# GS1 Policy, Principles and Process for the Adoption of a New AIDC Data Carrier or Data Carrier Syntax

## 1 Policy

GS1 AIDC (automatic identification and data capture) standards must be relevant and applicable to any supply chain, independent of who assigns, receives, and processes the standards. An AIDC data carrier and/or data carrier syntax should only be introduced if they are required to enable new applications or provide superior ways to perform existing functions. The new AIDC data carrier and/or data carrier syntax must interoperate with existing carriers and syntaxes in existing applications without causing substantial disruption.

For example, this policy applies where a new or existing AIDC Application Standard introduces:

- New barcode(s) to be used instead of the currently supported barcodes (e.g., GS1 DotCode instead of existing GS1 barcodes such as GS1 DataMatrix).
- New data carrier syntax for use instead of the currently supported syntax, (e.g., GS1 Digital Link URI syntax instead of GS1 Element String syntax).

If a GS1 Global Standards Management Process (GSMP) group requirement identifies a new AIDC data carrier (e.g., barcode, tag) and/or syntax choice that enables a new or superior way to support an existing AIDC Application Standard(s), then it can be added in GS1 General Specifications data carrier sections, all applicable, global AIDC Application Standards and related symbol specification table(s) or RFID equivalent). The addition is contingent on proper approval through the (GSMP).

## 2 Guiding principles in technology adoption

It is obligatory to do due diligence when assessing a new data carrier or data carrier syntax for adoption within an AIDC Application Standard. This assessment is conducted by GS1 Global Office (GO) and properly documented. If the assessment presents a potential revision to this Policy, the GS1 GO Architecture Group Chairs will consult the GS1 Architecture Group.

### 2.1 Backward compatibility

A new AIDC data carrier/syntax must be able to carry the application standard-defined subset of GS1 data elements for which the AIDC data carrier is required.

### 2.2 Forward capability

The assessment of a new AIDC data carrier or data carrier syntax must demonstrate that it has the capability to deliver the needed ranges of cost/performance/quality across the expected range of applications, materials, and operational environments.

### 2.3 Exclusivity

A technique must be available to enable unambiguous recognition of GS1 data structures within AIDC solution provider offerings.

## 2.4 GS1 data element use

When a GS1 Application Standard specifies the use of a GS1 AIDC data carrier, the AIDC Application Standard shall specify exclusive use of GS1 data elements.

## 2.5 Intellectual property

AIDC data carriers or data carrier syntax must comply with the GS1 IP policy, with preference to AIDC data carriers in the public domain and freely available.

## 2.6 Auto-discrimination

AIDC data carriers must co-exist with one another and be capable of unambiguous recognition (e.g., symbology identifier, regular expression).

## 2.7 Equivalent representation

Systems must be able to interpret and process an AIDC data carrier for equivalent syntaxes (e.g., GS1 element string, GS1 Digital Link URI).

## *2.8* Human factors

Consideration should be given per data carrier syntax to efficient keystroke entry (or equivalent data entry method), error handling, and barcode placement as key factors in effective implementation.

## 2.9 Business requirements

At a minimum, a request for a new AIDC data carrier or data carrier syntax must address why the new technology is required (i.e., what unmet business requirement is met) and what effect the new technology will have on legacy solutions built based on GS1 standards. An approval plan must include a migration path to support the new technology, must support current business practices, and must provide benefit beyond existing technologies.

# 3 Process

## 3.1 Global Standards Management Process (GSMP) groups

The GSMP is the mechanism to approve the adoption of new technology for the GS1 system. Work requests to add an AIDC data carrier or data carrier syntax to an existing or new AIDC Application Standard require evaluation for approval. This evaluation is based on the following conditions.

1. Technology is freely implementable to the best of GS1's knowledge
2. A technique must be available to enable unambiguous identification of GS1 data structures.
3. Tested to ensure it will not substantially disrupt scanner or reader performance for existing AIDC data carriers or data carrier syntax
4. Capable of being compliant with equivalent specifications in symbol specification tables or RFID equivalent for global AIDC Application Standards (e.g., data carrier syntax, quality, barcode placement, human-readable, barcode size, tag read/write)
5. The new AIDC data carrier or data carrier syntax option can be implemented exclusively in 90%+ of installed scanner/reader locations for a given operative scanner environment as defined by the GS1 General Specifications without significant disruption to the performance of existing AIDC data carriers.

The GS1 Management Board and General Assembly (GA) may decide to make an exception to the 90%+ minimum by approving and deploying program management to reach that goal.

## 3.2 Formation of policy and principles

The GS1 Architecture Group forms the policy and principles for evaluation of new AIDC data carriers and data carrier syntax and the GS1 Board Committee for Standards approves the policies and principles. These policies and principles steer the evaluation of AIDC data carriers and data carrier syntax throughout the entire GSMP.

### Approval History

| Date | Notes |
|---|---|
| 8 Dec 2022 | Latest update – approved by the General Assembly on 08 December 2022 |
| 11 Dec 2023 | No text changes, but converted to latest version of Word as approved by the GS1 General Assembly |