

**10  
steps****to a resilient  
post-COVID-19  
supply chain**

## **Sustainable post-COVID-19 supply chain recovery through global data standards**

### **Building a resilient supply chain through product identification and data sharing**

This document is a summary of the [full GS1 report](#) included in the [UN website](#) of written contributions to the [Policy Hackathon on Model Provisions for Trade in Times of Crisis and Pandemic in Regional and Other Trade Agreements](#).

A digitized, standardized supply chain can mitigate supply chain shocks, and provide workable solutions the world needs today and in the future for recovery and resilience.

COVID-19 is disrupting traditional supply chain practices, and post COVID-19, the world will see altered supply chain structures. Fundamentally, manufacturing and supply chains will become more localised, which will directly impact companies' operations, costs and sourcing. In addition, supply chains will adopt more robust preparedness planning in anticipation of future pandemics and will incorporate better sustainability and resilience into their systems. These changes are expected to change the way business is conducted long after the pandemic subsides.

On an operational level, negative impacts and systemic weaknesses revealed by the present crisis have included: limited availability of staff due to lockdowns, restrictions on export-import trade flows and diversions, requirements for contactless import procedures, and the lack of visibility and flexibility in the supply chain. It is apparent that the application of open global data standards will not only enhance cross-border trade aspects during the pandemic recovery phase, but also build much-needed preparedness into border processes and supply chains to ensure future resilience.

It has been demonstrated that lack of harmonisation and standardisation of regulatory processes among governments presents significant challenges<sup>1</sup> to cross-border trade, and these issues are naturally exacerbated during a pandemic or other disaster, which reduces the availability of essential goods precisely when they are needed most.

Challenges to the safety and efficiency of supply chains commonly result from insufficient data or data errors. These deficiencies compel government agencies to cast an overly broad operational and regulatory net, and to undertake needless and excessive inspections, slowing the transit of goods across borders. This encumbers trade, wastes agency resources, and makes cross-border trade less efficient during normal circumstances, but even more so during a time of crisis.

Border agencies often must rely on data that they receive from intermediary parties (e.g. carriers, agents, representatives) that are not the original source of the information. Therefore, the reliability of such information may be questioned by authorities, introducing additional friction into trading processes. To remedy the above deficiencies and challenges, collaboration among all supply chain stakeholders is critical.

Key areas requiring broad cooperation include:

- Infrastructure to enable interoperability among logistics operators/platforms
- Effective paperless sharing of data between industry (including MSMEs) and government
- The use of a common, standardised informational language among supply chain stakeholders for identification, description and data sharing for goods trade

Government operations can be significantly improved by leveraging systems already employed by business, by re-using data generated by industry, and by augmenting existing border agency systems with identification and classification systems already adopted by industry. Simplified, paperless and automated border procedures limit impacts on all stakeholders and can make processes safer by being contactless.

All governments need to evaluate what their priorities are, what product categories are strategically important, and what challenges need to be addressed. Therefore, a range of options is presented as general guidance, rather than mandatory instructions or rules. This approach is intended to give governments flexibility in developing preparedness plans that best suit their local conditions.

Recommendations are presented in alignment with corresponding pandemic response phases identified by WHO. This approach enables each government to select tools and processes best matched to its specific context, whether that be pre-pandemic, mid-pandemic, or post-crisis re-building. While each constituent will inevitably find itself addressing a somewhat unique combination of issues and conditions, it is strongly encouraged that all stakeholders commit to open, free, and interoperable standards to ensure a level playing field, to promote innovation and to achieve global resilience.

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<sup>1</sup> Kevin Syslo (team lead) University of Southern California, Marshall School of Business *APEC Supply Chains: Identifying Opportunities for Improvement* (2011)

The GS1 recommendations focus on the use of open, global standards for product identification and data sharing, migration to completely electronic documents along the entire international trading process, linkages between industry identifiers and the HS code, future trade agreements including global data standards, and a commitment to emerging technologies like blockchain and IoT to enhance data capture, decision-making and information sharing.

**Recommendation 1:**

Use standardised unique product identification across international supply chains.

**Recommendation 2:**

Create linkage between industry identifiers and the HS code for accelerated and accurate goods processing.

**Recommendation 3:**

Use standardised product classification and identification to differentiate between COVID-19 essential goods, humanitarian relief items and non-essential goods.

Enable digital pre-arrival clearance for all essential goods and relief items.

**Recommendation 4:**

Gain efficiencies in the importation of goods by using electronic systems with GDSN.

**Recommendation 5:**

Adopt standardised digital processes globally or at least regionally to further connect MSMEs into information exchange networks.

**Recommendation 6:**

Future trade agreements should recommend or mandate the use of open global standards especially in cross-border procedures.

**Recommendation 7:**

Include technologies like digital twins and IoT in supply chain and border processes to enhance data capture, decision-making, and information sharing. Link these with data standards.

**Recommendation 8:**

Use electronic platforms and documents in international trade, migrate completely to e-documents and use global data standards in e-records.

**Recommendation 9:**

Adopt standardised barcode, data matrix or QR code, and barcode scanning anywhere along the supply chain, including the border.

**Recommendation 10:**

Strengthen international public-public, private-public, and private-private information sharing and collaboration.

Access [here](#) for more information on GS1 Standards and [here](#) to learn more about GS1 Public Policy