Linking Strategy, Enterprise Architecture and Programme Management

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Abstract

- **Businesses are under pressure to be effective, efficient and agile**
  - **THE CHALLENGE: Achieving these simultaneously in organisations undergoing change, competing in aggressive markets and absorbing technological turbulence**
- **An architecture approach with an agile slant can help**
  - **Only constant is change**
  - **Cannot predict what the future holds**
- **What we can do is**
  - **Understand what we have, its strengths and limitations**
  - **Set in place principles and goals which guide decision making**
- **Taking a service oriented approach, we can identify**
  - **Constants, such as external stakeholders, product and services, industry requirements and generic internal services**
- **Models and tools can help us**
  - **Evaluate alternatives quickly and cost effectively**
  - **Communicate strategy succinctly to implementors**
  - **Serve as a basis for planning activity and monitoring progress**

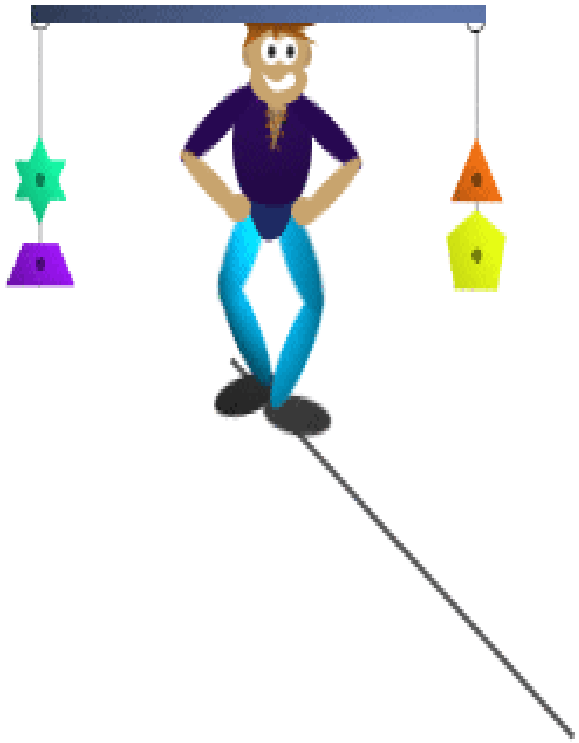
This presentation, based on 15 years experience across a variety of industries and organisations, provides a framework and examples to explain the approach.

Coverage

- The Challenge
- Scope of Enterprise Architectures
- Strategy
- Program Management
- Conceptual/Model Issues
  - Key Architecture Elements/Meta Model
  - Service Based Model
  - Scenarios & Filtering
  - Delta Models
- Initiative Aspects
  - Cost, Risk
  - Benefits
- Content/Solution Architecture Issues
  - Organizational APIs
  - Layered Models
  - Service Delivery
- Tool Requirements
- Conclusion
- Questions

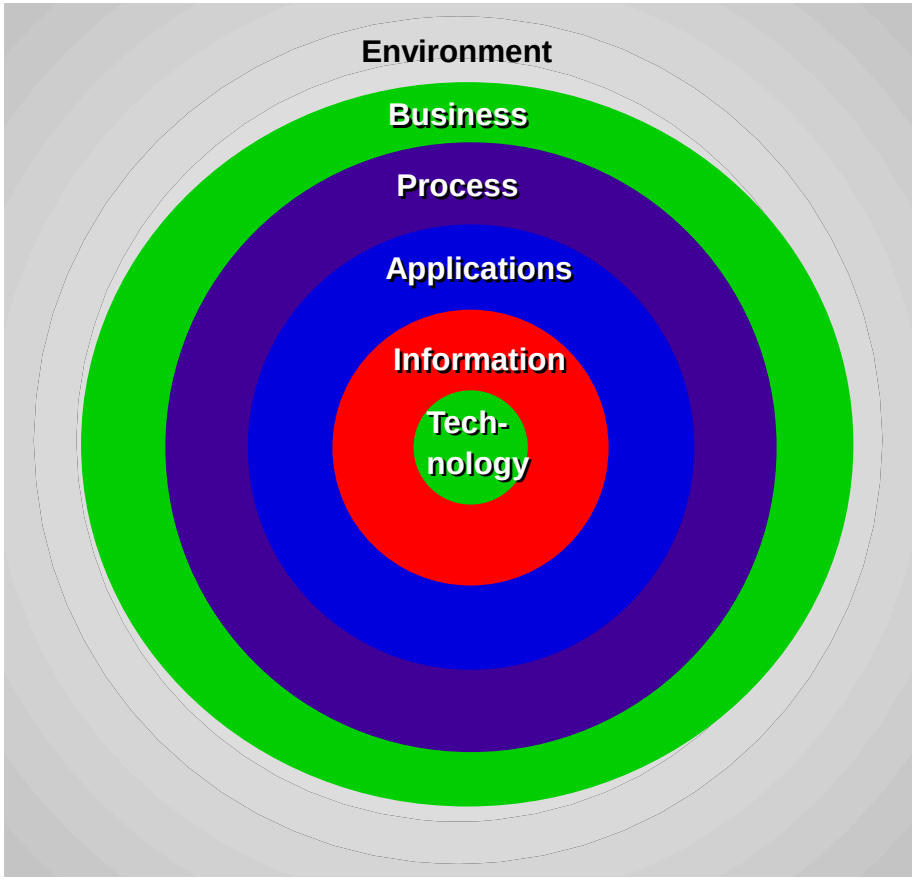
The Challenge

- How to stay agile
- But still exploit infrastructure expenditure effectively and achieve efficiency
- And deal with things that typically take a long time
- Deliver real value from architecture efforts



Enterprise Architecture Coverage

- **Inventory**
  - What have we got?
  - How good is it?
  - Gaps & Redundancies
  - Opportunities
- **Blueprint**
  - What do we want?
  - Guide investment, initiatives, implementation choices



Two-way Street

Architecture choices must be informed by business drivers…

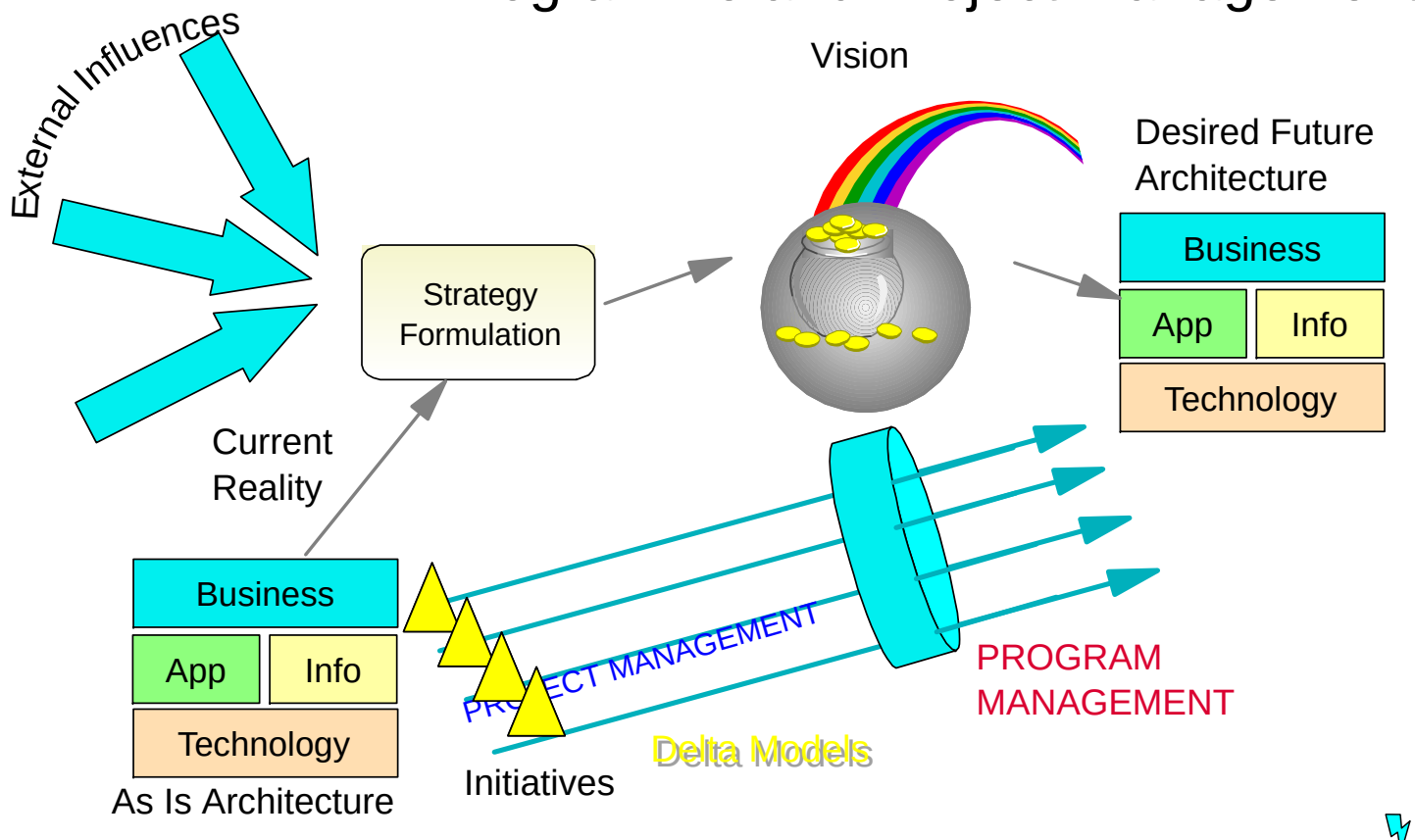
Business Driver / Architecture Req.	Cut Costs	Efficient One Stop Service	Shorten Product Intro Time	Grow Market Share	Good Corp. Citizen-ship	Focus on Core Compe-tencies	World Class Service
Lower TCO thru Standard Config's	✔		✔			✔	
Reduce # of technologies per arch. component	✔	✔	✔			✔	✔
Data and network integration		✔	✔	✔		✔	✔
Follow internat'nl standards	✔	✔	✔	✔	✔	✔	✔

Technology Driver / Business Innovation	Massive Cheap Bandwidth	Powerful Portable Devices	AffordableDigital Signal Processing	Cheap Reliable Digital Storage
Free Local Access	✔			
Video Conferencing Service to Homes	✔		✔	✔
Voice Commands for Svc Transactions		✔	✔	
Keep all documents electronically	✔	✔	✔	✔

Technology possibilities can drive business change

Strategy & Architecture

Relationship between Strategy, Architecture, Programme and Project Management

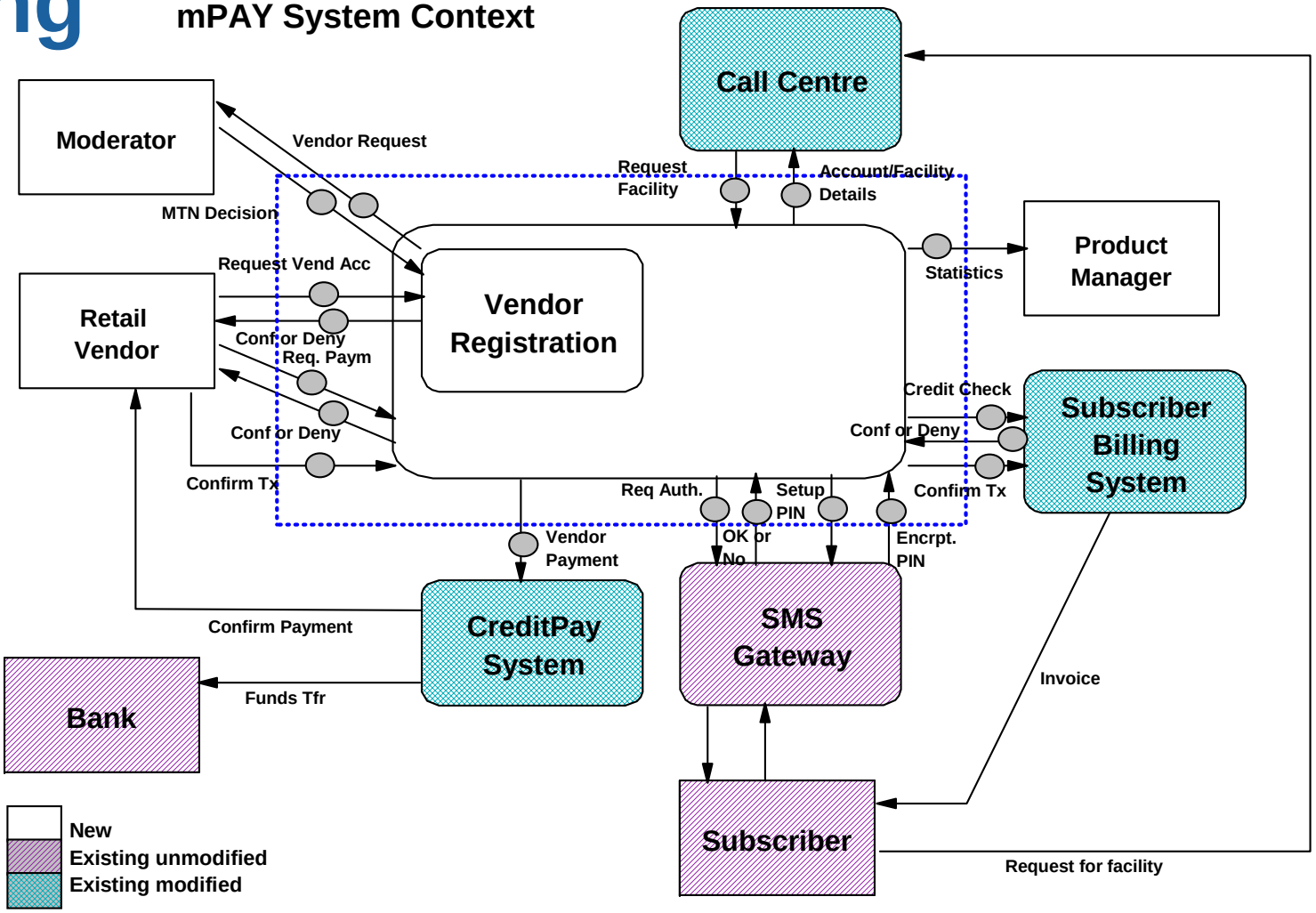


Delta Models

- Show net change between two scenarios/models
- Identify what an initiative must deliver to achieve the strategy
- Can address any dimension of the architecture:
  - Service
  - Process
  - System
  - Information
  - Technical Infrastructure…
- Provide accurate scope for projects
  - each change ~ work breakdown item
- Create communication between Strategists, Architects and Project Office

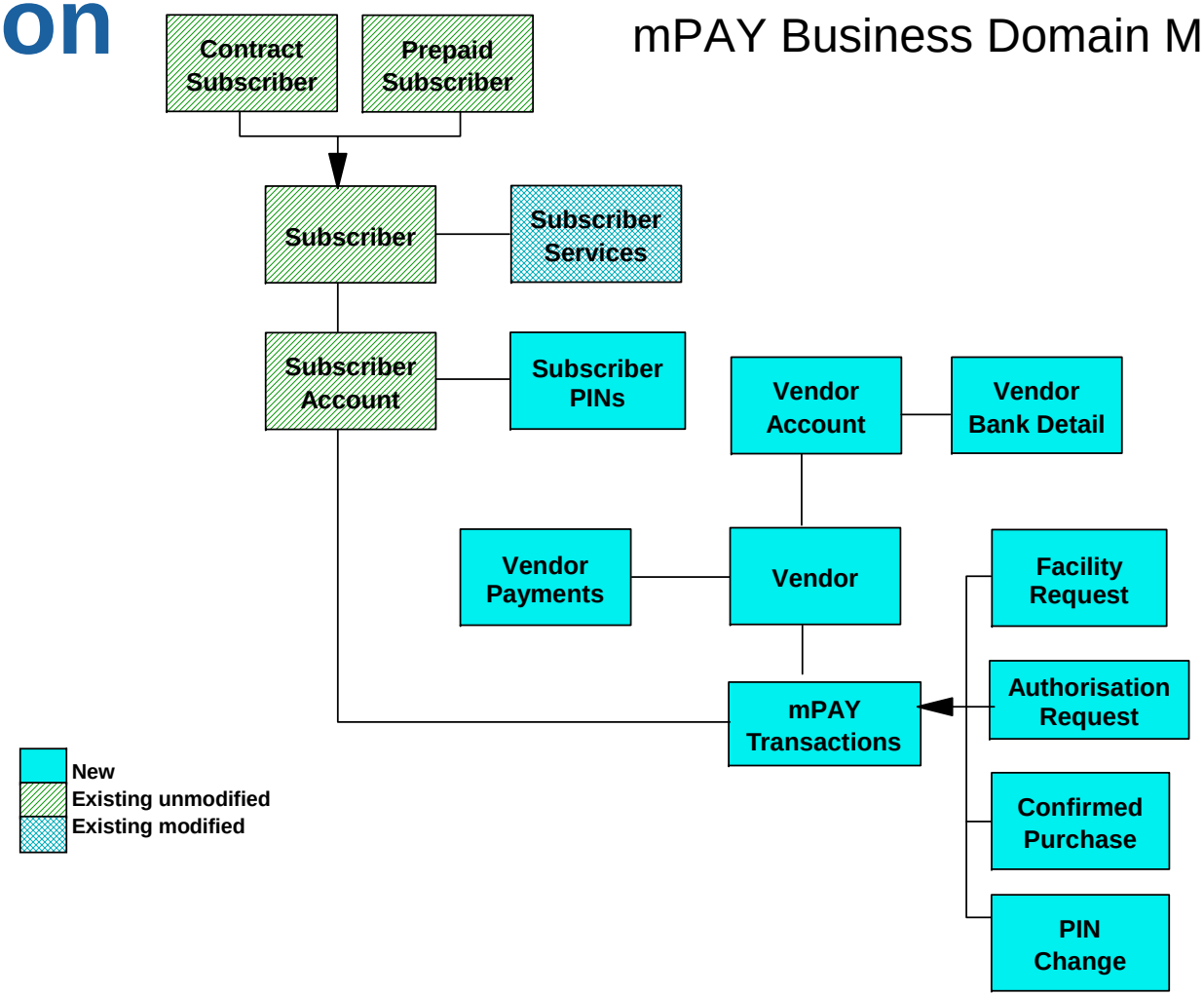
Scoping

mPAY System Context

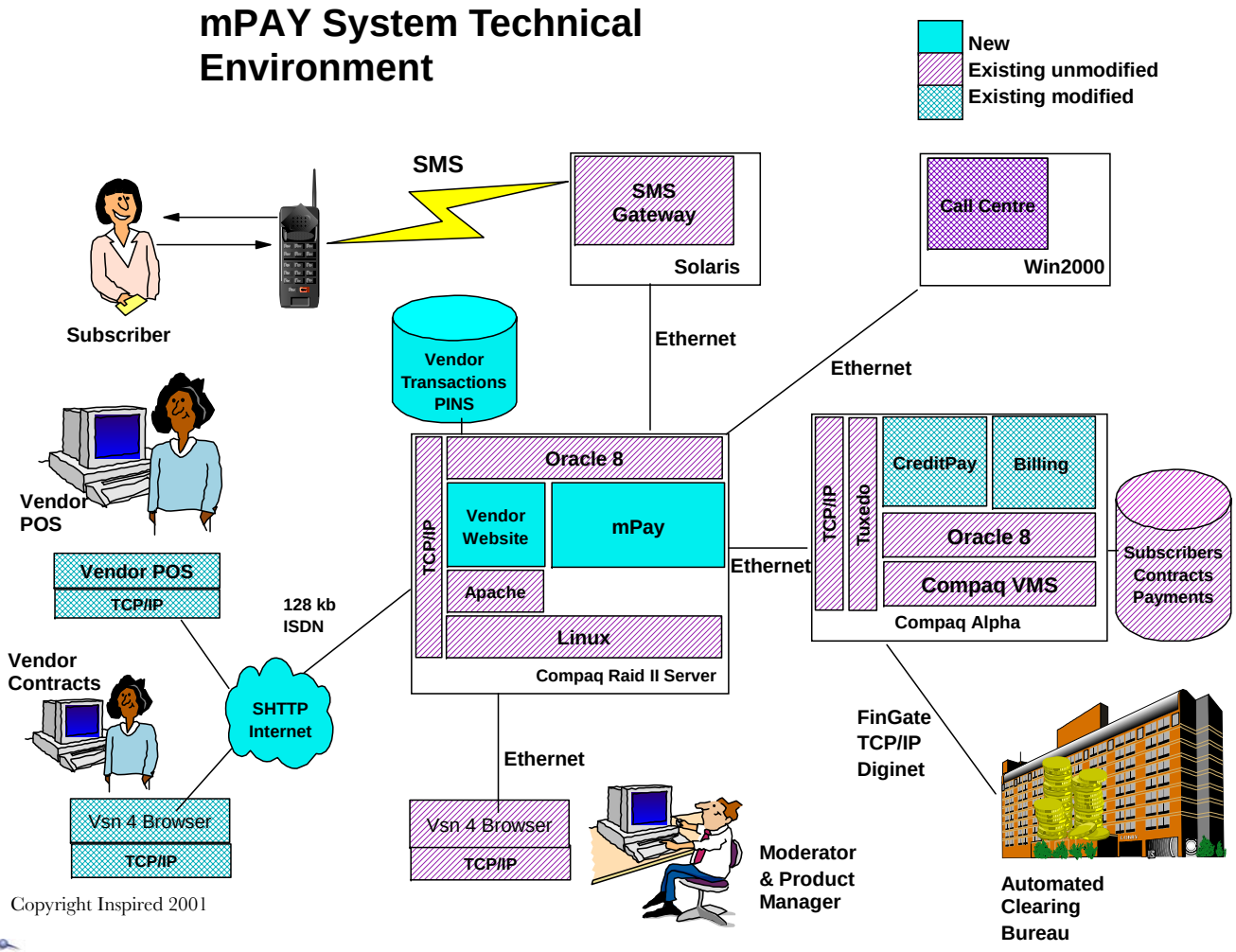


Information

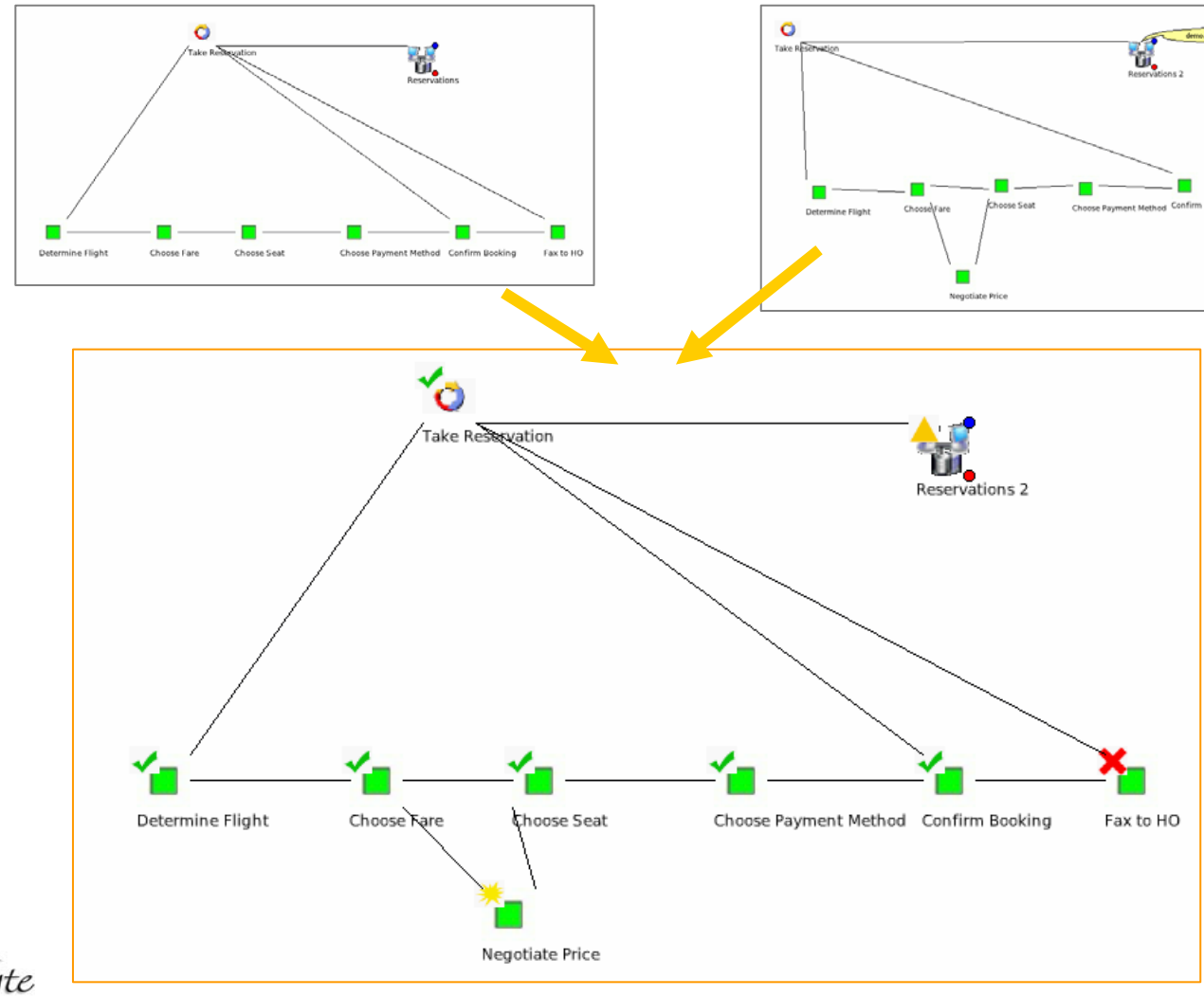
mPAY Business Domain Model



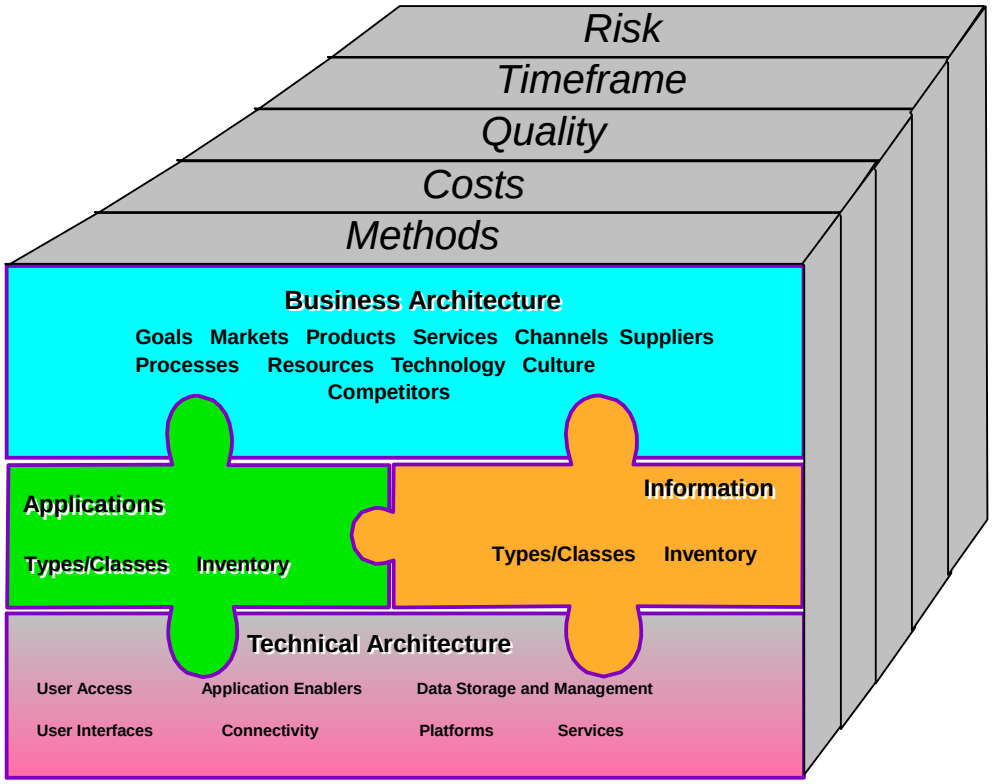
Technical Infrastructure



Process


Take Reservation
Reservations
Determine Flight
Choose Fare
Choose Seat
Choose Payment Method
Confirm Booking
Fax to HO
demoApplicationSystem: Reservations 2
Reservations 2
Negotiate Price

Adding Dimensions



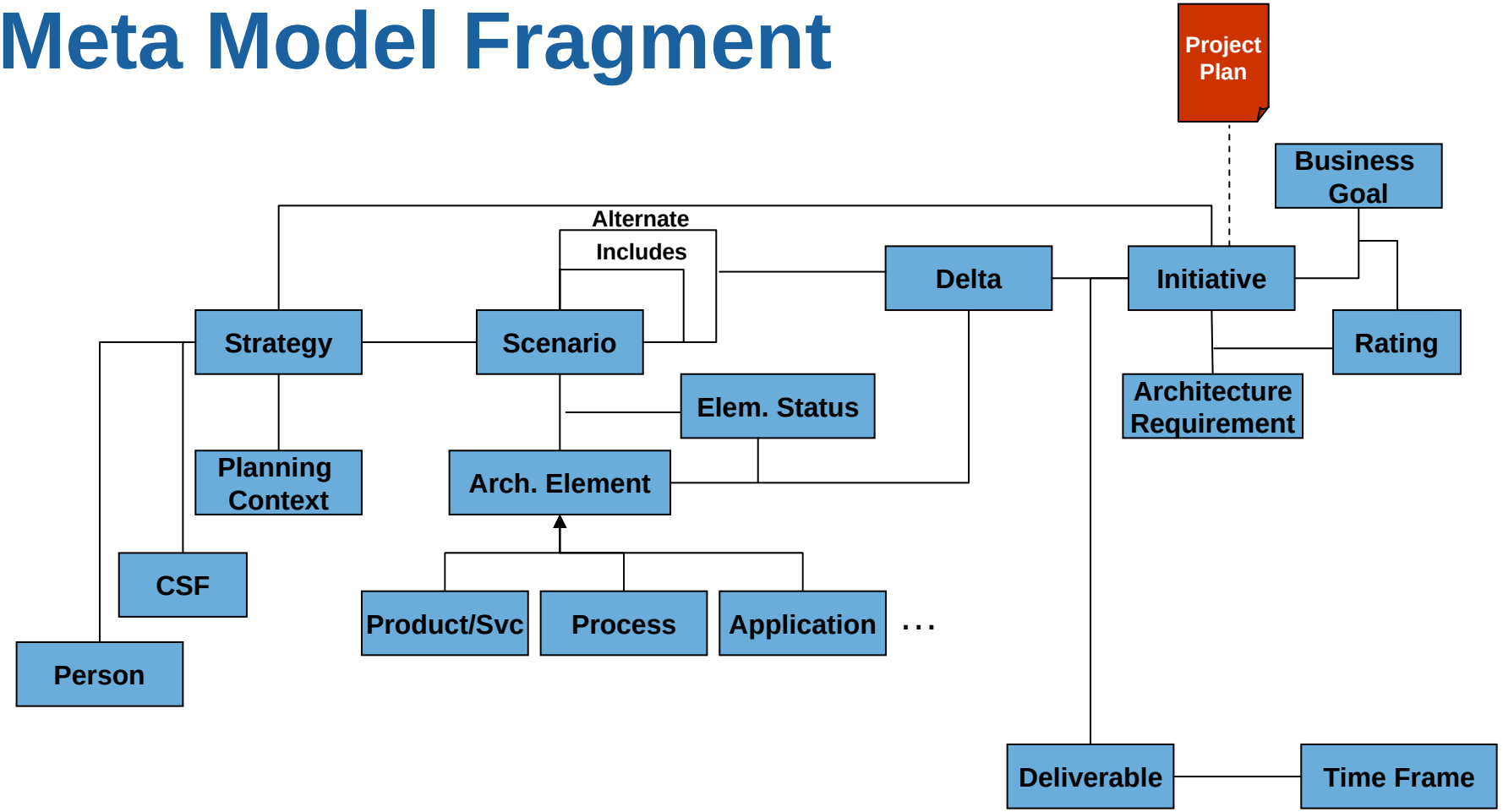
Models can be enhanced with additional dimensions of

- Methods (how we do things)
  - Deliverables, Process, Techniques, Resources
- Costs
- Quality & Metrics
- Timing
- Risk

The above can reflect both

- Current Position
- Benchmarks from Industry/ Competitors
- Goals

Meta Model Fragment



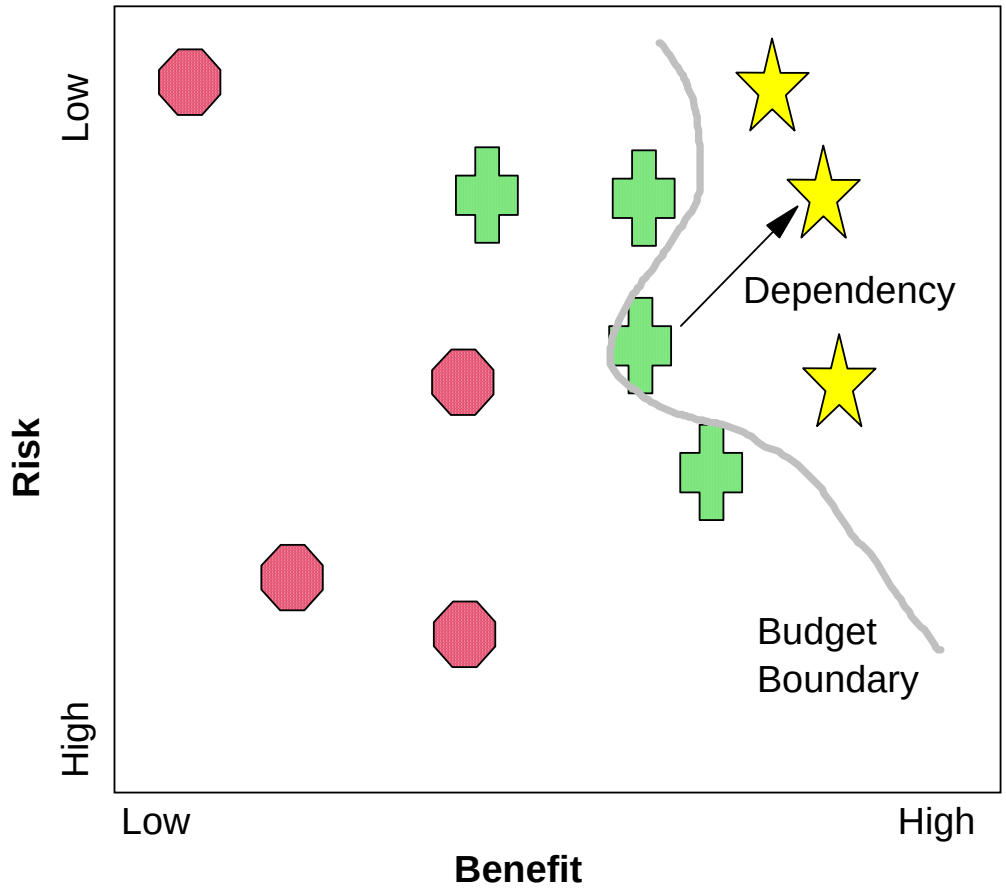
Excerpt from Inspired Enterprise Architecture Frameworks

Selecting Strategy

- **How to get there from here with**
  - **Least possible**
    - Risk
    - Disruption
    - Cost
    - Pain
    - Time
  - **Best Possible**
    - Strategic Fit
    - Compatibility
    - Flexibility

Portfolio Selection

- **Determine per proposed project**
  - **Time, Resource, Cost estimate**
  - **Benefit Ranking**
  - **Risk Score**
  - **Dependencies**
- **Map into decision space**
  - **Choose based on budget boundary**
  - **Include highest ranked, adding in prerequisites**

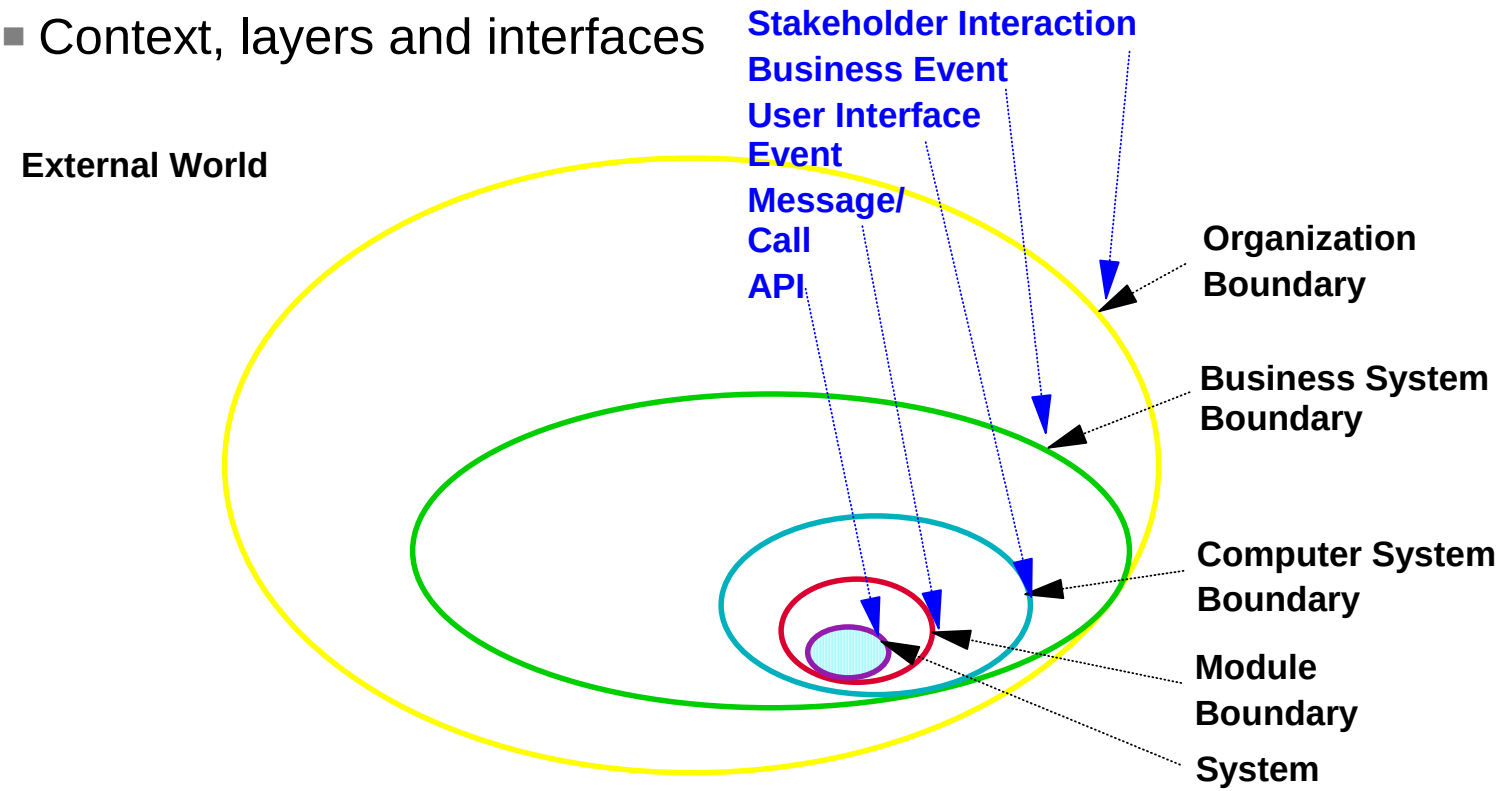


Important Issues

- External Focus
- Boundary of Organization
- Delivery of Expected “outputs”
- Required “inputs”
- Services, Processes & Support to Achieve
  - Distinguish “what” and “how”
- Manage logical and implementation distinction
  - Allow multiple alternatives for implementation

Services and "APIs"

- Context, layers and interfaces



Internal layers are not necessarily completely contained in an outer layer
e.g. A computer system may serve multiple business systems or a module may be part of more than one computer system.
If we choose, we can see a business process as a business system.

Business "APIs"

- **Published service interfaces**
  - **Like real APIs**
    - Collected into Protocols
    - Documented
    - Held Stable, unless change negotiated with users
  - **Implementation**
    - Via Web Services (for example)
    - Possibly with Business Process Automation (e.g. workflow, BPEL)
- **Facilitate**
  - **Rapid reconfiguration**
  - **Ease of outsourcing/partnering**

Tool Support Requirements

- **Flexible Meta Model**
- **Process Modeling**
- **Interoperability**
- **Scenarios, Filtering**
- **Collaboration Support**
- **Reporting, Document Composition**
- **Analysis and Derivation Capability**
  - **Inferencing**
  - **Computation**
- **Security and Audit Capability**

Case Studies

- **Telecommunications**
  - Assistance with implementation of realtime evolving strategy
- **Media Group**
  - Integration of Strategy, Architectures, Project Office
- **International Bank**
  - Integration of Architectures and Business Transformation Initiatives
  - International operations to own business service layer/client facing and legislative compliance processes
  - Central operation to own integrated data and transactional services
- **Major Assurer**
  - Integration of Architectures and Initiatives, Budget Process

Conclusion

- **Benefits of integration across strategy, architecture and programme management**
  - Architecture choices reflect business goals
  - Business enlightened to explore technical possibilities
  - Initiatives better scoped, understood, evaluated, prioritised
  - Enhanced communication and implementation via projects
- **Benefits of a service based, layered EA approach**
  - Business more responsive to opportunities or imperatives
  - Time to market and respond reduced
  - Risks reduced
- **Mechanisms**
  - Capable meta models, architecture process integrated with strategy, initiatives, project management
  - Supportive tooling
- **Futures**
  - Bridges to automated implementation with MDA and BPEL

References

- Inspired; Enterprise Architecture Frameworks
- Graham McLeod and Derek Smith; Managing Information Technology Projects 2nd Edition 2003
- Graham McLeod; Advanced Systems Delivery with Objects, Components, Patterns and Middleware (Beyond UML)
- IBM Webservices briefing papers
- Inspired; Archi Reference Materials
- Graham McLeod; EA Tool Requirements, Presentation to Open Group Conference, Dublin, May 2005
- Object Management Group; Model Driven Architectures documentation

THANK YOU

Questions?