

# UBL Forum

## November 2006

### SINGAPORE

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An Industry Partnership Supported by  
SPRING Singapore & IDA Singapore



# Opening Address

*Mr Kamarudin bin Tambi*  
*CrimsonLogic Pte Ltd*

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# UBL Introduction

*Mr Ken Holman*

*Co-chair, UBL Human Interface SubCommittee  
Chair, OASIS Code List Representation TC*

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# UBL and the Danish OIO Project

*Mr Tim McGrath  
Vice-Chair, UBL TC*

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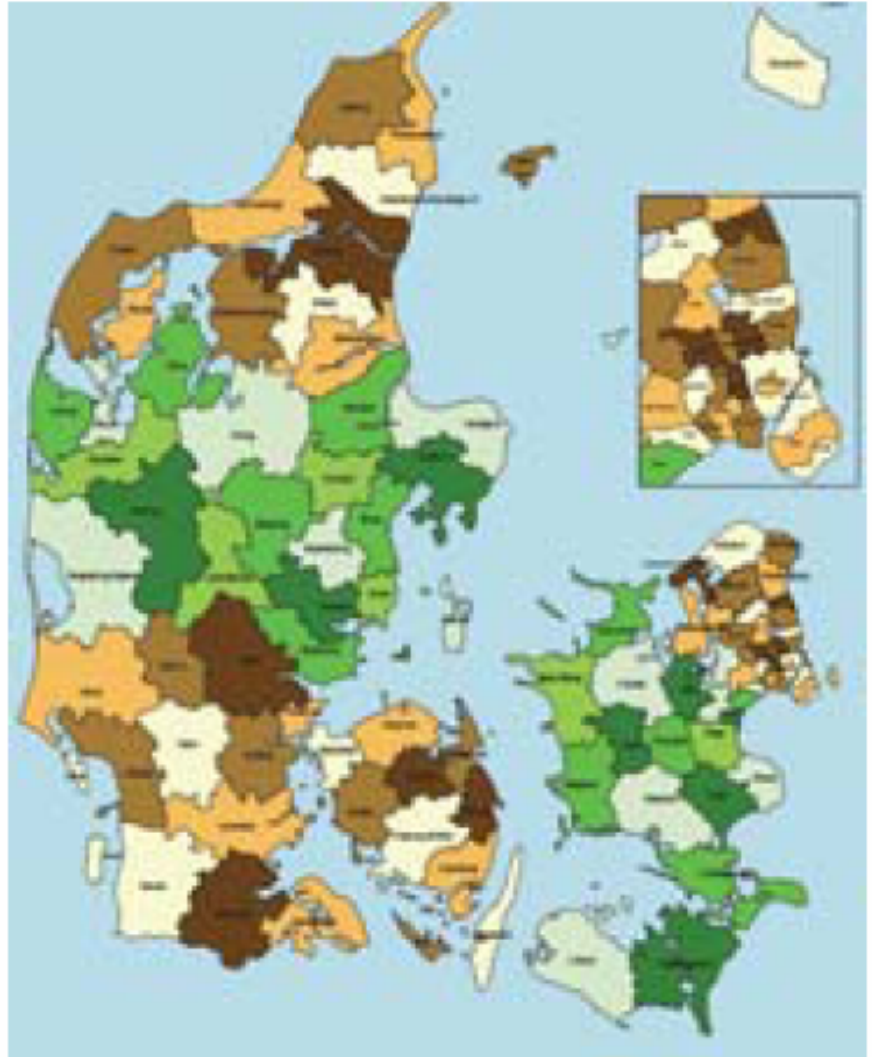
# The Danish Public Sector

Today

- 19 Ministries
- 14 Counties
- ~271 Municipalities
- ~950.000 employees

Structural reform from  
January 1<sup>st</sup> 2007

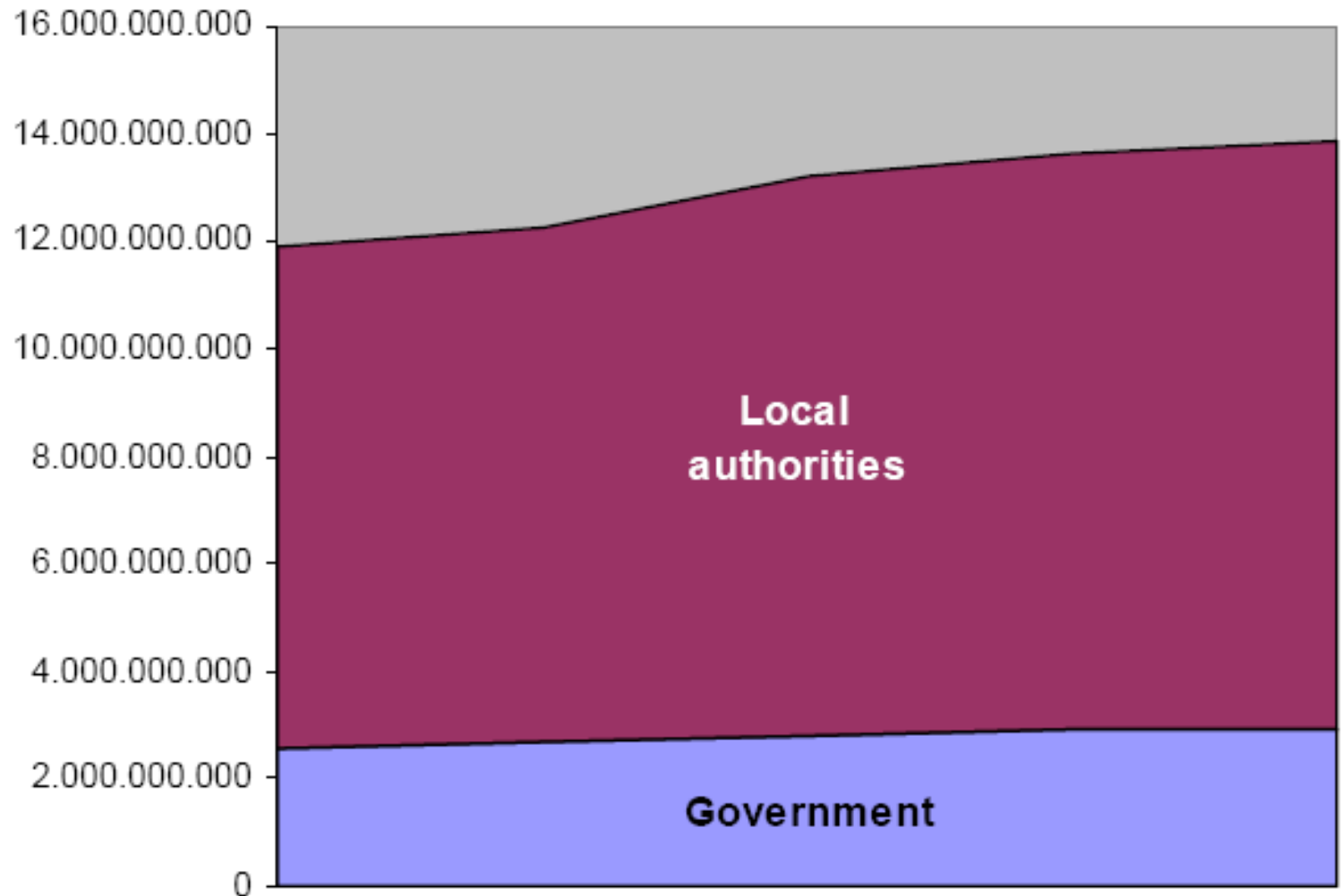
- 5 Regions
- 98 Municipalities



# Key players in public E-procurement

- **Ministry of Finance**
  - Budgets
  - Policy
- **Agency for Governmental Management**
  - Legislation
  - Guidelines
  - Implementation
- **Ministry of Science**
  - XML-schemas
  - Digital Signature
- **National Procurement (SKI)**
  - Framework agreements
- **Gatetrade et al.**
  - Suppliers of IT-solutions for E-commerce

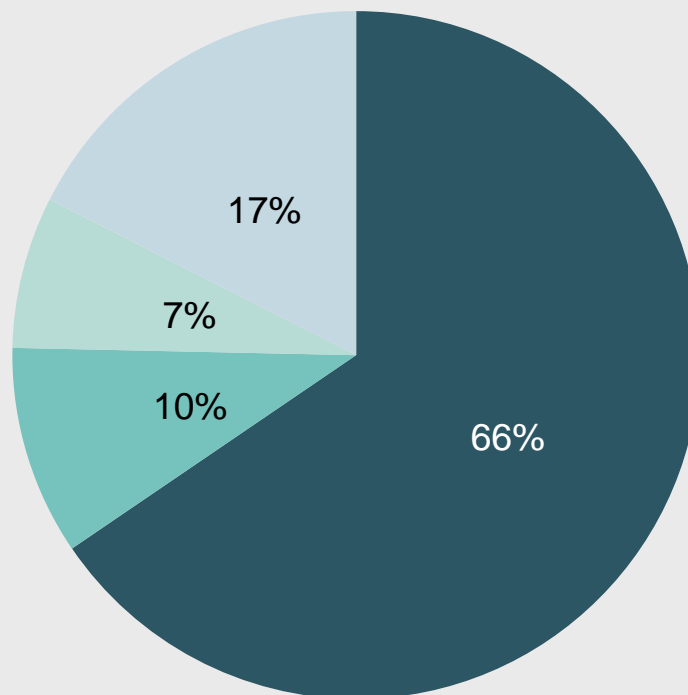
# Public procurement 2000 – 2004 (€)





# The biggest volume is in the private sector

Invoices - by sector



191 million  
invoices  
and orders are  
exchanged in  
companies with  
10-99  
employees

■ B2B

■ B2B foreign

■ B2G

■ B2C

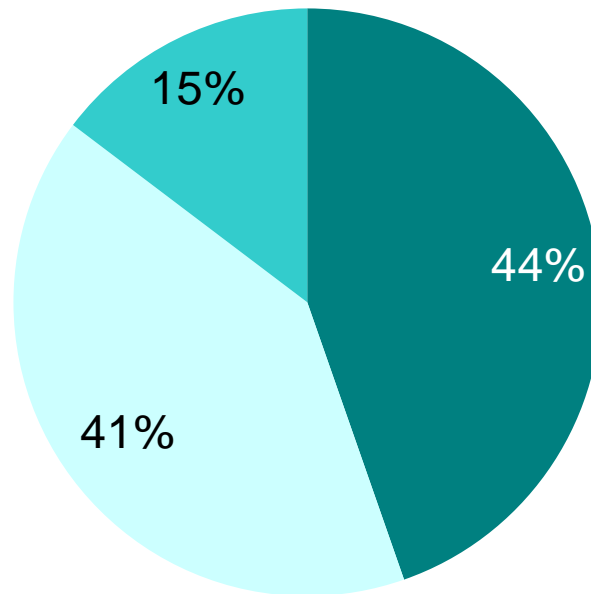
Source: "Analyse af besparelses- og innovationspotentiale ved digitalisering af forretningsprocesser" udarbejdet af KPMG, december 2005.



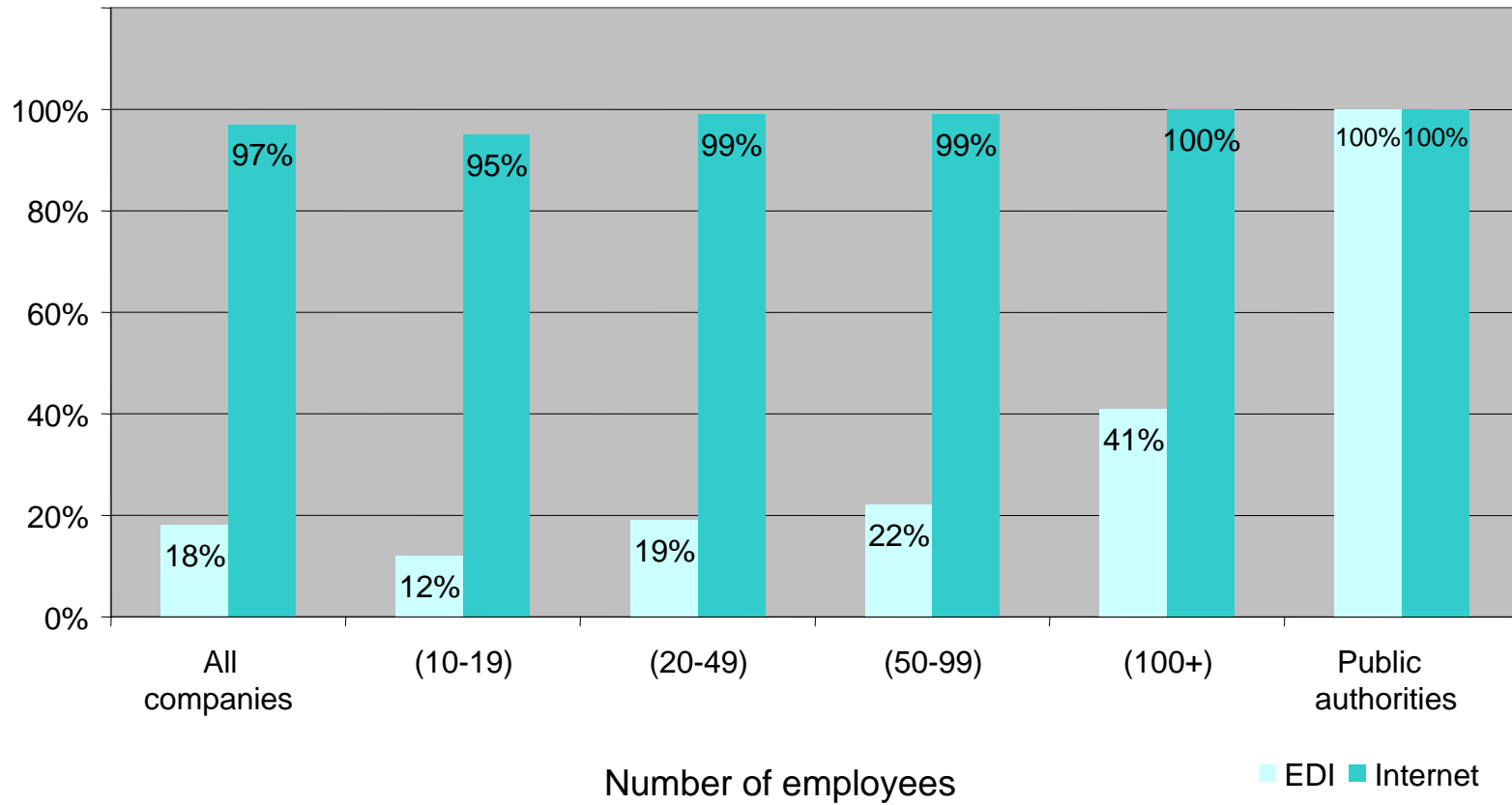
# But why are the SME's important?

(it's about lowering the barriers for participation, not ignoring the SME's)

Distribution of transaction volume for companies between 10 and 99 employees. (Total volume is 191 million orders and invoices)



# EDI is a substantial barrier



# Vision for e-government 2010

- 50% of all Danish companies are doing full electronic business
- 90% of all Danish companies, citizens and public authorities have a digital signature certificate
- That the public sector organizations follow Enterprise Architecture principles and become service enabled (SOA)
- That we have ONE citizens portal drawing on all the different service offerings across the public sector
- That the public sector play an offensive and innovative role in shaping SOA enablement both in the private as well as the public sector
- Enable competition on services rather than infrastructure, formats or vendor lock-in



# The Strategy

- Legal:
  - An umbrella agreements for multilateral exchange of e-business documents, only requirement is a Digital Signature.
  - Standardized service level agreements for e-business. Differentiated requirements for SME's and larger companies.
  - Using the Digital Signature to secure and sign business messages adding to the trust.
- Complexity:
  - A new national e-business registry, which allows all Danish companies and institutions to register simple e-business services and endpoints with their company ID.
- Cost:
  - Open source components makes it possible for anyone to get started just using a digital signature.
- Technical:
  - New open standards create a common open national service oriented infrastructure for business transactions, build around recognized international web service standards.

# The case: Danish e-invoicing law

- All invoices to the public sector sent electronically
  - If not the authority can refuse payment
- 18 million invoices exchanged each year
  - Estimate saving of €7 in handling cost per transaction
- 440.000 companies affected
  - Scanning agencies handle the conversion of paper invoices
  - Both the private and the public sector will benefit from the initiative
- This is the first step
  - Once the invoice is digital, the upstream process can be optimized (ie. procurement and tendering)
- UBL is the underlying standard

*Total estimated savings in public sector 120 million € per year.*

# Impact on Public and Private Sector

- Each public institution must be connected to a VANS supplier
  - Other Networks can be used if both parties agree
- Each public institution must be able to receive and read OIOXML
  - Other formats can be used if both parties agree
- The invoices must be electronic on **arrival**
- Vendors can choose
  - Full integration
  - Invoice portals
  - Central scanning bureaus



# Initial Results

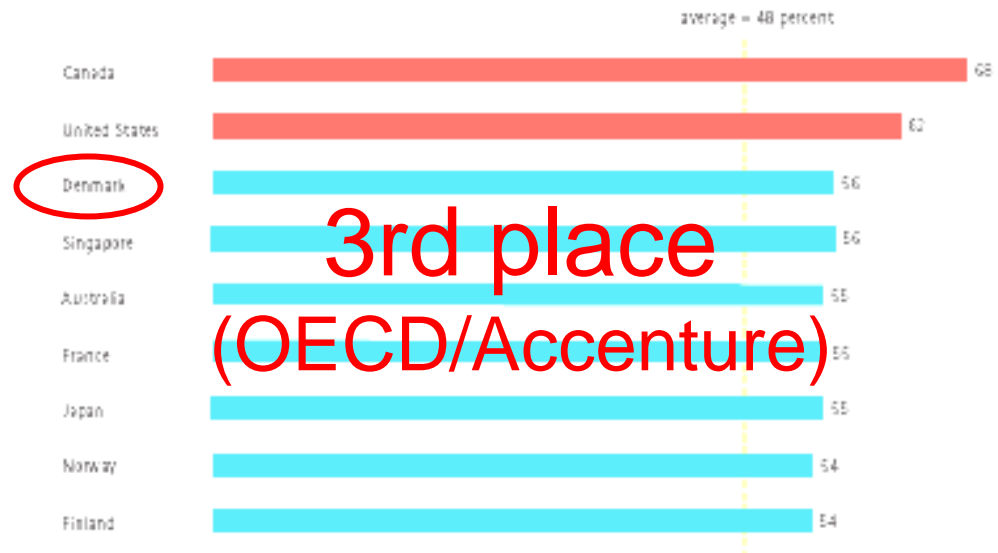
- Slow start with 400.000 invoices in february (approx. 30% of the potential volume)
- A lot of negativity from the industry and public authorities because of the very tight schedule
- Many invoices were not paid on time
- Special requirements identified
  - Utilities
  - 3rd party involvement

# eGovernment in Denmark – today

2006 e-readiness rank (of 68)	2005 rank	Country	2006 e-readiness score (of 10)*	2005 score
1	1	Denmark	9.00	8.74
2	2	US	8.88	8.73
3	4	Switzerland	8.81	8.62
4	3	Sweden	8.76	8.64
5	5	UK	8.64	8.54
6	8	Netherlands	8.60	8.28
7	6	Finland	8.56	8.32
8	10	Australia	8.50	8.22
9	12	Canada	8.37	8.03
10	6	Hong Kong	8.36	8.32
11	9	Norway	8.35	8.27
12	12	Germany	8.34	8.03
13	11	Singapore	8.24	8.18
14 (tie)	16	N. Zealand	8.19	7.82
14 (tie)	14	Austria	8.19	8.01
16	15	Ireland	8.09	7.98
17	17	Belgium	7.99	7.71
18	18	South Korea	7.90	7.66
19	19	France	7.86	7.61
20	--	Bermuda*	7.81	--
21	21	Japan	7.77	7.42

1st place  
(The Economist)

Figure 1: 2005 overall maturity scores



3rd place  
(OECD/Accenture)

Table 3.1

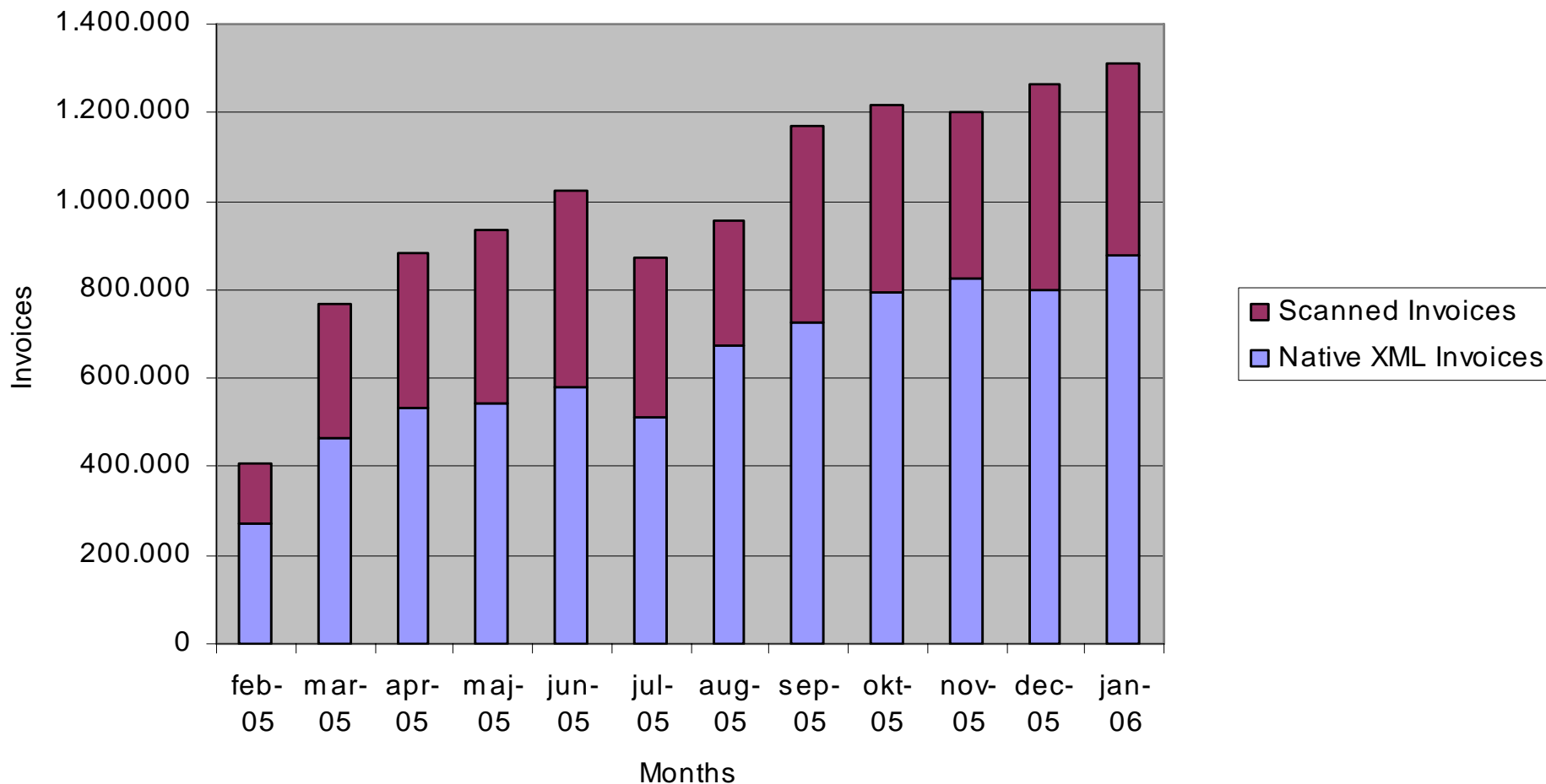
E-Government Readiness Rankings 2004: top 25 countries

Rank	Country	E-Government Readiness Index
1	United States	0.9132
2	Denmark	0.9047
3	United Kingdom	0.8852
4	Sweden	0.8741
5	Republic of Korea	0.8575
6	Australia	0.8377
7	Canada	0.8369

2nd place  
(UN)

# Full digitalization – a challenge

Electronic Invoices to the Public sector in Denmark



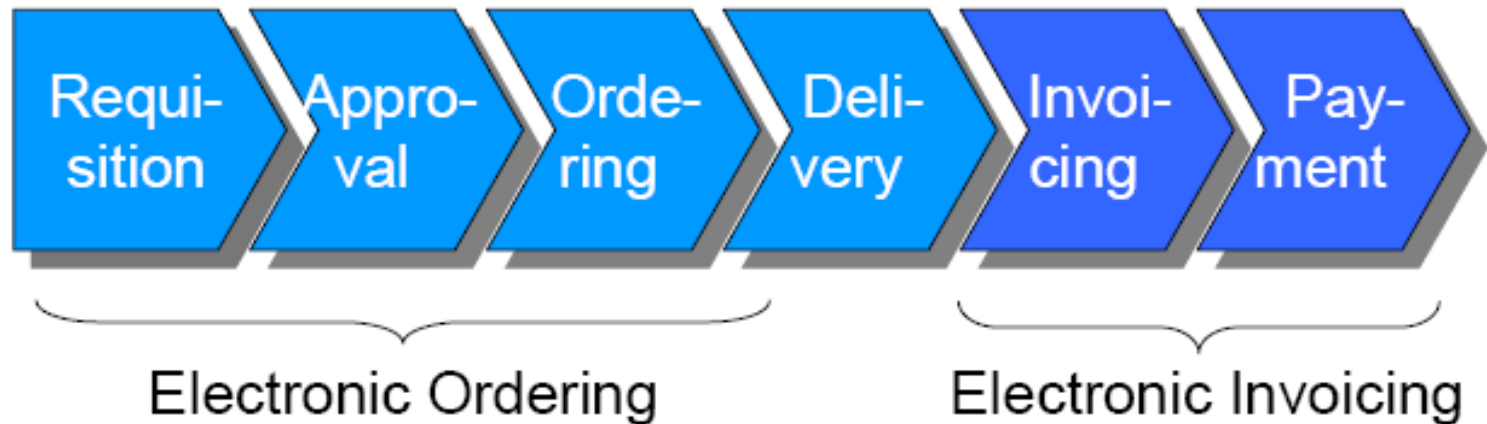


# Lessons Learned

- Focus on infrastructure
- Continuous improvement and support
- The keyword is “information” to all parties of interests
- The process of information should have been initiated earlier in the project (as always)
- Don’t forget the people – change management is essential
- Electronic invoicing is “only” one step on the road to efficient public procurement

# Next Steps

- Only about 30% of the governmental institutions have completely digitized the invoicing process
- E-ordering – digitizing the full procurement process

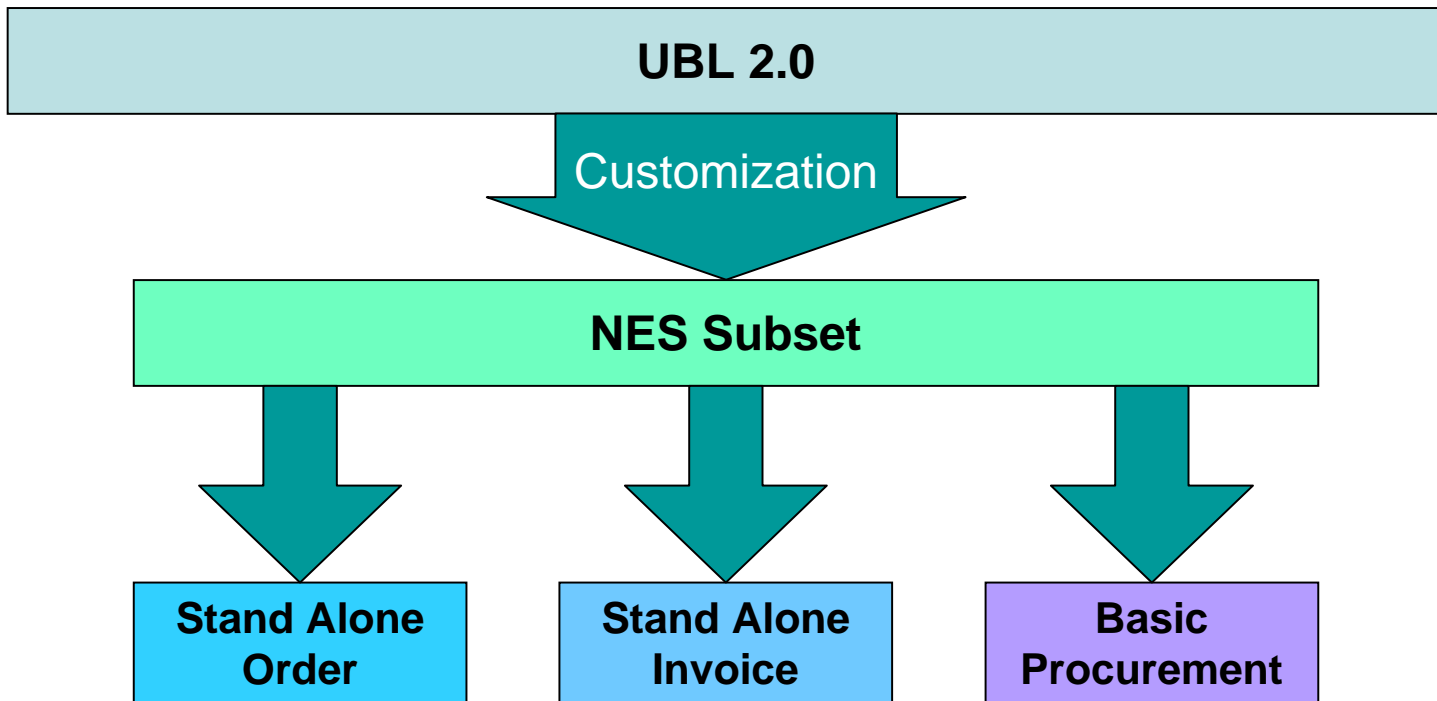


- **To digitize 191 million documents using OIUBL**

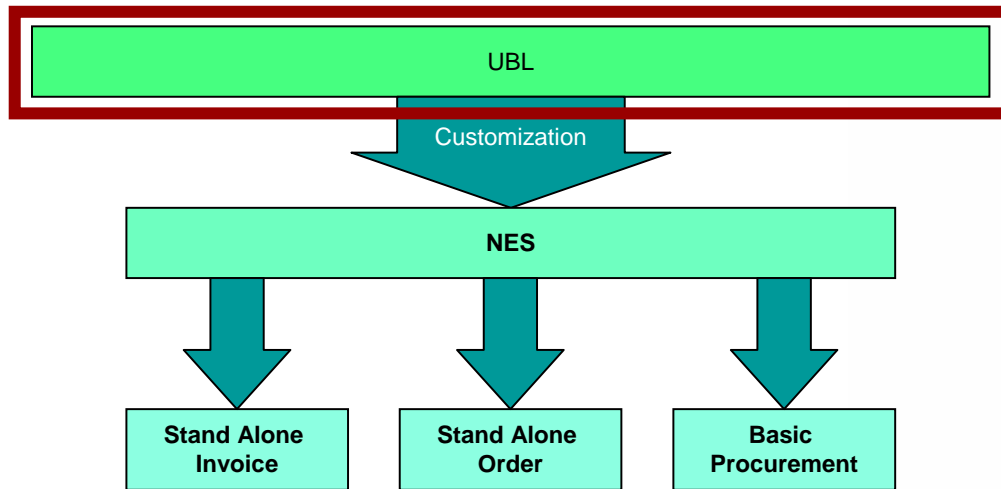
# North European Subset (NES)

- NES is a collaboration between Denmark, Sweden, Norway, Finland, Iceland and the UK.
- NES describes business rules for a number of simple profiles.

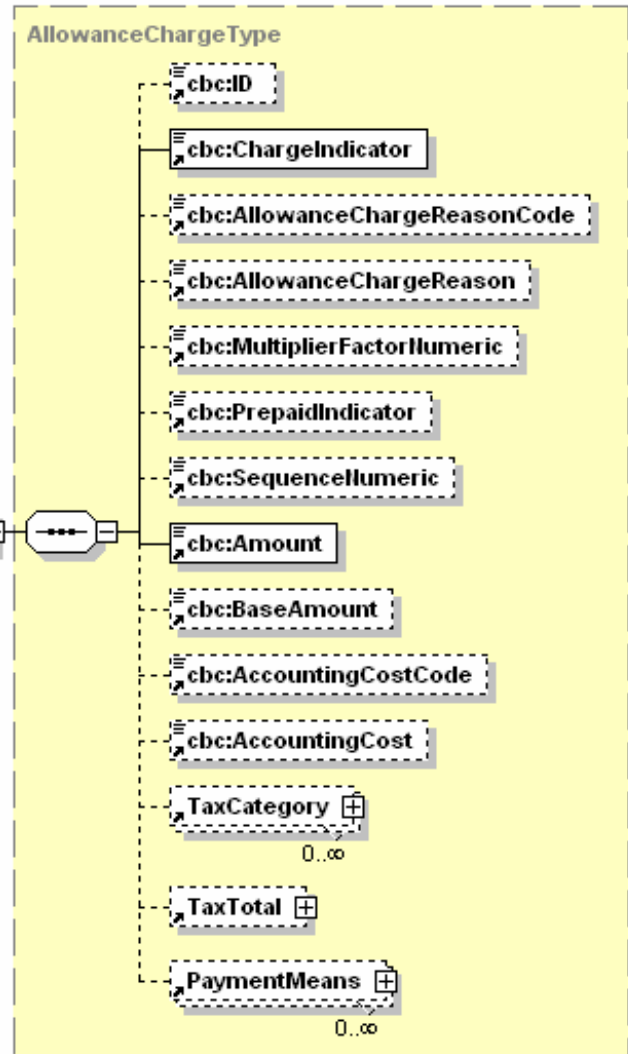
# UBL North European Subset



# UBL North European Subset

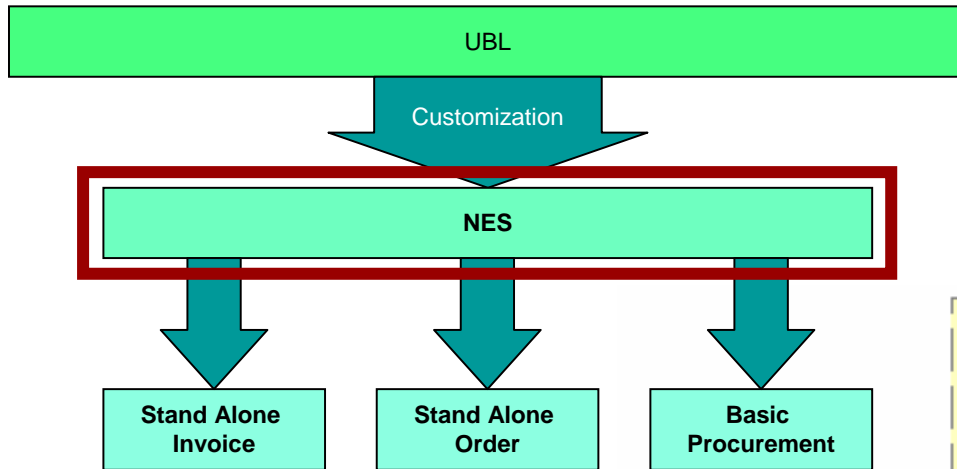


AllowanceCharge

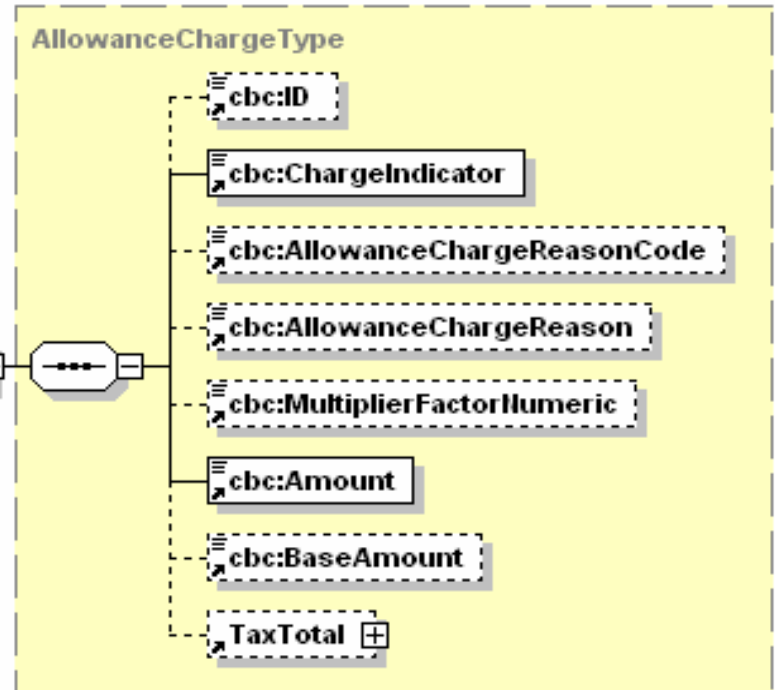




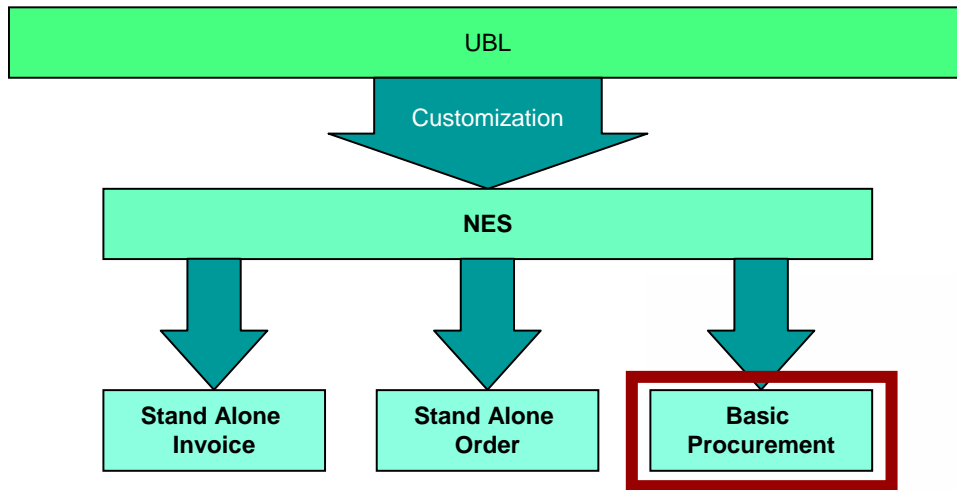
# UBL North European Subset



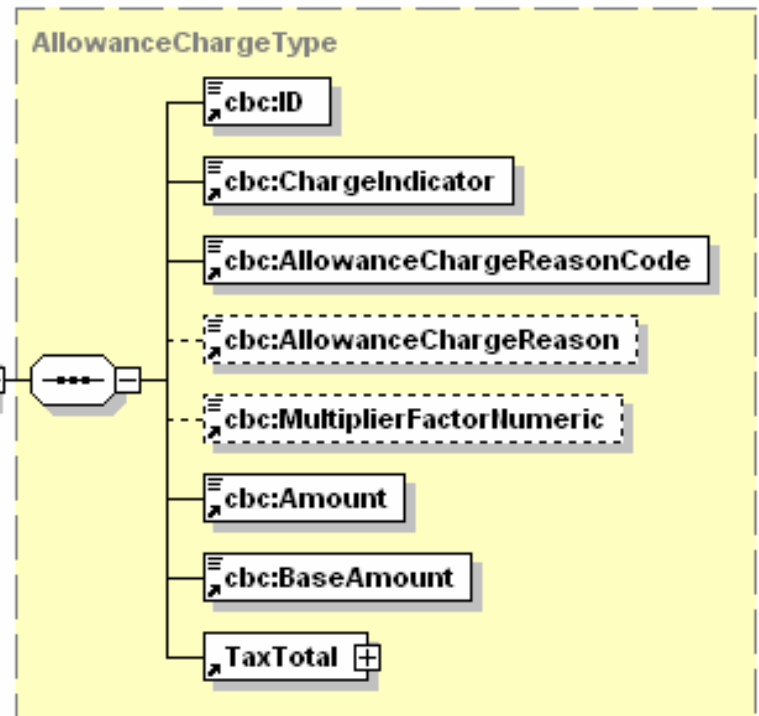
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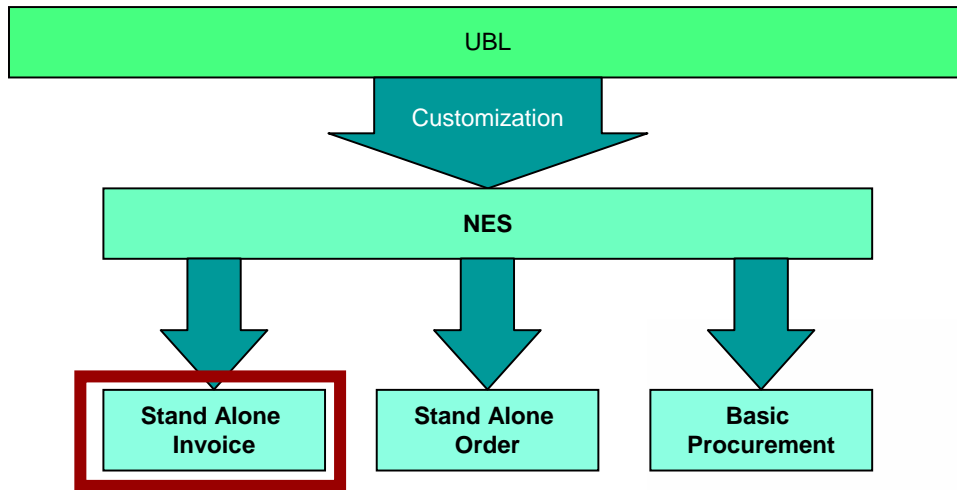
# UBL North European Subset



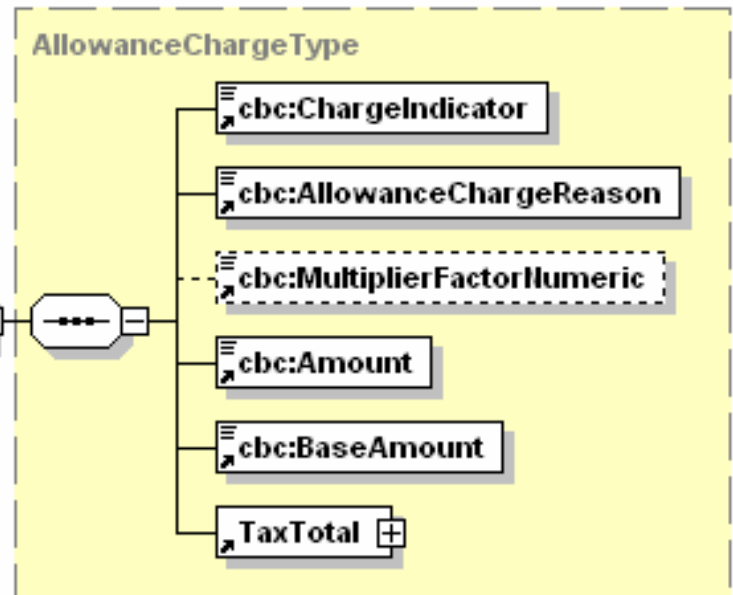
AllowanceCharge



# UBL North European Subset



AllowanceCharge



# Using UBL for the US DOT EFM Project

*Mr Andy Schoka*  
*Consultant, US Department of Transport*  
*Electronic Freight Manifest Project*

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# What is the Electronic Freight Management (EFM) Initiative?

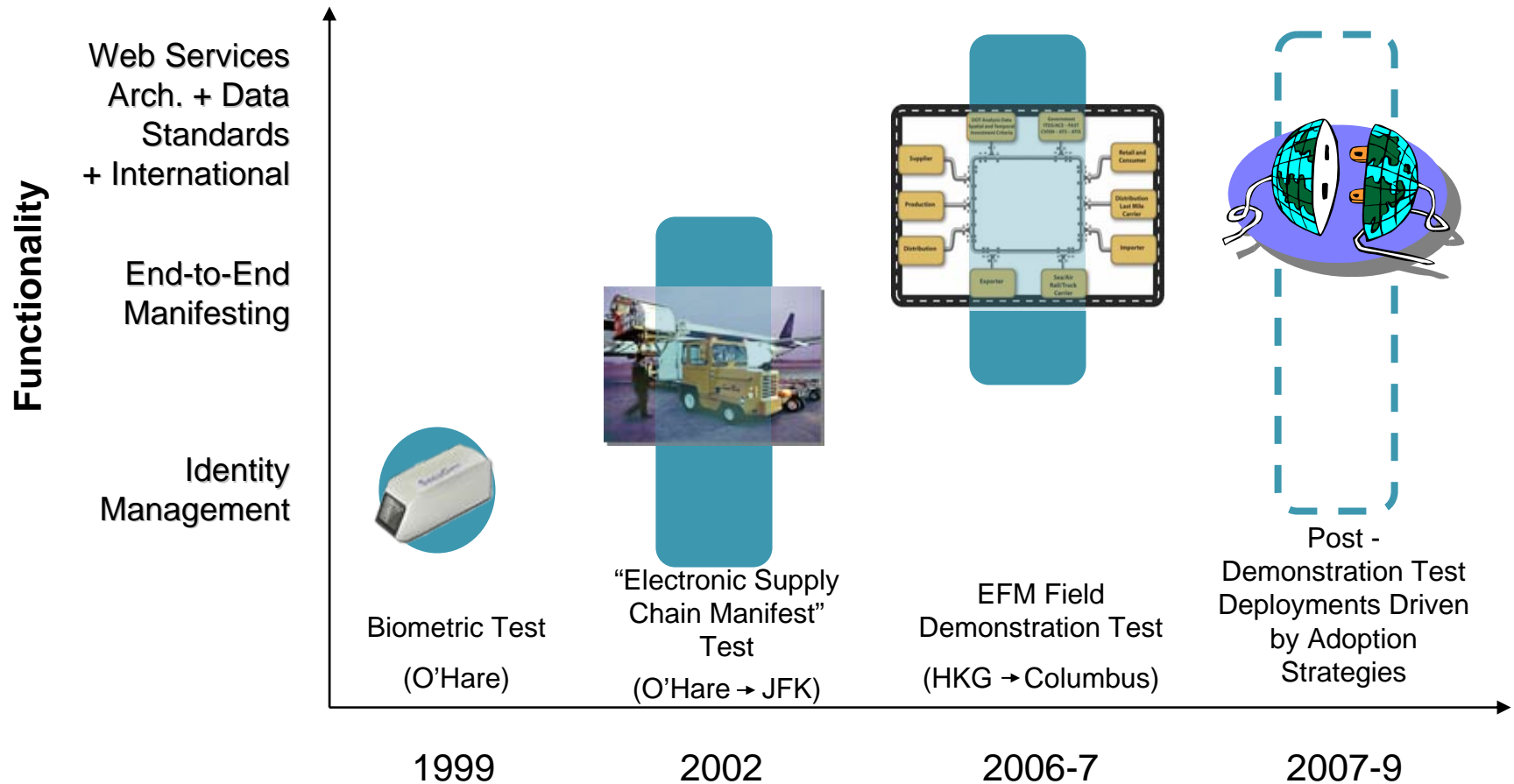
- ▶ **EFM** is a USDOT R&D program that promotes and evaluates innovative e-business concepts, enabling process coordination and information sharing for supply chain freight partners through public-private collaboration.
- ▶ **EFM envisions** an integrated family of processes and technology aimed at the standardized sharing of electronic information among all supply chain partners that promotes the effective use of transportation resources and the efficient movement of goods on the transportation network.



## Several definitions are needed to understand the relationship among different pieces of EFM.

- ▶ **The Freight Information Highway (FIH)** is an innovative, non-proprietary standards-based architectural specification that defines a service-oriented architecture to support business process coordination and secure real-time data exchange.
- ▶ **The Columbus Electronic Freight Management (CEFM) project** is a deployment test within the EFM program which implements all the components of the FIH necessary to support a select Limited Brands international truck-air-truck supply chain.

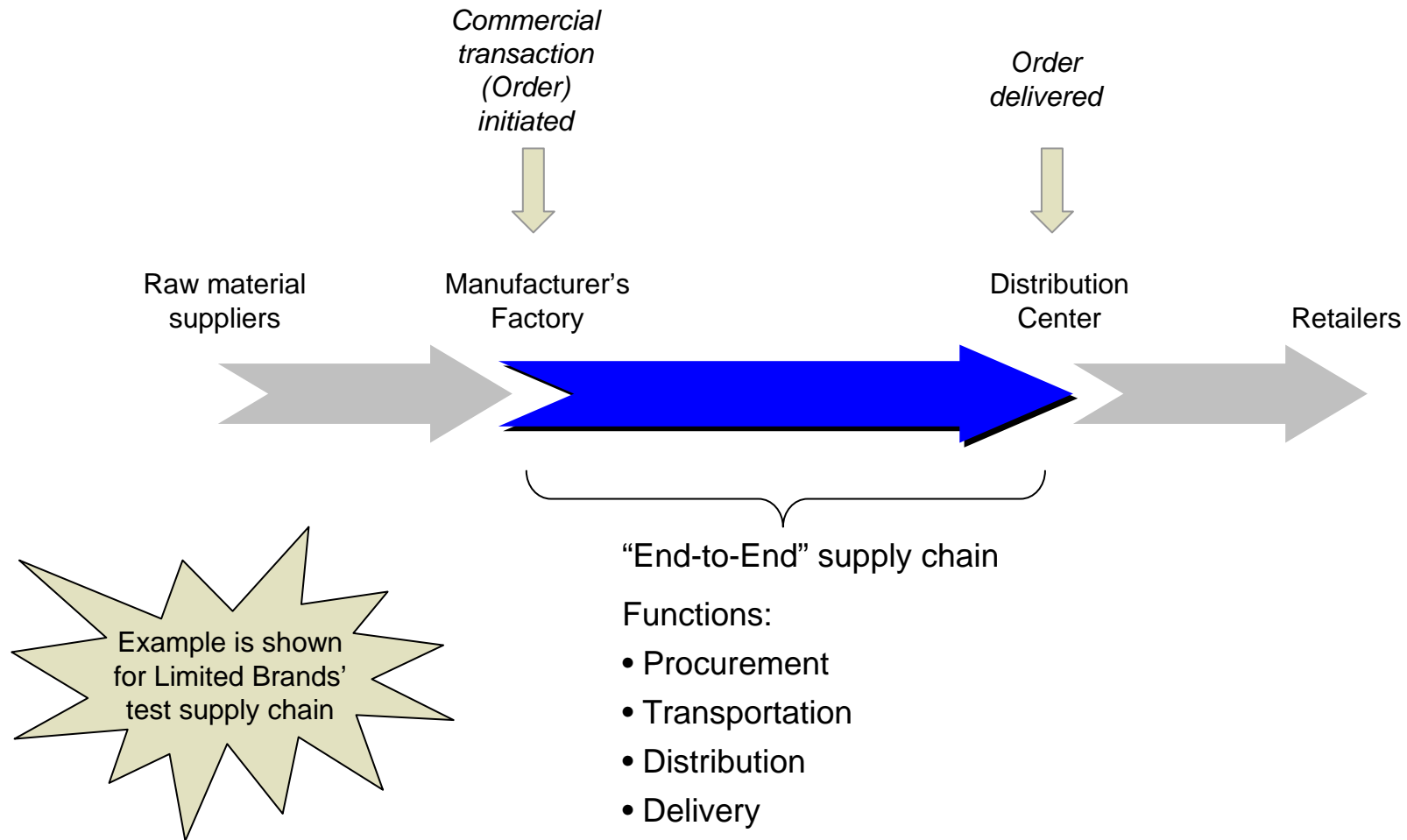
# The EFM initiative is evolving through several distinct tests, sponsored by the U.S. DOT's Intelligent Transportation Systems Joint Program Office.



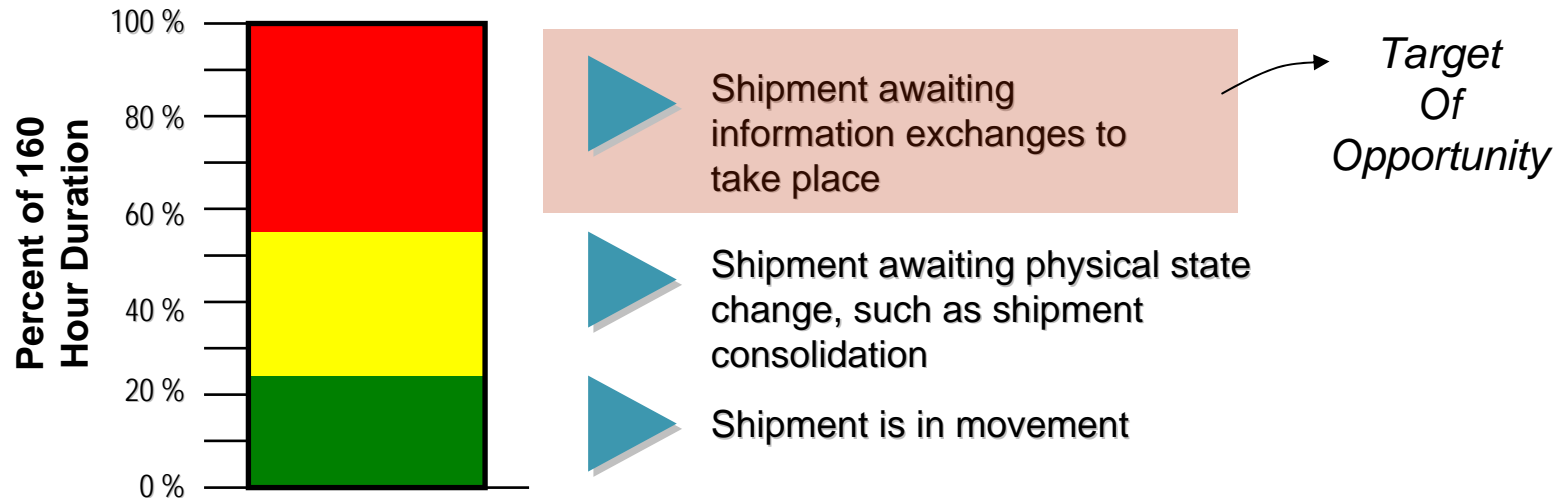
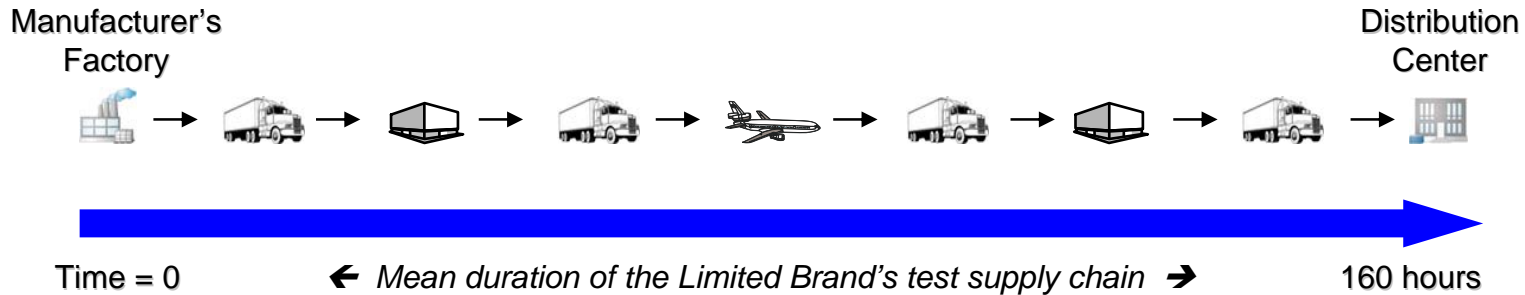
# **Operational concepts, a technology architecture and relevant relationships have been created:**

- ▶ **EFM System Architecture and Technical Concept of Operation**
- ▶ **Business-level Concept of Operation for upcoming Demonstration Test**
- ▶ **Executive White Paper**
- ▶ **Relationships established with several standards-related organizations**

**EFM considers the trade's perspective of “end-to-end” in defining the supply chain's span, a capability broader than transport modes have traditionally provided their customers.**



# EFM targets the time freight is at rest, awaiting information exchanges.



Data are based on preliminary qualitative findings collected during baseline activities along the target supply chain.



# The CEFM Deployment Test involves an Asia-to-US apparel supply chain.



## Test Participants:

- Two Chinese apparel manufacturers
- Two freight forwarders
- Air cargo terminal operator
- Two charter air carriers
- Buyer
- US 3PL
- Import Broker

# Elements of the EFM Demonstration Test include:

▶ These EFM elements....

▶ Lead to these Demonstration Test components...

▶ To create this expected value for stakeholders....

Technology Architecture

Data Standards

Identity Management

*Portions already  
successfully tested in  
two previous tests*

• “Virtual” data record of the shipment, enabled by web services technologies

• Messaging schemas harmonized with emerging international standards

• Definition and use of unique consignment references

• Selected opportunities to help industry modify its business processes

• Improved shipment and inventory management for shippers and consignees

• Clerical data entry savings and error reduction

• Quicker and more predictable delivery times to consignees

• Enhanced freight security

• Improved resource management

• Improved regulatory and trade compliance

**The Demonstration Test is being designed and developed this year (2006), with plans to be operating on live shipments in early 2007.**



### **Design**

- ▶ Requirements and Preliminary Design are complete
- ▶ Detailed Design in progress (through end '06)
- ▶ Seeking a forum to convene standards bodies for buy-in and design review

### **Development**

- ▶ System development and implementation is expected to take six months
- ▶ Expected completion in early 2007

### **Test Operation**

- ▶ Test expected to be run for six months

**A formal, independent evaluation will be completed during 2007, to assess how well the Test met its objectives.**



### **Evaluation**

- ▶ Ability of supply chain partners to operate in the EFM / FIH environment
- ▶ Scalability from one or two supply chains to many
- ▶ Ability and willingness of partners to operate using international data and messaging standards

**Feedback will be provided for all stakeholders once the Test's results are evaluated.**

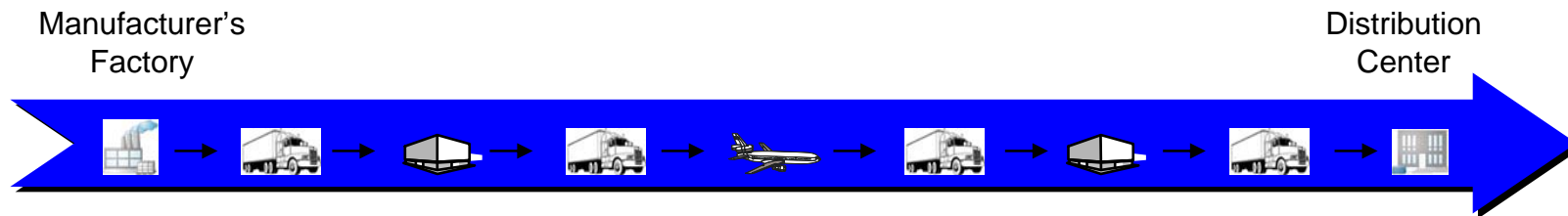


### **Feedback**

- ▶ Best practices defined and published
- ▶ Content offered to standards bodies
- ▶ Test observations also turned over to industry and government stakeholders



**We have reached out to, and are respecting mature and emerging initiatives and instruments within relevant standards development and standards implementing organizations.**



- WCO Data Model
- US CBP ACE
- UCR

Customs

- Cargo IMP
- Cargo 2000
- eFreight

IATA

- TBG3
- CC
- TDED

UN/CEFACT

- UBL

OASIS

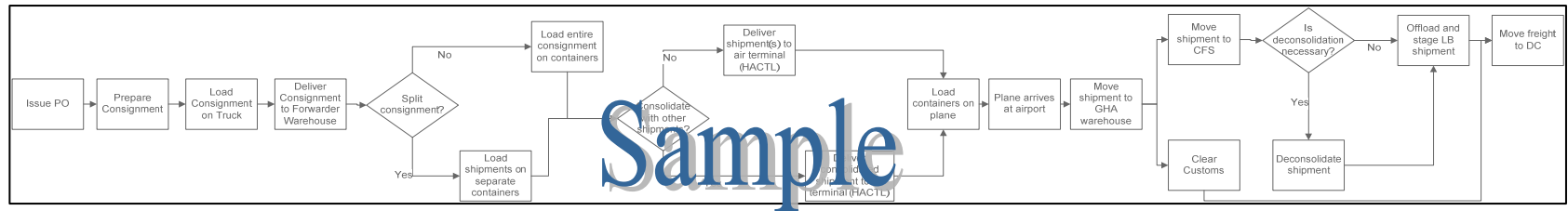
## **Because of our interest in UBL, we have been actively engaged in the definition and review of the UBL 2.0 release**

- ▶ **Participating on the UBL Transportation Subcommittee**
- ▶ **Conducting technical review of UBL**
- ▶ **Conducting business review of UBL, particularly with regards to the requirements of the EFM Demonstration Test**
- ▶ **Contributing to the public review process via these reviews**
- ▶ **Preliminary findings being shared with UBL Transportation Subcommittee**

## Examples of new formats of information exchanges that will be tested include:

Business Function	Baseline Information Exchange	Demo Test
▶ Resource and production planning for dispatch to DC	▶ Dispatch Advice EDI (ANSI X12 861, with MIGs published by Buyer)	▶ UBL Despatch Advice document, customized for this supply chain
▶ Limited Brands' exception management process for shipments	▶ Forwarders enter custom Access app ("Daily Status Report"); email file twice daily to Limited Brands	▶ New UBL-compatible message will be created; "pushed" to Limited Brands
▶ Forwarder verifies wheels-up and wheels-down of aircraft	▶ Forwarders' clerks check airline web sites and make telephone calls	▶ Use same message as above
▶ Document truck contents; non-negotiable record of carriage	▶ Truck manifest cut from ODW's (the US 3PL) legacy application	▶ UBL Bill of Lading document adapted

**One key enabling element of EFM is the development of a reference identifier to uniquely identify shipments.**

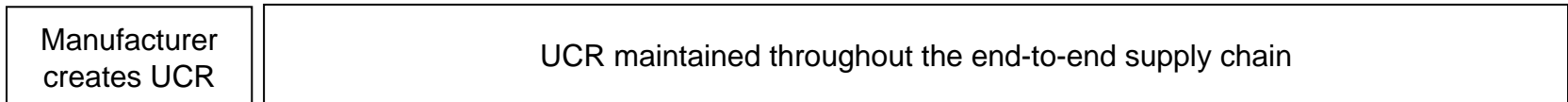


**PO #   Ship. #   BOL # 1   HAWB #   Split Shpt ID   Consolidated Shpt ID   MAWB #   BOL # 2**

***Examples of Identifiers used in baseline business process***

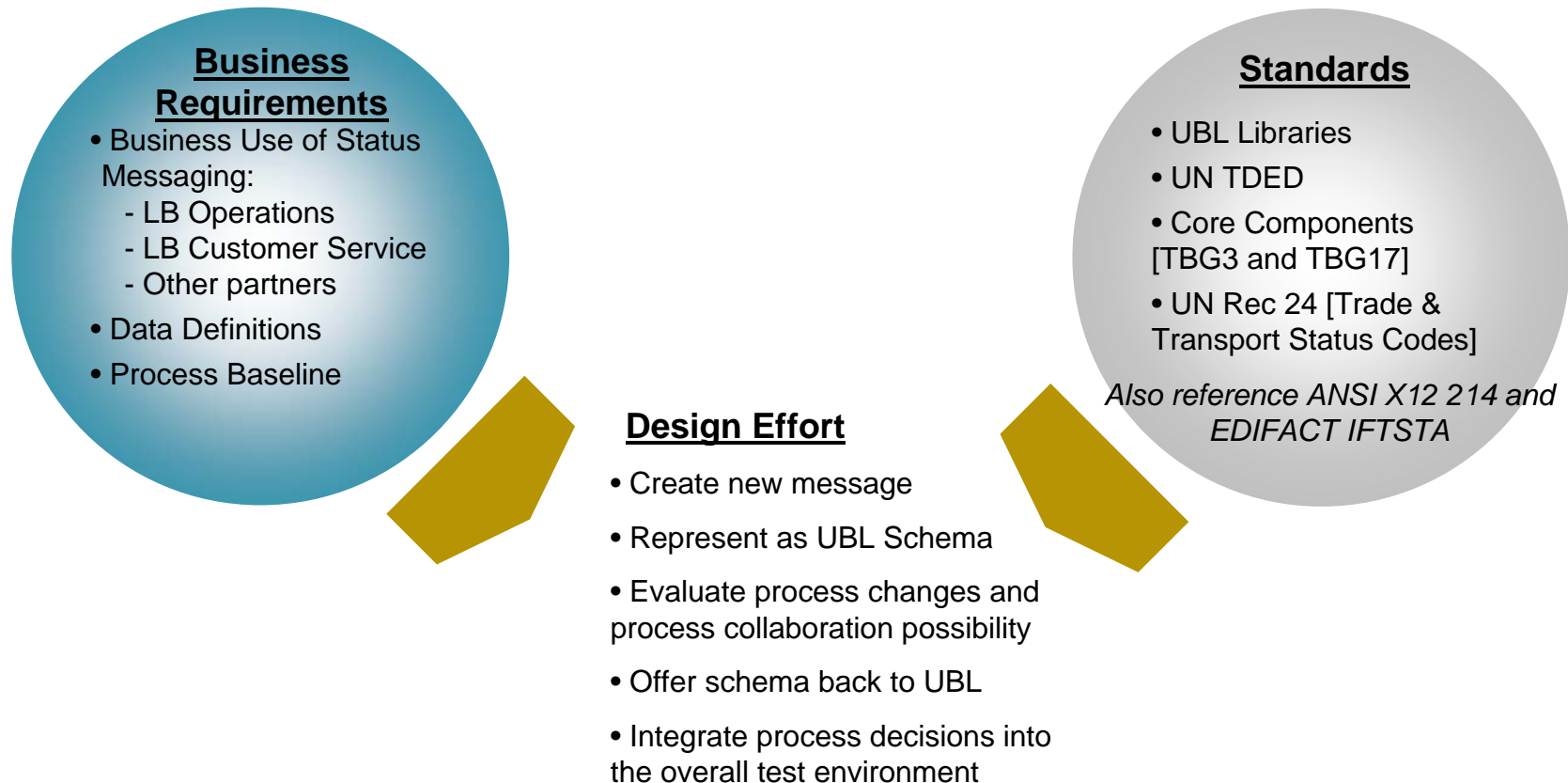


***Adopt WCO's Unique Consignment Reference (UCR)***



***Anticipated scenario in EFM Demonstration Test***

**We are now designing a shipment statusing capability that meets the partners' business requirements and adapts and extends appropriate standards.**



# **An EFM package will be developed during the Columbus EFM project and will consist of the following:**

- ▶ Implementation Guidance
- ▶ Instructions for Trading Partners
  - Web services connections
  - How to publish/subscribe
- ▶ Universal Business Language (UBL) Messages
  - Define all UBL/eXtensible Markup Language (XML) messages to be used by industry
  - Includes appropriate XML schema
  - Published and available on FIH Portal
- ▶ Installation of local profile database
- ▶ Any appropriate translation software, if needed and available

# Summary

- ▶ **Improve supply chain efficiency**
- ▶ **Technology**
  - **Data Standards**
  - **Freight Information Highway**
- ▶ **Improved methods of information sharing**
- ▶ **Deployable across modes when successful**
- ▶ **Broad benefits to industry**



# Tea Break

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# UBL and UN/CEFACT

*Mr Tim McGrath  
Vice-Chair, UBL TC*

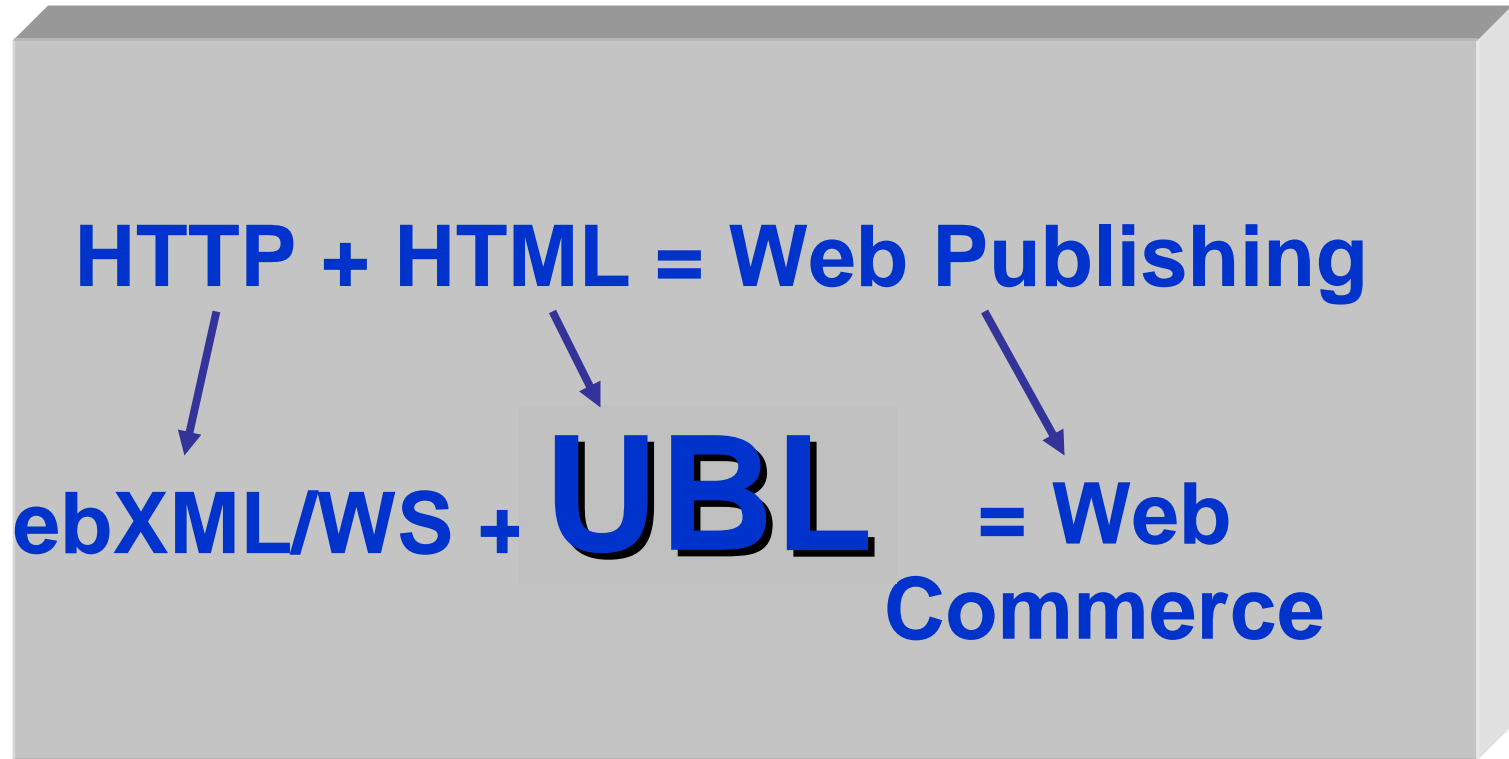
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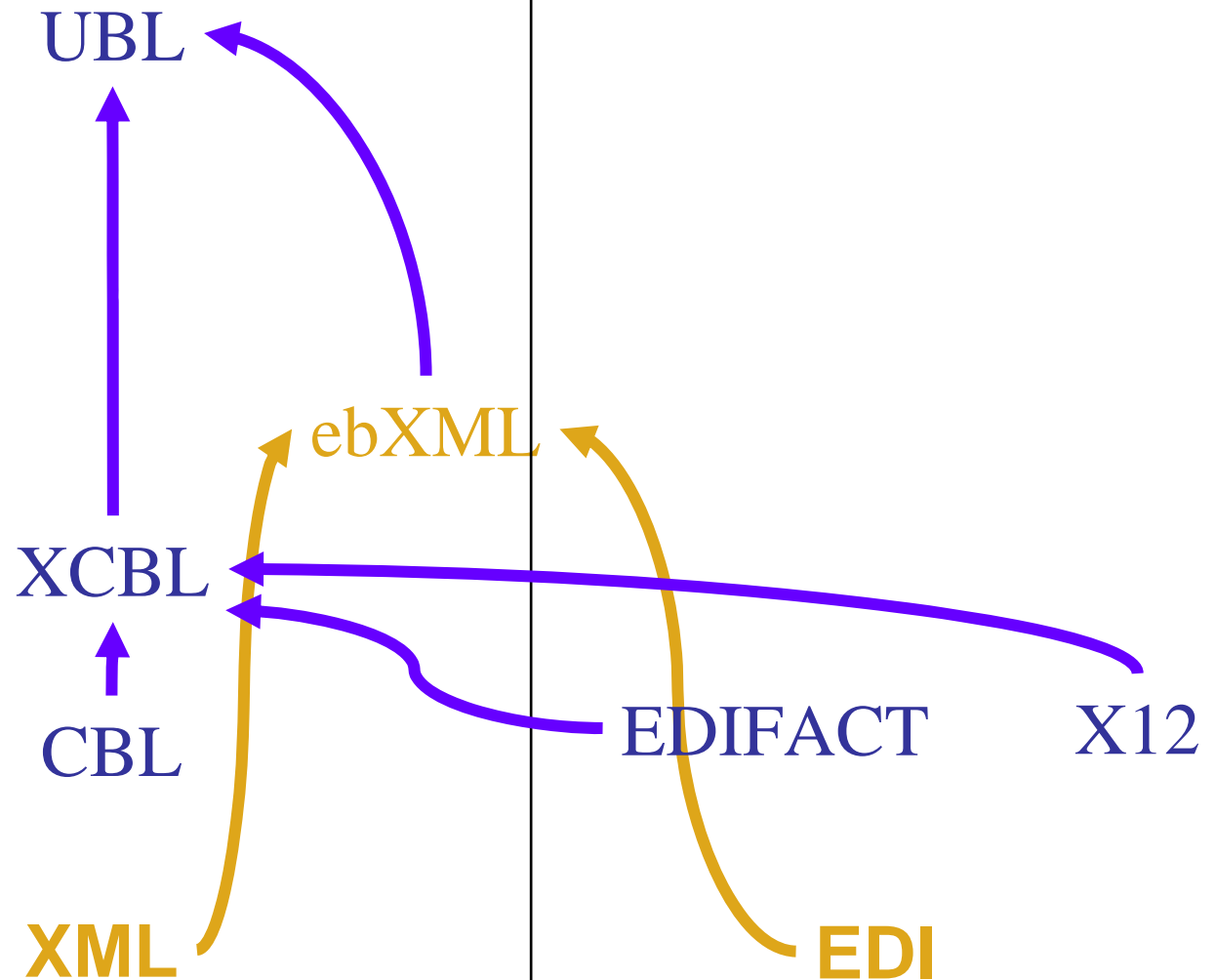


# The UBL Objective





# UBL's Ancestry



# UBL 2.0

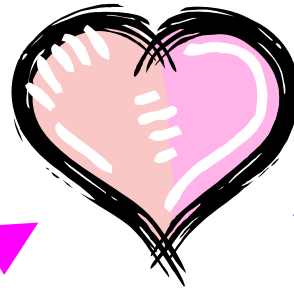
- Now an OASIS Committee Specification.
  - OASIS Standard expected December 2006
- Extended library.
  - 31 document types.
  - Extended Procurement Process (Europe).
  - Transportation Process Documents (Asia and US).
- Based on real implementation experience.
  - Improved library of re-usable components
- Alignment with UN/CEFACT projects.
  - Core Component Type library.
  - Input from Trade and Business Groups.
- Compliant to ISO 15000-5
  - ebXML Core Component Technical Specification.

# Sanctioning eBusiness Standards

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION



INTERNATIONAL  
TELECOMMUNICATION UNION



UN/CEFACT

SIMPLE, TRANSPARENT AND EFFECTIVE PROCESSES  
FOR GLOBAL BUSINESS

UNITED NATIONS ECONOMIC  
COMMISSION FOR EUROPE



International  
Organization for  
Standardization

# Specific Technology Consortia

- OASIS

- XML standards for e-business
- Collaborates with UN/CEFACT on the ebXML



- World Wide Web Consortium (W3C)

- Web infrastructure standards



- The Internet Engineering Task Force (IETF)

- Internet standards





# But wait, there's more...

- Industry solutions developed to fill a requirement not met by other standards:
  - Rosettanet, XBRL, OAGIS, GS1, etc.
  - Gain momentum and become a standards business.
- National bodies:
  - CEN/ISSS, NIST, CNIS, SITPRO
- Proprietary or private solutions.
- There is a natural selection at play.
  - The market will decide.
  - But only if given the correct information.

# UN/CEFACT Collaboration

- Agreed in April 2006.
  - UN/CEFACT recognizes UBL 2 as appropriate first-generation XML documents for eBusiness.
  - Future UN/CEFACT deliverables constitute the upgrade path for UBL.
  - Maintenance of UBL 2 remains with OASIS
  - In the expectation that UN/CEFACT will produce its own integrated set of XML schemas within a period of three years, OASIS will produce no further major versions of UBL past UBL 2.
  - OASIS will grant UN/CEFACT a perpetual, irrevocable license to create derivative works based on UBL.
- This means:
  - If you want a solution today then use UBL 2.0.
  - UBL 2.0 is the precursor to the next generation of UN/CEFACT XML standards.

# UBL has Traction

- Adopted for a variety of contexts:
  - Government e-procurement.
  - International trade.
- Based on library of re-usable components.
- Active user community contributing to further development and enhancements.
  - Credibility within XML community.
- A feature of an Open Standard is no auditing of usage.
  - ‘Viral’ adoption

# UBL has Sanction

- An approved OASIS Standard
  - 1.0 in May 2004
  - @ version 2.0 in December 2006
- Based on ebXML Core Components.
  - ISO 15000-5 compliant
  - Early adopter and pioneer
- UBL 2.0 aims to be a fully sanctioned international standard.
  - Endorsed by the MoU/MG for eBusiness standardization.

# UBL Future Work

- The next version of UBL will be a collaboration with UN/CEFACT:
  - This is underway.
  - A long term migration path for UBL users.
- Maintenance and support of UBL version 2 remains with the OASIS UBL Technical Committee.
  - Minor releases, errata, extensions, etc
  - Backward compatible with UBL 2.0
- Use UBL today and tomorrow.

# The UBL Technical Subcommittee

- Procurement SC
  - Models for Supply Chain business requirements
- Transportation SC
  - Models for International Trade business requirements
- Human Interface SC
  - Printed formats (eg. UN Layout Key)
  - Mappings for stylesheets
  - Input Forms (XForms)
- Small Business SC
  - Implementation profile for small business
- Software SC
  - Software for creating and customizing UBL models.

# Localization Subcommittees

- Translation of UBL semantics.
- Fostering requirements for local implementations.
  - Chinese
  - Japanese
  - Korean
  - Spanish
  - Italian
  - Danish



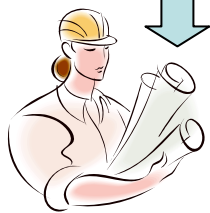


# UN/CEFACT

SIMPLE, TRANSPARENT AND EFFECTIVE PROCESSES  
FOR GLOBAL BUSINESS



CEFACT Plenary  
(Shareholders)



Bureau (Board of Directors)

Forum



Forum  
Management  
Group (Board  
of Management)



Permanent Groups  
(Workers)



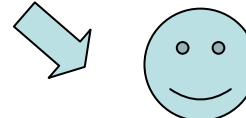
TMG (CCTS, UMM)



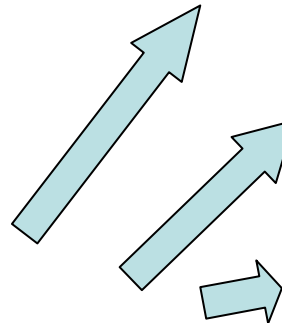
TBG (1-19)



ICG



ATG (1-2)



# UN/CEFACT

## Collaboration Activities part 1

- CEFACT BUREAU/ UBL TC
  - Mark Palmer and Tim McGrath
- TBG1 - Supply Chain
  - completed first analysis
- TBG3 – Transport
  - reviewed UBL 2.0 specification
  - proposing a common work item
- TBG17 – Harmonization
  - discussions started
- TMG/CCTS – Core Component Technical Specification
  - discussions started

# TBG1 – UBL core group

- Present situation
  - Two meetings of 3 days (July, September)
- Next steps
  - Present the Gap analysis to TBG1 and OASIS UBL TC
  - Work plan (start July 2006 – planned end September 2007)
    - November 2006 meeting – Gap analysis Order
    - December 2006 meeting – Gap analysis Order response, Order change, Order cancellation
    - January 2007 meeting – Gap analysis Despatch advice, Packing list, Receipt advice
    - March 2007 meeting – Gap analysis Catalogue messages
    - July 2007 meeting – Gap analysis Self-billing

# UN/CEFACT

## Collaboration Activities Part 2

- ATG/NDR - XML Naming and Design Rules
  - working team formed
  - submitted requirements
- TBG2 – UN/eDocs
  - unclear how to proceed
- ICG (and ATG2) – Code Lists
  - need to engage formally
- TBG19 e-Government
  - still immature
- TMG/Context Methodology/Message Assembly
  - still immature

# The Standards Maturity Model

Level 5 – “Functionally adequate” version is ubiquitous.

Level 4 – Many use “functionally adequate” version.

Level 3 – “Functionally adequate” version of standard is approved.

Level 2 – Version 1.0 of the standard is proposed.

Level 1 – Many recognize the problem.

[acknowledgements to Ross Altman, 2005]

# ebXML Content Standards Maturity

Level 5 – UBL 2.0 ??

Level 4 – UBL (OIOXML, DTTN, OGC, USDoT)

Level 3 – UBL 1.0

Level 2 – ebXML Core Components, OAG/S

Level 1 – *RosettaNet, GS1, UN/CEFACT Library*

# OASIS/UBL and UN/CEFACT collaboration plan

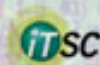
- Work together to build a common set of eBusiness document standards
- Work with all relevant Forum Groups
- Common core components and business processes
- Recognition of UBL v.2 as appropriate first-generation XML documents for eBusiness



# Developing UBL-based Solution

*Mr Malcom Tay*  
*Manager, CrimsonLogic Pte Ltd*

Organised by



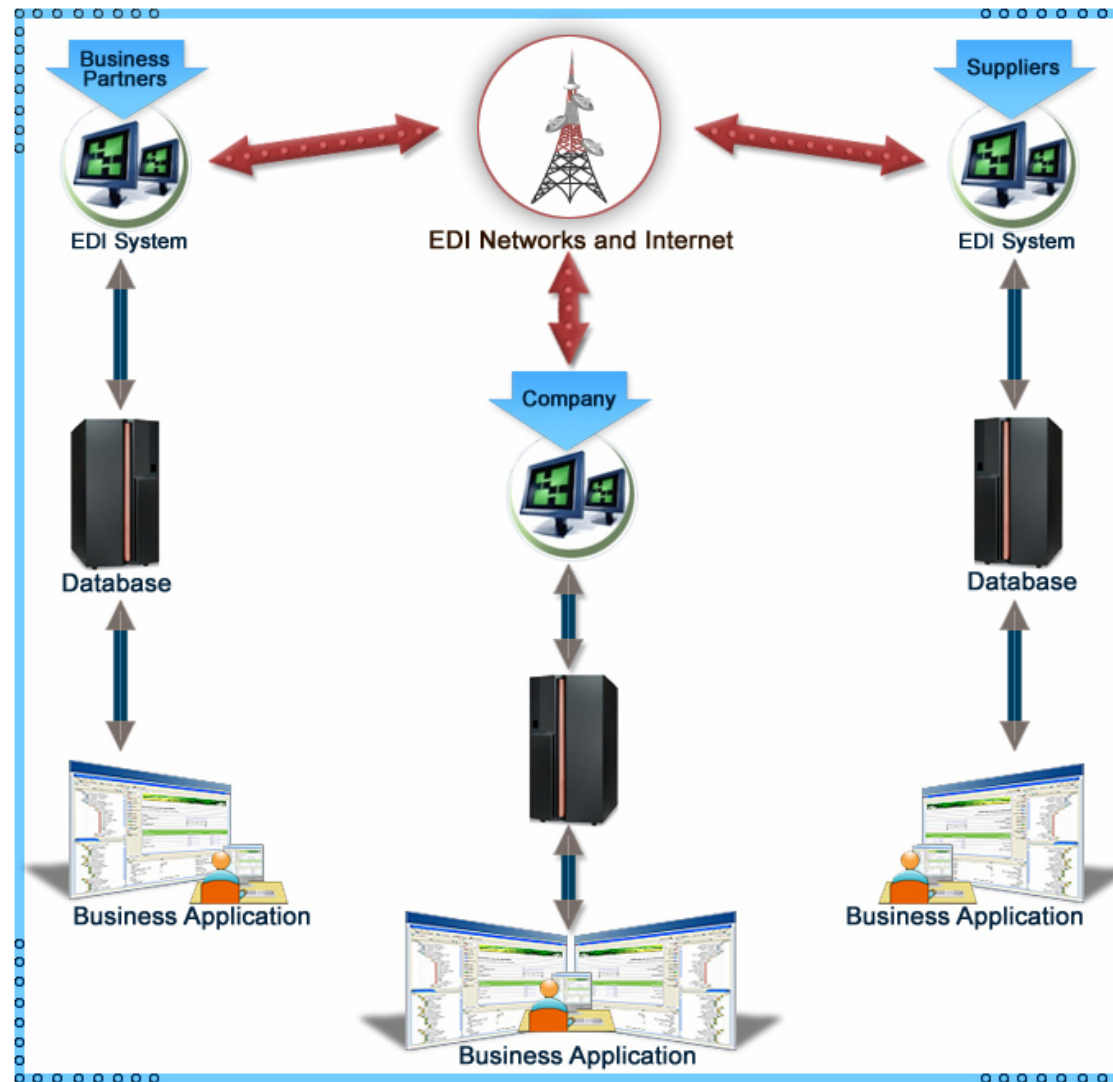
An Industry Partnership Supported by  
SPRING Singapore & IDA Singapore

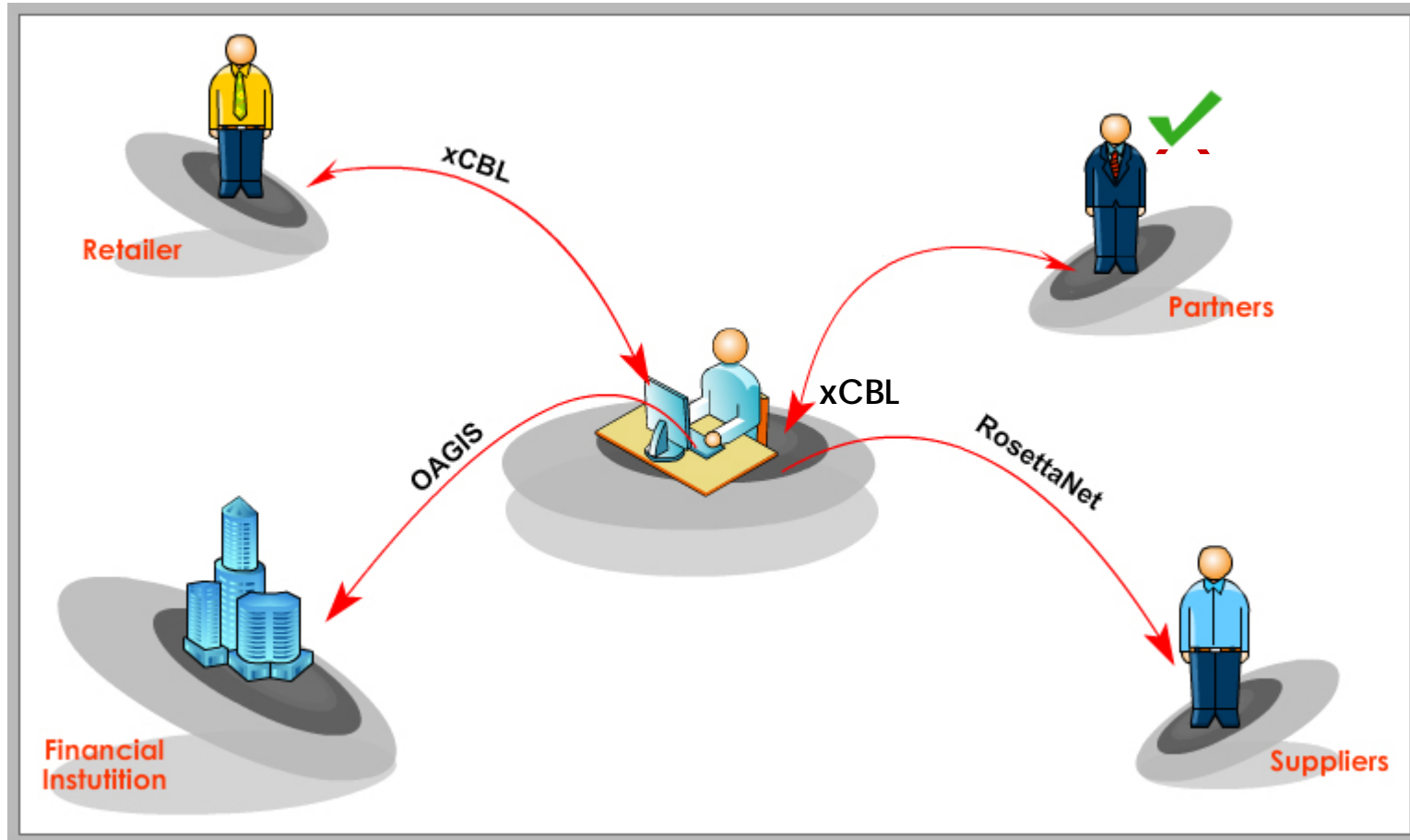
Hosted by



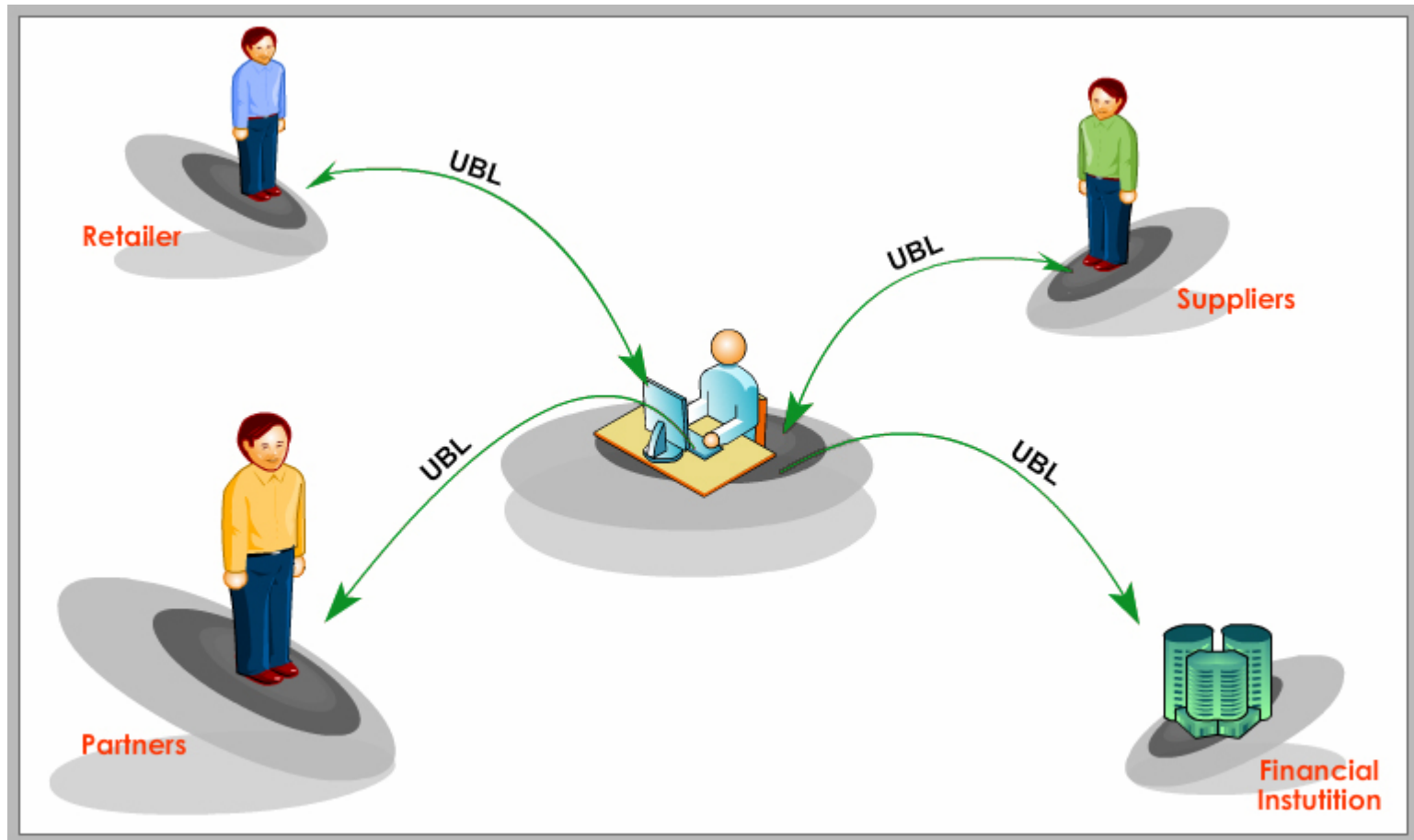


- UBL Overview
- Introduction to Xynthesis
- Developing UBL based Solutions
- Q & A

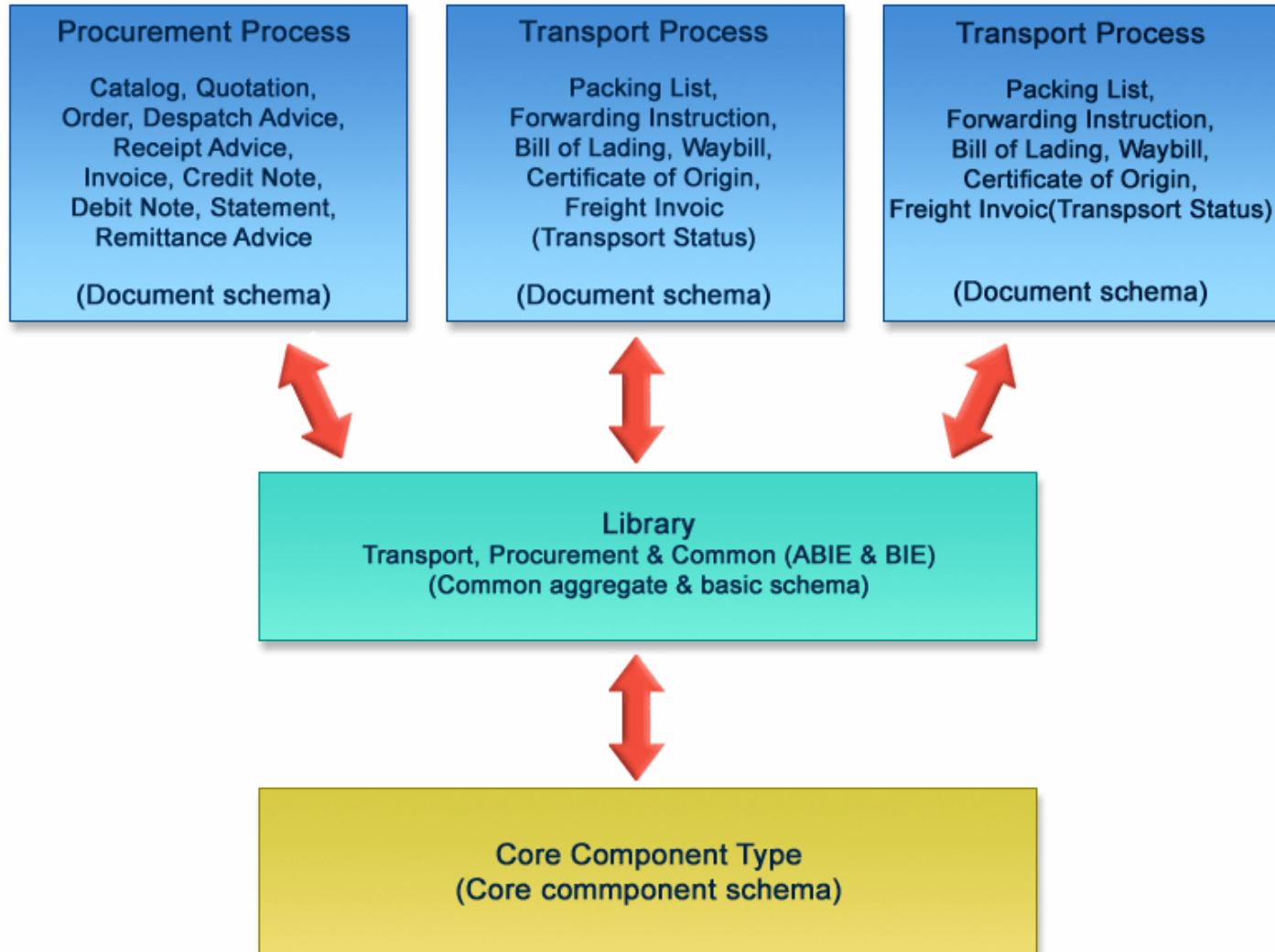




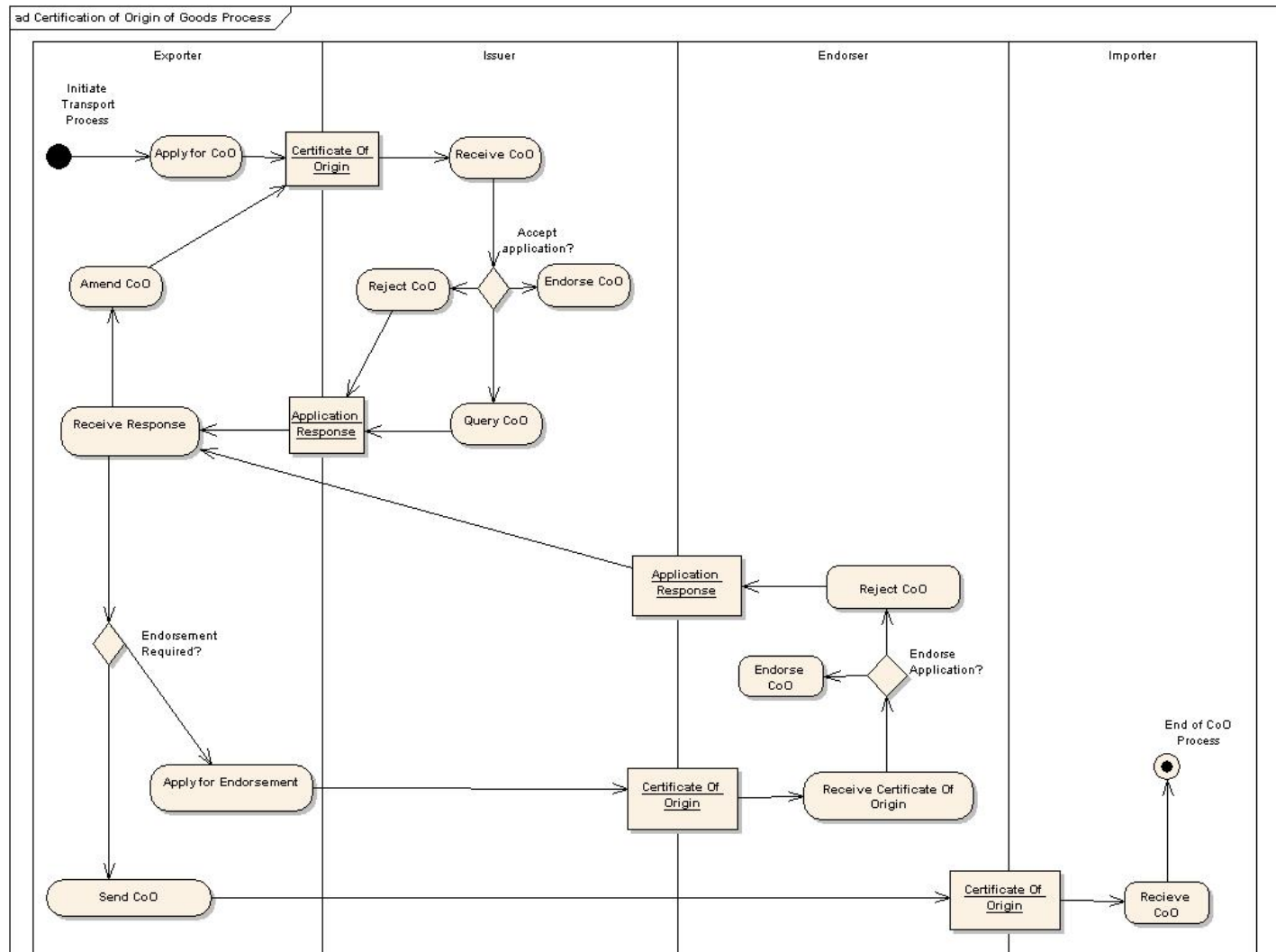


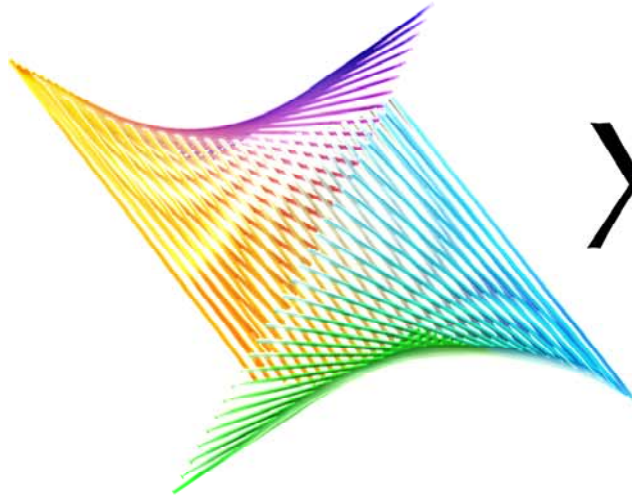


- **Universal Business Language (UBL)**
  - is the product of an international effort to define a non-proprietary library of standard electronic XML business documents
  - Leverages best features from EDI and other existing XML business libraries.
- **UBL Vision**
  - To create a vocabulary for common business communication









# Xynthesis

the complete business solutions platform

*"Xynthesis" originates from the word "synthesis" which means "the combining of separate elements to form a coherent whole".*

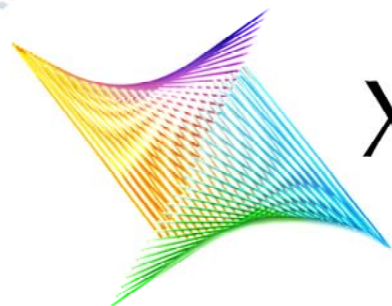
**Xynthesis – The complete business solutions platform comprising of a suite of products designed for business users. Now it is possible for you to assemble a fully functional and robust system easily with business agility. In short, business solutions: yours to create, on demand.**



# Xynthesis – The Constituents

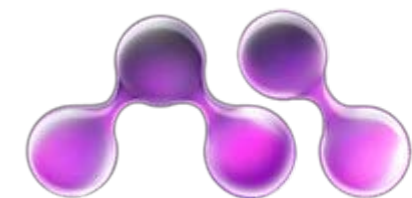


***Eureka***

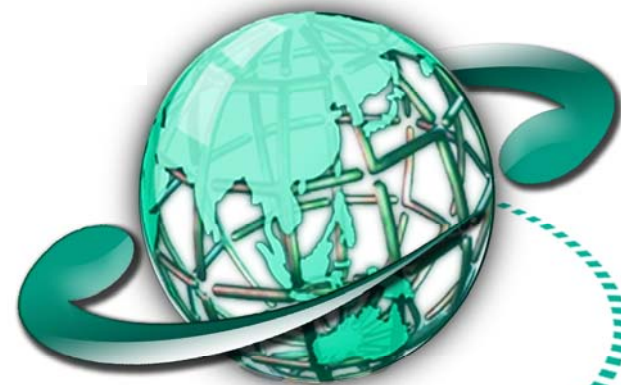


**Xynthesis**

the complete business solutions platform



**MAESTRO**

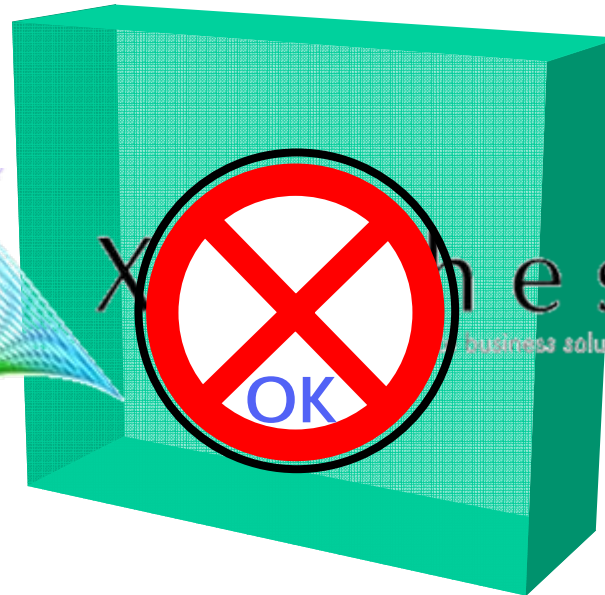
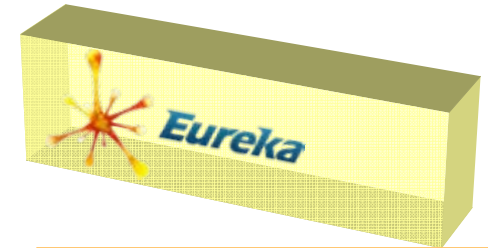
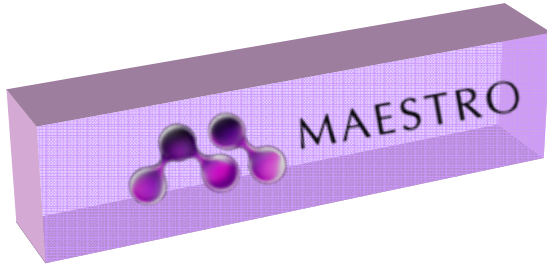


**Nexus**



CrimsonLogic

# Enterprise Application Development Conventional Vs Xynthesis way

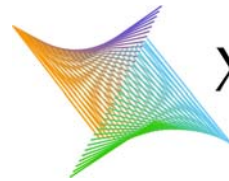
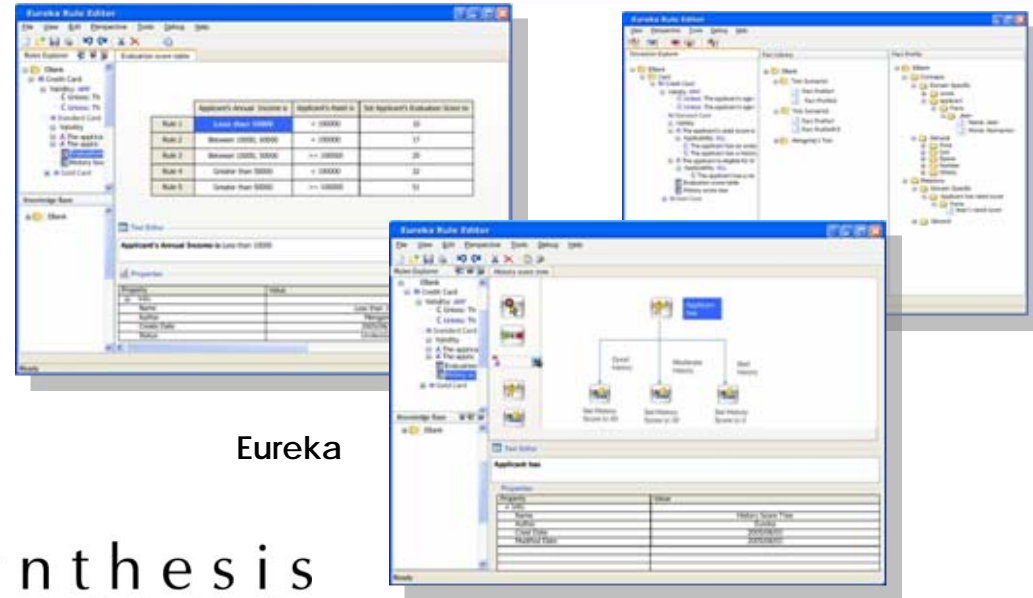


- Loose Security
- High Maintenance
- Slow Development
- Limited Reuse
- Lack of Control
- No Separation of Duties



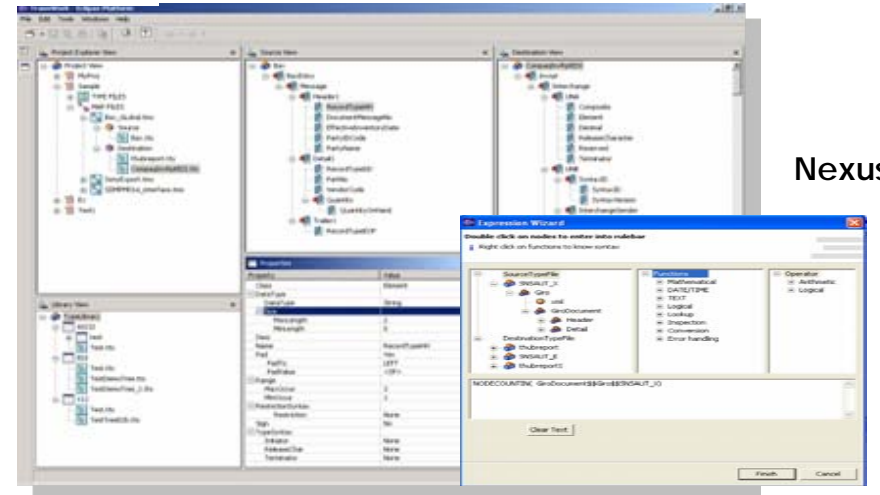
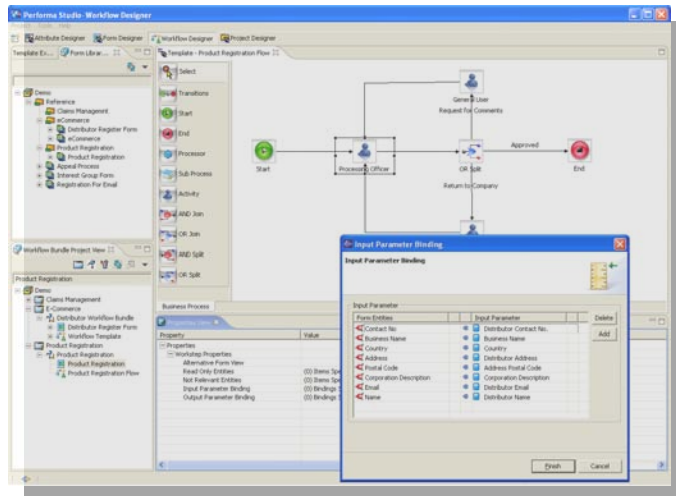


# CrimsonLogic Platform Xynthesis – Screenshots

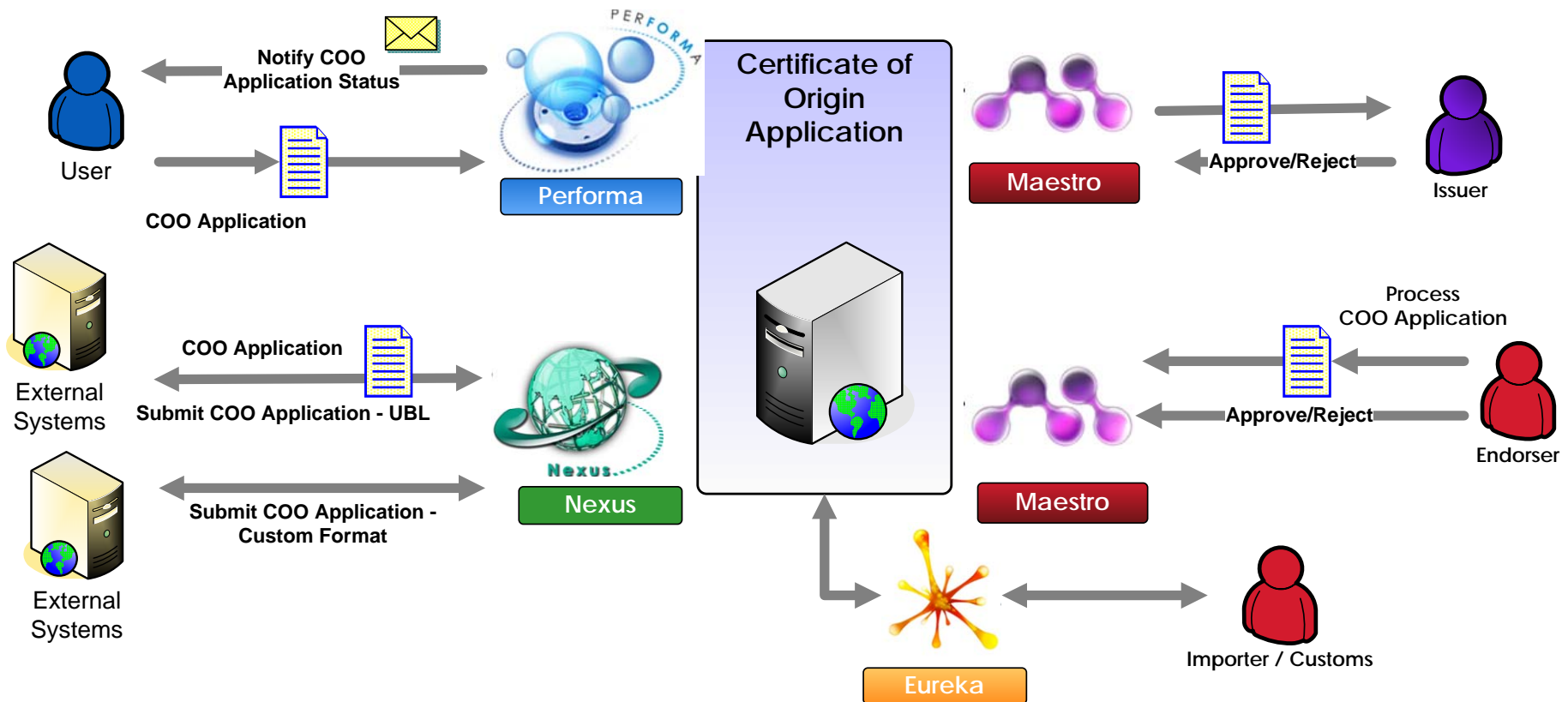


Xynthesis  
the complete business solutions platform

Maestro



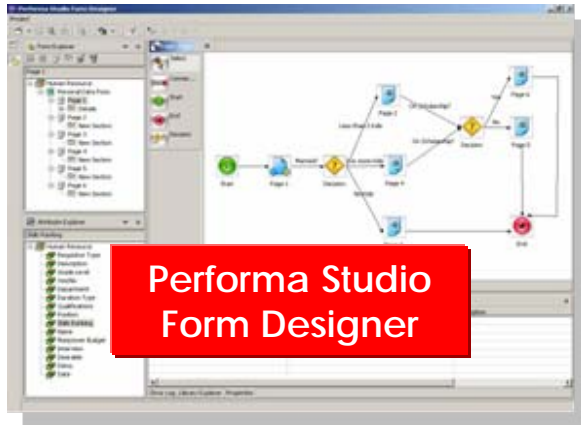




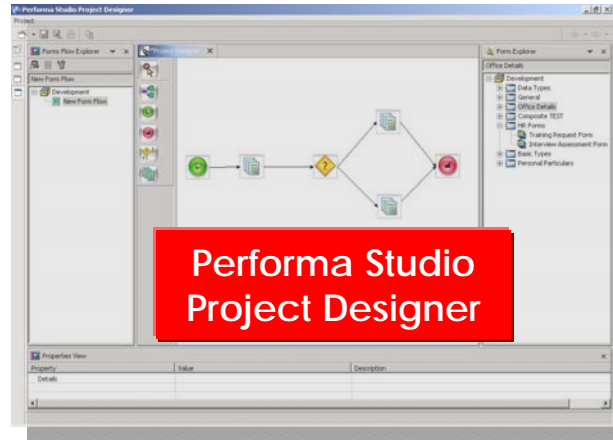


CrimsonLogic

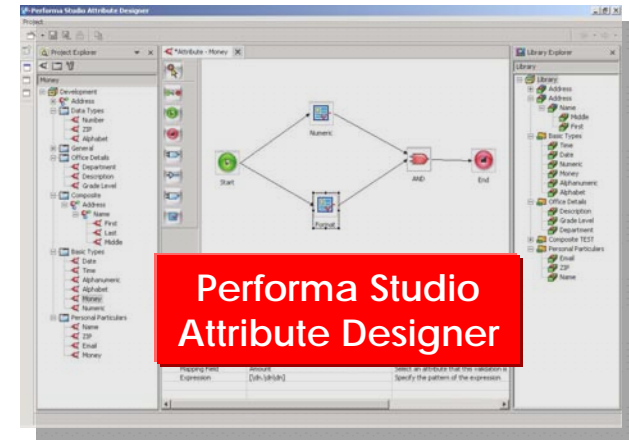
# Performa Suite Composition



Performa Studio  
Form Designer



Performa Studio  
Project Designer



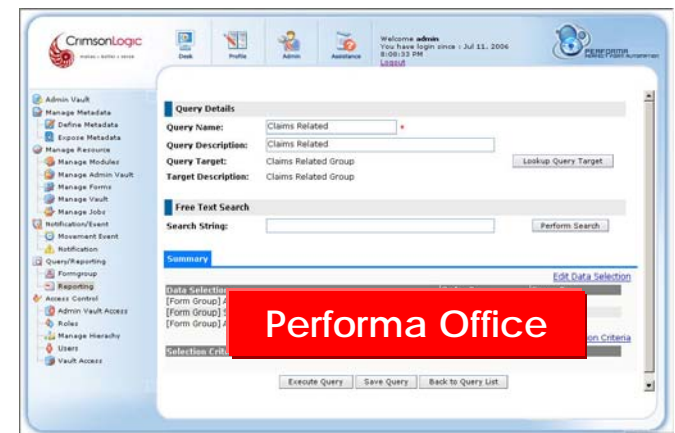
Performa Studio  
Attribute Designer



Performa Server



Performa Centre



Performa Office



CrimsonLogic

# Asia Pacific ICT Awards 2005



**Merit Award Winner**  
**Asia Pacific ICT Award 2005**

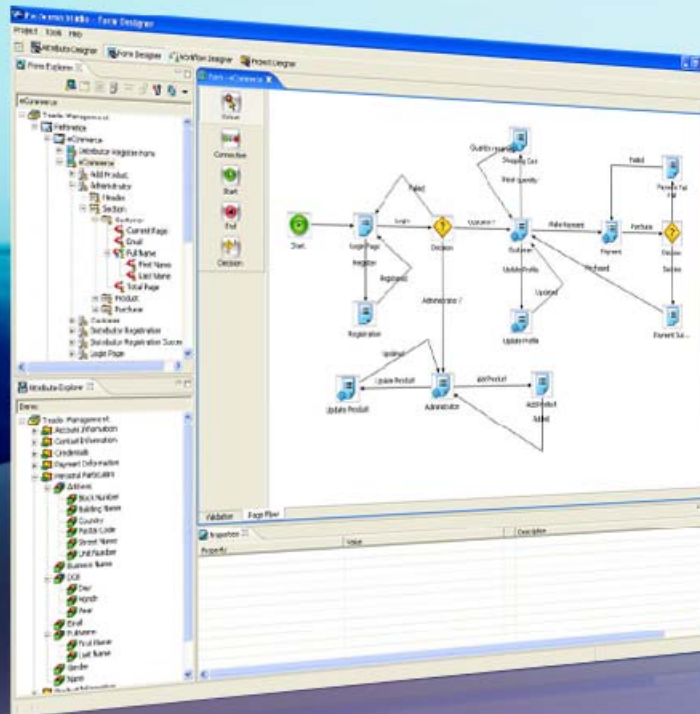




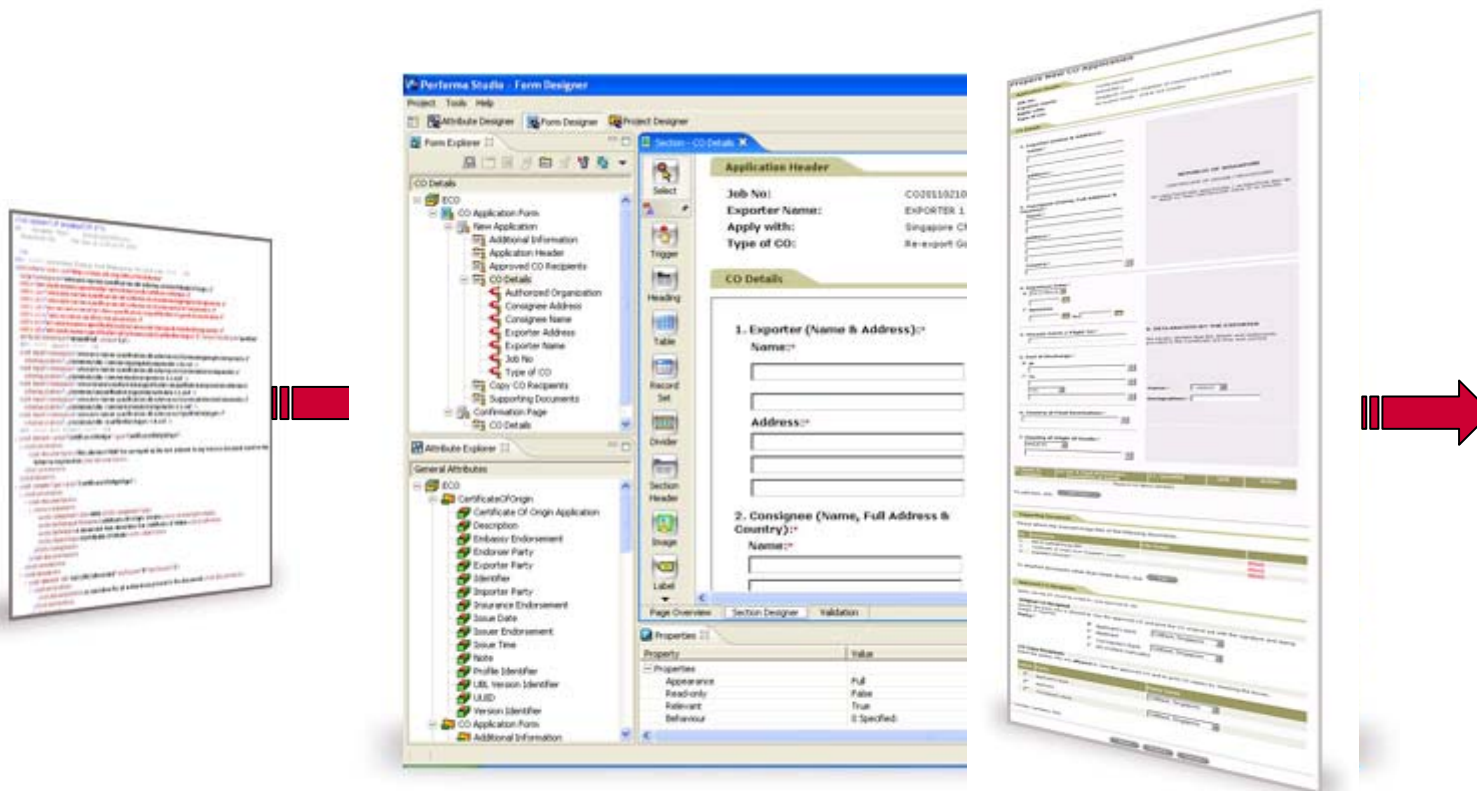
CrimsonLogic

# International Patented Product

## Patent



**Performa is  
an International Patented  
Product**



**Parform Studio - Form Designer**

Project: Tools: Help

Form Explorer

- Corporate Tax Application
  - Corporate Tax Domain
  - Corporate Validation
  - Reference
  - Personal Tax Application
    - Personal Tax Declaration Form
      - Details Declaration
        - Tax Auditor
        - Approval
          - Income Information
            - Dividend
              - Draft Dividend
              - Draft Income
              - Draft Interest
              - Draft Other Income
              - Employment
                - Income
                - Interest
                - Name
                - NRIC
                - Other Income
                - Tax Reference No.
              - Personal Relief
              - Relates

Section - Income Information

Select

Trigger

Heading

Table

Record Set

Divider

Section Header

Image

Label

Embedded Object

Barcode

**Personal Income Tax Declaration**

Please review taxpayer's income tax declaration

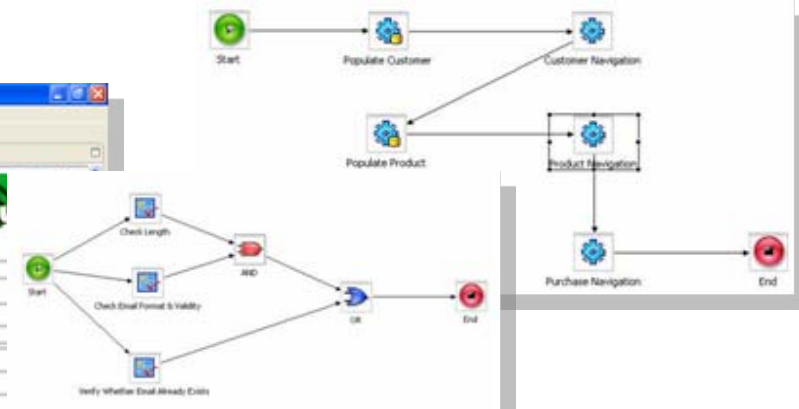
Name

Tax Reference No.

NRIC

Employment

Income Source	Submitted Amount (RM)	Valuated Amount
Annual Salary	0.00	0.00
Dividends	0.00	0.00
Interest	0.00	0.00
Other Income	0.00	0.00



**Translation Wizard**

Select a Category: All References

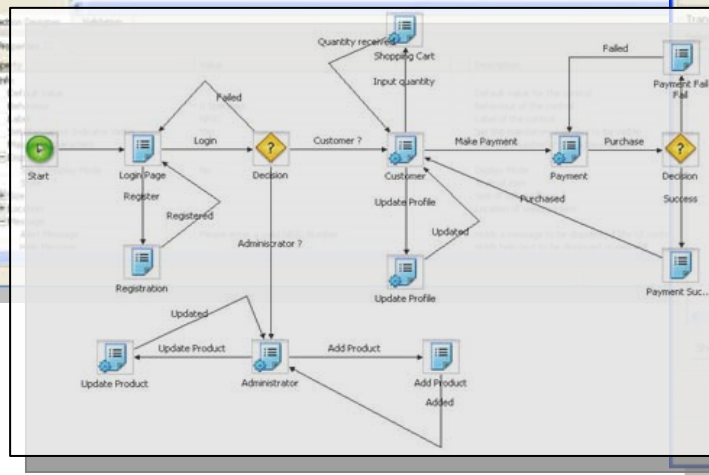
Filtering

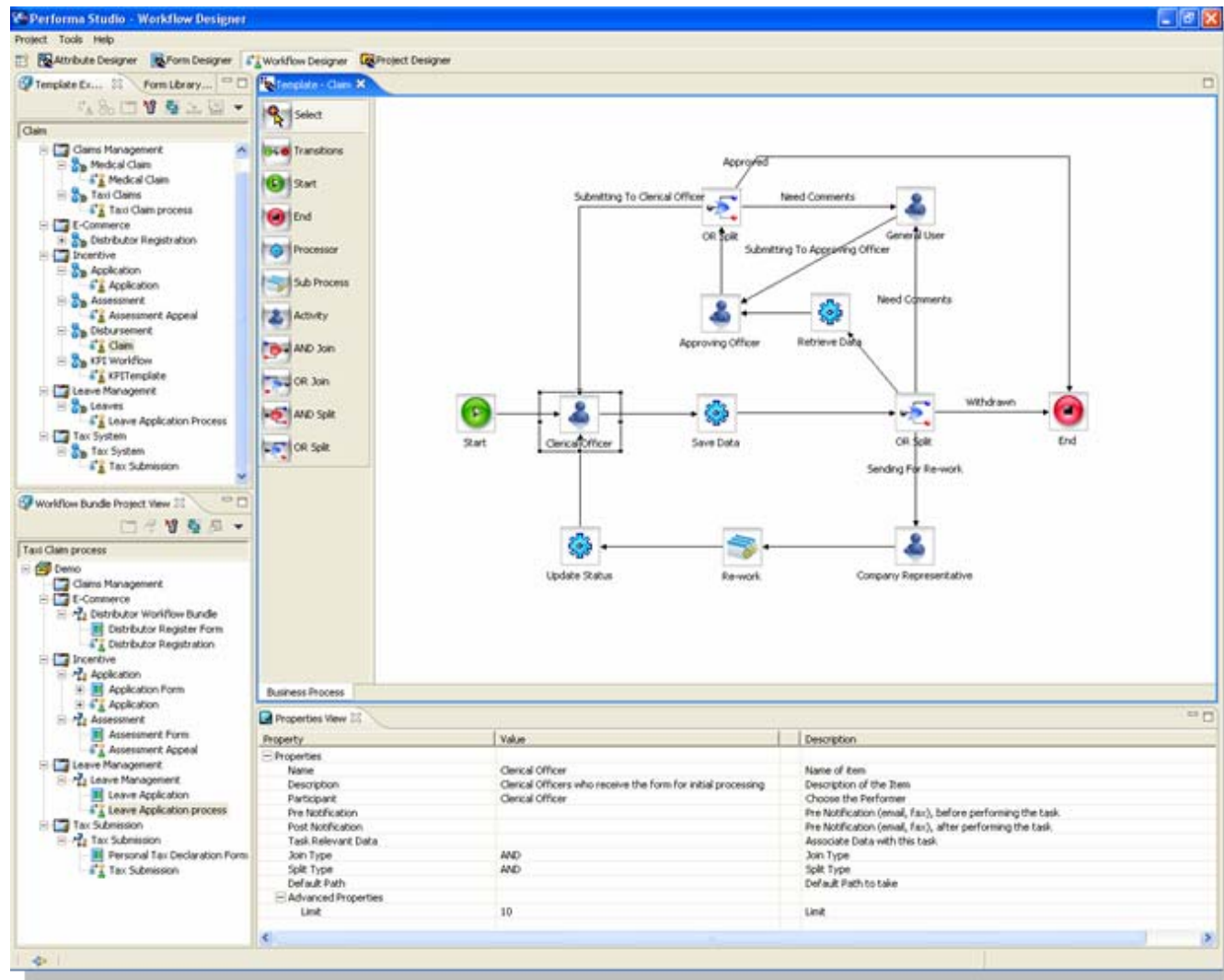
Select Filter Type: All

Containing Text:

Actual	Translated: Chinese
Customer	客户
Registration	客户资料
Customer Info	客户资料
Product Info	产品资料
Header	Header
Header	Header
Section	Section
Login Information	登录资料
Payment	付款
Distributor Registration S	经销商注册成功
Payment Successful	付款成功
Product	产品
Product Info	产品资料
Product Info	产品资料
Customer	客户
Login Page	登录页
Shopping Cart	购物车
Purchase	购买
Registration Successful	注册成功

Finish Cancel





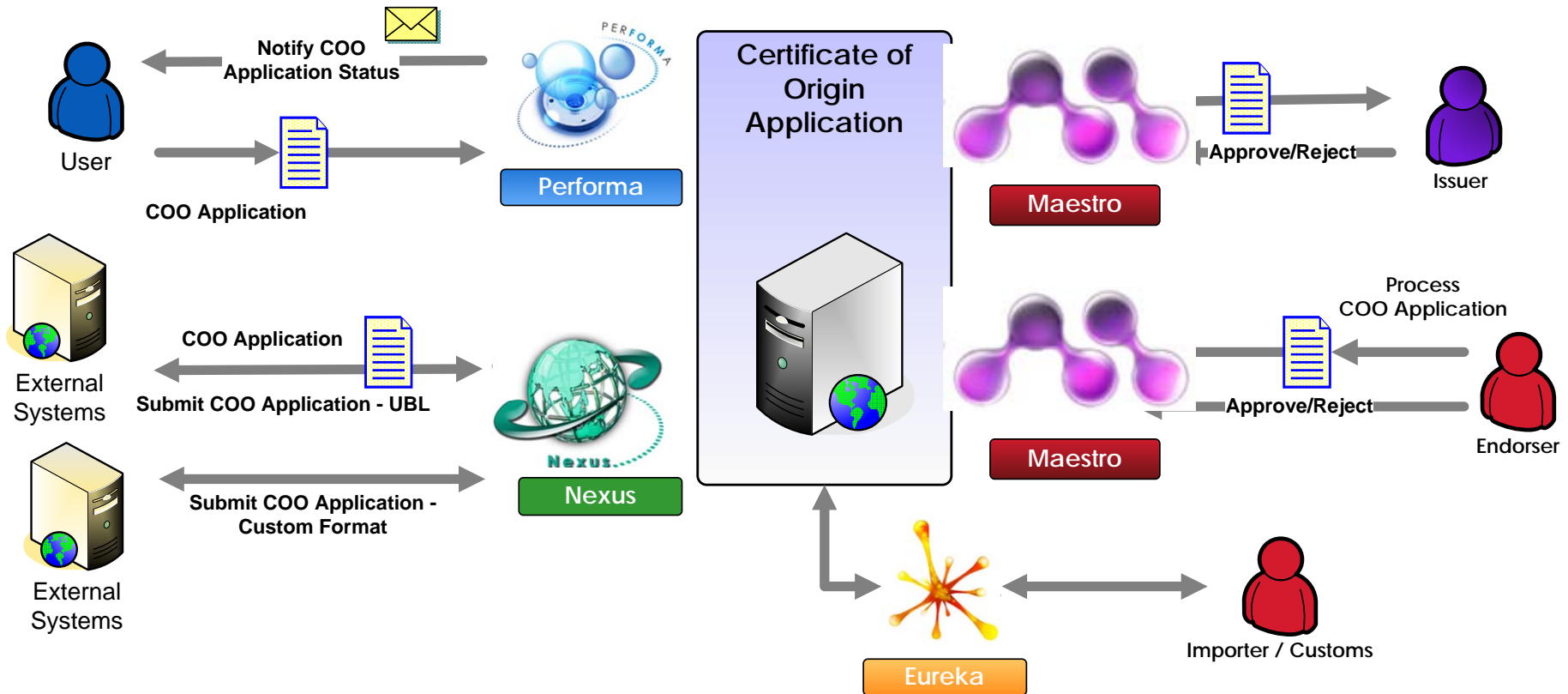




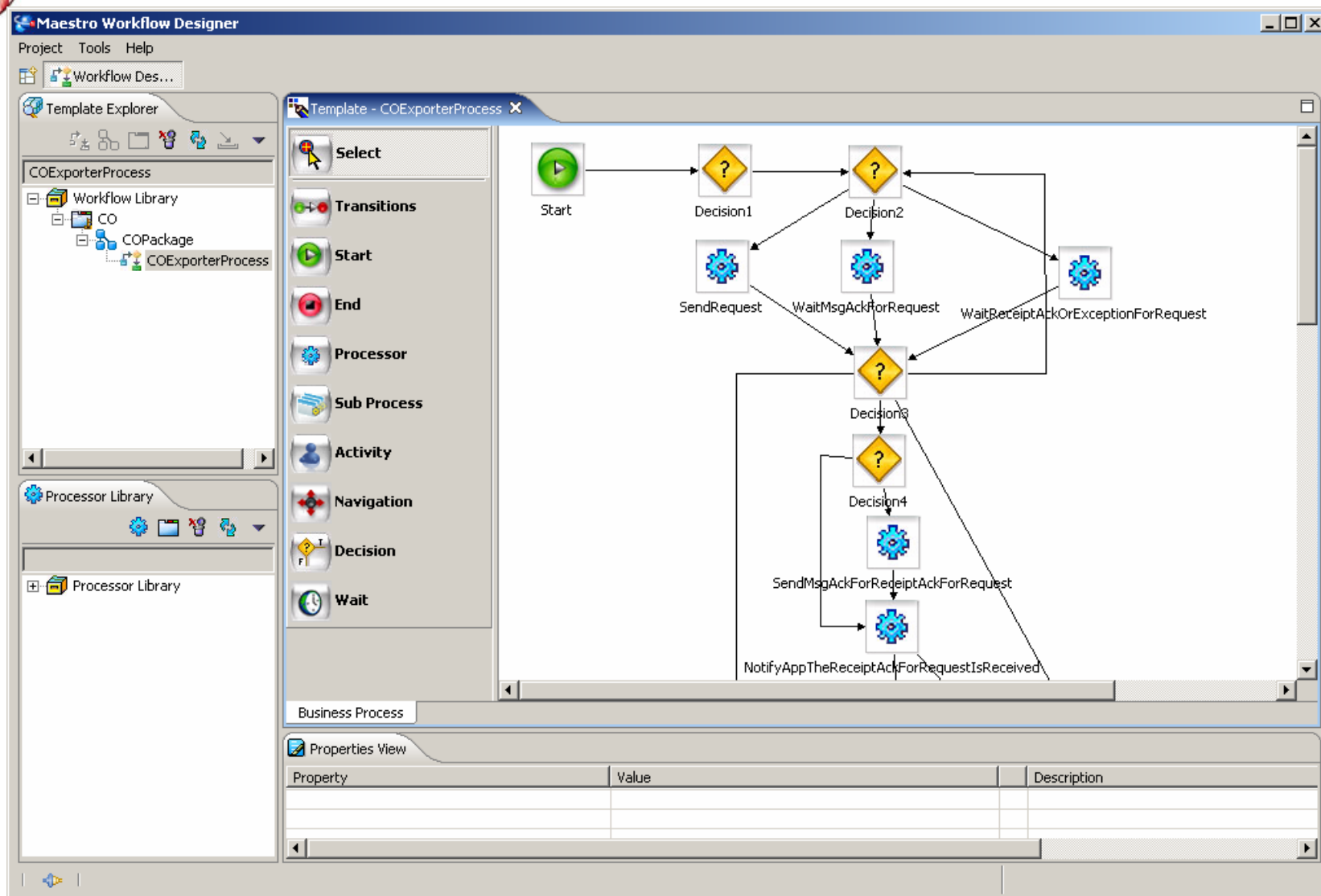
CrimsonLogic

# Design Once – Multiple Clients

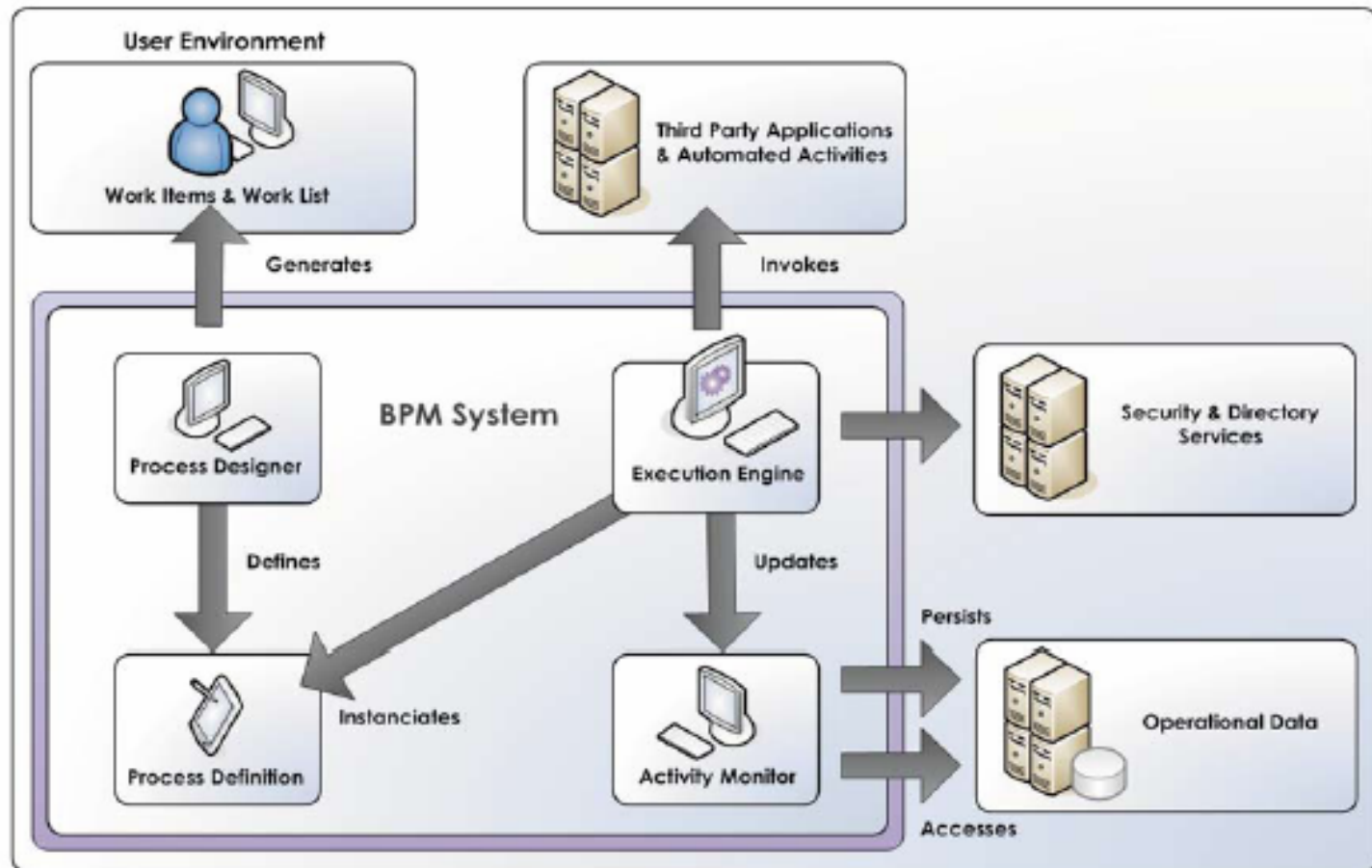


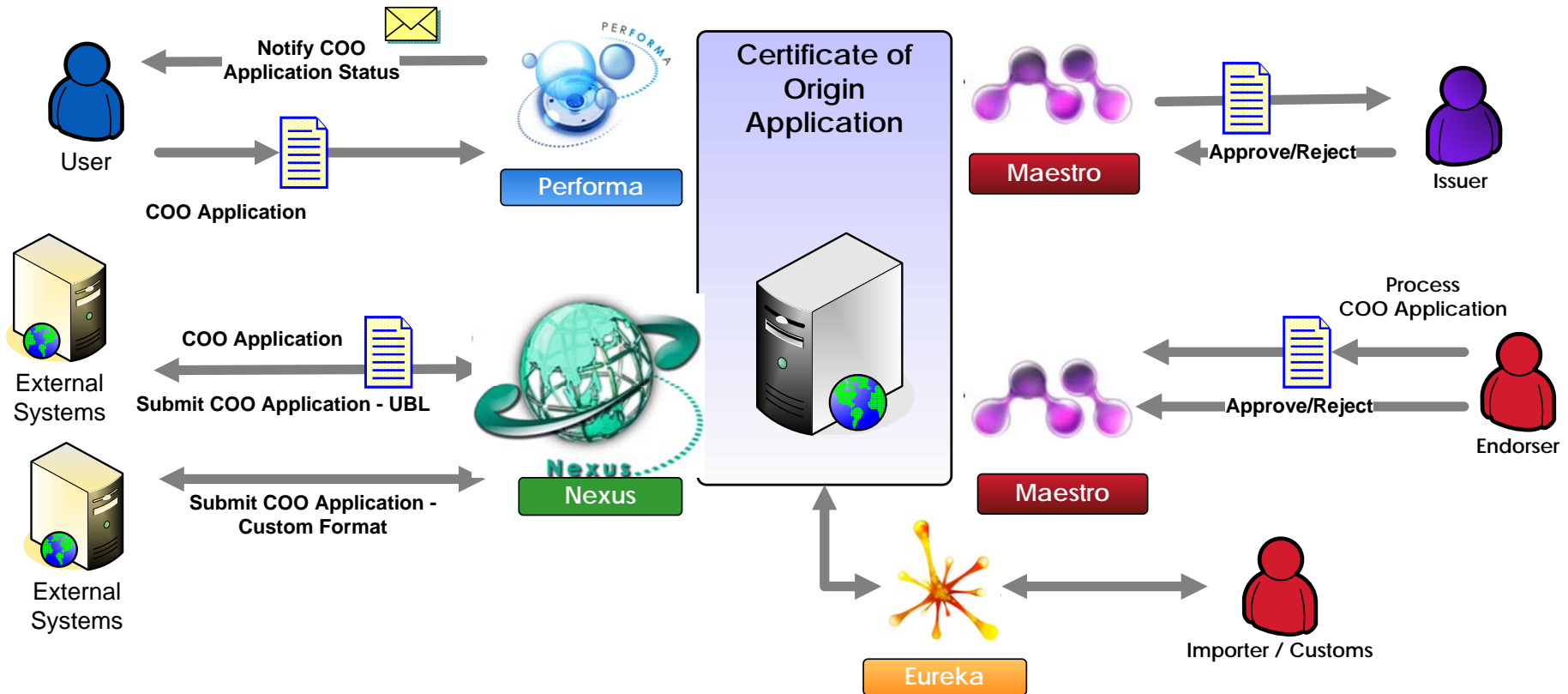












Provides the infrastructure for secure exchange of messages



Alerts via  
SMS and e-mail

Connect via Internet



Messages archived  
up to 7 years

**Message Hub**

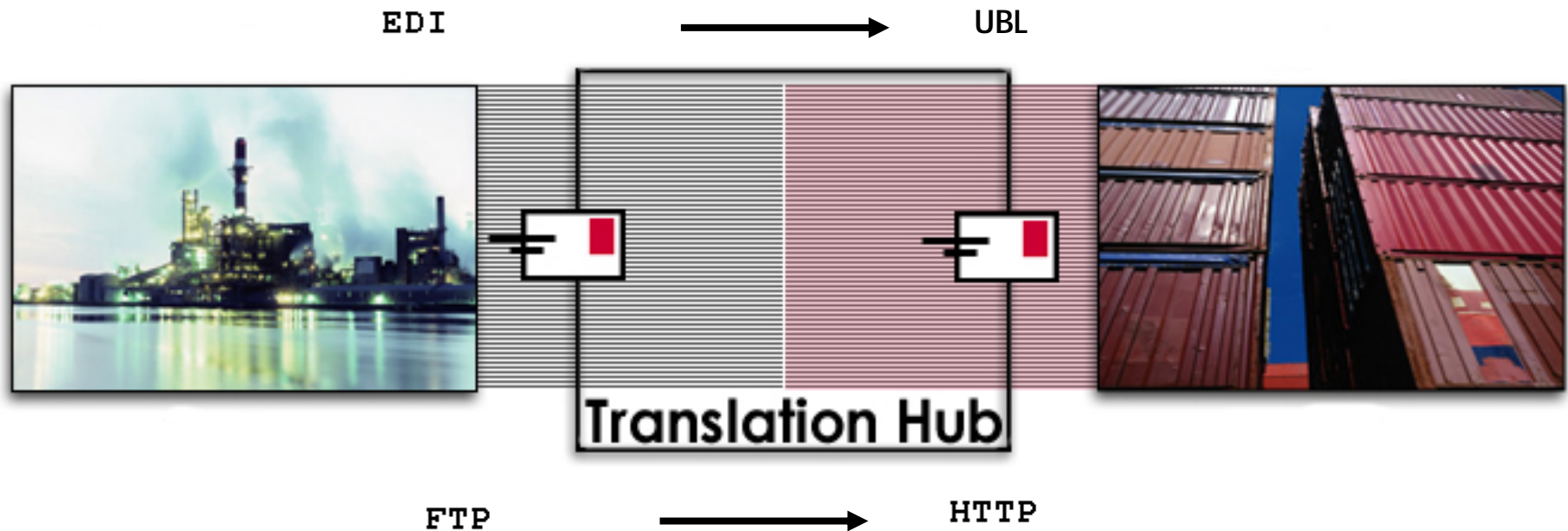
ebXML-enabled

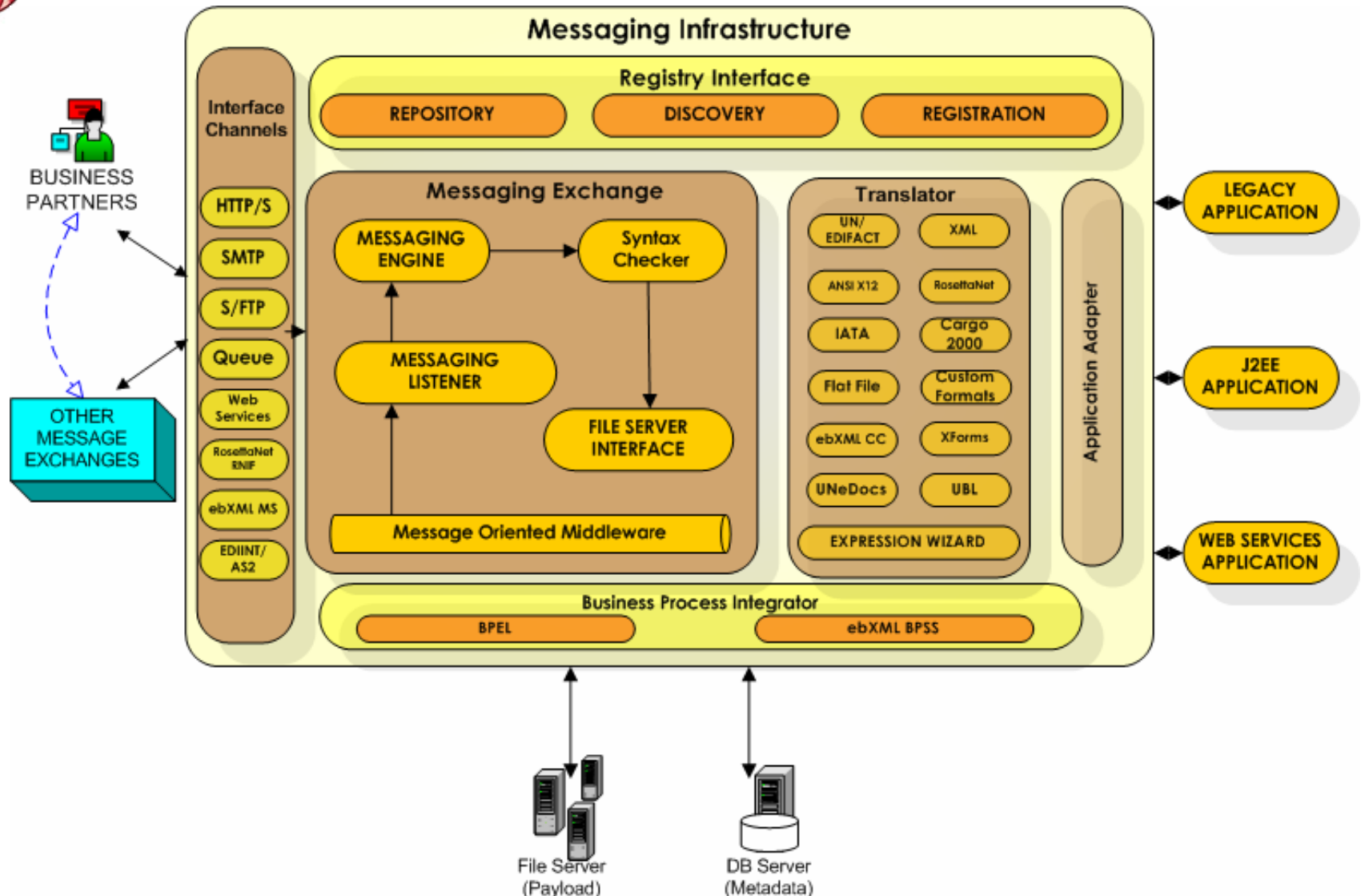


Connect via Internet



Converts application data from any format to any format  
in any protocol across industries









CrimsonLogic

# Nexus Transwork Studio – Translation Simplified

TransWork - Eclipse Platform

File Edit Tools Windows Help

Project Explorer View

- Project View
- MyProj
- Sample
- TYPE FILES
- MAP FILES
- Bax\_Global.tms
- Source
- Bax.tts
- Destination
- thubreport.tts
- CompaqInvRptEDI.tts
- SonyExport.tms
- SIMPMD1sl\_interface.tms
- Ex
- Test1

Source View

- Bax
- BaxEntry
- Message
- Header1
  - RecordTypeHH
  - DocumentMessageNo
  - EffectiveInventoryDate
  - PartyIDCode
  - PartyName
- Detail1
  - RecordTypeID
  - PartNo
  - VendorCode
  - Quantity
  - QuantityOnHand
- Trailer1
  - RecordTypeCOF

Destination View

- CompaqInvRptEDI
- Invrpt
- Interchange
  - Composite
  - Element
  - Decimal
  - ReleaseCharacter
  - Reserved
  - Terminator
- UNB
  - SyntaxID
  - SyntaxVersion
  - InterchangeSender
  - SenderID
  - IDCdQualifier
  - RoutingAddress

Properties

Property	Value
Class	Element
DataType	
DataType	String
Size	
MaxLength	2
MinLength	0
Desc	
Name	RecordTypeHH
Pad	
PadTo	LEFT
PadValue	<SP>
Range	
MaxOccur	3
MinOccur	1
RestrictionSyntax	
Restriction	None
Sign	No
TypeSyntax	
Initiator	None
ReleaseChar	None
Terminator	None

Library View

- TypeLibrary
- ASCII
- test
- Test.tts
- EDI
- Test.tts
- TestDemoTree.tts
- TestDemoTree\_1.tts
- X12
- Test.tts
- TestTreeD2k.tts

Expression Wizard

Double click on nodes to enter into rulebar

Right click on functions to know syntax

SourceTypeFile

- SNSAUT\_X
- Gro
- xml
- GroDocument
- Header
- Detail

DestinationTypeFile

- thubreport
- SNSAUT\_E
- thubreport1

Functions

- Mathematical
- DATE/TIME
- TEXT
- Logical
- Lookup
- Inspection
- Conversion
- Error handling

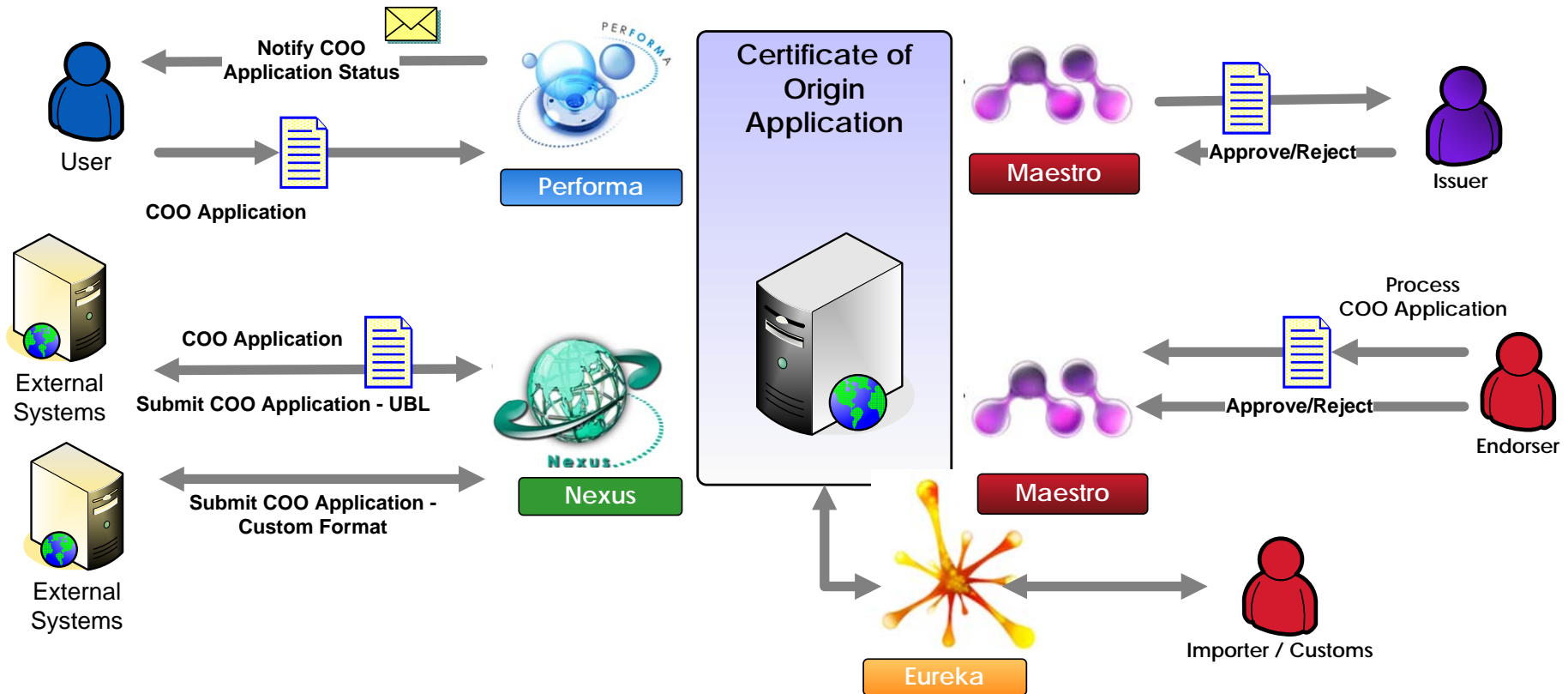
Operator

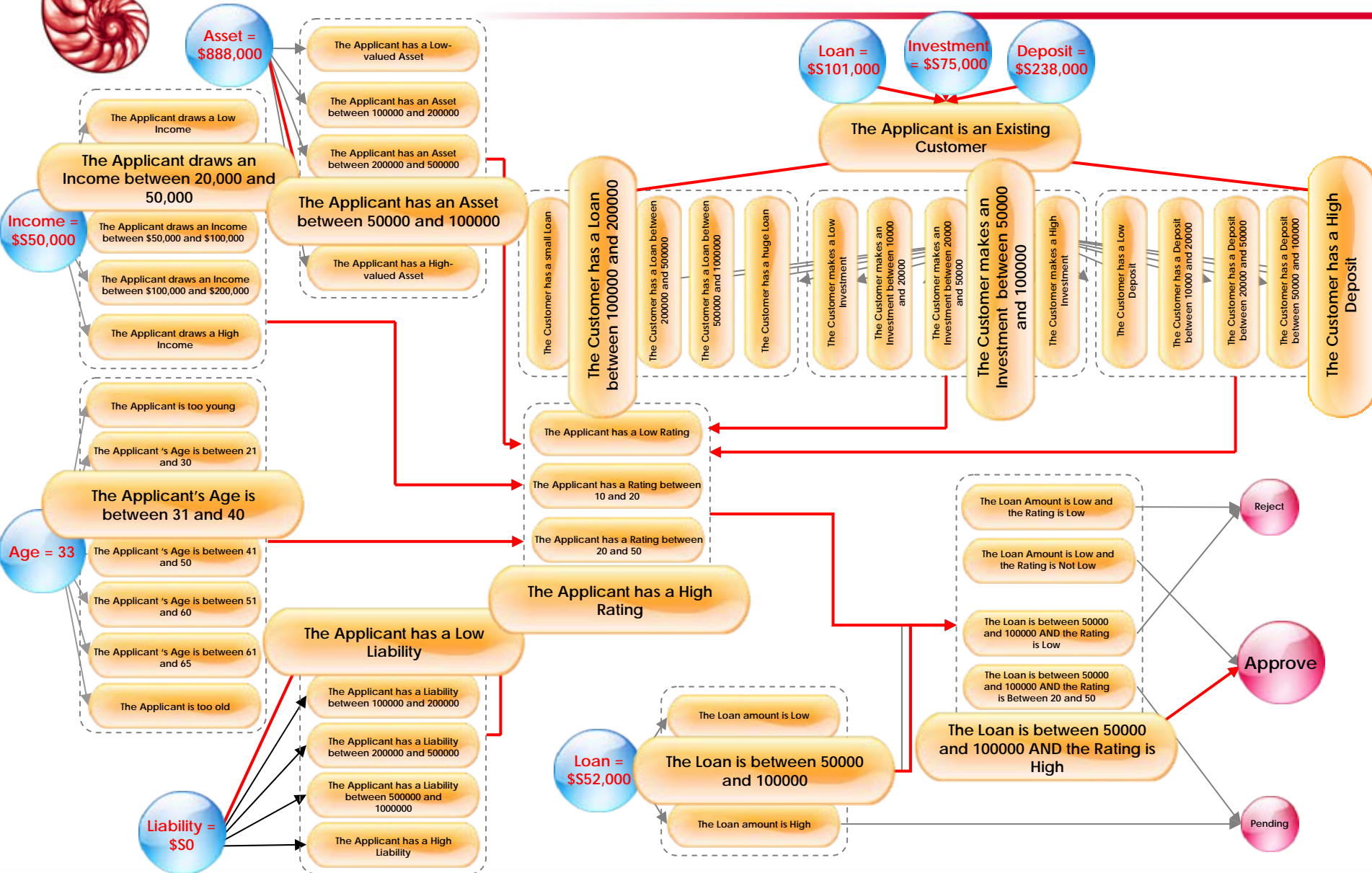
- Arithmetic
- Logical

NODECOUNTIN( GroDocument\$\$\$Gro\$\$\$SNSAUT\_X)

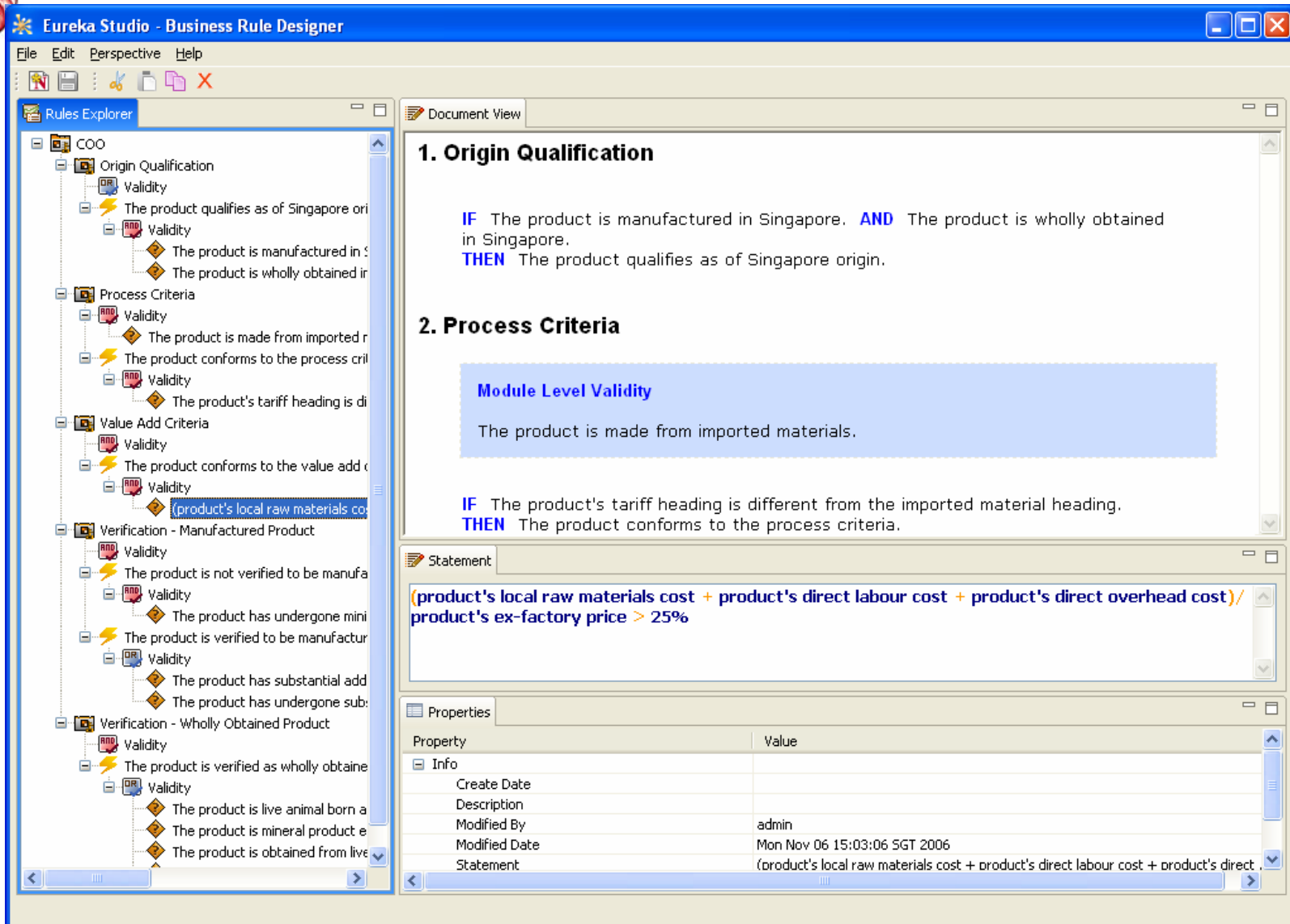
Clear Text

Finish Cancel









The screenshot shows the Eureka Studio - Business Rule Designer interface. The left pane displays a tree view of the rule structure, including sections like Origin Qualification, Process Criteria, Value Add Criteria, and Verification. The right pane shows the rule logic, divided into two main sections: 1. Origin Qualification and 2. Process Criteria. The Statement pane at the bottom displays a complex logical expression for a rule condition.

**1. Origin Qualification**

IF The product is manufactured in Singapore. AND The product is wholly obtained in Singapore.  
THEN The product qualifies as of Singapore origin.

**2. Process Criteria**

**Module Level Validity**

The product is made from imported materials.

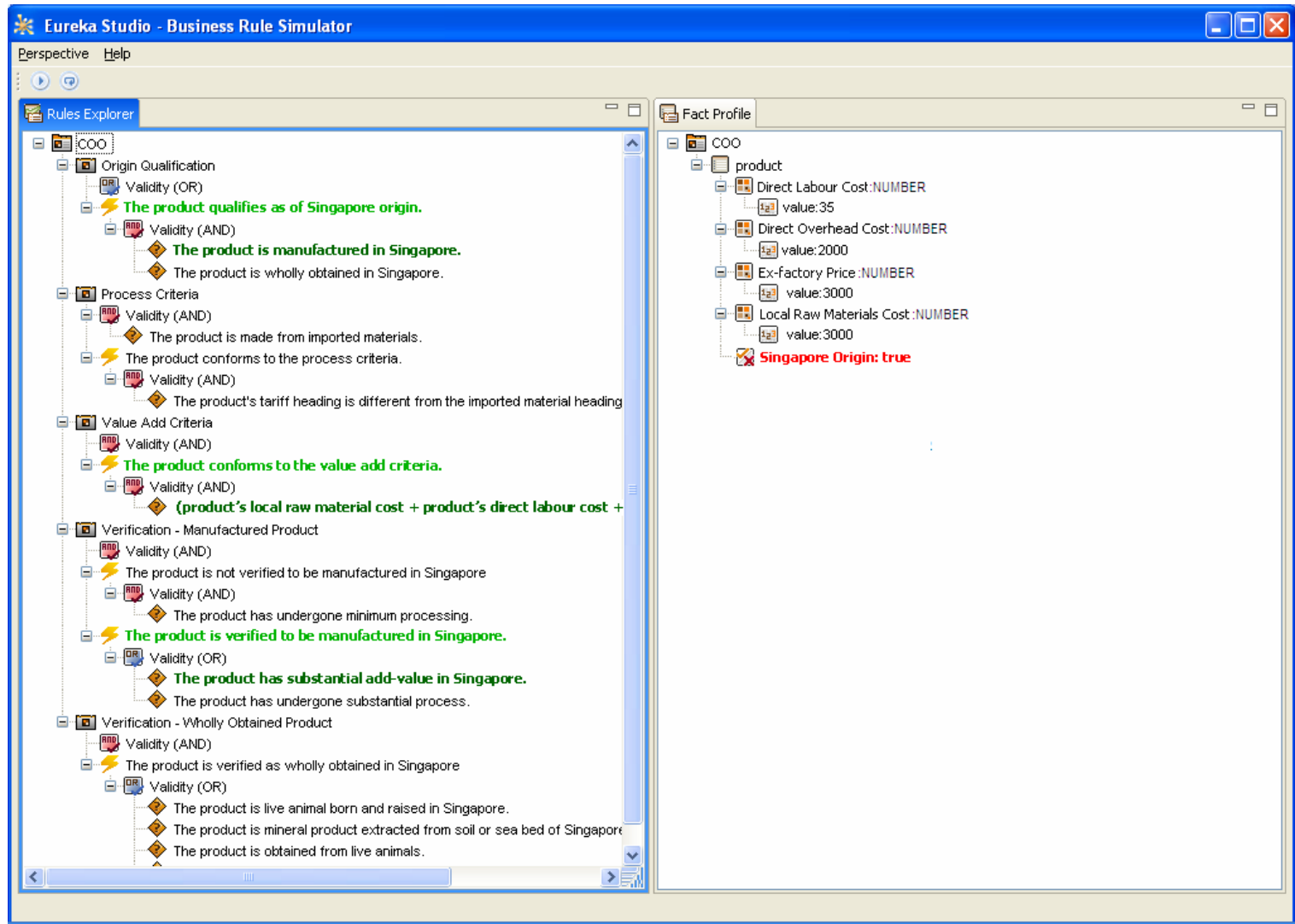
IF The product's tariff heading is different from the imported material heading.  
THEN The product conforms to the process criteria.

**Statement**

$$\frac{(\text{product's local raw materials cost} + \text{product's direct labour cost} + \text{product's direct overhead cost})}{\text{product's ex-factory price}} > 25\%$$

**Properties**

Property	Value
Create Date	
Description	
Modified By	admin
Modified Date	Mon Nov 06 15:03:06 SGT 2006
Statement	(product's local raw materials cost + product's direct labour cost + product's direct overhead cost) / product's ex-factory price > 25%



**Eureka Studio - Business Rule Simulator**

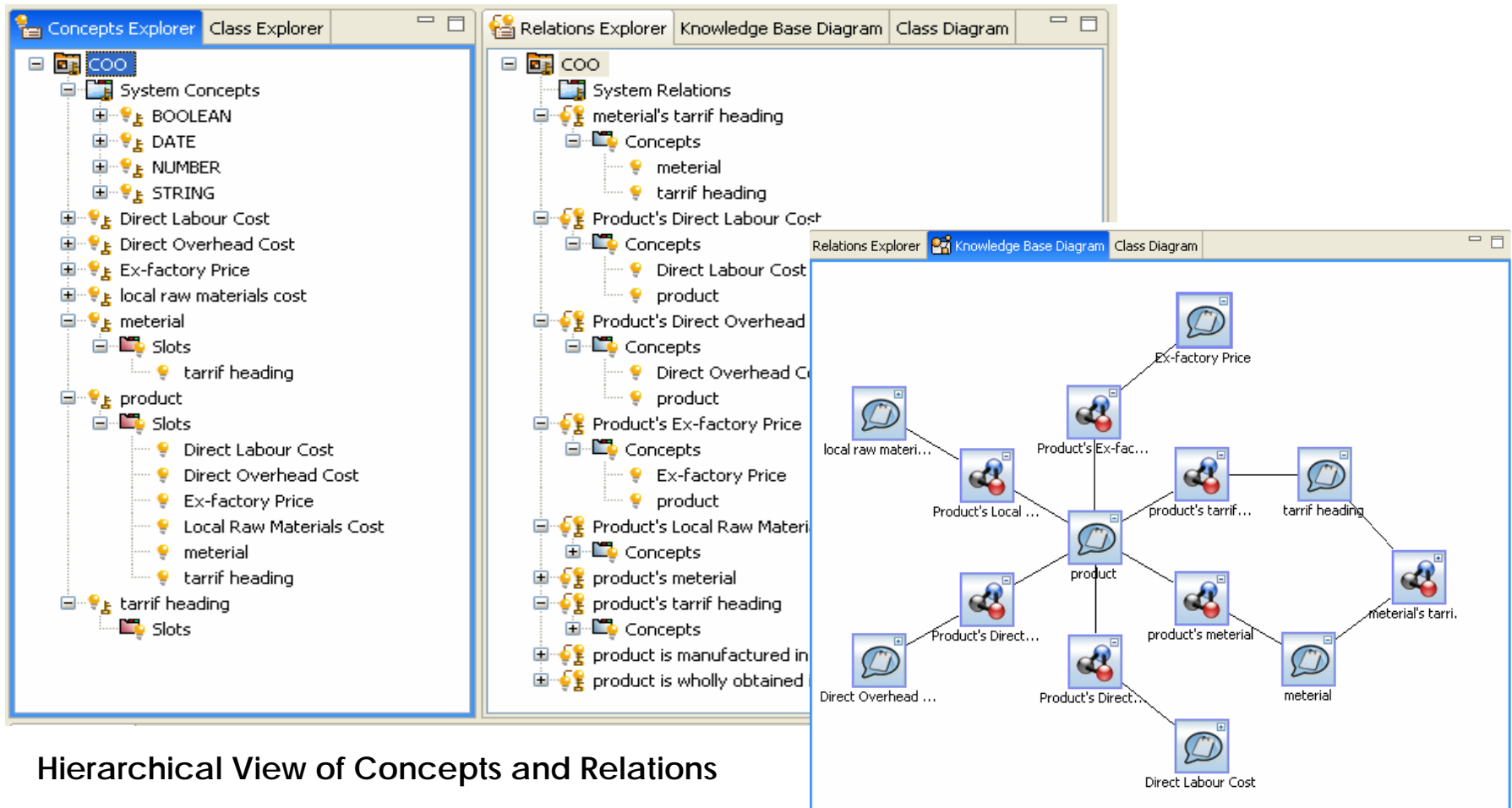
Perspective Help

**Rules Explorer**

- COO
  - Origin Qualification
    - Validity (OR)
      - The product qualifies as of Singapore origin.**
        - Validity (AND)
          - The product is manufactured in Singapore.**
            - The product is wholly obtained in Singapore.
    - Process Criteria
      - Validity (AND)
        - The product is made from imported materials.
      - The product conforms to the process criteria.
      - Validity (AND)
        - The product's tariff heading is different from the imported material heading
    - Value Add Criteria
      - Validity (AND)
        - The product conforms to the value add criteria.**
          - Validity (AND)
            - $\{ \text{product's local raw material cost} + \text{product's direct labour cost} + \dots \}$
    - Verification - Manufactured Product
      - Validity (AND)
        - The product is not verified to be manufactured in Singapore
        - Validity (AND)
          - The product has undergone minimum processing.
        - The product is verified to be manufactured in Singapore.**
          - Validity (OR)
            - The product has substantial add-value in Singapore.**
              - The product has undergone substantial process.
      - Verification - Wholly Obtained Product
        - Validity (AND)
          - The product is verified as wholly obtained in Singapore
          - Validity (OR)
            - The product is live animal born and raised in Singapore.
            - The product is mineral product extracted from soil or sea bed of Singapore
            - The product is obtained from live animals.

**Fact Profile**

  - COO
    - product
      - Direct Labour Cost:NUMBER
        - value:35
      - Direct Overhead Cost:NUMBER
        - value:2000
      - Ex-factory Price:NUMBER
        - value:3000
      - Local Raw Materials Cost:NUMBER
        - value:3000
      - Singapore Origin: true**



Hierarchical View of Concepts and Relations

Network View of Concepts and Relations

- **Business User Empowerment**
  - Faster Response to Business Changes
  - User-friendly and Easy-to-use
  - Harnessing Collective Intelligence
- **Better Efficiency, Greater Control**
  - Reduce Time and Cost
  - Common Platform
  - Segregation of Duties
  - Enhanced Security
- **Extensible and Scalable Architecture**
  - Better Interoperability and Seamless Connectivity
  - High Availability and Scalability



# Questions and Answers



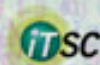
# Thank You

Visit us at [www.crimsonlogic.com](http://www.crimsonlogic.com)



# - Discussion Panel – Question and Answer

Organised by



An Industry Partnership Supported by  
SPRING Singapore & IDA Singapore

Hosted by





# End of UBL TC Forum

**Thank you!**

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