

Session SS14: Re-Tooling Public Transit One Agency at a Time: Towards a Unified Transit Reference Architecture

The Case for a Transit Reference Architecture

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Process Renewal Group

Agenda

- What is a framework?
- What value does a Framework provide?
- Industry and Enterprise Frameworks
- Developing a Framework
- Conclusion

What is a Reference Framework

- A consistent way to describe an organization's processes and their supporting capabilities (an ontology of the things that matter)
- Often viewed as a meta-model of concepts
- May include a set of indicators that provide performance metrics and allow comparisons
- A means of benchmarking practices among organizations
 - What is done
 - How are things done
 - How well are things done

Frameworks can be Industry, Functional or specific to your own Enterprise

The Need for a Value-oriented and Process-centric Framework

- All work in organizations must create value for the stakeholders external to the organization.
- There is no common language that effectively describes the work that is performed within and among most organizations to deliver this value.
- Organizations with multiple locations and services are finding that a business process-centric reference framework provides them a common language independent of organizational structure.

Some Business Process Frameworks

- **Generic Enterprise Models** intended to describe typical organizations
 - APQC's Process Classification Framework *
- **Industry-Specific Models** aiming to describe an industry in whole.
 - Insurance Framework
 - Telecommunications
 - Aerospace and Defense
 - Automotive
 - Banking
 - Broadcasting
 - Consumer Products
 - Education
 - Electric Utilities
 - Government Services
 - Petroleum Downstream and Upstream
 - Pharmaceutical

Some More Reference Frameworks

- **Process Lifecycle and Value Chain Models** to examine all work in a connected process chain across and within enterprises.
 - Supply Chain Council's SCOR
 - Value Chain Group's VRM
- **Domain-Specific Models** geared towards particular functions within the organization and the processes within them
 - OCG's ITIL (Info. Tech. Infrastructure Library)
 - ISACA's COBIT (Control OBjectives for IT)
- **Enterprise Architecture Frameworks**
 - Zachman Ontology for Enterprise Architecture
 - TOGAF, DODAF and MODAF
 - FEAF – US Federal Framework

The Framework is what's Inside the Box

External Stakeholders do not care about the inside of the box but you have to in order to create value



Customer



The Transit Enterprise



Supplier

A Simpler Powerful Model is Needed *

BPM: the discipline that improves measurable business process performance through ongoing optimization of enterprise-wide processes and their supporting capabilities.

Organization Structure:

- Formal
- Roles and Responsibilities
- Incentives

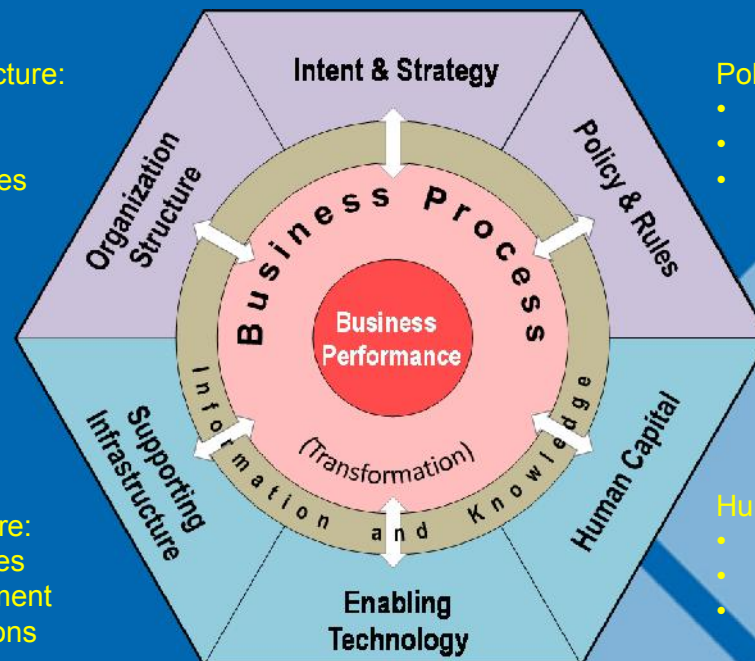
Supporting Infrastructure:

- Facilities
- Equipment
- Locations

Intent & Strategy:

- Enterprise
- Stakeholder
- Process

* Burlton Hexagon



Policy & Rules:

- Regulations
- Policies
- Business Rules

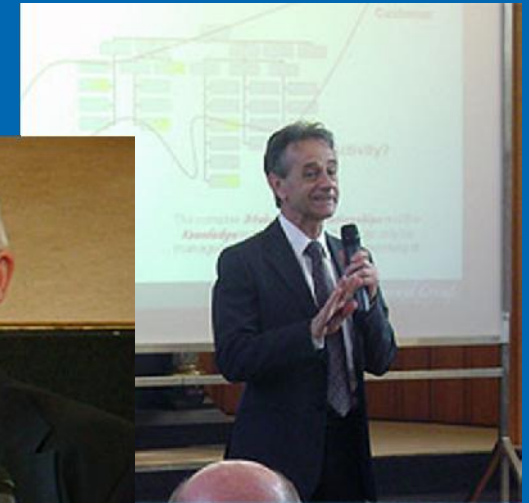
Human Capital:

- Competency
- Capacity
- Motivation

Enabling Technology:

- Software Services
- Applications
- Datastores

Enterprise and Process Frameworks: Zachman and Burlton





Zachman Enterprise Framework

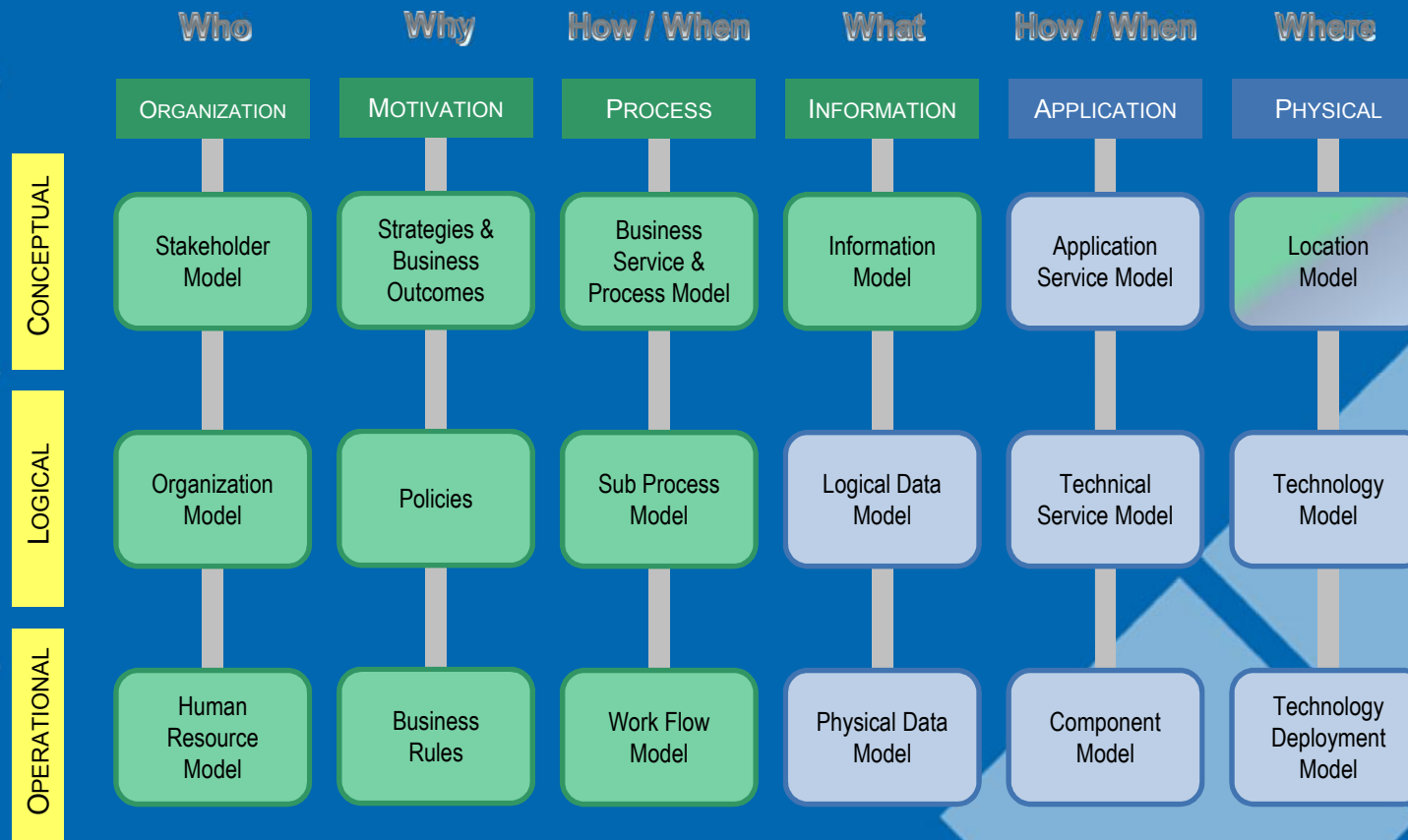
THE ZACHMAN ENTERPRISE FRAMEWORK²™

	WHAT	HOW	WHERE	WHO	WHEN	WHY	
SCOPE CONTEXTS	Inventory Identification e.g. Inventory Types	Process Identification e.g. Process Types	Network Identification e.g. Network Types	Organization Identification e.g. Organization Types	Timing Identification e.g. Timing Types	Motivation Identification e.g. Motivation Types	STRATEGISTS AS THEORISTS
BUSINESS CONCEPTS	Inventory Definition e.g. Business Entity Business Relationship	Process Definition e.g. Business Transform Business Input	Network Definition e.g. Business Location Business Connection	Organization Definition e.g. Business Role Business Work	Timing Definition e.g. Business Cycle Business Moment	Motivation Definition e.g. Business End Business Means	EXECUTIVE LEADERS AS OWNERS
SYSTEM LOGIC	Inventory Representation e.g. System Entity System Relationship	Process Representation e.g. System Transform System Input	Network Representation e.g. System Location System Connection	Organization Representation e.g. System Role System Work	Timing Representation e.g. System Cycle System Moment	Motivation Representation e.g. System End System Means	ARCHITECTS AS DESIGNERS
TECHNOLOGY PHYSICS	Inventory Specification e.g. Technology Entity Technology Relationship	Process Specification e.g. Technology Transform Technology Input	Network Specification e.g. Technology Location Technology Connection	Organization Specification e.g. Technology Role Technology Work	Timing Specification e.g. Technology Cycle Technology Moment	Motivation Specification e.g. Technology End Technology Means	ENGINEERS AS BUILDERS
COMPONENT ASSEMBLIES	Inventory Configuration e.g. Component Entity Component Relationship	Process Configuration e.g. Component Transform Component Input	Network Configuration e.g. Component Location Component Connection	Organization Configuration e.g. Component Role Component Work	Timing Configuration e.g. Component Cycle Component Moment	Motivation Configuration e.g. Component End Component Means	TECHNICIANS AS IMPLEMENTERS
OPERATIONS INSTANCE CLASSES	Inventory Instantiation e.g. Operations Entity Operations Relationship	Process Instantiation e.g. Operations Transform Operations Input	Network Instantiation e.g. Operations Location Operations Connection	Organization Instantiation e.g. Operations Role Operations Work	Timing Instantiation e.g. Operations Cycle Operations Moment	Motivation Instantiation e.g. Operations End Operations Means	WORKERS AS PARTICIPANTS
Released October 2008	INVENTORY SETS	PROCESS TRANSFORMATIONS	NETWORK NODES	ORGANIZATION GROUPS	TIMING PERIODS	MOTIVATION REASONS	<i>Normative Projection on Version 2.01</i>

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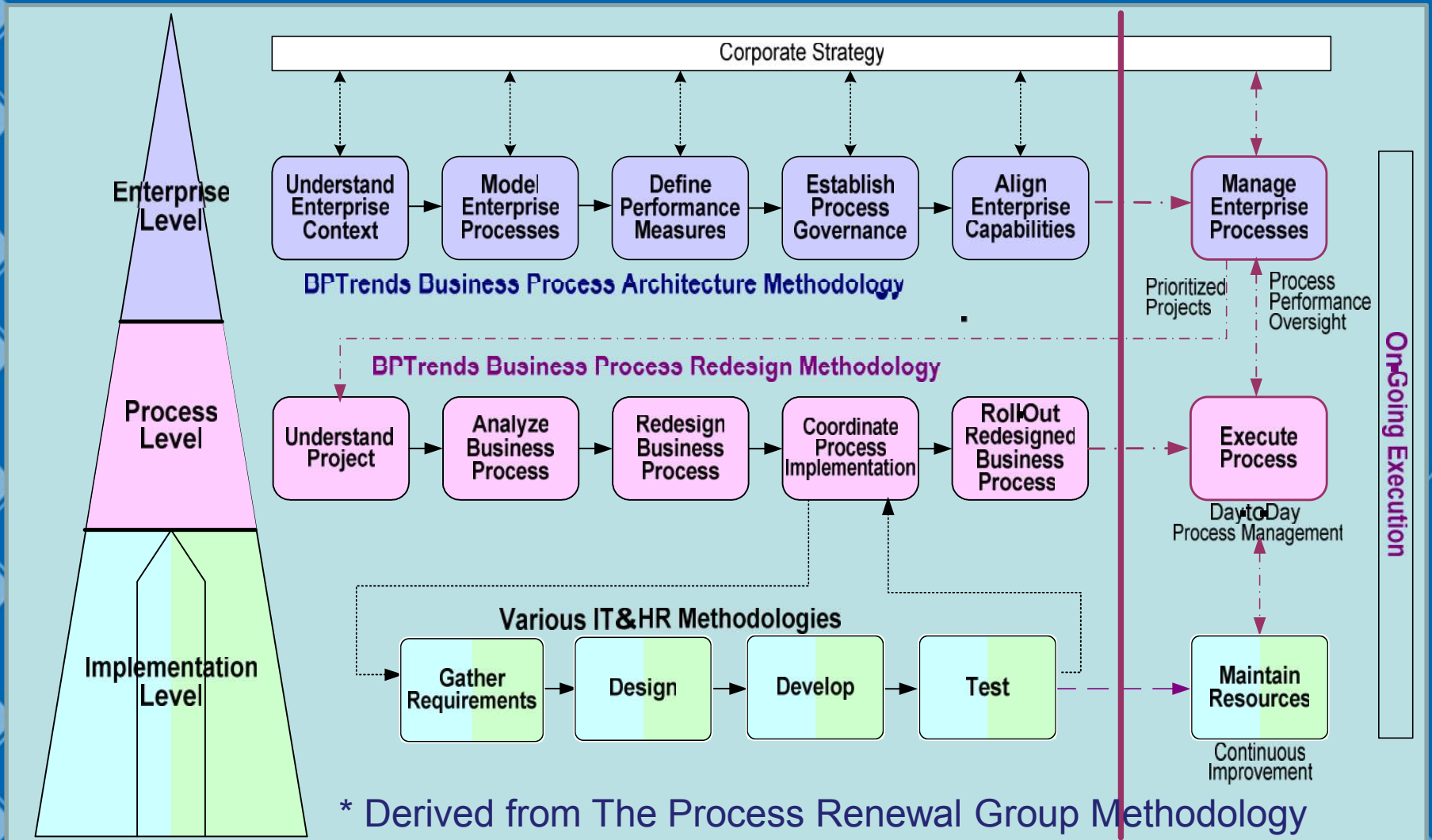
Transit Service Based Enterprise Architecture Structure (Framework for a Framework)



- Adapted from the core concepts of the Zachman Framework

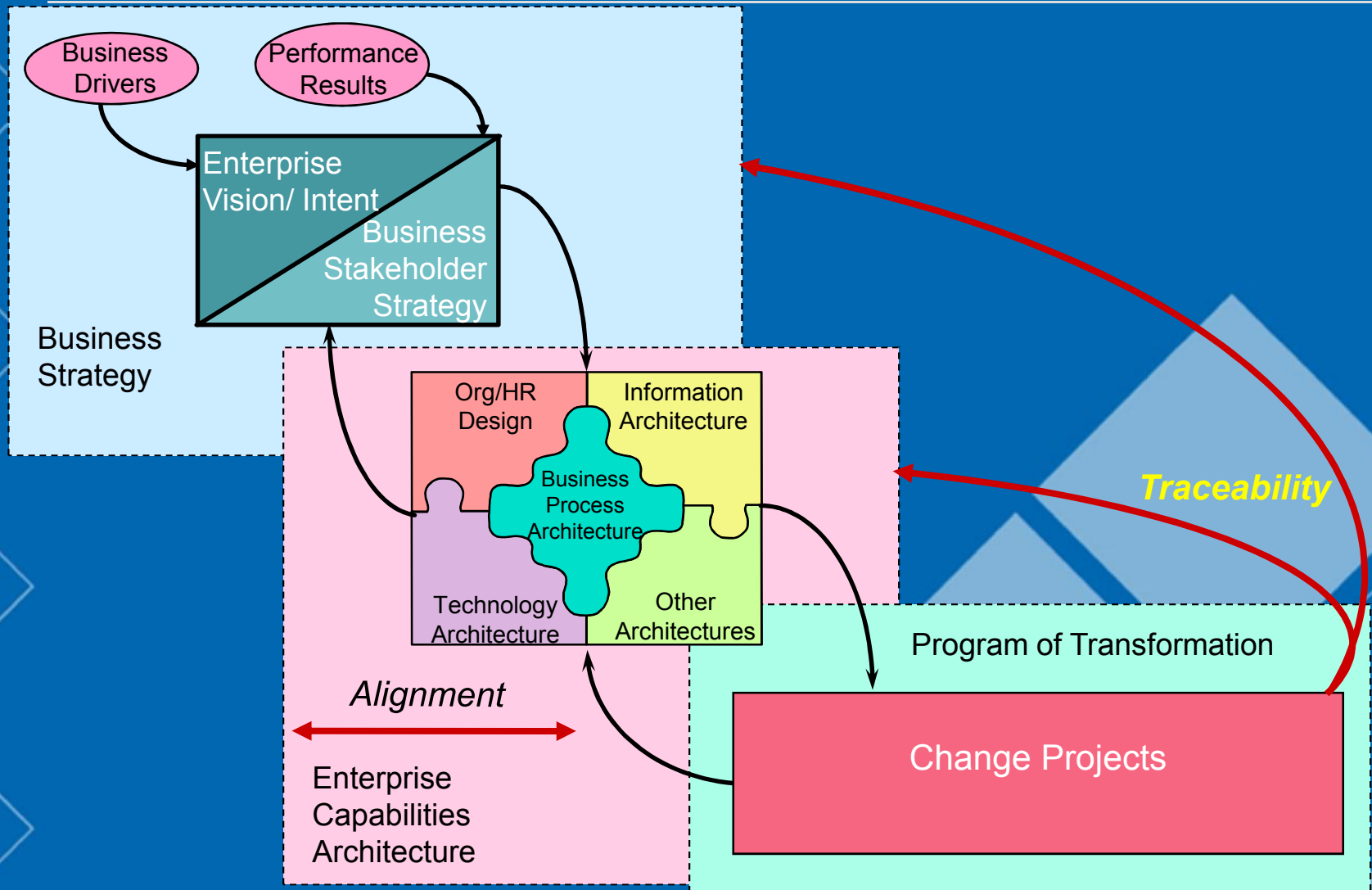
Using or Developing a Framework Requires a Methodology

*(The BPTrends Associates BPM Methodology *)*



* Derived from The Process Renewal Group Methodology

Transit Value Creation Requires Strategic Alignment of Change & Traceability of Decisions



Building a Custom Framework for your Enterprise's Use

- We could use an existing ***generic Framework*** that would suggest possible Value Streams, Level 1 and Level 2 processes, and then edit it
- We could generate all of the Value Streams, Level 1 and Level 2 processes at once using ***relationship and asset lifecycles*** and assembling them
- We could use some ***combination***

Transit Enterprise Strategic and Business Outcomes

Balancing the needs and expectations of our stakeholders enables Transit Enterprise to solidify it's Strategic Outcomes



Customer



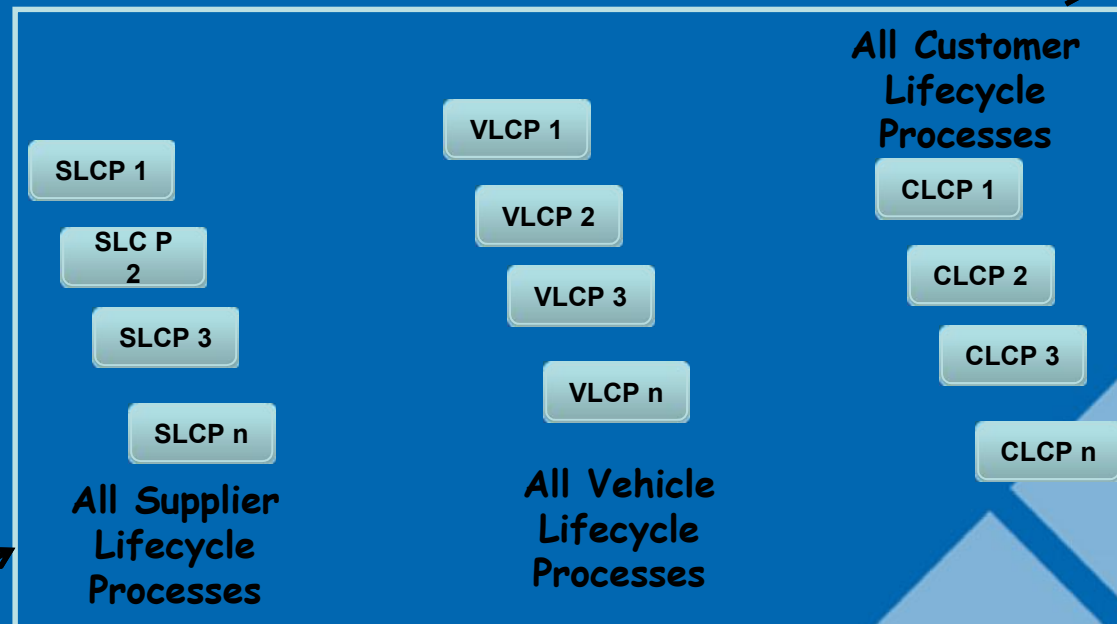
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What Transit Enterprise does for Stakeholders & the Internal Assets Needed

The lifecycles of our external relationships and internal assets must support meeting needs and satisfying expectations of stakeholders



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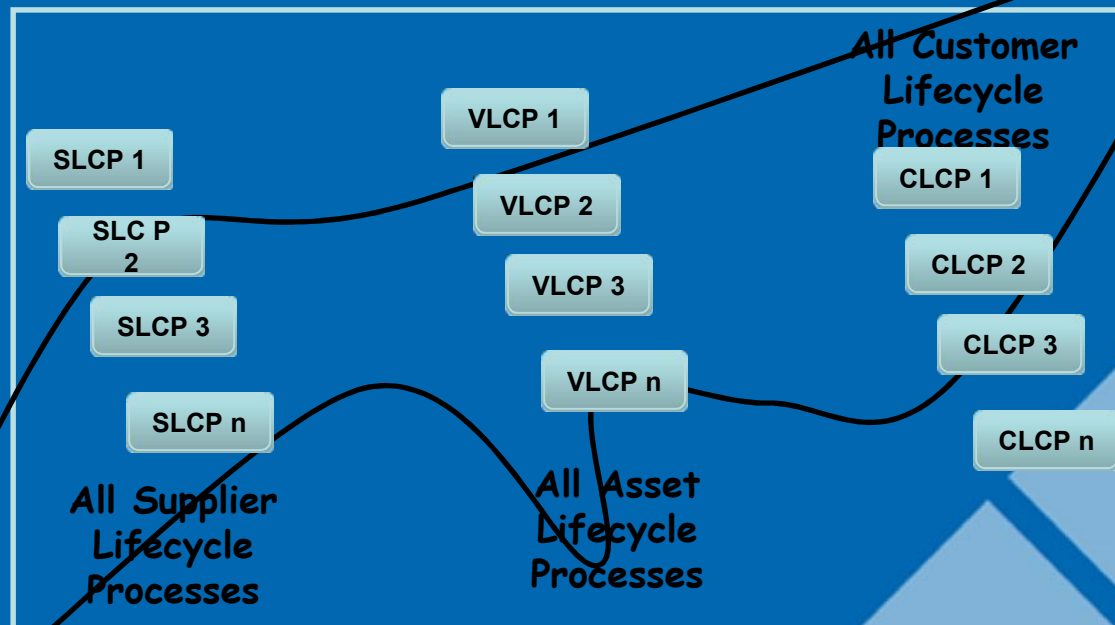
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Consolidating the Lifecycles into Processes

The processes in each lifecycle ideally work with one another to build end to end business process that are and ensure healthy stakeholder relationships



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The Ideal Business Processes of the Transit Enterprise

The activities in each lifecycle are ideally categorized into aligned Business Processes that will deliver outcomes of value for the Transit Enterprise and its stakeholders



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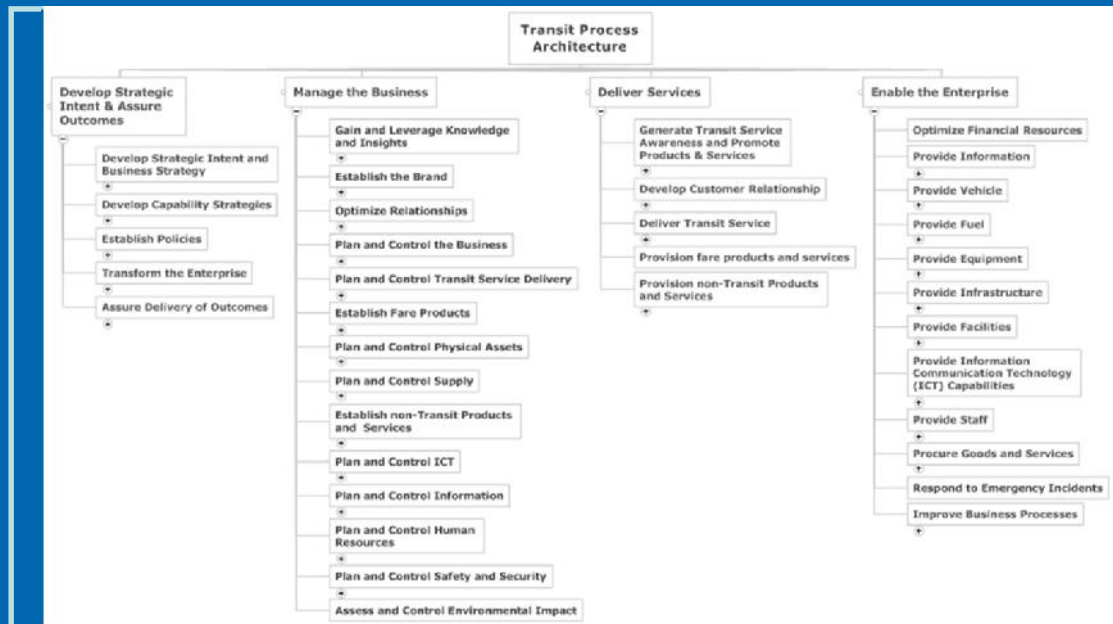
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The Ideal Business Processes of the Enterprise

The result will be a Business Process Framework that can be the basis for managing and governing the Enterprise



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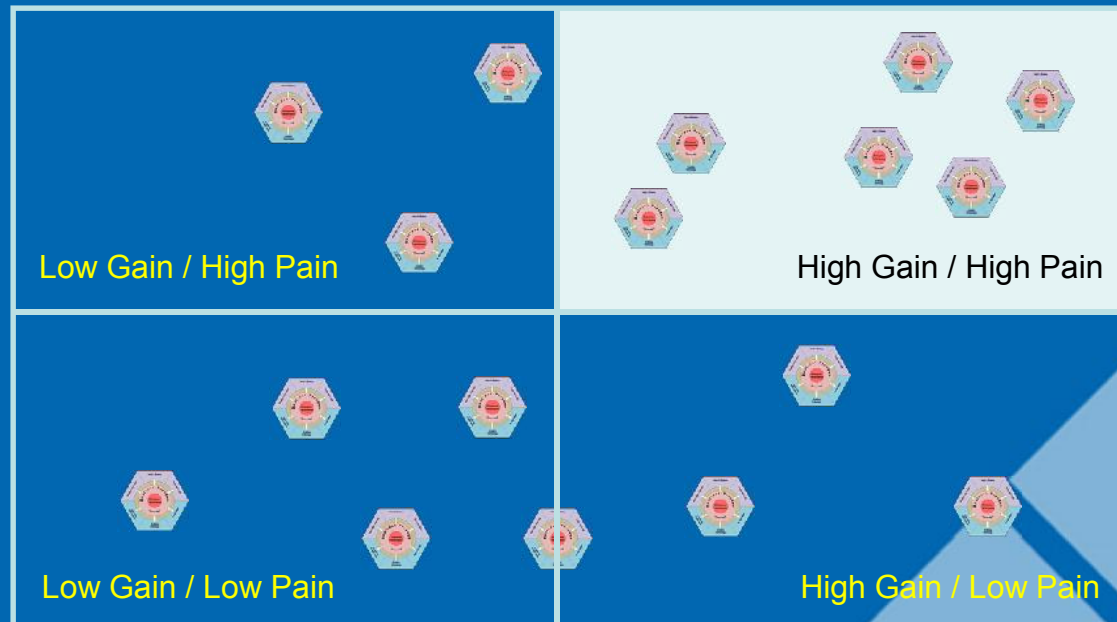
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Your Assessment of Your Pain and Gain using the Framework

The priority ideal processes for change are those with high gain towards your outcomes and your high pain performance gap



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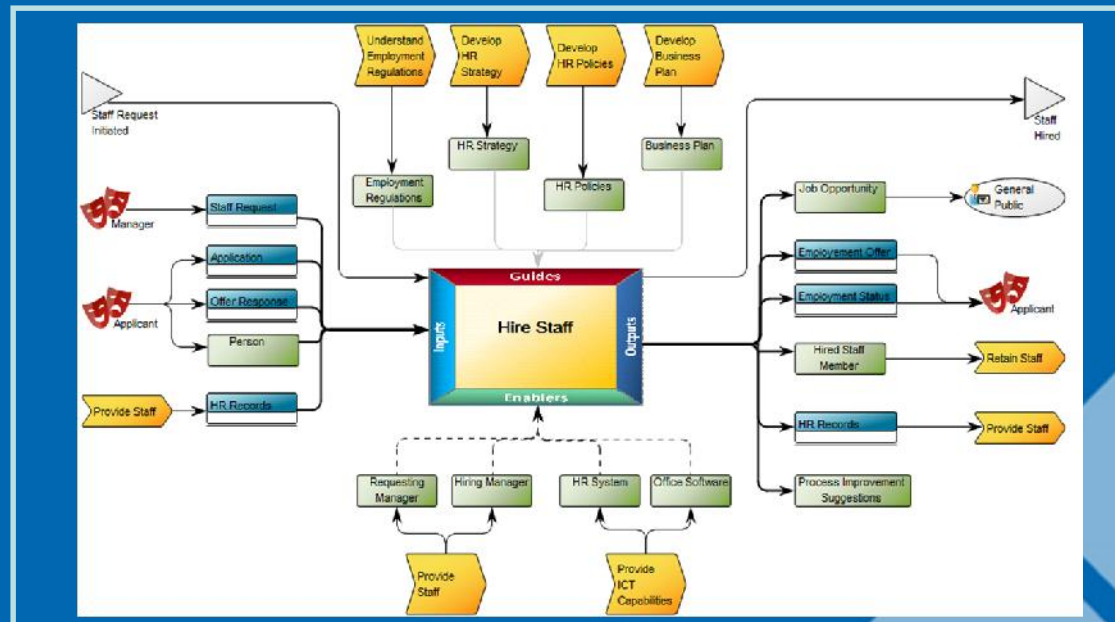
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The Interaction among Ideal Business Processes of the Transit Enterprise

Each ideal process of the Transit Enterprise has significant interactions with other ideal processes and our stakeholders



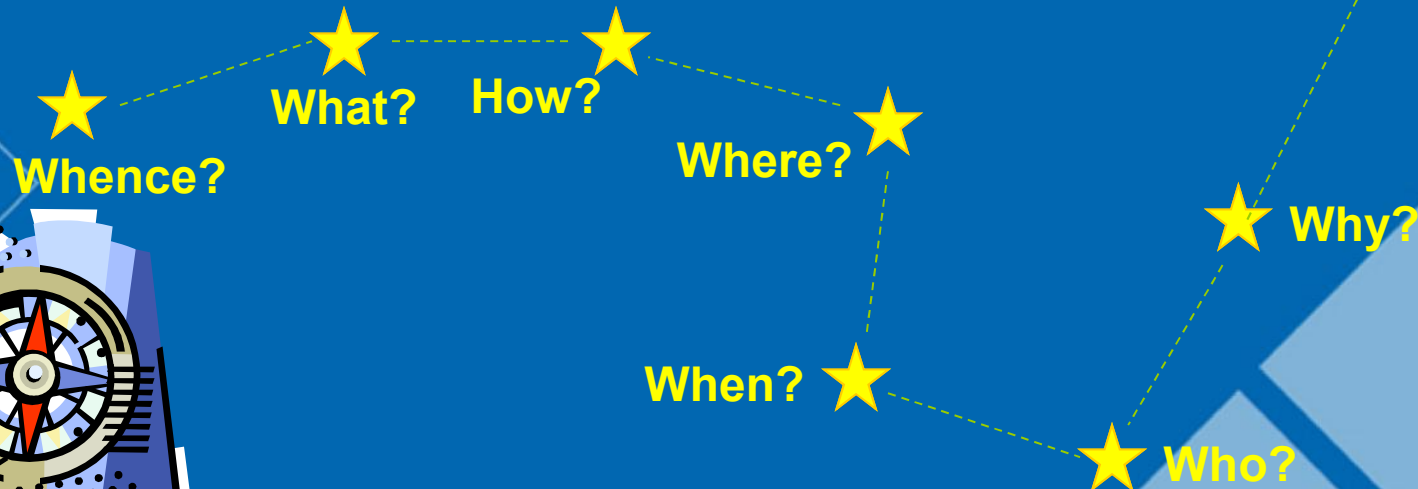
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Conclusion

- You Need a North Star but it is not sufficient



- You will need navigational guidance
- An Industry or Enterprise Transit Framework could be your guide

