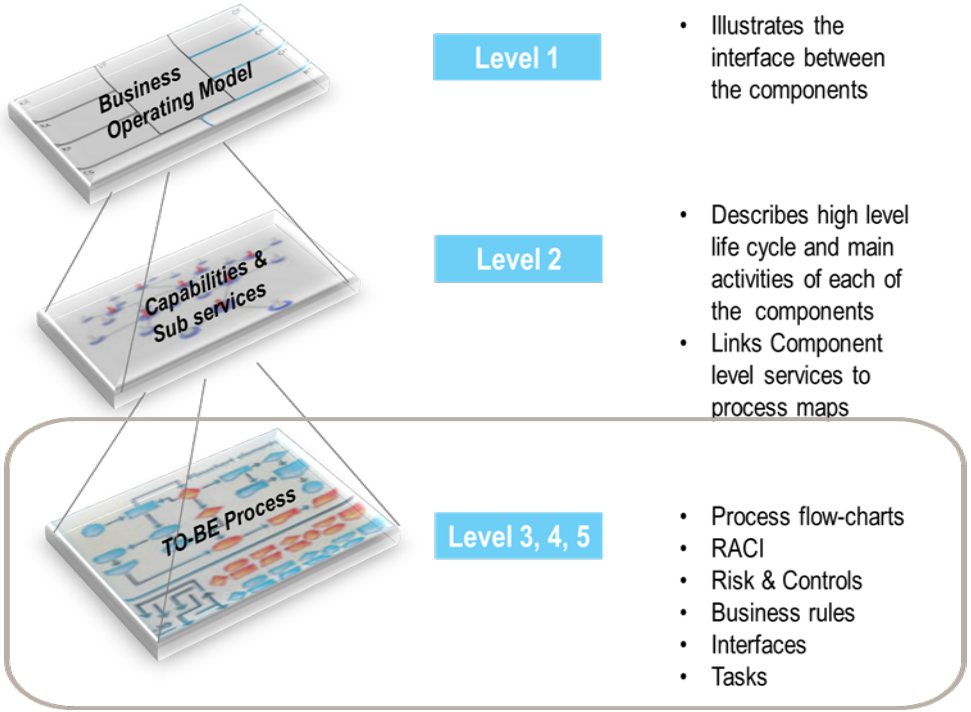
Solution ….contd;

Creating the Business Process view



Solution ….contd;

Business Process view example

User Story ID	Business Domain	L4 Process Map	L5 Process Map	Scrum Development Status	Status
VRII.014	Contributions	Action Contributions (Day 1)	Assess And Validate Rollover In Information (Day 1)	Completed	Passed
VRII.015	Contributions	Action Contributions (Day 1)	Assess And Validate Rollover In Information (Day 1)	Completed	Passed
VRII.016	Contributions	Action Contributions (Day 1)	Assess And Validate Rollover In Information (Day 1)	Completed	Passed
VRII.017	Contributions	Action Contributions (Day 1)	Assess And Validate Rollover In Information (Day 1)	Completed	Passed
AECE.001	Contributions	Action Contributions (Day 1)	Action Employer Contributions Exception (Day 1)	Completed	Passed
AECE.002	Contributions	Action Contributions (Day 1)	Action Employer Contributions Exception (Day 1)	Completed	Passed
AECE.003	Contributions	Action Contributions (Day 1)	Action Employer Contributions Exception (Day 1)	Completed	Partially Tested
AECE.004	Contributions	Action Contributions (Day 1)	Action Employer Contributions Exception (Day 1)	Completed	Partially Tested
AECE.005	Contributions	Action Contributions (Day 1)	Action Employer Contributions Exception (Day 1)	Completed	Passed
AECE.006	Contributions	Action Contributions (Day 1)	Action Employer Contributions Exception (Day 1)	Completed	Passed
AECE.009	Contributions	Action Contributions (Day 1)	Action Employer Contributions Exception (Day 1)	Completed	Passed
AECE.011	Contributions	Action Contributions (Day 1)	Action Employer Contributions Exception (Day 1)	Completed	Passed
AMCE.001	Contributions	Action Contributions (Day 1)	Action Member Contribution Exception (Day 1)	Completed	Passed
AMCE.002	Contributions	Action Contributions (Day 1)	Action Member Contribution Exception (Day 1)	Completed	Passed
AMCE.004	Contributions	Action Contributions (Day 1)	Action Member Contribution Exception (Day 1)	Completed	Passed
ARAE.001	Contributions	Action Receipted Amounts (Day 1)	Action Receipted Amount Exception (Day 1)	Completed	Partially Tested
ARAE.004	Contributions	Action Receipted Amounts (Day 1)	Action Receipted Amount Exception (Day 1)	Completed	Passed
ARAE.005	Contributions	Action Receipted Amounts (Day 1)	Update Allocation Type/Sub-Allocation Type	Completed	Passed
ARIE.004	Contributions	Action Contributions (Day 1)	Action Rollover In Exception (Day 1)	Completed	Passed
ARIE.005	Contributions	Action Contributions (Day 1)	Action Rollover In Exception (Day 1)	Completed	Passed
FREA.001	Contributions	Action Receipted Amounts (Day 1)	Finalise Receipted Amounts (Day 1)	Completed	Passed
GLOBFR.015	Global	Global	Global	Completed	Passed
VMCI.025	Contributions	Action Contributions (Day 1)	Assess And Validate Member Contribution Information (Day 1)	Completed	Passed
VMCI.026	Contributions	Action Contributions (Day 1)	Assess And Validate Member Contribution Information (Day 1)	Completed	Passed
VRII.018	Contributions	Action Contributions (Day 1)	Assess And Validate Rollover In Information (Day 1)	Completed	Passed
VRII.019	Contributions	Action Contributions (Day 1)	Assess And Validate Rollover In Information (Day 1)	Completed	Passed
VRII.020	Contributions	Action Contributions (Day 1)	Assess And Validate Rollover In Information (Day 1)	Completed	Passed
GLOBFR.028	Financial Management	Global	Global	Completed	Passed
HECR.001	Financial Management	Conduct Periodic Credit Interest Rates and ICR Upload (Day 1)	Handle Exception for Credit Rates Upload (Day 1)	Completed	Passed
HECR.002	Financial Management	Conduct Periodic Credit Interest Rates and ICR Upload (Day 1)	Handle Exception for Credit Rates Upload (Day 1)	Completed	Partially Tested
PCUB.001	Financial Management	Conduct Periodic Credit Interest Rates and ICR Upload (Day 1)	Prepare Credit Interest Rates/ICR Upload Batch (Day 1)	Completed	Partially Tested
PCUB.002	Financial Management	Conduct Periodic Credit Interest Rates and ICR Upload (Day 1)	Prepare Credit Interest Rates/ICR Upload Batch (Day 1)	Completed	Passed

Solution ….contd;

Business Process view provides the operational readiness perspective

Domain	L4 Process			L5 Process			User Story		
	Passed	Partially Tested	Pass %	Passed	Partially Tested	Pass %	Passed	Partially Tested	Pass %
Benefits	11	1	91.67%	18	2	90.00%	170	1	99.42%
Claims	4	1	80.00%	25	3	89.29%	160	1	99.38%
Contributions	1	4	20.00%	12	11	52.17%	194	12	94.17%
FM	7	12	36.84%	25	31	44.64%	209	72	74.38%
Global	1	0	100.00%	1	0	0.00%	23	0	100.00%
Insurance	1	5	16.67%	10	13	43.48%	110	9	92.44%
M & E	5	0		20	0	100.00%	114	0	
Total	30	2		111	60	64.91%	980	0	

56.60%

Holistic Perspective

Operations Readiness

91.16%

Standard Perspective

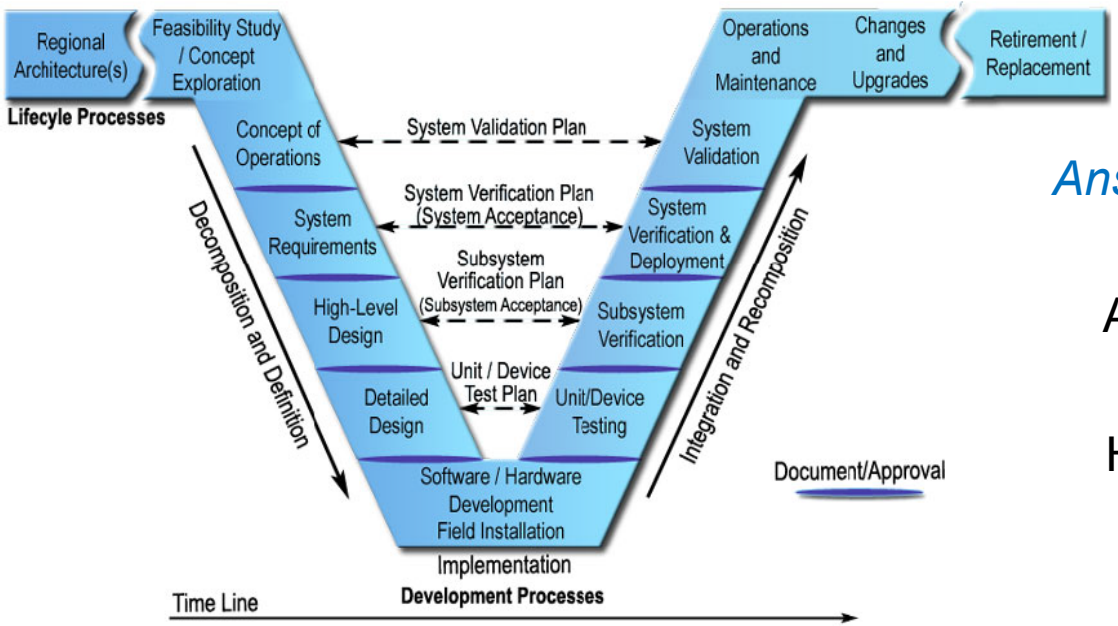
Requirements View

6% improvement in system will increase operations readiness from 20% to 100%

Whole of FM function can be managed outside the application

Alignment with Vee-Model

System validation against the Concept of operations



Reference : “Systems Engineering for ITS”, Dept. of Transportation, USA

Answering the questions :

Are we building it right ?

How much have we built right ?

Comparison with “Use case”

A use case typically describes how an actor uses the software to materialize a goal(s), which captures the requirements as part of the template.

- Use cases are based on business scenarios & in reality, would result in execution of multiple business processes in sequence or sometimes a portion of the business process depending on the granularity. Ie; **a combination of Business Process**
- Is considered a SDLC artifact by the business teams, but knowledge rests with business operations
- Considered as an overhead over requirements specifications and hence usually done by IT teams
- To create an operations concept view using use cases, they will have to be mapped to business process

Thank You