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Beslutande
Gustaf Fahl
Teknisk Direktör

Föredragande
Jörgen Wremert
LogV Mdata TI

Business rules

FMV General rules for application of S1000D

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References

Table 1 References

Document No./Reference	Title
[1] Logistikportalen	Regelverk FMV Materielpublikationer
[2] S1000D Issue 4.1	International specification for technical publications (applicable issue below referred to as S1000D)
[3] 16FMV10512-5:n ¹	FMV S1000D IPD to PMF converter
[4] 16FMV10512-6:n	FMV Information code list
[5] 16FMV10512-7:n	FMV Project Decision Point S1000D
[6] DIG Business Rules Issue 001	S1000D DIG Business Rules
[7] 16FMV10512-11:n	FMV Grafisk utformning för S1000D – PDF

1 Introduction

1.1 General

These business rules constitute the requirements on S1000D based information to be acquired by FMV on behalf of, and for the presentation/use within, the Swedish defence organization.

1.2 Scope

The business rules define the general rules that apply to all acquisition and production S1000D projects run by FMV within the defence domain.

1.3 Limitations

These rules do not apply to any on-going project involving S1000D deliveries of information to FMV, unless there is a specific agreement between FMV and the information contractor to apply them.

In the general case these business rules are not sufficient to cover the entire needs of rules for applying S1000D to a specific acquisition project. Hence, any acquisition information in such a project should be governed by project specific rules, as well as these rules.

It should be noted, that any project specific rules will only be limitations of and restrictions to these rules and will not break any of the rules stated herein. In addition, S1000D does not require

¹ Reference number :n in the reference list relates to the latest version according to "Beslut FMV Business Rules för S1000D", 16FMV10512-1:n.



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that the project specific rules repeat any governing rules given here, as long as there is a reference to these rules from the project rules concerned.

Note

In S1000D terminology, the rules are *layered*.

1.4 Application of rules

Rules apply in the following order of priority

- FMV Project specific rules (when such exist)
- FMV General rules (this document)
- DIG business rules [6]
- S1000D specified rules

Consequently, if a certain business rule decision point is not covered by any project specific, FMV general or DIG business rule, the S1000D rule applies. If so, in case S1000D offers more than one alternative, any alternative can be applied by the information contractor.

In those cases where S1000D Issue 4.1 doesn't provide unambiguous rules for how it should be applied, and a later issue provides more specific instructions/advices, as far as possible the instructions/advices of the most recently published issue should be applied.

Note

FMV general BREX is created for checking deliveries to FMV as the first priority. This means that all rules may not be applicable or suitable in production of the information. Situations may occur when it is necessary to disregard or adjust certain rules to make it possible to create the information in a given environment and in a manner that the producer prefers. Depending on the production system used it can be more or less difficult to introduce a specific production variant of the FMV general BREX in the system but it can always be done. The important requirement from FMV is that when information is delivered to FMV it must refer to the agreed (chain of) BREX, one of which must be the "official" FMV general BREX.



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In many cases the rules herein specify the baseline generally applicable to FMV acquisitions of information, however, leaving open to projects to specify appropriate limitations as needed. In those cases, the wording is

- “Unless otherwise explicitly specified,”
- “.... project[s] can”

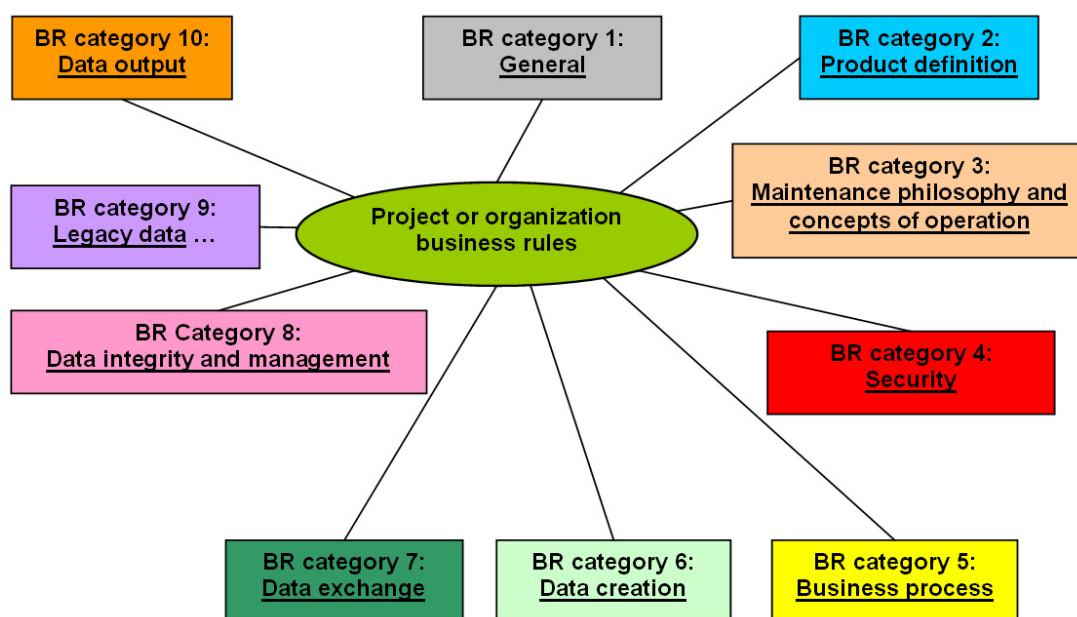
The interpretation of this is that these FMV general rules apply if no project specific rules have been specified, documented and provided to the information contractor.

For better readability the requirements below are also marked with

- “REQ” for generally applicable FMV “must” requirements, that apply to all projects and circumstances,
- “BAS” for “negotiable” baseline requirements that may be subject of overruling project decisions. In these cases, there is a general FMV rule that will apply “unless otherwise explicitly specified”, ie unless a project imposes a project specific rule
- “PRO” (Project Decision Point) for those requirements that are entirely dependent on project specific considerations and decisions and therefore must be specified by the project.

1.5 Business rules categories

The Business rules specified in this document are structured in accordance with the categorization derived from S1000D. Thus, the categories are:



For referencing purposes each business rule stated below carries a persistent identity like BRDP nn-xx-xx-xxxx, where nn corresponds to the appropriate category number.

1.5.1 Business rules decisions points

In the S1000D specification chapter 2.5.3, there is a Business Rules Decision Point's (BRDP) index specified as an excel spreadsheet. As cross-reference between the index and this FMV general Business Rules, FMV have created the FMV Project Decision Point S1000D [5]. The FMV Project Decision Point S1000D [5] have the BRDP category number from this document specified in the table as a cross reference for the BRDPs specified in S1000D.

1.6 Terms/phrases

The following terms have been used in this document:

Project	An acquisition effort aimed at acquiring a product/system and the technical information needed to operate and maintain the product
Contractor	The company that is contracted by FMV to provide the technical information

2 Category 1: General Business Rules

2.1 S1000D Issue to use (BRDP 01-10-00-000)

REQ S1000D deliveries **must** comply with Issue 4.1.

2.2 Scope of S1000D compliant information (BRDP 01-30-00-000)

2.2.1 Decision on which part of technical information to be in "S1000D format" and which not (BRDP 01-31-00-000)

REQ *To the extent* that the following types of information by contract(s)/agreement(s) will be **included** in the delivered information package, they **must be** in compliance with S1000D:

- descriptions of how the product/system is made and/or its function (for general and specific use)
- maintenance information (intended for maintainers; eg instructions, check lists, fault finding)
- operational instructions (intended for operators/crew)
- additional information types needed to compile technically complete and consistent deliveries of information, such as
 - applicability information
 - business rules information (in accordance with the BREX concept)
 - indirect referencing information (in accordance with the container concept)

BAS Unless otherwise explicitly specified, the following types of information do not have to be in compliance with S1000D:

- parts information (refer to section 7.3.4 below for more specific rules)
- learning information
- wiring information
- maintenance planning information

For detailed rules regarding all of the above-mentioned types of information, refer to section 7.3 below.

PRO A project can decide to accept parts of delivered information in non-S1000D format. Typically, this applies for sub-contractor information, such as standard user manuals for a sub-system or a platform. If required, FMV expect this documented and decided in the project business rules.



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2.2.2 Decision on which data module types to be used and which not (BRDP 01-32-00-000)

REQ *To the extent* that various information types will be **delivered** as specified in accordance with section 2.2.1, delivered objects **must conform** to the pertinent S1000D structures (ie schemas) as follows:

- general descriptive information **must use** the descriptive structure
- maintenance related procedural information **must use** the procedural structure
- applicability information **must use** the ACT structure and, to the extent applicable, CCT and PCT structures
- formalized business rules information **must use** the BREX data module structure
- indirect referencing information **must use** the container data module structure
- parts information, refer to section 7.3.4 for details
- learning information **must use** the Learning data module, the SCORM Content Package Module and, the SCO data module
- wiring information must use the Descriptive structure
- publications must be specified using the publication structure.

BAS In addition, unless otherwise specifically specified, operational/crew information must use the crew schema descriptive structure.

REQ Delivered S1000D objects **must not be** based on any of the following structures

- wiring information using the S1000D Wiring Description/Wiring Data structures
- process information using the S1000D Process structure
- operator/crew aimed information must not be based on the crew reference card structure
- CIR information using the S1000D CIR structure
(ie all references from data modules to CIR must be resolved in the information delivered to FMV).

BAS In addition, but only if explicitly specified by the project, information not required to be S1000D compliant as described in section 2.2.1 above can be delivered in accordance with the following:

- fault finding information using the S1000D Fault structure (instead of eg procedural or descriptive)
- When considered necessary to represent the content concerned, a project can decide to accept data modules based on the Checklist structure.

If required, FMV expect this to be documented and decided in the project business rules.



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2.3 XML or SGML for data modules

(BRDP 01-40-00-000)

REQ Delivered S1000D data *must be* in XML format.

2.4 NON-S1000D framework to be taken into account

(BRDP 01-50-00-000)

In addition to S1000D the following requirements apply:

BAS Unless otherwise explicitly specified, the general structure of publications must adhere to [1], and applicable defence branch specific specifications as advised by FMV.

BAS Unless otherwise explicitly specified, layout of publications in page format must adhere to the principles of [7] with the amendments specified by rules, refer to Para 12.

If required, FMV expect that requirement beside the above will be documented and decided in the project business rules.

2.5 Decisions on Business rules to which deliveries must conform

(BRDP 01-60-00-000)

REQ Delivered S1000D objects *must conform* to:

- S1000D issue 4.1 [2]
- The DIG Business Rules (BR) [6]
- The BR in this document, FMV BR
- The project BR (which could be the contractor's BR or FMV project BR, however, in compliance with the rules in this document, ie FMV general business rules).



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3 Category 2: Product definition

3.1 Data module (DM) coding strategy related to product definition (BRDP 02-10-00-000)

It is not FMV's desire to impose any specific data module coding on acquired S1000D data. Nevertheless the coding may have implications on FMV/FM possibilities to present/use the data.

REQ Therefore the *following applies*

- Model identifier codes (MIC) **must be** officially registered in accordance with the instructions in S1000D.
- FMV **require to be** informed of the data module coding strategy at a point in time agreed with FMV and well before first performed delivery of data. FMV expects the data module coding strategy to be documented and decided in the project business rules.

Note

- FMV's preference is to use identifications based on the maintained SNS schemes provided by S1000D.
- FMV are strong advocates of a modularization strategy in-line with the intent of S1000D.
- FMV prefer compact data module codes, if that is possible and does not result in additional production/maintenance problems and/or costs.
- FMV reserve the right to suggest enhancements to modularization principles and identification schemes if that is considered appropriate.

Note

Normally, DM coding will be considered in connection to Design review meetings or other review meetings with implications on documentation.

REQ For sea products, product definition **must be** applied in accordance with 16FMV2255-3

BAS Unless otherwise explicitly specified, for land products the "Maintained SNS - General surface vehicles" must be applied.



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3.2 Applicability (BRDP 02-20-00-000)

The use of applicability will have implications on FMV/FM possibilities to present/use the data.

REQ Therefore the following *rules apply*:

- FMV *require* a complete description of how applicability is used in the data to be delivered at a point in time agreed with FMV and well before first delivery. FMV expect this to be documented and decided in the project business rules.

Note

Normally, applicability will be considered in connection to Design review meetings or other reviews meetings with implications on documentation.

- Applicability information *must always be* provided with human readable annotations
 - using element <displayText> in the applicability elements within the object concerned (DM etc)
- FMV assume the right to suggest enhancements to the applicability model used if that is considered appropriate.

Note

Any additional, and more sophisticated, use of applicability is accepted in deliveries to FMV, however, this does not affect the requirement for human readable annotations.



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4 Category 3: Maintenance philosophy and concepts of operation

4.1 Information Sets

(BRDP 03-10-00-000)

REQ To the extent that the following types of information by contract(s)/agreement(s) will be included in the delivered information package, they ***must be*** in compliance with S1000D:

- descriptions of how the product/system is made and/or its function (for general and specific use)
- maintenance information (intended for maintainers; eg instructions, check lists, fault finding)
- operational instructions (intended for operators/crew).

BAS Unless otherwise explicitly specified, information must be prepared in compliance with the applicable information sets described by S1000D (refer primarily to S1000D Chap 3.3 and Chap 5).

BAS As needed, a project can further specify the scope, depth and structure of delivered information. If required, FMV expect this to be documented and decided in the project business rules.

BAS Unless otherwise specifically decided Battle Damage And Repair (BDAR) information must be possible to include in a corresponding interactive solution.

5 Category 4: Security

5.1 Security classification and commercial classification (BRDP 04-10-00-000)

REQ Delivered data objects (data modules, figures, etc) **must be** security classified using the following values and definitions:

- 01 = Non classified – EJ SEKRETESS (normally used)
- 02 = Classified - SEKRETESS
- 03 = Restricted – BEGRÄNSAT HEMLIG (BH)/RESTRICTED
- 04 = Confidential – KONFIDENTIELL (K)/CONFIDENTIAL
- 05 = Secret – HEMLIG (H)/SECRET
- 06 = Top secret – KVALIFICERAT HEMLIG (KH)/TOP SECRET

REQ Delivered XML data objects (data modules, publication modules, etc) that are classified 02 or higher **must** include classification information in the identification and status section as follows:

1. <remarks><simplePara>FMV klassning, datum: YYYY-MM-DD</simplePara></remarks>
2. <remarks><simplePara>FMV klassning, lagrum: X:Y</simplePara></remarks>
 - Where X is OSL chapter and Y is the paragraph
3. <remarks><simplePara>FMV klassning, ansvar: JD | UD | FD</simplePara></remarks>
 - This is only valid for security classification 06.
 - Where JD | UD | FD is one of the responsible departments:
 - JD = Justitiedepartementet
 - UD = Utrikesdepartementet
 - FD = Försvarsdepartementet

Note:

If the information is unknown the YYYY-MM-DD, X:Y and JD | UD | FD can be left blank.

5.2 Data restrictions (BRDP 04-20-00-000)

Even though it is not a firm requirement, FMV's preference is that applicable data restrictions are included in the data objects concerned, eg data and publication modules.

REQ Delivered XML data objects (data modules, publication modules, etc) that are classified 02 or higher **must** include a reference to the written decision document that classifies



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the XML data object. The document identity must be included in the element `<dataDisclosure>` as follows:

- `<dataDisclosure>FMV sekretess: 16FMV10512-3:3;</disclosure>`
 - Where XXXXX is the document identity (if more than one they are separated with ";") followed by ";".

Note:

When the above is used the element `<dataDistribution>` can be empty.

- REQ** Delivered data objects ***must not contain*** any data restriction markings that have not been agreed before delivery.
- REQ** When they exist and are not included in the data objects, relevant data restrictions ***must be*** documented at least in the project business rules provided to FMV.
- BAS** If special needs so require, projects can decide to apply stricter use of data restrictions within data objects. If required, FMV expect this documented and decided in the project business rules.

5.3 National security restrictions (BRDP 04-30-00-000)

- BAS** If the project needs to include the security classification for Swedish armed forces the attribute caveat must be used. When used the following caveat values and definitions apply:
- "cv71" = Ej sekretess
 - "cv72" = Sekretess
 - "cv73" = Begränsat hemlig
 - "cv74" = Konfidentiell
 - "cv75" = Hemlig
 - "cv76" = Kvalificerat Hemligt – som INTE är av synnerlig betydelse för rikets säkerhet
 - "cv77" = Kvalificerat Hemligt – synnerlig betydelse för rikets säkerhet

5.4 Commercial classification (BRDP 04-50-00-000)

- REQ** Attribute commercialClassification ***must not contain*** any information intended for FMV/FM use. It will not be regarded by FMV/FM.



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5.5 Export control (BRDP 04-40-00-000)

Generally, FMV do not require any export control to be recorded and included in delivered data objects.

REQ Delivered data objects ***must not contain*** any export control markings that have not been agreed before delivery.

REQ When they exist, included or not included in the data module, relevant export control statement must be contained in the data module element
<identAndStatusSection>/<dmStatus>/<dataRestrictions>/<restrictionInstructions>
/<exportControl>/<exportRegistrationStmt>/<simplePara> or, in case of a
publication module, in the front matter title page element
<content>/<frontMatter>/<frontMatterTitlePage>/<dataRestrictions>/<restrictionI
nstructions>/<exportControl>/<exportRegistrationStmt>/<simplePara>.

6 Category 5: Business process

6.1 Integration with other (non-S1000D) systems (BRDP 05-10-00-000)

6.1.1 Input/output information from/into external discipline into/from technical publication (BRDP 05-12-00-000)

Generally, FMV need to have access to spare parts data in its own data bases. For requirements regarding illustrated/non-illustrated parts data, refer to section 7.3.4.

PRO If FMV need to have access to information in a non- S1000D format through other systems (eg DITO, LIFT or contractor's systems), the requirements on the contractor to support this *must be* agreed between FMV/FM and the contractor. FMV expect this to be documented and decided in the project business rules.

6.2 Project hierarchy for deliverables and input from main and sub-contractors and rules declaration at each partner's side (BRDP 05-20-00-000)

6.2.1 Rules for each partner on organizational and project level (BRDP 05-22-00-000)

REQ FMV *require* that all delivered objects (data modules, illustrations etc) are uniquely identified in accordance with the identification principles specified by S1000D. Refer to Para 3.1 for the project structural details decided.

6.3 Agreed workflow procedures between OEM, suppliers and Customer (BRDP 05-30-00-000)

REQ A DMRL, covering the envisioned delivery, *must be* presented to FMV well before the delivery takes place.

BAS Unless otherwise agreed, the DMRL has to be presented, and considered, in connection with design review meetings or other review meetings with implications on documentation.

REQ It is recognized that the DMRL may be subject to changes during production/delivery, *in which case* proposed and intended changes *must be* presented to FMV when they are current.

FMV reserve the right to suggest amendments to any presented DMRL.

PRO Projects can require deliveries of CSL as needed due to project circumstances.



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6.4 Consolidation of Identification and Status information (BRDP 05-40-00-000)

6.4.1 Technical names (BRDP 05-45-00-000)

- REQ** There *must be* a one-to-one relation between technical names and the specific object concerned.
- REQ** If a technical name concerns a grouping of objects (eg Pumps) there *must be* a one-to-one relation between the name and the group concerned.
- REQ** The technical names *must be* inherited from the system difference code, SNS, disassembly code and the disassembly code variant concerned.

6.4.2 Information names (BRDP 05-46-00-000)

- REQ** There *must be* a one-to-one relation between information names and the specific information concerned.
- REQ** When there is an information code/name specified in the FMV translated information code list [4] for the information continued in a data module they *must be* used.
- REQ** If an information name concerns a range of information types (eg Descriptions) there *must be* a one-to-one relation between the name and the range of information types concerned.
- REQ** The information names *must be* inherited from the information code and the information code variant.
- BAS** Unless otherwise explicitly specified, IPD data modules must be assigned information code 941.

6.4.3 Business Rules EXchange (BREX) (BRDP 05-4E-00-000)

FMV maintain a BREX data module that, as far as applicable, reflects these rules.

- REQ** Deliveries to FMV *must be* in compliance with:
- the S1000D default BREX
 - the FMV general BREX data module
 - the DIG BREX
 - the BREX data module to which they refer (which could be the contractor's BREX, however, in compliance with the rules in this document, ie FMV general business rules). This BREX would normally be the FMV project specific BREX.



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- any other applicable project specific BR developed and agreed to govern the production/deliveries of S1000D data to FMV, and the corresponding BREX data module (when this exists)

Note

Compliance will be verified by FMV in connection to delivery.

PRO Projects can develop and apply project specific BREX data modules reflecting the specific project business rules developed on basis of the general rules herein.

6.4.4 Reason for update (BRDP 05-4J-00-000)

REQ Delivered information *must be* supplied with information about reason for update as specified by S1000D.

When applied, the information *must be* consistently worded.

BAS Unless otherwise explicitly specified, revised data modules must be marked (in RFU) in Swedish, e.g.: Uppdaterad i enlighet med modifiering XYZ.

7 Category 6a: Data creation – text

7.1 General writing rules (BRDP 06-11-00-000)

7.1.1 Language (BRDP 06-11-01-000)

REQ Delivered information **must be** in Swedish and/or English (preferred is Simplified Technical English (ASD STE-100)).

REQ Delivered information **must be** unambiguous using a consistent vocabulary/terminology.

BAS Unless otherwise specifically decided, Swedish must be used.

PRO Projects can decide to impose stricter rules regarding languages and vocabularies. For Swedish text SAOL can be a suitable source of information, for English text Merriam-Webster. FMV expect the choices made to be documented and decided in the project business rules.

7.1.2 Units of measurement (BRDP 06-11-03-000)

REQ Units of measurement **must be** given as ISO units, **unless** this is inconsistent with the actual product/equipment properties concerned.

7.2 Common constructs (BRDP 06-12-00-000)

7.2.1 Warnings, cautions and notes (BRDP 06-12-01-000)

REQ Warnings **must be** created in accordance with the rules and guidelines in [2] and [7].

REQ Warnings **must not be** classified regarding severity or type, ie they must not depend on use of the attributes "vitalWarningFlag" or "warningType" to try to express differing attention severities. These attributes **must not** be used.

REQ Caution **must be** created in accordance with the rules and guidelines in [2] and [7].

REQ Caution **must not be** typed, i.e. they must not depend on use of the attribute "cautionType".

BAS Unless otherwise explicitly specified, note must not use the attribute "noteType". If required, FMV expect this to be documented and decided in the project business rules.

7.2.2 Change marking (BRDP 06-12-04-000)

BAS Unless otherwise explicitly specified, changes must be marked by use of the appropriate change attributes applied to the context in which a change appears. Additional in-line change markings will be disregarded.

BAS If change mark is used, the page format/printed matter, changes must be shown using change bars.

BAS If change mark is used the following must apply, deleted information must be eliminated from its context. Just using the change type attribute with value “delete” is not sufficient.

7.2.3 Referencing (BRDP 06-12-05-000)

REQ Except for in learning information, there *must be no* use of the attribute referredFragment (references from a data module to a location within another data module) with procedural information (eg maintenance instruction, fault finding procedure or operational procedure), only to the data module as a whole.

REQ In-line references to data modules, publication modules and other documents *must be* complete in the sense that they are understandable in their context, without any additional generated pre/post text. Such additional text *must be* included in the authored context as appropriate.

REQ Cross references within data modules *must be complete* in the sense that they are understandable in their context, without any additional generated pre/post text. The only text that can be assumed generated, and *thus must not be* included as authored pre/post text, are the catch words (or, in case Swedish is the target language, their Swedish correspondences).

- Fig
- Table
- Step
- Para
- Zone
- Access panel
- Access point
- etc.

BAS Unless otherwise specifically decided, the content of element <internalRef>, ie text between start tag and end tag, will be disregarded by FMV.



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BAS Unless otherwise specifically decided, references to data/publication modules in publications modules must have populated issue attributes.

BAS Unless otherwise specifically decided, references to data/publication modules in publications modules must have populated title elements.

7.2.4 Titles (BRDP 06-12-08-000)

BAS Unless otherwise explicitly specified, in descriptive contexts, titles must be used on the first and second level. The reason for **not** using titles must be decided and documented in the project business rules.

REQ There *must be no* references in any titles.

7.2.5 Hotspots (BRDP 06-12-11-000)

REQ IPD data using vectorized illustrations *must be* furnished with hotspots.

BAS Unless otherwise explicitly specified, at least vector graphics that have callouts must be furnished with hotspots. Raster illustrations do not have to be hotspotted.

BAS Unless otherwise explicitly specified, delivered information must not rely on hotspot functionality to be understandable and/or readable. Nevertheless, hotspot markup can be included. FMV expects hotspot decisions to be documented in the project business rules.

7.2.6 Preliminary requirements and requirements after job completion (BRDP 06-12-12-000)

7.2.6.1 Production maintenance data (BRDP 06-12-12-010)

BAS Unless otherwise explicitly specified, delivered information must not be dependent on presentation of Production maintenance data to be understandable and/or readable. Nevertheless, such markup can be included. If required, FMV expect this documented and decided in the project business rules.

7.2.6.2 Information on required support equipment (BRDP 06-12-12-090)

BAS Unless otherwise explicitly specified, support equipment items must be provided with an FMV stock number (M/F number).

BAS When used the number must be given as an “identNumber, where the element “manufacturerCode”, must contain cage code "A196N" and the element “partNumber” must contain the M/F number.



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7.2.6.3 Information on required supplies (BRDP 06-12-12-100)

BAS Unless otherwise explicitly specified, supplies must be provided with an FMV stock number (M/F number).

BAS When used the number must be given as an “identNumber”, where the element “manufacturerCode”, must contain cage code "A196N" and the element “partNumber” must contain the M/F number.

7.2.6.4 Information on required spares (BRDP 06-12-12-110)

BAS Unless otherwise explicitly specified, spares must be provided with an FMV stock number (M/F number).

BAS When used the number must be given as an “identNumber where the element “manufacturerCode” or “mfc”, must contain cage code "A196N" and the element “partNumber” must contain the M/F number.

7.2.7 Text elements (BRDP 06-12-13-000)

7.2.7.1 Index (BRDP 06-12-13-070)

REQ Delivered information ***must not be*** dependent on in-line markup of index information, by use of the element <indexFlag>, to be understandable and/or readable. Such markup will be disregarded and not presented by FMV/FM presentation tools/environments.

7.2.8 Tables (BRDP 06-12-14-000)

REQ Tables ***must not*** rely on any specific table type annotation (tabstyle) for its presentation. The attribute tabstyle will not be recognized by FMV.

BAS Unless otherwise explicitly specified, tables must not be represented as graphics unless in agreed cases, where regular tables are obviously inappropriate.

7.2.9 Common information (BRDP 06-12-15-000)

REQ In some data module types there is a possibility to include introductory common information using the element “commonInfo”. This element ***must not be*** used to contain extensive information but only a brief introduction to the data module concerned, as necessary to understand the relevance and use of the data module.



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7.2.10 Authoring - attributes (BRDP 06-12-16-000)

7.2.10.1 Project configurable attributes (BRDP 06-12-16-010)

REQ If project unique configurable attributes are used (refer to S1000D Chap 3.9.6.1) with project specific values in delivered information, a list of the project specific attributes with a full description of corresponding applied values **must be** presented to FMV in the earliest possible design/similar review meeting. FMV also expect that these are documented and decided in the project business rules.

BAS Unless otherwise explicitly specified, only the S1000D predefined values of attribute listItemPrefix must be used.

7.2.10.2 Fixed attributes (BRDP 06-12-16-020)

BAS If the attribute “quantityUnitOfMeasure” (S1000D Chap 3.9.6.2) is used, a complete list of applied values must be presented to FMV in the earliest possible design/similar review meeting. FMV also expect that these are documented and decided in the project business rules.

7.3 Data module types (BRDP 06-13-00-000)

REQ Generally, to be fully functional and readable data modules **must be** self-contained and **not dependent** on any CIR, or any other source external to the data module.

REQ Data modules, as well as publications, delivered to FMV **must only contain** information applicable to the product configurations and use cases pertinent to FMV/FM.

7.3.1 Descriptive information (BRDP 06-13-01-000)

BAS Unless otherwise explicitly specified, the paragraph hierarchy of a descriptive data module must not exceed five levels and should preferably be at the most three levels. If required, FMV expect additional rules are documented and decided in the project business rules.

7.3.2 Procedural information (BRDP 06-13-02-000)

BAS Unless otherwise explicitly specified, the step hierarchy of a procedural data module must not exceed five levels and should preferably be at the most three levels. If required, FMV expect additional rules are documented and decided in the project business rules.



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- REQ** A structure element must have a title if any of its sibling structure elements have a title. A substructure element can have a title only if its parent structure element has a title.

7.3.3 Crew/Operator information (BRDP 06-13-05-000)

- REQ** The element <crewProcedureName> structure **must not** be used.
- REQ** The element <sequentialList> structure **must not** be used for representing a step structure.
- REQ** Project specific attribute values in the element <crewDrill> and the crew structure specific child elements **must not** be used.
- REQ** The element <subCrewDrill> structure **must not** be used.
- REQ** The element <thumbTabText> **must not** be used.
- REQ** The element <crewProcedureName> **must not** be used.
- REQ** Sectionized content **must use** a structure of <levelledPara> in <levelledPara> to achieve the sections.
- REQ** If the element <levelledPara> uses title the element <crewDrill> **must not** use title or if the element <crewDrill> uses title the element <levelledPara> **must not** use title.

- REQ** Structures of <crewDrillStep> in <crewDrillStep> **must be** used only to represent true step/substep constructs, not sections in a data module.

- BAS** Unless otherwise explicitly specified, the step hierarchy of a crew descriptive data module must not exceed five levels and should preferably be at the most three levels. If required, FMV expect additional rules are documented and decided in the project business rules.

7.3.4 Parts information (BRDP 06-13-06-000)

- BAS** Unless otherwise explicitly specified, delivered IPD publications must adhere to the structure described in [3]. This will enable FMV to extract a catalogue structure from the delivered IPD publication, convert the structure to an FMV in-house structure and reuse the converted structure to create a spare parts catalogue to FMV's preferred own standards using the Produktionsmiljö MaterielFörteckningar (PMF) tool.



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Alternatively, projects can decide to require spare parts information to be delivered as

- self-sufficient, ready-to-use and conformant S1000D IPD data modules and publications
- already created and sufficiently populated PMF catalogues, fully furnished for formatting and generation of catalogues in the PMF environment
- already created PMF structures (like output by [3]) for generation of catalogues in the PMF environment

Note

In most cases, FMV will require detailed information about individual spares/items to be entered separately into the FMV databases.

Note

Use of attribute partStatus will not be recognized by FMV.

7.3.5 Container data module (BRDP 06-13-11-000)

REQ Container data modules, when used, ***must include*** applicability annotations/information for the alternatives which they concern.

8 Category 6b: Data creation – illustrations (BRDP 06-20-00-000)

- REQ** Illustrations *must be* prepared in such a way that they do not deviate in major respects from the specifications found in [1] and [2].
- BAS** Unless otherwise specifically agreed, the graphical objects must not contain any identification numbers.
- REQ** If colors are used in illustrations, the illustrations *must be* clearly visible presented in black and white.
- REQ** Raster graphics *must have* at least 300 dpi resolution at the intended presentation size. Also, density must be adjusted to provide a clear view, with no loss of readability, at the intended presentation size.

8.1 Legends (BRDP 06-22-00-000)

- BAS** Unless otherwise explicitly specified, legends must be included for all figures where callouts are used.
- REQ** Element <listItemTerm> in legends *must be* correspond to the callout in the corresponding illustration.
- BAS** Unless otherwise specifically decided, legends (and other similar text) must not be included in the graphical objects.

8.2 Foldout (BRDP 06-23-00-000)

- BAS** Unless otherwise explicitly specified, foldouts must be located at the end of its context.



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9 Category 7: Data exchange

9.1 Data Module Lists (DML) (BRDP 07-20-00-000)

REQ DML format *must be* agreed with FMV before deliveries commence.

9.1.1 Data Module Requirement List (DMRL) (BRDP 07-21-00-000)

REQ The scope of S1000D information to be delivered *must be* agreed with FMV and documented as a DMRL.

Note

It is recognized that a DMRL is a document that potentially requires updates while a project is on-going.

PRO As decided by a project, a DMRL may take different forms, such the S1000D DML format (in XML), spreadsheets etc.

9.1.2 CSDB Status List (CSL) (BRDP 07-22-00-000)

BAS Unless otherwise explicitly specified, there is no requirement to deliver CSL to FMV for production follow-up and/or CSDB synchronization.
Projects can decide that CSLs are needed, and decide on the frequency of CSL deliveries.

9.2 File based transfer protocol (BRDP 07-30-00-000)

REQ Deliveries *must be* fully compliant with the agreed and applied S1000D issue (refer to section 2.1)

REQ One delivery package (ie file based transfer package) *must only contain* textual/XML information in accordance with S1000D issue 4.1.

9.2.1 Rules of file based transfer (BRDP 07-31-00-000)

REQ Delivered XML based information *must be* delivered in S1000D compliant file based transfer packages.

REQ Data dispatch notes in file based transfer packages *must include* an S1000D conformant data delivery list.



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BAS Unless otherwise explicitly specified, information deliveries to FMV must be made using FMVs external SharePoint site, DVD media or USB memory sticks. If required, FMV expect this to be documented and decided in the project business rules.

BAS Unless otherwise explicitly specified, deliveries must be compressed using Zip format.

9.2.2 Interchange of illustrations and multimedia (BRDP 07-32-00-000)

BAS Unless otherwise explicitly specified, and with the exception of CALS raster format MIL-STD-28002, illustrations must be in one of the formats named by S1000D, Chap 4.8, as elaborated in Chap 7.3.2.

As needed, projects can decide to accept/include additional formats for

- vector and/or raster graphics
- multimedia objects

If required, FMV expect this to be documented and decided in the project business rules.

REQ Any such additional format, including CALS raster MIL-PRF-28002, **must be** suggested and agreed in a design, or similar, review meeting well before deliveries commence.

9.3 Update methodologies and frequency and periodicity of data exchanges (BRDP 07-40-00-000)

9.3.1 Update methodologies (BRDP 07-41-00-000)

BAS Unless otherwise explicitly specified, updates of delivered information must be made applying the same delivery structure as was initially applied.

10 Category 8: Data integrity and management

10.1 Quality assurance (BRDP 08-20-00-000)

10.1.1 Quality assurance methods and types (BRDP 08-22-00-000)

REQ QA status of delivered CSDB objects **must be** recorded using the QA annotation items in the metadata sections of the S1000D objects concerned.

REQ Delivered information **must be** first verified, “table-top” - in compliance with S1000D - before delivered to FMV.



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- PRO** If found appropriate, delivered information can be first verified “on-object” before delivered.
- PRO** Projects can decide to require additional verification (such as second verification by FMV and/or FM) before delivered information is approved.
- REQ** In any case, the QA plan for information production and/or deliveries to FMV ***must be*** agreed by FMV before deliveries commence. The QA plan ***must describe*** how the QA actions/steps relate to the QA annotations items provided in delivered S1000D objects.
- BAS** Unless otherwise explicitly specified, if special needs so require, projects can decide to apply applicability on element <qualityAssurance>. If required, FMV expect this to be documented and decided in the project business rules.

Note

In normal cases applicability doesn't apply here.

10.2 Comments

(BRDP 08-30-00-000)

FMV do not use the comment object to return comments regarding delivered information.

- PRO** Projects must decide on the methods to apply for commenting purposes.



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11 Category 9: Legacy data management and handling

11.1 Conversion rules

(BRDP 09-10-00-000)

REQ The target issue of any conversion to S1000D *must be* Issue 4.1.

11.2 Inclusion rules for legacy information into the technical publication

(BRDP 09-20-00-000)

BAS Unless otherwise explicitly specified, the only accepted format for non-S1000D legacy data is PDF.

Note

Non-S1000D legacy information is typically user manuals to system integrated off-the-shelf vehicles, and other sub-systems/components, not originally produced, or currently existing, in accordance with S1000D.

Projects can decide to allow additional formats for legacy information deliveries. If required, FMV expect this to be documented and decided in the project business rules.

Legacy information logically belonging to the delivered publications (eg operator instructions for sub-systems) must be included using the referencing mechanism in the publication module or as encapsulated information entities in data modules. The project can decide which method to use.

12 Category 10: Data output

12.1 Requirements on Publications (BRDP 10-10-00-000)

12.1.1 Common requirements on publications (BRDP 10-11-00-000)

BAS Unless otherwise explicitly specified, delivered publications in page format (printed or PDF) and electronic publications realized by publication modules, still concerning the same content, must show the same general TOC/navigational structure.

12.1.1.1 Rules on front matter (BRDP 10-11-01-000)

REQ Deliveries of publications in the form of CSDB objects ***must include*** the following front matter data modules:

- "Fastställelsesida"
- Title page
- LOEDM
- Highlights

REQ The front matter data modules ***must use*** the Front matter schema, except for "Fastställelsesida", refer to [7].

BAS Unless otherwise explicitly specified, deliveries of page format publications (PDF/printed) must include front matter in accordance with the effective revision of [7].

BAS Unless otherwise explicitly specified, updating instructions do not have to be delivered.

12.1.1.2 Common requirements to illustrated parts data (IPD) (BRDP 10-11-03-000)

BAS Unless otherwise specifically decided, delivered IPD must be standalone publication(s).

12.2 Publication management (BRDP 10-20-00-000)

REQ Each identified publication ***must include*** a LOAP specific for that publication and represented using the Front Matter Schema.

REQ References to data and publication modules ***must always*** be marked up as links.

REQ Unless otherwise explicitly decided, the language in a LOAP ***must be*** Swedish.



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12.2.1 Publication module schema and its elements and attributes (BRDP 10-21-00-000)

REQ Publications delivered as publication modules *must specify* titles for all included publication module entries (using the title sub-element of element <pmEntry></pmEntry>).

12.3 Print requirements (BRDP 10-40-00-000)

REQ BDAR information *must be* possible to print.

BAS Unless otherwise explicitly specified, Crew information must be possible to print.

12.4 Presentation rules for page-oriented publications (and/or their parts) (BRDP 10-50-00-000) -

BAS Unless otherwise explicitly specified, presentation of page oriented publications (paper and/or PDF) must be in line with the principles expressed in [7].