



The Global Language of Business

Core Business Vocabulary Standard

specifies the structure of vocabularies and specific values for the vocabulary elements to be utilised in conjunction with the GS1 EPCIS standard

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3 Log of Changes

Release	Date of Change	Changed By	Summary of Change
1.0	Oct 2010		Initial release

Release	Date of Change	Changed By	Summary of Change
1.1	March 2014		<p>A new standard vocabulary for EPCIS source/destination type is added.</p> <p>Templates for new user vocabularies for EPCIS source/destination identifier, EPCIS transformation identifier, and object classes are added.</p> <p>New business step, disposition, and business transaction type values are added. The definitions of existing values are also clarified.</p> <p>Disposition values <code>non_sellable_expired</code>, <code>non_sellable_damaged</code>, <code>non_sellable_disposed</code>, <code>non_sellable_no_pedigree_match</code>, and <code>non_sellable_recalled</code> defined in CBV 1.0 are deprecated in favour of new disposition values <code>expired</code>, <code>damaged</code>, <code>disposed</code>, <code>no_pedigree_match</code>, and <code>recalled</code> introduced in CBV 1.1.</p> <p>RFC5870-compliant geocoordinate URIs are now permitted as location identifiers.</p> <p>The introductory material is revised to align with the GS1 System Architecture.</p>
1.2	Sep 2016		<p>CBV 1.2 is fully backward compatible with CBV 1.1 and 1.0.</p> <p>CBV 1.2 includes these new or enhanced features:</p> <p>A new standard vocabulary for EPCIS error declaration reason identifiers is added.</p> <p>The URI structure for EPCIS event identifiers is specified.</p> <p>New business step values <code>dispensing</code> and <code>voidShipping</code> added.</p> <p>New disposition values <code>dispensed</code> and <code>partially_dispensed</code> added.</p> <p>A new section for trade item master data attributes is added, and the section on location and party master data attributes is expanded.</p>

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1 Introduction – Core Business Vocabulary

This GS1 standard defines the Core Business Vocabulary (CBV). The goal of this standard is to specify various vocabulary elements and their values for use in conjunction with the EPCIS standard [EPCIS1.2], which defines mechanisms to exchange information both within and across organisation boundaries. The vocabulary identifiers and definitions in this standard will ensure that all parties who exchange EPCIS data using the Core Business Vocabulary will have a common understanding of the semantic meaning of that data.

This standard is intended to provide a basic capability that meets the above goal. In particular, this standard is designed to define vocabularies that are *core* to the EPCIS abstract data model and are applicable to a broad set of business scenarios common to many industries that have a desire or requirement to share data. This standard intends to provide a useful set of values and definitions that can be consistently understood by each party in the supply chain.

Additional end user requirements may be addressed by augmenting the vocabulary elements herein with additional vocabulary elements defined for a particular industry or a set of users or a single user. Additional values for the standard vocabulary types defined in this standard may be included in follow-on versions of this standard.

This standard includes identifier syntax and specific vocabulary element values with their definitions for these *Standard Vocabularies*:

- Business step identifiers
- Disposition identifiers
- Business transaction types
- Source/Destination types
- Error reason identifiers

This standard provides identifier syntax options for these *User Vocabularies*:

- Objects
- Locations
- Business transactions
- Source/Destination identifiers
- Transformation identifiers
- Event identifiers

This standard provides *Master Data Attributes and Values* for describing Physical Locations including:

- Site Location
- Sub-Site Type
- Sub-Site Attributes
- Sub-Site Detail

Additional detailed master data regarding locations (addresses, etc.) are not defined in this standard.

2 Relationship to the GS1 System Architecture

The Core Business Vocabulary is a companion standard to the EPCIS standard. EPCIS is the standard that defines the technical interfaces for capturing and sharing event data. EPCIS defines a framework data model for event data. The Core Business Vocabulary is a GS1 *data standard* that supplements that framework by defining specific data values that may populate the EPCIS data model. As such, the CBV exists in the "Share" group of GS1 standards.

163 **3 Relationship to EPCIS**

164 This section specifies how the Core Business Vocabulary standard relates to the EPC Information
 165 Services (EPCIS) standard.

166 **3.1 EPCIS event structure**

167 The EPCIS 1.2 standard [EPCIS1.2] specifies the data elements in an EPCIS event. The following
 168 lists these data elements, and indicates where the Core Business Vocabulary provides identifiers
 169 that may be used as values for those data elements.

- 170 ■ **The “what” dimension:** The *what* dimension for most event types contains one or more
 171 unique identifiers for physical or digital objects or classes of physical or digital objects.
 172 Identifiers for physical or digital objects in the Core Business Vocabulary are specified in
 173 [Section 8.2 \(instance-level\) and Section 8.3 \(class-level\)](#). In the case of an EPCIS
 174 TransformationEvent, an optional TransformationID may be used to link together multiple
 175 events that describe the same transformation. The Core Business Vocabulary includes
 176 TransformationIDs in [Section 8.7](#).
- 177 ■ **The “when” dimension:** The moment in time at which an EPCIS event occurred. Event time is
 178 fully specified in the EPCIS standard.
- 179 ■ **The “where” dimension:** The “where” dimension consists of two identifiers that describe
 180 different aspects of where an event occurred:
 - 181 □ **Read Point:** The location where the EPCIS event took place. In the case of an EPCIS event
 182 arising from reading a barcode or RFID tag, the Read Point is often the location where the
 183 barcode or RFID tag was read. Identifiers for read points in the Core Business Vocabulary
 184 are specified in [Section 8.3](#).

 185 Example: A reader is placed at dock door #3 at the London Distribution Centre (DC).
 186 Product passed through the dock door. Read point = <The identifier that stands for London
 187 DC Dock Door #3>
 - 188 □ **Business Location:** The location where the subject of the event is assumed to be following
 189 an EPCIS event, until a new event takes place that indicates otherwise. Identifiers for
 190 business locations in the Core Business Vocabulary are specified in [Section 8.3](#).

 191 Example: A product is read through the sales floor transition door at store #123. The
 192 product is now sitting on the sales floor. Business location = <The identifier that stands for
 193 store #123 Sales Floor>
- 194 ■ **The “why” dimension:** The “why” dimension consists of two identifiers and a list of business
 195 transaction identifiers, which collectively provide the business context or “why” the event
 196 occurred:
 - 197 □ **Business Step:** Denotes a specific activity within a business process. The business step
 198 field of an event specifies what business process step was taking place that caused the
 199 event to be captured. Identifiers for business steps in the Core Business Vocabulary are
 200 specified in [Section 7.1](#).

 201 Example: an EPCIS event is generated as a product departs the location identified by the
 202 Read Point. Business Step = <The identifier that denotes “shipping”>
 - 203 □ **Disposition:** Denotes the business state of an object. The disposition field of an event
 204 specifies the business condition of the subject of the event (the things specified in the
 205 “what” dimension), subsequent to the event. The disposition is assumed to hold true until
 206 another event indicates a change of disposition. Identifiers for dispositions in the Core
 207 Business Vocabulary are specified in [Section 7.2](#).

 208 Example: an EPCIS event is generated and afterward the products can be sold as-is and
 209 customers can access product for purchase. Disposition = <The identifier that denotes
 210 “sellable and accessible”>
 - 211 □ **Business Transaction References:** An EPCIS event may refer to one or more business
 212 transaction documents. Each such reference consists of two identifiers:

- 213 - **Business Transaction Type:** Denotes a particular kind of business transaction.
214 *Example: the identifier that denotes "purchase order".* Identifiers for business
215 transaction types in the Core Business Vocabulary are specified in [Section 7.3](#).
- 216 - **Business Transaction Identifier:** Denotes a specific business transaction document of
217 the type indicated by the Business Transaction Type.
218 *Example: <The identifier that denotes Example Corp purchase order #123456>*
219 Identifiers for business transactions in the Core Business Vocabulary are specified in
220 [Section 8.5](#).
- 221 □ **Source and Destination References:** An EPCIS event may refer to one or more sources
222 and/or destinations that describe the endpoints of a business transfer of which the event is a
223 part. Each source or destination reference consists of two identifiers:
 - 224 - **Source or Destination Type:** Denotes a particular kind of source or destination.
225 *Example: the identifier that denotes "owning party".* Identifiers for source and
226 destination types in the Core Business Vocabulary are specified in [Section 7.4](#).
 - 227 - **Source or Destination Identifier:** Denotes a source or destination of the type
228 indicated by the Business Transaction Type. *Example: <The identifier that denotes*
229 *Example Corp as an owning party>* Identifiers for sources and destinations in the Core
230 Business Vocabulary are specified in [Section 8.6](#).

231 3.2 Vocabulary kinds

232 (The material in this section is adapted directly from [EPCIS1.2], [Section 6.2](#).)

233 Vocabularies are used extensively within EPCIS to model conceptual, physical, and digital entities
234 that exist in the real world.

235 Examples of vocabularies defined in the EPCIS standard are business steps, dispositions, location
236 identifiers, physical or digital object identifiers, business transaction type names, and business
237 transaction identifiers. In each case, a vocabulary represents a finite (though open-ended) set of
238 alternatives that may appear in specific fields of events.

239 It is useful to distinguish two kinds of vocabularies, which follow different patterns in the way they
240 are defined and extended over time:

- 241 ■ **Standard Vocabulary:** A Standard Vocabulary is a set of Vocabulary Elements whose definition
242 and meaning must be agreed to in advance by trading partners who will exchange events using
243 the vocabulary.
- 244 ■ **User Vocabulary:** A User Vocabulary is a set of Vocabulary Elements whose definition and
245 meaning are under the control of a single organisation.

246 These concepts are explained in more detail below.

247 3.2.1 Standard Vocabulary

248 A Standard Vocabulary is a set of Vocabulary Elements whose definition and meaning must be
249 agreed to in advance by trading partners who will exchange events using the vocabulary. For
250 example, the EPCIS standard defines a vocabulary called "business step," whose elements are
251 identifiers denoting such things as "shipping," "receiving," and so on. One trading partner may
252 generate an event having a business step of "shipping," and another partner receiving that event
253 through a query can interpret it because of a prior agreement as to what "shipping" means.

254 Standard Vocabulary elements tend to be defined by organisations of multiple end users, such as
255 GS1, industry consortia outside GS1, private trading partner groups, and so on. The master data
256 associated with Standard Vocabulary elements, if any master data is defined at all, are defined by
257 those same organisations, and tend to be distributed to users as part of a standard or by some
258 similar means. New vocabulary elements within a given Standard Vocabulary tend to be introduced
259 through a very deliberate and occasional process, such as the ratification of a new version of a
260 standard or through a vote of an industry group.

261 The Standard Vocabularies specified in the Core Business Vocabulary standard are: [business steps](#)
262 [\(Section 7.1\)](#), [dispositions \(Section 7.2\)](#), [business transaction types \(Section 7.3\)](#), and [source and](#)

263 [destination types \(Section 7.4\)](#). The elements and definitions are agreed to by parties prior to
 264 exchanging data, and there is general agreement on their meaning.

265 Example: the following is a business step identifier defined in [Section 7.1](#) herein:

266 urn:epcglobal:cbv:bizstep:receiving

267 This identifier is defined by the GS1 Core Business Vocabulary standard, and its meaning is known
 268 and accepted by those who implement the standard.

269 While an individual end user organisation acting alone may introduce a new Standard Vocabulary
 270 element, such an element would have limited use in a data exchange setting, and would probably
 271 only be used within an organisation's four walls. On the other hand, an industry consortium or other
 272 group of trading partners may define and agree on standard vocabulary elements beyond those
 273 defined by the Core Business Vocabulary, and these may be usefully used within that trading group.

274 3.2.2 User Vocabulary

275 A User Vocabulary is a set of Vocabulary Elements whose definition and meaning are under the
 276 control of a single organisation. For example, the EPCIS standard defines a vocabulary called
 277 "business location," whose elements are identifiers denoting such things as "Acme Corp. Distribution
 278 Centre #3." The location identifier and any associated master data is assigned by the user. Acme
 279 Corp may generate an event whose business location field contains the identifier that denotes
 280 "Acme Corp. Distribution Centre #3," and another partner receiving that event through a query can
 281 interpret it either because the partner recognises the identifier as being identical to the identifier
 282 received in other events that took place in the same location, or because the partner consults
 283 master data attributes associated with the location identifier, or both.

284 Example:

285 urn:epc:id:sgln:0614141.12345.400

286 This identifier is assigned by the End User who owns the GS1 Company Prefix 0614141, and the
 287 meaning of the identifier (that is, what location it denotes) is determined exclusively by that end
 288 user. Another End User can understand the meaning of this identifier by consulting associated
 289 master data.

290 User Vocabulary elements are primarily defined by individual end user organisations acting
 291 independently. The master data associated with User Vocabulary elements are typically defined by
 292 those same organisations, and are usually distributed to trading partners through the EPCIS Query
 293 Interface or other data exchange / data synchronisation mechanisms. New vocabulary elements
 294 within a given User Vocabulary are introduced at the sole discretion of an end user, and trading
 295 partners must be prepared to respond accordingly.

296 While the Core Business Vocabulary standard does not (and as the discussion above makes clear,
 297 cannot) specify particular user vocabulary elements, the Core Business Vocabulary does provide
 298 syntax templates that are recommended for use by End Users in constructing their own user
 299 vocabulary elements. See [Section 8.1](#). The user vocabularies for which templates are specified in
 300 this standard are: [physical or digital objects \(Sections 8.2 and 8.3\)](#), [locations](#) which include both
 301 read points and business locations ([Section 8.4](#)), [business transaction identifiers \(Section 8.5\)](#),
 302 [source/destination identifiers \(Section 8.6\)](#), and [transformation identifiers \(Section 8.7\)](#).

303 4 Terminology and typographical conventions

304 Within this standard, the terms SHALL, SHALL NOT, SHOULD, SHOULD NOT, MAY, NEED NOT, CAN,
 305 and CANNOT are to be interpreted as specified in Annex G of the ISO/IEC Directives, Part 2, 2001,
 306 4th edition [ISODir2]. When used in this way, these terms will always be shown in ALL CAPS; when
 307 these words appear in ordinary typeface they are intended to have their ordinary English meaning.

308 All sections of this document, with the exception of Sections 2, 3 and 3 are normative, except where
 309 explicitly noted as non-normative.

310 The following typographical conventions are used throughout the document:

- 311 ■ ALL CAPS type is used for the special terms from [ISODir2] enumerated above.

- 312 ■ `Monospace` type is used to denote programming language, UML, and XML identifiers, as well as
 313 for the text of XML documents.
- 314 ➤ Placeholders for changes that need to be made to this document prior to its reaching the final
 315 stage of approved GS1 standard are prefixed by a rightward-facing arrowhead, as this
 316 paragraph is.

317 5 **Compliance and compatibility**

318 The GS1 Core Business Vocabulary is designed to facilitate interoperability in EPCIS data exchange
 319 by providing standard values for vocabulary elements to be included in EPCIS data. The standard
 320 recognises that the greatest interoperability is achieved when all data conforms to the standard, and
 321 also recognises that individual End Users or groups of trading partners may need to extend the
 322 standard in certain situations.

323 To that end, this standard defines two levels of conformance for EPCIS documents:

- 324 ■ **CBV-Compliant:** An EPCIS document that only uses vocabulary identifiers specified in the Core
 325 Business Vocabulary standard in the standard fields of EPCIS events.
- 326 ■ **CBV-Compatible:** An EPCIS document that uses a combination of vocabulary identifiers
 327 specified in the Core Business Vocabulary standard and other identifiers that are outside the
 328 standard.

329 An EPCIS document is neither CBV-Compliant nor CBV-Compatible if it wrongly uses identifiers
 330 defined in the Core Business Vocabulary standard or if it violates any other rules specified herein.

331 The formal definition of these terms is specified below.

332 5.1 **CBV Compliant**

333 A “CBV-Compliant Document” is a document that conforms to the schema and other constraints
 334 specified in [EPCIS1.2], and which furthermore conforms to all the normative language in this
 335 standard that pertains to a “CBV-Compliant Document.”

336 A “CBV-Compliant Application” is any application for which both of the following are true:

- 337 ■ If it operates in a mode where it claims to accept a CBV-Compliant Document as an input, the
 338 application SHALL accept any document that is a CBV-Compliant Document according to this
 339 standard, and furthermore in processing that input SHALL interpret each CBV identifier
 340 according to the meaning specified herein.
- 341 ■ If it operates in a mode where it claims to produce a CBV-Compliant Document as an output,
 342 the application SHALL only produce a document that is a CBV-Compliant Document according to
 343 this standard, and furthermore in generating that output SHALL only use CBV identifiers to
 344 denote their meaning as specified herein.

345 The following list summarises the requirements for an EPCIS document to be a “CBV-Compliant
 346 Document,” as specified elsewhere in this standard:

- 347 ■ A CBV-Compliant Document SHALL conform to the schema and other constraints specified in
 348 [EPCIS1.2].
- 349 ■ A CBV-Compliant Document SHALL NOT use any URI beginning with `urn:epcglobal:cbv:`
 350 except as specified in this standard.
- 351 ■ Each EPCIS event in a CBV-Compliant Document SHALL include a `bizStep` field, and the value
 352 of the `bizStep` field SHALL be a URI consisting of the prefix `urn:epcglobal:cbv:bizstep:`
 353 followed by the string specified in the first column of some row of the table in [Section 7.1.3](#).
- 354 ■ A CBV-Compliant Document MAY include a `disposition` field. If the `disposition` field is
 355 present, the value of the `disposition` field SHALL be a URI consisting of the prefix
 356 `urn:epcglobal:cbv:disp:` followed by the string specified in the first column of some row of
 357 the table in [Section 7.2.3](#).

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- Each EPCIS event in a CBV-Compliant Document MAY include one or more `bizTransaction` elements. If `bizTransaction` elements are present, each such element MAY include a `type` attribute. If a given `bizTransaction` element includes a `type` attribute, the value of the `type` attribute SHALL be a URI consisting of the prefix `urn:epcglobal:cbv:btt:` followed by the string specified in the first column of some row of the table in [Section 7.3.3](#).
 - Each EPCIS event in a CBV-Compliant Document MAY include one or more `source` or `destination` elements. The value of the `type` attribute of each such element SHALL be a URI consisting of the prefix `urn:epcglobal:cbv:sdt:` followed by the string specified in the first column of some row of the table in [Section 7.4.3](#).
 - Each EPCIS event in a CBV-Compliant Document MAY include an `ErrorDeclaration` element, and when present, the `ErrorDeclaration` element MAY include a `reason` field. When present in a CBV-Compliant Document, the value of the `reason` field of the `ErrorDeclaration` element SHALL be a URI consisting of the prefix `urn:epcglobal:cbv:er:` followed by the string specified in the first column of some row of the table in [Section 7.5.3](#).
 - URIs defined in the EPC Tag Data standard SHALL only be used in a CBV-Compliant Document as specified in [Section 8.1.1](#).
 - A CBV-Compliant document SHALL use one of the three URI forms specified in [Section 8.2](#) to populate instance-level identifiers in the “what” dimension of EPCIS events (that is, the `epcList`, `parentID`, `childEPCs`, `inputEPCList`, and `outputEPCList` fields in EPCIS `ObjectEvents`, `AggregationEvents`, `TransactionEvents`, and `TransformationEvents`), for every such field that is not null. A CBV-Compliant document SHOULD use the EPC URI form as specified in [Section 8.2.1](#) unless there is a strong reason to do otherwise.
 - A CBV-Compliant document SHALL NOT use an SGLN EPC (`urn:epc:id:sgln:...`) as an object identifier.
 - A CBV-Compliant document SHALL use one of the three URI forms specified in [Section 8.3](#) to populate class-level identifiers in the “what” dimension of EPCIS events (that is, the `epcClass` fields in all EPCIS event types), for every such field that is not null. A CBV-Compliant document SHOULD use the EPC URI form as specified in [Section 8.3.1](#) unless there is a strong reason to do otherwise.
 - A CBV-Compliant document SHALL use one of the four URI forms specified in [Section 8.4](#) to populate the “where” dimension of EPCIS events (that is, the `readPoint` and `businessLocation` fields in all EPCIS event types), for every such field that is not null. A CBV-Compliant document SHOULD use the EPC URI form as specified in [Section 8.4.1](#) unless there is a strong reason to do otherwise.
 - When using an EPC URI as a location identifier ([Section 8.4.1](#)), a CBV-Compliant document SHOULD NOT use EPC schemes other than SGLN (`urn:epc:id:sgln:...`), unless there is a strong reason to do so.
 - A CBV-Compliant document SHALL use one of the four URI forms specified in [Section 8.5](#) to populate the business transaction identifier field (that is, the text content of the `bizTransaction` element) of EPCIS events, for every such field that is not null.
 - When using an EPC URI as a business transaction identifier, a CBV-Compliant Documents SHOULD NOT use EPC schemes other than GDTI EPCs (`urn:epc:id:gdti:...`) or GSRN EPCs (`urn:epc:id:gsrc:...`), unless there is a strong reason to do so. GDTI EPCs SHOULD only be used as business transaction identifiers when they have been assigned to denote a business transaction, rather than a physical document not connected with any business transaction.
 - A CBV-Compliant document SHALL use one of the three URI forms specified in [Section 8.6](#) to populate a source or destination identifier field (that is, the text content of a `source` or `destination` element), for every such field that is not null. A CBV-Compliant document SHOULD use the EPC URI form as specified in [Section 8.6.1](#) unless there is a strong reason to do otherwise.

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- When using an EPC URI as a source or destination identifier ([Section 8.6.1](#)), a CBV-Compliant document SHOULD NOT use EPC schemes other than SGLN (`urn:epc:id:sgln:...`), unless there is a strong reason to do so.
 - A CBV-Compliant document SHALL use one of the four URI forms specified in [Section 8.7](#) to populate the transaction identifier field (that is, the text content of the `transformationID` element) of EPCIS `TransformationEvents`, for every such field that is not null.
 - When using an EPC URI as a transformation identifier, a CBV-Compliant Document SHOULD NOT use EPC schemes other than GDTI EPCs (`urn:epc:id:gdti:...`) unless there is a strong reason to do so. GDTI EPCs SHOULD only be used as transformation identifiers when they have been assigned to denote a transformation, rather than a physical document not connected with any transformation.
 - A CBV-Compliant document SHALL use one of the URI forms specified in [Section 8.8.1](#) to populate the event identifier field (that is, the text content of the `eventID` element) of an EPCIS event, whenever that field is not null.

423 5.2 CBV compatible

424 A "CBV-Compatible Document" is a document that conforms to the schema and other constraints
 425 specified in [EPCIS1.2], and which furthermore conforms to all the normative language in this
 426 standard that pertains to a "CBV-Compatible Document."

427 A "CBV-Compatible Application" is any application for which both of the following are true:

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- If it operates in a mode where it claims to accept a CBV-Compatible Document as an input, the application SHALL accept any document that is a CBV-Compatible Document according to this standard, and furthermore in processing that input SHALL interpret each CBV identifier according to the meaning specified herein.
 - If it operates in a mode where it claims to produce a CBV-Compatible Document as an output, the application SHALL only produce a document that is a CBV-Compatible Document according to this standard, and furthermore in generating that output SHALL only use CBV identifiers to denote their meaning as specified herein.

436 The following list summarises the requirements for an EPCIS document to be a "CBV-Compatible
 437 Document," as specified elsewhere in this standard.

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- A CBV-Compatible Document SHALL conform to the schema and other constraints specified in [EPCIS1.2].
 - A CBV-Compatible Document SHALL NOT use any URI beginning with `urn:epcglobal:cbv:` except as specified in this standard.
 - URIs defined in the EPC Tag Data standard SHALL only be used in a CBV-Compatible Document as specified in [Section 8.1.1](#).
 - A CBV-Compatible Document SHOULD use the EPC URI form as specified in [Section 8.2.1](#) for each instance-level object identifier unless there is a strong reason to do otherwise.
 - A CBV-Compatible Document SHOULD use the EPC URI form as specified in [Section 8.3.1](#) for each class-level object identifier unless there is a strong reason to do otherwise.
 - A CBV-Compatible Document SHALL NOT use an SGLN EPC (`urn:epc:id:sgln:...`) as an object identifier.
 - A CBV-Compatible Document SHOULD use the EPC URI form as specified in [Section 8.4.1](#) for each location identifier unless there is a strong reason to do otherwise.
 - When using an EPC URI as a location identifier ([Section 8.4.1](#)), a CBV-Compatible Document SHOULD NOT use EPC schemes other than SGLN (`urn:epc:id:sgln:...`), unless there is a strong reason to do so.
 - When using an EPC URI as a business transaction identifier, a CBV-Compatible Document SHOULD NOT use EPC schemes other than GDTI EPCs (`urn:epc:id:gdti:...`) or GSRN EPCs (`urn:epc:id:gsrc:...`), unless there is a strong reason to do so. GDTI EPCs SHOULD only be

458 used as business transaction identifiers when they have been assigned to denote a business
459 transaction, rather than a physical document not connected with any business transaction.

460 ■ When using an EPC URI as a source or destination identifier ([Section 8.6.1](#)), a CBV-Compatible
461 document SHOULD NOT use EPC schemes other than SGLN (`urn:epc:id:sgln:...`), unless
462 there is a strong reason to do so.

463 ■ When using an EPC URI as a transformation identifier, a CBV-Compatible Document SHOULD
464 NOT use EPC schemes other than GDTI EPCs (`urn:epc:id:gdti:...`) unless there is a strong
465 reason to do so. GDTI EPCs SHOULD only be used as transformation identifiers when they have
466 been assigned to denote a transformation, rather than a physical document not connected with
467 any transformation.

468 In general, every CBV-Compliant Document is also a CBV-Compatible Document, though not every
469 CBV-Compatible Document is a CBV-Compliant Document. A CBV-Compatible Document may
470 include an identifier that is compliant with [EPCIS1.2] but which is not permitted for CBV-Compliant
471 Documents, provided that it meets the requirements above. A CBV-Compatible Document may also
472 include an event in which the `bizStep` field is omitted, whereas that field is always required for
473 CBV-Compliant Documents.

474 6 Use of Uniform Resource Identifiers (URIs)

475 This section specifies general rules that apply to all uses of URIs in this standard.

476 6.1 URI prefix for Standard Vocabularies in the CBV

477 All URIs for standard vocabulary elements specified in the Core Business Vocabulary standard have
478 the following syntax:

479 `urn:epcglobal:cbv:qualifier:payload`

480 where the *qualifier* denotes the type of the vocabulary the vocabulary element belongs to and
481 *payload* the vocabulary element unambiguously identifies an element of the vocabulary.

482 6.2 Limitation on Use of the URI prefix

483 The Core Business Vocabulary standard is the only GS1 standard in which URIs beginning with
484 `urn:epcglobal:cbv:` are defined.

485 A CBV-Compliant or CBV-Compatible document SHALL NOT use any URI beginning with
486 `urn:epcglobal:cbv:` or `urn:epc:` except as specified in this standard.

487 Both CBV-Compliant and CBV-Compatible documents MAY contain URIs that do not begin with
488 `urn:epcglobal:cbv:`, provided that the requirements specified elsewhere in this standard are
489 met. These SHALL be used to identify vocabulary elements not defined by the CBV standard. URIs
490 beginning with `urn:epcglobal:` SHALL NOT be used except as specified herein or in another GS1
491 standard.

492 6.2.1 Example of limitation of use of URI prefix (non-normative)

493 Suppose a user needs a new disposition value to stand for "quarantined." The user may NOT use
494 the following URI:

495 `urn:epcglobal:cbv:disp:quarantined`

496 In this case the particular URI above is NOT part of this standard and therefore may not be used.
497 Instead a URI like the following could be used and considered CBV-Compatible. However, it must be
498 noted that this vocabulary would have limited meaning to supply chain participants receiving this
499 unless a prior understanding had been established.

500 `http://epcis.example.com/disp/quarantined`

501 7 Standard Vocabularies

502 This section specifies standard vocabulary elements for four EPCIS standard vocabularies: business
503 steps, dispositions, business transaction types, and source/destination types.

504 7.1 Business steps

505 This section specifies standard identifiers for the EPCIS `BusinessStepID` vocabulary. These
506 identifiers populate the `bizStep` field in an EPCIS event, as specified below.

507 7.1.1 URI structure

508 All business step values specified in this section have the following form:

509 `urn:epcglobal:cbv:bizstep:payload`

510 where the `payload` part is a string as specified in the next section. Every payload string defined
511 herein contains only lower case letters and the underscore character.

512 7.1.2 Compliant usage

513 Each EPCIS event in a CBV-Compliant Document SHALL include a `bizStep` field, and the value of
514 the `bizStep` field SHALL be a URI consisting of the prefix `urn:epcglobal:cbv:bizstep:` followed
515 by the string specified in the first column of some row of the table in Section [7.1.3](#) below. The
516 portion following the prefix SHALL be written exactly as specified in the table below, in all lowercase
517 letters (possibly including underscores, as indicated).

518 Each EPCIS event in a CBV-Compatible Document MAY include a `bizStep` field, and the value of the
519 `bizStep` field MAY be a URI as specified above for a CBV-Compliant document, and MAY be any
520 other URI that meets the general requirements specified in [EPCIS1.2], [Section 6.4](#), except for
521 those URIs which in this standard are forbidden or designated for a different purpose.

522 7.1.2.1 Example of correct and incorrect usage (non-normative)

523 The following shows an excerpt of a CBV-Compliant EPCIS document in XML format containing a
524 single event, where the business step of that event is the Core Business Vocabulary "shipping"
525 value:

```
526 <epcis:EPCISDocument xmlns:epcis="urn:epcglobal:epcis:xsd:1" ...>
527   <EPCISBody>
528     <EventList>
529       <ObjectEvent>
530         ...
531         <bizStep>urn:epcglobal:cbv:bizstep:shipping</bizStep>
532         ...
533       </ObjectEvent>
534     </EventList>
535   </EPCISBody>
536 </epcis:EPCISDocument>
```

537 The following example is NOT CBV-Compliant, because it does not use the full URI string in the
538 business step field. It is also not CBV-Compatible, because the value of the business step field is not
539 a URI with an owning authority, as required by Section 6.4 of [EPCIS1.2].

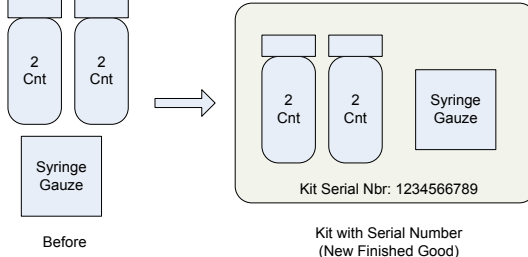
```
540 <epcis:EPCISDocument xmlns:epcis="urn:epcglobal:epcis:xsd:1" ...>
541   <EPCISBody>
542     <EventList>
543       <ObjectEvent>
544         ...
545         <bizStep>shipping</bizStep>
546         ...
```

WRONG


```
547         </ObjectEvent>
548     </EventList>
549 </EPCISBody>
550 </epcis:EPCISDocument>
```

551 Additional samples may be found [Section 11.1](#).

552 **7.1.3 Element values and definitions – Business step**

Business steps		
Value	Definition	Examples
accepting	Denotes a specific activity within a business process where an object changes possession and/or ownership.	<p>Retailer X unloads a pallet on to the receiving dock. The numbers of cases on the pallet are counted. The pallets are disaggregated from the shipping conveyance. The quantity is verified against the delivery document (Freight Bill or Bill of Lading), notating any over, short or damaged product at the time of delivery. Typically this process releases freight payment and completes the contractual agreement with the carrier of delivering the product/assets to a specified location.</p> <p>A parcel carrier drops off five boxes at Distributor Y's DC. A person on the Receiving Dock signs that they accept the five boxes from the parcel carrier.</p> <p>A wholesaler is assigned a lot of fish at a fish auction, verifies the quantity and acknowledges receipt.</p> <p>A manufacturer's fork lift driver scans the IDs of components which have been removed from a consignment warehouse. In doing so, the components are added to the manufacturer's inventory</p>
arriving	Denotes a specific activity within a business process where an object arrives at a location.	Truckload of a shipment arrives into a yard. Shipment has not yet been received or accepted.
assembling	<p>Denotes an activity within a business process whereby one or more objects are combined to create a new finished product.</p> <p>In contrast to transformation, in the output of <i>assembling</i> the original objects are still recognisable and/or the process is reversible; hence, <i>assembling</i> would be used in an Aggregation Event, not a Transformation Event.</p>	<p>Computer parts (hard drive, battery, RAM) assembled into a consumer ready computer</p> <p>Healthcare kitting: a surgical kit including drug, syringe, and gauze are combined to create a new 'product': a <i>kit</i></p> 
collecting	Denotes a specific activity within a business process where an object is picked up and collected for future disposal, recycling or re-used.	<p>An organisation picks up disposed consumer electronics in an end of life state from various different organisations. After the goods are picked up, they typically are brought back and received into a Collection Centre</p> <p>Rented or leased pallets are picked up and brought to a collection centre.</p>

Business steps		
commissioning	<p>Process of associating an instance-level identifier (such as an EPC) with a specific object, or the process of associating a class-level identifier, not previously used, with one or more objects. A tag may have been encoded and applied in this step, or may have been previously encoded.</p> <p>In the case of a class-level identifier, <code>commissioning</code> differs from <code>creating_class_instance</code> in that <code>commissioning</code> always indicates that this is the first use of the class-level identifier, whereas <code>creating_class_instance</code> does not specify whether the class-level identifier has been used before.</p>	<p>On a packaging line, an encoded EPC is applied to a case and associated to the product.</p> <p>An individual virtual document (e.g. digital coupon, digital voucher, etc.) is assigned an EPC</p> <p>One hundred bottles of a particular batch of pharmaceutical product are produced, those being the first bottles of that batch to be produced.</p> <p>Sides of beef are transformed into individual packaged steaks. This may be an EPCIS 1.2 <code>TransformationEvent</code> if the input sides of beef are also tracked.</p>
consigning	<p>Indicates the overall process of <code>staging_outbound</code>, <code>loading</code>, <code>departing</code>, and <code>accepting</code>. It may be used when more granular process step information is unknown or inaccessible.</p> <p>The use of <code>consigning</code> is mutually exclusive from the use of <code>staging_outbound</code>, <code>loading</code>, <code>departing</code>, and <code>accepting</code>.</p> <p>Note: This business step is similar to <code>shipping</code>, but includes a change of possession and/or ownership at the outbound side.</p>	<p>A wholesaler comes aboard a fishing vessel, selects and buys boxes of fish, and brings them to his premises.</p> <p>A manufacturer retrieves components from a consignment warehouse for use in its assembly line. In the logical second of leaving the consignment warehouse, the components pass into the ownership of the manufacturer.</p> <p>A manufacturer stages products for loading, loads them into a container, the container is sealed, and the container departs. Ownership transfers to the receiver sometime during this overall process. If this is done in a single step, then business step <code>consigning</code> is used.</p>
creating_class_instance	<p>Denotes a step in a business process where an instance or increased quantity of a class-level identifier is produced. Unlike <code>commissioning</code>, this business step may be repeated for the same class-level identifier.</p>	<p>Water, sugar, and other ingredients are combined to produce a single batch of soda over a single shift on a single production line. This may be an EPCIS 1.2 <code>TransformationEvent</code> if the input ingredients are tracked.</p> <p>Potatoes are sorted by size and quality, washed, and packed into cases of a single lot in a single packaging facility on a single date.</p>
cycle_counting	<p>Process of counting objects within a location in order to obtain an accurate inventory for business needs other than accounting purposes (e.g., replenishment and allocation).</p>	<p>A preselected subset of objects (for instance, all products belonging to a certain brand owner or a specific object class) within a retail store, are counted by a handheld reader.</p> <p>All objects of a specific sub-location (sales floor or a shelf on the sales floor, e.g.) are counted by a handheld reader.</p>
decommissioning	<p>Process of disassociating an instance-level identifier (such as an EPC) with an object. The object may be re-commissioned at some point in the future – however only with a new instance-level identifier.</p>	<p>An eSeal on a reusable container is broken when the container is opened, so that the container is no longer identified by the instance-level identifier that was in the eSeal.</p> <p>A digital coupon or an empties refund voucher is redeemed at retail point-of-sale</p>
departing	<p>Denotes a specific activity within a business process where an object leaves a location on its way to a destination.</p>	<p>Truckload of a shipment departs a yard, typically through a gate and begins transit to another location</p>

Business steps		
destroying	Process of terminating an object. For an instance-level identifier, the object should not be the subject of subsequent events; subsequent events are likely indicative of error (such as a stray read of a tag inside an incinerator). For a class level identifier, quantities are reduced; however, the class-level identifier may still be used in subsequent events (referring to different instances that were not destroyed).	Distributor or Retailer puts empty case in the incinerator or box crusher.
disassembling	Denotes a specific activity within a business process where an object is broken down into separate, uniquely identified component parts.	Before feeding a consumer electronics end of life item (a computer) into recycling operation line, it is necessary to disassemble the parts for the purpose of being recycled or disposed of in an environmentally sound manner. A surgical kit (e.g. 2- 50 count bottles of medication and 1 syringe gauze) is broken down into its separate component parts
dispensing	Denotes a specific activity within a business process where a product is made available in full or part to a consumer.	A pharmacist dispenses a pharmaceutical to fill a specific prescription written by a physician, to a consumer or patient. A deli manager slices a 5 pound package of turkey for sale.
encoding	Process of writing an instance-level identifier (typically an EPC) to a barcode or RFID tag, where the identifier is not yet associated with an object at this step in the process.	3rd Party writes tags and returns spool of case tags to Manufacturer
entering_exiting	Denotes a specific activity at the Entrance/Exit door of a facility where customers are either leaving with purchased product or entering with product to be returned to the facility.	Customer leaves the facility of Retailer X with their purchased items through a customer entrance/exit door.
holding	Denotes a specific activity within a business process where an object is segregated for further review.	Retailer X unloads a second pallet on to their receiving dock, and, finding no purchase order for the pallet, moves the pallet to a holding area on the dock Distributor Y obtains a shipment of pharmaceutical product. Distributor Y finds that their supplier cannot provide a complete pedigree. Distributor Y moves the shipment to a quarantine area on their dock. Shipper Z is told by Customs to move a container to a special area until Customs can inspect and clear the container.
inspecting	Process of reviewing objects to address potential physical or documentation defects.	Manufacturer A pulls 10 bottles from every batch to ensure that the product and pill count in the bottles match expectations Distributor Y checks all returned products to designate them either as saleable or as damaged Regulator R pulls 3 bottles from a shelf to determine if the bottles have a correct pedigree Customs Agent C uses a machine to scan the contents of a shipping container Pallet pool operator Z checks if certain pallets comply with quality standards.

Business steps		
installing	Denotes a specific activity within a business process where an object is put into a composite object (not merely a container). In <i>installing</i> the composite object exists prior to this step, whereas in <i>assembling</i> the composite object is created during the step.	Additional memory chips and a rechargeable battery are installed within a computer A duplexing unit is installed on a laser printer Additional safety equipment is installed within the cabin of an aircraft or vehicle (e.g. fire extinguishers)
killing	Process of terminating an RFID tag previously associated with an object. The object and its instance-level identifier may continue to exist and be the subject of subsequent events (via a barcode, manual data entry, replacement tag, etc.).	Kill Command is issued to the tag to prevent any further reading of the tag or the information on the tag.
loading	Denotes a specific activity within a business process where an object is loaded into shipping conveyance.	Manufacturer A loads pallets into a container. The pallets are aggregated to the container. Distributor Y loads racks full of totes on to a truck
other	A business step not identified by any of the values listed in the core business vocabulary.	"Other" may be used for terms that have yet to be added to the core business vocabulary from an industry or a user
packing	Denotes a specific activity within a business process that includes putting objects into a larger container – usually for shipping. Aggregation of one unit to another typically occurs at this point.	12 packs of soda are placed into a case Loose potatoes are placed into a tote.
picking	Denotes a specific activity within a business process that includes the selecting of objects to fill an order.	Distributor Y places three units into a tote to meet the requirements of a purchase order Manufacturer A pulls three pallets from its racks to fulfil a purchase order
receiving	Denotes a specific activity within a business process that indicates that an object is being received at a location and is added to the receiver's inventory. The use of <i>receiving</i> is mutually exclusive from the use of <i>arriving</i> and <i>accepting</i> .	Retailer X confirms that the count of cases on the pallet equals the expected count in a purchase order. Retailer X takes the cases into inventory. Typically, this process matches the product to the purchase order for payment to the supplier. A shipment from a manufacturer factory site to manufacturer distribution centre, is matched against the transaction record then added to local inventory.
removing	Denotes a specific activity within a business process where an object is taken out of a composite object.	A defective airplane part is taken out of the engine
repackaging	Denotes a specific activity within a business process where an object's packaging configuration is changed.	Distributor Y receives one box full of batteries and another box full of laptops without batteries. Distributor Y ships out new boxes containing one laptop and one battery.
repairing	Denotes a specific activity within a business process where a malfunctioning product is repaired (typically by a post-sales service), without replacing it by a new one.	A computer is brought to a repair centre to fix a problem An airplane part is in maintenance centre to diagnose an issue
replacing	Denotes a specific activity within a business process where an object is substituted or exchanged for another object.	A defective airplane part is replaced by a new part.

Business steps		
reserving	Process in which a set of instance-level identifiers, not yet commissioned, are provided for use by another party.	Manufacturer provides set of case EPC numbers to a 3rd Party labeller
retail_selling	Denotes a specific activity within a business process at a point-of-sale for the purpose of transferring ownership to a customer in exchange for something of value (currency, credit, etc.).	Retailer X sells a screwdriver to a customer by checking it out through a point-of-sale system.
shipping	Indicates the overall process of <i>staging_outbound</i> , <i>loading</i> and <i>departing</i> . It may be used when more granular process step information is unknown or inaccessible. It may indicate a final event from a shipping point. The use of <i>shipping</i> is mutually exclusive from the use of <i>staging_outbound</i> , <i>departing</i> , or <i>loading</i> .	<p>Manufacturer A loads and reads product into the shipping container and closes the door. The product has been read out of the shipping facility. The shipment is immediately picked up and a BOL is associated at this point. (The shipment has left the yard)</p> <p>At Distributor Y, the truck containing racks full of totes pulls away from the shipping dock or staging area.</p> <p>Manufacturer A completes loading product into trailer and seals door. The trailer is ready for pickup. The generation of a Despatch Advice / ASN triggers a "shipping" event.</p> <p>A 3PL picks and tags the product. The product is loaded into a trailer and signed over to a transportation carrier. The 3PL notifies the manufacturer who generates a "shipping" event. NOTE: This would be the case if there were NO departing step at a read point at the gate.</p> <p>Typical Process flow: <i>staging_outbound</i> <i>loading</i> <i>departing</i></p> <p>The above steps assume an organisation's ability and desire to share all steps in the process. If those process steps are not captured, the single business step of shipping would be used.</p>
staging_outbound	Denotes a specific activity within a business process in which an object moves from a facility to an area where it will await transport pick-up.	<p>Container is being closed and will be subsequently loaded onto a vehicle in the yard.</p> <p>Container is being closed and seal is applied, and will be subsequently loaded onto a vehicle in the yard</p> <p>Product has been picked and is now in a staging lane waiting for loading into a container</p>
stock_taking	Process of counting objects within a location following established rules and/or standards to serve as a basis for accounting purposes.	All EPCs in a retail store are read by a handheld reader following a procedure accepted by the organisation's accounting firm.
stocking	Denotes a specific activity within a business process within a location to make an object available to the customer or for order fulfilment within a DC.	<p>Retailer X places cans from a case on to a shelf on the sales floor</p> <p>Dist X moves goods from a storage area to a picking area</p>
storing	Denotes a specific activity within a business process where an object is moved into and out of storage within a location.	<p>Manufacturer A moves a pallet from the receiving area to a rack</p> <p>Retailer X moves a case from the receiving dock to a shelf in the backroom</p>

Business steps		
transforming (Deprecated)	<p>Denotes a specific activity within a business process where one or more objects are an input into a process that irreversibly changes that object / those objects into a new object or objects; the output has a new identity and characteristics.</p> <p>This business step is deprecated for use with EPCIS 1.2. The EPCIS 1.2 standard has an event type, <code>TransformationEvent</code>, dedicated to transformations. The business steps <code>commissioning</code>, <code>creating_class_instance</code>, or other business steps may be used with <code>TransformationEvent</code>.</p>	<p>Meat packer X cuts a whole cow into two sides of beef (1 to many)</p> <p>Food processor Y combines water, vegetables, and meat to create a unit of soup (many to one)</p> <p>Butcher Z combines meat from multiple carcasses, grinds them together, and creates individual packages of ground beef (many to many)</p>
transporting	<p>Process of moving an object from one location to another using a vehicle (e.g., a ship, a train, a lorry, an aircraft).</p>	<p>Carrier X conveys 150 sea containers from Hong Kong seaport to Hamburg seaport with a container vessel.</p> <p>A train with 20 goods wagons goes from one train station to another.</p> <p>A lorry moves a swap trailer from a depot to a distribution centre.</p>
unloading	<p>Denotes a specific activity within a business process where an object is unloaded from a shipping conveyance.</p>	<p>Manufacturer A unloads pallets from a shipping conveyance. The pallets are disaggregated from the shipping conveyance.</p> <p>Distributor Y unloads racks full of totes from a truck</p>
unpacking	<p>Denotes a specific activity within a business process that includes removing products (individuals, inners, cases, pallets) from a larger container – usually after receiving or accepting.</p> <p>Disaggregation of one unit from another typically occurs at this point.</p>	<p>12 packs of soda are removed from a case</p> <p>Loose potatoes are taken off from a tote.</p>
void_shipping	<p>Denotes a process of declaring that one or more objects in a prior outbound process (captured in an EPCIS event having business step <code>shipping</code>, <code>departing</code>, or <code>consigning</code>) were not shipped (or departed or consigned) as previously indicated.</p>	<p>A sender cancels a shipment after a prior shipping event.</p> <p>A sender discovers, either by notification from a recipient or on their own, that a shipment they believed occurred and created a shipping event for, did not actually occur. The record is updated to reflect this.</p> <p>A sender discovers that three out of ten items previously shipped were not included in the shipment. The <code>voidShipping</code> event indicates that those three items were not shipped.</p>

553

554 **7.2 Dispositions**

555 This section specifies standard identifier values for the EPCIS `DispositionID` vocabulary. These
556 identifiers populate the `disposition` field in an EPCIS event, as specified below.

557 **7.2.1 URI structure**

558 All disposition values specified in this section have the following form:

559 `urn:epcglobal:cbv:disp:payload`

560 where the *payload* part is a string as specified in the next section. Every payload string defined
 561 herein contains only lower case letters and the underscore character.

562 **7.2.2 Compliant usage**

563 Each EPCIS event in a CBV-Compliant Document MAY include a `disposition` field. If the
 564 `disposition` field is present, the value of the `disposition` field SHALL be a URI consisting of the
 565 prefix `urn:epcglobal:cbv:disp:` followed by the string specified in the first column of some row
 566 of the table below. The portion following the prefix SHALL be written exactly as specified in the table
 567 below, in all lowercase letters (possibly including underscores, as indicated).

568 Each EPCIS event in a CBV-Compatible Document MAY include a `disposition` field, and the value
 569 of the `disposition` field MAY be a URI as specified above for a CBV-Compliant document, and MAY
 570 be any other URI that meets the general requirements specified in [EPCIS1.2], [Section 6.4](#), except
 571 for those URIs which in this standard are forbidden or designated for a different purpose.

572 **7.2.2.1 i Example of correct and incorrect usage (non-normative)**

573 The following shows an excerpt of a CBV-Compliant EPCIS document in XML format containing a
 574 single event, where the disposition of that event is the Core Business Vocabulary "in progress"
 575 value:

```
576 <epcis:EPCISDocument xmlns:epcis="urn:epcglobal:epcis:xsd:1" ...>
577   <EPCISBody>
578     <EventList>
579       <ObjectEvent>
580         ...
581         <disposition>urn:epcglobal:cbv:disp:in_progress</disposition>
582         ...
583       </ObjectEvent>
584     </EventList>
585   </EPCISBody>
586 </epcis:EPCISDocument>
```

587 The following example is NOT CBV-Compliant, because it does not use the full URI string in the
 588 `disposition` field. It is also not CBV-Compatible, because the value of the `disposition` field is not a
 589 URI with an owning authority, as required by [Section 6.4](#) of [EPCIS1.2].

```
590 <epcis:EPCISDocument xmlns:epcis="urn:epcglobal:epcis:xsd:1" ...>
591   <EPCISBody>
592     <EventList>
593       <ObjectEvent>
594         ...
595         <disposition>in_progress</disposition> WRONG
596         ...
597       </ObjectEvent>
598     </EventList>
599   </EPCISBody>
600 </epcis:EPCISDocument>
```

601 Additional examples may found in [Section 11.1](#).

602 **7.2.3 Element Values and definitions – Dispositions**

Dispositions		
Value	Definition	Examples

Dispositions		
active	A commissioned object has just been introduced into the supply chain.	<p>Manufacturer A commissions tags for 10 cases of product. A virtual document has been assigned an EPC</p> <p>Business step: commissioning</p>
container_closed	Object has been loaded onto a container, the doors have been closed and the shipment sealed.	<p>Container is being closed and will be awaiting pickup in the yard. Container is being closed and electronic seal is applied.</p> <p>Business step: staging_outbound</p>
damaged	Object is impaired in its usefulness and/or reduced in value due to a defect.	<p>Pallet pool operator P notices that a plank of a pallet is broken and records this incident by scanning the EPC of the pallet. Retailer R receives a shipment where the product packages on the pallet have been dented</p> <p>Business step: accepting inspecting receiving removing repairing replacing</p>
destroyed	Object has been fully rendered non-usable.	<p>Incinerator Operator B indicates that product and packaging have been incinerated</p> <p>Business step: destroying</p>
dispensed	A full quantity of product is distributed to a consumer.	<p>A pharmacist dispenses a pharmaceutical in a container's totality to fill a specific prescription written by a physician, to a consumer or patient. A deli manager slices the complete contents of a 5 pound package of turkey for sale. NOTE: this disposition reflects the disposition of the original object, not what was dispensed.</p>
disposed	Object has been returned for disposal.	A package of pharmaceuticals has been picked up by a distributor and will be subsequently destroyed
encoded	An instance-level identifier has been written to a barcode or RFID tag, but not yet commissioned.	<p>3rd Party has written EPCs to tags and returns spool of case tags to Manufacturer</p> <p>Business step: encoding</p>
expired	Object is past expiration date.	<p>Distributor Y indicates that a product is past its expiration date</p> <p>Business step: holding staging_outbound storing</p>

Dispositions		
in_progress	Default disposition for object proceeding through points in the supply chain.	<p>Product arrives at a location and is being accepted and verified. Product is being prepared for shipment.</p> <p>Business step: receiving picking loading accepting staging_outbound arriving void_shipping</p>
in_transit	Object being shipped between two trading partners.	<p>Shipper Z pulled a container/product out of a manufacturer's yard on to a road</p> <p>Business step: shipping departing</p>
inactive	Decommissioned object that may be reintroduced to the supply chain.	<p>A reusable tag is removed from a reusable transport item. A digital coupon or an empties refund voucher has been redeemed at retail point-of-sale</p> <p>Business step: decommissioning</p>
no_pedigree_match	In validating the pedigree for the object, no match was found, causing the product to be quarantined for further investigation and disposition.	<p>Distributor Y could not obtain a valid pedigree for a product from its Manufacturer A</p> <p>Business step: holding staging_outbound storing</p>
non_sellable_other	Object cannot be sold to a customer.	<p>A product is not sellable pending further evaluation. A product is not sellable, and one of the other dispositions (expired, recalled, damaged, no_pedigree_match) does not apply. Product has been sold and is awaiting customer pick-up.</p> <p>Business step: holding inspecting staging_outbound storing</p>
partially_dispensed	A portion of a product is distributed to a customer, while additional product is retained for subsequent distribution.	<p>A pharmacist dispenses 10 pills from a 100-count bottle to fill a customer prescription. A deli manager slides and packages one pound of a 10 pound ham for customer purchase. NOTE: This disposition reflects the disposition of the original object, not what was dispensed.</p>
recalled	Object is non-sellable because of public safety reasons.	<p>Manufacturer A requested that all Retailers and Distributors return its batteries that could overheat and explode</p> <p>Business step: holding staging_outbound storing</p>

Dispositions		
reserved	Instance-level identifier has been allocated for a third party.	Distributor receives EPC numbers and can encode tag with the numbers. Business step: reserving
retail_sold	Product has been purchased by a customer.	A customer at Retailer X purchased a screwdriver by checking it out through the point of sale system Business step: retail_selling
returned	Object has been sent back for various reasons. It may or may not be sellable.	Product is received at a returns centre from a customer because of an over-shipment, recall, expired product, etc. Business step: receiving holding shipping
sellable_accessible	Product can be sold as is and customer can access product for purchase.	Retailer X puts a case of screwdrivers on to a shelf or display within customer reach Business step: stocking receiving
sellable_not_accessible	Product can be sold as is, but customer cannot access product for purchase.	Retailer X puts a case of screwdrivers on to a shelf in a store backroom Business step: receiving storing loading holding inspecting
stolen	An object has been taken without permission or right.	A pharmaceutical manufacturer completes an investigation of serial numbers that are missing from inventory, and concludes that they have been stolen
unknown	An object's condition is not known.	

603

604 **7.2.3.1 CBV 1.0 Disposition Values deprecated in CBV 1.1**

605 CBV 1.0 defined several disposition values that are deprecated in CBV 1.1. The following table lists
 606 the deprecated dispositions and the values which replace them in CBV 1.1. Each CBV 1.1 value
 607 applies to all the situations that the corresponding CBV 1.0 value did, but may also be applied to
 608 similar situations where the concept of "sellable" is not relevant. For example, in CBV 1.1 the
 609 disposition `damaged` may be applied to a returnable asset, which was never considered "sellable"
 610 even when it was undamaged.

CBV 1.0 Disposition (deprecated)	CBV 1.1 Disposition
<code>non_sellable_expired</code>	<code>expired</code>
<code>non_sellable_damaged</code>	<code>damaged</code>
<code>non_sellable_disposed</code>	<code>disposed</code>
<code>non_sellable_no_pedigree_match</code>	<code>no_pedigree_match</code>
<code>non_sellable_recalled</code>	<code>recalled</code>

611

612 **7.3 Business Transaction Types**

613 This section specifies standard identifier values for the EPCIS `BusinessTransactionTypeID`
 614 vocabulary. These identifiers may be used to populate the `type` attribute of a `bizTransaction`
 615 element in an EPCIS event. See [Section 8.5](#) for details of when these identifiers should be used.

616 **7.3.1 URI structure**

617 All business transaction type values specified in this section have the following form:

618 `urn:epcglobal:cbv:btt:payload`

619 where the `payload` part is a string as specified in the next section. Every payload string defined
 620 herein contains only lower case letters and the underscore character.

621 **7.3.2 Compliant usage**

622 Each EPCIS event in a CBV-Compliant Document MAY include one or more `bizTransaction`
 623 elements. If `bizTransaction` elements are present, each such element MAY include a `type`
 624 attribute. If a given `bizTransaction` element includes a `type` attribute, the value of the `type`
 625 attribute SHALL be a URI consisting of the prefix `urn:epcglobal:cbv:btt:` followed by the string
 626 specified in the first column of some row of the table below. The portion following the prefix SHALL
 627 be written exactly as specified in the table below, in all lowercase letters (possibly including
 628 underscores, as indicated). See [Section 8.5](#) for more compliance requirements concerning business
 629 transaction types.

630 **i Non-Normative:** Example (non-normative): An EPCIS document in XML format containing a
 631 usage sample may be found in [Section 11.1](#).

632 Each EPCIS event in a CBV-Compatible Document MAY include one or more `bizTransaction`
 633 elements. If `bizTransaction` elements are present, each such element MAY include a `type`
 634 attribute. If a given `bizTransaction` element includes a `type` attribute, the value of the `type`
 635 attribute MAY be a URI as specified above for a CBV-Compliant document, and MAY be any other
 636 URI that meets the general requirements specified in [EPCIS1.2], [Section 6.4](#), except for those URIs
 637 which in this standard are forbidden or designated for a different purpose.

638 **7.3.3 Element Values and Definitions – Business Transaction Types**

Business Transaction Types	
Value	Definition
<code>bol</code>	Bill of Lading. A document issued by a carrier to a shipper, listing and acknowledging receipt of goods for transport and specifying terms of delivery
<code>desadv</code>	Despatch Advice. A document/message by means of which the seller or consignor informs the consignee about the despatch of goods. Also called an "Advanced Shipment Notice," but the value <code>desadv</code> is always used regardless of local nomenclature.
<code>inv</code>	Invoice. A document/message claiming payment for goods or services supplied under conditions agreed by the seller and buyer.
<code>pedigree</code>	Pedigree. A record that traces the ownership or custody and transactions of a product as it moves among various trading partners.
<code>po</code>	Purchase Order. A document/message that specifies details for goods and services ordered under conditions agreed by the seller and buyer.
<code>poc</code>	Purchase Order Confirmation. A document that provides confirmation from an external supplier to the request of a purchaser to deliver a specified quantity of material, or perform a specified service, at a specified price within a specified time.
<code>prodorder</code>	Production Order. An organisation-internal document or message issued by a producer that initiates a manufacturing process of goods.

Business Transaction Types	
recadv	Receiving Advice. A document/message that provides the receiver of the shipment the capability to inform the shipper of actual goods received, compared to what was advised as being sent.
rma	Return Merchandise Authorisation. A document issued by the seller that authorises a buyer to return merchandise for credit determination.

639 **7.4 Source/Destination types**

640 This section specifies standard identifier values for the EPCIS `SourceDestTypeID` vocabulary. These
 641 identifiers may be used to populate the `type` attribute of a `source` or `destination` element in an
 642 EPCIS event. See [Section 8.6](#) for details of when these identifiers should be used.

643 **7.4.1 URI structure**

644 All source/destination type values specified in this section have the following form:

645 `urn:epcglobal:cbv:sdt:payload`

646 where the `payload` part is a string as specified in the next section. Every payload string defined
 647 herein contains only lower case letters and the underscore character.

648 **7.4.2 Compliant usage**

649 Each EPCIS event in a CBV-Compliant Document MAY include one or more `source` and/or
 650 `destination` elements. The value of the `type` attribute of the `source` or `destination` element
 651 SHALL be a URI consisting of the prefix `urn:epcglobal:cbv:sdt:` followed by the string specified
 652 in the first column of some row of the table below. The portion following the prefix SHALL be written
 653 exactly as specified in the table in Section 7.4.3, in all lowercase letters (possibly including
 654 underscores, as indicated). See [Section 8.6](#) for more compliance requirements concerning source
 655 and destination types.

656 **i Non-Normative:** Example (non-normative): An EPCIS document in XML format containing a
 657 usage sample may be found in [Section 11.1](#).

658 Each EPCIS event in a CBV-Compatible Document MAY include one or more `source` and/or
 659 `destination` elements. The value of the `type` attribute of the `source` or `destination` element
 660 MAY be a URI as specified above for a CBV-Compliant document, and MAY be any other URI that
 661 meets the general requirements specified in [EPCIS1.2], [Section 6.4](#), except for those URIs which in
 662 this standard are forbidden or designated for a different purpose.

663 **7.4.3 Element Values and Definitions – Source/Destination Types**

Source/Destination Types	
Value	Definition
<code>owning_party</code>	The source or destination identifier denotes the party who owns (or is intended to own) the objects at the originating endpoint or terminating endpoint (respectively) of the business transfer of which this EPCIS event is a part.
<code>possessing_party</code>	The source or destination identifier denotes the party who has (or is intended to have) physical possession of the objects at the originating endpoint or terminating endpoint (respectively) of the business transfer of which this EPCIS event is a part.
<code>location</code>	The source or destination identifier denotes the physical location of the originating endpoint or terminating endpoint (respectively) of the business transfer of which this EPCIS event is a part. When a source of this type is specified on an EPCIS event at the originating endpoint of a business transfer, the source identifier SHOULD be consistent with the Read Point specified in that event. When a destination of this type is specified on an EPCIS event at the terminating endpoint of a business transfer, the destination identifier SHOULD be consistent with the Read Point specified in that event.

664 **7.5 Error reason identifiers**

665 This section specifies standard identifier values for the EPCIS `ErrorReasonID` vocabulary. These
 666 identifiers may be used to populate the `reason` attribute of an `errorDeclaration` element in an
 667 EPCIS event.

668 **7.5.1 URI structure**

669 All error reason identifier values specified in this section have the following form:

670 `urn:epcglobal:cbv:er:payload`

671 where the `payload` part is a string as specified in the next section. Every payload string defined
 672 herein contains only lower case letters and the underscore character.

673 **7.5.2 Compliant usage**

674 Each EPCIS event in a CBV-Compliant Document MAY include an `ErrorDeclaration` element, and
 675 when present, the `ErrorDeclaration` element MAY include a `reason` field. When present in a
 676 CBV-Compliant Document, the value of the `reason` field of the `ErrorDeclaration` element SHALL
 677 be a URI consisting of the prefix `urn:epcglobal:cbv:er:` followed by the string specified in the
 678 first column of some row of the table in Section 7.5.3. The portion following the prefix SHALL be
 679 written exactly as specified in the table below, in all lowercase letters (possibly including
 680 underscores, as indicated).

681 Each EPCIS event in a CBV-Compatible Document MAY include an `ErrorDeclaration` element,
 682 and when present, the `ErrorDeclaration` element MAY include a `reason` field. When present in a
 683 CBV-Compatible Document, the value of the `reason` attribute of the `ErrorDeclaration` element
 684 MAY be a URI as specified above for a CBV-Compliant document, and MAY be any other URI that
 685 meets the general requirements specified in [EPCIS1.2], [Section 6.4](#), except for those URIs which in
 686 this standard are forbidden or designated for a different purpose.

687 **7.5.3 Element Values and Definitions – Error reason identifiers**

Error reason identifiers	
Value	Definition
<code>did_not_occur</code>	The prior event is considered erroneous because it did not actually occur. There are no corrective events. (In a CBV-Compliant Document, this error reason SHALL NOT be used in an error declaration that contains one or more corrective event IDs.)
<code>incorrect_data</code>	The prior event is considered erroneous because some or all of the data in the event are incorrect. Subsequent events may provide a correct indication of what actually occurred when the prior event was captured. These events may be linked using the corrective event IDs in the error declaration.

688 **8 User vocabularies**

689 This section specifies syntax templates that end users may use to define vocabulary elements for
 690 three EPCIS user vocabularies: physical or digital objects, locations (both read points and business
 691 locations), and business transactions.

692 **8.1 General considerations**

693 Unlike the standard vocabularies discussed in [Section 7](#), a vocabulary element in a User Vocabulary
 694 is created by an End User. For example, an End User who creates a new business location such as a
 695 new warehouse may create a business location identifier to refer to that location in EPCIS events.
 696 The specific identifier string is defined by the End User, and its meaning may be described to trading
 697 partners via master data exchange, or via some other mechanism outside of the EPCIS Query
 698 Interface.

699 The EPCIS standard ([Section 6.4](#)) places general constraints on the identifiers that End Users may
 700 create for use as User Vocabulary elements. Specifically, an identifier must conform to URI syntax,
 701 and must either conform to syntax specified in GS1 standards or must belong to a subspace of URI
 702 identifiers that is under the control of the end user who assigns them.

703 The Core Business Vocabulary provides additional constraints on the syntax of identifiers for user
 704 vocabularies, so that CBV-Compliant documents will use identifiers that have a predictable
 705 structure. This in turn makes it easier for trading partners to understand the meaning of such
 706 identifiers.

707 For each user vocabulary considered here, several different syntax templates are provided for
 708 constructing vocabulary elements:

709 ■ **EPC URI:** An Electronic Product Code “pure identity” URI may be used as a user vocabulary
 710 element. EPCs have a structure and meaning that is widely understood. EPCs may also be
 711 encoded into data carriers such as RFID tags and barcodes according to GS1 standards. For this
 712 reason, EPCs are often the best choice for creating user vocabulary elements when it is possible
 713 to do so.

714 ■ **Private or Industry-wide URN:** A Uniform Resource Name (URN) of the form
 715 `urn:URNNamespace:...` may be used as a user vocabulary element. Doing so requires that the
 716 user who creates the vocabulary element be authorised to use the URN namespace that appears
 717 following the `urn:` prefix. For example, the End User may register its own URN namespace with
 718 the Internet Assigned Numbers Authority (IANA). Alternatively, an industry consortium or other
 719 trading group could register a URN namespace, and define a syntax template beginning with this
 720 namespace for use by its members in creating vocabulary elements. Because of the difficulty of
 721 registering a URN namespace, this method is typically used by trading groups, not individual
 722 end users.

723 ■ **HTTP URL:** A Uniform Resource Locator (URL) of the form
 724 `http://Domain/...` may be used as a user vocabulary element. Doing so requires that the user
 725 who creates the vocabulary element be authorised to use the Internet domain name that
 726 appears following the `http:` prefix. Often a subdomain of the End User’s organisation domain is
 727 used; for example, the Example Corporation may choose to use `epcis.example.com` as a
 728 domain name for constructing user vocabulary identifiers. Because registering an Internet
 729 domain name is relatively easy, this method is quite appropriate for use by individual end users
 730 as well as by industry groups.

731 Note that HTTP URLs used as EPCIS user vocabulary elements do not necessarily refer to a web
 732 page. They are just identifiers (names) that happen to use the HTTP URI scheme for the sake of
 733 convenience.

734 Further details about each of these three forms are specified below.

736 **i Non-Normative:** Explanation: The reason that several different syntax templates are
 737 provided for each user vocabulary is to provide flexibility for end users to meet their business
 738 requirements. Use of an EPC is preferred for most end user vocabularies; however, EPC codes
 739 are somewhat constrained in syntax (e.g., limitations on character set and number of
 740 characters allowed), and may not easily accommodate the construction of identifiers based on
 741 codes already in use within legacy business systems. The other forms provide an alternative.

742 **8.1.1 General Considerations for EPC URIs as User Vocabulary Elements**

743 Where an EPC URI is used as a User Vocabulary Element, both CBV-Compliant and CBV-Compatible
 744 documents SHALL use an EPC Pure Identity URI, except as noted below. An EPC Pure Identity URI is
 745 a URI as specified in [TDS1.9], [Section 6](#) (specifically, a URI matching the grammar production
 746 EPC-URI in [TDS1.9], [Section 6.3](#)). EPC “pure identity” URIs begin with `urn:epc:id:...`

747 Both CBV-Compliant and CBV-Compatible documents SHALL NOT use any of the other URI forms for
 748 EPCs defined in [TDS1.9]. In particular, documents SHALL NOT use EPC Tag URIs
 749 (`urn:epc:tag:...`), EPC Pure Identity Pattern URIs (`urn:epc:idpat:...`), or EPC Pattern URIs
 750 (`urn:epc:pat:...`), except that both CBV-Compliant and CBV-Compatible documents MAY use EPC
 751 Pattern URIs for class-level identification of objects as specified in [Section 8.3.1](#). Both CBV-

752 Compliant and CBV-Compatible documents MAY use EPC Raw URIs (`urn:epc:raw:...`) as defined in
 753 [TDS1.9], [Section 12](#), provided that the raw value cannot be decoded as an EPC. Both CBV-
 754 Compliant and CBV-Compatible documents SHALL NOT use an EPC Raw URI representing EPC
 755 memory bank contents that could be successfully decoded into an EPC Pure Identity URI according
 756 to [TDS1.9].

757 **i** **Non-Normative:** Explanation: [EPCIS1.2] specifies that “When the unique identity [for an
 758 instance-level identifier in the “what” dimension] is an Electronic Product Code, the
 759 [identifier] SHALL be the “pure identity” URI for the EPC as specified in [TDS1.9], [Section 6](#).
 760 Implementations MAY accept URI-formatted identifiers other than EPCs.” The above language
 761 clarifies this requirement, and provides more specific references to [TDS1.9]. The above
 762 language also extends these restrictions to the use of EPC URIs in other dimensions of EPCIS
 763 events beyond the “what” dimension.

764 **8.1.2 General Considerations for Private or Industry-wide URN as User Vocabulary**
 765 **elements**

766 Where specified in [Sections 8.2](#) through 8.5, a CBV-Compliant document or CBV-Compatible
 767 document MAY use a private or industry-wide URN as specified below.

768 A Private or Industry-wide URN SHALL have the following form:

769 `urn:URNNamespace:**:qual:Remainder`

770 where the components of this template are as follows:

Template Component	Description
<code>urn:</code>	The characters <code>u</code> , <code>r</code> , <code>n</code> , and <code>:</code> (colon).
<code>URNNamespace</code>	A URN Namespace registered with the Internet Assigned Numbers Authority according to [RFC2141].
<code>**:</code>	Denotes either a single colon character or any string that conforms to the requirements of [RFC2141] and any syntax rules defined for the registered URN namespace, and which begins and ends with a colon character. In other words, any number of additional subfields may be included between the URN Namespace and the <code>qual</code> component, in order to provide flexibility for URN Namespace owners to administer their namespace.
<code>qual:</code>	A qualifier as specified in Sections 8.2 through 8.5 , depending on the type of identifier.
<code>Remainder</code>	The remainder of the identifier as specified in Sections 8.2 through 8.5 .

771
 772 In addition, an identifier of this form SHALL be 128 characters or fewer, and SHOULD be
 773 60 characters or fewer.

774 Identifiers of this form must be assigned by the owner of the URN Namespace. The owner of the
 775 URN Namespace may delegate the authority to assign new identifiers to End Users or other parties,
 776 provided that appropriate rules are employed to ensure global uniqueness.

777 **8.1.3 General Considerations for HTTP URLs as User Vocabulary elements**

778 Where specified in [Sections 8.2](#) through [8.5](#), a CBV-Compliant document or CBV-Compatible
 779 document MAY use an HTTP URL.

780 An HTTP URL SHALL have the following form:

781 `http://[Subdomain.]Domain/**/qual/Remainder`

782 where the components of this template are as follows:

Template Component	Description
<code>http://</code>	The seven characters <code>h</code> , <code>t</code> , <code>t</code> , <code>p</code> , <code>:</code> (colon), <code>/</code> (slash), and <code>/</code> (slash).

Template Component	Description
<i>[Subdomain.]Domain</i>	<p>An Internet Domain name that has been registered with an Internet Domain Name Registrar, optionally preceded by one or more subdomain names.</p> <p>For example, if <code>example.com</code> is a registered Internet Domain Name, then the following are acceptable values for this component:</p> <p><code>example.com</code> <code>epcis.example.com</code> <code>a.rather.verbose.example.com</code></p> <p>Unless there is a reason to do otherwise, <code>epcis.example.com</code> is recommended for most End Users (where the End User substitutes its own company or organisational Domain Name for <code>example.com</code>).</p> <p>Explanation (non-normative): Use of a subdomain dedicated to EPCIS, such as <code>epcis.example.com</code>, helps to avoid the possibility of conflict with other uses of the company or organisational domain name, such as URLs of web pages on the company web site. While HTTP URLs used as identifiers in EPCIS events are not usually intended to be dereferenced via a web browser, it is usually helpful to emphasise this fact by making the URL distinct from the URLs used by the company web site.</p>
<i>/**/</i>	Denotes either a single slash character, or any string that matches the grammar rule <code>path-absolute</code> defined in [RFC3986], Section 3.3 . In other words, any number of additional path components may be included between the authority component and the <code>obj</code> component, in order to provide flexibility for domain owners to administer their namespace.
<i>qual/</i>	A qualifier as specified in Sections 8.2 through 8.5 , depending on the type of identifier.
<i>Remainder</i>	The remainder of the identifier as specified in Sections 8.2 through 8.5 .

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In addition, an identifier of this form SHALL be 128 characters or fewer, and SHOULD be 60 characters or fewer.

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Identifiers of this form must be assigned by the owner of the Internet domain *Domain*. The owner of the domain may delegate the authority to assign new identifiers to other parties, provided that appropriate rules are employed to ensure global uniqueness.

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8.2 Physical or digital objects (Instance-Level Identification)

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Instance-level identifiers for physical or digital objects populate the “what” dimension of EPCIS events. This includes the `epcList`, `parentID`, `childEPCs`, `inputEPCs`, and `outputEPCs` fields in EPCIS `ObjectEvents`, `AggregationEvents`, `TransactionEvents`, and `TransformationEvents`. See [Section 1](#) of [EPCIS1.2] for a further definition of “object” in this sense, also reproduced below.

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A CBV-Compliant document SHALL use one of the three URI forms specified in this section to populate the above fields of EPCIS events, for every such field that is not null. A CBV-Compatible document MAY use one of the three URI forms specified in this section, or MAY use any other URI that meets the general requirements specified in [EPCIS1.2], [Section 6.4](#), except for those URIs which in this standard are forbidden or designated for a different purpose.

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Both CBV-Compliant and CBV-Compatible documents SHOULD use the EPC URI form as specified in [Section 8.2.1](#) unless there is a strong reason to do otherwise.

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i Non-Normative: Explanation, quoted from [EPCIS1.2]: “Objects” in the context of EPCIS typically refers to physical objects that are identified either at a class or instance level and which are handled in physical handling steps of an overall business process involving one or more organisations. Examples of such physical objects include trade items (products), logistic units, returnable assets, fixed assets, physical documents, etc. “Objects” may also refer to digital objects, also identified at either a class or instance level, which participate in comparable business process steps. Examples of such digital objects include digital trade items (music downloads, electronic books, etc.), digital documents (electronic coupons, etc.), and so forth. Throughout this document the word “object” is used to denote a physical or digital object, identified at a class or instance level, that is the subject of a business process step. [Section 8.2](#) of this CBV standard defines identifier structures for instance-level

812 identification of Objects; [Section 8.3](#) defines identifier structures for class-level identification
 813 of Objects.

814 **8.2.1 EPC URI for Instance-level identification of objects**

815 A CBV-Compliant document or CBV-Compatible document MAY use an EPC Pure Identity URI as
 816 specified in [Section 8.1.1](#) to populate the `epcList`, `parentID`, and `childEPCs` fields in EPCIS
 817 `ObjectEvents`, `AggregationEvents`, and `TransactionEvents`. Both CBV-Compliant and
 818 CBV-Compatible documents SHOULD use this form unless there is a strong reason to do otherwise.

819 Both CBV-Compliant and CBV-Compatible documents SHALL NOT use an SGLN EPC
 820 (`urn:epc:id:sgln:...`) as an Object identifier.

821 Both CBV-Compliant and CBV-Compatible documents SHALL NOT use any of the other URI forms for
 822 EPCs defined in [TDS1.9]; see [Section 8.1.1 for details](#).

823 **8.2.2 Private or Industry-wide URN for Instance-level identification of objects**

824 A CBV-Compliant document or CBV-Compatible document MAY use a private or industry-wide URN
 825 as specified below to populate the `epcList`, `parentID`, and `childEPCs` fields in EPCIS
 826 `ObjectEvents`, `AggregationEvents`, and `TransactionEvents`. However, both CBV-
 827 Compliant and CBV-Compatible documents SHOULD use the EPC URI form ([Section 8.2.1](#)) unless
 828 there is a strong reason to do otherwise. See [Section 8.1](#) for general considerations regarding the
 829 use of Private or Industry-wide URI identifiers.

830 A Private or Industry-wide URI suitable for populating the `epcList`, `parentID`, and `childEPCs`
 831 fields of EPCIS events SHALL have the following form:

832 `urn:URNNamespace:**:obj:Objid`

833 where the components of this template are as follows:

Template Component	Description
<code>urn:URNNamespace:**:</code>	As specified in Section 8.1.2 .
<code>obj:</code>	The characters <code>o</code> , <code>b</code> , <code>j</code> , and <code>:</code> (colon).
<code>Objid</code>	An identifier for the object that complies with the requirements of [RFC2141] and any syntax rules defined for the registered URN namespace <code>URNNamespace</code> , and which does not contain a colon character. This identifier must be unique relative to all other identifiers that begin with the same prefix.

834
 835 Identifiers of this form must be assigned by the owner of the URN Namespace. The owner of the
 836 URN Namespace may delegate the authority to assign new identifiers to End Users or other parties,
 837 provided that appropriate rules are employed to ensure global uniqueness.

838 **i** **Non-Normative:** Example (non-normative): An EPCIS document in XML format containing a
 839 usage sample may be found in [Section 11.2](#).

840 **8.2.3 HTTP URLs for Instance-level identification of objects**

841 A CBV-Compliant document or CBV-Compatible document MAY use an HTTP URL as specified below
 842 to populate the `epcList`, `parentID`, and `childEPCs` fields in EPCIS `ObjectEvents`,
 843 `AggregationEvents`, and `TransactionEvents`. However, both CBV-Compliant and CBV-
 844 Compatible documents SHOULD use the EPC URI form ([Section 8.2.1](#)) unless there is a strong
 845 reason to do otherwise. See [Section 8.1](#) for general considerations regarding the use of HTTP URL
 846 identifiers.

847 An HTTP URL suitable for populating the `epcList`, `parentID`, and `childEPCs` fields of EPCIS
 848 events SHALL have the following form:

849 `http://[Subdomain.]Domain/**/obj/Objid`

850 where the components of this template are as follows:

Template Component	Description
<code>http://[Subdomain.]Domain/**/</code>	As specified in Section 8.1.3 .
<code>obj/</code>	The characters <code>o</code> , <code>b</code> , <code>j</code> , and <code>/</code> (slash).
<code>Objid</code>	An identifier for the object that matches the grammar rule <code>segment-nz</code> defined in [RFC3986], Section 3.3 (among other things, this means <code>Objid</code> may not contain a slash character), and which is unique relative to all other identifiers that begin with the same prefix.

851
852 Identifiers of this form must be assigned by the owner of the Internet domain *Domain*. The owner of
853 the domain may delegate the authority to assign new identifiers to other parties, provided that
854 appropriate rules are employed to ensure global uniqueness.

855 **i Non-Normative:** Example (non-normative): An EPCIS document in XML format containing a
856 usage sample may be found in [Section 11.2](#).

857 8.3 Physical or digital objects (Class-level identification)

858 Class-level identifiers for physical or digital objects populate the “what” dimension of EPCIS events.
859 This includes the `epcClass` field within the EPCIS `QuantityEvent` (deprecated in EPCIS 1.1) and
860 within the `quantityElement` structures of EPCIS `ObjectEvents`, `AggregationEvents`,
861 `TransactionEvents`, and `TransformationEvents`. See [Section 1](#) of [EPCIS1.2] for a further
862 definition of “object” in this sense, also reproduced below.

863 A CBV-Compliant document SHALL use one of the three URI forms specified in this section to
864 populate the above fields of EPCIS events, for every such field that is not null. A CBV-Compatible
865 document MAY use one of the three URI forms specified in this section, or MAY use any other URI
866 that meets the general requirements specified in [EPCIS1.2], [Section 6.4](#), except for those URIs
867 which in this standard are forbidden or designated for a different purpose.

868 Both CBV-Compliant and CBV-Compatible documents SHOULD use the EPC URI form as specified in
869 [Section 8.3.1](#) unless there is a strong reason to do otherwise.

870 **i Non-Normative:** Explanation (non-normative), quoted from [EPCIS1.2]: “Objects” in the
871 context of EPCIS typically refers to physical objects that are identified either at a class or
872 instance level and which are handled in physical handling steps of an overall business process
873 involving one or more organisations. Examples of such physical objects include trade items
874 (products), logistic units, returnable assets, fixed assets, physical documents, etc. “Objects”
875 may also refer to digital objects, also identified at either a class or instance level, which
876 participate in comparable business process steps. Examples of such digital objects include
877 digital trade items (music downloads, electronic books, etc.), digital documents (electronic
878 coupons, etc.), and so forth. Throughout this document the word “object” is used to denote a
879 physical or digital object, identified at a class or instance level, that is the subject of a
880 business process step. [Section 8.2](#) of this CBV standard defines identifier structures for
881 instance-level identification of Objects; [Section 8.3](#) defines identifier structures for class-level
882 identification of Objects.

883 8.3.1 EPC URI for Class-level identification of objects

884 A CBV-Compliant document or CBV-Compatible document MAY use one of the following URI forms
885 specified in the EPC Tag Data standard to populate the `epcClass` field within the EPCIS
886 `QuantityEvent` (deprecated in EPCIS 1.1) and within the `quantityElement` structures of EPCIS
887 `ObjectEvents`, `AggregationEvents`, `TransactionEvents`, and `TransformationEvents`:

Identifier Type	URI Form	Normative Reference
GTIN	<code>urn:epc:idpat:sgtin:CCC.III.*</code>	[TDS1.9, Section 8]

Identifier Type	URI Form	Normative Reference
GTIN+batch/lot	urn:epc:class:lgtn:CCC.III.LLL	[TDS1.9, Section 6]
GRAI (no serial)	urn:epc:idpat:grai:CCC.TTT.*	[TDS1.9, Section 8]
GDTI (no serial)	urn:epc:idpat:gdti:CCC.TTT.*	[TDS1.9, Section 8]
GCN (no serial)	urn:epc:idpat:sgcn:CCC.TTT.*	[TDS1.9, Section 8]
CPI (no serial)	urn:epc:idpat:cpi:CCC.TTT.*	[TDS1.9, Section 8]

888 where:

- 889 ■ CCC is the GS1 Company Prefix portion of an EPC Pure Identity Pattern URI
- 890 ■ III is the Indicator + Item Reference portion of an SGTIN EPC Pure Identity Pattern URI or the
- 891 Indicator + Item Reference portion of an LGTIN EPC Class URI
- 892 ■ TTT is the Returnable Asset Type, Document Type, Coupon Reference, or Component/Part Type
- 893 portion of an EPC Pure Identity Pattern for GRAI, GDTI, SGCN, or CPI, respectively.

894 A CBV-Compliant document or CBV-Compatible document SHALL NOT use any other Pure Identity
 895 Pattern URI form specified in [TDS1.9, Section 8]. This includes, for example, an SSCC Pure Identity
 896 Pattern URI, or an SGTIN Pure Identity Pattern URI with two "*" wildcards.

897 Both CBV-Compliant and CBV-Compatible documents SHALL NOT use any of the other URI forms for
 898 EPCs defined in [TDS1.9]; see Section 8.1.1 for details.

899 8.3.1.1 Explanation (non-normative)

900 The EPC Tag Data standard defines EPC Pure Identity Pattern URIs as a way to specify a pattern
 901 that matches many instance-level EPCs. For example, the EPC Pure Identity Pattern URI
 902 urn:epc:idpat:sgtin:0614141.112345.* matches any SGTIN URI that begins with
 903 urn:epc:idpat:sgtin:0614141.112345, for example the specific SGTIN URI
 904 urn:epc:idpat:sgtin:0614141.112345.400. In the EPCIS Simple Event Query, such a
 905 pattern may be used to match EPCIS events whose "what" dimension contains instance-level
 906 identifiers that have a specified GTIN and any serial number.

907 The table above specifies the use of EPC Pure Identity Pattern URIs to achieve a second purpose,
 908 namely as class-level identifiers for use in the Quantity Element fields of EPCIS events. In this
 909 usage, the URI urn:epc:idpat:sgtin:0614141.112345.* refers to the object class identified
 910 by GTIN 10614141123459.

911 Not all EPC Pure Identity Pattern URIs make sense as class-level identifiers. For example, when
 912 urn:epc:idpat:sgtin:0614141.*.* is used in an EPCIS query to match instance-level
 913 identifiers, it matches all SGTIN identifiers that include GS1 Company Prefix 0614141. This is valid
 914 as a matching condition for a query, but there is no corresponding object class and so this is not a
 915 valid class-level identifier. A similar argument applies to a URI such as
 916 urn:epc:idpat:sscc:0614141.*, and the other EPC Pattern URIs not included in the table
 917 above.

918 8.3.2 Private or Industry-wide URN for Class-level identification of objects

919 A CBV-Compliant document or CBV-Compatible document MAY use a private or industry-wide URN
 920 as specified below to populate the epcClass field within the EPCIS QuantityEvent (deprecated in
 921 EPCIS 1.1) and within the quantityElement structures of EPCIS ObjectEvents,
 922 AggregationEvents, TransactionEvents, and TransformationEvents. However, both
 923 CBV-Compliant and CBV-Compatible documents SHOULD use the EPC URI form (Section 8.3.1)
 924 unless there is a strong reason to do otherwise. See Section 8.1 for general considerations
 925 regarding the use of Private or Industry-wide URI identifiers.

926 A Private or Industry-wide URI suitable for populating the epcClass field of EPCIS events SHALL
 927 have the following form:

928 urn:URNNamespace:**:class:ObjClassid

929 where the components of this template are as follows:

Template Component	Description
<code>urn:URNNamespace:**:</code>	As specified in Section 8.1.2 .
<code>class:</code>	The characters <i>c</i> , <i>l</i> , <i>a</i> , <i>s</i> , <i>s</i> , and <code>:</code> (colon).
<code>ObjClassid</code>	An identifier for the object class that complies with the requirements of [RFC2141] and any syntax rules defined for the registered URN namespace <i>URNNamespace</i> , and which does not contain a colon character. This identifier must be unique relative to all other identifiers that begin with the same prefix.

930 Identifiers of this form must be assigned by the owner of the URN Namespace. The owner of the
 931 URN Namespace may delegate the authority to assign new identifiers to End Users or other parties,
 932 provided that appropriate rules are employed to ensure global uniqueness.

933 **i** **Non-Normative:** Example (non-normative): An EPCIS document in XML format containing a
 934 usage sample may be found in [Section 11.2](#).

935 **8.3.3 HTTP URLs for Class-level identification of objects**

936 A CBV-Compliant document or CBV-Compatible document MAY use an HTTP URL as specified below
 937 to populate the `epcClass` field within the EPCIS `QuantityEvent` (deprecated in EPCIS 1.1) and
 938 within the `quantityElement` structures of EPCIS `ObjectEvents`, `AggregationEvents`,
 939 `TransactionEvents`, and `TransformationEvents`. However, both CBV-Compliant and CBV-
 940 Compatible documents SHOULD use the EPC URI form ([Section 0](#)) unless there is a strong reason to
 941 do otherwise. See [Section 8.1](#) for general considerations regarding the use of HTTP URL identifiers.

942 An HTTP URL suitable for populating the `epcClass` fields of EPCIS events SHALL have the following
 943 form:

944 `http://[Subdomain.]Domain/**/class/ObjClassid`

945 where the components of this template are as follows:

Template Component	Description
<code>http://[Subdomain.]Domain/**/</code>	As specified in Section 8.1.3 .
<code>class/</code>	The characters <i>c</i> , <i>l</i> , <i>a</i> , <i>s</i> , <i>s</i> , and <code>/</code> (slash).
<code>ObjClassid</code>	An identifier for the object class that matches the grammar rule <code>segment-nz</code> defined in [RFC3986], Section 3.3 (among other things, this means <code>ObjClassid</code> may not contain a slash character), and which is unique relative to all other identifiers that begin with the same prefix.

946 Identifiers of this form must be assigned by the owner of the Internet domain *Domain*. The owner of
 947 the domain may delegate the authority to assign new identifiers to other parties, provided that
 948 appropriate rules are employed to ensure global uniqueness.

950 **i** **Non-Normative:** Example: An EPCIS document in XML format containing a usage sample
 951 may be found in [Section 11.2](#).

952 **8.4 Locations**

953 Identifiers for locations populate the “where” dimension of EPCIS events. This includes the
 954 `readPoint` and `businessLocation` fields in all EPCIS event types.

955 A CBV-Compliant document SHALL use one of the four URI forms specified in this section to
 956 populate the above fields of EPCIS events, for every such field that is not null. A CBV-Compatible
 957 document MAY use one of the four URI forms specified in this section, or MAY any other URI that
 958 meets the general requirements specified in [EPCIS1.2], [Section 6.4](#), except for those URIs which in
 959 this standard are forbidden or designated for a different purpose.

960 Both CBV-Compliant and CBV-Compatible documents SHOULD use the EPC URI form as specified in
 961 [Section 8.4.1](#) unless there is a strong reason to do otherwise.

962 **8.4.1 EPC URI for Location identifiers**

963 A CBV-Compliant document or CBV-Compatible document MAY use an EPC Pure Identity URI as
 964 specified in [Section 8.1.1](#) to populate the `readPoint` and `businessLocation` fields in all EPCIS
 965 event types. Both CBV-Compliant and CBV-Compatible documents SHOULD use this form unless
 966 there is a strong reason to do otherwise.

967 Both CBV-Compliant and CBV-Compatible documents SHOULD NOT use EPC schemes other than
 968 SGLN EPCs (`urn:epc:id:sgln:...`) for location identifiers, unless there is a strong reason to do so.

969 Both CBV-Compliant and CBV-Compatible documents SHALL NOT use any of the other URI forms for
 970 EPCs defined in [TDS1.9]; see [Section 8.1.1](#) for details.

971 **8.4.2 Private or Industry-wide URN for Location identifiers**

972 A CBV-Compliant document or CBV-Compatible document MAY use a private or industry-wide URN
 973 as specified below to populate the `readPoint` and `businessLocation` fields in all EPCIS event
 974 types. However, both CBV-Compliant and CBV-Compatible documents SHOULD use the EPC URI
 975 form ([Section 8.4.1](#)) unless there is a strong reason to do otherwise. See [Section 8.1](#) for general
 976 considerations regarding the use of Private or Industry-wide URI identifiers.


977 A Private or Industry-wide URI suitable for populating the `readPoint` and `businessLocation`
 978 fields in all EPCIS event types SHALL have the following form:

979 `urn:URNNamespace:**:loc:Locid`

980 where the components of this template are as follows:

Template Component	Description
<code>urn:URNNamespace:**:</code>	As specified in Section 8.1.2 .
<code>loc:</code>	The characters <code>l</code> , <code>o</code> , <code>c</code> , and <code>:</code> (colon).
<code>Locid</code>	An identifier for the location that complies with the requirements of [RFC2141] and any syntax rules defined for the registered URN namespace <code>URNNamespace</code> , and which does not contain a colon character. This identifier must be unique relative to all other identifiers that begin with the same prefix.

981 Identifiers of this form must be assigned by the owner of the URN Namespace. The owner of the
 982 URN Namespace may delegate the authority to assign new identifiers to End Users or other parties,
 983 provided that appropriate rules are employed to ensure global uniqueness.

984  **Non-Normative:** Example (non-normative): An EPCIS document in XML format containing a
 985 usage sample may be found in [Section 11.2](#).

986 **8.4.3 HTTP URLs for Location identifiers**

987 A CBV-Compliant document or CBV-Compatible document MAY use an HTTP URL as specified below
 988 to populate the `readPoint` and `businessLocation` fields in all EPCIS event types. However, both
 989 CBV-Compliant and CBV-Compatible documents SHOULD use the EPC URI form ([Section 8.4.1](#))
 990 unless there is a strong reason to do otherwise. See [Section 8.1](#) for general considerations
 991 regarding the use of HTTP URL identifiers.

992 An HTTP URL suitable for populating the `readPoint` and `businessLocation` fields in all EPCIS
 993 event types SHALL have the following form:

994 `http://[Subdomain.]Domain/**/loc/Locid`

995 where the components of this template are as follows:

Template Component	Description
<code>http://[Subdomain.]Domain/**/</code>	As specified in Section 8.1.3 .
<code>loc/</code>	The characters <code>l</code> , <code>o</code> , <code>c</code> , and <code>/</code> (slash).
<code>Locid</code>	An identifier for the location that matches the grammar rule <code>segment-nz</code> defined in [RFC3986], Section 3.3 (among other things, this means <code>Locid</code> may not contain a slash character), and which is unique relative to all other identifiers that begin with the same prefix.

996 Identifiers of this form must be assigned by the owner of the Internet domain *Domain*. The owner of
 997 the domain may delegate the authority to assign new identifiers to other parties, provided that
 998 appropriate rules are employed to ensure global uniqueness.

i Non-Normative: Example (non-normative): An EPCIS document in XML format containing a
 999 usage sample may be found in [Section 11.2](#).
 1000

1001 8.4.4 Geographic Location URIs for Location identifiers

1002 A CBV-Compliant document or CBV-Compatible document MAY use a geographic location URI as
 1003 specified in [RFC5870] to populate the `readPoint` and `businessLocation` fields in all EPCIS
 1004 event types. Such identifiers may be used in situations where it is not feasible to assign a unique
 1005 location identifier; for example, to indicate the location of a ship on the open ocean. Both CBV-
 1006 Compliant and CBV-Compatible documents SHOULD use a location identifier as specified in
 1007 [Sections 8.4.1](#) through [8.4.3](#) (with preference given to the EPC URI form as specified in
 1008 [Section 8.4.1](#)) unless a geographic location URI is the only feasible alternative.

1009 The syntax and meaning of geographic location URIs is specified in [RFC5870].

i Non-Normative: Explanation (non-normative): The simplest form of RFC5870-compliant
 1010 geographic location URI looks like this: `geo:22.300,-118.44`
 1011 This example denotes the geographic location with latitude 22.300 degrees (north) and
 1012 longitude 118.44 degrees (west). Other forms of the `geo` URI allow for the inclusion of
 1013 altitude, uncertainty radius, and reference coordinate system. Please consult [RFC5870] for
 1014 details of these and other considerations that apply to the use of the geographic location URI.
 1015

1016 8.5 Business transactions

1017 Identifiers for business transactions populate the “why” dimension of EPCIS events. This includes
 1018 the `bizTransactionList` field in all EPCIS event types.

1019 The EPCIS standard provides for a business transaction to be identified by a pair of identifiers, the
 1020 “business transaction identifier” (hereinafter “BTI”) that names a particular business transaction,
 1021 and an optional “business transaction type” (hereinafter “BTT”) that says what kind of business
 1022 transaction the identifier denotes (purchase order, invoice, etc.). [Section 7.3](#) of this standard
 1023 provides standardised values for BTTs.

1024 URI forms for BTIs are specified below. A CBV-Compliant document SHALL use one of the four URI
 1025 forms specified in this section to populate the BTI field (text content of the `bizTransaction`
 1026 element) of EPCIS events, for every such field that is not null. A CBV-Compatible document MAY use
 1027 one of the four URI forms specified in this section, or MAY use any other URI that meets the general
 1028 requirements specified in [EPCIS1.2], [Section 6.4](#), except for those URIs which in this standard are
 1029 forbidden or designated for a different purpose.

1030 A `bizTransaction` element in an EPCIS event includes a BTI and an optional BTT in any of the
 1031 following three combinations:

- 1032 ■ If the goal is to communicate a business transaction identifier without indicating its type, a BTI
 1033 is included and the BTT omitted.

- 1034 ■ If the goal is to communicate a business transaction identifier and to indicate its type, and
1035 furthermore the type is one of the CBV standard types specified in [Section 7.3](#), a BTI is
1036 included, and one of the URIs specified in [Section 7.3](#) is included as the BTT.
- 1037 ■ If the goal is to communicate a business transaction identifier and to indicate its type, and
1038 furthermore the type is not one of the CBV standard types specified in [Section 7.3](#), the BTI is
1039 included, and some URI that does not begin with `urn:epcglobal:cbv:...` is included as the
1040 BTT. (This is CBV-Compatible but not CBV-Compliant.)

1041 **8.5.1 EPC URI for Business transaction identifiers**

1042 A CBV-Compliant document or CBV-Compatible document MAY use an EPC Pure Identity URI as
1043 specified in [Section 8.1.1](#) as a business transaction identifier in all EPCIS event types.

1044 Both CBV-Compliant and CBV-Compatible documents SHOULD NOT use EPC schemes other than
1045 GDTI EPCs (`urn:epc:id:gdti:...`) or GSRN EPCs (`urn:epc:id:gsrn:...`) for business transaction
1046 identifiers, unless there is a strong reason to do so. GDTI EPCs SHOULD only be used as business
1047 transaction identifiers when they have been assigned to denote a business transaction, rather than
1048 a physical document not connected with any business transaction.

1049 Both CBV-Compliant and CBV-Compatible documents SHALL NOT use any of the other URI forms for
1050 EPCs defined in [TDS1.9]; see [Section 8.1.1](#) for details.

1051 **i Non-Normative:** Explanation (non-normative): One of the intended uses of the Global
1052 Document Type Identifier (GDTI) is to identify business transactions such as invoices,
1053 purchase orders, and so on. When a GDTI is used in this way, it is suitable for use as a
1054 business transaction identifier in EPCIS. However, many business information systems use
1055 other types of identifiers for business transactions, and so the use of GDTI is not as strongly
1056 recommended as SGLNs are for locations or other types of EPCs are for physical or digital
1057 objects. It is also for this reason that the form in [Section 8.5.2](#) is provided.

1058 **i Non-Normative:** Example (non-normative): An EPCIS document in XML format containing a
1059 usage sample may be found in [Section 11.1](#).

1060 **8.5.2 GLN-based identifier for legacy system business transaction identifiers**

1061 A CBV-Compliant document or CBV-Compatible document MAY use a GLN-based identifier as
1062 specified below as a business transaction identifier in all EPCIS event types.

1063 A GLN-based URI suitable for use as a business transaction identifier in all EPCIS event types SHALL
1064 have the following form: `urn:epcglobal:cbv:bt:gln:transID` where the components of this
1065 template are as follows:

Template Component	Description
<code>urn:epcglobal:cbv:bt:</code>	The 21 characters <code>u, r, n, ..., b, t,</code> and <code>:</code> (colon).
<code>gln:</code>	A 13-digit Global Location Number (GLN) that identifies the business system within which <code>transID</code> is defined, followed by a colon. This is typically a "party GLN" that identifies the organisation responsible for the business transaction identifier, or a division of an organisation that maintains a separate divisional business information system.
<code>transID</code>	An identifier for the business transaction that complies with the requirements of [RFC2141] and which does not contain a colon character. This identifier must be unique relative to all other identifiers that begin with the same prefix.

1066 Identifiers of this form must be assigned by the owner of the GLN that is embedded in the identifier.
1067 The owner of the GLN may delegate the authority to assign new identifiers to other parties, provided
1068 that appropriate rules are employed to ensure global uniqueness.

1069 **i Non-Normative:** Example (non-normative): An EPCIS document in XML format containing a
1070 usage sample may be found in [Section 11.2](#).

1071 **8.5.3 Private or Industry-wide URN for business transaction identifiers**

1072 A CBV-Compliant document or CBV-Compatible document MAY use a private or industry-wide URN
 1073 as specified below as a business transaction identifier in all EPCIS event types.

1074 A private or industry-wide URN suitable for use as a business transaction identifier in all EPCIS
 1075 event types SHALL have the following form: `urn:URNNamespace:**:bt:transID` where the
 1076 components of this template are as follows:

Template Component	Description
<code>urn:URNNamespace:**:</code>	As specified in Section 8.1.2 .
<code>bt:</code>	The characters <code>b</code> , <code>t</code> , and <code>:</code> (colon).
<code>transID</code>	An identifier for the business transaction that complies with the requirements of [RFC2141] and any syntax rules defined for the registered URN namespace <code>URNNamespace</code> , and which does not contain a colon character. This identifier must be unique relative to all other identifiers that begin with the same prefix.

1077 Identifiers of this form must be assigned by the owner of the URN Namespace. The owner of the
 1078 URN Namespace may delegate the authority to assign new identifiers to End Users or other parties,
 1079 provided that appropriate rules are employed to ensure global uniqueness.

1080 **i Non-Normative:** Example (non-normative): An EPCIS document in XML format containing a
 1081 usage sample may be found in [Section 11.2](#)

1082 **8.5.4 HTTP URLs for business transaction identifiers**

1083 A CBV-Compliant document or CBV-Compatible document MAY use an HTTP URL as specified below
 1084 as a business transaction identifier in all EPCIS event types.

1085 An HTTP URL suitable for use as a business transaction identifier in all EPCIS event types SHALL
 1086 have the following form: `http://[Subdomain.]Domain/**/bt/transID` where the components of this
 1087 template are as follows:

Template Component	Description
<code>http://[Subdomain.]Domain/**/</code>	As specified in Section 8.1.3 .
<code>bt/</code>	The characters <code>b</code> , <code>t</code> , and <code>/</code> (slash).
<code>transID</code>	An identifier for the business transaction that matches the grammar rule <code>segment-nz</code> defined in [RFC3986], Section 3.3 (among other things, this means <code>transID</code> may not contain a slash character), and which is unique relative to all other identifiers that begin with the same prefix.

1088 Identifiers of this form must be assigned by the owner of the Internet domain `Domain`. The owner of
 1089 the domain may delegate the authority to assign new identifiers to other parties, provided that
 1090 appropriate rules are employed to ensure global uniqueness.

1091 **i Non-Normative:** Example (non-normative): An EPCIS document in XML format containing a
 1092 usage sample may be found in [Section 11.2](#).

1093 **8.6 Source/Destination identifiers**

1094 Identifiers for sources and destinations populate the `source` and `destination` elements
 1095 (respectively) in the “why” dimension of EPCIS events.

1096 A CBV-Compliant document SHALL use one of the three URI forms specified in this section to
 1097 populate the above fields of EPCIS events. A CBV-Compatible document MAY use one of the three
 1098 URI forms specified in this section, or MAY use any other URI that meets the general requirements
 1099 specified in [EPCIS1.2], Section 6.4, except for those URIs which in this standard are forbidden or
 1100 designated for a different purpose.

1101 Both CBV-Compliant and CBV-Compatible documents SHOULD use the EPC URI form as specified in
 1102 [Section 8.6.1](#) unless there is a strong reason to do otherwise.

8.6.1 EPC URI for Source/Destination identifiers

A CBV-Compliant document or CBV-Compatible document MAY use an EPC Pure Identity URI as specified in [Section 8.1.1](#) to populate the `source` and `destination` elements in all EPCIS event types. Both CBV-Compliant and CBV-Compatible documents SHOULD use this form unless there is a strong reason to do otherwise.

Both CBV-Compliant and CBV-Compatible documents SHOULD NOT use EPC schemes other than SGLN EPCs (`urn:epc:id:sgln:...`) for source and destination identifiers, unless there is a strong reason to do so.

Both CBV-Compliant and CBV-Compatible documents SHALL NOT use any of the other URI forms for EPCs defined in [TDS1.9]; see [Section 8.1.1](#) for details.

8.6.2 Private or Industry-wide URN for Source/Destination identifiers

A CBV-Compliant document or CBV-Compatible document MAY use a private or industry-wide URN as specified below, or a private or industry-wide URN as specified in Section 8.4.2, to populate the `source` and `destination` fields in all EPCIS event types. However, both CBV-Compliant and CBV-Compatible documents SHOULD use the EPC URI form ([Section 8.6.1](#)) unless there is a strong reason to do otherwise. See Section 8.1 for general considerations regarding the use of Private or Industry-wide URI identifiers.

In addition to the private or industry-wide URN form as specified in Section 8.4.2, a Private or Industry-wide URI suitable for populating the `source` and `destination` fields in all EPCIS event types SHALL have the following form: `urn:URNNamespace:**:sd:Locid` where the components of this template are as follows:

Template Component	Description
<code>urn:URNNamespace:**:</code>	As specified in Section 8.1.2.
<code>sd:</code>	The characters <code>s</code> , <code>d</code> , and <code>:</code> (colon).
<code>Locid</code>	An identifier for the location that complies with the requirements of [RFC2141] and any syntax rules defined for the registered URN namespace <code>URNNamespace</code> , and which does not contain a colon character. This identifier must be unique relative to all other identifiers that begin with the same prefix.

Identifiers of this form must be assigned by the owner of the URN Namespace. The owner of the URN Namespace may delegate the authority to assign new identifiers to End Users or other parties, provided that appropriate rules are employed to ensure global uniqueness.

8.6.3 HTTP URLs for Source/Destination identifiers

A CBV-Compliant document or CBV-Compatible document MAY use an HTTP URL as specified below, or an HTTP URL as specified in Section 8.4.3, to populate the `source` and `destination` fields in all EPCIS event types. However, both CBV-Compliant and CBV-Compatible documents SHOULD use the EPC URI form (Section 8.6.1) unless there is a strong reason to do otherwise. See Section 8.1 for general considerations regarding the use of HTTP URL identifiers.

In addition to the HTTP URL form as specified in Section 8.4.3, an HTTP URL suitable for populating the `source` and `destination` fields in all EPCIS event types SHALL have the following form:

`http://[Subdomain.]Domain/**/sd/SourceOrDestId`

where the components of this template are as follows:

Template Component	Description
<code>http://[Subdomain.]Domain/**/</code>	As specified in Section 8.1.3 .
<code>sd/</code>	The characters <code>s</code> , <code>d</code> , and <code>/</code> (slash).
<code>SourceOrDestId</code>	An identifier for the location that matches the grammar rule <code>segment-nz</code> defined in [RFC3986], Section 3.3 (among other things, this means <code>Locid</code> may not contain a slash character), and which is unique relative to all other identifiers that begin with the same prefix.

1137 Identifiers of this form must be assigned by the owner of the Internet domain *Domain*. The owner of
 1138 the domain may delegate the authority to assign new identifiers to other parties, provided that
 1139 appropriate rules are employed to ensure global uniqueness.

1140 **8.7 Transformation identifiers**

1141 Identifiers for transformations populate the `transformationID` field of EPCIS
 1142 `TransformationEvents`.

1143 URI forms for transformation identifiers are specified below. A CBV-Compliant document SHALL use
 1144 one of the four URI forms specified in this section to populate the `transformationID` field of
 1145 EPCIS `TransformationEvents`, for every such field that is not null. A CBV-Compatible document
 1146 MAY use one of the four URI forms specified in this section, or MAY use any other URI that meets
 1147 the general requirements specified in [EPCIS1.2], Section 6.4, except for those URIs which in this
 1148 standard are forbidden or designated for a different purpose.

1149 **8.7.1 EPC URI for Transformation identifiers**

1150 A CBV-Compliant document or CBV-Compatible document MAY use an EPC Pure Identity URI as
 1151 specified in [Section 8.1.1](#) to populate the `transformationID` field of EPCIS
 1152 `TransformationEvents`.

1153 Both CBV-Compliant and CBV-Compatible documents SHOULD NOT use EPC schemes other than
 1154 GDTI EPCs (`urn:epc:id:gdti:...`) for transformation identifiers unless there is a strong reason to
 1155 do so. GDTI EPCs SHOULD only be used as transformation identifiers when they have been assigned
 1156 to denote a transformation, rather than a physical document not connected with any transformation.

1157 Both CBV-Compliant and CBV-Compatible documents SHALL NOT use any of the other URI forms for
 1158 EPCs defined in [TDS1.9]; see [Section 8.1.1](#) for details.

1159 **i Non-Normative:** Explanation: One of the intended uses of the Global Document Type
 1160 Identifier (GDTI) is to identify business transactions such as production orders which may be
 1161 in one-to-one correspondence with transformations. When a GDTI is used in this way, it is
 1162 suitable for use as a transformation identifier in EPCIS. However, many business information
 1163 systems use other types of identifiers for transformations, and so the use of GDTI is not as
 1164 strongly recommended as SGLNs are for locations or other types of EPCs are for physical or
 1165 digital objects. It is also for this reason that the form in [Section 8.7.2](#) is provided.

1166 **8.7.2 GLN-based Identifier for Legacy System Transformation identifiers**

1167 A CBV-Compliant document or CBV-Compatible document MAY use a GLN-based identifier as
 1168 specified below [8.1.1](#) to populate the `transformationID` field of EPCIS `TransformationEvents`.

1169 A GLN-based URI SHALL have the following form: `urn:epcglobal:cbv:xform:gln:xformID`
 1170 where the components of this template are as follows:

Template Component	Description
<code>urn:epcglobal:cbv:xform:</code>	The 24 characters <i>u</i> , <i>r</i> , <i>n</i> , ..., <i>r</i> , <i>m</i> , and <i>:</i> (colon).
<code>gln:</code>	A 13-digit Global Location Number (GLN) that identifies the business system within which <i>xformID</i> is defined, followed by a colon. This is typically a "party GLN" that identifies the organisation responsible for the transformation identifier, or a division of an organisation that maintains a separate divisional business information system.
<code>xformID</code>	An identifier for the transformation that complies with the requirements of [RFC2141] and which does not contain a colon character. This identifier must be unique relative to all other identifiers that begin with the same prefix.

1171 Identifiers of this form must be assigned by the owner of the GLN that is embedded in the identifier.
 1172 The owner of the GLN may delegate the authority to assign new identifiers to other parties, provided
 1173 that appropriate rules are employed to ensure global uniqueness.

1174 **8.7.3 Private or Industry-wide URN for Transformation identifiers**

1175 A CBV-Compliant document or CBV-Compatible document MAY use a private or industry-wide URN
 1176 as specified below to populate the `transformationID` field of EPCIS `TransformationEvents`.

1177 A private or industry-wide URN SHALL have the following form:
 1178 `urn:URNNamespace:**:xform:transID` where the components of this template are as follows:

Template Component	Description
<code>urn:URNNamespace:**:</code>	As specified in Section 8.1.2 .
<code>xform:</code>	The characters <code>x</code> , <code>f</code> , <code>o</code> , <code>r</code> , <code>m</code> , and <code>:</code> (colon).
<code>xformID</code>	An identifier for the transformation that complies with the requirements of [RFC2141] and any syntax rules defined for the registered URN namespace <code>URNNamespace</code> , and which does not contain a colon character. This identifier must be unique relative to all other identifiers that begin with the same prefix.

1179 Identifiers of this form must be assigned by the owner of the URN Namespace. The owner of the
 1180 URN Namespace may delegate the authority to assign new identifiers to End Users or other parties,
 1181 provided that appropriate rules are employed to ensure global uniqueness.

1182 **8.7.4 HTTP URLs for Transformation identifiers**

1183 A CBV-Compliant document or CBV-Compatible document MAY use an HTTP URL as specified below
 1184 to populate the `transformationID` field of EPCIS `TransformationEvents`.


1185 An HTTP URL SHALL have the following form:

1186 `http://[Subdomain.]Domain/**/xform/xformID`

1187 where the components of this template are as follows:

Template Component	Description
<code>http://[Subdomain.]Domain/**/</code>	As specified in Section 8.1.3 .
<code>xform/</code>	The characters <code>x</code> , <code>f</code> , <code>o</code> , <code>r</code> , <code>m</code> , and <code>/</code> (slash).
<code>xformID</code>	An identifier for the transformation that matches the grammar rule <code>segment-nz</code> defined in [RFC3986], Section 3.3 (among other things, this means <code>xformID</code> may not contain a slash character), and which is unique relative to all other identifiers that begin with the same prefix.

1188 Identifiers of this form must be assigned by the owner of the Internet domain `Domain`. The owner of
 1189 the domain may delegate the authority to assign new identifiers to other parties, provided that
 1190 appropriate rules are employed to ensure global uniqueness.

1191  **Non-Normative:** Example: An EPCIS document in XML format containing a usage sample
 1192 may be found in [Section 11.2](#).

1193 **8.8 Event identifiers**

1194 An event identifier may populate the `eventID` field of an EPCIS event. When an EPCIS event
 1195 includes an `eventID` field, the identifier in that field must be globally unique (different from the
 1196 event identifier in any other EPCIS event created by any party). Note that an EPCIS event is not
 1197 required to include an event identifier.

1198 A CBV-Compliant document SHALL use the URI form specified in Section 8.8.1 to populate the
 1199 `eventID` field of EPCIS events, for every such field that is not null. A CBV-Compatible document
 1200 MAY use the URI form specified in Section 8.8.1, or MAY use any other URI that meets the general
 1201 requirements specified in [EPCIS1.2], [Section 6.4](#), except for those URIs which in this standard are
 1202 forbidden or designated for a different purpose.

1203 **8.8.1 Universally Unique Identifier (UUID) URIs for Event identifiers**

1204 A CBV-Compliant document SHALL and a CBV-Compatible document MAY use a UUID Version 1 or
 1205 Version 4 URI as specified in [RFC4122] to populate the `eventID` fields in any EPCIS event where
 1206 that field is not omitted.

1207 **i Non-Normative:** Example:
 1208 `<eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6bf6</eventID>`

1209 **9 Trade item master data**

1210 This section specifies master data attributes that may be used to describe a trade item identifier
 1211 that appears in the “what” dimension of an EPCIS event, including the EPC, Parent ID, and EPC
 1212 Class fields.

1213 Different trade item identifiers are used at different levels of trade item identification. Each master
 1214 data attribute defined in the CBV for trade item identifiers specifies one or more of the following
 1215 three levels of identification to which it is applicable:

Identification Level	Description	Typical Identifier	Identifier use in EPCIS Event
Trade item-level	A master data attribute that applies to all instances of a given trade item. As trade items are usually identified by a GTIN, this is often called “GTIN-level”.	<code>urn:epc:idpat:sgtin:0614141.112345.*</code>	EPC Class
Lot-level	A master data attribute that applies to all instances of a given trade item within a specified batch or lot.	<code>urn:epc:class:lgtin:0614141.112345.L123</code>	EPC Class
Instance-level	A master data attribute that applies to a specific instance of a trade item	<code>urn:epc:id:sgtin:0614141.112345.400</code>	EPC Parent ID

1216
 1217 A CBV-Compliant or CBV-Compatible document MAY include any of the master data attributes
 1218 specified in this section within the master data section of the EPCIS Header, subject to the
 1219 constraints specified elsewhere in this section. The master data attributes specified in this section
 1220 may also be used in an EPCIS Master Data Document or in the response to an EPCIS Master Data
 1221 Query. A CBV-Compliant or CBV-Compatible document MAY include any of the lot-level or instance-
 1222 level master data attributes specified in this section in the ILM D section of an EPCIS event, but
 1223 SHOULD NOT include trade item-level attributes in the ILM D section.

1224 When a master data attribute specified in this section is used in the master data section of the
 1225 EPCIS Header, in an EPCIS Master Data Document, or in the response to an EPCIS Master Data
 1226 Query, each such attribute applies to the specific identifier cited and also all matching identifiers at a
 1227 lower level. For example, a master data attribute specified for the trade item-level identifier
 1228 `urn:epc:idpat:sgtin:0614141.112345.*` would also apply to lot-level and instance-level
 1229 identifiers that share the same GTIN. A master data attribute specified for the lot-level identifier
 1230 `urn:epc:class:lgtin:0614141.112345.L123` would also apply to instance-level identifiers
 1231 that share the same GTIN and lot.

1232 When a master data attribute specified in this section is used in the ILM D section of an EPCIS event,
 1233 it applies to all identifiers appearing in any EPC or `QuantityElement` field within that event.

9.1 Trade item master data attribute names

In the master data section of an EPCIS header, in an EPCIS Master Data Document, and in the response to an EPCIS Master Data Query, a master data attribute is specified as a name/value pair. The name of every trade item master data attribute defined in this section consists of the following namespace identifier:

```
urn:epcglobal:cbv:mda
```

followed by a pound sign (#) character, followed by a local name as specified in Section 9.2.

In the ILM D section of an EPCIS event, a master data attribute is specified as an XML element. The element name is an XML QName whose namespace is the same namespace identifier specified above and whose local name is the local name as specified in Section 9.2.

i Non-Normative: Example: Here is how the attribute `sellByDate` would appear in the EPCIS header, Master Data Document or Master Data Query response:

```
<VocabularyElement id="urn:epc:class:lg tin:0614141.012345.L123">
  <attribute id="urn:epcglobal:cbv:mda#sellByDate">2016-03-15</attribute>
</VocabularyElement>
```

Here is how the same attribute would appear in the ILM D section of an event:

```
<epcis:EPCISDocument xmlns:cbvmd="urn:epcglobal:cbv:mda" ...>
  ...
  <ObjectEvent>
    ...
    <QuantityElement>
      <epcClass>urn:epc:class:lg tin:0614141.012345.L123</epcClass>
    </QuantityElement>
    ...
    <ilmd>
      <cbvmd:sellByDate>2016-03-15</cbvmd:sellByDate>
    </ilmd>
    ...
  </ObjectEvent>
  ...
</epcis:EPCISDocument>
```

9.2 Trade item master data attributes

The tables below specify master data attributes that may be used to describe a trade item identifier.

The meaning of the "Level" column is as follows:

- **Trade Item:** the master data attribute is a trade item-level attribute as specified in Section 9.
- **Lot:** the master data attribute is a lot-level attribute as specified in Section 9.
- **Instance:** the master data attribute is an instance-level attribute as specified in Section 9.
- **Trade Item or Instance:** the master data attribute is either a trade item-level attribute or an instance-level attribute as specified in Section 9, depending on the trade item. For example, `netWeight` is a trade item-level attribute for a fixed weight product but an instance-level attribute for a variable weight product.
- **Trade Item or Lot or Instance:** the master data attribute is either a trade item-level attribute or a lot-level attribute or an instance-level attribute as specified in Section 9, depending on the trade item. For example, `countryOfOrigin` may be consistent across all instances of a trade item for a manufactured product, or consistent across all instances in a lot but varying across lots for fish species harvested in lots in varying territorial waters, or varying across all instances for fish species harvested individually in varying territorial waters.

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Master data attributes for each level are shown below in separate tables. Master data attributes that may be used at multiple levels are repeated in more than one table as appropriate. Within each table, attributes are listed alphabetically.

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9.2.1 Trade item master data attributes – trade item level

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The following attributes may be used to describe a trade item identifier at the trade item (GTIN) level.

1287

Local Name	Type	Description	Level
additionalTradeItemIdentification	String (1-80 characters)	A trade item identifier that is in addition to the GTIN. Example: 12345111111	Trade Item
additionalTradeItemIdentificationTypeCode	Code	A code that indicates what type of identifier is used for additionalTradeItemIdentification The code list for this attribute is defined in GDSN; see http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:AdditionalTradeItemIdentificationTypeCode&release=1 Example: FDA_NDC_11	Trade Item
countryOfOrigin	Code	Country from which the goods are supplied. The code list for this attribute is the ISO 3166-1 Alpha-2 list of 2-letter country codes; see http://www.iso.org/iso/country_codes Example: UK	Trade Item or Lot or Instance
descriptionShort	String (1-35 characters)	A free form short length description of the trade item that can be used to identify the trade item at point of sale. Example: Acme Red Widgets	Trade Item
dosageFormType	String (1-35 characters)	A dosage form is the physical form of a medication that identifies the form of the pharmaceutical item. Example: PILL	Trade Item
drainedWeight	Measurement (see Section 9.2.4)	The weight of the trade item when drained of its liquid. For example 225 "grm", Jar of pickles in vinegar. Applies to defined bricks of GCI Global trade item Classification - Mainly food trade item. Has to be associated with a valid UoM. Example: [see Section 9.2.4]	Trade Item or Instance
functionalName	String (1-35 characters)	Describes use of the product or service by the consumer. Should help clarify the product classification associated with the GTIN. Example: Widget	Trade Item
grossWeight	Measurement (see Section 9.2.4)	Used to identify the gross weight of the trade item. The gross weight includes all packaging materials of the trade item. At pallet level the trade item-GrossWeight includes the weight of the pallet itself. For example, "200 grm", value - total pounds, total grams, etc. Has to be associated with a valid UOM. Example: [see Section 9.2.4]	Trade Item or Instance
manufacturerOfTradeItemPartyName	String (1-200 characters)	Party name information for the manufacturer of the trade item. Example: Acme Corporation	Trade Item
netContentDescription	String (1-500 characters)	Free text describing the amount of the trade item contained by a package, usually as claimed on the label. Example: 253 grams	Trade Item

Local Name	Type	Description	Level
netWeight	Measurement (see Section 9.2.4)	Used to identify the net weight of the trade item. Net weight excludes any packaging materials and applies to all levels but consumer unit level. For consumer unit, Net Content replaces Net Weight (can then be weight, size, volume). Has to be associated with a valid UoM. Example: [see Section 9.2.4]	Trade Item or Instance
labelDescription	String (1-500 characters)	A literal reproduction of the text featured on a product's label in the same word-by-word order in which it appears on the front of the product's packaging. This may not necessarily match the GTIN description as loaded by the supplier into the GTIN description field in GDSN. Example: Acme Corporation Tiny Red Widgets	Trade Item
regulatedProductName	String (1-500 characters)	The prescribed, regulated or generic product name or denomination that describes the true nature of the product and is sufficiently precise to distinguish it from other products according to country specific regulation. Example: Epcistra	Trade Item
strengthDescription	String (1-500 characters)	Free text describing the strength of the active ingredient(s) of the product Example: 200mg/100mg	Trade Item
tradeItemDescription	String (1-200 characters)	An understandable and useable description of a trade item using brand and other descriptors. This attribute is filled with as little abbreviation as possible while keeping to a reasonable length. Free form text field, this data element is repeatable for each language used and must be associated with a valid ISO language code. Field length is 178 characters. This should be a meaningful description of the trade item with full spelling to facilitate message processing. Retailers can use this description as the base to fully understand the brand, flavour, scent etc. of the specific GTIN in order to accurately create a product description as needed for their internal systems. Example: GS1 Brand Base Invisible Solid Deodorant AP Stick Spring Breeze	Trade Item

1288 9.2.2 Trade item master data attributes – lot level

1289 The following attributes may be used to describe a trade item identifier at the lot level.

1290

Local Name	Type	Description	Level
bestBeforeDate	Date	The date before which the product is best used or consumed. It is a statement about quality. Example: 2017-03-15	Lot
countryOfOrigin	Code	[see description in Section 9.2.1]	Trade Item or Lot or Instance
farmList	List of Farm	List of structures describing farm information; see below	Lot
firstFreezeDate	Date	The date of initial freezing, if different from the date of production. Example: 2016-03-15	Lot

Local Name	Type	Description	Level
growingMethodCode	Code	The process through which fresh produce is grown and cultivated. The code list for this attribute is defined in GDSN; see http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:GrowingMethodCode&release=1 Example: HYDROPONIC	Lot
harvestEndDate	Date	The date when harvesting ended. Example: 2016-03-15	Lot
harvestStartDate	Date	The date when harvesting started. Example: 2016-03-15	Lot
itemExpirationDate	Date	The date after which the product should not be used or consumed. Its meaning is determined based on the trade item context (e.g., for food, the date will indicate the possibility of a direct health risk resulting from use of the product after the date, for pharmaceutical products, it will indicate the possibility of an indirect health risk resulting from the ineffectiveness of the product after the date). It is often referred to as "use by date" or "maximum durability date." Example: 2016-03-15	Lot
productionMethodForFishAndSeafoodCode	Code	A code specifying how the fish had been grown / cultivated. The code list for this attribute is defined in GS1 EDI; see http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:ProductionMethodForFishAndSeafoodCode&release=1 Example: AQUACULTURE	Lot
sellByDate	Date	The date before or on which, the product should be sold. Example: 2017-03-15	Lot
storageStateCode	Code	A code depicting that the referred product was previously frozen or not. The code list for this attribute is defined in GS1 EDI; see http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:StorageStateCode&release=1 Example: Previously Frozen	Lot
unloadingPort	UN LOCODE	Port where the goods were unloaded from a seagoing vessel after having been transported by it. The value of this attribute is a user vocabulary maintained by UN/ECE; see http://www.unece.org/cefact/locode/welcome.html Example: DE BRV	Lot
vesselCatchInformationList	List of VesselCatch Information	List of structures describing vessel catch information; see below	Lot

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The value of vesselCatchInformationList consists of one or more elements named vesselCatchInformation, which contains the following subelements:

Field	Type	Description
vesselID	String	Identifier for the vessel Example: DE-X-1234
vesselName	String	Name of the vessel Example: HMS Gena

Field	Type	Description
catchArea	Code	A code specifying area where the product was caught. The code list for this attribute is defined by the Food and Agriculture Organization of the United Nations (FAO); see http://www.fao.org/fishery/area/search/en Example: 37.2
fishingGearTypeCode	Code	A code specifying the type of gear used in capture of fisheries. The code list for this attribute is defined by the Food and Agriculture Organization of the United Nations (FAO); see ftp://ftp.fao.org/FI/DOCUMENT/cwp/handbook/annex/AnnexM1fishinggear.pdf Example: TM

1293 The value of `farmList` consists of one or elements named `farm`, which contains the following
1294 subelements:

Field	Type	Description
farmIdentification	String	Identifier for the farm Example: urn:epc:id:sgln:061414.00001.0
farmIdentificationTypeCode	Code	Type of the <code>farmIdentification</code> Example: EPC-GLN

1295 The code list for `farmIdentificationTypeCode` is as follows:

Code	Description
EPC-GLN	The identifier is a GS1 Global Location Number (GLN), expressed as a GLN EPC URI.

1296 9.2.3 Trade item master data attributes – instance-level

1297 The following attributes may be used to describe a trade item identifier at the trade item (GTIN)
1298 level.

Local Name	Type	Description	Level
countryOfOrigin	Country Code	[see description in Section 9.2.1]	Trade Item or Lot or Instance
drainedWeight	Measurement	[see description in Section 9.2.1]	Trade Item or Instance
grossWeight	Measurement	[see description in Section 9.2.1]	Trade Item or Instance
lotNumber	String (1–20 characters)	A distinctive combination of numbers and/or letters from which the complete history of the manufacture, processing, packaging, coding and distribution of a batch can be determined. Example: ABC123	Instance
netWeight	Measurement	[see description in Section 9.2.1]	Trade Item or Instance

1299 9.2.4 Values of type measurement

1300 Each value of type `Measurement` is a structure having the following subelements:

Field	Type	Description
measurement	Decimal	The numerical value of the measurement
measurementUnitCode	Code	The unit of measure for the measurement. The code list for this attribute is UN/ECE Recommendation 20; see http://www.unece.org/cefact/recommendations/rec_index.html

1301 When a value of type `Measurement` appears in ILM D, it takes the form illustrated below. In this
1302 example, the attribute is `netWeight` with a value of 3.5 kilograms.

```
1303 <ilmd>
1304   <cbvmd:netWeight measurementUnitCode="KGM">3.5</cbvmd:netWeight>
1305 </ilmd>
```

1306 When a value of type `Measurement` appears in an EPCIS Master Data Document, the master data
1307 section of an EPCIS document header, or in a response to an EPCIS Simple Master Data Query, it
1308 takes the form illustrated below.

```
1309 <attribute id="urn:epc:cbv:mda:netWeight"><measurement
1310 measurementUnitCode="KGM">3.5</measurement></attribute>
```

10 Location and party master data

1311 This section specifies master data attributes that may be used to describe a physical location
1312 identifier or party identifier. Physical location master data attributes may be used to describe a
1313 location identifier whether the location identifier is used as a EPCIS Read Point, Business Location,
1314 Source, or Destination. Party master data attributes may be used whether the party identifier is
1315 used as an EPCIS Source or Destination.

1317 Different physical location identifiers may denote locations at different levels of granularity. The
1318 master data attributes defined in the CBV for physical location identifiers are designed to be used for
1319 locations at two different levels of granularity:

- 1320 ■ **Site:** A physical location where a structure or group of structures (and / or areas) is. Examples
1321 of a Site include a distribution centre, a retail store, a hospital, etc.
- 1322 ■ **Sub-site:** A specific physical location contained within a site. Examples of a Sub-site include a
1323 back room within a retail store, the sales floor of a retail store, a storage area within a
1324 warehouse, and so on.

1325 A CBV-Compliant or CBV-Compatible document MAY include any of the master data attributes
1326 specified in this section within the master data section of the EPCIS Header, subject to the
1327 constraints specified elsewhere in this section. The master attributes specified in this section may
1328 also be used in an EPCIS Master Data Document or in the response to an EPCIS Master Data Query.
1329 A CBV-Compliant or CBV-Compatible document SHALL NOT include any of the master data
1330 attributes specified in this section in the ILM D section of an EPCIS event.

10.1 Location and party master data attribute names

1331 In the master data section of an EPCIS header, in an EPCIS Master Data Document, and in the
1332 response to an EPCIS Master Data Query, a master data attribute is specified as a name/value pair.
1333 The name of every location/party master data attribute defined in this section consists of the
1334 following namespace identifier:

```
1335 urn:epcglobal:cbv:mda
```

1336 followed by a pound sign (#) character, followed by a local name as specified in Section 10.2. As an
1337 exception, the master data attributes `site`, `sst`, `ssa`, and `ssd` use a colon (:) character instead of
1338 a pound sign as the separator, for back-compatibility to CBV 1.1 and earlier.

10.2 Location and party master data attributes

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The table below specifies master data attributes that may be used to describe a physical location or party identifier.

If a master data attribute indicates "location" in the usage column of the table, then a CBV-Compliant or CBV-Compatible document MAY use that attribute to describe an identifier that appears in any of the following fields in an EPCIS event:

- Read point
- Business location
- Source, if the source type is `location` as specified in Section 7.4
- Destination, if the destination type is `location` as specified in Section 7.4

If a master data attribute indicates "party" in the usage column of the table, then a CBV-Compliant or CBV-Compatible document MAY use that attribute to describe an identifier that appears in any of the following fields in an EPCIS event:

- Source, if the source type is `owning_party` or `possessing_party` as specified in Section 7.4
- Destination, if the destination type is `owning_party` or `possessing_party` as specified in Section 7.4

A CBV-Compliant or CBV-Compatible document SHALL NOT use master data attributes to describe an identifier except as permitted above.

Local Name	Type	Description	Usage
<code>site</code> (see note below)	String (1 –128 characters)	Identifies the site in which this location is contained. For a Sub-site location, this is the identifier of the parent location. For a Site location, this is the identifier of the location itself. When the identifier for the location to which this master data attribute applies is an SGLN EPC, the Site Location master data attribute is always the 13-digit GLN implied by the company prefix and location reference components of that SGLN	Location
<code>sst</code> (see note below)	Code List (section 10.3.1)	Sub-Site Type: describes the primary business function of the sub-site location. This master data attribute is only applicable to a sub-site location. This value is expressed as a single numerical code (see code list below); for example, code 201 indicates that the sub-site type is a "back room" as defined below	Location
<code>ssa</code> (see note below)	Code List (section 10.3.2)	Sub-Site Attribute: further qualifies the business function of the sub-site location. This master data attribute is only applicable to a sub-site location. Sub-site attributes are expressed as a comma-separated list of zero or more numerical codes (see code list below). For example, if the sub-site type is 203 (sales area), then sub-site attributes of "404,412" further specifies that this location identifier is a sales area for groceries (attribute 412) that are frozen (attribute 404).	Location

Local Name	Type	Description	Usage
ssd (see note below)	String (1 –128 characters)	<p>Sub-Site Detail: provides additional proprietary information. This master data attribute is only applicable to a sub-site location.</p> <p>For example, instead of sharing that a product is on <i>some</i> shelf in the back room of store 123, a party may wish to communicate the <i>exact</i> shelf in the backroom of store 123, e.g. shelf #4567. The Sub-Site Detail master data attribute provides the identity of the specific shelf; e.g., 4567</p>	Location
name	String	The name of the location or party expressed in text.	Location or Party
streetAddressOne	String	The first free form line of an address. This first part is printed on paper as the first line below the name. For example, the name of the street and the number in the street or the name of a building.	Location or Party
streetAddressTwo	String	The second free form line of an address. This second part is printed on paper as the second line below the name. The second free form line complements the first free form line to locate the party or location.	Location or Party
streetAddressThree	String	The third free form line of an address. This third part is printed on paper as the third line below the name. The third free form line complements the first and second free form lines where necessary.	Location or Party
city	String	Text specifying the name of the city.	Location or Party
state	String	One of the constituent units of a nation having a federal government.	Location or Party
postalCode	String	Text specifying the postal code for an address.	Location or Party
countryCode	String	The ISO 3166-1 alpha-2 code specifying the country for the address.	Location or Party
latitude	Decimal	Latitude of the location, in degrees. Positive numbers are northern latitude; negative numbers are southern latitude.	Location
longitude	Decimal	Longitude of the location, in degrees. Positive numbers are eastern longitude; negative numbers are western longitude.	Location

Note: for back-compatibility with CBV 1.1 and earlier, the complete name of the attributes `site`, `sst`, `ssa`, and `ssd` are expressed differently; see Section 10.1.

10.3 Location master data code list values

The following section specifies code list values for sub-site type and sub-site attribute.

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10.3.1 Sub-Site Type

The value of the Sub-Site Type master data attribute for a location identifier, if present, SHALL be one of the codes in the following table:

Sub-Site Type Master Data Attribute Values		
Code	Short Description	Definition
201	Backroom	An area within a store (all formats - club, etc.) used to hold product until it is purchased or can be moved to the sales floor
202	Storage Area	An area where product is kept within a facility to fulfil future need. Reserve rack or bulk stacking. A location where the product is stored until it is needed in selection aisles making it accessible to the consumer. Reserve slots may contain one or multiple pallet loads, as well as multiple items within them For a retail store Secondary storage area associated with a store (may not be in the physical location) Potential to use this more broadly and add attributes to make distinction where necessary (recalled area, quarantined area, controlled substance, lay-away)
203	Sales Floor	An area within a store (all formats - club, etc.) where product is displayed for customer purchase
207	Returns Area	An area within a facility for holding or consolidating product to be sent back to the supplier, shipper or designated location
208	Production Area	An area within a facility where the conversion of materials and or assembly of components to manufacture goods, products or services takes place.
209	Receiving Area	An area within a facility where incoming merchandise is unloaded and checked for condition and completeness
210	Shipping Area	An area within a facility where outgoing merchandise is checked for condition and completeness and loaded onto a conveyance for transport
211	Sales Floor Transition Area	An area within a store between two physical locations (e.g. Backroom and Sales Floor) - used for a read point only
212	Customer Pick-Up Area	An area designated at a store for customer to take possession of purchased product.
213	Yard	An area outside of the main building used for holding product (e.g. Trailer or container)
214	Container Deck	An area on board a shipping vessel where containers are loaded.
215	Cargo Terminal	An area where cargo may get transferred between carriers. Cargo terminals provide the interface between modes of transportation.
251	Packaging Area	An area within a facility where product is packaged.
252	Picking Area	An area within a facility in which product is picked to fulfil an order.
253	Pharmacy Area	An area within a facility where prescription products are stored, dispensed and/or sold.
299	Undefined	Any sub-site type not identified by any of the listed values

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10.3.2 Sub-Site Attributes

The value of the Sub-Site Attributes master data attribute for a location identifier SHALL be zero or more of the codes in the following table.

When the value of the Sub-Site Attributes master data attribute is transmitted as a single string (including when the Sub-Site Attributes master data attribute is transmitted using the `EPCISMasterDataDocument` form specified in [EPCIS1.2]), the string SHALL consist of the codes separated by commas with no leading, trailing, or internal whitespace characters, and furthermore the codes SHALL appear in ascending numerical sequence reading from left-to-right.

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Non-Normative: Explanation (non-normative): The restriction on ascending numerical sequence guarantees that there is only one way to compose the string for a given set of

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attributes. This simplifies application processing of this data; e.g., when comparing whether two location identifiers have an identical set of Sub-Site Attributes.

Sub-Site Attribute Master Data Attribute Values		
Code	Short Description	Definition
401	Electronics	A specific area within the store for holding electronic products such as TV's, DVD players, etc.
402	Cold storage	A specific area or room that maintains a temperature above freezing but below ambient room temperature.
403	Shelf	A specified internal location for holding product.
404	Frozen	A specific area or room that maintains a temperature at or below freezing
405	Fresh	A specific area or room that maintains a specified temperature and/or humidity to preserve stored product
406	Promotion	A specific area or room that is used to hold special purchased product.
407	End Cap	A specific internal location on the sales floor, typically at the end of an aisle, for displaying product.
408	Point of Sale	An area in a retail location where sales transactions occur
409	Security	A designated internal location for the purpose of minimising direct access to the product
411	General Mdse	An area where typically - non-food products other than perishable, dry groceries and health and beauty care products that are displayed in stores on standard shelving. Examples include household cleaning products, paper napkins, laundry detergents, and insect repellents
412	Grocery	An area where typically - food products that are displayed in stores on standard shelving. Examples include canned goods, produce, meats.
413	Box Crusher	A Baler used to compact recycled materials (e.g. corrugated boxes, slip sheets and packaging material)
414	Dock / Door	One or more doors where trucks or rail cars are loaded (shipping) or unloaded (receiving). Used to load or unload trailers or vans.
415	Conveyor Belt	A continuous moving strip or surface that is used for transporting single cartons or a load of objects from one place to another
416	Pallet Wrapper	An area where any automatic or manual method using bands of plastic film applied to product used to encase palletised loads prior to shipment to protect against product damage
417	Fixed Reader	Any fixed read point configuration (reader and antennas) for the purpose of capturing EPC data (e.g. Door way or conveyor read point)
418	Mobile Reader	Any non-fixed (portable) reader configuration (reader and antennas) for the purpose of capturing EPC data (e.g. Hand held or forklift reader)
419	Shelf/Storage	Where the product is stored on the sales floor, not accessible to the customer, until it can be moved, making it accessible to the consumer.
420	Returns	An area within a store or retailer DC for holding or consolidating product to be sent back to the supplier, shipper or designated location.
421	Staging	An area within a DC or Manufacturing Facility which the receiving and shipping docks use to gather and check inbound and outbound loads.
422	Assembly	An area where components are put together into an end product, appropriate to the process concerned.
423	Lay-Away	An area within a store for holding or consolidating customer purchases for final payment and pickup
424	Dispenser	Tablet, caplet or capsule dispensing machine in which bulk product has been placed to be dispensed on a prescription basis.
425	Quarantine	An area at a Manufacturing, Distribution or Retail facility to hold product that may not be suitable for consumption until further inspection

Sub-Site Attribute Master Data Attribute Values		
426	Controlled Substance	A caged and locked area in which regulated, controlled substance pharmaceuticals are held while awaiting shipment.
427	Recalled Product	An area in which recalled product is stored pending shipment back to the manufacturer or the manufacturer's designated returns centre for final disposition
428	Quality Control	An area in which any product not meeting quality standards is held pending further evaluation.
429	Printing Room	An area which provides printed labels/tags for the goods/cartons/pallets within a DC or Manf Facility Please note – this supports the process where an EPC tag is encoded off the line and is later commissioned and associated with a particular product.
430	Loading Dock	A parking bay, partly enclosed by a raised platform, at which trucks are loaded and unloaded, e.g. in a warehouse site.
431	Entrance Gate	A point of transport access into a yard or other arriving area.
432	Exit Gate	A point of transport exit from a yard or other departing area.
433	Gate	A point of transport within a facility – not indicated specifically as an entrance or an exit point.
434	Read Point Verification Spot	A point at which a tagged object's location has been verified by an associated read of a separate fixed location tag. Read Point Verification Spot would be used when there is a business process to capture the current location of an object at rest (typically with a mobile reader).

11 Example EPCIS Documents (non-normative)

The following sections provide examples of usage of the Core Business Vocabulary.

11.1 CBV-Compliant object event using standard vocabulary

The following shows a CBV-Compliant EPCIS document in XML format containing a single object event, where CBV-Compliant identifiers are used for business step and disposition, and EPCs are used for all user vocabulary values.

```

1383 <?xml version="1.0" encoding="UTF-8" standalone="yes"?>
1384 <epcis:EPCISDocument
1385     xmlns:epcis="urn:epcglobal:epcis:xsd:1"
1386     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
1387     creationDate="2005-07-11T11:30:47.0Z"
1388     schemaVersion="1">
1389   <EPCISBody>
1390     <EventList>
1391       <ObjectEvent>
1392         <eventTime>2007-07-26T21:41:19Z</eventTime>
1393         <recordTime>2007-07-26T21:41:19Z</recordTime>
1394         <eventTimeZoneOffset>-05:00</eventTimeZoneOffset>
1395         <epcList>
1396           <!-- Section 8.2.1 – EPC Identifier -->
1397           <epc>urn:epc:id:sgtin:0614141.181335.234</epc>
1398         </epcList>
1399         <action>ADD</action>
1400         <!-- Section 7.2.1 – BizStep -->
1401         <bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>
1402         <!-- Section 7.2 – Disposition -->
1403         <disposition>urn:epcglobal:cbv:disp:active</disposition>
1404         <!-- Section 8.4.1 – EPC URI for Locations -->
    
```

```

1405     <readPoint>
1406         <id>urn:epc:id:sgln:0614141.00300.1</id>
1407     </readPoint>
1408     <!-- Section 8.4.1 – EPC URI for Locations -->
1409     <bizLocation>
1410         <id>urn:epc:id:sgln:0614141.00300.0</id>
1411     </bizLocation>
1412     <bizTransactionList>
1413     <!-- Section 8.5.1 – EPC URI -->
1414     <!-- Section 8.5 – BTT -->
1415         <bizTransaction
1416 type="urn:epcglobal:cbv:btt:po">urn:epc:id:gdti:0614141.06012.1234</bizTrans
1417 action>
1418     </bizTransactionList>
1419 </ObjectEvent>
1420 </EventList>
1421 </EPCISBody>
1422 </epcis:EPCISDocument>
  
```

11.2 CBV-Compliant object event using HTTP URLs and Private or Industry-wide URNs

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The following shows a CBV-Compliant EPCIS document in XML format containing a single object event, illustrating the use of HTTP URLs and Private or Industry-wide URNs for user vocabulary values.

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```

1428 <?xml version="1.0" encoding="UTF-8" standalone="yes"?>
1429 <epcis:EPCISDocument
1430   xmlns:epcis="urn:epcglobal:epcis:xsd:1"
1431   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
1432   creationDate="2005-07-11T11:30:47.0Z"
1433   schemaVersion="1">
1434 <EPCISBody>
1435   <EventList>
1436     <ObjectEvent>
1437       <eventTime>2007-07-26T21:41:19Z</eventTime>
1438       <recordTime>2007-07-26T21:41:19Z</recordTime>
1439       <eventTimeZoneOffset>-05:00</eventTimeZoneOffset>
1440       <epcList>
1441         <!-- Section 8.2.2 -->
1442         <epc>urn:example:epcis:id:obj:Q12345.67890.001</epc>
1443         <!-- Section 8.2.3 -->
1444         <epc>http://epcis.example.com/user/vocab/obj/12345.67890</epc>
1445       </epcList>
1446       <action>ADD</action>
1447       <!-- Section 7.2.1 – BizStep -->
1448       <bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>
1449       <!-- Section 7.2 – Disposition -->
1450       <disposition>urn:epcglobal:cbv:disp:active</disposition>
1451
1452       <!-- Section 8.3.2 Location identifier -->
1453       <readPoint>
1454         <id>urn:example:epcis:id:loc:warehouse23</id>
1455       </readPoint>
1456       <!-- Section 8.3.3 Location identifier -->
1457       <bizLocation>
1458         <id>http://epcis.example.com/user/vocabularies/loc/abc.12345</id>
1459       </bizLocation>
1460       <bizTransactionList>
1461       <!-- Section 8.4.4 -->
  
```

```

1462     <bizTransaction
1463 type="urn:epcglobal:cbv:btt:po">http://transaction.example.com/production/ord
1464 ers/bt/po12345</bizTransaction>
1465     <!-- Section 8.4.3 -->
1466     <bizTransaction
1467 type="urn:epcglobal:cbv:btt:inv">urn:example:epcis:bt:inv:12345</bizTransact
1468 ion>
1469     <!-- Section 8.4.2 - Legacy System BT Identifier -->
1470     <bizTransaction
1471 type="urn:epcglobal:cbv:btt:desadv">urn:epcglobal:cbv:bt:0614141000029:asn12
1472 345</bizTransaction>
1473     </bizTransactionList>
1474     </ObjectEvent>
1475     </EventList>
1476 </EPCISBody>
1477 </epcis:EPCISDocument>
  
```

1478 11.3 CBV-Compatible event

1479 The following shows a CBV-Compatible EPCIS document in XML format containing a single object
 1480 event. CBV-Compliant EPC identifiers are used for physical objects and locations, but because non-
 1481 standard identifiers are used for business step and disposition the document is CBV-Compatible and
 1482 not CBV-Compliant.

```

1483 <?xml version="1.0" encoding="UTF-8" standalone="yes"?>
1484 <epcis:EPCISDocument
1485   xmlns:epcis="urn:epcglobal:epcis:xsd:1"
1486   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
1487   creationDate="2005-07-11T11:30:47.0Z"
1488   schemaVersion="1">
1489 <EPCISBody>
1490   <EventList>
1491     <ObjectEvent>
1492       <eventTime>2007-07-26T21:41:19Z</eventTime>
1493       <recordTime>2007-07-26T21:41:19Z</recordTime>
1494       <eventTimeZoneOffset>-05:00</eventTimeZoneOffset>
1495       <epcList>
1496         <!-- Section 8.2.1 - EPC Identifier -->
1497         <epc>urn:epc:id:sgtin:0614141.181335.234</epc>
1498       </epcList>
1499       <action>ADD</action>
1500       <bizStep>urn:example:uservocab:bizstep:quarantined</bizStep>
1501 <disposition>http://epcis.example.com/user/vocab/disp/contaminated</disposit
1502 ion>
1503     <!-- Section 8.3.1 - Locations -->
1504     <readPoint>
1505       <id>urn:epc:id:sgln:0614141.00300.1</id>
1506     </readPoint>
1507     <!-- Section 8.3.1 - Locations -->
1508     <bizLocation>
1509       <id>urn:epc:id:sgln:0614141.00300.0</id>
1510     </bizLocation>
1511   </ObjectEvent>
1512 </EventList>
1513 </EPCISBody>
1514 </epcis:EPCISDocument>
  
```

11.4 Location master data

The following shows an EPCIS Master Data document illustrating the use of location master data attributes defined in Section 8.6.

```

1518 <?xml version="1.0" encoding="UTF-8" standalone="yes"?>
1519 <epcismd:EPCISMasterDataDocument
1520     xmlns:epcismd="urn:epcglobal:epcis-masterdata:xsd:1"
1521     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
1522     schemaVersion="1"
1523     creationDate="2005-07-11T11:30:47.0Z">
1524 <EPCISBody>
1525     <VocabularyList>
1526         <Vocabulary type="urn:epcglobal:epcis:vtype:ReadPoint">
1527             <VocabularyElementList>
1528                 <!-- Section 10.3 - Location Master Data Names -->
1529                 <VocabularyElement id="urn:epc:id:sgln:0614141.00300.0">
1530                     <attribute
1531 id="urn:epcglobal:cbv:mda:site">0614141003006</attribute>
1532                     </VocabularyElement>
1533
1534                 <!-- Section 10.3 - Location Master Data Names -->
1535                 <VocabularyElement id="urn:epc:id:sgln:0614141.00300.1">
1536                     <attribute
1537 id="urn:epcglobal:cbv:mda:site">0614141003006</attribute>
1538                     <!-- Section 10.3.1 SST -->
1539                     <attribute id="urn:epcglobal:cbv:mda:sst">208</attribute>
1540                     <!-- Section 10.3.2 SSA -->
1541                     <attribute id="urn:epcglobal:cbv:mda:ssa">422</attribute>
1542                     <attribute id="urn:epcglobal:cbv:mda:ssd">Line #1 at Manufacturing
1543 Plant 1</attribute>
1544                     </VocabularyElement>
1545
1546                 <!-- Section 10.3 - Location Master Data Names -->
1547                 <VocabularyElement id="urn:epc:id:sgln:0614141.00300.2">
1548                     <attribute
1549 id="urn:epcglobal:cbv:mda:site">0614141003006</attribute>
1550                     <!-- Section 10.3.1 SST -->
1551                     <attribute id="urn:epcglobal:cbv:mda:sst">251</attribute>
1552                     <!-- Section 10.3.2 SSA -->
1553                     <attribute id="urn:epcglobal:cbv:mda:ssa">416,417</attribute>
1554                     </VocabularyElement>
1555                 </VocabularyElementList>
1556             </Vocabulary>
1557         </VocabularyList>
1558     </EPCISBody>
1559 </epcismd:EPCISMasterDataDocument>
  
```

12 References

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1569

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1571

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13 Contributors to earlier versions

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