

Perspective

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Perspective

Enterprise Architecture

Business/ Organisation Architecture

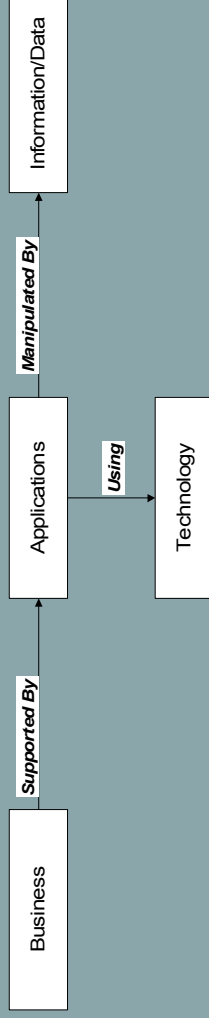
Information Systems

Application Architecture

Information/Data Architecture

Technology (ICT) Architecture

Product Architecture



Processes

Development of the enterprise architecture, or any of the architecture within it, will typically involve:

- Initially, analysing the current architecture: this will be a process of description, documenting the architecture "as-is", or "baseline" architecture;
- Moving on to a definition of the architecture as it is planned to develop in the future - the architecture as it should be, or "target" architecture

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Definition:

An enterprise is the highest level endeavour, consisting of a collection of related programs that are managed as a single unit.

Definition:

business architecture is either the current or reengineered architecture of a business capturing its major components (and their responsibilities and relationships) as well as its major mechanisms (i.e., how these components collaborate to meet the requirements of the business enterprise).

Definition:

A business is a business engineering integration work product that models a business that interacts with the customer organization or the user organization

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Definition:

Business architecting is the subclass of the architecting activity during which the business architecture for all or part of the business enterprise of the customer organisation is produced.

Definition:

Architecting is the activity consisting of the cohesive collection of all tasks that primarily involve the production of one or more related architectures.

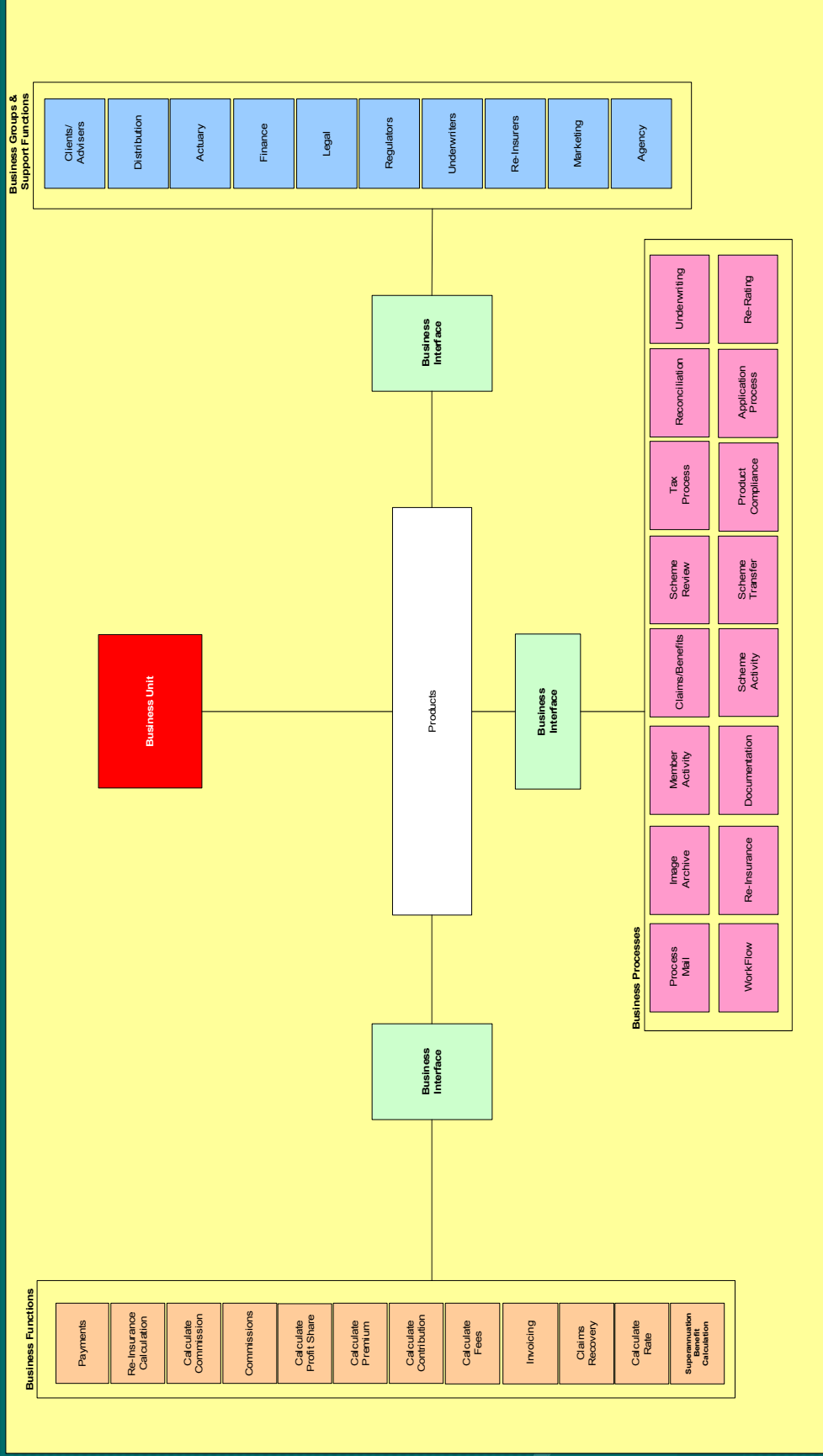
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A **Business Architecting process** consist of the following:

- Establish **current (baseline) Business Architecture** (on either Enterprise, Business Unit or Project level)
 - Identify Business Functions
 - Identify Business Processes
 - Identify Business Interfaces
 - Identify internal business groups, support groups & Business Units
 - Identify external Business groups & Support groups
 - Design the Business Baseline architecture
 - Design Business Baseline architecture diagram (Conceptual Business Architecture for validation- show components and relationships)
- **Sequencing plan-** a document that defines the strategy for changing the enterprise from the to the target architecture. It schedules multiple, concurrent, interdependent activities, and incremental builds that will evolve the enterprise
- Establish **future (target) Business Architecture** (on either Enterprise, Business Unit or Project level)
 - Identify new businesses
 - Identify new Business functions
 - Identify new Business processes
 - Identify new business interfaces
 - Identify new Business groups and support groups
 - Design the Business Target Architecture
 - Design Business Baseline architecture diagram (Conceptual Business Architecture for validation- show components and relationships)

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Business Target Architecture



Business Function

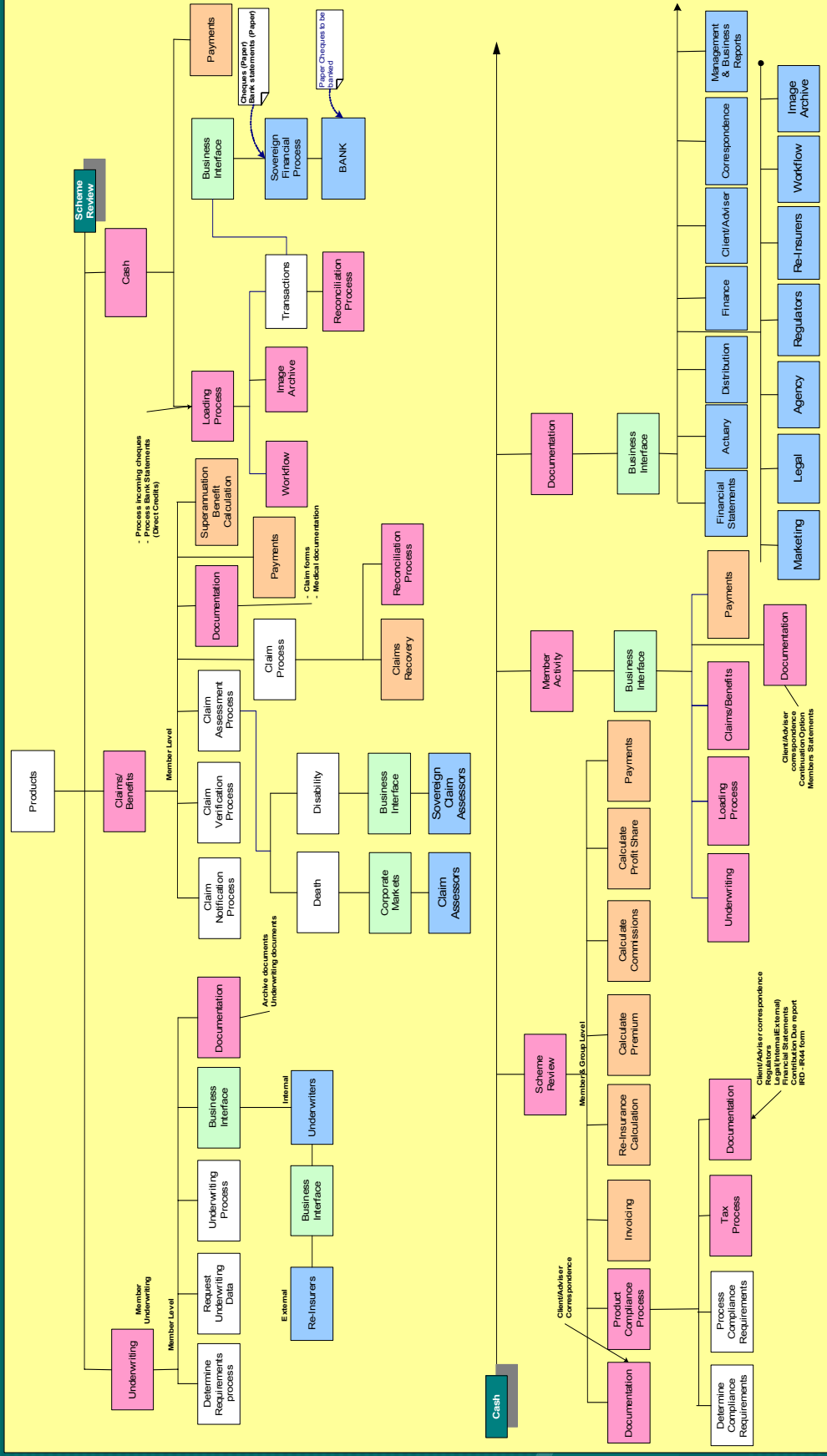
Business Process

Business Group/Support Function

Business Interface

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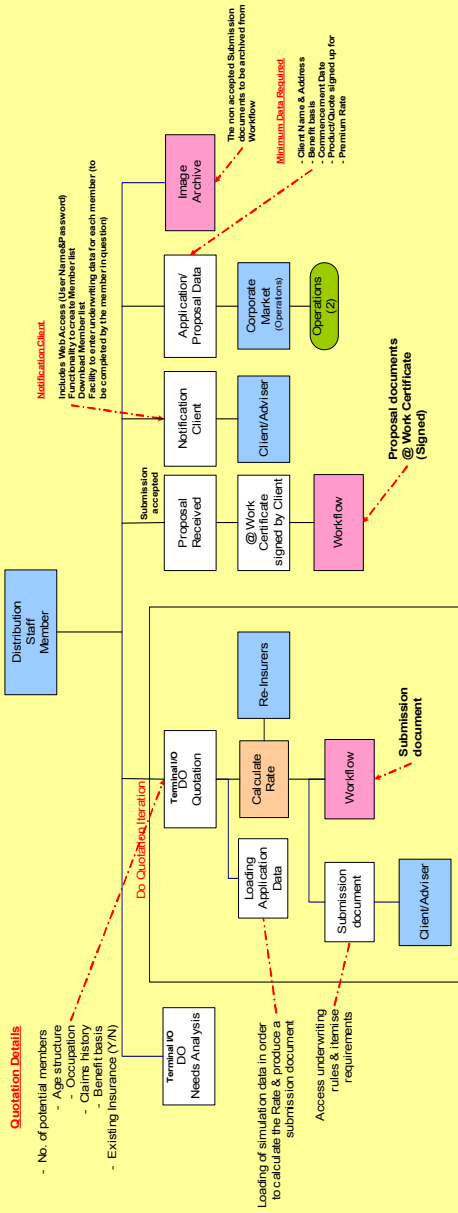
Business Target Architecture



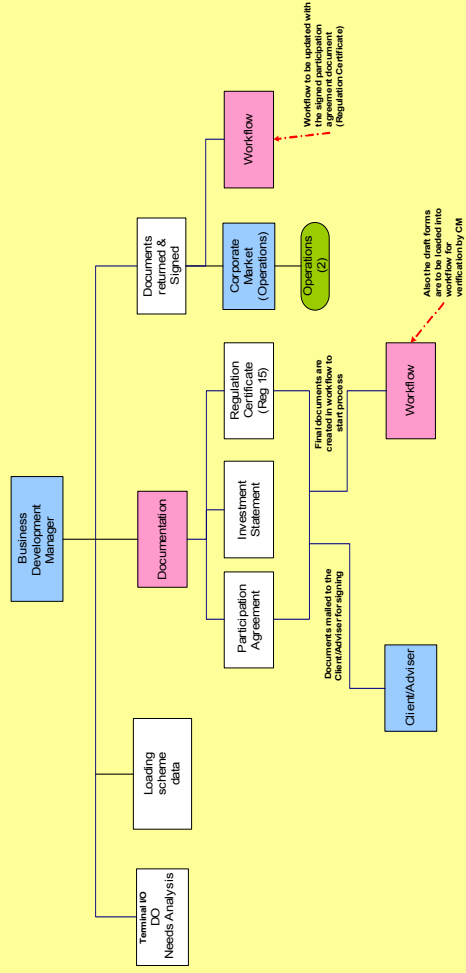
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Business Architecture

Risk Products



Superannuation Products



Business Function

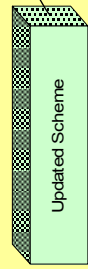
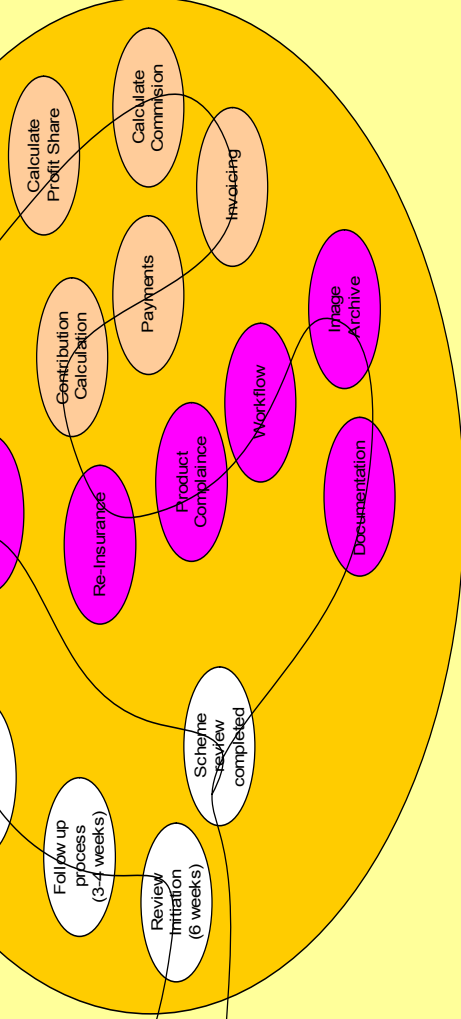
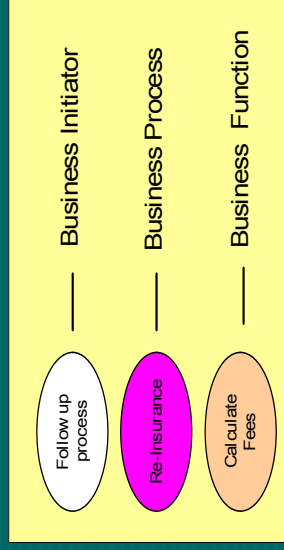
Business Process

Business Group/Support Function

Business Interface

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Business Process



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- **Business Architecture documentation** consist of the following:
 - Designs of the Baseline Architecture
 - Designs of the Target Architecture
 - High Level Business Use Case descriptions
 - Component specifications of:
 - Business functions
 - Business processes
 - Business Interfaces
 - Business Groups/Support functions
 - Business Component interfaces
 - Designs of the Business Architecture diagrams (showing components and relationships)

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Learning's & Benefits from the business architecting process:

- Business users assigned to project had:
 - Learned to work as a team
 - Grown a lot (wanted to be there and be developed)
- A lot of processes not documented
- More inter-departmental relationships than first realised
- the project identified a lot of duplication of process and effort within the business
- Speaking the same language (Terminology)
- Much better understanding about “who does what, when, and why” in the business
- You don't know what you don't know at the start
- Personal development took place for some project members
- Changes in project members were positive
- More communication at local level to other business Unit staff members about the project and business architecture process
- Resulting document have proven to be invaluable in areas far beyond IT and systems
- It is clear that we are now able to specify accurately our systems requirements
- Also able to identify structural issues that were not previously apparent

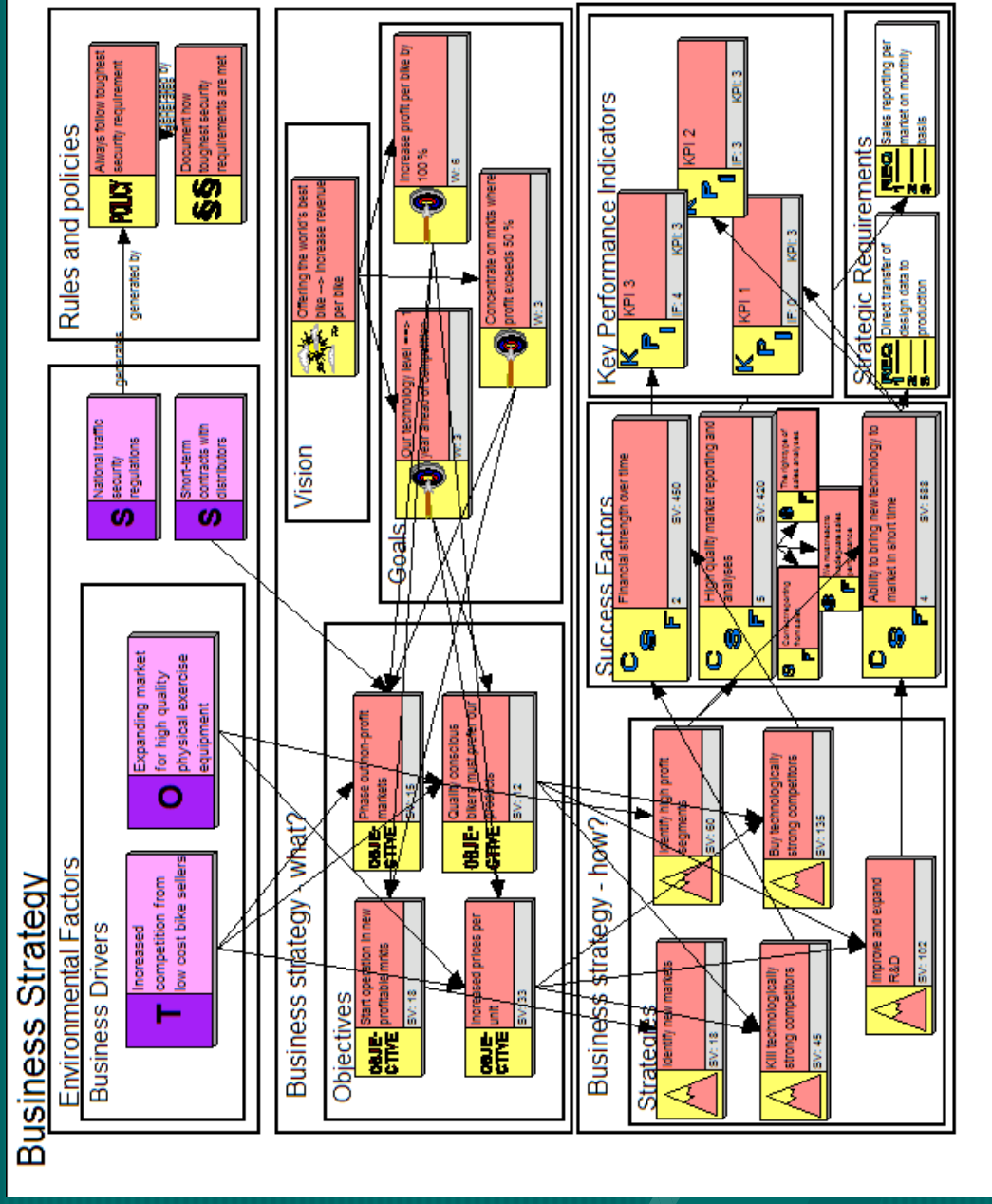
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Enterprise Architecture Modeling Tools

Company	Products	Enterprise Framework Support	Development Facility
Casewise	Corporate Modeler Enterprise Edition	Casewise Framework, Zachman	Rational Rose, Erwin, PowerDesigner, OracleDesigner, Tibco, Telelogic Doors
Computas	Metis Product Family	Zachman, TOGAF, C4ISR, FEAF / TEAF	UML
IDS Scheer	ARIS Collaborative Suite	ARIS Framework	
Popkin Software	System Architect Family	Zachman, TOGAF, C4ISR	Business Process Modeling, IDEF, Gane and Sarson, Yourdon/DeMarco, Ward and Mellor, SSADM method, UML, XML
Proforma	Provision Modeling Suite	Zachman, C4ISR	Rummler-Brache, LOVEM, IDEF, UML, Visio, RUP, UML
Ptech	Enterprise Framework	Zachman, C4ISR	UML
Select Business Solutions	Select Enterprise	Zachman	MDA, UML, RUP, Yourdon, XP

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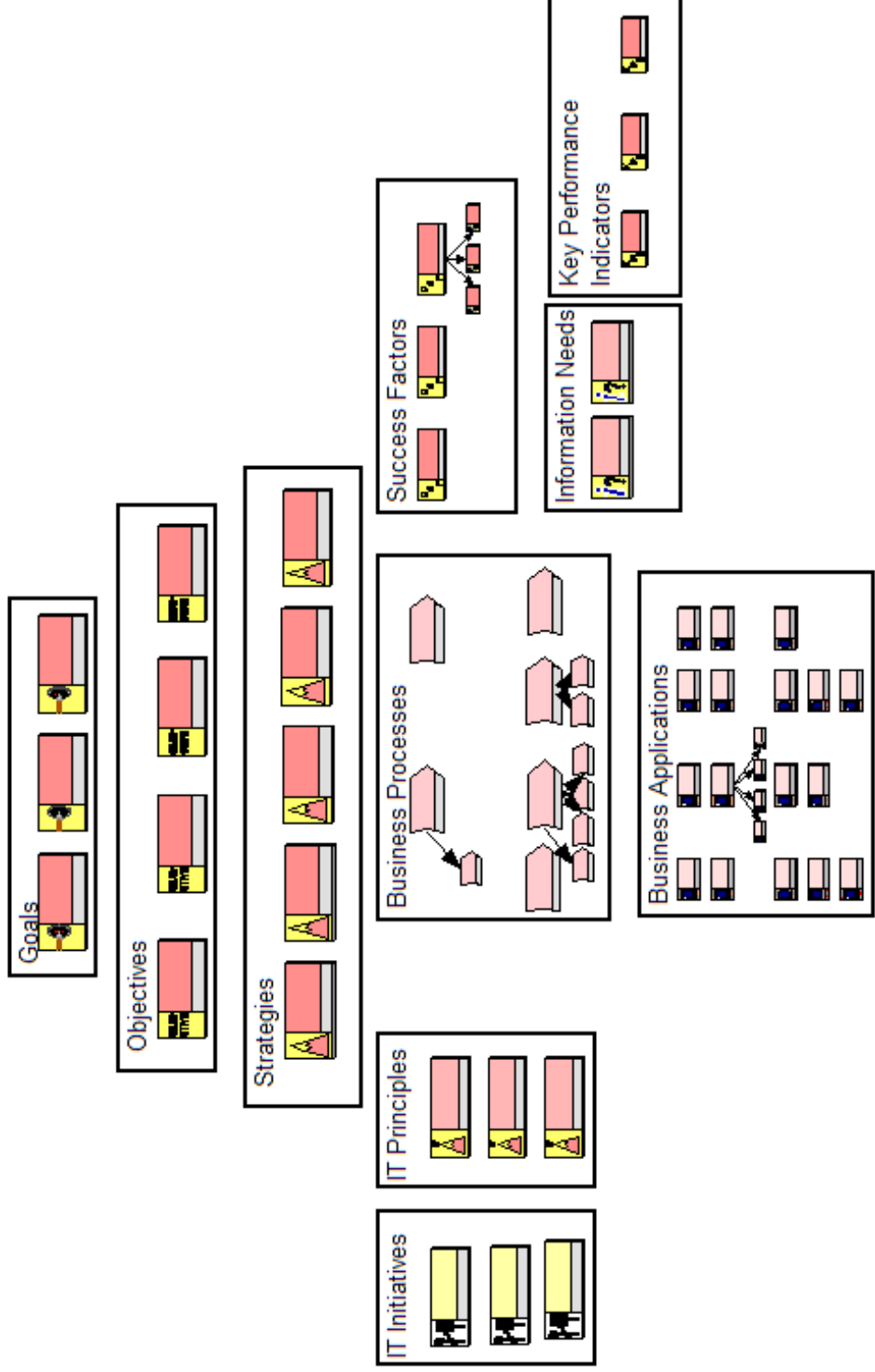
Architecture Modelling Tool Example



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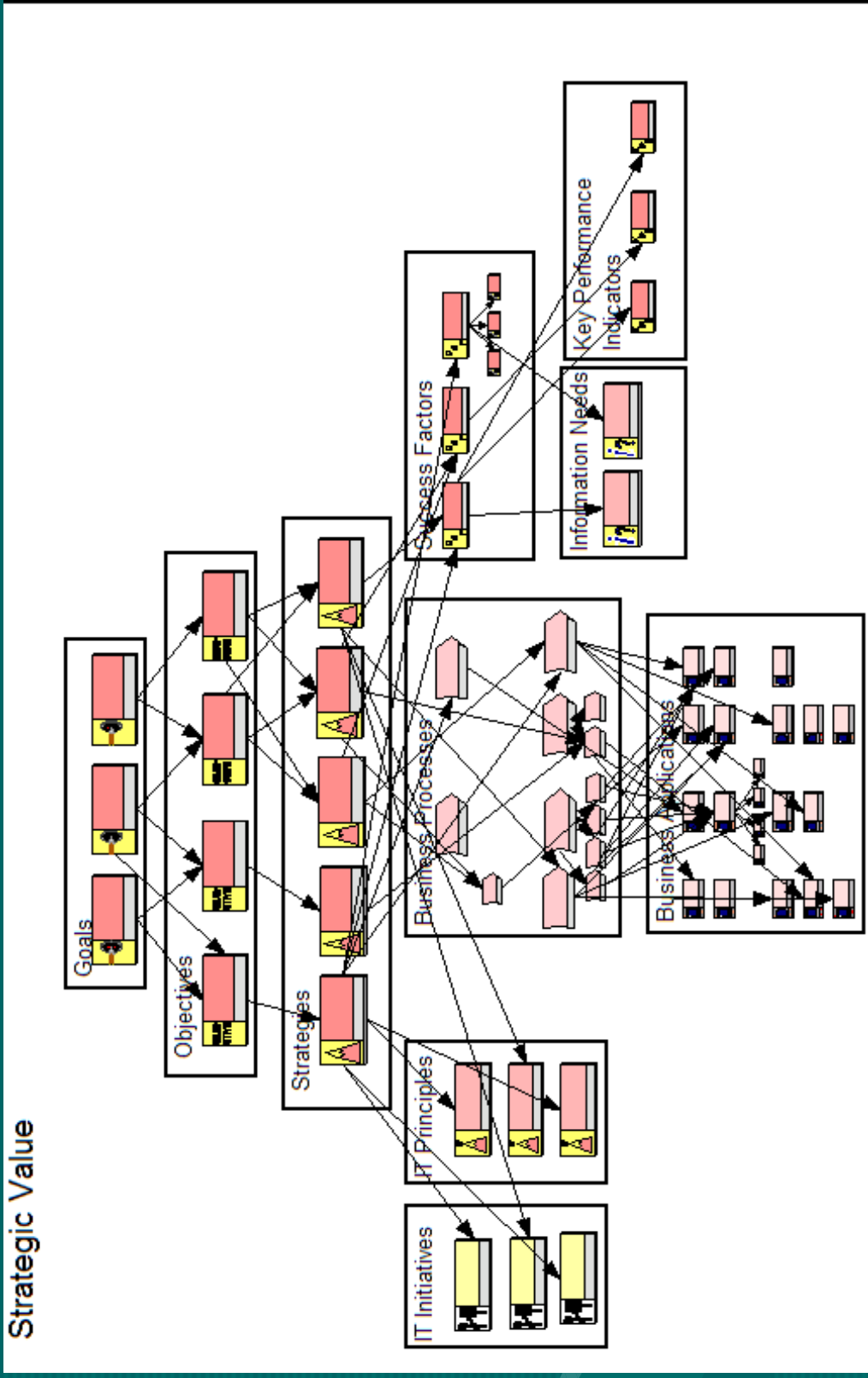
Architecture Modelling Tool Example

Strategic Value

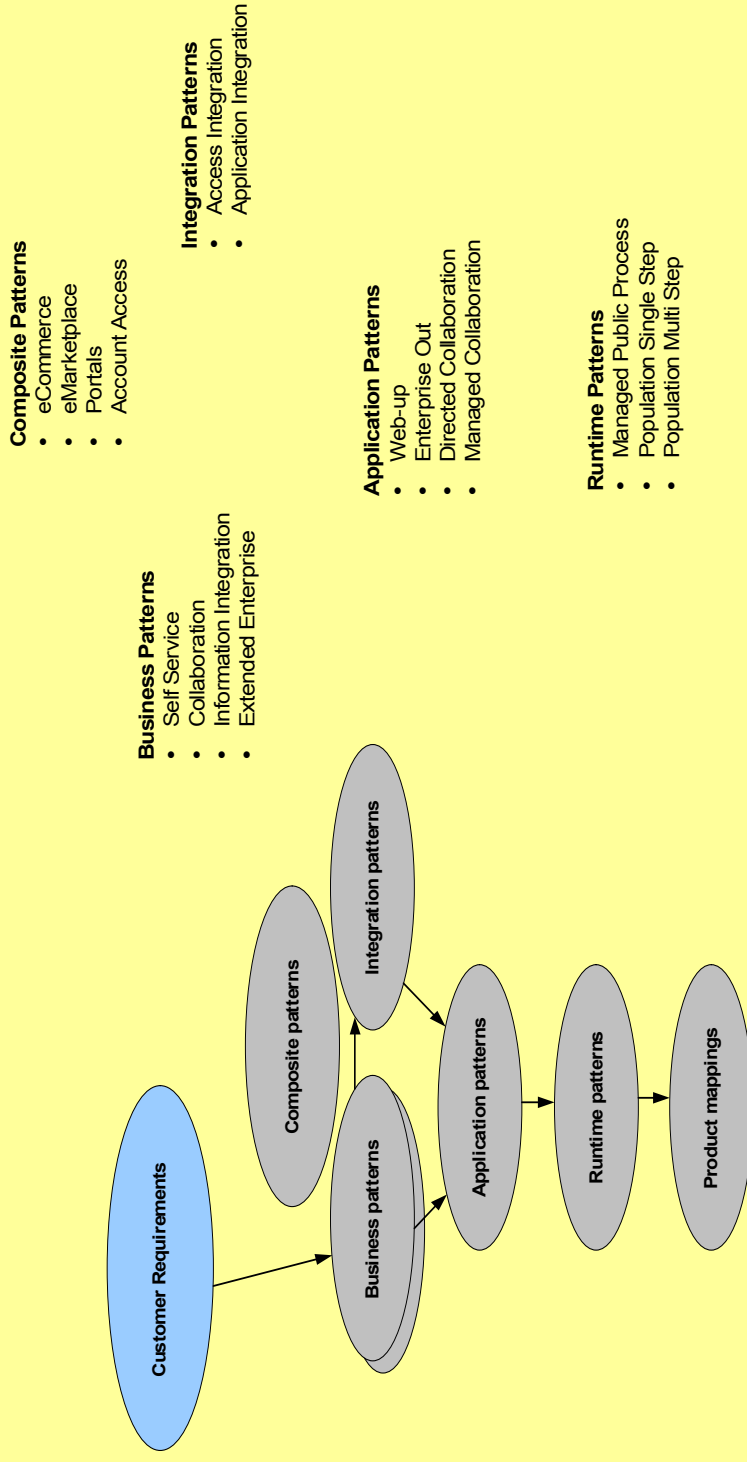


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Architecture Modelling Tool Example



Business Patterns

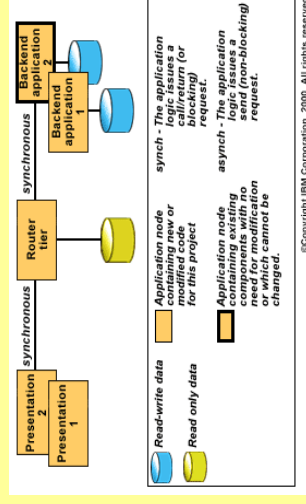
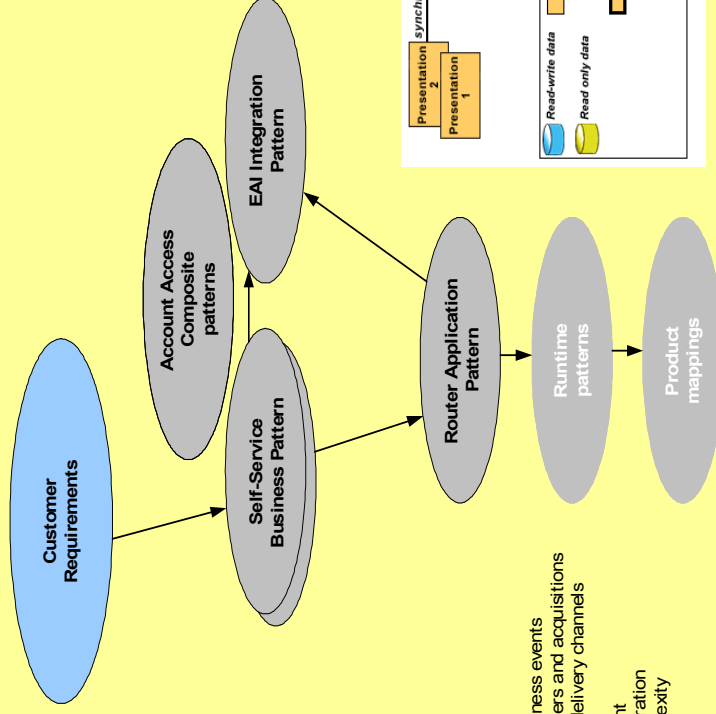


IBM's Business Patterns Cookbook

Business Patterns

- Business Drivers**
- Time to market
 - Improve organisational efficiency
 - Reduce latency of business events
 - Unified customer view across Lines of Business
 - Easy to adapt during mergers and acquisitions
 - Integrate across multiple delivery channels
- IT Drivers**
- Minimize application complexity
 - Minimize total cost of ownership (TCO)
 - Leverage existing skills
 - Leverage legacy investment
 - Back end application integration
 - Minimize enterprise complexity
 - Maintainability
 - Scalability

- Business and IT Drivers**
- Reduce the latency of business events
 - Easy to adapt during mergers and acquisitions
 - Integrate across multiple delivery channels
 - Leverage existing skills
 - Leverage legacy investment
 - Back end application integration
 - Minimize enterprise complexity
 - Maintainability
 - Scalability



IBM's Business Patterns Cookbook

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Business Line Architecture

Definition:

Is a cooperative business and information process and system that operates across organisational boundaries and implements one or more “Lines of Business”

Software Product Line Architecture

Definition:

A software product line is a set of software-intensive systems sharing a common, managed set of features that satisfy the specific needs of a particular market segment or mission and that are developed from a common set of core assets in a prescribed way [Clements 01].

Many organizations are finding that software product lines take economic advantage of the commonality among similar systems and can yield remarkable quantitative improvements in productivity, time to market or field, product quality, and customer satisfaction.

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continue - Software Product Line Architecture

Product line software architectures and supporting components are the focus of an increasing number of software organisations attempting to reduce software costs.

One essential attribute of a product line architecture is that it effectively isolate the logical, or static, aspects of the application from any product specific variations in the physical architecture or execution architecture.

The notion of a product line using a shared architecture and set of components is directly applicable to organisations that develop and market systems or products. Nevertheless, many of the principles can be employed even in such project-based organisations.

Software product lines do not appear accidentally, but require a conscious and explicit effort from the organisation interested in employing the product line approach

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References

- Enterprise Architecture Overview for Financial Services - B.Rossier, Jan 2004
- Enterprise Architectures – OGC UK
- A practical guide to Federal Enterprise Architecture – CIO Council version 1.0
- Donald Firesmith – Open Process Framework
- Product line Analysis - Carnegie Mellon, Software Engineering Institute
- Jan Bosh, University of Groningen, - Adopting, Software Product Lines
- Design & Use of Software Architectures, Jan Bosh
- Business Line Architecture & Integration, IAC March 2003
- Software Architecture in practice, Paul Clements, Len Bass, Rick Kazman
- Software Architecture – Organisational Principles and Patterns, David M. Dikel
- Cibit-Serc – Experience with Architecture, Gert Florijn, Cor Baars
- Software Architecture Workshop, Sept 2002, by Dana Bredemeyer
- Institute for Enterprise Architecture Development