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Implementation of GS1 EDI Standards in 2017

Detailed Report





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1. Introduction

1.1 Scope and objective

This report presents the implementation of GS1 EDI standards in the year 2017. It is based on the answers of 41 Member Organisations, of which 35 have reported some form of GS1 EDI usage in their countries.

The report covers the implementation of GS1 EDI standards - GS1 XML, GS1 Profiles of the UN/CEFACT XML and GS1 EANCOM® in detail:

- Type and versions of standards implemented
- Number of implementing companies
- Specific messages implemented
- Implementation of EDI standards in core GS1 sectors: Healthcare, Apparel, Footwear & Fashion, Public Procurement and Transport & Logistics
- Communication methods used for exchanging EDI messages
- Member Organisation activities in the area of EDI

There is also general information about Web EDI, non-GS1 EDI standards and proprietary solutions.

We asked similar questions to those from previous years, to provide comparable data. Information included in this report should give a good overview of the business processes in which EDI standards are implemented worldwide as well as the scope of implementation.

1.2 Target audience

The primary target audience of this report is the GS1 Global Office and GS1 Member Organisations.

The **GS1 Global Office** uses the survey results to update the GS1 EDI strategy and define the future of EDI. Information obtained during the survey helps in discovering the marketing, communication and training needs of Member Organisations and their users. It helps taking decisions based on the actual market situation, rather than assumptions.

The **GS1 Member Organisations** benefit from the survey results by being able to compare the situation in their market with what is happening in other countries. Knowing what is being implemented where, it is easier to seek assistance when similar needs arise in their country. They can also estimate how the situation may develop in their market, based on information from other countries. It is particularly useful in supporting user companies with the cross-border business relationship.

However, the information presented can also be useful to GS1 user companies, **industry associations, EDI solution providers and other standard development organisations**. It enables them to benchmark their own actual or planned implementation with user groups from their own and other countries. The overview of the market trends may also be a valuable aid in taking decisions about the EDI implementation.

When sharing with external bodies or member companies, Member Organisations may wish to adjust the text to suit the intended audience.

1.3 Caveats

Data reported in the survey are partly based on estimation made by GS1 Member Organisations, and partly on surveys conducted on the local markets and information obtained from EDI solution providers. Thus, the implementation report should not be considered as a scientific research, but as an illustration of market trends. However, the estimation is made by people the most suitable for that: the GS1 Member Organisation staff members, having daily contact with their user community and often assisting them in implementation.

✓ **Note:** The number of responses received from GS1 Member Organisations is smaller than in previous years (40 in 2017 and 68 in 2016), so comparisons with earlier results should be made with caution. In Section 9, necessary adjustments have been made – on the assumption that implementations in countries that did not provide response did not disappear.

1.4 Structure of the document

The report is divided into eleven major sections:

1. Introduction
2. General EDI standards implementation statistics
3. EANCOM®
4. GS1 XML
5. GS1 Profiles of the UN/CEFACT XML
6. Web EDI
7. Non GS1 EDI Standards
8. Communication methods used to send EDI messages
9. EDI implementation overview since 2005 and future trends
10. Use of EDI standards in Healthcare, Apparel, Footwear & Fashion and Public Procurement

The ninth section contains a short analysis of the EDI implementation trends, based on data between 2005 and 2017, as well as estimation for year 2018.

The Appendices contains the list of EDI related projects and experiences, which Member Organisations are willing to share with the GS1 Community and the general comments provided by some GS1 MOs.

1.5 Additional information

We are confident that this survey will be of high interest to you and we invite you to visit our website <http://www.gs1.org/EDI> if you would like to have further information regarding our organisation and/or the standards we offer.

An electronic version of this report can be downloaded from the GS1 website: <https://www.gs1.org/standards/edi>. We are open to any comments on any information you would like to see in this report, so that it could best suit your needs in the future. You can submit your comments via the GS1 website <http://www.gs1.org/contact>.

2. General EDI implementation statistics

34 MOs reported that various EDI standards have been implemented in their countries in 2017.

Table 1 List of countries where EDI is used:

Country	GS1 XML	UN/CEFACT Profiles	EANCOM®	Country	GS1 XML	UN/CEFACT Profiles	EANCOM®
Argentina	Y		Y	Latvia	*	*	*
Australia	Y		Y	Lithuania	Y		Y
Austria	Y		Y	Netherlands	Y		Y
Belarus			Y	Macedonia	Y		
Belgium & Luxembourg	Y		Y	Norway	Y		Y
Canada	Y		Y	Paraguay	Y		
Colombia			Y	Philippines	Y		
Croatia	Y	Y	Y	Russia	Y		Y
Czech Republic			Y	Serbia	Y		Y
Denmark	Y		Y	Singapore	Y		
El Salvador	Y	Y	Y	Slovakia			Y
Finland	Y		Y	Slovenia	Y		Y
Germany	Y	Y	Y	South Africa	Y	Y	Y
Hong Kong			Y	Sweden	Y		Y
Hungary			Y	Switzerland	Y		Y
Ireland	Y		Y	USA	Y		Y
Italy	Y		Y	Vietnam	*	*	*
Japan	*	*	*				
TOTAL: 35 countries, GS1 XML: 26, UN/CEFACT Profiles: 4, EANCOM®: 28							

* Only non-GS1 standards implemented

Table 2: List of countries where EDI standards were reported as not used:

Egypt		Georgia		Korea
Ghana		Jordan		Turkmenistan

The chart below illustrates the types of EDI standards implemented in 36 GS1 member countries where some form of EDI is being used.

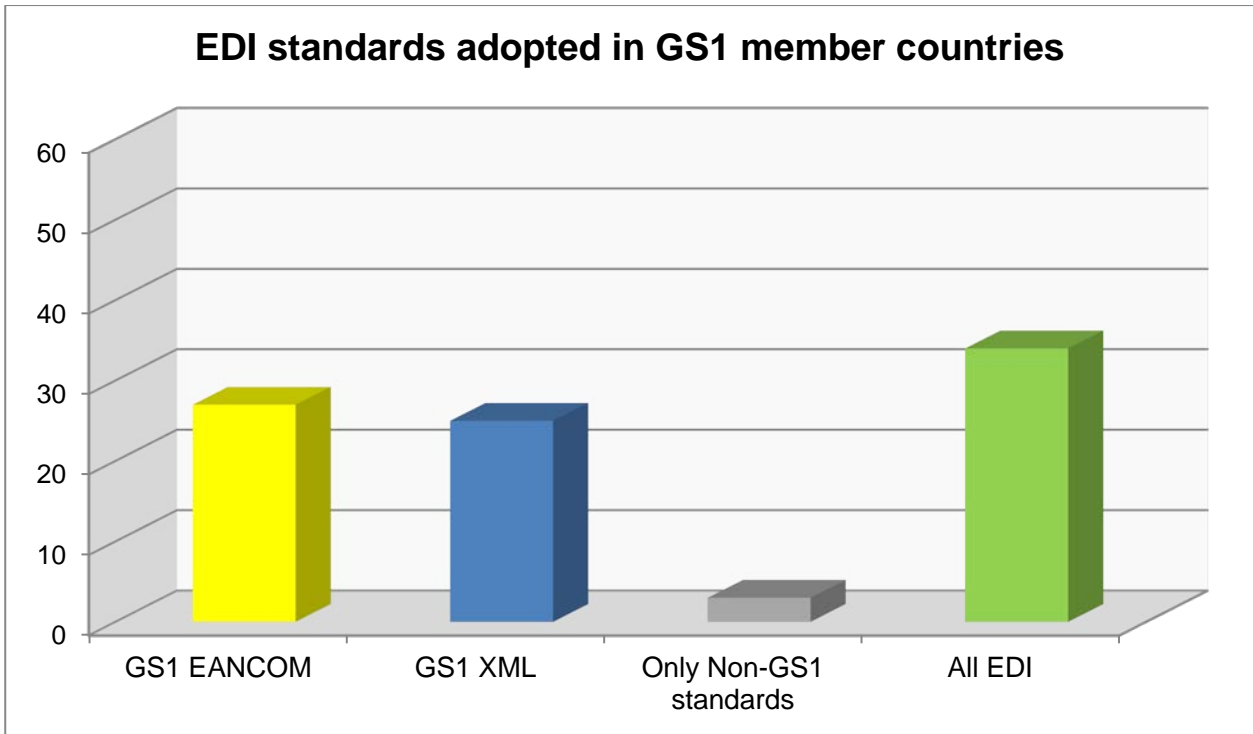


Figure 1: Types of EDI standards implemented in GS1 member countries

3. GS1 EANCOM®

3.1 Number of GS1 EANCOM® and implemented versions

In year 2017, the implementation of EANCOM® standards was reported by 28 countries. EANCOM® versions 97 and 2002 are implemented in almost the same number of countries – 16 and 18 respectively. It should be noted, however, that many more companies in these countries use EANCOM 97 than 2002, although the exact number is not available. Version 94 is still in use in 8 countries. If counted in terms of user companies, the EANCOM® 97 is by far the most used one.

An additional question has been asked about the syntax version¹ used for EANCOM® 2002, to help determine the future development of EANCOM® standard. The number of users of specific versions is included in the Table 3 below.

Table 3: List of countries where EANCOM® is used:

Country	EANCOM® Users		Implemented Versions of EANCOM®			EANCOM® 2002 Syntax version	
	Dec 2016	Est. 2017	94	1997	2002	S3	S4
			# of users	# of users	# of users		
Argentina	2000	2000			Y		Y
Australia	n/a	n/a					
Austria	2920	2980	Y	Y	Y	Y	Y ¹
Belarus	3768	4200			Y	Y	
Belgium & Luxembourg	n/a	n/a		Y	Y		
Canada	81	81	Y	Y	Y		
Colombia	2440	2600		Y			Y
Croatia	15	15			Y		
Czech Republic	1445	1470		770	675		
Denmark	3000	3000	Some	Majority	Few	Y	
El Salvador ²	74	74			Y		
Finland	n/a	n/a					
Germany	10400	10600		8200	2200	Y	Y
Hong Kong	2000	2000		Y			
Hungary ³	2000	2100	Y	Y	Y	Y	
Ireland	2500	2600	1350	800	350	Y	
Italy	1900	2000		Y			
Lithuania	202	202					
Netherlands	8555	9000	Y	Y	Y	Y	
Norway	370	400	Y				
Russia	2800	3000	50	150	2200	1400	1200
Serbia	75	85			Y		
Slovakia	900	950		Y	Y	Y	Y
Slovenia	1000	n/a		Y	Y	Y	
South Africa	n/a	n/a		Y	Y		
Sweden	n/a	n/a	Y	Y			
Switzerland	3460	3700			Y	Y	Y
US	n/a	n/a					
TOTAL – 27 countries	51,905	53,057	9 countries	17 countries	19 countries	11 countries	6 countries

¹ The overview of differences between Syntax level 3 and 4 can be found on [GS1 website](#).



Note: "Y" means that no information about the number of users, even estimated, is available to this Member Organisation, although the version is known to have been used.

Additional comments about versions of GS1 EANCOM®

¹ **GS1 Austria:** Syntax 4 is used only for an invoice with a signature

² **GS1 El Salvador:** The ORDERS is implemented with 3 retailers (2 super markets: Super Selectos and Walmart, and 1 department store: Almacenes SIMAN) and 72 suppliers, but not all the suppliers are working with the 3 retailers

³ **GS1 Hungary:** Estimated numbers

Note: More information about GS1 EANCOM® can be found at the
[GS1 website](#)

Or from the local GS1 Member Organisation.

3.2 EANCOM® message implementations

A total of 43 EANCOM® messages have been reported as implemented, the most popular being ORDERS (Order), INVOIC (Invoice), DESADV (Despatch Advice), PRICAT (Price/Sales Catalogue), ORDRSP (Order Response), RECADV (Receiving Advice) and INVRPT (Inventory Report). This order is very similar to previous years. Table 4 below contains the details of messages used.

Table 4: List of EANCOM® message implementation per country

Country	Master Data				Pre-Order			Order					Transport & Delivery								Payment					Report & Planning								Other			# by country										
	PARTIN	PRICAT	PRODAT	PROINQ	CNTCND	REQOTE	QUOTES	ORDCHG	ORDERS	ORDRSP	OSTENQ	OSTRPT	HANMOV	INSDS	IFTMBF	IFTMBC	IFTMIN	IFCSUM	IFTSTA	IFTMAN	DESADV	RECADV	RETANN	RETINS	INVOIC	TAXCON	REMADV	COMDIS	COACSU	PAYMUL	APERAK	BANSTA	CREMUL	CONTRL	DELFOR	DIRDEB		FINSTA	INVRPT	MSCONS	OALITY	SLSFCT	SLSRPT	CONDRA	GENRAL	AUTACK	
Argentina	Y						Y	Y	Y											Y	Y	Y		Y		Y																	Y			12	
Australia		Y					Y	Y	Y												Y	Y			Y	Y							Y					Y	Y	Y							13
Austria		Y	Y	Y			Y	Y	Y			Y	Y		Y	Y	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y		Y		Y	Y	Y			Y	Y	Y	Y		Y	Y				32
Belarus	Y	Y	Y	Y			Y	Y	Y	Y	Y										Y	Y			Y		Y	Y				Y								Y				Y		19	
Belgium & Luxembourg							Y	Y				Y	Y		Y					Y	Y	Y	Y	Y	Y	Y	Y	Y				Y								Y		Y				18	
Canada		Y		Y		Y	Y	Y		Y	Y	Y	Y				Y				Y				Y			Y														Y			16		
Croatia		Y					Y														Y	Y			Y																				5		
Czech Republic	Y	Y	Y				Y	Y		Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y		Y	Y		Y	Y			Y	Y				Y		26	
Denmark	Y	Y					Y	Y				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y			Y		Y	Y	Y		Y	Y					Y				25		
El Salvador							Y																																						1		
Germany	Y	Y		Y	Y	Y	Y	Y	Y			Y	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y	Y	Y			Y		Y	Y							Y	Y					29		
Hong Kong							Y	Y													Y				Y	Y																	Y			7	
Hungary ¹	Y	Y					Y	Y													Y	Y			Y																				7		
Ireland							Y	Y	Y												Y	Y			Y	Y			Y		Y										Y				10		
Italy		Y					Y	Y	Y												Y	Y			Y	Y																Y			10		
Lithuania	Y	Y	Y	Y			Y	Y	Y												Y	Y			Y																				10		
Netherlands		Y	Y				Y	Y	Y				Y			Y					Y	Y		Y	Y	Y	Y		Y			Y									Y				15		
Norway		Y					Y	Y													Y				Y				Y																	6	



4. GS1 XML

4.1 Number of GS1 XML and implemented versions

In 2017, the implementation of GS1 XML standards was reported by 26 countries. The most widely used version set of GS1 XML standards was 2.x, and out of the three latest EDI releases 3.0 and 3.1 were implemented in more countries than the other ones.

Table 5: List of countries where the GS1 XML standards are used:

COUNTRY	2017	Est. 2018	1.X	2.X	3.0	3.1	3.2	3.3
Argentina	2200	2200		2200				
Australia	n/a	n/a		Y	Y	Y		
Austria	46	50		1		44	1	
Belgium & Luxembourg	n/a	n/a						
Canada	2	2						
Croatia	150	200						
Denmark ¹	120	140		Y				
El Salvador ²	2						2	
Finland								
Germany	500	520		370	20	50	55	5
Ireland	4	9			4			
Italy ³	250	350		Y		Y		
Lithuania	829	860		18		596	215	
Macedonia	14	30					14	
Netherlands	150	200				Y	Y	Y
Paraguay	270	350		270				
Philippines	n/a	n/a						
Russia	1700	2500			250	350	1100	
Serbia	135	155		75	40	20		
Singapore	600	n/a	Y					
Slovenia	100			60				40
South Africa	50	55		Y			Y	Y
Sweden	5000	5200				Y		
Switzerland	25	35				Y		
USA								
TOTAL – 25 countries	12,147	10,956	1 country	11 countries	5 countries	10 countries	8 countries	4 countries

Note: "Y" means that no information about the number of users, even estimated, is available to this Member Organisation, although the version is known to have been used.

Additional comments

¹ **GS1 Denmark:** [Ver 2.x used for] GUSI INVOICE

² **GS1 El Salvador:** 2 suppliers at the moment, but I don't know the roll-out, probably in this year will be just the local suppliers

³ **GS1 Italy:** Yes, for Cash Handling and GDSN. 2.8 for Cash EDI

4.2 GS1 XML message implementations



The details of the implementation of particular messages are presented in Table 6 on the following pages.

Last year, the most widely implemented GS1 XML messages were Order, Despatch Advice, Receiving Advice and Invoice, similar to the previous years.

Note: The table lists official GS1 XML message names.

Visit GS1 website to find:

- [More information about GS1 XML](#)
- [Definitions of messages and their components](#) and [information about GS1 XML design](#)
- [Download message packets](#)

Or contact the local GS1 Member Organisation.



Table 6: List of GS1 XML EDI message implementations per country

Country	Align	Order			Deliver						Transport Management				Warehousing						Pay				Plan				Other		# of messages by country							
	Item Data Notification	Order	Configure to Order	Order Response	Consumption Report	Despatch Advice	Despatch Advice – Cash Handling Ext.	Despatch Advice – Fish Traceability Ext.	Despatch Advice - Meat Product Ext.	Inventory Report	Receiving Advice	Transport Capacity Requirements	Transport Instruction &Response	Transport Status Request &Notification	Transport Pick-up Drop-off Request &Conf.	Warehousing Inbound Instruction	Warehousing Inbound Notification	Warehousing Outbound Instruction	Warehousing Outbound Notification	Warehousing Operations Instruction	Warehousing Operations Notification	Logistics Inventory Report Request	Logistics Inventory Report	Advanced Remittance Notification	Claims Notaification	Request for Payment	Debit or Credit Advice	Invoice	Settlement	Goods Requirements		Goods Requirements Response	Purchase Conditions	Replenishment Proposal	Replenishment Request	Application Receipt Acknowledgement	Product Recall	
Argentina		Y								Y																												3
Australia	Y	Y		Y	Y					Y		Y	Y													Y	Y	Y	Y	Y					Y	Y	15	
Austria	Y	Y															Y																		Y		4	
Croatia	Y	Y																																			2	
Denmark	Y	Y				Y			Y	Y																		Y									6	
El Salvador																											Y										1	
Germany		Y		Y		Y		Y	Y	Y		Y	Y	Y			Y	Y									Y										12	
Ireland		Y		Y		Y				Y																	Y										5	
Italy ¹	Y	Y		Y		Y	Y			Y																								Y			7	
Lithuania		Y		Y		Y				Y																Y		Y									6	
Macedonia		Y		Y		Y			Y	Y																		Y									6	



Country	Align	Order			Deliver							Transport Management				Warehousing						Pay					Plan				Other		# of messages by country						
	Item Data Notification	Order	Configure to Order	Order Response	Consumption Report	Despatch Advice	Despatch Advice – Cash Handling Ext.	Despatch Advice – Fish Traceability Ext.	Despatch Advice - Meat Product Ext.	Inventory Report	Receiving Advice	Transport Capacity Requirements	Transport Instruction &Response	Transport Status Request &Notification	Transport Pick-up Drop-off Request &Conf.	Warehousing Inbound Instruction	Warehousing Inbound Notification	Warehousing Outbound Instruction	Warehousing Outbound Notification	Warehousing Operations Instruction	Warehousing Operations Notification	Logistics Inventory Report Request	Logistics Inventory Report	Advanced Remittance Notification	Claims Notaification	Request for Payment	Debit or Credit Advice	Invoice	Settlement	Goods Requirements	Goods Requirements Response	Purchase Conditions		Replenishment Proposal	Replenishment Request	Application Receipt Acknowledgement	Product Recall		
Netherlands	Y	Y		Y		Y				Y	Y				Y	Y	Y	Y	Y	Y	Y	Y						Y	Y										22
Paraguay		Y																								Y	Y												3
Russia	Y	Y		Y		Y				Y	Y																Y	Y											7
Serbia		Y		Y		Y				Y	Y																Y	Y											6
Singapore		Y		Y																							Y	Y											3
Slovenia		Y		Y		Y				Y	Y		Y									Y					Y	Y						Y					10
South Africa ²	Y	Y		Y											Y		Y						Y	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y				15
Sweden	Y											Y			Y	Y	Y	Y																					6
Switzerland	Y	Y		Y		Y				Y												Y	Y				Y	Y											8
TOTAL	10	18	0	13	1	12	1	0	1	8	12	0	5	2	2	3	2	5	3	1	1	1	2	3	1	1	2	3	16	2	3	3	1	2	2	5	1		

Additional comments about GS1 XML messages

¹ **GS1 Italy:** Only for Cash Handling

² **GS1 South Africa:** We would like to implement Product Recall

5. GS1 profiles of the UN/CEFACT XML messages

GS1 has developed subsets (profiles) of four UN/CEFACT XML messages:

- Cross Industry Order
- Cross Industry Order Response
- Cross Industry Despatch Advice
- Cross Industry Invoice

Four MOs reported that these profiles either have been implemented in their countries or such implementation is being considered, but only two pointed specific message being implemented. The results are presented in Table 7 below.

Table 7: Implementation of GS1 profiles of UN/CEFACT XML

COUNTRY	Cross Industry Order	Cross Industry Order Response	Cross Industry Despatch Advice	Cross Industry Invoice
Croatia				
El Salvador				
Germany ¹				Y
South Africa	Y	Y	Y	Y
TOTAL	1	1	1	2

Additional comments about GS1 UN/CEFACT profiles

¹ GS1 Germany: ZUGFeRD

6. Web EDI

The Web EDI involves the exchange of electronic documents via an internet enabled platform. The business messages are available to the users as web forms that can either be filled-in manually or in automated way. The message is then converted by the translation application into the suitable EDI standard and transferred to the other user company.

GS1 does not provide separate guidelines for the WEB EDI, but some GS1 MO do provide local guides.

Table 9: List of countries where Web EDI is used:

COUNTRY	2017	Est. 2018	COUNTRY	2017	Est. 2018
Argentina	1200	1200	Japan	n/a	n/a
Australia	n/a	n/a	Latvia	599	758
Austria	810	910	Lithuania	561	600
Belarus	1200	1500	Macedonia	14	30
Belgium & Luxembourg ¹	n/a	n/a	Netherlands	650	700
Canada	902	927	Norway ³	n/a	n/a
Colombia	200	200	Paraguay	172	250
Croatia	95	110	Russia	30000	35000
Czech Republic	530	550	Serbia	170	180
Denmark	1000	1100	Singapore	600	600
El Salvador ²	n/a	n/a	Slovakia	n/a	n/a
Finland	200	200	Slovenia ⁴	300	300
Germany	6000	6200	South Africa	650	690
Hong Kong	1900	1900	Sweden	n/a	n/a
Hungary	500	500	Switzerland	n/a	n/a
Ireland	n/a	n/a	Vietnam	n/a	n/a
Italy	500	500			
Total	In 2017: 48,753 in 33 countries, estimated for 2018: 54,905				

Note: "n/a" means that no information about the number of users, even estimated, is available to this Member Organisation, although the Web EDI solutions are known to have been used.

Additional comments about Web EDI

- ¹ **GS1 Belgium & Luxembourg:** We do know the numbers are raising, because retailers keep on onboarding new suppliers. Lots of them use webEDI solutions.
- ² **GS1 El Salvador:** The information that we know is that 1 retailer has a Web EDI solution, and the 72 suppliers has the option, but we don't know the number that are using it.
- ³ **GS1 Norway:** There are several thousands of WEB EDI users. Numbers are not known
- ⁴ **GS1 Slovenia:** ZZI Net environnement

7. Non GS1 EDI standards and solutions

Non-GS1 EDI standards have been implemented in 27 countries. The most widely used ones are: UBL and various local standards (including ANSI X12). These results are very similar to previous years. The details can be found in Table 10 below.

Table 10: List of non GS1 EDI standards used in GS1 member countries:

Country	Standard	# of users	
		2017	Est. 2018
Australia	ANSI X12	n/a	n/a
	RosettaNet	n/a	n/a
	Proprietary XML	n/a	n/a
Austria ¹	UN/EDIFACT	n/a	n/a
	ebInterfaceXML	n/a	n/a
	Odette/VDA	n/a	n/a
Belgium & Luxembourg	BIS + e-fff (so not only for B2G)	n/a	n/a
	Tradacoms	n/a	n/a
	Bilaterally agreed flat files anSd xml	n/a	n/a
Brazil	Details n/a	n/a	n/a
Canada	ANSI X12	n/a	n/a
Croatia	OAGI	2	n/a
	UBL	2	n/a
Denmark	UBL 2.1 Invoice	200,000	200,000
	MEDCOM medical communication EDIFACT	2,600	2,600
El Salvador ²	SIDUNEA WORLD	n/a	n/a
	CEPA (Comisión Ejecutiva Portuaria Autónoma)	n/a	n/a
Finland	TIEKE's national standards	n/a	n/a
Germany	OpenTrans	n/a	n/a
	BMEcat	n/a	n/a
	EDIFACT-Subsets	n/a	n/a
Hong Kong	Healthcare Equipment Maintenance Order and Order Response	25	25
Hungary ³	EDIFACT (not EANCOM)	100	n/a
India	Details n/a	n/a	n/a
Ireland	TradaComs	n/a	n/a
	BASDA 5DIY/Hardware)	n/a	n/a
	ANSIX12	n/a	n/a
Italy	XML PA per pblic administration	n/a	n/a
Japan	Ryutsu BMS	11800	12300
Latvia	Details n/a	797	890
Lithuania	UBL invoice (All companies supplying goods and services to the public sector)	n/a	n/a
Netherlands ⁴	EDIFACT	n/a	n/a
	BG Pharma protocol	n/a	n/a
	BMECAT	n/a	n/a
Norway ⁵	local profile e2b Invoice XML	1000	1000
	local profile EHF XML used in public procurement	10000	10000
Russia	Tax EDI	2350000	2350000
	FSS EDI	2350000	2350000



	Customs EDI	85000	90000
Serbia	Details n/a	n/a	n/a
Singapore	Details n/a	n/a	n/a
Slovenia ⁶	e-Slog	5000	5000
South Africa	Details n/a	n/a	n/a
Sweden	UBL	n/a	n/a
	National format based on XML developed by the Building and construction sector	n/a	n/a
	Odette	n/a	n/a
Switzerland	Details n/a	n/a	n/a
Total	27 countries	5,016329	5,021818

Note: "n/a" means that no information about the number of users, even estimated, is available to this Member Organisation, although the standard is known to have been used.

Additional comments about non-GS1 EDI standards

¹ **GS1 Austria:** UBL

² **GS1 El Salvador:** In Central America in borders and frontiers to Customs are using/implementing a System named SIDUNEA WORLD, provided by UNCTAD. It manages the messages to import and export used in the region. In CEPA (Comisión Ejecutiva Portuaria Autónoma / Autonomous Port Executive Commission) have developed csv and xls files to interchange information about the goods especially with courier companies.

³ **GS1 Hungary:** estimated number

⁴ **GS1 Netherlands:** Also UBL, IHE, Dicom

⁵ **GS1 Norway:** All numbers are guestimates

⁶ **GS1 Slovenia:** Number of users is total guesswork. There is no available and reliable source of numbers of users

8. Communication methods used to exchange EDI messages

The most popular communication channel used to send the EDI messages is AS2, followed by Web Services and Value Added Networks. This result is similar to previous years, but it is clear that more and more companies use Internet to exchange EDI messages, hence the growing popularity of AS2 and web services. The details are presented in Table 11 below.

Table 11: List of communication methods used to exchange EDI messages.

COUNTRY	AS1	AS2	AS3	AS4	Web Services	ebMS	VAN	Other
Argentina		Y						
Australia	Y	Y	Y		Y	Y	Y	
Austria		Y					Y	Y
Belarus		Y			Y			
Belgium & Luxembourg ¹		Y		Y	Y		Y	
Canada ²		Y			Y		Y	FTP, SFTP, Direct FTP, TLS
Croatia		Y			Y		Y	
Czech Republic	Y	Y			Y		Y	Y
Denmark		Y	Y				Y	Y
El Salvador		Y			Y			FTP
Germany		Y			Y		Y	e. g. FTP
Hong Kong		Y					Y	VPN
Hungary		Y			Y		Y	
Ireland		Y			Y		Y	SFTP, FTP, x.400
Italy		Y			Y			
Japan		Y				Y		Jx
Latvia		Y						
Lithuania				Y	Y		Y	
Macedonia					Y		Y	
Netherlands		Y			Y	Y	Y	
Norway							Y	FTP and others
Paraguay					Y			
Russia		Y			Y		Y	FTP, SFTP, OFTP, FTP/VPN, JMS, X400, E-Mail
Serbia			Y		Y			Y
Singapore		Y			Y			
Slovakia		Y			Y		Y	
Slovenia		Y					Y ³	SFTP
South Africa		Y			Y		Y	
Sweden		Y			Y		Y	
Vietnam	Y	Y						Y
Total	3	25	3	2	21	3	20	13

Additional comments about EDI communication methods

¹ **GS1 Belgium & Luxembourg:** We don't have information about this. We know that VANs, webservices and ASx methods are been used.

² **GS1 Canada:** VAN: 1190 users, AS2: 4 users

³ **GS1 Slovenia:** Panteon Group Network X400



9. GS1 EDI implementation overview since 2005 and future trends

The EDI implementation survey has been run for 13 years now. Although a large part of data is based on estimation since absolute figures often are very difficult to obtain, these are made by people the most suitable for that: the GS1 Member Organisation staff members, having daily contact with their user community.

Due to some inconsistencies in the responses received every year, the charts presented below the chart represent statistical approximation of the 12 year results. Thus, they should be considered only as a trend illustration, rather than absolute figures.

Figure 3 illustrates the implementation of GS1 EANCOM® and GS1 XML in last 13 years, and the forecast for 2018.

The Web EDI implementation is growing at even a greater rate, which indicates that also smaller companies and organisations are increasingly embracing EDI based information exchange. See figure 4.

From the chart it is clear that GS1 EANCOM® is far from being an 'old and obsolete' technology. The number of users amongst GS1 member companies is now more than 100,000 companies and in 2018 it is forecasted to increase by further 5.000. The details of the GS1 EANCOM® implementation results are presented in Figure 5.

The newer – comparing to the 'classic' EDI – GS1 XML standard after a period of modest implementation levels during first years, is now exceeding 35.000 companies. The details of the GS1 XML implementation results are presented in Figure 6.

Please note that the slight dip in some of the figures in last years does not mean that the implementation rate is decreasing, but more GS1 MOs base the figure they report on actual market data, rather than estimation. Besides, some MOs from countries where EDI is widely implemented did not provide figures this year, hence some correction of the reported numbers.

In general, the interest and actual adoption of the electronic form of business documents exchange is constantly growing, confirming the benefits the companies can get from this form of business integration.

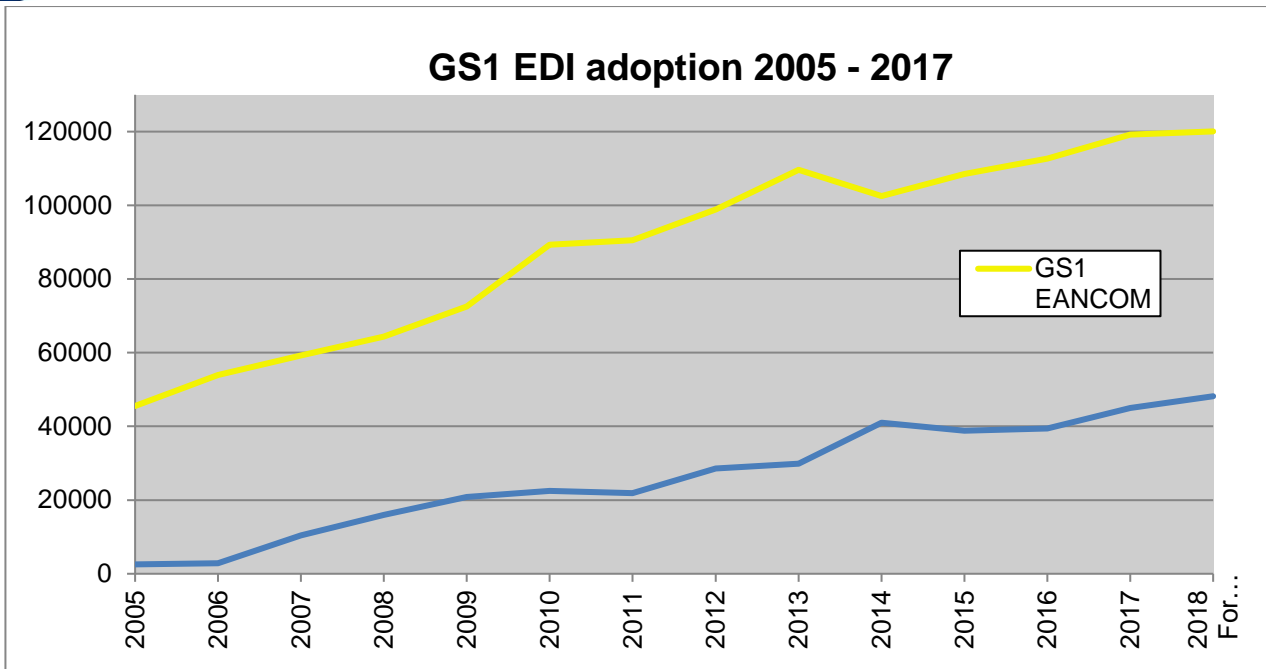


Figure 3: Adoption of GS1 EDI standards 2005-2017 and forecast for 2018

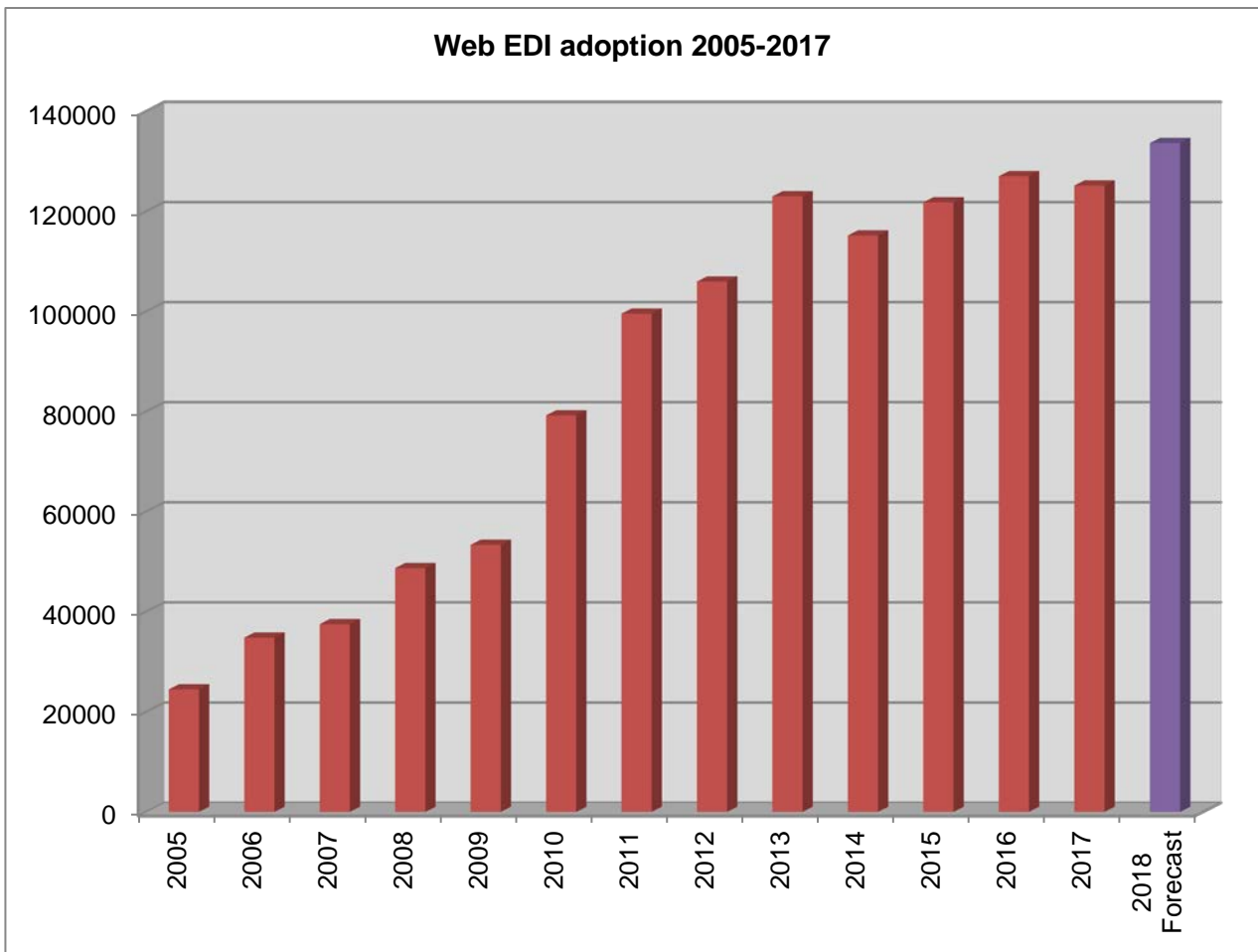


Figure 4: Adoption of Web EDI 2005-2017 and forecast for 2018

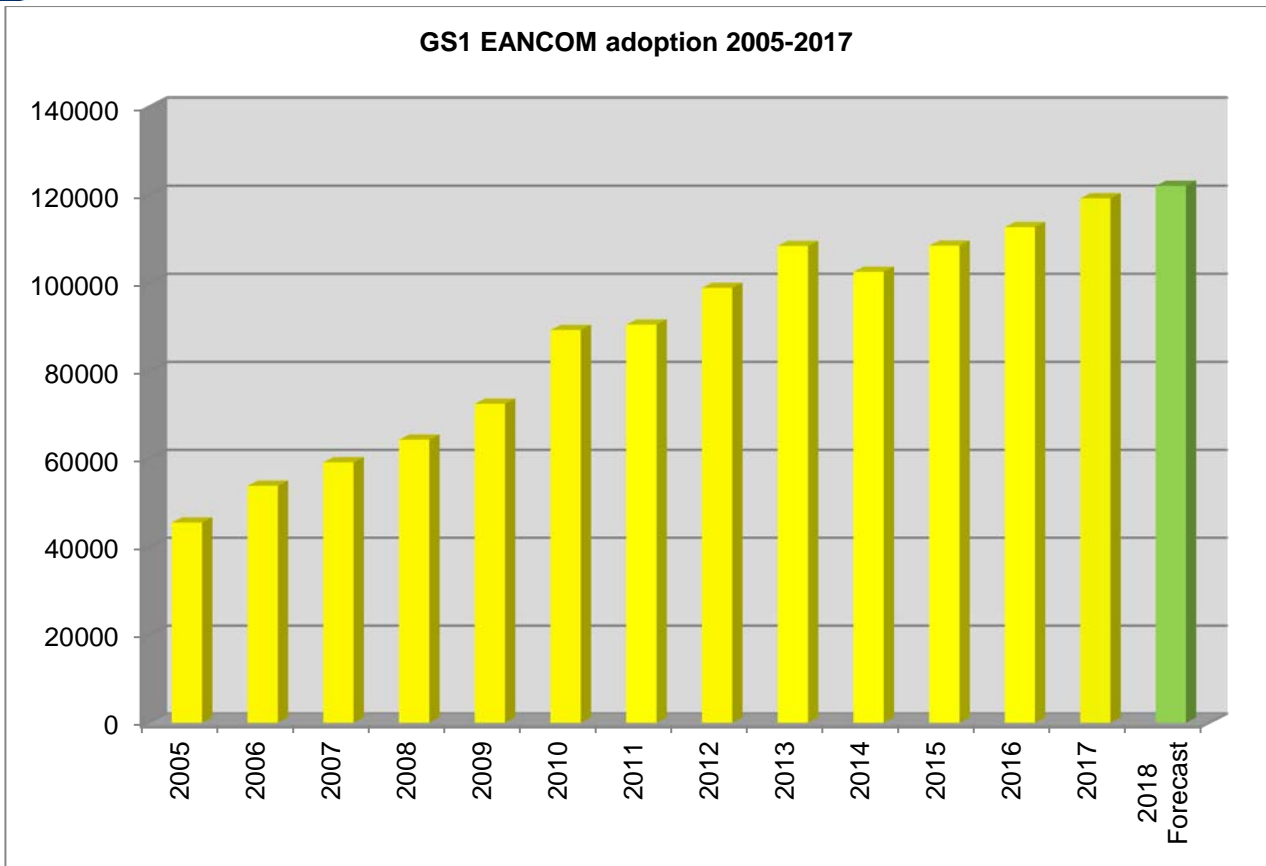


Figure 5: Adoption of GS1 EANCOM® 2005-2016 and forecast for 2017

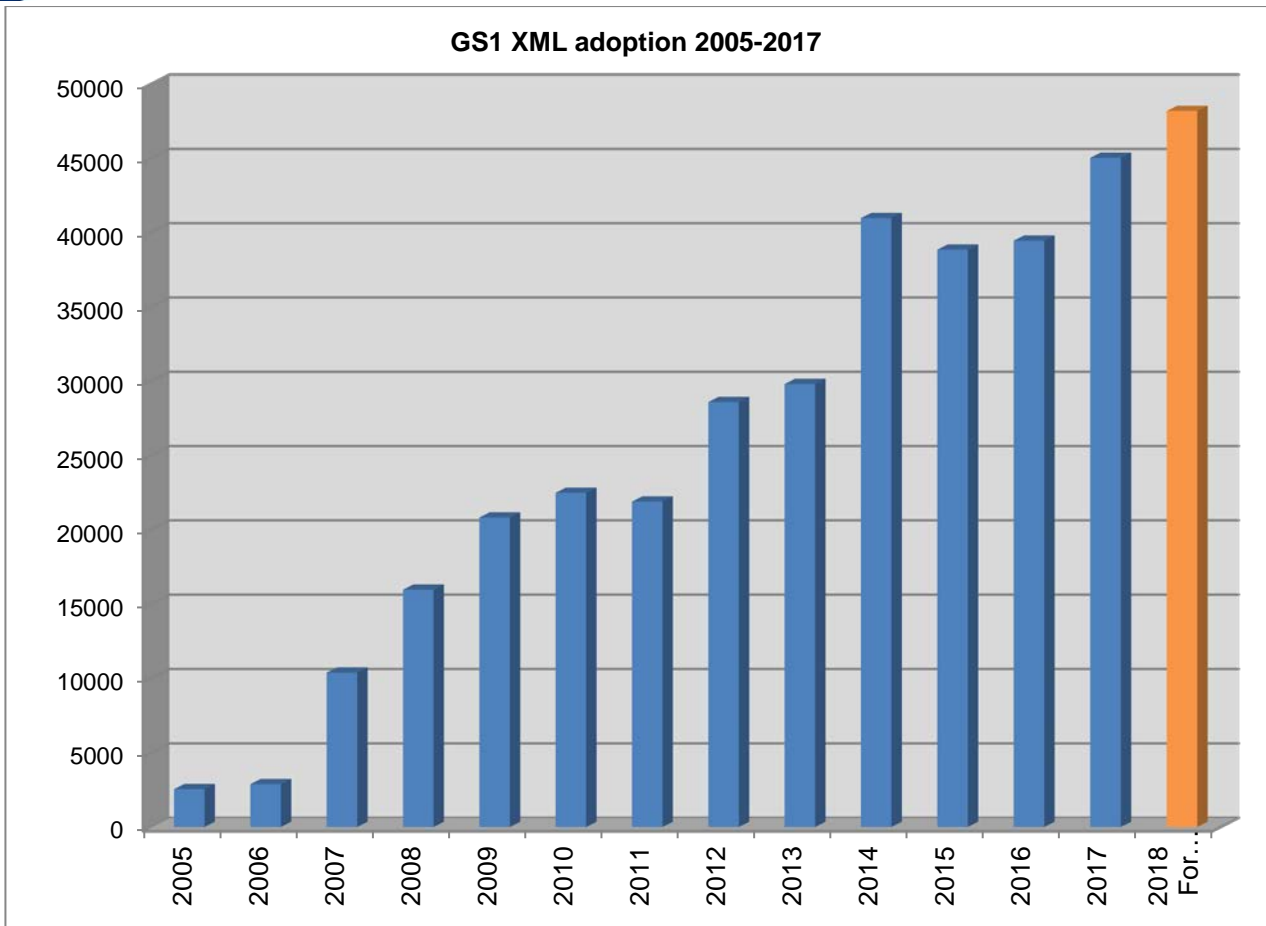


Figure 6: Adoption of GS1 XML 2005-2016 and forecast for 2017

10. Sectors using EDI standards

This section describes the EDI standards implemented in: Healthcare, Apparel Footwear & Fashion, Public Procurement and Transport & Logistics.

10.1 Use of EDI standards in Healthcare

In Healthcare sector, we asked questions about the implementation of the GS1 EDI standards: GS1 EANCOM® and GS1 XML, as well as HL7 – widely used by Healthcare worldwide and possible other standards. We asked also whether the newly published [GS1 EDI Healthcare Guidelines](#) are implemented in by GS1 members and whether they are used for new implementations or as a base for update of existing local guidelines.

The results received from 18 countries are presented in Table 12 below.

Table 12: Use of EDI standards in Healthcare sector

COUNTRY	EANCOM®	GS1 XML	HL7	Other	GS1 Global HC Guidelines		
					Used	New impl.	Local guide update
Argentina		Y					
Australia ¹	Y	Y	Y				
Austria	Y				Y	Y	
Belarus	Y				Y		Y
Belgium & Luxembourg ²				Y			
Canada			Y	Y	Y		Y
Czech Republic ³	Y						
Denmark	Y						
Germany	Y	Y			Y	Y	
Hong Kong	Y						
Ireland	Y	Y			Y	Y	
Macedonia ⁴		Y					
Netherlands	Y	Y	Y	IHE, Dicom, BG pharma protocol	Y	Y	
Russia	Y			Y			
Serbia		Y					
Slovenia ⁵		Y	Y				
South Africa	Y	Y					
Sweden	Y				Y		
Switzerland		Y			Y	Y	
TOTAL 29	12	10	4	4	8	5	2

Additional comments

¹ **GS1 Australia:** Working to get local industry aligned with the guidelines and migrate to GS1 XML 3.1

² **GS1 Belgium & Luxembourg:** 3-corner-model "eHealth". We never got their manuals, so we don't know exactly which standards they are using.

³ **GS1 Czech Republic:** PHARMACEUTICAL INDUSTRY

⁴ **GS1 Macedonia:** only on one biggest Macedonian distributors company from pharmaceutical sector

⁵ **GS1 Slovenia:** HL7 is used for administrative reasons

10.2 Use of EDI standards in Apparel, Footwear & Fashion

In Apparel, Footwear & Fashion sector we checked implementation of the GS1 EDI standards: GS1 EANCOM® and GS1 XML, as well as and possible other standards. The results received from 11 countries are presented in Table 13 below.

Table 13: Use of EDI standards in Apparel, Footwear & Fashion sector

COUNTRY	EANCOM®	GS1 XML	Other
Austria	Y		
Belarus	Y		
Belgium & Luxembourg	Y		
Czech Republic	Y		
Denmark	Y	Y	UBL
El Salvador ¹	Y	Y	
Germany	Y		e. g. PRANKE
Ireland	Y		
Italy	Y		eBiz
Japan			Ryutsu BMS
Netherlands	Y		Pranke
Russia	Y		Y
TOTAL 11	11	2	6

Additional comments

¹ **GS1 El Salvador:** Almacenes SIMAN (department store)



10.3 Use of EDI standards in Public Procurement

In Public Procurement sector we checked implementation of the GS1 EDI standards: GS1 EANCOM® and GS1 XML, as well as and possible other standards. The results received from 9 countries are presented in Table 14 below.

Table 14: Use of EDI standards in Public Procurement sector

COUNTRY	EANCOM®	GS1 XML	Other
Australia		Y	
Austria	Y		ebInterfaceXML, UBL
Belgium & Luxembourg	Y		UBL
Czech Republic			UBL based syntax
Germany	Y		
Italy			UBL for PEPPOL and XML PA (italian standard for public administrations)
Netherlands			UBL
Sweden	Y		
Vitenam			UN/EDIFACT CUSCAR D98B
TOTAL 9	4	1	6

Additional comments

GS1 Ireland: None in active use yet. In Ireland, there is no legislation in place specifically relating to the support for, or provision of, electronic invoicing (eInvoicing) in the Public Sector.

10.4 Use of EDI standards in Transport, Warehousing, Logistics & Delivery

Because of significant difficulty in separating out the implementation of EDI for Transport & Logistics and other processes, we calculated the number of GS1 XML and EANCOM® logistic and warehousing messages reported by each country. The results are presented in Table 15 below.

Table 15: Use of EDI standards in Transport, Warehousing, Logistics & Delivery

COUNTRY	EANCOM®	GS1 XML
Argentina	Y	
Australia	Y	Y
Austria	Y	Y
Belarus	Y	
Belgium & Luxembourg	Y	
Canada	Y	
Croatia	Y	
Czech Republic	Y	
Denmark	Y	
Germany	Y	Y
Hong Kong	Y	
Hungary	Y	
Ireland	Y	
Italy	Y	
Lithuania	Y	
Netherlands	Y	Y
Norway	Y	
Russia	Y	
Serbia	Y	Y
Slovakia	Y	
Slovenia	Y	Y
South Africa		Y
Sweden	Y	Y
Switzerland	Y	
TOTAL 23	23	8

10.5 Use of EDI standards in other sectors

EDI is used by GS1 Member Companies in other sectors. For the following twelve implementation areas we checked implementation of the GS1 EDI standards: GS1 EANCOM® and GS1 XML, as well as other standards. The results received from 5 countries are presented in Table 16 and 17 below.

Table 16: Use of EANCOM in other sectors

Country	FMCG (Fast Moving Consumer Goods)	Foodservice	DIY (Do It Yourself) products	Construction, plumbing, electro-technical products	Media and Entertainment	Consumer Electronics	Upstream (EDI between consumer goods manufacturers and their suppliers)	Waste management	Cash handling	RTI (Returnable Transport Items) management	Agricultural Crop data information sharing	Customs
Austria	Y	Y	Y			Y	Y	Y		Y		
Belgium & Luxembourg ¹	Y	Y	Y	Y		Y	Y			Y		
Germany	Y	Y	Y		Y	Y	Y	Y	Y	Y		
Netherlands ²	Y		Y				Y			Y		
Sweden	Y	Y										
TOTAL	5	4	4	1	1	3	4	2	1	4	0	0

Table 16: Use of GS1 XML in other sectors

Country	FMCG (Fast Moving Consumer Goods)	Foodservice	DIY (Do It Yourself) products	Construction, plumbing, electro-technical products	Media and Entertainment	Consumer Electronics	Upstream (EDI between consumer goods manufacturers and their suppliers)	Waste management	Cash handling	RTI (Returnable Transport Items) management	Agricultural Crop data information sharing	Customs
Austria	Y								Y			
Germany	Y						Y		Y	Y		
Netherlands ²		Y								Y		
TOTAL	2	1	0	0	0	0	1	0	2	2		

Additional comments about EDI in other sect

¹ **GS1 Belgium & Luxembourg:** Cash handling: proprietary national bank, Customs: proprietary customs

² **GS1 Netherlands:** Construction: Propriety XML solution, BMECAT



Appendix 1 List of EDI related projects and / or experiences

This Appendix contains a list of projects and / or experiences that particular MOs would like to share with the GS1 Community.

The MO employees interested in details of any of those projects should contact directly the respective Member Organisation and the user company employees can receive more details via their local MO.

Country	Projects to share
Belgium & Luxembourg	GS1 Belgium & Luxembourg considers BIS to be the format for cross sector transactions: B2G + B2B and will support it.
Ireland	Quote from TrueCommerce: "Woodies DIY has been a great success for a sector that needed to adjust to align itself with EDI. They are using GS1 GLN for all suppliers, have required GTIN use from suppliers, have 100% of their supply chain on EDI or Web EDI and are looking to improve processes further through automation."
Italy	We are in charge with Cash EDI project. We also follow the italian discussion about eInvoicing B2B as mandatory.
Netherlands	<p>1. GS1 NL has become responsible for the maintenance of the OpenTripModel. OpenTripModel is a simple, free, lightweight and easy-to-use data model, used to exchange real-time logistic trip data on the web, and making it easier for shippers, carriers, software vendors, OEMs, and truck manufacturers to create new multi-brand application and services.</p> <p>2. GS1 Netherlands has a complete suite of EDI messages and tools to speed up the adoption of EDI in the Fashion sector, based on the set of 7 messages developed by GS1 Germany. GS1 Netherlands has updated 3 of these messages in order to support the omnichannel and the shop-in-shop business models: PRICAT, SLSRPT, INVRPT. In addition to these technical documents, we have also developed:</p> <ul style="list-style-type: none"> • Message implementation guidelines for the Dutch Fashion market • An online EDI testservice Fashion. This service will test the conformity of: <ul style="list-style-type: none"> o the EDIFACT version o the syntax o the structure of the fields o the validation of used fields in respect mandatory, optional and conditional use • e-learning GS1 EDI Fashion; knowledge test regarding technical specifications and the message implementation guideline • A bench mark for EDI solution providers has been launched this month. First results will be published on the 30th of March: <ul style="list-style-type: none"> o Knowledge: which solution providers got certificates by the testservice and e-learning o Experience: which solution providers have implemented which messages o Note: all at voluntary base and no additional costs for those who are a member of GS1 <p>All documentation and services are in English available. MO's can contact our CTO/Industry Manager Fashion Loek Boortman for more information and/or a free account to have a look at the documentation and services.</p>
Slovenia	CashEDI based on GS1 XML 3.3
Sout Africa	We need to build capacity as we do not have sufficient resoruces