Business Transformation
Utilizing Business Rule Technologies

Don Baisley
Peter Cunningham
Agenda.

- Objectives
- Who Are We
- Business Blueprints
- Process Case Study
  - Process Description for Check Truncation
  - Business Rule Taxonomy
  - Standardized Business Rule Capture
- Conclusions
- Q&A
Objectives

What you should take away:

- Change is a Constant. *Build to last because you build to change*
- Business Blueprinting Enables the Agile Corporation
  - Provides a Holistic View of the Corporation
  - Enables Digital Capture of Intellectual Assets
  - Provides Traceability from Business Strategy through to Technology Infrastructure
  - Industry Standard Components and Business Patterns
- Standardized Approach to Capture Business Rules

Benefits+: Beyond traditional benefits.

- Future-proof solutions
- Alignment between the Business and Technology Strategies
- Business Process Predictability and Traceability
  - Dynamic Cost and ROI Models linked to processes
- Separating the IP that represents the business from the code that executes it for rapid business reuse towards fast moving business opportunities
- Cost reduction through reusability and elimination of redundant processes
- Enhanced capabilities to respond faster to fast-moving opportunities and lower development & deployment costs
Who is Unisys

An exciting Technology sector story in the making...transformation to a services led, technology enabled company

**Unisys at a Glance**
- Global Business Solutions & Services Company
- 37,000 Employees Worldwide
- 3rd Largest US Patent Holder
- 5th Largest System Integrator Worldwide, 1st in Europe
- 6th Largest Consulting Firm
- Global presence... in more than 100 countries - $5.8 Billion
- Outsourcing Leader – 9000 employees, 20 centers

**Our Customers**
- 88% of top 25 world banks
- 50% of the world’s insurers
- NASDAQ Powered By Unisys
- 100+ Telecom Carriers in 40 Countries, 9 of top 10 Telcos
- 200 airlines (18 of top 25)
- 1500 government agencies
- More than 200 newspapers

**Our Solutions**
- Process 50% of world’s checks
- Process 250 million income tax returns
- Process 80+ million payments monthly (30+ M for Telco’s alone SBC, BellSouth, Comcast, Qwest, etc.)
- Deliver Physical and Network Security at 450 US airports Process 1 Billion calls daily
Our Clients Face Uncertainty in Their Business Environment …

Capitalization Issues
• Economic Downturn
• Bad Loans
• Bad Investments Payouts

Competition Issues
• Liberalization
• Foreign Entrants, etc.

Regulatory Issues
• Patriot Act
• Anti-Money Laundering
• Check 21

Pressure On:
• Cost Base
• Risk Profile
• Asset Allocation
• Geographic Focus

Business Model And Structure
(Excessive M&A Activity in mid 1990)

Consolidation
Legacy Migration
Out Sourcing…

Industry Events
Payment Processing

Sarbanes – Oxley Baseline Accord Implementation

Credit Risk
Operational Risk
Loan Securitization Risk

Capital adequacy + Corporate governance

Operation Cost
(level of flexibility in the cost base)

Technology Imperatives

Industry Infrastructure
Imagine a truly responsive organization...

Agile enough to respond to a new opportunity with simultaneous shifts to the business architecture – *business model, process models, technology architecture* – to get to market faster than any competitor.

- Reduce Cost by Eliminating Processing, Application & Infrastructure Redundancy
- Reduce Business Process “Cycle Times” For Competitive Advantage
- Increase Agility by Assessing Impacts and Reacting more quickly to Change
Business Blueprints:
Built to Last Because They are Built to Change…

Business BLUEPRINTS consists of:

- Tools, methods and libraries of organizational 
patterns, business process components and 
technology implementation options …
- That allow a client to build or modify business 
processes quickly and predictably… based on the 
pre-population of domain specific business 
processes & assets…
- Bringing the concept of blueprinting to the arena of 
high-volume, mission-critical systems.

Business BLUEPRINTING is the process of:

- Adhering to a rigorous discipline of crafting 
specific business solutions…
- Resulting in domain or solution-specific models 
(business & technology) that enhance the classic 
‘better, faster, cheaper’ benefits BECAUSE of the 
discipline to include those of being ‘reusable, agile 
and traceable’.

What do you end up with?
- A Completely Electronic, Extensible, Traceable 
& Deployable Models
- Intellectual Property Separated from System Implementation
Business Blueprints: An Integrated Approach

Integrates Business Modeling, Service Oriented Architecture, & Web Services

- **Business Vision & Operations Model**
  Characterization of business domain – including business objectives, structure, organizational measures, and competitive framework.

- **Business Rules & Process Model**
  Characterization of the operational requirements and key business processes. Translating them into reusable Business Patterns.

- **Functional / Application Model**
  Key Business functions implemented as a set of architectural models (UML) representing core business services.

- **Infrastructure Model**
  Characterization of the deployment services and technologies to realize the business objectives. Key Functional Services (Web Services) that are provided to all applications in the organization (Security, Network, Application Server, Data Services, Integration Services, Administration).
What’s Unique about Business Blueprints?

➢ Separation of IP from Underlying Technology:
  • The separation is the source of agility and leverage through control of your IP
  • Discipline to manage unstructured documents

➢ Interactive IP:
  • The Blueprint captures intellectual capital – Unisys and client – in an industry standard, visually modeled form which is electronically traceable from top to bottom

➢ Traceability:
  • Business-Pattern -Traceability from business model through deployment implementation

➢ Integrated Cost Model:
  • Sensitivity Analysis on Blueprint changes can be linked and driven from any level

➢ Service Oriented Architecture:
  • Allows Stateless Business calls of a variety of components
... And We Do all This Through Enabling Open Standards, Methods, and Industry Standard Tools.

The Business Blueprint program has created an integrated tooling environment that supports end-to-end traceability, ROI analysis, as well as MDA capabilities.

**Modeling & Development Track**

- **Enterprise & Business Modeling (BPEL)**
  - Proforma
  - Reqs. Modeler
- **Application Modeling & IDE (LINC & UML)**
  - Rational
  - Reqs. Modeler
- **MDA Code Generation & Testing (MDA)**
  - ArcStyler
  - Reqs. Modeler
- **IDE & Integration**
  - Jupiter
  - WebSphere
  - WebLogic
- **Deployment & Operations**
  - Jupiter
  - WebSphere
  - WebLogic
  - Sentinel

**ROI, Cost, & Impact Analysis Track**

- **Proforma**
  - Business Process Simulation
- **Cost Xpert**
  - Cost & Schedule Estimation
- **Business activity Monitoring (BAM) & System Monitoring**
Case Study: Check Processing

- Processes are written from a business perspective (not a detailed programming perspective)
- Each business rule is independent of process and can guide processes at multiple points
- Rules are subject to regulatory and competitive forces
- Automated tools can link rules into process
The Old Paradigm

1. Regulatory or Market Driven Changes
2. Business Requests Changes - BRD
3. JAD Session
4. System Requirements Document
5. Requirements Sign-off
6. Design and Code
7. Test

The New Paradigm

1. Regulatory or Market Driven Changes
2. Business Requests Changes - BRD
3. Define Process and Change/Add Rules
4. Test

- Components are Commodity
- Services Based Architecture
- Business Rules isolated from Commodity Code
- Business Units generate infrastructure from Process Definition
Business Rule Taxonomy

Business Rule: A bank manager may provide what overdraw limit is on a given checking account if the checking account is with a bank managed by the bank manager

Vocabulary

• Terms - bank manager, overdraw limit, checking account, bank

• Functional Forms of Sentences and other kinds of Expressions
  - <Business Actor> may provide <Interrogative>
  - <overdraw limit> is on <account>
  - <account> is with <bank>
  - <bank> managed by <bank manager>

• Linguistic symbols
  - “A” – Indefinite Article – a Universal or Existential Quantifier depending on Context
  - “what” – Interrogative Operator
  - “a given” – Parametric Operator
  - “if” – Logical Connective
  - “the” – Definite Article – a Pronominal Operator
A bank manager may provide what overdraw limit is on a given checking account if the checking account is with a bank managed by the bank manager.

A bank manager may provide <interrogative>  

what overdraw limit is on a given checking account  

the checking account is with a <bank>  

bank managed by the bank manager
Business Rules from case study

Store paper: Part of Capture process

Receive Request for Check: The check must be provided back to the paying institution within three days of receiving a request following a customer service enquiry

- *It is required that* a [check request](#) for a posted check is satisfied on a date at most 3 days past the date of the check request if the check request is prompted by a customer service inquiry at the paying institution of the posted check

Retention Period: The paper check shall be retained and readily available at the collecting imaging bank for a period of 60 days.

- *Given that* a [paper check](#) is collected at a collecting imaging bank, *it is required that* the paper check is available at that collecting imaging bank if the collection date of the paper check plus 60 days is not passed.
Conclusions

- **Business Blueprinting together with a Common Business Rule Information Model Enables Separation of Intellectual Assets (Business Rules) from the Process model and Underlying Code that Executes it**
  - Business Processes described at a Business Person’s perspective
  - Helps Manage the Complexity of the Enterprise

- **Common Business Rules Information Model can generate Databases and Service Components that Automate Business Functions**
  - IT Infrastructure Agility and Responsiveness

- **Business Rules and Business Blueprints allows Future-proofing of your Enterprise**

- **Business Blueprinting Creates a Tighter Alignment Between Business and Technology Architecture**
  - Business Process Predictability and Traceability
  - Cost reduction through reuse and elimination of redundancy

- **Business Blueprints is enabled through a seamless toolset**
  - Unisys is working with the OMG to Standardize Business Rules and Common Information Models