DHS Cloud Strategy and Trade Nexus

May 2011

Homeland
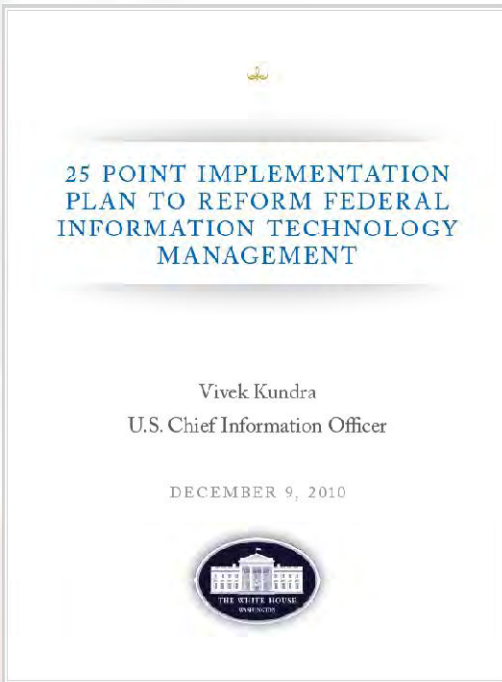Security

IT Reform @ DHS

Federal Plan → Departmental Plan → IT Reform @ DHS

25 POINT IMPLEMENTATION PLAN TO REFORM FEDERAL INFORMATION TECHNOLOGY MANAGEMENT

Vivek Kundra
U.S. Chief Information Officer

DECEMBER 9, 2010

	Action Item	Owner(s)	< 6 mos.	6-12 mos.	12-18 mos.	DHS	Component
	Achieving Operational Efficiency						
1	Complete detailed implementation plans to consolidate 800 data centers by 2015	OMB, Agencies	•				
2	Create a government-wide marketplace for data center availability	OMB, GSA			•		
3	Shift to a "Cloud First" policy	OMB, Agencies	•				
4	Stand-up contract vehicles for secure IaaS solutions	GSA	•				
5	Stand-up contract vehicles for "commodity" services	GSA		•			
6	Develop a strategy for shared services	Federal CIO		•			
	Effectively Managing Large-Scale IT Programs						
7	Design a formal IT program management career path	OPM, OMB	•				
8	Scale IT program management career path	OPM, Agencies			•		
9	Require Integrated Program Teams	OMB	•				
10	Launch a best practices collaboration platform	Federal CIO Council	•				
11	Launch technology fellows program	Federal CIO		•			
12	Enable IT program manager mobility across government and industry	OMB, CIO Council, OPM			•		
13	Design and develop cadre of specialized IT acquisition professionals	OMB, Agencies	•				
14	Identify IT acquisition best practices and adopt government-wide	OFPP	•				
15	Issue contracting guidance and templates to support modular development	OFPP		•			
16	Reduce barriers to entry for small innovative technology companies	SBA, GSA, OFPP			•		
17	Work with Congress to create IT budget models that align with modular development	OMB, Agencies	•				
18	Develop supporting materials and guidance for flexible IT budget models	OMB, CFO Council, CIO Council		•			
19	Work with Congress to scale flexible IT budget models more broadly	OMB, Agencies			•		
20	Work with Congress to consolidate Commodity IT spending under Agency CIO	OMB, Agencies	•				
21	Reform and strengthen Investment Review Boards	OMB, Agencies	•				
22	Redefine role of Agency CIOs and Federal CIO Council	Federal CIO, Agency CIOs	•				
23	Rollout "TechStat" model at bureau-level	Agency CIOs		•			
24	Launch "myth-busters" education campaign	OFPP	•				
25	Launch an interactive platform for pre-RFP agency-industry collaboration	GSA	•				

→ Cloud First

→ Rationalize IT Infrastructure

→ Governance & Best Practices

"Shift to a "Cloud First" policy"

Homeland Security

Private and Public Cloud Services

DHS Private Cloud Attributes

1. Services Based
2. Multi Tenant
3. Pay Per Use
4. Scalable and Elastic
5. Access
6. Compliant

DHS Cloud Services (Private/Public)

1. Software as a Service (SaaS)
2. Platform as a Service (PaaS)
3. Infrastructure as a Service (IaaS)
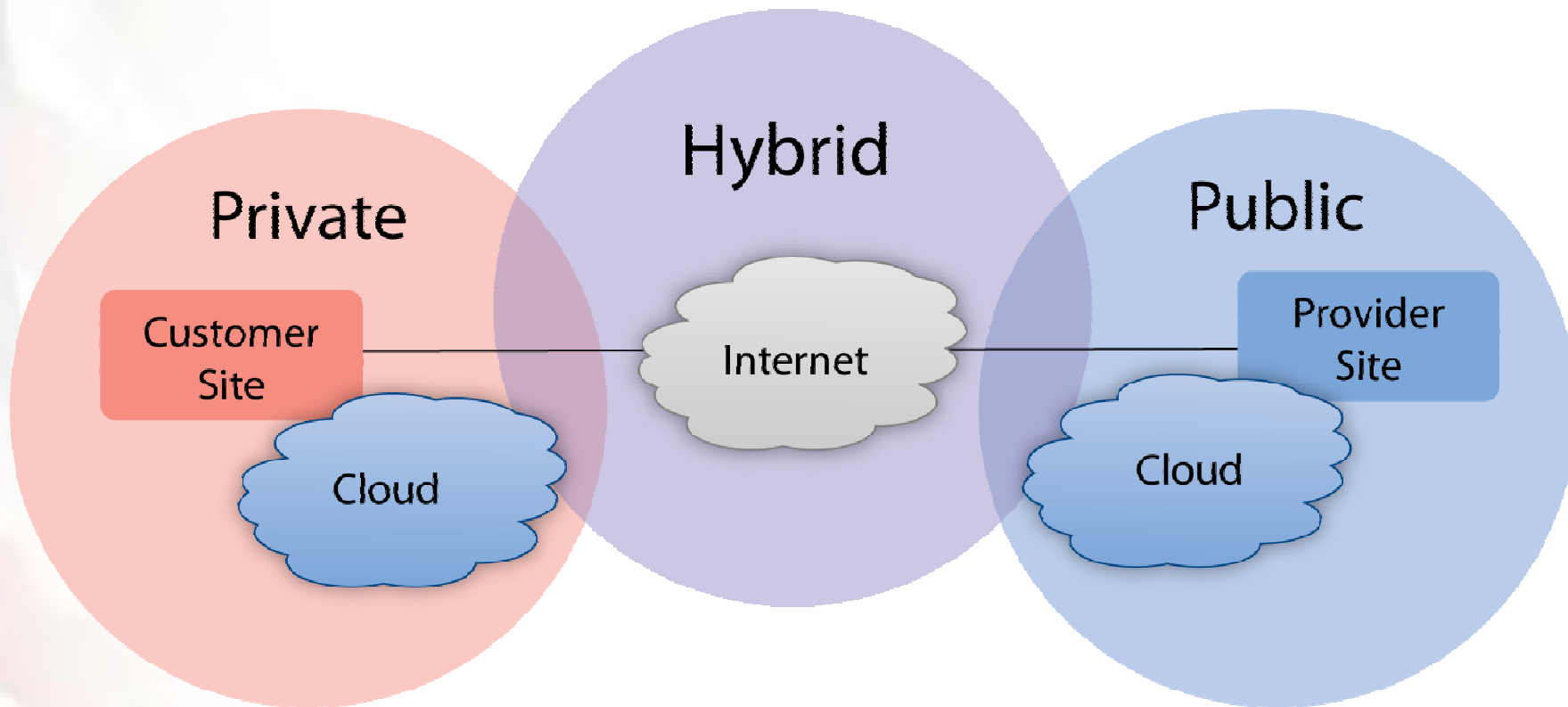4. Consulting as a Service (Caas)

Data Segmentation – Pivot Point

- Must Align the Right Data Segmentation to the Right Cloud Model
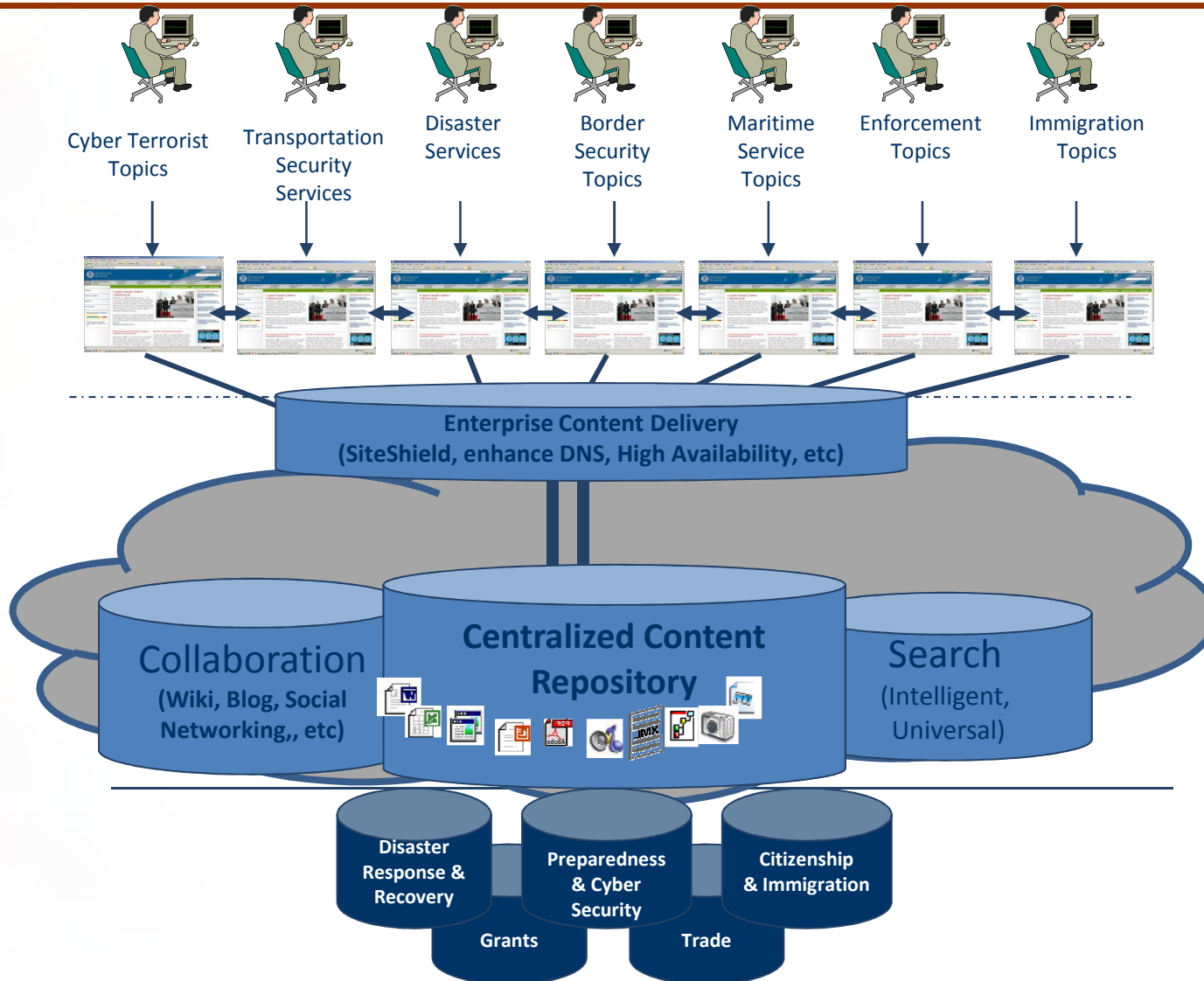- Must meet Security and Certification requirements

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Cloud Models

DHS Public Cloud Vision
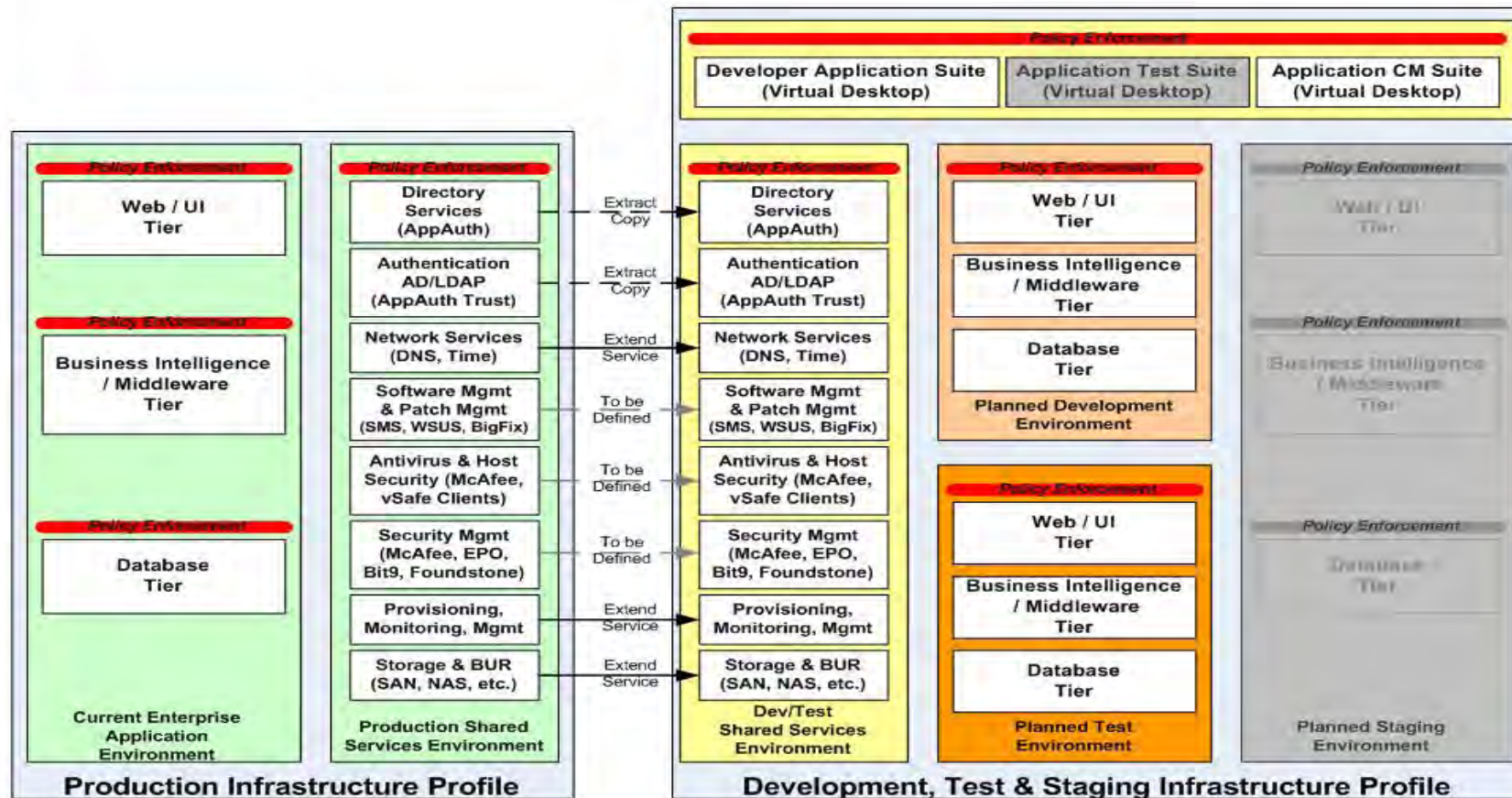
Challenges for Hosting Sensitive TRADE Applications

- Security And Privacy
- Access Controls and Data Segregation
- Compliance
- Logs and audit trails
- Business continuity and disaster recovery

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DHS Private Cloud: Infrastructure as a Service

DHS OCIO/ITSO & OCIO/ESDO
Development, Test, Staging & Production Infrastructure Profile

Developer Application Suite (Virtual Desktop) | **Application Test Suite** (Virtual Desktop) | **Application CM Suite** (Virtual Desktop)

Production Infrastructure Profile

Current Enterprise Application Environment
- Web / UI Tier
- Business Intelligence / Middleware Tier
- Database Tier

Production Shared Services Environment
- Directory Services (AppAuth)
- Authentication AD/LDAP (AppAuth Trust)
- Network Services (DNS, Time)
- Software Mgmt & Patch Mgmt (SMS, WSUS, BigFix)
- Antivirus & Host Security (McAfee, vSafe Clients)
- Security Mgmt (McAfee, EPO, Bit9, Foundstone)
- Provisioning, Monitoring, Mgmt
- Storage & BUR (SAN, NAS, etc.)

Development, Test & Staging Infrastructure Profile

Dev/Test Shared Services Environment
- Directory Services (AppAuth) — Extract Copy
- Authentication AD/LDAP (AppAuth Trust) — Extract Copy
- Network Services (DNS, Time) — Extend Service
- Software Mgmt & Patch Mgmt (SMS, WSUS, BigFix) — To be Defined
- Antivirus & Host Security (McAfee, vSafe Clients) — To be Defined
- Security Mgmt (McAfee, EPO, Bit9, Foundstone) — To be Defined
- Provisioning, Monitoring, Mgmt — Extend Service
- Storage & BUR (SAN, NAS, etc.) — Extend Service

Planned Development Environment
- Web / UI Tier
- Business Intelligence / Middleware Tier
- Database Tier

Planned Test Environment
- Web / UI Tier
- Business Intelligence / Middleware Tier
- Database Tier

Planned Staging Environment
- Web / UI Tier
- Business Intelligence / Middleware Tier
- Database Tier

Policy Enforcement (on all tiers)

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Self Check: Identity Proofing in the Cloud

US Workforce:
Self Check will be available to the entire US workforce, regardless of employment with an E-Verify employer

Web Based:
Self Check will initially be offered over the Internet and other channels are being investigated

Identity Assurance: Level 2
Identity Proofing, including knowledge based questioning, ensures Self Check is only used by identity information owners

Fraud Prevention:
A user is only able to use Self Check if he is able to successfully authenticate his identity

Employment Eligibility Verification:
Self Check returns either an affirmative response or any data mismatches found in DHS or SSA records

Self Check Results
- ☑ Sample
- ☑ Sample
- ☑ Sample
- ☒ Sample

Mismatch Resolution:
Users receive instructions on how to correct any data mismatches in SSA or DHS records

Homeland Security

Norbert Kouwenhoven

IBM Global Customs Solutions Leader
WCO Conference, May 11th, 2011

Cloud Strategies and Solutions for Customs:

From smoke to cloud …..

An IBM point of view

WCO conference
May 11th, 2011
Norbert Kouwenhoven

IBM

What is ´Cloud technology´?

Multi -Tenant

Tenant | Tenant

Multi Tenant application

WAS & DB2 server

OS

Hardware

shared application

Multi Application Instance

Tenant | Tenant

Application Instance | Application Instance

WAS & DB2 server

OS

Hardware

shared middleware

Multi Stack

Tenant | Tenant

Application Instance | Application Instance

WAS & DB2 | WAS & DB2

OS

Hardware

shared OS

Multi - VM

Tenant | Tenant

Application Instance | Application Instance

WAS & DB2 | WAS & DB2

OS | OS

Hardware

shared hardware

Sharing

Isolation

SAAS

Collaboration | CRM/ERP/HR

Business Processes | Industry Applications

Software as a Service

PAAS

Web 2.0 Application Runtime | Java Runtime

Middleware | Database | Development Tooling

Platform as a Service

Clouds are all about sharing – the level of sharing determines the type of cloud

IAAS

Servers | Data Center Fabric

Networking | Storage

Infrastructure as a Service

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What about ´Private´ and ´Public´ cloud?

The spectrum of deployment options for cloud computing:

Private
IT capabilities are provided "as a service," over an intranet, within the enterprise and behind the firewall

Public
IT activities / functions are provided "as a service," over the Internet

Enterprise data center	Enterprise data center	Enterprise	Enterprise	Users
Private cloud	Managed private cloud	Hosted private cloud	A / B — Shared cloud services	A / B — Public cloud services
	Third-party operated	Third-party hosted and operated		
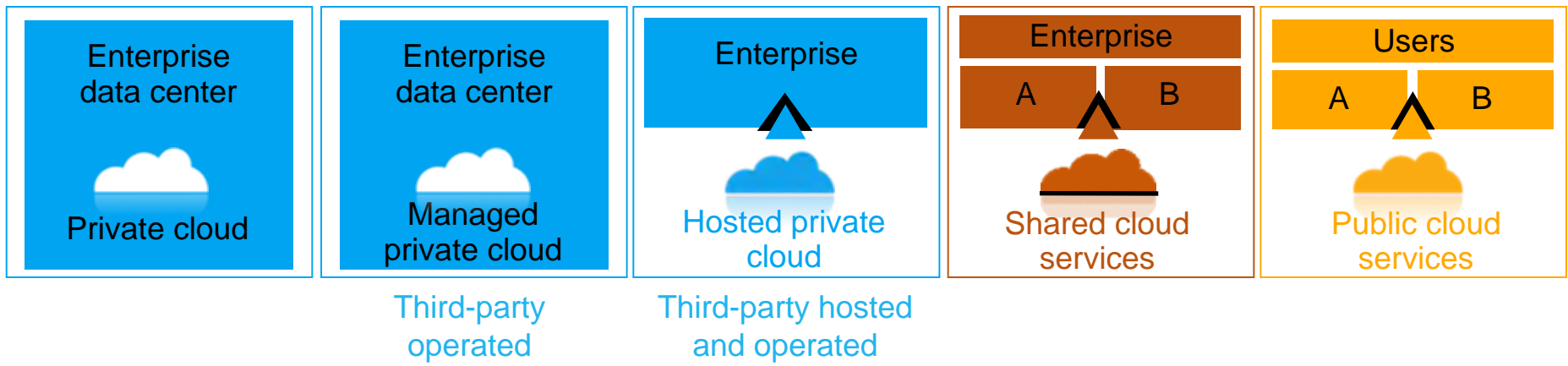
Hybrid
Internal and external service delivery methods are integrated

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How does Cloud "work"?

Direct access to the environment

Services Portal

Final User

billing

Virtualized "Cloud" Infrastructure

Services Portfolio

Automatised Provisioning

Software & Hardware Resources

VIRTUALISATION	+	**STANDARDISATION**	+	**AUTOMATION**	=	**Costs**

Flexibility

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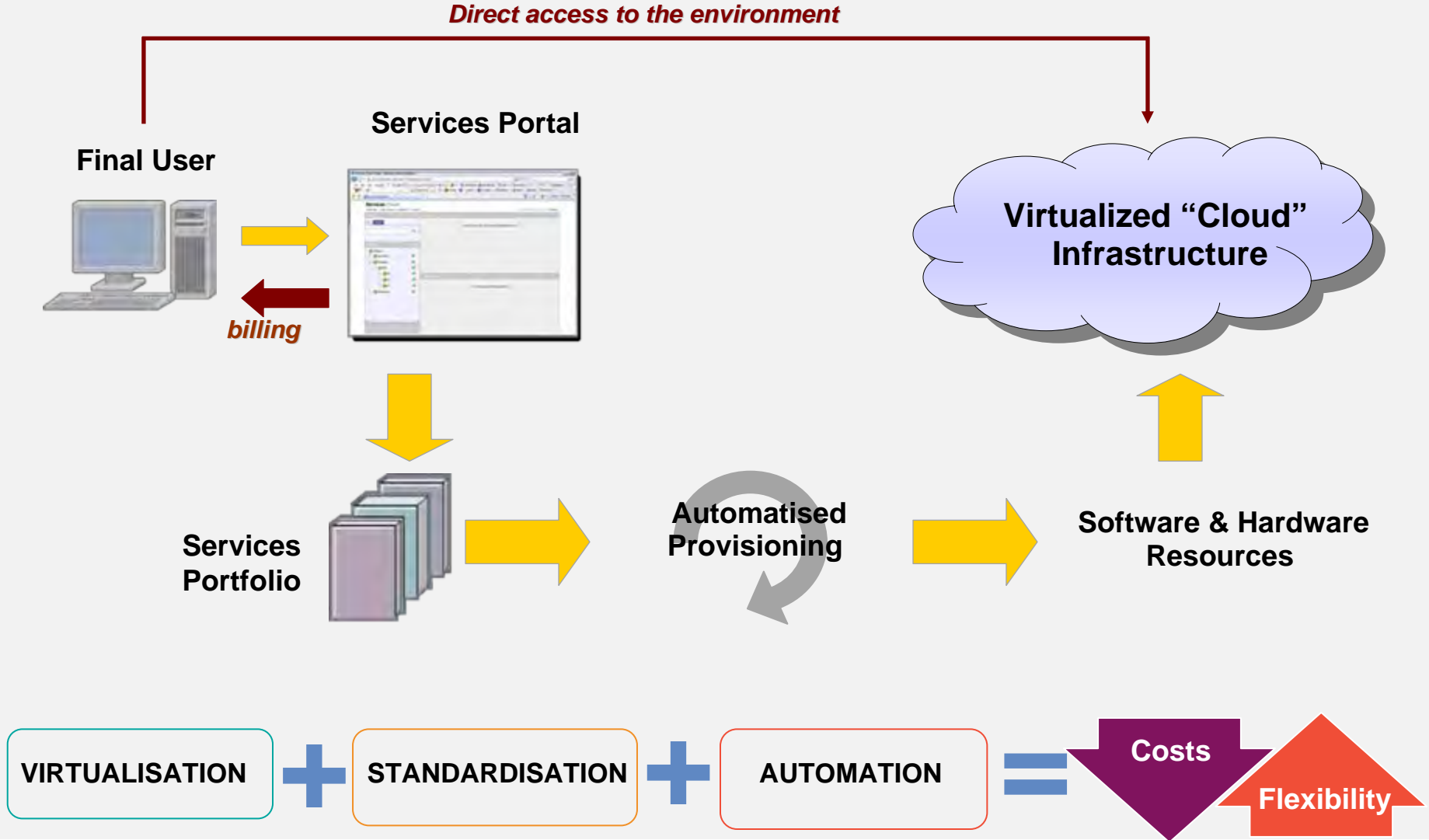
Ask yourself what *you* would do if…

… you could give any of your clients (traders, LSPs,…) access to any of your services anytime, anywhere, by any means?

… you had on demand access to unlimited computing and analytics power?

… you could easily and seamlessly connect and collaborate with businesses and government organizations wherever they happened to be?

… you could inexpensively and rapidly develop and experiment with new services?

VIRTUALIZATION **+** **AUTOMATION** **+** **STANDARDIZATION** **=** Cost / Flexibility
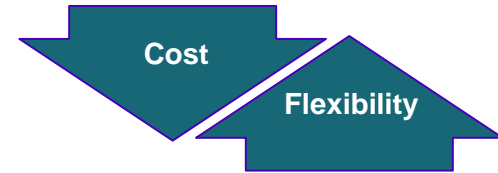
So what's <u>your</u> cloud strategy?

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How to develop & implement your own strategy?

| Analysis & Vision | Strategy Design | Strategic Roadmap |
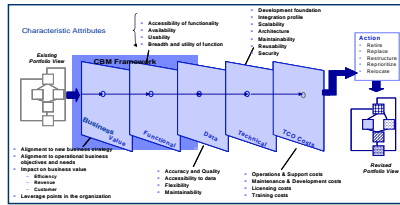
Cloud Strategy Outline — **Cloud Services Prioritization** — **Business Case** — **Execute**

Cloud Readiness Report — **Cloud Strategy** — **Cloud Migration Roadmap**
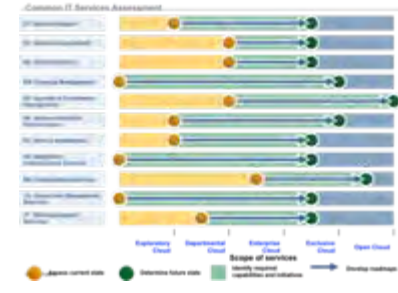
| ±3 weeks | ± 4 weeks | ±3 weeks |

IBM Cloud Strategy Method

Examples...

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eCustoms Framework

Single Window
- Single View
- Single Reporting
- Coordination

Distribution
- Risk
- Obligation
- Inspection
- Clearance

Data
- External Registries
- External reporting
- Intelligence

Trade Point
- Registration
- Declarations
- Tools

Transit	Entry	Exit	Excise	Import	Export

Movement Declaration Processing

Trade Declaration Processing

Large Account Processing

Warehouse Processing

- Risk control
- Obligation control
- Inspection control
- Release control

Analytics
- Investigative
- Predictive
- Learning
- Dashboards

External Coordination

SOA Foundation

Information Foundation

Metadata and Analytics foundation

Collaboration
- Movement coordination
- Single Access Point

Inspect
- Planning
- Inspection support

Guaran-tees (GMS)
- Accounting

Risk (AS-IS)
- Event risk

Tariff
- Duties
- Quota
- Anti dumping
- Surveillance

Licenses
- Registries
- Licenses

Warehouse
- Data
- Statistics
- Documents

Configuration
- Reporting
- Monitoring
- Customization

Private cloud : Suitable for components with major national customizations or high security requirements, e.g.:

Three types of private cloud:

- **Private cloud**: Private, implemented on your premises, you run/manage it

- **Managed private cloud**: Third-party operated, owned by you, mission critical, packaged applications

- **Hosted private cloud**: Third-party owned and operated, standardization, centralization, security, internal network

Single Window
- Single View
- Single Reporting
- Coordination

Trade Point
- Registration
- Declarations
- Tools

Transit | Entry | Exit | Excise | **Import** | **Export**

Analytics
- Investigative
- Predictive
- Learning
- Dashboards

Distribution
- Risk
- Obligation
- Inspection
- Clearance

External Coordination

Metadata and Analytics foundation

Data
- External Registries
- External reporting
- Intelligence

Collaboration
- Movement coordination
- Single Access Point

Inspect
- Planning
- Inspection support
- Accounting

Guaran-tees (GMS)

Risk (AS-IS)
- Event risk

Tariff
- Duties
- Quota
- Anti dumping
- Surveillance

Licenses
- Registries
- Licenses

Warehouse
- Data
- Statistics
- Documents

Configuration
- Reporting
- Monitoring
- Customization

Enterprise data center

Private cloud

Enterprise data center

Managed private cloud

Enterprise

Hosted private cloud

Enterprise A | Enterprise B

Shared cloud services

Users

A | B

Public cloud services

Shared Cloud: Suitable for economic regions with standardized customs business processes, e.g.:

Shared cloud services can be accessed by multiple administrations, thereby reducing costs:

- Mix of shared and dedicated resources
- Shared facility and staff
- Virtual private network (VPN) access
- Subscription or membership based

Single Window
- Single View
- Single Reporting
- Coordination

Gateway

Trade Point
- Registration
- Declarations
- Tools

Transit Entry Exit Excise Import Export

Analytics
- Investigative
- Predictive
- Learning
- Dashboards

Movement Declaration

Trade Declaration

Large Account

Warehouse

Distribution
- Risk
- Obligation
- Inspection
- Clearance

External Coordination

Metadata and Analytics foundation

Reference Data

Collaboration
- Movement coordination
- Single Access Point

Inspection
- Planning
- Inspection support

Revenue
- Valuation
- Guarantees
- Levy/Collect
- Accounting

Risk (TO-BE)

Tariff (regional)

Client Register

- Anti dumping
- Surveillance

Warehouse
- Data
- Statistics
- Documents

Configuration
- Reporting
- Monitoring
- Customization

reporting
- Intelligence

- Event risk

- Licenses

Enterprise data center

Private cloud

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Enterprise data center

Managed private cloud

Enterprise

Hosted private cloud

Enterprise A   Enterprise B

Shared cloud services

Users

A   B

Public cloud services

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What will tomorrow´s Customs Agency CIO see?

Users

Delivery Channels

public

Cloud Environment: NOT in own organization!

shared

Customs business applications

| Client Register | Tariff | Transit | Entry | Exit | Excise |

| Guaran-tees (GMS) | Import | Export | private | Supply chain data |
| | Inspect | Licenses | | Ref Data |

Cloud Environment Roles

Saas Administrator

SaaS Consumer Business Mgr

Consumer of SaaS

BAU Application Users

Electronic Business Gateway

Process services   Collaboration services   Analytics services   …

Shared middleware services

Infrastructure services

Integration Layer

Other Enterprise Resources

| Data Stores | Legacy Applications | ... | Non Cloud Systems | External Entities |

Business Partner Systems

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Call for Action:

3 ideas for immediate implementation

TARIFF-online on a Public Cloud: 27 European Member States implement the same Integrated Tariff of the European Communities

Business Challenge

- TARIC comprises all customs duty rates and certain EU rules applicable to the EU's external trade. National extension adds national taxes
- 27 countries need the same business application. No high security requirements, as the database can be accessed by traders online.

What you want

- Be compliant with EU requirements
- TARIFF data management
- Support for traders
- Reduce IT costs (application development, maintenance, personnel)
- Know what it will cost
- Fast Return on Investment

Our cloud offering provides a solution

- TARIC database as a shared cloud service for multiple customs administrations
    - Query duty data & calculate duties
- EU compliant, including updates (new releases)
- Outsource tariff data management
- National measures can be added through web interface
- Flexibility in pricing: fixed price or pay per use
- No investment in ADM and infrastructure. Countries share costs of standardized application.
- Fast deployment, no development cycle
- Option: public cloud, also accessible to traders
- Same service for quota handling and surveillance reporting (statistics)

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Shipment Information Sharing Service on Shared Private Cloud: SISS to realize the Authorized Supply Chain (secure trade lanes)

Products **Containers** **Documents** **Participants**

SISS Governance Process and Facilities
(Directory Service, Data Query, Process Choreography)

Exporter | LSP | Terminal | Customs | Carrier | Terminal | Customs | Importer
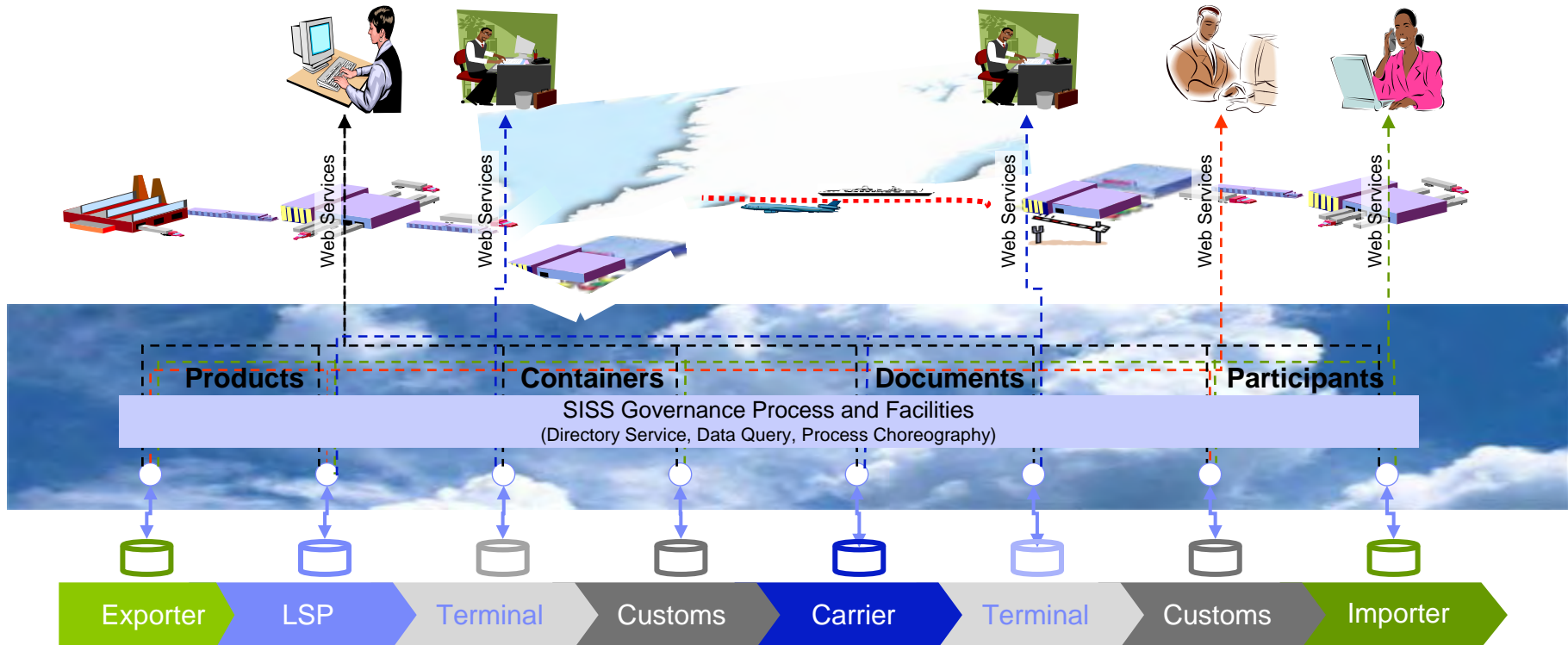
Supply chain partners and government share end-to-end supply chain information of authorized supply chains. Standardized information services are available for all authorized parties via a cloud

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Risk Assessment on a Private Cloud, in a world of distributed information sources and a plethora of threats

Business Challenge

- Risk assessment is characterized by a large variety of information sources and dynamic world requiring constant learning and regular changes of risk profiles
- Risk management techniques are highly sophisticated, and self development is complex and expensive
- COTS solutions exist on the market

What you want

- Identify risks on time
- Learning cycle
- A risk management system that handles information from multiple sources of various organizations (e.g., customs, police)
- Secure data

Our cloud offering provides a solution

- Standardized risk assessment service
- As a private cloud service for your administration
- Tailored to your administration's situation
    - Option: Initial set of risk profiles
    - Flexibility: Manage your own risk profiles
- Security is guaranteed
    - Private cloud (either on your premises, or on ours)
    - Security services
- No investment in ADM and infrastructure. Countries share costs of standardized application.
- Fast deployment, no development cycle. No need to re-invent the wheel

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What role can IBM play?
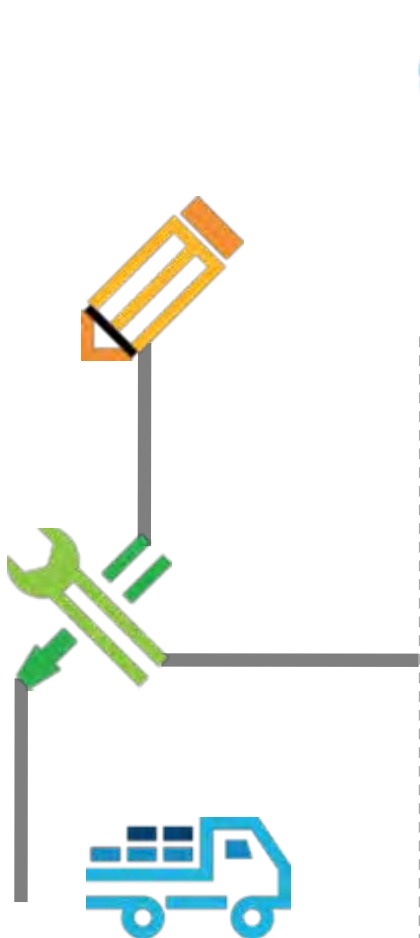
IBM provides a comprehensive set of capabilities to accelerate a client's "cloud journey":

▶ Consulting and enabling services
Experience and expertise to help plan, build and deliver cloud services

▶ Cloud services
To optimize your business

▶ Technologies
To plan, build, deliver and manage cloud services

For more information, please visit:
ibm.com/cloud

Back-up slides

What is "Cloud" technology ?

*Cloud computing is a model for enabling convenient, **on-demand network access** to a **shared pool** of **configurable** computing resources (e.g., networks, servers, storage, applications, and services) that can be **rapidly provided** and **released with minimal management effort** or service provider interaction.*

"Cloud" is:

- a new consumption and delivery model inspired by consumer Internet services.

"Cloud" enables:

- Self-service
- Sourcing options
- Economies-of-scale

"Cloud" represents:

- The industrialization of delivery for IT supported services

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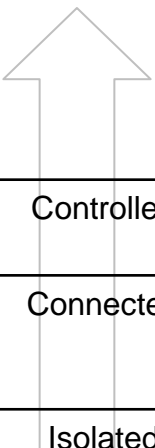
Cloud solutions go far beyond Customs Business Applications: desktop services, collaboration services and more

- IBM Smart Analytics Cloud
- LotusLive Collaboration Suite
- IBM Smart Cloud Enterprise
- IBM Managed Security Services

Existing services and third-party services

Customs Business Applications

| **Process services** | **Collaboration services** | **Analytics services** | **...** |

Shared middleware services

Infrastructure services

Integrated service management and Security

Business planning and lifecycle management services

- IBM Smart Cloud for Storage
- IBM Smart Cloud for Desktop

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Industry integration towards 'networked' business requires a cloud based platform

Factory based production	eBusiness	networked Business
19980 - 1995	1995 - 2010	2010 - 2025
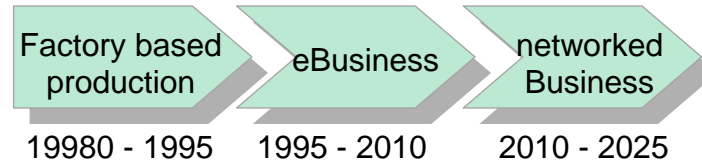
Maturity Level	Business operating environment	IT operating environment
Optimized	'End to end' networks of optimized functions and information in trade and logistics communities	**Cloud based solutions provided by industry specific suppliers**
Controlled	Distribution of business functions and information into the network	Modular systems with a mix of internal and external suppliers
Connected	Coordination of trade/movement information between partners	Common parts appearing in systems
Isolated	One on one' exchange of trade/movement information between trade, logistics and government parties.	Silo based IT systems aimed at specific types of business flows and regimes.

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Cloud: Doing more with less, with reduced risk, higher quality and maximum business flexibility

Capability	From		To
Server/Storage Utilization	10-20%		70-90%
Self service	None		Unlimited
Test Provisioning	Weeks		Minutes
Change Management	Months		Days/Hours
Release Management	Weeks		Minutes
Metering/Billing	Fixed cost model		Granular
Payback period for new services	Years		Months

Cloud is a synergistic fusion which accelerates business value across a wide variety of domains.
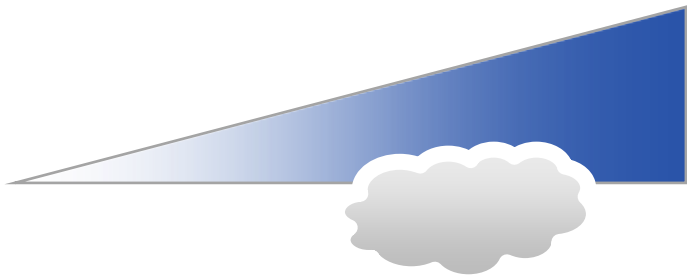
Legacy environments

Cloud enabled enterprise

There is a spectrum of deployment options

	Third-party hosted	**Third-party hosted and operated**		
Enterprise data center / Private cloud	**Enterprise data center** / Managed private cloud	**Enterprise** / Hosted private cloud	Enterprise A / Enterprise B / Shared cloud services	Users / A / B / Public cloud services
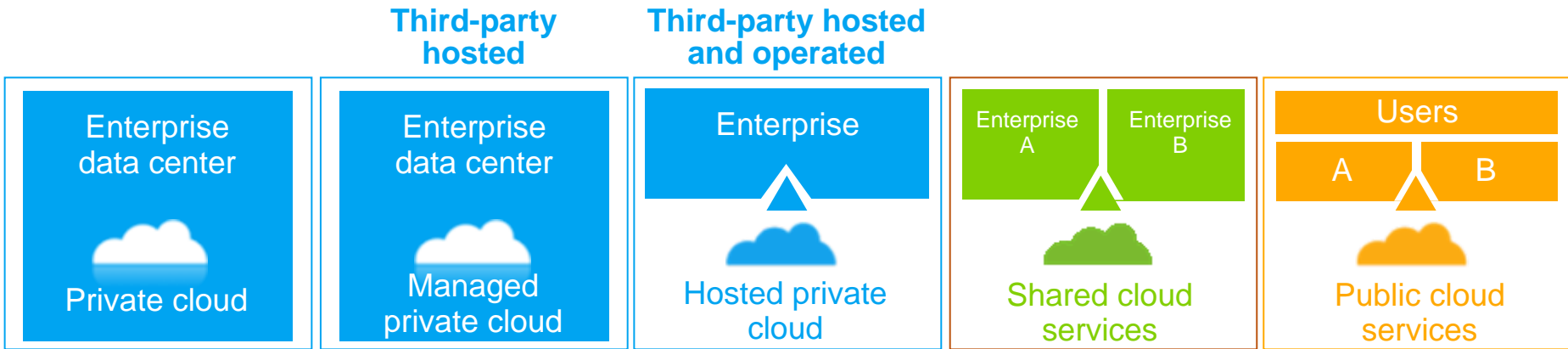
- Private
- Implemented on client premises
- Client runs/ manages

- Third-party operated
- Enterprise owned
- Mission critical
- Packaged applications

- Third-party owned and operated
- Standardization
- Centralization
- Security
- Internal network

- Mix of shared and dedicated resources
- Shared facility and staff
- Virtual private network (VPN) access
- Subscription or membership based

- Shared resources
- Elastic scaling
- Pay as you go
- Public Internet

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Ready-to-consume cloud services from IBM

IBM Smart Business on the IBM Cloud

Business processes	• **BPM BlueWorks** • **IBM Smart Business Cloud for Expense Reporting**
Collaboration	• **IBM LotusLive**
Desktop and devices	• **IBM Smart Business Cloud for Desktop** • **IBM Smart Business End User Support**
Development and test	• **IBM Smart Business Cloud for Development and Test**
Infrastructure compute	• **Computing on Demand** • **IBM Managed Security Services** • **IBM Tivoli Live**
Infrastructure storage	• **IBM Information Protection Services**
Software as a Service	• **IBM WebSphere Application Server** • **IBM DB2** • **IBM WebSphere sMash** • **IBM Informix Dynamic Server** • **IBM WebSphere Portal** • **Lotus Domino** • **Lotus Web Content Mgmt**

Customs and the Cloud

Demystifying the Cloud

World Customs Organisation ICT Conference 2011

Seattle, USA

accenture

High performance. Delivered.

Jim Canham

Director

Global Customs Industry

Accenture

..... allows users – from citizens, traders, to departmental employees, to IT staff – to obtain computing services and capabilities through the internet, regardless of the users' physical location.

These services, from raw infrastructure to complete business processes can be purchased and delivered through web interfaces and turned on and off as required.

Jim Canham

Director

Global Customs Industry

Accenture
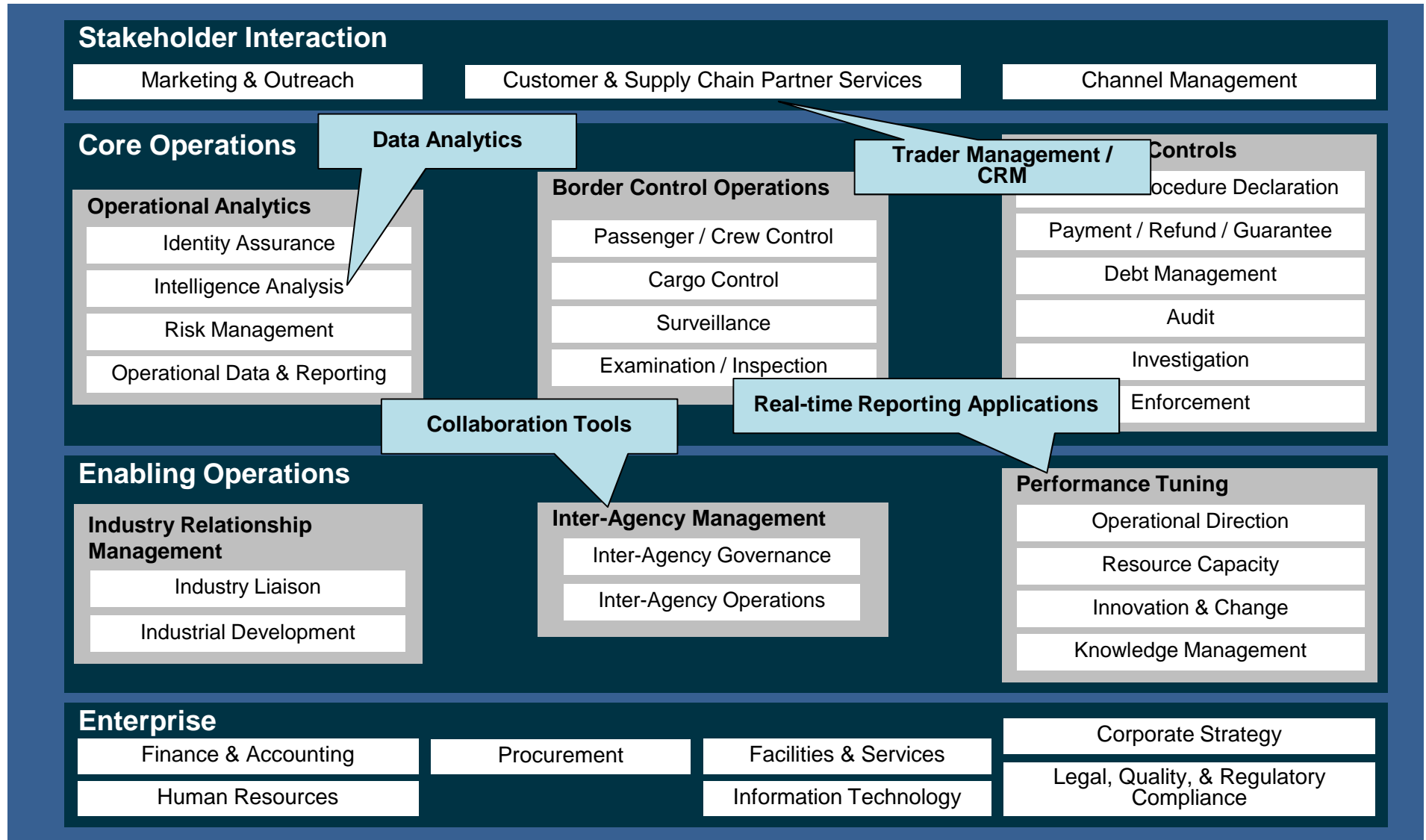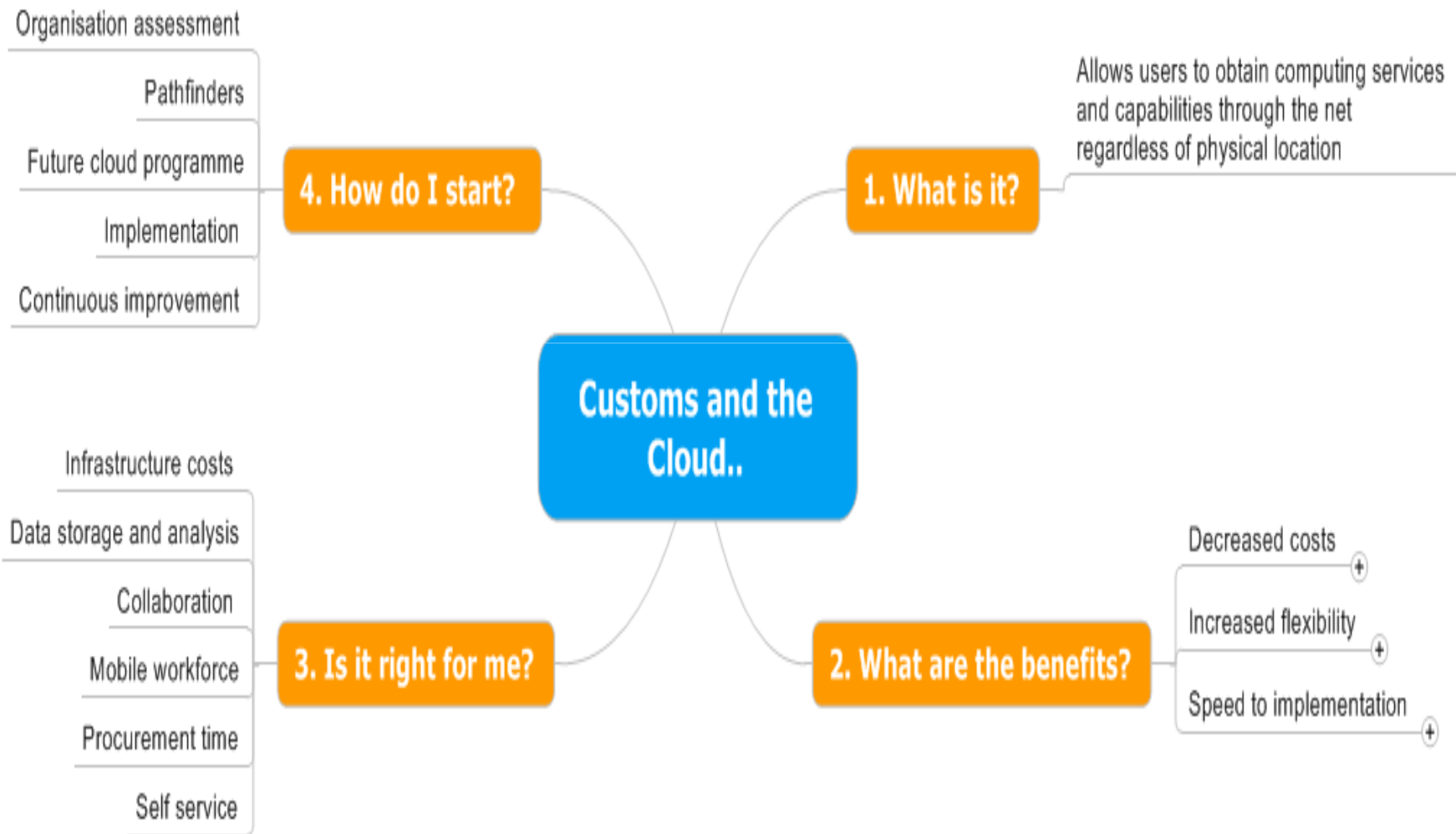
United Nations Economic Commission for Europe

New concepts for information exchange in international supply chains

Why are Governments different…

Seattle, May 2011

1

Agenda

1. UNECE

2. Governments

3. Towards a cloud based, information driven supply chain

4. Complementary role of Government, Business and International Organizations

5. Single Window – a case study for cloud computing?

6. Conclusions

UN Economic Commission for Europe (UNECE)

Trusteeship Council	Security Council	General Assembly	Economic and Social Council	International Court of Justice	Secretariat

FUNCTIONAL COMMISSIONS:

- Human rights
- Narcotic drugs
- Crime prevention and criminal justice
- Sustainable development
- Etc…..

REGIONAL COMMISSIONS

Economic Commission for Africa

Economic Commission for Europe

Economic Commission for Latin American and Caribbean

Economic and Social Commission for Asia and the Pacific

Economic and Social Commission for Western Asia

PROGRAMMES AND FUNDS

- UNCTAD
- UNDP
- UNEP
- UNICEF
- UNCDF
- …….

Role of UNECE

☐ UNECE's key objective is economic integration within the UNECE region and between UNECE region and the rest of the world

☐ Trade Facilitation and efficient trade data interchange are key tools of UNECE to achieve this objective

UN/CEFACT – Trade facilitation Standards and Recommendations

- ☐ Over 30 Recommendations, many of which are ISO Standards and are covered in the WTO TF Negotiations
    - Recommendation 1 - UN Layout Key for Trade Documents (ISO 6422)
    - Recommendation 25 - UN/EDIFACT (ISO 9735)
    - UNTDED (ISO 7372) and Core Component Library (CCL) - WCO data model
    - Recommendation 33, 34 and 35 - Single Window
    - Recommendation 4 on TF Structures
    - Recommendation 18 – strategies and approaches

UNITED NATIONS
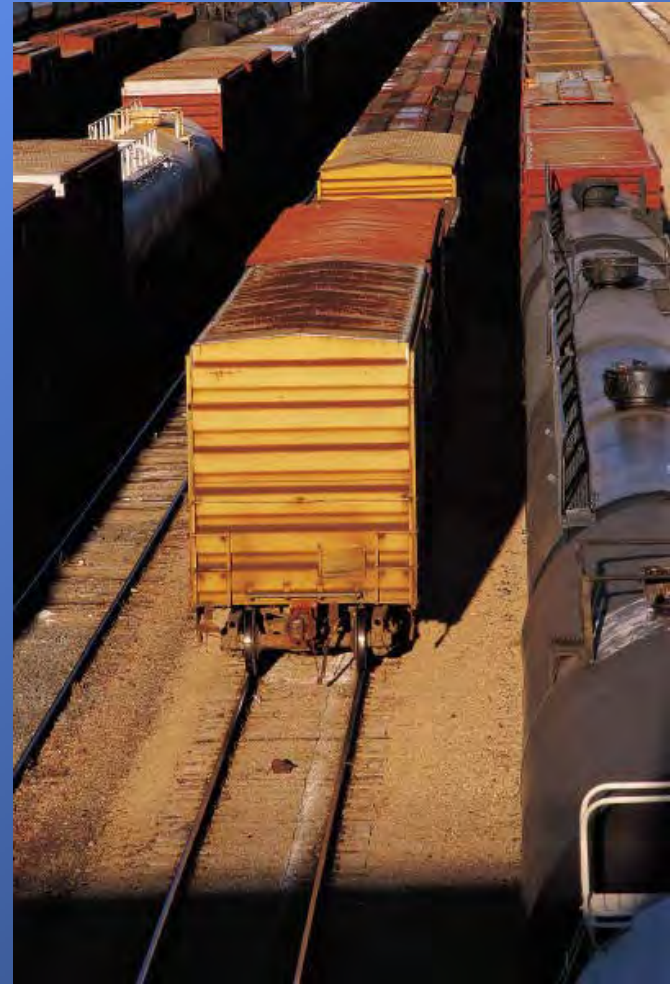
Facilitation of the International Supply Chain

BUY → **SHIP** → **PAY**

Prepare for Export → **Export** → **Transport** → **Prepare for Import** → **Import**

Commercial Procedures	Transport Procedures	Regulatory Procedures	Financial Procedures

6

UNITED NATIONS
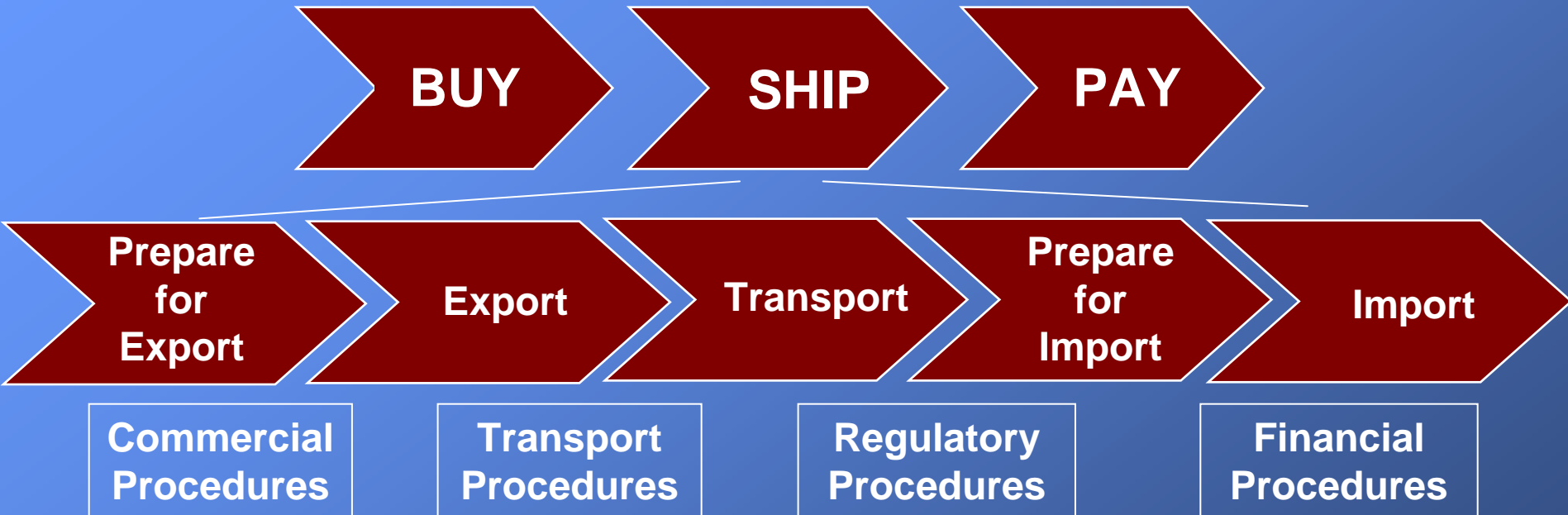
Governments (why are they different …)

- ☐ Different attitudes to trade - trusted partner (AEO, CTPAT) or ….

- ☐ Different views on information access

- ☐ Degree of regulation

- ☐ Attitude to data security (and legal framework)

AND …..

- ☐ Different roles (and time frame) of trade and Government

NEED TO FOCUS MORE ON THE COMPLEMENTARY ROLES OF GOVERNMENTS, BUSINESS AND THE INTERNATIONAL ORGANISATOINS

Towards a cloud based, information driven supply chain

☐ Cloud computing +++++ :

- ■ Reuse of information

- ■ Potential for a fundamentally different approach to handling (regulatory) information across the supply chain (from document/message centric approach to information centric approach).

- ■ Potential for great creativity

- ■ Productivity gains for business and government

- ■ **Movement from capital expenditure to operational expenditure – lower cost of entry**

Towards a cloud based, information driven supply chain?

But, we need to be precise:

- ☐ Which data exactly needs to be shared – and how ?
- ☐ Who wants it, for what reason, when and in which format?
- ☐ Who is ready to provide the data and under which conditions?
- ☐ What policies and regulatory frameworks are needed?
- ☐ What standards and legal framework?
- ☐ What are the new opportunities created – what are the new operation and business models required

UNITED NATIONS

Towards a cloud based, information driven supply chain?

And we need to be aware of the pitfalls:

☐ Who owns the data – how can it be protected (legal framework)

☐ Who has access – with whom can I share the information

☐ What if the government wants to impound the data of one company – is it all taken

☐ Who is responsible when the system crashes

☐ Who is responsible when the data gets lost

Complementary role of Governments, Trade and the Business Community

Requires the integrated action of business, governments, international organizations, universities ….

Each has its own unique role to plan and these need to be linked together through strong business government cooperation

Complementary role of Governments, Trade and the Business Community …

The role of Governments

- Provide the policy, legal and regulatory framework
  - ☐ Provide stability for investment

- Support the Research and Development

Complementary role of Governments, Trade and the Business Community …

The role of the private sector

- Provide technology and solutions

- Source of innovation and change

- Deliver the business case

- Implement

Complementary role of Governments, Trade and the Business Community …

The role of the International Organizations

- **Develop the** <u>global standards</u>, **frameworks and rules**
  - UNECE - Standards and Recommendations
    - Semantic Libraries (UNTDED, Core Component Library)
    - Data Model
    - Business process models
    - Codes for business
  - UNCITRAL, WTO, WCO, IMO, etc
- **Ensure an inclusive approach**
  - Forum for debate
  - Capacity Building
- **Provide the forum to evaluate new technologies and concepts and to promote implementation on a global level**

Complementary role of Governments, Trade and the Business Community …

The role of Educational Institutes

- Pathfinder projects
- Developing business models, operational models
- Working closely with business and government
- Living Labs (ITAID, OPTICHAIN)
- Research and Development
- Education and training

Single Window - a potential case study for the cloud

☐ Large scale inter organizational information exchange system to simplify and automate national export and import processes

☐ Port community systems

☐ One time submission of information

☐ G2G and B2G business processes

☐ UN Recommendations

☐ Government mandated and driven

☐ Private sector use and benefit

☐ Strong link to national development agendas and external trade policies

UN Single Window Symposium

☐ UN Single Window Symposium in Geneva, 12 to 13 December 2011 – Single Window 10 years on – where are we now and where should we go

☐ Organised by all five UN Regional Commissions (Africa, Asia, Europe and North America, Middle East, Latin America)

Summary

- ☐ Cloud based information sharing could generate a paradigm shift in the way we do international trade

- ☐ It can only succeed if governments and international organizations provide direction, security, standards, and the regulatory environment – <u>participate in this effort</u>

- ☐ It will only succeed if there is a business case and the private sector drives it

Team Work

Thank you

All UNECE Recommendations, codes, standards and publications are available for free on our website at:

- ☐ www.unece.org/trade
- ☐ www.unece.org/cefact/

Tom Butterly
E-mail: tom.butterly@unece.org

UNITED NATIONS

Cloud Computing: A New Era for Customs and Trade

ICT Procurement
Why is Government So Different?

Renee Stein
TCBoost Project
Nathan Associates Inc.

Target Issues

How do you identify and select the appropriate ICT solution(s) that support an administration's goals and meet its automation needs within the constraints of financing, infrastructure, ICT expertise and available skills?

How do you ensure that the solution procured fits within the associated (financial and opportunity) costs – of infrastructure, training, etc. – while also providing the necessary benefits of automation?

ICT Solutions Survey

Problem:

1. There doesn't exist a comprehensive list of the solutions available for customs primary automation- this market is constantly growing.

2. Customs administrations and donors must therefore spend extensive resources to identify solutions, and many times do not take a needs-based, business-case approach to solution selection.

3. Donors and Customs do not have the information to know the options for procurement or the types of cost structures available when seeking solutions.

ICT Survey Process

- Survey of solution providers examining the range of solutions and the functionalities that are automated.

- Survey of pricing and payment mechanisms suggested by solution providers.

- Best practices research for ICT procurement.

Border ICT Solutions Mapping Tool

Tool Overview

Functionality Filter	Solutions		

1 Use the filters below to only show the solutions which match your requirements.

Reset Filter

⊞ Information Management
⊞ Pre-Import
⊞ Declarations, clearance and inspection
⊞ Risk Management
⊞ Authorized Economic Operator
⊞ Revenue
⊞ Transit
⊞ Enforcement
⊞ Declaration
⊞ Audit
⊞ Investigations
⊞ Appeals
⊞ Global Cooperation
⊞ Quality Management
⊞ Systems Support

Download Excel table of data

2 Explore the solutions below to see the full range of features they offer.
Check up to 4 solutions and click Compare

Solution	Countries	Provider
ASYCUDA World	Show	UNCTAD
Scanning Solutions	Show	SGS
TransitNet	Show	SGS
Profiler	Show	SGS
TRADENET	Show	SGS
Advance Cargo Information	Show	SGS
NetReveal	Show	Detica
Arctic TARIFF	Show	Arctic Group
Arctic FAST	Show	Arctic Group
MicroClear	Show	ICS
TRIPS	Show	Crown Agents
e-biscus	Show	Bull
HS Classifier & HS Code Auditor	Show	3CE
Trade World Manager Portal & Universal Risk Management	Show	Webb Fontaine
Government Executive Vision	Show	Webb Fontaine
Trade XI	Show	Gainde 2000
Single Window Orbus	Show	Gainde 2000
Electronic Cargo Tracking	Show	SGS

Outcome 1 – Online Tool

Functional and customizable mapping of solutions

List of solutions surveyed, ability to compare solutions by functions offered

Ability to see list of countries where solutions are currently implemented and access the website of the solution for more information
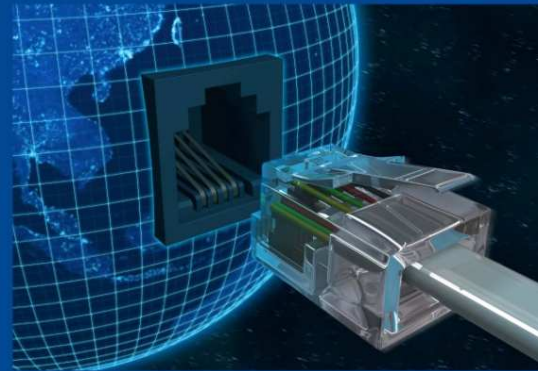
Outcome 2 - ICT Procurement Guide
Driving Real Change

- Accountability

- Competitive Supply

- Consistency

- Efficiency

- Fair-dealing

- Integration

- Integrity

- Informed decision-making

- Legality

- Responsiveness

USAID
FROM THE AMERICAN PEOPLE

INFORMATION AND COMMUNICATIONS TECHNOLOGY PROCUREMENT

BEST PRACTICES GUIDE FOR CUSTOMS ADMINISTRATIONS

May 2011
This publication was produced by Nathan Associates Inc. for USAID's review

Conclusion

Information and Needs-Based Assessment **+** Procurement Best Practices **=** Sustainable and Effective ICT Solutions

Please visit the Nathan Associates booth to receive a copy of the Guide and a demonstration of the Internet tool

http://www.tcboostproject.com/resources/tools/border/survey_results.php
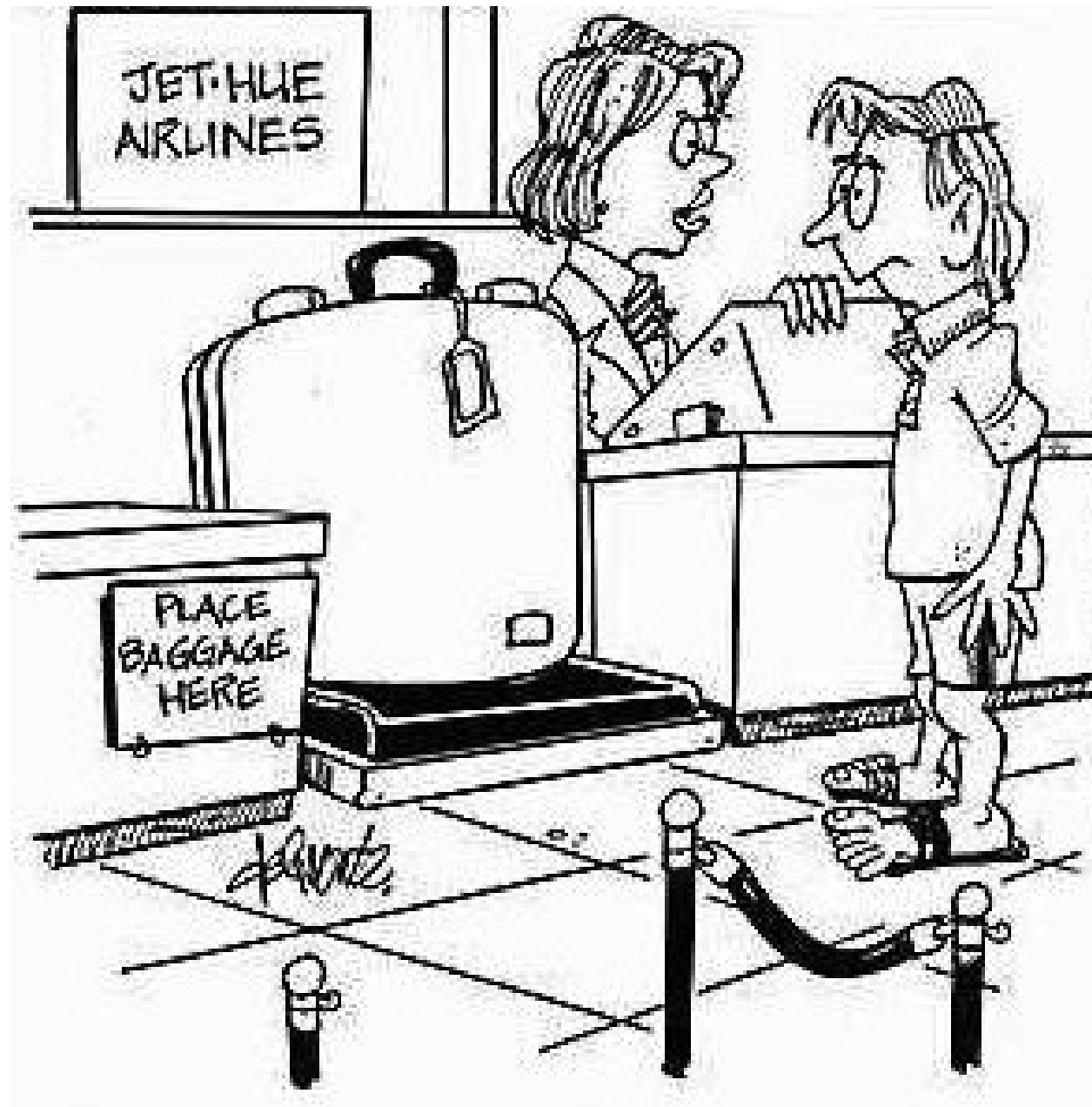
The Pipeline Interface

Th   rch

**Frank Heijmann
Netherlands Customs**

**David Hesketh
United Kingdom Customs**

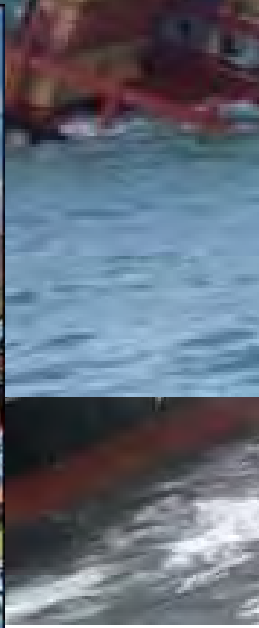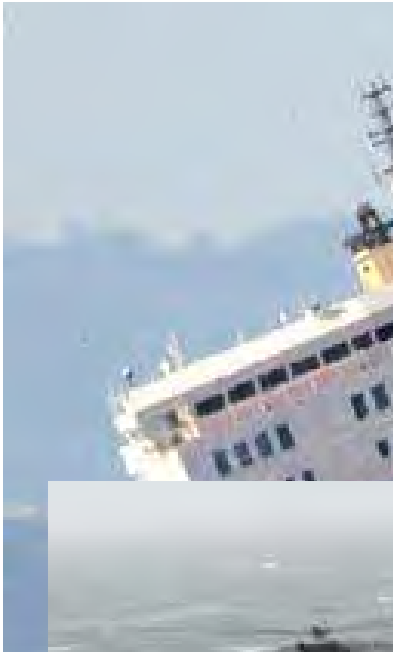Malcom Purcell McLean, 1913 – 2001

CONTRACT
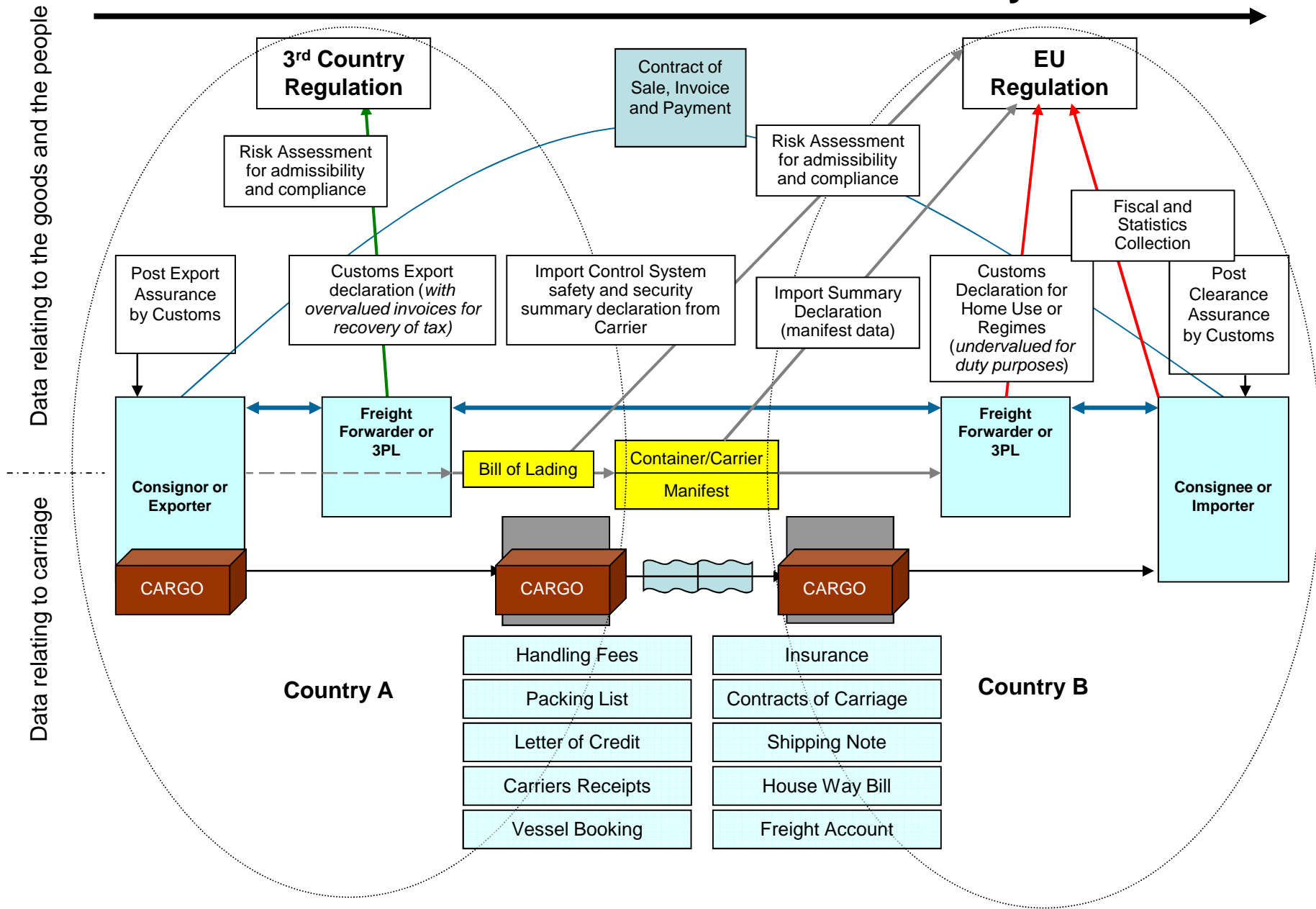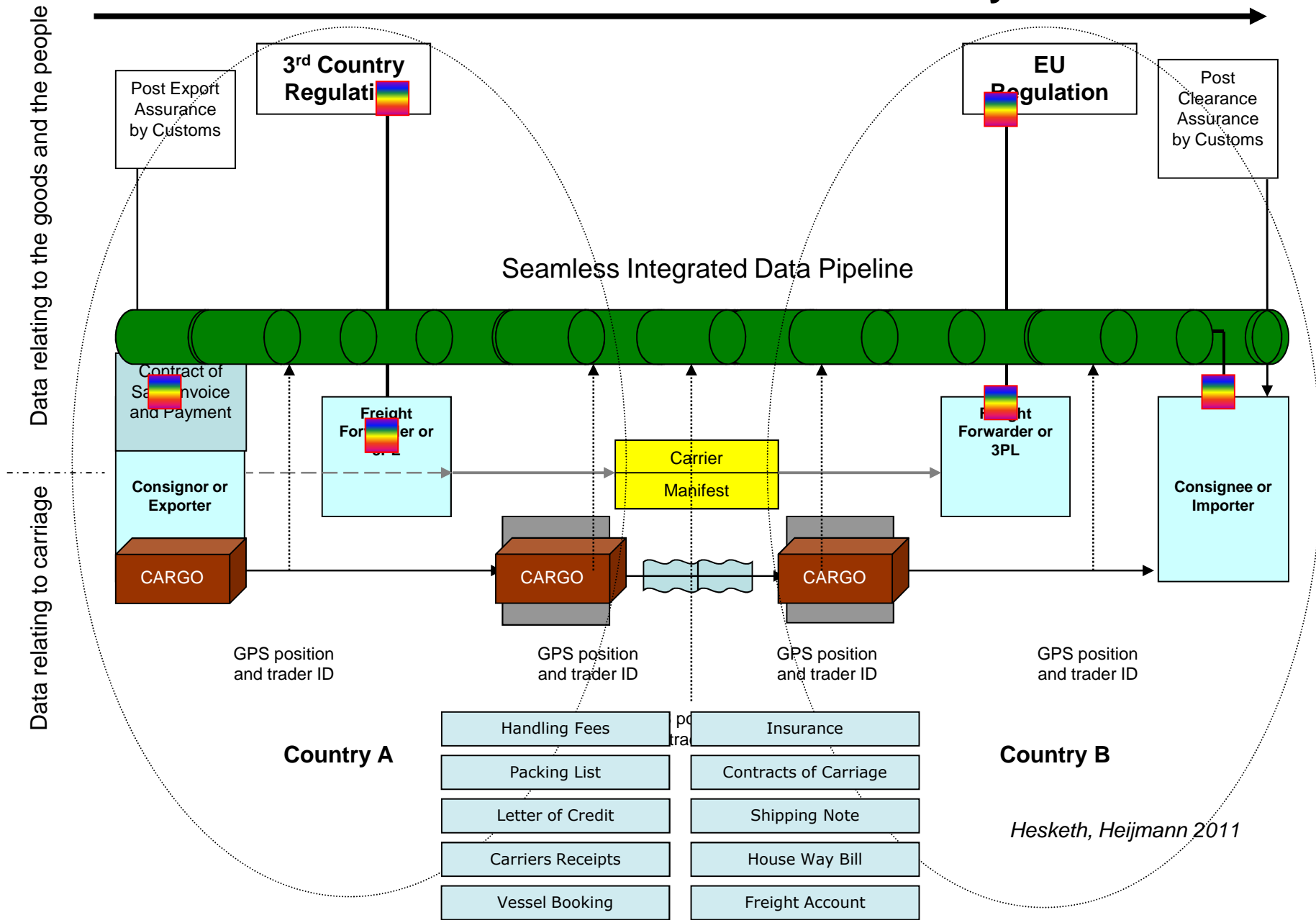
The contract which inclu
Schedu

without limitation

Please read all of

Small Fine Print

I hereby affirm that all of the
business loss through out the

Company has the right to terminate th

within this agreem

Title

Da

Current Customs and International Trade Systems

Data relating to the goods and the people

Data relating to carriage

3rd Country Regulation

Risk Assessment for admissibility and compliance

Contract of Sale, Invoice and Payment

Risk Assessment for admissibility and compliance

EU Regulation

Fiscal and Statistics Collection

Post Export Assurance by Customs

Customs Export declaration (*with overvalued invoices for recovery of tax*)

Import Control System safety and security summary declaration from Carrier

Import Summary Declaration (manifest data)

Customs Declaration for Home Use or Regimes (*undervalued for duty purposes*)

Post Clearance Assurance by Customs

Freight Forwarder or 3PL

Freight Forwarder or 3PL

Consignor or Exporter

Bill of Lading

Container/Carrier Manifest

Consignee or Importer

CARGO

CARGO

CARGO

Country A

Country B

Handling Fees	Insurance
Packing List	Contracts of Carriage
Letter of Credit	Shipping Note
Carriers Receipts	House Way Bill
Vessel Booking	Freight Account

Future Customs and International Trade Systems

Data relating to the goods and the people

Data relating to carriage

Post Export Assurance by Customs

3rd Country Regulati

Seamless Integrated Data Pipeline

Contract of Sal Invoice and Payment

Consignor or Exporter

CARGO

Freight Forwarder or 3PL

Carrier Manifest

CARGO

CARGO

EU Regulation

Freight Forwarder or 3PL

Post Clearance Assurance by Customs

Consignee or Importer

GPS position and trader ID

GPS position and trader ID

GPS position and trader ID

GPS position and trader ID

Country A

Country B

Handling Fees	Insurance
Packing List	Contracts of Carriage
Letter of Credit	Shipping Note
Carriers Receipts	House Way Bill
Vessel Booking	Freight Account

Hesketh, Heijmann 2011

The Pipeline Interface

Frank Heijmann
Netherlands Customs

David Hesketh
United Kingdom Customs

Outsourcing IT

Anne Craig

WCO – IT Conference
May 2011

Canada Border
Services Agency

Agence des services
frontaliers du Canada

Canada

Outsourcing IT

❖ CBSA mandate

❖ Sourcing Strategy

❖ CBSA what we do

❖ Outsourcing – some things to consider

❖ Keys to Success

CBSA Mandate

❖ The CBSA mandate is to protect Canada's borders while facilitating the flow of legitimate trade and travel. Execution of this mandate is increasingly dependent on information technology, especially in the areas of risk assessment and revenue collection.

❖ The CBSA also provides services at the border for other government departments and agencies. This unique role introduces higher complexity, since our information management practices must support not only our own legislated mandate, but that of other departments and agencies through advanced information sharing protocols.

❖ CBSA develops and maintains its own line of business applications to support this mandate. Currently, we have in excess of 120 nationally and internationally deployed IT systems. Of these applications, 47 are considered 'mission critical'.

Canadian Federal Government – Sourcing Strategy

- ❖ In the Canadian Federal Government, most departments and agencies have their own IT organization. The strategy in the last few years has been to develop a centralized IT Shared Services organization that would provide certain IT services to all of government.

- ❖ Those services were defined as common services and represented potential benefits in cost savings as well as providing centralized management of services allowing departments to focus on their more specialized needs.

- ❖ These services are primarily "outsourced" and managed through contracts that were competitively sourced. These type of services are traditional IT services such as network and data centre services.

4

CBSA – what do we do?

❖ We build, we buy, and we share.

❖ When the CBSA was created in 2003, previously part of the Canada Customs and Revenue Agency, a decision was made to continue to have the Canada Revenue Agency provide a number of IT services to the CBSA. This includes Data Centre Services, Distributed Computing Services, Infrastructure Management Services, and Telecommunication Services. We review that decision every couple of years and continue to believe this an effective model for us.

❖ With our tight business linkages with other Federal departments in Canada and abroad, we also receive, provide, or share IT services with our partners.

❖ We also have outsourced IT arrangements with private sector experts for specific business application capabilities. Examples are the receipt of API/PNR data, the NEXUS Air Kiosk solution using biometrics, and the license plate reader solution used at land border crossings.

❖ The information CBSA receives from its clients is provided under legislative and privacy frameworks. Appropriate measures must be taken to safeguard and utilize any data for the purposes it was intended.

CBSA ASFC

Outsourcing – what to consider

❖ Is it mission critical to your business?

❖ Do you have the capabilities internally?

❖ How quickly do you need the capability?

❖ How much do you know about what you are outsourcing? How will the service or technology withstand change?

❖ Do you have the capabilities/experience to manage an outsourced arrangement?

❖ How do you ensure your accountability?

Keys to Success

❖ Develop and maintain a relationship with your service provider.

❖ Managing sourced arrangements requires extra different skill sets than normally found when managing your own IT organization.

❖ When developing an outsourcing plan consider the entire life cycle as you would any other IT asset.

❖ Keep your sourcing strategy ever green. Consider it as a part of your overall IT strategy.

7

Integration of Customs Risk Management Technology with ASYCUDA

2011 WCO IT Conference & Exhibition
Day 2 Session 9:45 – 11:00hrs

Overview

This session will provide a summary of the recent deployment of the Barbados Automated Customs Risk Management System.

Panelists:

- *Mr. Frank Holder, Comptroller of Customs (Barbados) &*
- *Mr. Chris Thibedeau, Vice President, GreenLine Systems*

Implementing Risk Management at the Barbados Customs & Excise Department (BCED)

BCED has recently undergone a significant change in the way it conducts business at the border.

With the assistance of the Inter-American Development Bank (IDB), BCED is in the process of transforming to a risk management-based customs organization.

Background

2008 - BCED formed a dedicated Risk Management Unit (RMU)

2009 - RM System needed to carry out risk analysis and intelligence tasks
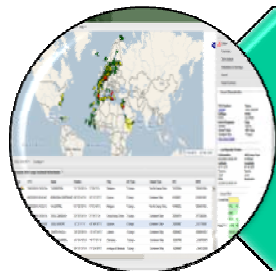
2010 - BCED and GreenLine Systems implement iBench as BCED's Automated Customs Risk Management System

Four capabilities were identified as required for the risk management system

Alignment with international best practices

Ingestion of data from ASYCUDA++

Merging of shipment and risk related information

Customized risk analysis
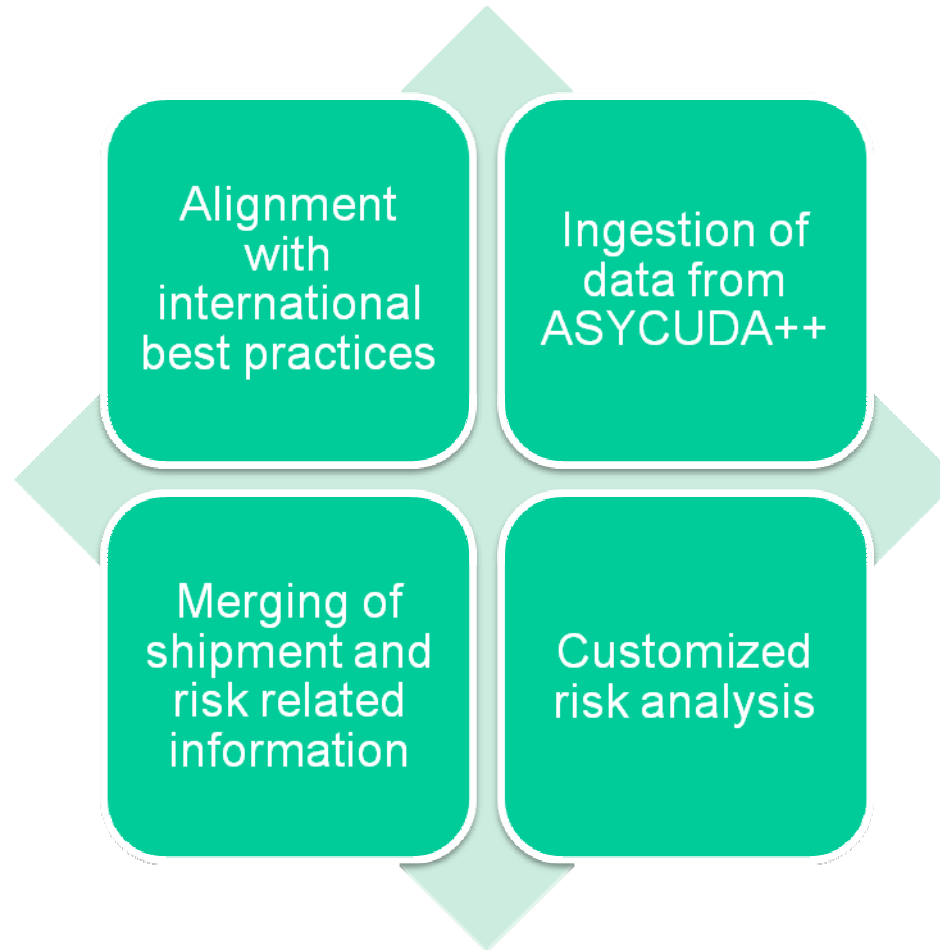
System Objectives

Integrate with ASYCUDA++

Pre-Arrival and Arrival Analysis Workflow

Risk Scoring of Cargo and SADs

Mgmt Reports

3 Risk Assessment Modules (RAMs):

Revenue Protection

Narcotics

Security

Project Phases: Plan and Design

Plan
- Kick Off Meeting

Design
- Analyze Data
- Analyze ASYCUDA++ Historical Transactions
- Needs Assessment
- Gather Requirements
- Develop ConOps
- Functional Requirements

Project Phases: Configure-Integrate-Develop

Additional Customizations

Develop Custom Reports

Define Risk Assessment Models
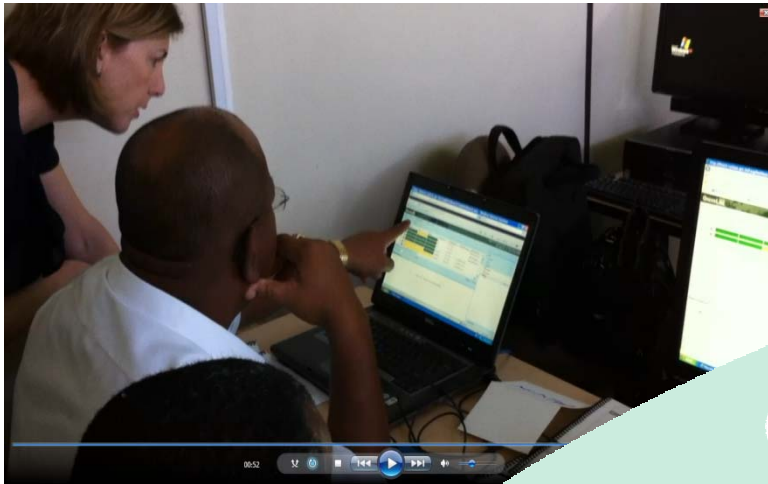
Develop ASYCUDA++ Interface

Project Phases: Test and Train
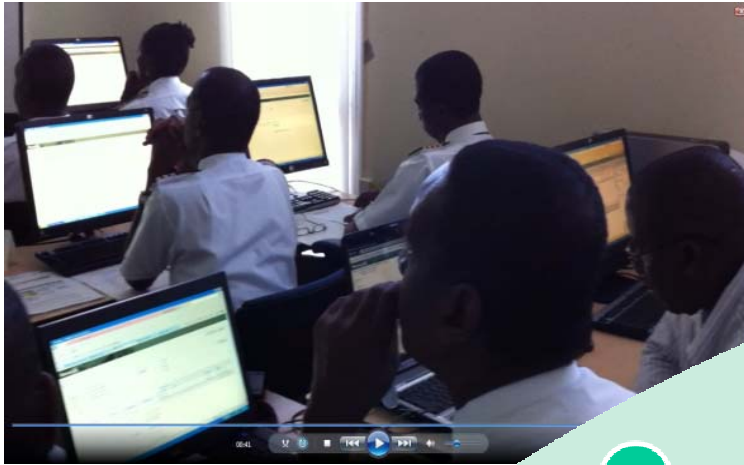
Full Regression Test

End-User Training

Deploy iBench in the Production Environment

Conclusion

WCO products SRAs and GHRI have been closely integrated with ASYCUDA

Barbados has made a significant step forward in its modernization that can be considered a benchmark and best practice for other partner customs administrations

Recommended Reading

The Barbados Customs example follows the principles and tenants promoted in a new capacity building product:

– InterAmerican Development Bank's Knowledge and Capacity Product:

- "*Risk Management for Cargo and Passengers.*"

For further information on this document please contact:

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Regulatory and Law Enforcement
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(cell) 613-884-8162 |
Email: cthibedeau@greenlinesystems.com
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Maria Ortiz

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Integration and Trade Sector
Tel: 1-202-623-2391
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Washington, D.C. 20577 USA
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www.iadb.org

Questions?
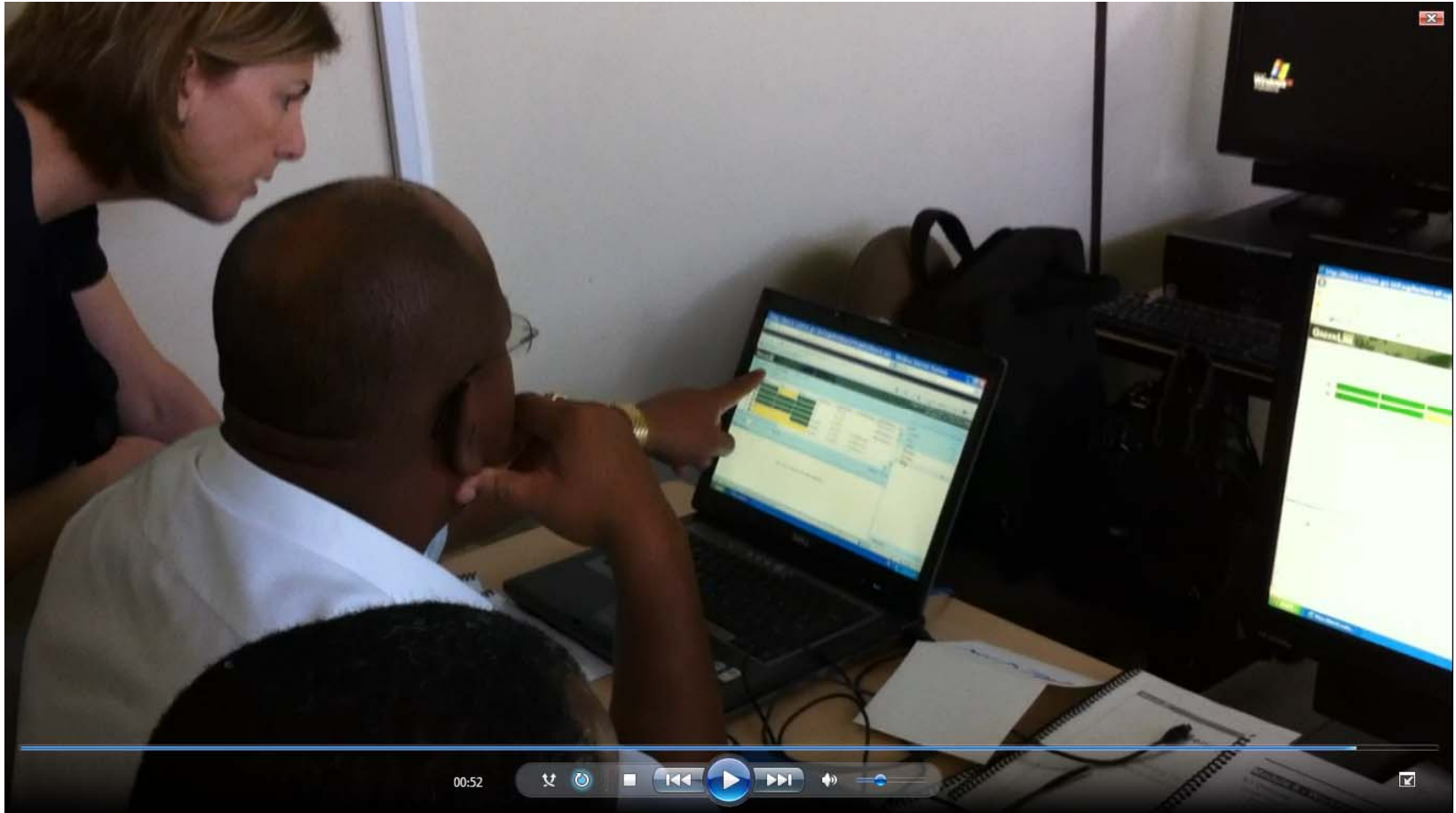
May 2011

PORT OF SEATTLE HARBOR

Pier 90/91

Pier 86

Pier 66

Terminal 46

BNSF (SIG - North)

Terminal 30

Terminal 5 On-Dock Rail

BNSF (SIG - South)

Terminal 25

Terminal 5

Terminal 18

UPRR (ARGO)

TECHNOLOGY, EQUIPMENT & PEOPLE

Optical Character Recognition (OCR)

Rubber Tired Gantry Crane (RTG)

Radiation Portal Monitors (RPM's)

Radio Frequency Identification (RFID)

Vehicle & Cargo Inspection Station (VACIS)

TERMINAL GATE ENTRY & EXIT

MARINE TERMINAL ENTRY

GATE PASS ISSUED

DRIVER'S ID SCANNED

INSTRUCTION TICKET PRINTS

ENTRANCE TO ON -TERMINAL TRUCK QUEUING AREA
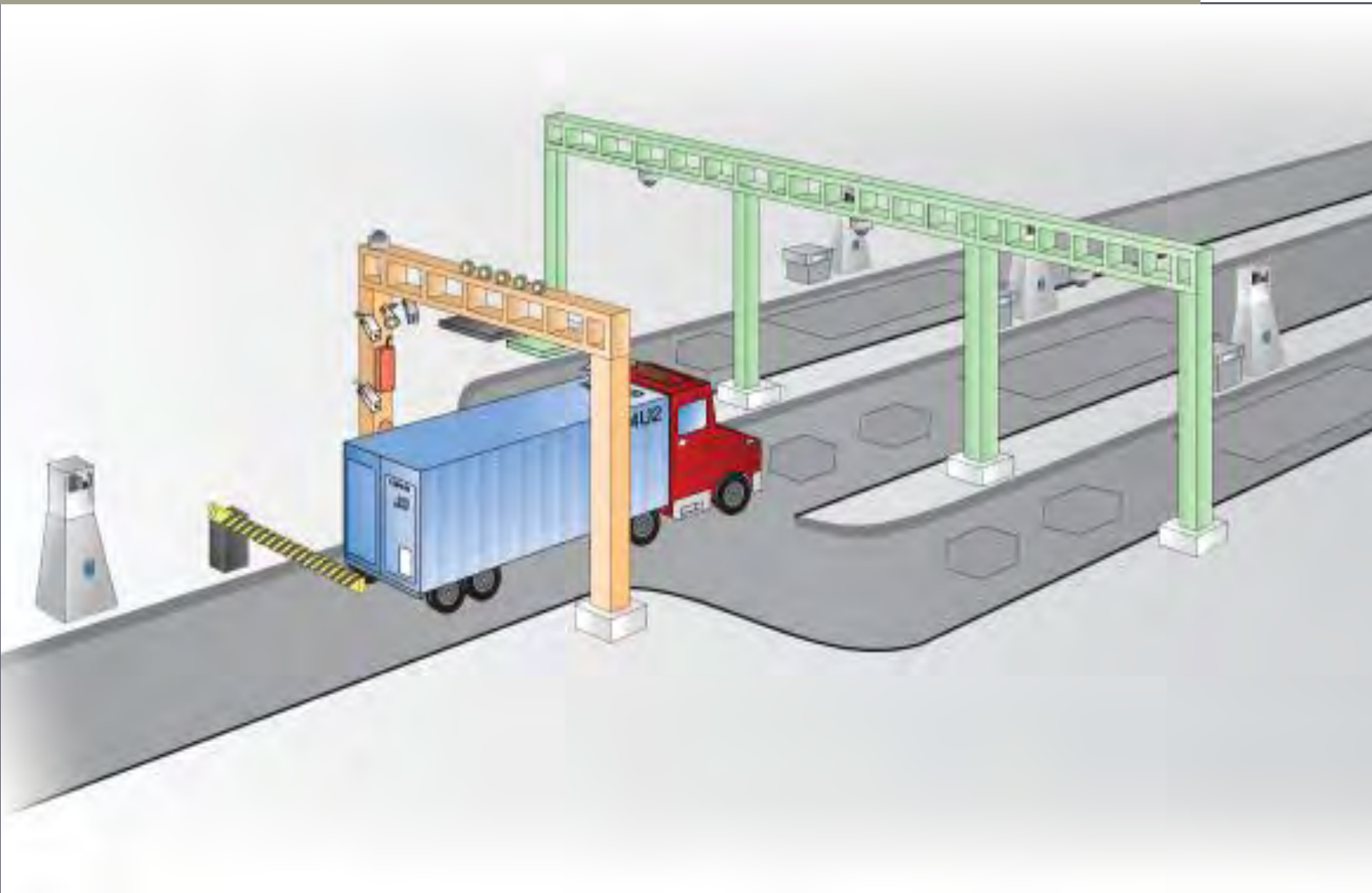
STEAMSHIP COMPANY EQUIPMENT INTERCHANGE
AND INSPECTION REPORT

Gate Pass Number

4203

REMARKS - REFER TO DAMAGE BY ITEM NUMBER, BOTH CONTAINER AND CHASSIS

STEAMSHIP COMPANY	VESSEL	VOYAGE
BLUE CONTAINER LINE		

DELIVERING - RECEIVING CARRIER	BOOKING/BILL OF LADING NUMBER	CARGO DESCRIPTION
EMERAL EXPRESS		

PORT OF DISCHARGE	FOR TRANSHIPMENT TO	MOVEMENT IN	HAZARDOUS	LABELS

CONTAINER NUMBER	SEAL NUMBER	STATUS		LENGTH	HEIGHT	TYPE
TGHU787003 6		EMPTY		40'	9'6"	Standard

CHASSIS NUMBER	CHASSIS LENGTH & TYPE	BOOKED TEMP		BKD. VENT		OVERSIZE
FFFZ016393	40' GOOSE NECK					

TOTAL ROAD WEIGHT	TRACTOR WEIGHT	CHASSIS WEIGHT	CONTAINER GROSS	CONTAINER TARE	CARGO WEIGHT

Done

Internet

TERMINAL TECHNOLOGY

YARD TRUCK RFID TAG

OCR Cameras

CRANE RFID TAG & PTUI

Crane OCR

RADIO FREQUENCY ID (RFID) FOR TRUCKS

RFID Port

RFID Ports

RFID tag on Port Truck

Tag triggered by RFID Port

Automated tag/transaction association

RFID FOR CONTAINER HANDLING EQUIPT
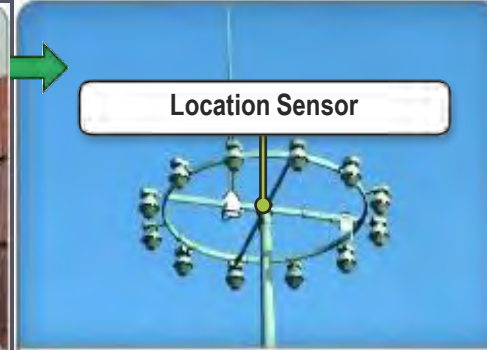

RFID Port

RFID Tag

RFID Tag

PTIU

Location Sensor

Vendor Marine Terminal

TOS

Terminal Operating System

RFID tag on top-pick forces the truck or chassis tag to transmit its ID. ID is auto transferred back to the top-pick
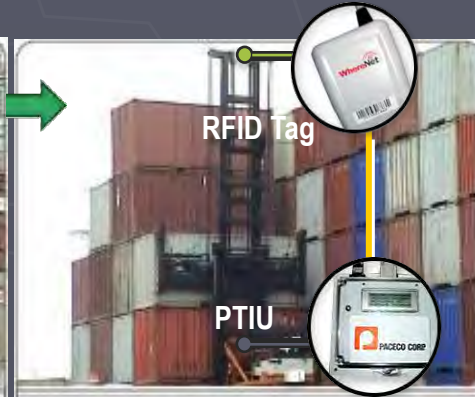
Container and Top-pick are automatically associated based on PTUI sensor and location

The location of the top-pick's tag is determined when container disengages.

The location information is translated to bay, cell, and tier and updated to the TOS.

TERMINAL SECURITY

Transportation Workers Identification Credential (TWIC)

Vehicle & Cargo Inspection Station (VACIS)
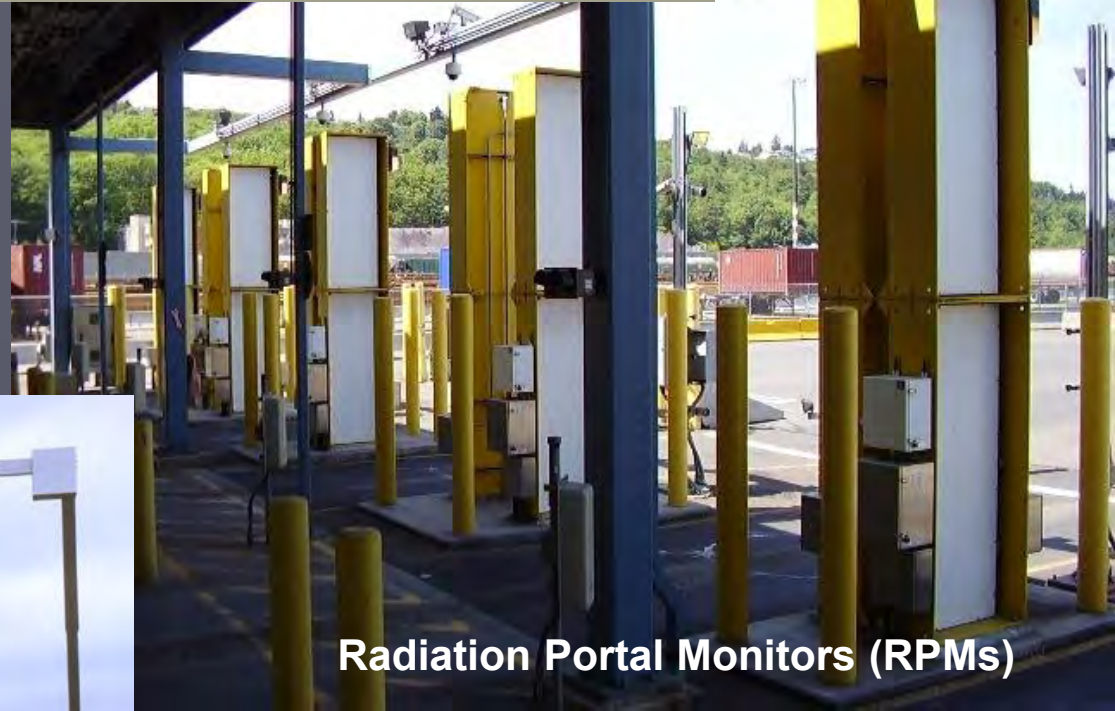
Radiation Portal Monitors (RPMs)

Transportation Worker Identification Credential

Card Security Features

Sample prototype card shown, production card will differ in appearance

Memory chip carries individual's unique biometric for identity match at reader. If the secured data doesn't match the individual's fingerprint, or the facility has not opened access to the individual the card **cannot be used**.

May, 2011

KCS Korea Customs Service

Innovation through
CLOUD
COMPUTING

**Rapidly Increasing Workload
Limited Personnel & Resources?**
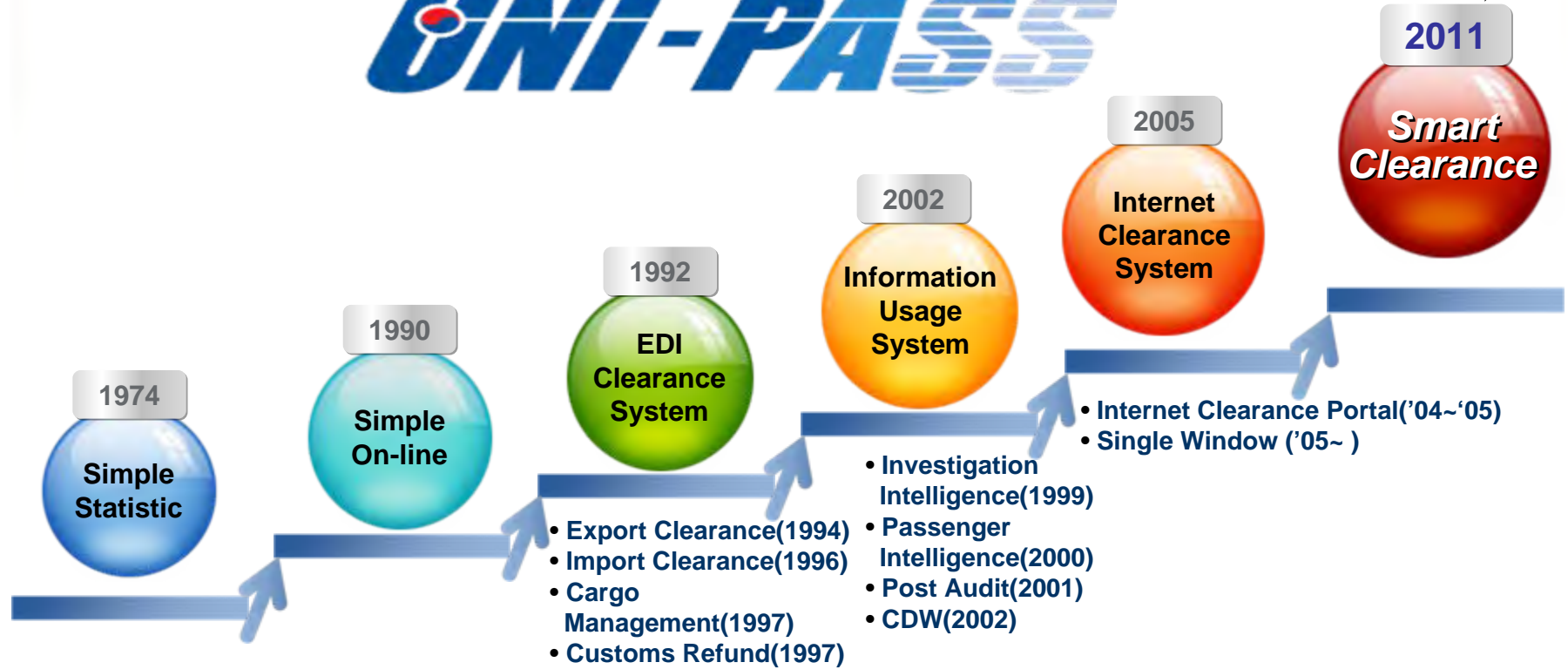
Computerization

Development History

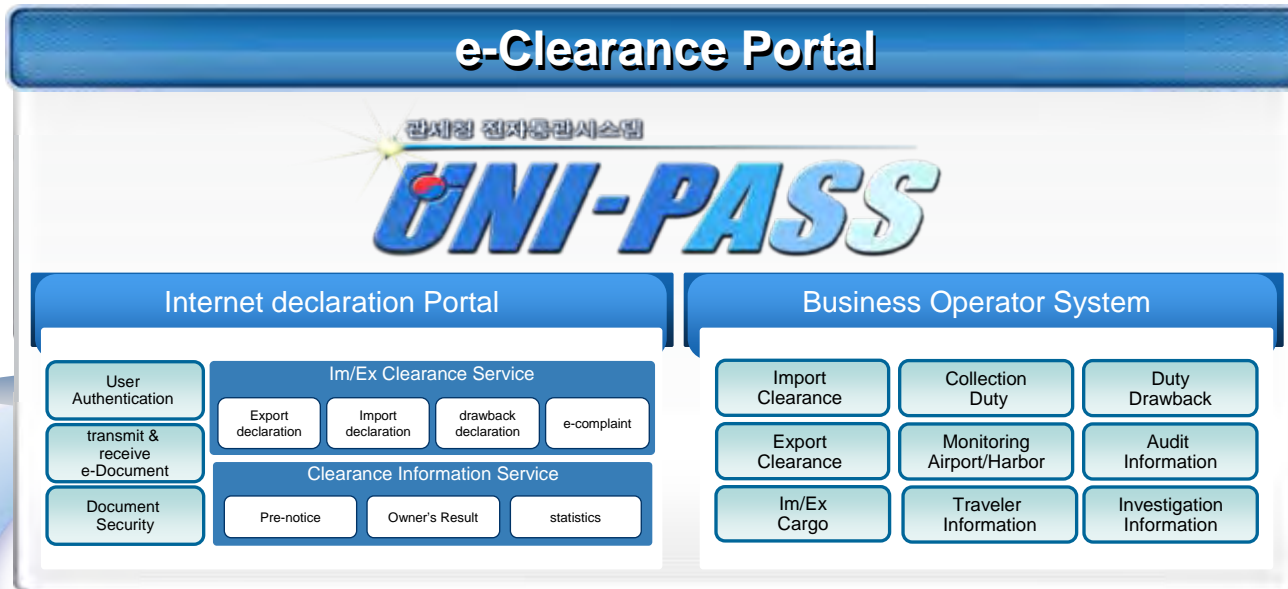Paper   EDI   e-Customs   u-Customs   Smart Customs

관세청 전자통관시스템
UNI-PASS

1974
Simple Statistic

1990
Simple On-line

1992
EDI Clearance System

- Export Clearance(1994)
- Import Clearance(1996)
- Cargo Management(1997)
- Customs Refund(1997)

2002
Information Usage System

- Investigation Intelligence(1999)
- Passenger Intelligence(2000)
- Post Audit(2001)
- CDW(2002)

2005
Internet Clearance System

- Internet Clearance Portal('04~'05)
- Single Window ('05~)

2011
Smart Clearance

System Composition

77 Info Systems inclusive of UNI-PASS to support customs administration

e-Clearance Portal

UNI-PASS
관세청 전자통관시스템

Internet declaration Portal

User Authentication
transmit & receive e-Document
Document Security

Im/Ex Clearance Service

Export declaration	Import declaration	drawback declaration	e-complaint

Clearance Information Service

Pre-notice	Owner's Result	statistics

Business Operator System

Import Clearance	Collection Duty	Duty Drawback
Export Clearance	Monitoring Airport/Harbor	Audit Information
Im/Ex Cargo	Traveler Information	Investigation Information

BSC
- Strategic Target Mgmt
- Performance Mgmt
- Problem Identification

EA
- IT Architecture
- IT Asset Mgmt
- IT Service Mgmt

i-HRM
- Capacity Evaluation Mgmt
- Capacity Development Learning Program
- Appointment Mgmt
- Promotion Mgmt

CKM
- Knowledge Mgmt
- COP
- Wiki, Blog

CRM
- Customer Mgmt
- Campaign
- Counseling Mgmt
- VOC Mgmt

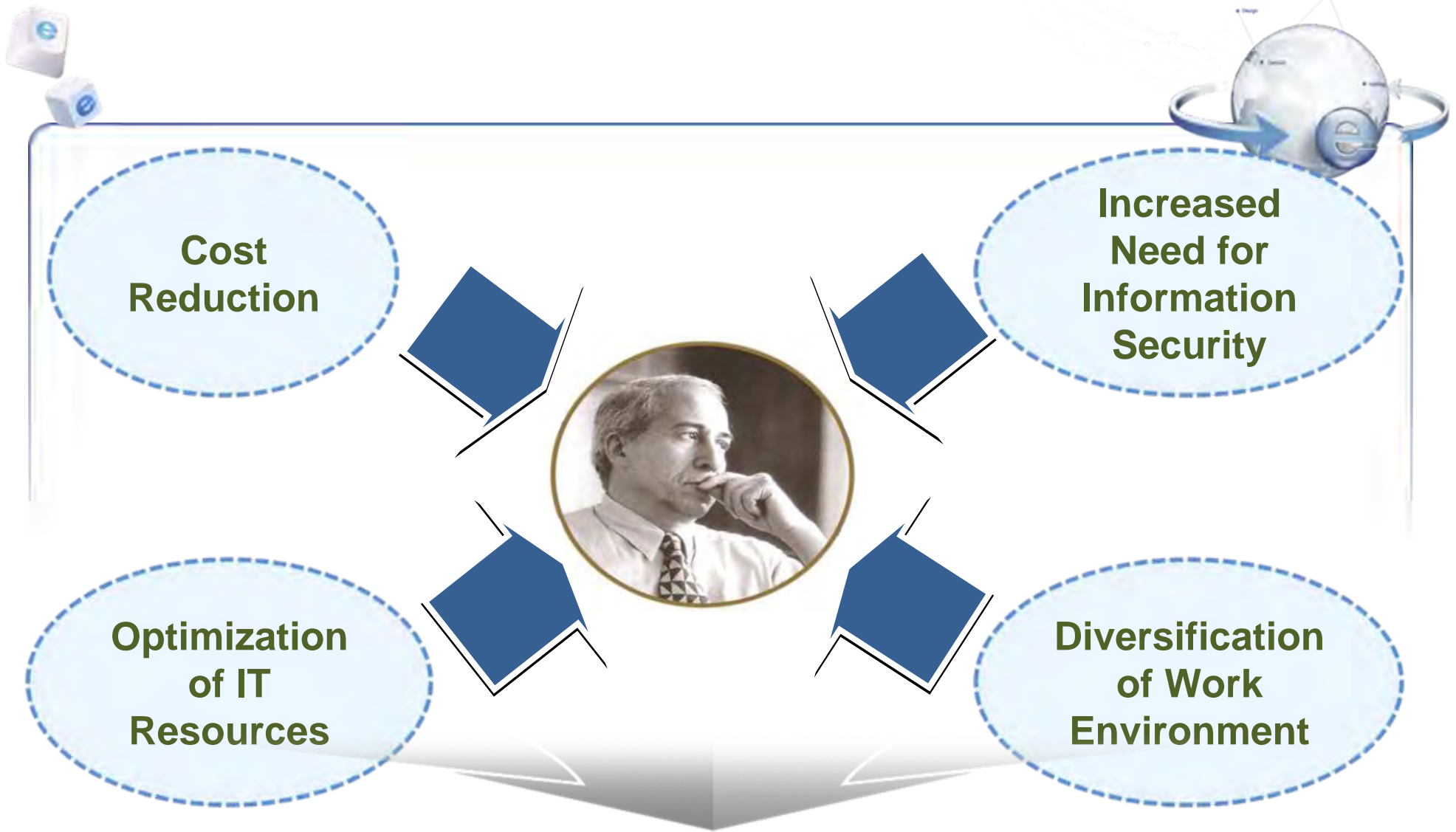### CDW
- Data Integration
- Data Mining
- Data Analysis

u – Clearance Network
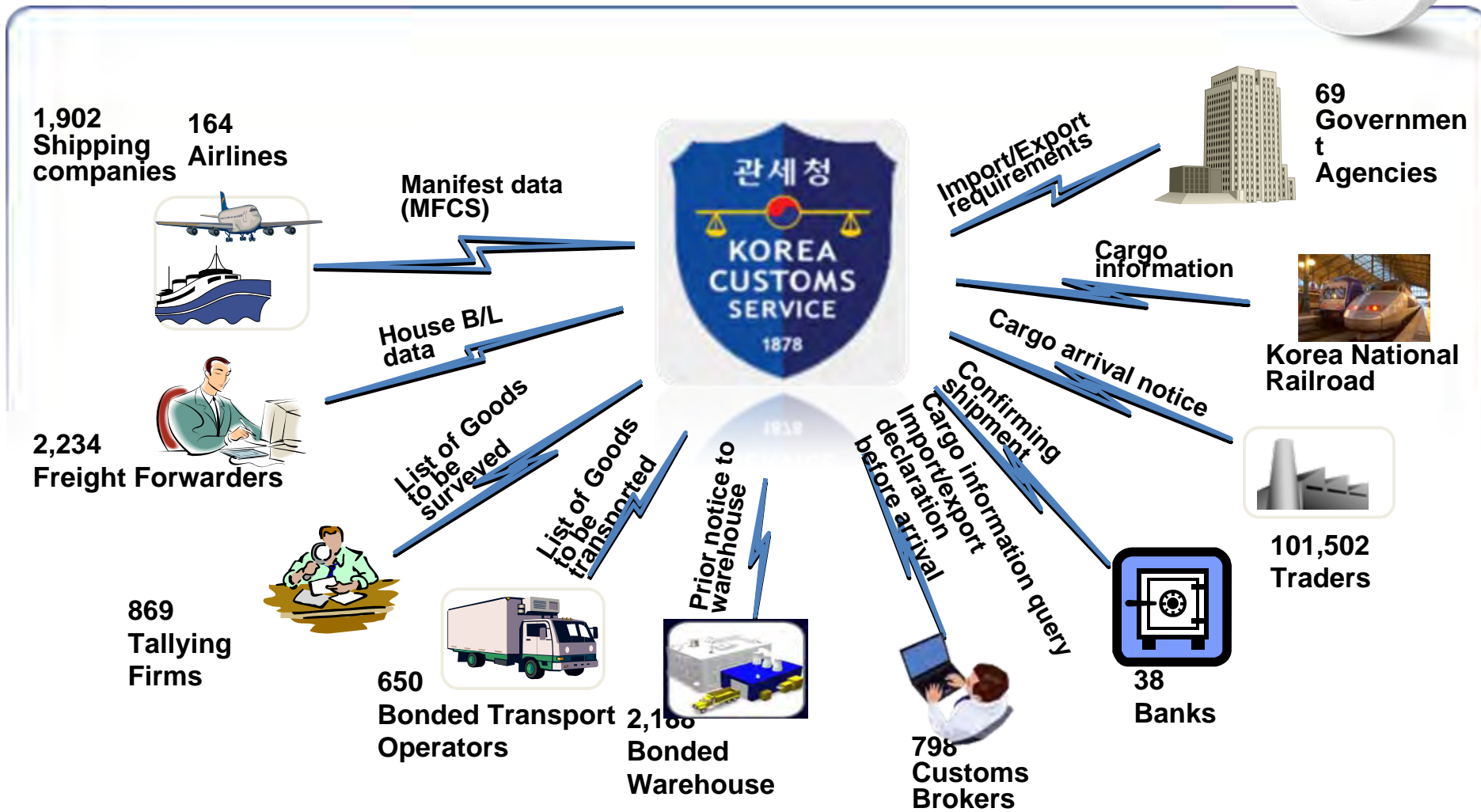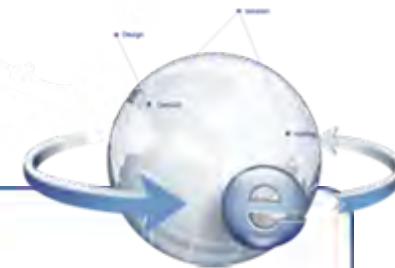
What are their interests ?

Cost Reduction

Increased Need for Information Security

Optimization of IT Resources

Diversification of Work Environment

Need for a New Smart Customs Service

Project Background

Public Cloud (Single Window)

Increase of Logistics Cost due to Increased Trade Volume

Unnecessary Repetition of Work (Import Declaration and Requirements Application)
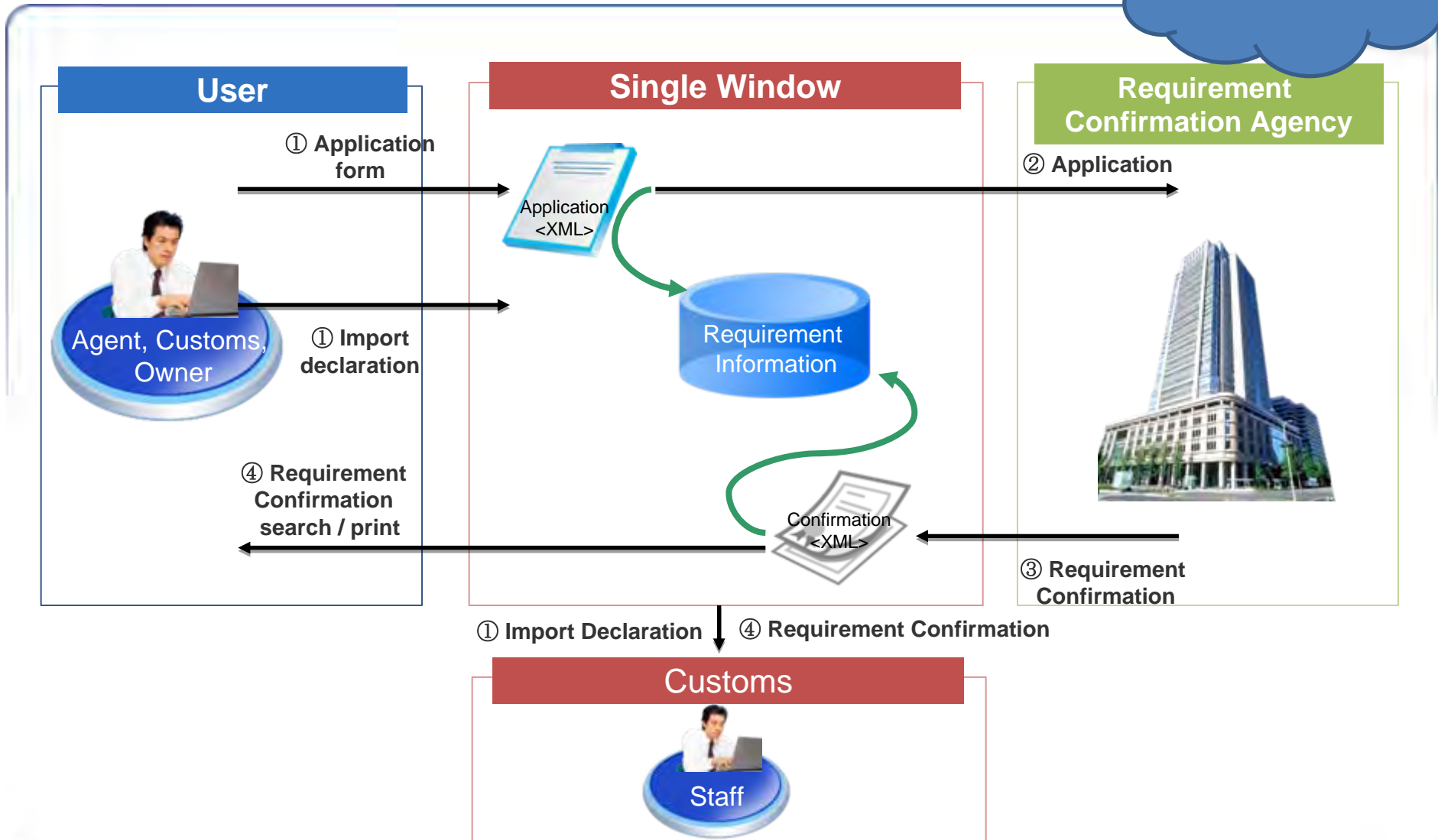
Manual Work Processing of Confirmation Agencies

Effort to Simplify Clearance Process

Launch of 『Single Window』 project for One-Stop processing of information

관세청
KOREA CUSTOMS SERVICE

UNI-PASS

Work Process

Public Cloud
(Single Window)

User

Single Window

Requirement Confirmation Agency

① Application form

② Application

Application <XML>

Agent, Customs, Owner

① Import declaration

Requirement Information

④ Requirement Confirmation search / print

Confirmation <XML>

③ Requirement Confirmation

① Import Declaration   ④ Requirement Confirmation

Customs

Staff

SaaS (Software as a Service)

Public Cloud (Single Window)

Korea Customs e-Clearance System
UNI-PASS

Cloud Service

Single Window (SaaS)

Requirement Confirmation Agency(10)

Confirmation Server

One Stop Service

Importer Exporter

ASP System (SaaS)

Requirement Confirmation Agency(13)
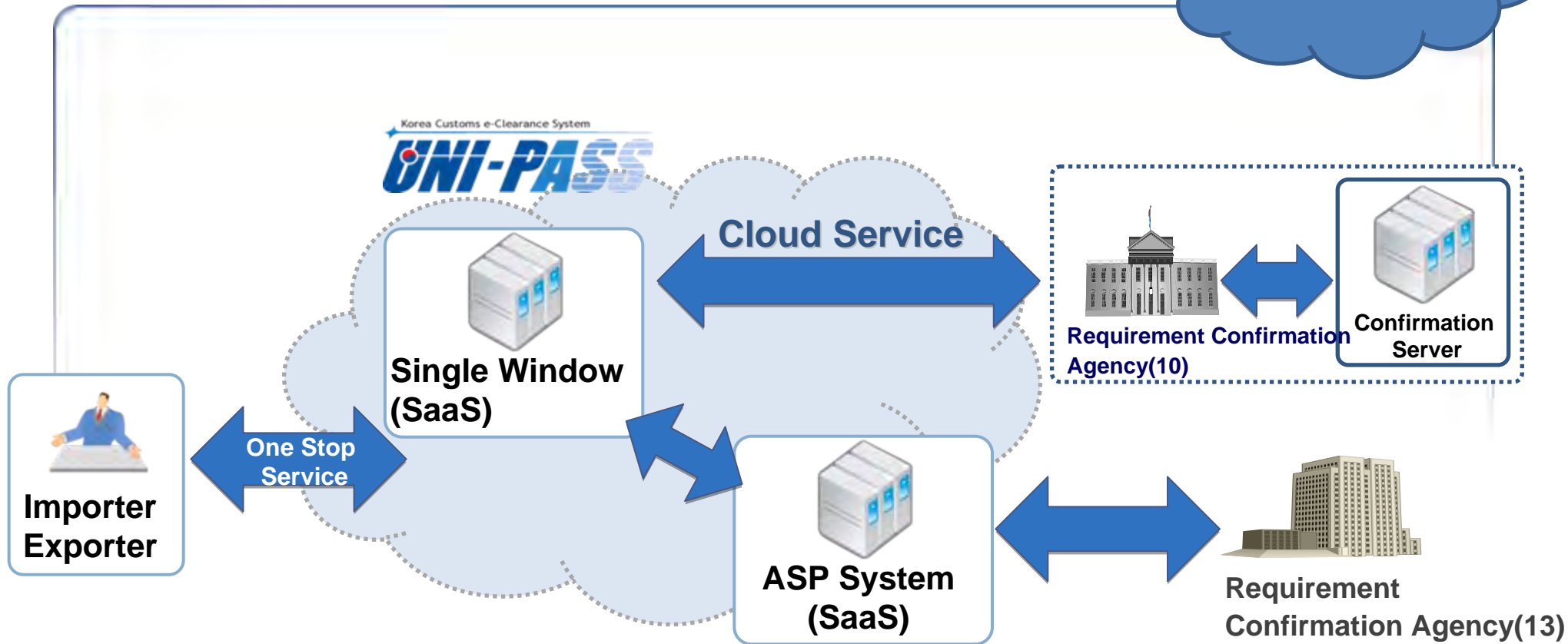
- ASP System : provides requirements confirmation SaaS for requirements confirmation agencies.

Application Effects

Standardization

Improvement of Scalability and Flexibility through Platform Unification and Integration of Infrastructure

Economic Effects

Reduction of System Development, Management and Operation Cost

→ **13billion USD / 1 year**

관세청
KOREA CUSTOMS SERVICE

UNI-PASS
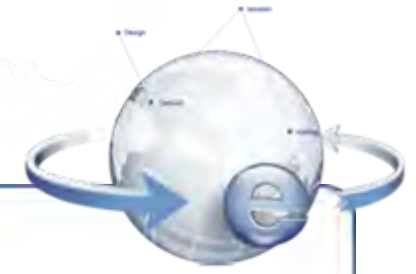
Korea Customs e-Clearance System
UNI-PASS **Cloud Service**

Public Cloud
(Single Window)

**Private Cloud
(SBC)**

Project Background

Enterprises are using several security solutions for information protection, but circuitous leakage routes targeting PCs are being detected continuously.

Hackers Crack Cyberspace

THE KOREA TIMES 기사입력 2009-01-12 19:09 최종수정 2009-01-12 19:09

Increasing Hacking in Korea

Year	Value
'98	158
'99	572
'00	1,943
'01	5,333
'02	15,192
'03	26,179

Source: KISA

Staff ReporterThe sprawling Korea is the pride of the nation million households connected Internet, marking the world's

However, the world-envied generated some headaches has become more ubiquitous

According to statistics com Information Security Agency (KISA), domestic hacking

Retired FSS staff banned from workin at banks

2011-05-04 19:55

The Financial Supervisory Service on Wednesday decided to ban its staff from taking senior posts at financial companies right after their retirement way to prevent corruption.

The decision came as part of its sweeping reform measures following sev incumbent FSS staffers' wrongdoings.

In its statement, the regulatory body said it would ban the habitual practic under which incumbent and former staffers were recommended as audito banks or brokerage firms.

"We will completely eliminate the practice. In addition to stopping our recommendation practice, we plan to reject the sort of calls from financial

Press Release

Implication   **PC is highly vulnerable to information leakage**
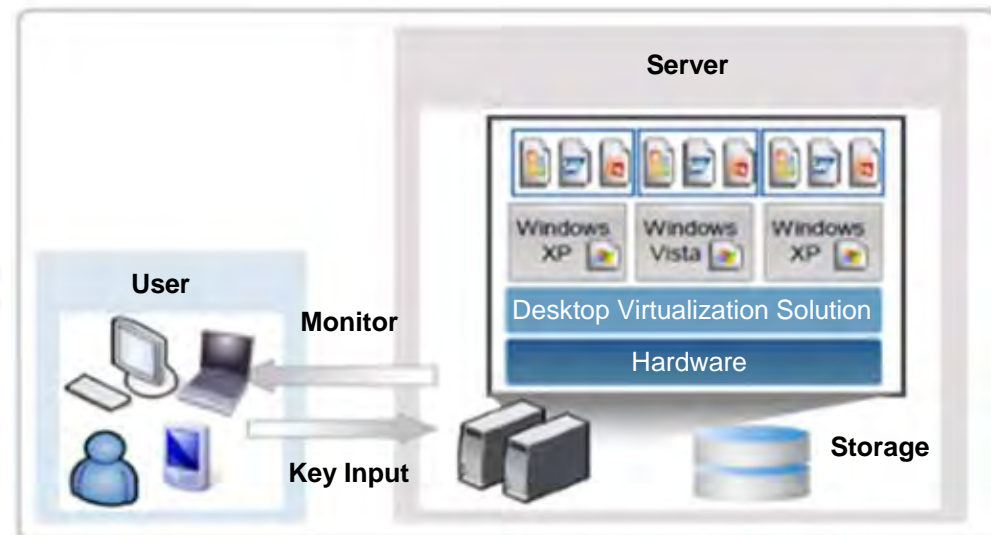
SBC (Server Based Computing)

Private Cloud (SBC)

▶ **PC Environment**

▶ **Desktop Virtualization**

- Creation/management of important Data done by PC
- Requires regular update management of illegal S/W

- Data creation/management by server, PC Download is done according to policy
- Work environment standardization and central management possible

SBC (Server Based Computing)

Private Cloud (SBC)

Software and Data required for the Server is Provided the User PC is only used as in/out-put device.

Users

Application Virtualization
Desktop Virtualization

Browser | outlook
ERP
document
OS | document

LAN

Groupware, Portal

LAN/WAN

Sending minimum value

- Import/Export Audit
- Cargo Audit
- Requirement Confirmation Audit
- Operation / Maintenance

Personal Storage

Internal Work

Fundamental Prevention of Info Leakage	Ease of Post-Tracking	Protection of Internal Sources from Viruses	Support of Diverse Work Environment

Application Effect

Security

Possibility of internal/external information leakage minimized due to fundamental blocking of data storage in PC

Various Work Environment

Connection environment for data equipment(Smart Phone, PDA, etc) is provided for easy use by remote officer, traveling officer

Economic

Reduction of Equipment Operation Cost through Unification of Data Processing Equipment
→ 2.6 billion USD/year

Future Development Direction
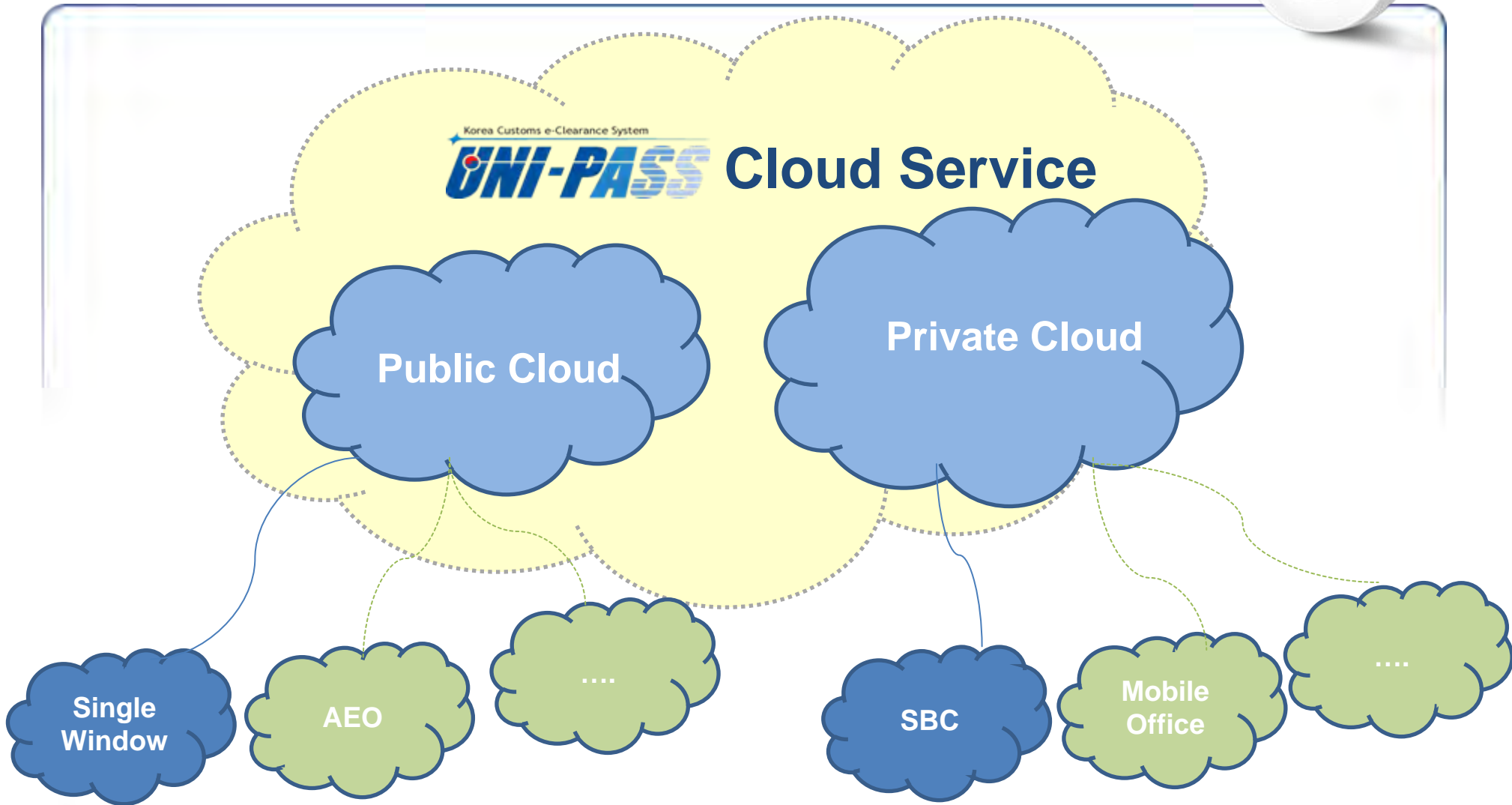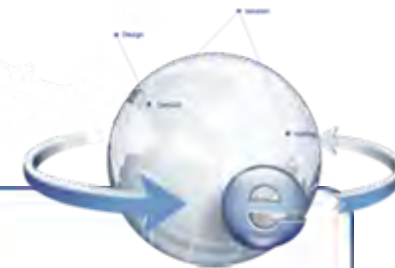
Thank You !
Q & A

Customs IT Vision

Information Technology Conference

Seattle, US
13 May 2011

Susanne Aigner
Deputy Director
Compliance and Facilitation

The WCO Mission Statement

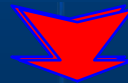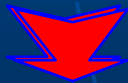To enhance the effectiveness and efficiency of Customs administrations

…by improving their ability to

| Apply trade regulations & facilitate trade | Protect society | Collect revenue |

…which promotes
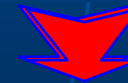
economic prosperity and social development

High Priority Activities

- **Trade Facilitation, smooth flow of goods**

- **Security of Global Supply Chains**

- **Cooperation among Customs and with other agencies, e.g. GNC, CBM, SW, MRA**

- **Efficiency of Customs, Use of modern tools and instruments**

Key Requirements: Connectivity and Access to information when required

Potential Solutions

- **More accurate data**

- **As early as possible**

- **Maximum use of risk management and reduced burden on trade**

- **Innovation (cloud? Data pipelines?)**

- **But there are concerns: data protection/confidentiality/ responsibility for accuracy of data**

Approved as the future Customs roadmap

Thank you for your attention

For more information

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Mozambique Vision -
The Steps for a Sustainable Single Window Implementation

2011 WCO IT Conference & Exhibition
Sheraton Hotel, US 11-13 May 2011

By Guilherme Mambo, Mozambique Customs,
gmambo@at.gov.mz or gfmambo@gmail.com

Contents

- Mozambique – Overview

- Challenges faced by Mozambique Customs;

- Steps for a Sustainable Single Window Implementation

- Mozambique Single electronic Window- SeW

- Lessons learnt.

Mozambique – Overview

- Population: 22,061,451 people , 2010 (country comparison to the world: 52);

- GDP: USD 22.19 billion , 2010 (country comparison to the world: 121);

- GDP – growth rate: 8.3% (2010) country comparison to the world: 8);

- **Export – Partners (2009):**

- Netherlands 47.62%, South Africa 11.6%;

- **Import – Partners (2009):**
  South Africa 33.54%, Netherlands 8.42%, India 5.93%, China 4.24% .

Mozambique – Overview

Mozambique Customs today:

- Stands at the forefront of the international trade management;

- Constitutes a **strategic** partner to the private sector of the economy;

- Customs procedures and practices have a direct impact on the competitiveness of the companies.

Mozambique – Overview

Customs Traditional Role

Modern Roles

- **Revenue Collection**
- Prevention of illicit trade
- Trade facilitation

Traditional Roles

- Provide transparency, predictability and timely clearance of goods to traders & stakeholders
- **Social Protection and Business Competitiveness**
- Balance trade facilitation and regulatory control

Challenges Faced by Mozambique Customs

The need to better meet:

- an increasing volumes of imports and exports;

- increasing volumes of entry and exit of means transportation;

- More sophisticated trafficking of drug and arms;

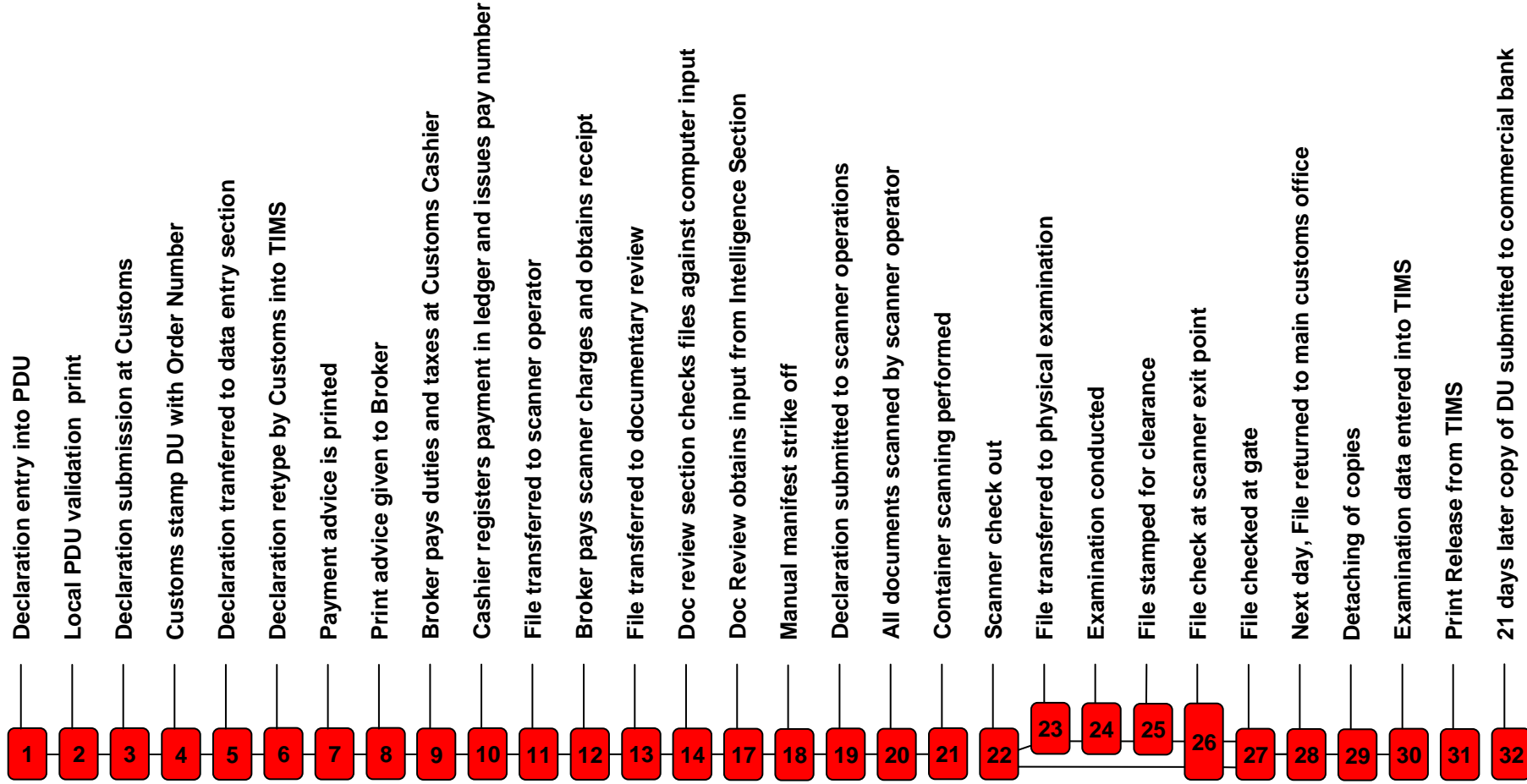- Growing of international requirements originating from integration and development;

Challenges Faced by Mozambique Customs

The need to better meet:

- Facilitate the movement of legitimate goods and persons;

- Promote economic growth;

- Rapid technological advancement;

- Inadequate financial resources, facilities, infrastructure; untrained staff;

Old Customs clearance process

Declaration entry into PDU — 1
Local PDU validation print — 2
Declaration submission at Customs — 3
Customs stamp DU with Order Number — 4
Declaration tranferred to data entry section — 5
Declaration retype by Customs into TIMS — 6
Payment advice is printed — 7
Print advice given to Broker — 8
Broker pays duties and taxes at Customs Cashier — 9
Cashier registers payment in ledger and issues pay number — 10
File transferred to scanner operator — 11
Broker pays scanner charges and obtains receipt — 12
File transferred to documentary review — 13
Doc review section checks files against computer input — 14
Doc Review obtains input from Intelligence Section — 17
Manual manifest strike off — 18
Declaration submitted to scanner operations — 19
All documents scanned by scanner operator — 20
Container scanning performed — 21
Scanner check out — 22
File transferred to physical examination — 23
Examination conducted — 24
File stamped for clearance — 25
File check at scanner exit point — 26
File checked at gate — 27
Next day, File returned to main customs office — 28
Detaching of copies — 29
Examination data entered into TIMS — 30
Print Release from TIMS — 31
21 days later copy of DU submitted to commercial bank — 32

Steps for a Sustainable Single Window Implementation

The preparatory work took 7 years and included the following steps:

- Internal Performance Reviews 2003;

- Customs Processes and IT systems diagnosis 2004;

- Rules and procedures Gap analysis 2005;

- Best Practices Workshop in Maputo (attended by 11 countries - 2005);

- MOU with Confederation of Trade Associations for implementation of SeW - 2006;

- *WCO* Time *Release Study* – 2007;

- International Tender 2009 for identification of partners;

- Start of implementation - Jan 2010.

Mozambique Single Electronic Window- SeW

Moz SeW is implemented by MCNet a PPP mandated by the Government of Mozambique to implement, operate and ensure sustainability of a Single Electronic Window program for Trade.

The project includes strategic partnership with SGS and Crimsonlogic .

The aim of the Single Window project is to:

- Provide a centralized electronic platform for trade;

- Reduce clearance times at land borders, port and airports;

- Increase revenue collection and;

- Generally reduce the cost of doing business in Mozambique.

Mozambique Single Electronic Window- SeW

- Provide the traceability of all the supply chain;

- Provides real time tracking of all customs operations;

- Insure the implementation of administrative and customs procedures;

- Centralizes and consolidates all the supply chain information;

- Compares expected data with real data and reveals discrepancies;

- Insure secure information about customs clearance process for each and any consignment;

Mozambique TradeNet and CMS

Mozambique TradeNet and CMS

Lessons Learnt

- We went through:
  - Huge coordination effort
  - Each entity had to review and be prepared to change its procedures and processes to fit into the SEW environment;
  - Each entity to agree in "letting go" the paper documents
- Financing – how is this achieved considering the sustainability and continuous evolution of such a system was critical;
- Overcoming infrastructure weaknesses in developing such as Mozambique with dozens of land borders in remote areas;
- System reliability was challenge to be seriously addressed due to the critical role a SEW plays in the trading environment;
- Legal Framework was established;
- Training and capacity building is a critical area that required carefully planning and execution;

Mozambique is proud to have the first Single Window in Southern Continental part of Africa

THANK YOU