



USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

GS1 SCIS Requirements Narrative

Version 1, July 2020

INTRODUCTION

PURPOSE

The GS1 Supply Chain Information Systems (SCIS) Requirements, available at <https://www.ghsupplychain.org/GS1SCISReqs>, aim to provide countries investing in SCIS with the functional and technical requirements for meeting GS1 standards, as these standards define the deployment of SCIS in ways that maintain and leverage GS1 capabilities, as well as define the operations and business process capabilities needed to support verification and traceability of products.

These requirements are intended as a supplement to existing base requirements for a given system and as such should be integrated into these additional SCIS requirements for a party's specific procurement. These requirements are intended to support mapping and comparing of system capabilities, and evaluation of a proposed system's ability to be configured and deployed in a manner that supports GS1 implementation, including management of master data, support of transaction processing using Global Trade Item Number (GTIN), Global Location Number (GLN), and Serial Shipping Container Code (SSCC), and enabling reporting and supply chain visibility.

Implementers may use only the requirements that are most suitable to their specific procurement and/or implementation, based on their desired level of maturity. While a given implementation may only need the elementary requirements, it is recommended that all requirements be considered to support future development.

METHODOLOGY

These GS1 SCIS Requirements are built using the Wiegers method. Wiegers requirements are assembled against use case scenarios, and here we have relied on the Supply Chain Operations Reference (SCOR) Model, which is also the model used for the Supply Chain Information Systems Maturity Model, developed by the Global Health Supply Chain – Procurement and Supply Management project (GHSC-PSM) under United States Agency for International Development (USAID) guidance in 2017. The SCOR Model helped to develop the "Design Package", a tab included toward the end of the worksheet, which has select business processes around which the requirements are categorized. The requirements begin with a User requirement - the user must be able to perform a certain function in the business process. These are then followed by Functional requirements: functions that the system shall be able to perform in support of the User requirement. There are then possible Non-functional requirements, which describe a condition that may be present during the process, and System requirement, which are conditions that the system should be able to perform, considered technical requirements.

NAVIGATION

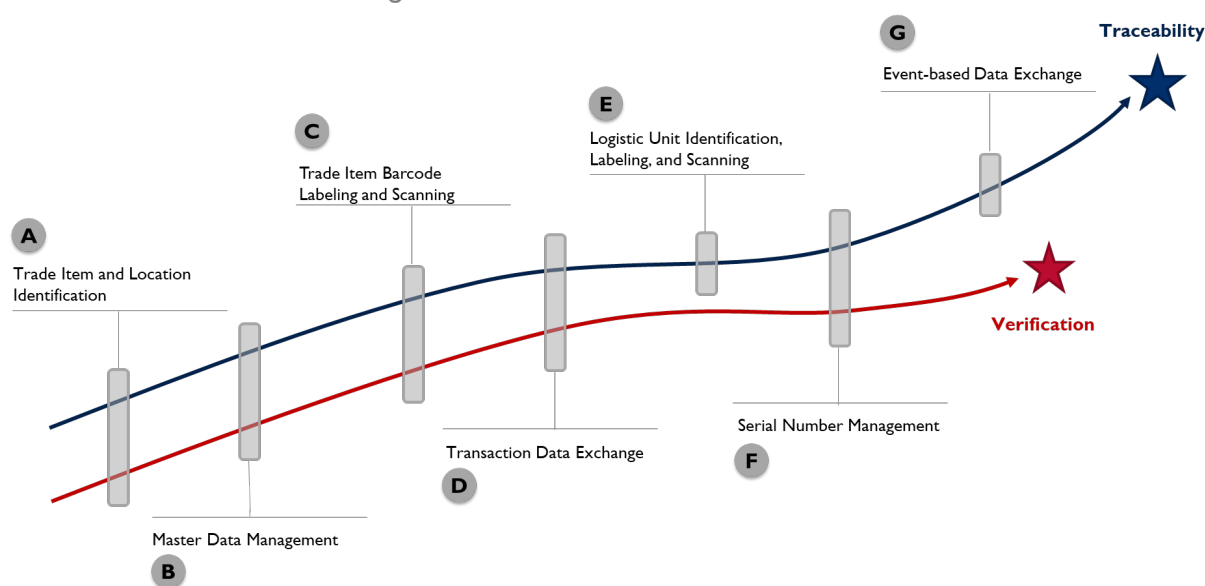
Each SCIS Requirement worksheet is described below. Note that some procurements will use only selective worksheets, depending upon the types of systems being procured. For example, a procurement for a Warehouse Management System, might only use the Offeror Instructions, Master Data Management, Order Management, and Warehouse Management tabs. If barcoding in the warehouse is included in the procurement, then the Barcoding Hardware Integration tab would be included; and if traceability is a final desired outcome, then the Interoperability and Traceability tab would be included.

System Tab	Description
Offeror Instructions	The Offeror Instructions tab is used to introduce the requirements package to the offeror in a procurement, with instructions (sample included) for how to respond to the requirements
Acronyms	A listing of acronyms used throughout the requirements; note acronyms are not spelled out in the requirements.
Glossary	A glossary of terms used throughout the requirements.
Master Data Management	Master Data Management requirements represent the foundational requirements (i.e. maturity levels 1 and 2) to record products, trade items, locations in the internal supply chain, as well as suppliers and supplier locations.
Forecasting & Planning	Forecasting & Planning requirements address how these systems interpret trade items across the trade item hierarchy, and how these systems would be able to share forecast data with suppliers. These are generally more advanced systems in SCIS.
Supplier & Contract Management	Supplier & Contract Management requirements address how suppliers can interact with the SCIS to manage supplier data, and how integrating supplier catalogs and supplier contracts would interact with GS1 standards, including GLNs and GTINs.
Procurement	Procurement requirements address how purchase order creation interacts with GLNs and GTINs, and how SCIS would integrate with electronic data interchange (EDI) technologies to receive Advanced Shipment Notices during the procurement process. There are additional EDI transaction support needs that are captured on the Interoperability & Traceability tab. EDI requirements also represent more advanced systems capabilities, which are incorporated in the GS1 standard, but often optional levels of functionality.

Order Management	Order Management address the requirements for SCIS to manage internal distribution orders, which is closely coupled with the Warehouse Management system to distribute goods across the internal supply chain.
Warehouse Management	Warehouse Management requirements address the core of transactions for receiving, stocking and shipping goods in the supply chain. These requirements form the bulk of level 3 and level 4 maturity for GS1 compliance.
Transportation Management	Transportation Management addresses more advanced levels of maturity, where integration with 3PL providers is required to monitor distribution of goods across the extended supply chain.
Interoperability & Traceability	Interoperability & Traceability addresses the most advanced levels of maturity, including the automated exchange of transaction data that may be required for high-volume business partner relationships, and event tracking through electronic product code information services (EPCIS) to provide complete traceability of trade items across the extended supply chain. The events captured in an EPCIS are defined on the Event Notification tab.
Barcoding Hardware Integration	Barcoding Hardware Integration represents foundational requirements for connecting to barcode equipment to facilitate automated identification and data capture, maturity level 3.
Design Package	The Design Package tab is a summary of the user requirements that are included in each tab of the SCIS tabs. All requirements are assembled using the Wiegers method, which includes the User requirement as the function that a user of SCIS must be able to perform. The User requirement is then supported with Functional requirements that describe what the system shall perform, Non-functional requirements that describe key features of the process being performed, and System requirements, that describe system functions necessary to perform the process.
Event Notification	The Event Notification tab contains the list of events that are captured in EPCIS in a healthcare setting.
Tables	Includes the list of verification tables used in the SCIS worksheets, and also includes a reference to the GS1 Implementation Roadmap used to align the Priority/Maturity Level column in the SCIS worksheets.

GS1 IMPLEMENTATION ROADMAP

The requirements are grounded in the foundational requirements for supporting master data management of items (as a basis for products), parties (e.g. locations and suppliers), and the interoperability requirements for exchange of data across the extended supply chain. Transaction-oriented requirements are organized across the systems defined in the GHSC-PSM GS1 Implementation Roadmap (available at <https://www.ghsupplychain.org/implementation-guidance-pharmaceutical-traceability-leveraging-gs1-global-standards>), tracking capabilities needed across the various systems defined in that roadmap. The requirements are prioritized to reflect basic requirements needed to support GS1 standards and extend to those requirements needed to support product verification, and then to those needed to support product traceability, including serialization and the ability to integrate with an event-based data exchange.



All requirements align with a level on the roadmap, and these levels can help guide which requirements are essential to the specific procurement. Each procurement should identify where on the maturity model the country is striving to achieve, with requirements beyond that level either listed as “included for information gather about the offeror’s capabilities, but not mandatory” or removed from the worksheet altogether.

CLOSING

These GS1 Global Standards SCIS Requirements are a tool intended to support countries in procuring and deploying SCIS capable of leveraging GS1 standards for master data management, automatic identification and data capture, product verification, product traceability, and other capabilities. These requirements should be tailored to each procurement to align with the desired maturity level and should be integrated with the existing base requirements for the given systems. Additional input and support may be solicited from the GHSC-PSM HSS Global Standards & Traceability team (HSS_GS1GlobalStandards_HQ@ghsc-psm.org) for applying these requirements to a specific procurement activity.