

GDSN Validation Rules subteam

Thursday 23 March 2017 Face-to-Face Jersey City Event

Who may attend: Opted in

23 March 2017

Anti-trust caution

- GS1 operates under the GS1 anti-trust caution. Strict compliance with anti-trust laws is and always has been the policy of GS1.
- The best way to avoid problems is to remember that the purpose of the group is to enhance the ability of all industry members to compete more efficiently.
- This means:
 - There shall be no discussion of prices, allocation of customers, or products, boycotts, refusals to deal, or market share.
 - If any participant believes the group is drifting toward impermissible discussion, the topic shall be tabled until the opinion of counsel can be obtained.
- The full anti-trust caution is available via the link below, if you would like to read it in its entirety: http://www.gs1.org/gs1-anti-trust-caution.



Statement & reminder for seeking intellectual property information

- Relevant to the features of the specification that are being developed in this work group, if anyone has knowledge or information about intellectual property rights, such as, patents or patent applications; please promptly convey this information to the work group facilitator.
- The intellectual property rights can either be in development or owned by persons, companies or third parties within this work group or outside this work group.
- We do this under the guidance of the GS1 Intellectual Property Policy, so that GS1 can seek to avoid the uncertainty regarding intellectual property claims against the Specification.



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Agenda: 1/2

- 1. Opening, anti-trust, ... (5 mins) David/co-chairs:
 - Approve agenda and minutes of the 6 March 17 call
 - Review action list
- Open eBallots / Community Reviews (5 mins) David:
 - Note/address any comments (if required)
- 3. Implementation timeframe & next steps for "How to Write a GDSN Validation Rules" (45 mins) Ewa:
 - Backward re-engineering of existing Validation Rules
 - Implementation Guidelines for Validation Rules (separate from Trade Item Implementation Guide?)
- Community Room and improving efficiency of subteam (30 mins) David/co-chairs :
 - Community Reviews and eBallots (one WR → multiple VRs)
 - Tracking Excel sheet → publication in Excel, Word, database?



Other improvements?

Agenda: 2/2

5. Progress the GDSN Validation Rules (20 mins) Mark

- GDSN Validation Rules Work In Progress Summary
- 6. GS1 in Europe, upcoming VR requests (20 mins) Tomáš
- 7. GS1 Sweden, upcoming VR requests (10 mins) Staffan
- 8. Strawman for DateTime (15 mins) Mark
- 9. Work load planning (10 mins) All
- 10.Close



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1) Opening, anti-trust, review action items

Steve Robba, Neil Gray, Gina Tomassi & David Buckley

GDSN Validation Rules, 23 March 2017, Jersey City



Review open action items

No	Action Item	Owner	Date Entered	Due Date	Status/Next Steps
71	Present a firm proposal to a future meeting that provided implementation guidance for VR 437 and/or a Work Request to modify VR 437	Tomáš Tlučhoř	13 Feb	23 Mar	
72	Contact Mike Mowad to discuss how best to document guidance on individual Validation Rules (within the Trade Item Implementation Guidance group)?	David Buckley	13 Feb	14 Feb	Done
73	Request the following motion at GMD-SMG: - WR 17-004, requested 14-day Community Review impacting VR 1524 - WR 16-107, request errata fix to VR 524	David Buckley	13 Feb	14 Feb	Done
74	Following an extensive discussion around the request in WR 16-417 for a Validation Rule around TimeDate, it was agreed that: - Staffan would withdraw this part of WR 16-417 and submit a new Work Request - Mark would develop some strawman proposal to meet the business requirement	Mark Van Eeghem Staffan Olsson	13 Feb	27 Feb 6 Mar 23 Mar	Done
75	As no Community Review comments, request a motion to eBallot at GMD-SMG for WR 16-272 - Issue with Validation Rule 451 Validation rule and error message not meaning the same thing	David Buckley	27 Feb	28 Feb	Done
76	As a result of Community Review comments on the Validation Rules part of WR 16-526 (Release 3.1.3) the	Mark Van Eeghem	27 Feb	28 Feb	Done

Review open action items cont.

No	Action Item	Owner	Date Entered	Due Date	Status/Next Steps
77	Following on from action 72, it was questioned whether the <u>Trade Item Implementation Guideline</u> was right place to store implementation guidance for Validation Rules (maybe a standalone guide would be better). This topic to be discussed at the face-to-face meeting.	David Buckley	27 Feb	23 Mar	
78	The group resolved the minor Community Review comments, so request a motion to eBallot at GMD-SMG for WR 17-004 Add new GDSN Validation Rule 1524 to prevent two different methods of communicating min & max humidity	David Buckley	6 Mar	7 Mar	Done
79	Reopen the eBallot WR 15-308 How to Write GDSN Validation Rules and inform those who have already voted of the update	David Buckley	6 Mar	7 Mar	Done
80	As a result of Community Review comments on the Validation Rules part of WR 16-526 (Release 3.1.3) the subteam agreed the updated Validation Rules presented by Mark and this would be reported to the GMD-SMG	Mark Van Eeghem / David Buckley	6 Mar	7 Mar	Done

2) Open eBallots / Community Reviews

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Address any comments as required

David Buckley

GDSN Validation Rules, 23 March 2017, Jersey City



3) Implementation timeframe & next steps for "How to Write a GDSN Validation Rules" and

Implementation Guidelines for Validation Rules

Ewa Iwicka

GDSN Validation Rules, 23 March 2017, Jersey City



When to start with new VRs?

- Cut-off release from that time on all the new and updated VRs will be written in a new way
 - Release:...
 - Alternative start immediately for all new requests
- Change existing rules? NOT changing the rule meaning without w
 WR
 - Pros: all rules will be written in consistent and easier to understand / implement way
 - Cons: significant workload, rules written in different ways (confusion)
 - Alternative: add xPath and attribute categories to existing rules and re-write only when WR is submitted. This decision can be re-visited when the number of "old style" rules becomes small.



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Rules in Schematron - 1

- When the Schematron version should be delivered:
 - with the rule itself? May need to be changed if XML structure changes as a result of Community Review
 - with a delay? Would it affect implementation?
- How / where to host Schematron rules?
 - a code excerpt copied to Excel?
 - separate SCH files for download with hyperlinks to SCH files from VR data base and excel



Rules in Schematron - proposal

- Use ISO Schematron & xPath 2.0
- 1 SCH file per rule any change would result in changing 1 file only
- Use standard rule ID inside the rule and as the SCH file name
- Use standard error messages
- e.g.



</sch:rule>

</sch: pattern>

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Implementation Guidelines for Validation Rules?

During the discussion of Work Request WR 17-001 (ADR Classifications) action on GS1 in Europe for clear implementation guidance for VR 437 due to implementation issues.

GDS Validation Rule #	437	Original Rule ID		Constrained Party	Source Data Pool	
Date	16-January-17	WR	17-001	BMS	Catalogue Item Notification	
Status	NOT DELETED VR Type BUSINESS Target Market		GLOBAL			
Targeted Release	3.1.3	Regulation		All Contexts?	YES	

Issue with validation rule 437 references classification codes that are now obsolete. Since ADR changes at least ever 2 years, it is best not to have a validation limiting the values. Refer to section 2.2.2.3 in the ADR regulation Remove validation.

https://www.unece.org/fileadmin/DAM/trans/danger/publi/adr/adr2017/ADR2017e_web.pdf

Structured Rule Description

If dangerousGoodsRegulationCode is equal to 'ADR' and classOfDangerousGoods is not empty then classOfDangerousGoods must equal ('1', '2', '3', '4.1', '4.2', '4.3', '5.1', '5.2', '6.1', '6.2', '7', '8'or '9').

Error Message

If classOfDangerousGoods is populated and dangerousGoodsRegulationCode equals 'ADR', then classOfDangerousGoods must be one of the following values: '1', '2', '3', '4.1', '4.2', '4.3', '5.1', '5.2', '6.1', '6.2', '7', '8', '9'.

Impacted Attributes

xPath	AttributeName
HazardousInformationDetail/classOfDangerousGoods	

Where to publish VR guidance? Trade Item Implementation Guideline (Jan 17)

http://www.gs1.org/docs/gdsn/tiig/3_1/GDSN_Trade_Item_Implementation_Guide.pdf

Contains 44 references to GSDN Validation Rules including:

9.3 Validation Rule for Gross Weight

For a physical trade item, a validation rule is in place to assist recipient's downstream processes. Processes such as movements of partial shipping units, self-checkouts, and etc. require gross weight

information at a processes.

22.5 Applicable Validation Rules for Tax

This section provided guidance for tax related GDSN Validation Rules.

22.5.1 GDSN Validation Rule 528

For: Target Market 036 = Australia and dutyFeeTaxTypeCode is equal to 'WET' (Wine Equalisation Tax)

THEN: percentageOfAlcoholByVolume must be populated

22.5.2 GDSN Validation Rule 533

For: Target Market 528 = Netherlands

THEN: dutyFeeTaxCategoryCode must be populated

22.5.3 GDSN Validation Rule 571

For: Target Market 752 = Sweden

IF: dutyFeeTaxAgencyCode is populated
THEN: dutyFeeTaxAgencyCode must = 9SE

22.5.4 GDSN Validation Rule 578

For: Target Markets 056 = Belgio 372 = Ireland, 380 = Italy, 442 =

31.3.1 Implementation Guidance/Validations/Business Rules

Validation rules using isTradeItemABaseUnit can be found in the BMS GDSN Validation Rules.

31.3.2 Example

Pre-packed Fixed Weight Consumer Trade Package with GTIN encoded in the barcode (EAN/UPC)

Consumer Unit	GTIN: 00016000423442	IsTradeItemABaseUnit = True
Case	GTIN: 10016000423449	IsTradeItemABaseUnit = False



Questions for the group

- 1. Do we need Implementation Guidance on individual VRs:
 - If the VR needs implementation guidance, then write the rule better?
- 2. Which VRs do we need Implementation Guidance for?
- 3. Where should the consensus Implementation Guidance be stored:
 - Trade Item Implementation Guide
 - A new standalone document (maintained by this subteam)
 - In the rules themselves (updated error messages)
 - Somewhere else





Data Quality Checker

SCHREK/Schematron framework

GS1 France

22/03/2017



Why it was a top priority project?

- Increase customer satisfaction by ensuring the accuracy of product information
- Answer our members that asked for a data quality checker tool

- Improving Data Quality at the Source
- Strengthen trust and collaboration between trading partners

SCHREK overview



A web interface to check data quality product

- Check a CIN (Catalogue Information Notification) file before sending it to a trading partner
- Display the GS1 Response message with all the validation rules triggered (Name of the rule, Error message, xpath...)

An API to control the data quality of all the files that will go through GDSN

- Contains international and french validation rules
- Check if the file is OK or not regarding the rules
- Accept or reject the file depending on the result
- Generate a GS1 Response with all the information about the rules triggered (Name of the rule, Error message, xpath...)

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Web interface and Result



Schematron	n framework				
Past your XML documen	nt below :				
Or choose your XML doc	ocument here : Choisissez un fichier cin.LG6F507.xml				
Execute Reset					
	<pre><attributename>nomAttributConcernevaleurErronnee ▼<xpath></xpath></attributename></pre>	>			
	<pre>/*:catalogueItemNotificationMessage[namespace [1]/transaction[6]/documentCommand[1]/*:catal [1]/catalogueItem[1]/catalogueItemChildItemLi </pre>	logueItemNotifi	.cation[namespace-uri():	:'urn:gs1:gdsn:catalogue_iter	n_notification:xs em[1]/tradeItem[1
	<pre>▼<gs1error></gs1error></pre>	<th>·></th> <th></th> <th></th>	·>		
(GS1	There must be at most one iteration of free 	eQuantityOfNext	LowerLevelTradeItem per	Unit Of Measure	

Overview of technologies



- API engine : java JEE
- Configuration files: XSLT, XML
- Validation rules: schematron (.sch), xpath



What is missing now?



Branding and Communication

- Create Branding (Marketing Name/Logo)
- ▶ Work on a Communication plan

Features

- ▶ Check other type of files like Price (not only CIN)
- ► Create a backoffice interface to manage validation rules (state, definition, error message, name...)

Technical update

- Redesign architecture to manage big files (>8 MB)
- ▶ Update to manage the CIC message for local rules
- ► Source code API reengineering



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Key Figures

285 international validation rules

96 French validation rules

Launched on the 26th of May 2016

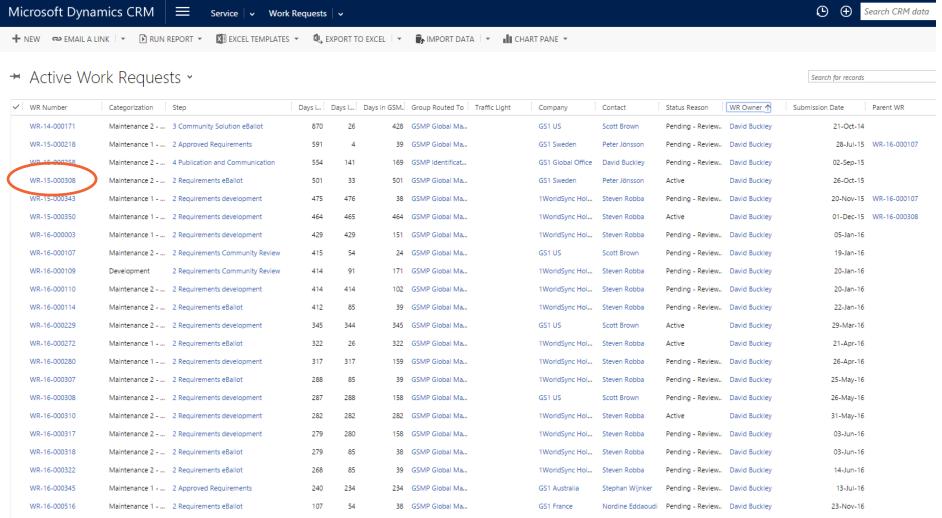
4) Community Review improvements and subteam working practices

Steve Robba, Neil Gray, Gina Tomassi & David Buckley

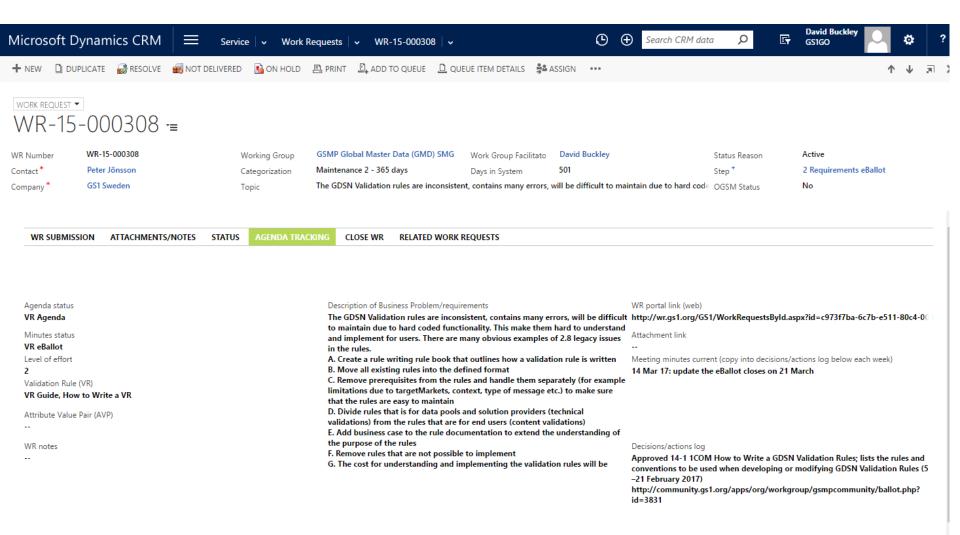
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Working direct in Work Request database 1/3



Working direct in Work Request database 2/3





Working direct in Work Request database 3/3

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Pros

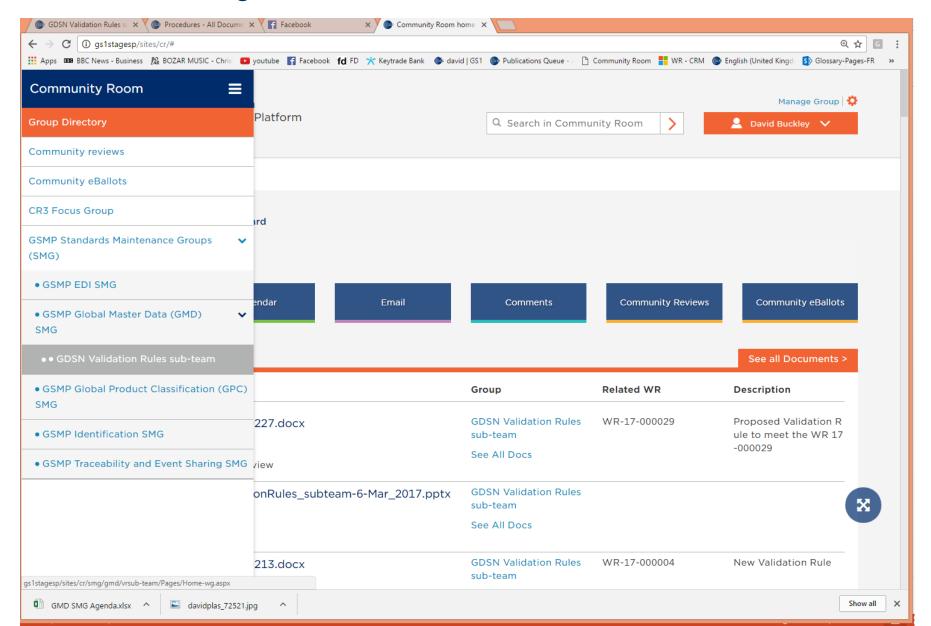
- All information held in database
- Easy tracking and tracing of changes (when change agreed, why it was agreed)
- Minutes extracted into Excel for record/approval

Cons

Online access availability during meeting?



Community Room



Benefits for community

Custom Built

- Built to our community needs
- Responsive

Integration with other systems

- Customer Relationship Management
- Work Request System

Improved Search

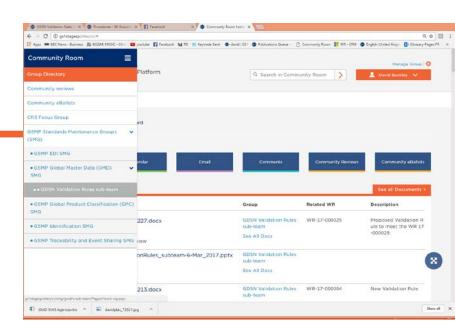
Find and share information within Community Room

Document management

(Versioning) from inception through publication

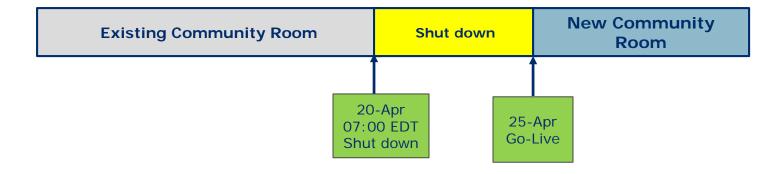
User Interface

- Simple navigation
- Modern functionality
- Improved user dashboard (groups / eBallot / Community Review)





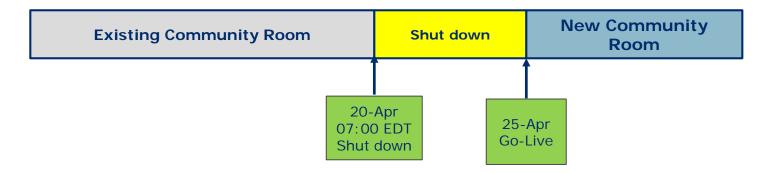
Updated Timeline



All existing Community Reviews/eBallots must end before 20-Apr All new Community Reviews/eBallots will start on 25-April



Updated Timeline Details



- 20 April @07:00 EDT Shut down Community Room
- 20-24 April NO Access to Community Room and New Community Room
- 25 April NEW Community Room Go Live
- 17 April administrators have access to New Community Room
- By 20 April @07:00 EDT Must end Community Review / Community eBallot
- By 21 April @07:00 EDT Shut Off for administrators
- 20-24 April Lock Down
- 25 April Start Community Review/ Community eBallot on NEW Community Room



Available Features

- Balloting
- Calendaring
- Commenting
- Document retrieval
 - ✓ Multiple comments
 - Tagging
- ✓ Email
- ✓ Group Directory
- Rosters
- Search
- ✓ User Profile Management

Videos available



Updated Go Live Date 25 April

- Due to Security changes in back end systems
 - The Community Room Focus Group recommended adding additional time for stress testing to ensure a quality deployment.



See Community Room in Jersey City

Tuesday 21 March

- 12:30-13:30 Lunch and Learn GS1 Xchange and Community Room
- 11:15-17:00 Community Room Session
 - On site Technology Team to answer your questions
 - See the features

Monday – Thursday

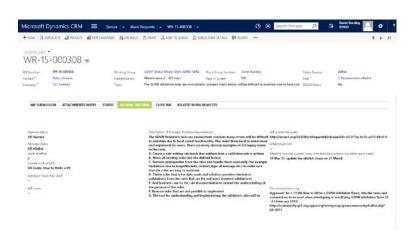
- Kiosk for GS1 Xchange and Community Room
 - Location: 3rd Floor by Coffee Break Hudson Pre-function



CRM / Community Room

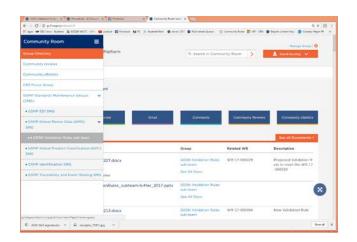
CRM

- Original Work Request
- Work Request status tracking



+ Community Room

- Document sharing
- Comments/discussion
- Community Review
- eBallot



= full transparency and visibility



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Community Room

- Break into three or four groups.
- In next 10 minutes consider for the GDSN Validation Rules subteam area:
 - What can we do better than before?
 - What would you like to be improved:
 - Process
 - Procedure



5) Progress GDSN Validation Rules

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Mark Van Eeghem

GDSN Validation Rules, 23 March 2017, Jersey City



6) GS1 in Europe, upcoming VR requests

Tomáš Tluchor

GDSN Validation Rules, 23 March 2017, Jersey City

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EU Mature Data Model

Work initiated in 2016

Actively participating GS1 MOs:

- BE, DE, DK, ES, FR, NL, SE,
- plus GS1 Global Office and 1WorldSync,
- indirectly also covered by the analysis: AT.

Goals

1. To provide better visibility of GDSN attributes that are critical for doing business in Europe.

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2. To work around validation rules to improve quality, especially completeness, of data provided in those critical attributes.



Deliverables

- 1. List of attributes an overview
 - DONE
- 2. New validation rules submit to GSMP and implement
 - ALMOST DONE
- Analysis of existing local validation rules submit to GSMP and implement
 - DELAY



List of attributes

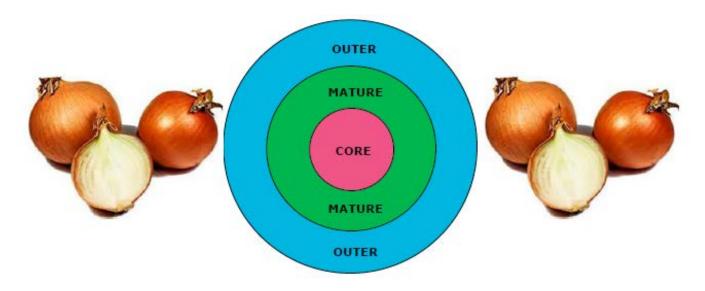


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Onion model

- **Core layer attributes** attributes that are used in all analysed markets.
- Mature layer attributes attributes are used in at least 4 analysed markets or they are mandatory or conditionally mandatory in at least one of analysed markets. Conditionally mandatory in this context means that the attribute can become mandatory based on a value in another mandatory attribute.
- 3. Outer layer attributes attributes are only optional and used in less than 4 analysed markets.



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Basic overview

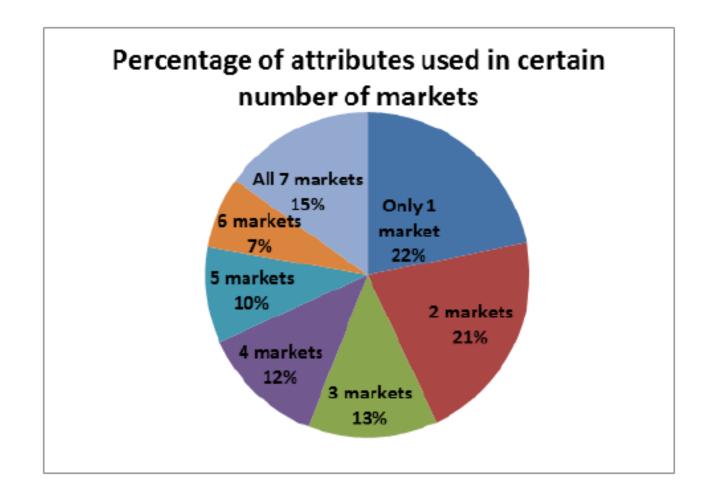
Basic Overview		
Total number of unique attributes	465	
Minimum number of attributes used in 1 market	148	
Maximum number of attributes used in 1 market		
Average number of attributes used in 1 market	231	

EU Mature Data Model		
Number of attributes in CORE layer	70	
Number of attributes in MATURE layer		
Number of attributes in OUTER layer		
Number of attributes in Mature data model (CORE+MATURE)	249	

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Usage of attributes – many differences





List of attributes: what is in?

For each attribute, following information is provided

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- Name and xpath
- YES/NO indication of usage for each of 7 analysed markets
- Mandatory status for each of 7 analysed markets
 - Mandatory
 - **Conditional Mandatory**
 - Optional
- EU Data Model Layer (Onion model)
- Number of markets using the attribute



Validation rules



New validation rules

- **Objective:** design new validation rules that would improve data quality (completeness) of CORE attributes.
- Result: 8 new validation rules (for 8 attributes) finalized
 - 3 months period when EU markets can opt-out from using some rules
 - After this period, GSMP work request will be submitted to add those rules into global standard – approx. mid June 2017

Challenges:

- Different business / legal needs in different markets
- Impossible to translate many exceptions (for products) into validation rules

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Risk of blocking data



Overview of the 8+1 new validation rules

ID	Affected attribute	Rule Description
VR1	olume	If gpcCategoryCode equals (any code from GPC-VR-1), then percentageOfAlcoholByVolume SHALL be used. Note: There is a global VR 325 in place for FR and NL.
VR2	descriptionShort	descriptionShort SHALL be used.
VR3	anFromTimeOfProduction	If isTradeItemNonphysical does not equal 'true' and isTradeItemAConsumerUnit equals 'true' and tradeItemDateOnPackagingTypeCode equals ('BEST_BEFORE_DATE', 'EXPIRATION_DATE'), then minimumTradeItemLifespanFromTimeOfProduction SHALL be used.
VR4		grossWeight SHALL be used.
VR5		If isTradeItemNonphysical and isReturnableAssetEmpty does not equal 'true' and isTradeItemAConsumerUnit equals 'true', then netContent SHALL be used.
VR6	packagingTypeCode	If isTradeItemNonphysical does not equal 'true', then packagingTypeCode SHALL be used.
VR7		If tradeItemUnitDescriptorCode equals 'PALLET', then quantityOfCompleteLayersContainedInATradeItem SHALL be used.
VR8	3.	If isTradeItemABaseUnit equals 'true', then dutyFeeTaxTypeCode SHALL be used.
VR9	·	tradeItemDescription SHALL be used. Note:The rule already exists as Global VR 590 only for France. OPT-IN Rule



Analysis of existing local validation rules

- **Objective:** compare existing local validation rules (not part of standard) used by 7 participating GS1 EU MOs and discover similarities. Evaluate possibility to harmonize similar local rules and promote them to global.
- **Result:** to be delivered.



7) GS1 Sweden, upcoming VR requests

Staffan Olsson

GDSN Validation Rules, 23 March 2017, Jersey City



Validation rules in Sweden

- Validation rules is considered very important by the Swedish user community
 - Suppliers expect errors to be detected by the data pool (Validoo) so no detectable errors are published to recipients
 - Data recipients expect to get clean data
- Users and service providers are active and constantly proposing new validation rules



Validation rules in Sweden

Our process is (intended to be) the following:

- 1. Someone has a data issue and asks why an error could occur (this happens in multiple ways)
- 2. GS1 Sweden creates a VR proposal which is presented to the Swedish user group (includes service providers and Validoo)
- 3. The user group approves the VR proposal (sometimes after some iterations)
- 4. The VR is submitted to as a WR to GSMP
- 5. The VR is published on GS1 Sweden's website in the lista of national VRs and implemented the next release
- 6. The VR goes through GSMP and is implemented in a release
- The VR is removed from GS1 Sweden's list of national validation rules



Backlog management

- Some GDSN VRs (submitted by GS1 SE) are no longer correct (so we have implemented similar rules nationally)
- Some national rules were never submitted

Going forward:

- Change/replace some existing GDSN validation rules
- Add some new rules



8) Strawman for DateTime

Mark Van Eeghem

GDSN Validation Rules, 23 March 2017, Jersey City



9) Workload planning

Steve Robba, Neil Gray, Gina Tomassi & David Buckley

GDSN Validation Rules, 23 March 2017, Jersey City



GDSN Validation Rules work queue: Brussels Event, *October 2016*



VR Writing Style: 2 WRs

No Points
for Style

15-350

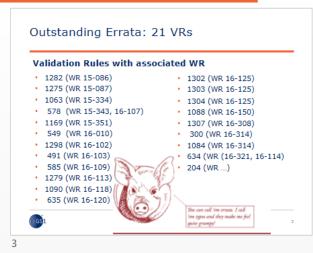
Validation rules with "There must be at most one" is confusing both native English speakers and non-Native. The must makes it sound mandatory that one MUST exist. Try to better word all validations to state "The maximum can be one iteration....."

16-110 (SR)

General comment to add to Sweden Validation guidelines

In the structured rule please include exact XML path, not this hand types reference that is not aligned to the xml path. Example Brand Owner GLN.

The error message can use that type of information, the structured rule is used for implementation and causes people to search unnecessarily for a XML path that does not exist.











GDSN Validation Rules work queue: today

- 17-004: Add new GDSN Validation Rule 1524 to prevent two different methods of communicating min & max humidity (eBallot closes 28 March 2017)
- 16-310: The GPC 99999999 is causing issues. We may need a 99999999 context so that validations can run properly against it. (talked about today)
- 16-229: To provide the ability to see the data carrier at any level so as to ascertain how the level might be utilized in operations. (talked about today)
- 17-029: Validation Rules inconsistent use of date & time attributes in GDSN (talked about today)



GDSN Validation Rules work queue: today

- 17-074: If GrowingMethodCode is equal to ORGANIC and TargetMarket is equal to EU and GPC Brick belongs to the GPC families 50100000, 50250000, 50260000, 50270000, 5029000, 50310000, 50320000 and 50350000 then at least one iteration of OrganicClaimAgencyCode must be provided.
 - This Validation Rule must be implemented in the next major reléase, not before, because it is not backwards compatible.
- 17-075: If TargetMarket is equal to EUR and GPC Brick belongs to the GPC families 50100000, 50250000, 50260000, 50270000, 5029000, 50310000, 50320000 and 50350000 then GrowingMethodCode must be equal (CLONED_FOODS, CONVENTIONAL, FIELD_GROWN, GREENHOUSE, HYDROPONIC, INTEGRATED_PEST_MANAGEMENT, ORGANIC and SHADE_GROWN)
- To Come: GS1 in Europe, GS1 Sweden requests?

Other work items:

- How to Write GDSN Validation Rules, rollout?
- Implementation Guidelines for GDSN Validation Rules?



GDSN Validation Rules subteam meeting schedule

No Change

- Mondays 16:00 17:00 CET (10:00 11:00 EST)?
 - Cancel meeting if not required?
 - Move to a bi-monthly meeting schedule?
 - Other ideas?

Cancel next Monday's call (27 March 2017)



10) Close

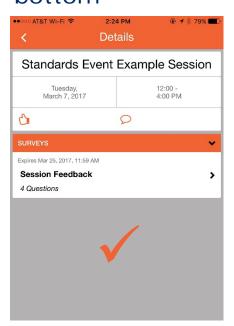
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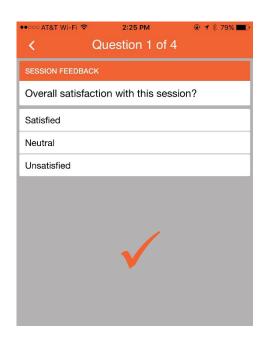


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