

June 2012

Transforming into the next generation:

Customs 2015: *a Smarter Planet strategy for customs administrations*

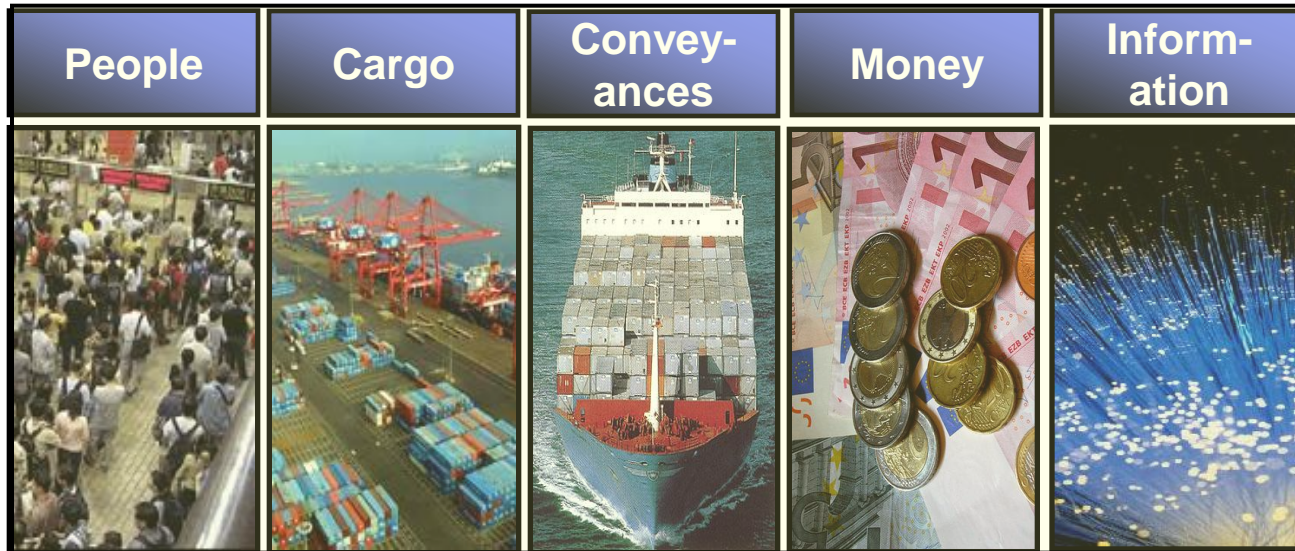
Ziv Baida, Norbert Kouwenhoven and Leigh Coen, IBM



This report is solely for the use of IBM personnel. No part of it may be circulated, quoted, or reproduced for distribution outside the IBM organization without prior written approval from IBM. This material was used by IBM during an oral presentation; it is not a complete record of the discussion.



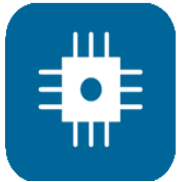
There are five primary channels in international trade.
Every shipment includes movement of...



- ❖ Past and present focus is on the cargo movement channel.
Conveyances logistics are being optimized in main ports
- ❖ These will remain important. Yet the strategic future focus is on the information channel.



In a world where more and more sensors provide data, the information channel is the key means to obtain the right data and create new insights, that will drive and enable transformation and new Customs strategies.



Our world is becoming **INSTRUMENTED**

More sensor data.

New forms of data collection include radio-frequency identification (RFID) tag-generated data, vessel movement data, data from container tracking devices and data from traders' internal systems



Our world is becoming **INTERCONNECTED**

Data sharing across customs administrations or across functional domains within a single agency. Data sharing among participants in a logistics or supply chain

Customs employees location-independent data access.

Employees spread geographically interconnect to collaborate.



All things are becoming **INTELLIGENT**

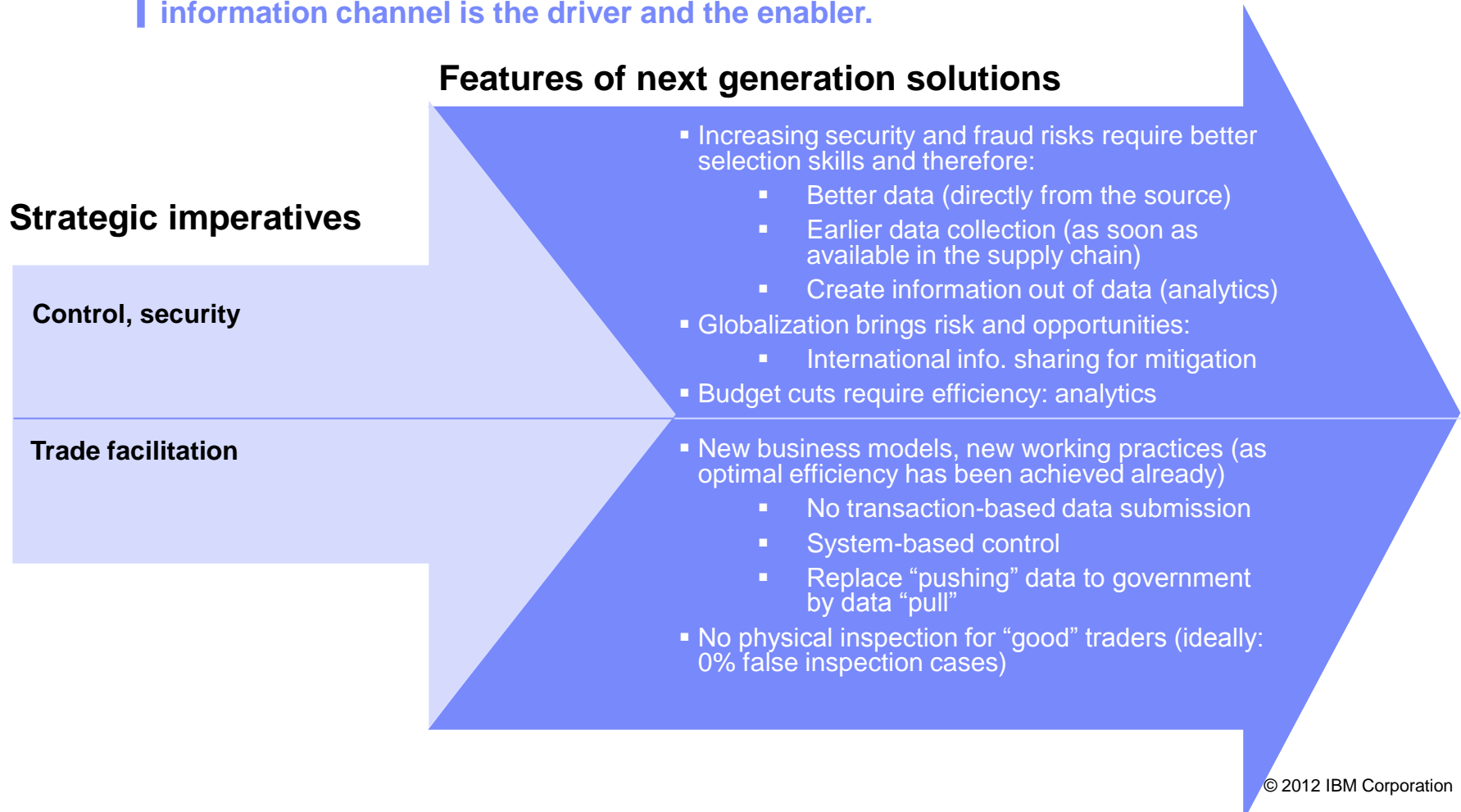
Analytics to create insights as early as possible. Human intelligence combined with analytics through interactive tools to turn mountains of data into intelligence that can be acted upon.





The information channel will help marry two seemingly contradicting goals: control and trade facilitation

- • ❖ Countries where major ports are located have become world leaders in logistics. No major improvement is possible there. To remain competitive, a new differentiation is necessary. This can be achieved by re-inventing the way customs operates. The information channel is the driver and the enabler.





The Customs 2015 strategy covers the areas of technology, policy and human capital, and specifically focuses on Customs Risk Management

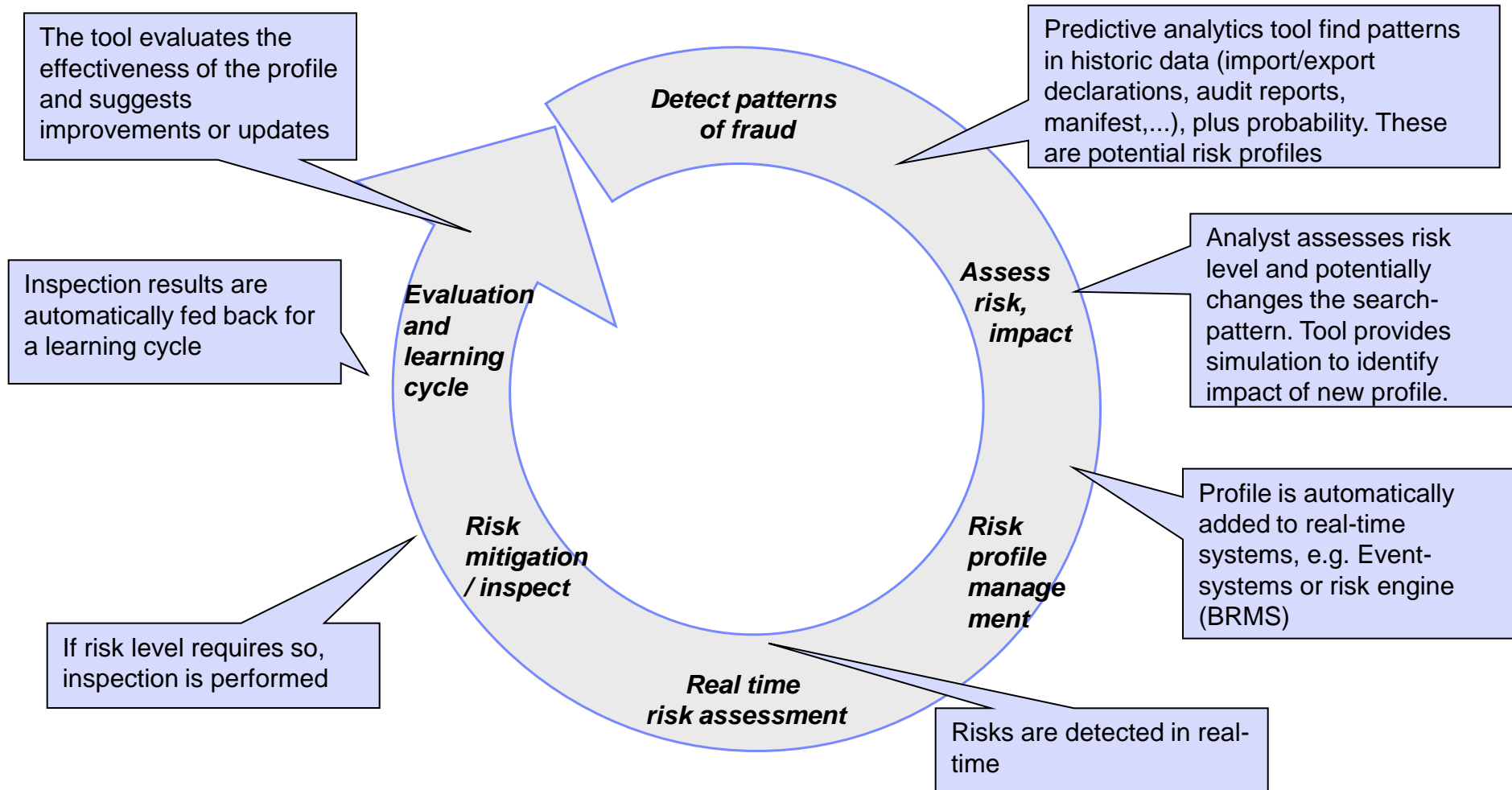
Pillar	Strategy	Key IT Solutions
Technology	Leverage technology to collect and share data that leads to new insights.	Data management, sensors, track-and-trace devices, analytics
	Drive operational efficiency and effectiveness.	Mobile and social media, analytics
Global Trade Policies	Establish Secure Trade Lane to support lawful trade.	Information standardization, process integration across the supply chain, sensors, track-and-trace devices
Human Capital	Adopt a strategic human capital approach to empowering front-line employees, which can help improve job performance.	Social and mobile media, IT education and enablement.
Risk Management	Set up instrumented, interconnected and intelligent systems to cope with 21st century risks and facilitate trade.	Predictive analytics, spatiotemporal analytics, social media analytics, data management



Risk Management techniques/models moving forward



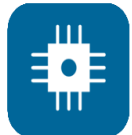
A survey among customs and immigration executives for IBM's CIBM Executive Forum 2011: the top business priority is targeting and selection, with high efficiency and effectiveness improvement potential



Source of the diagram: Lourens Riemens, IT architect, Dutch Customs, 2010



STL comprises two main technological components, using a service oriented architecture: container security devices and an information sharing infrastructure



Our world is becoming
INSTRUMENTED



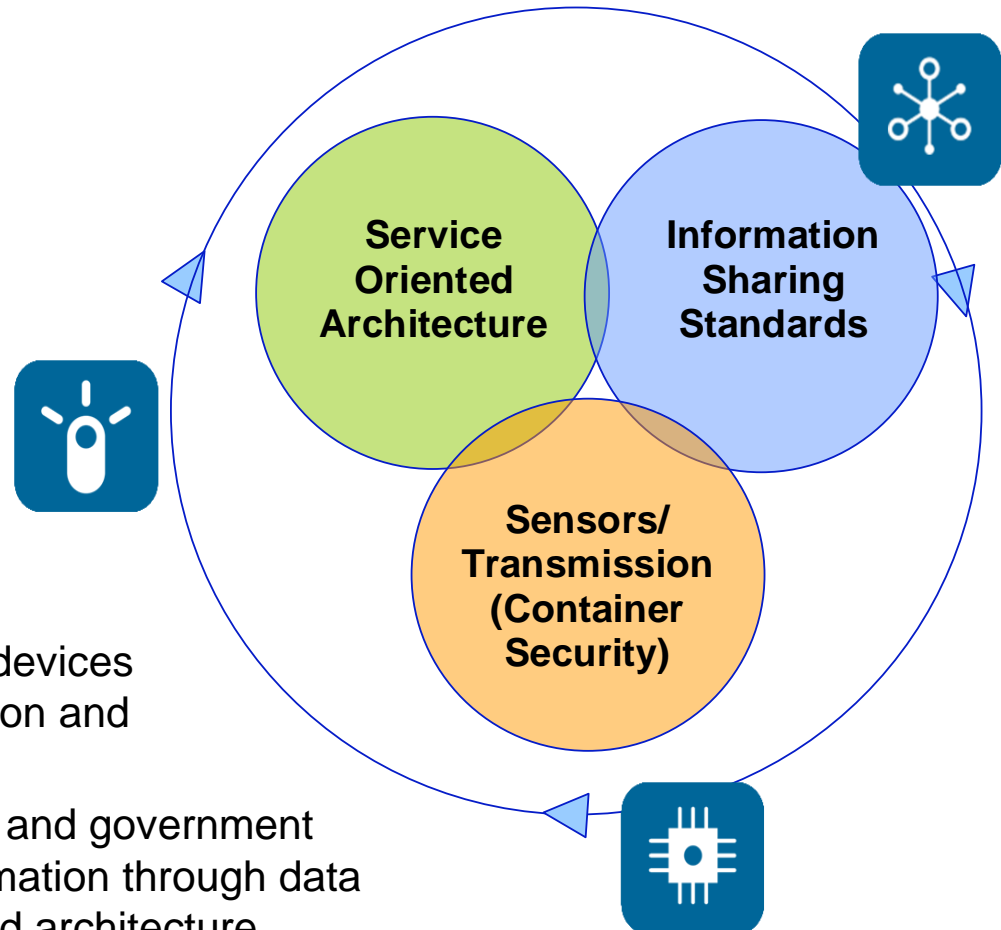
Our world is becoming
INTERCONNECTED



All things are becoming
INTELLIGENT










STL is...

- Instrumented, using track-and-trace devices that send container location information and security alerts.
- Interconnected, enabling businesses and government agencies to share supply chain information through data standardization and a service oriented architecture.
- Intelligent, as it enables customs to take action when supply chain integrity breaches occur.





Social media tools for customs officers, as implemented for a leading European Customs administration

 Connections Profiles	<i>Profiles</i>	Quickly find the people and expertise you need.
 Connections Communities	<i>Communities</i>	Work with people who share common interests and expertise
 Connections Activities	<i>Activities</i>	Organize your work and tap your professional network.
 Connections Blogs	<i>Blogs</i>	Present your ideas in weblogs and get feedback from others.
 Connections Wiki	<i>Wikis</i>	Create web content together.
 Connections Files	<i>Files</i>	Post, share, and discover documents, presentations, images, and more.
 Connections Atlas	<i>Atlas</i>	Visualize your network and extend it to tap into valuable resources and trusted experts across the organization
 Connections Bookmarks	<i>Bookmarks</i>	Save, organize, and share bookmarks.
 Connections Homepage	<i>Chat (+video)</i>	Locate and instantly connect with others via presence awareness, business cards, and instant messaging.
	<i>Quickr</i>	Organise project or teamwork effectively in team spaces



A Critical Success Factor for Customs 2015 strategy is developing a new business strategy for clients, where collaboration and information sharing are the keywords. Example new operating models are:

Actor	Current operations	Operations using new business model	Benefits
Customs inspection officer	Inspects cargo offline; later records results in IT system	<ul style="list-style-type: none"> ▪ Enables customs officer usage of mobile and social media to acquire and share information regarding an inspection in near real time with an extended network of private and public sector actors 	<ul style="list-style-type: none"> ▪ Improves information and knowledge sharing ▪ Results in more effective inspections and indirectly in fraud prevention and increased revenue collection
Importer/exp orter	Submits declarations to customs for every trade transaction	<ul style="list-style-type: none"> ▪ Shares supply chain and internal control information with customs. ▪ Reports control breaches ▪ Submits declarations for non-routine trade transactions 	<ul style="list-style-type: none"> ▪ Improves branding, product quality and supply chain agility with a high degree of internal control ▪ Reduces trade costs thanks to an exemption from submitting declarations
Carriers and LSPs	Provides transport services	<ul style="list-style-type: none"> ▪ Provides transport services and near-real time track-and-trace data to supply chain participants and customs ▪ Relies on sensors and analytics to identify risks and report to customs 	<ul style="list-style-type: none"> ▪ Enables new revenue streams ▪ Helps increase market share with differentiating service ▪ Improves branding and speeds the logistical process, enabling a price premium



Customs 2015 puts information management, analytics and social media on the agenda of the Customs CIO. But...

3

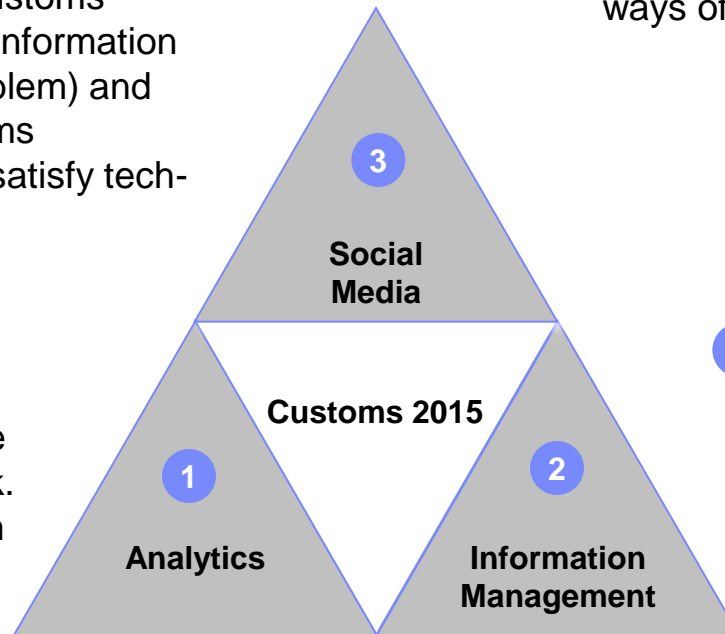
Social media for Customs employees to allow information sharing (ageing problem) and mobile work (Customs inspections) and to satisfy tech-savvy generation

Customs 2015 strategy focuses on introducing new capabilities and new ways of working.

1

Analytics for risk management. Find the needle in the haystack. Detect deviations from trade patterns.

Improved risk assessment results in optimized control, fast customs clearance and hence trade facilitation



2

Information Management. Extensive information sharing between supply chain partners and Customs.

Data harmonization (WCO datamodel), information sharing and information management services.

Integration serves customs risk management.



Call to Action



... but the CEO's attention is critical, because these areas will bring upon and depend on big changes in business, culture, policies and work practices. Transformation will not happen unless the CEO supports.

3

Social media

Changes how employees work
Empowerment
Community building

Information Technology is an enabler of new business models for Customs. The change therefore has to be business-driven.

1

Analytics

New business capability
New working practices;
different role for the
employees

Allows new
simplifications for “trusted
traders”; closer
collaboration with private
sector entities

2

Information Management

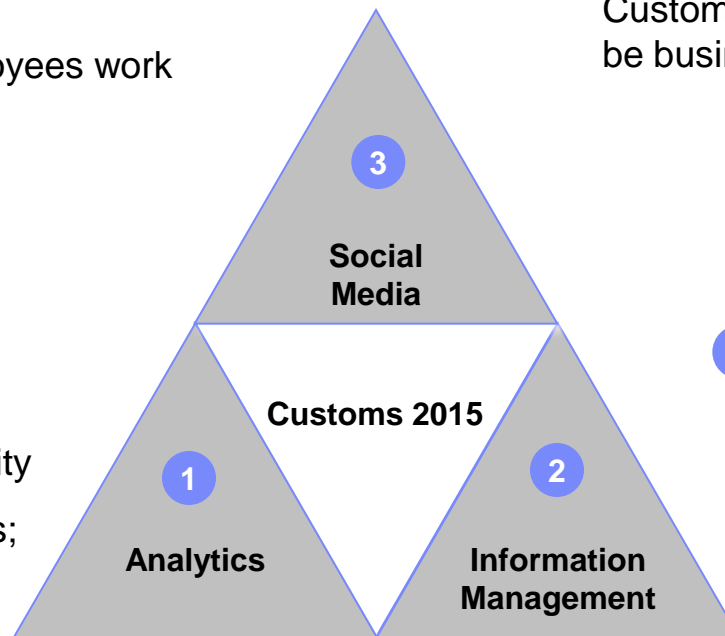
Collaboration agreements
(G2B and G2G)

Data standardization in
collaboration with other entities

Aligning with privacy legislation

Entails the development of new
risk management practices

STL / Cassandra is an example



Thank you!

धन्यवाद

Hindi

多謝

Traditional Chinese

ขอบคุณ

Thai

Спасибо

Russian

Gracias

Spanish

תודה

Hebrew

Thank You

English

شكراً

Arabic

Obrigado

Brazilian Portuguese

Grazie

Italian

多谢

Simplified Chinese

Danke

German

Merci

French

நன்றி

Tamil

ありがとうございました

Japanese

감사합니다

Korean