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Cloud Strategies and Solutions for Customs:

*From smoke to cloud .....*

An IBM point of view
What is ´Cloud technology´?

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

**Hybrid**
- Internal and external service delivery methods are integrated

- **Enterprise data center**
  - Private cloud
- **Enterprise data center**
  - Managed private cloud
- **Enterprise**
  - Hosted private cloud
- **Enterprise**
  - Shared cloud services
- **Users**
  - Public cloud services

- **Third-party operated**
- **Third-party hosted and operated**
How does Cloud “work”? 

Direct access to the environment

Final User

Services Portal

Virtualized “Cloud” Infrastructure

Services Portfolio

Automatised Provisioning

Software & Hardware Resources

VIRTUALISATION + STANDARDISATION + AUTOMATION = Flexibility + Costs
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?

So what's your cloud strategy?
How to develop & implement your own strategy?

**Analysis & Vision**
- Cloud Strategy Outline
- Cloud Readiness Report

**Strategy Design**
- Cloud Services Prioritization
- Cloud Strategy

**Strategic Roadmap**
- Business Case
- Cloud Migration Roadmap

**Execute**

IBM Cloud Strategy Method

Examples...
eCustoms Framework
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.
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
What will tomorrow’s Customs Agency CIO see?

Customs business applications

- Client Register
- Tariff
- Transit
- Entry
- Exit
- Excise

- Guarantees (GMS)
- Import
- Export
- Inspect
- Licenses

- Supply chain data
- Ref Data

Shared middleware services

Infrastructure services

Integration Layer

Other Enterprise Resources

- Data Stores
- Legacy Applications
- Non Cloud Systems
- External Entities

Cloud Environment: NOT in own organization!

Public

Shared

Roles

BAU Application Users

Business Partner Systems

Users

Delivery Channels

Cloud Environment Roles

Saas Administrator

SaaS Consumer Business Mgr

Consumer of SaaS

Electronic Business Gateway

Electronic Business Gateway

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

**SISS Governance Process and Facilities**
- Directory Service, Data Query, Process Choreography

**Participants**
- 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.
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 reinvent the wheel
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
If you have questions or need additional information, please don’t hesitate to contact us at any time.

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