Customs 2020

Tuning the engines of commerce in the Cognitive Era

Highlights

- Emerging cognitive technologies will help customs agencies tune the engines of commerce.
- Employing risk management tools results in better use of customs inspection resources, reducing operational costs and lessening the administrative burden.
- Developing secure trade lanes results in faster logistical processes.
- Increasing interaction with private stakeholders enables customs to identify fraudulent and compliant shipments and traders.

Customs, immigration and border management agencies are facing challenges that have been imposed by their ever-changing environment. Four influencing factors have been widely recognized:

- *Increasing trade volumes.* Import and export volumes have continued to increase in 2015 by upwards of 3 percent, and trade volumes are expected to keep growing, fueled by the growth of the middle class. This population growth increases demand for public services and consumable goods.
- *Increasing risks.* Risks became asymmetric and continue to rise due to geopolitical instability, political and economic unrest, regional conflicts, the migrant crises and terrorism.
- *Continued cost cutting and austerity measures.* These issues are caused by lingering term structural deficits and economic slowdowns that are affecting major economies. The costs related to the increasing demands for services and increasing public expectations are causing government agencies of all sizes to continue to reduce expenses. Cost cutting has affected government's customers, too. Modernization strategies must be sensitive to the impact on operating costs for both public and private stakeholders.
- *Shifting expenditures.* Government agencies are being reorganized and restructured; roles and responsibilities are shifting. Also, on the operational level, governments are redesigning processes, automating manual tasks and allocating budgets to new roles, tasks and departments at the expense of more traditional ones.

These dramatic changes in the environment in which customs agencies operate pose a big challenge for customs: *How to "do more with less."*

Tuning the engines of commerce

International trade is the lifeblood of the global economy, but it is also a target for all types of illicit activity. While customs agencies could step up levels of inspections, it is likely the resulting slowdown in the clearance of goods and materials would have a negative economic impact. Instead, national customs agencies can use the cognitive capabilities that have developed in recent years to sift through vast amounts of structured and unstructured data to investigate cases of fraud and non-compliance. In addition, they can use cognitive systems to find patterns among complex relationships that would take years to discover using traditional approaches. This greater ability to detect indicators of fraud, by extrapolating insight from tens of thousands of data points' helps predict how fraud practices are likely to evolve. Those patterns can be visualized, contextualized and weighted by confidence-giving administrators, giving them greater predictive insights and credible information. Administrators can then make informed decisions, helping to make the systems of trade more efficient and safer.

Elevate risk management processes

Managing customs operations risk is critical, requiring agencies to maintain the smooth flow of goods, while protecting the nation's borders from the entry of illegal and potentially dangerous items. The ability to quickly analyze information, ranging from image scans, social media chatter, unstructured data and other sources of intelligence, is a necessary capability that customs agencies need to possess and enhance. Unlocking the insight and intelligence contained within the unstructured data is where many risk management processes lack critical capability. In the Cognitive Era™, systems that can discover, identify and weigh evidence—even with mountains of unstructured data sources—will enable customs agencies to deal more effectively with large complex data sets. Agents will be able to compare current trade transactions with historic trends to more quickly identify deviations in shipments and trade patterns.

These elevated risk detection capabilities can result in improved targeting and better deployment of customs inspection resources, lowering operational costs, and improving the ability to balance between legitimate trade and risk management.

Improving risk management processes can also provide the ability to better engage and manage the relationship with compliant traders. With better engagement, customs agencies can develop new business models for interaction with logistics service providers (LSPs) and traders by relying on openness, information sharing, collaboration and, ultimately, post-clearance control. At the same time, LSPs and authorized economic operators (AEOs) enjoy major simplification of trade procedures.

Move toward secure trade lanes

Secure trade lanes (STLs) build on the understanding that if an international consignment is compliant at the beginning of its journey and its integrity has been guaranteed by technological means until it arrives at its destination, it need not be inspected at the destination. If traders can demonstrate that their internal control mechanisms ensure compliance and they provide customs with full visibility of their supply chain data for information sharing, customs can shift all necessary control to the post-clearance process. The result is faster logistical processes. In addition, the same instrumented, interconnected data and analytical intelligence enable traders and LSPs to find additional cost savings and competitive advantage in their own supply chains. Examples are improved quality control and improved planning that are independent of border clearance efficiencies. The full trade facilitation potential of STLs will be achieved by:

- Exempting participating traders from the requirement to submit import and export declarations
- Enabling traders to calculate and pay import duties by themselves periodically
- Pushing any customs involvement into the post-clearance process, as long as no supply chain integrity breaches have been detected by the technology

Increase interaction with private stakeholders

A critical success factor in customs is the development of a business strategy for private-sector customers. The strategy is based on the understanding that new technological means, including analytics tools, sensors, trace devices, and social and mobile media, enable customs to identify fraudulent and compliant shipments and traders. Consequently, a new modus operandi is possible for the interaction between customs and private-sector stakeholders.

Such business models are not yet widely used, with the exception of certain specific vertical trade lanes, such as air cargo, pharmaceuticals and perishable goods. Sufficient business value has long been unavailable for private-sector stakeholders, and regulation stood in the way of changing working practices. In recent years, however, increasing maturity in international mutual recognition agreements has paved the way to a legal framework for enabling these new working practices.

Get ready for the Cognitive Era

The emergence of the Cognitive Era can help agencies realize control and trade facilitation, rather than simply settling for the best acceptable trade-off between them. Therefore, importers and exporters, logistics service providers and customs agencies should focus on the issues discussed in the following sections.

Building a robust digital agenda

The path to cognitive begins with a datadriven governance and operating model. Across government organizations, many challenges can be solved by building integrated, data-enabled IT services that are shared across agencies. It's critical that agencies establish a well-integrated operational model that is built on data analytics and that uses cloud technologies. This IT infrastructure needs to be tuned for big data and cognitive workloads.

Government organizations need to develop IT capabilities that allow them to fast-track digital applications and harmonize technologies from public, private and hybrid cloud technologies

with distributed devices, Internet-of-Things instrumentation, and existing systems. All of this must be done with strong security elements that protect systems and sensitive information.

Doing this well requires a clear governance model and technology platform. Agencies must also establish a well-integrated operational model, one built to take advantage of cloud, analytics and cognitive capabilities. This digital foundation will allow government organizations to begin building their digital agendas to take advantage of the emerging cognitive computing era.

Preparing a cognitive foundation

The single most critical foundation of a successful cognitive organization is digitization of data. If data cannot be ingested by a cognitive system, it cannot be analyzed by a cognitive system. So the work in which all agencies are currently engaged—digitizing information and processes, moving data to the cloud, and building analytics capabilities—are prerequisites for success with cognitive computing.

For more information

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