



# GDSN DataCrunch in Healthcare

GS1 Healthcare Conference Lisbon

Sergi Vilella, Health Technical Responsible, **GS1 Spain**

Fernando Priego, Senior Manager, **IMS Health**



# Agenda

- Introduction
- Spanish Healthcare System
- Objectives
- Methodology
- Results
- Impact on healthcare sector
- Conclusions





ims | INTELLIGENCE.  
APPLIED.

# Local Membership Figures

## Number of members:

- Manufacturers 45%
- Medical Devices Suppliers 47%
- Wholesalers 5%
- Hospitals & Regional Health Services 3%

982

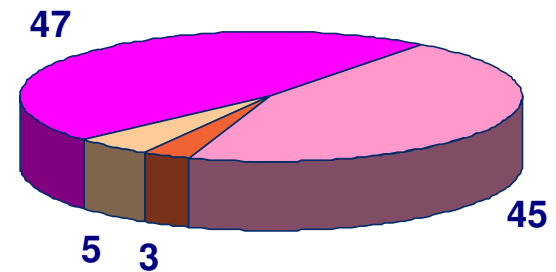
## Additional Information:

- EDI Users 430

## Employee's working in healthcare :

- 3 (2 – Full time 100%; 1 – Part time 30%)

GS1 Spain Healthcare membership structure



- Wholesalers
- Medical Devices
- Manufacturers
- Hospitals & R.H.S.

# The Spanish Healthcare Landscape

Responsibilities for public authorities on health:

<p><b>CENTRAL GOVERNMENT</b></p>	<ul style="list-style-type: none"> <li>• HEALTH BASIC PRINCIPLES AND COORDINATION</li> <li>• FOREIGN HEALTH AFFAIRS</li> <li>• PHARMACEUTICAL POLICY</li> <li>• MANAGEMENT OF INGESA (CEUTA AND MELILLA)</li> </ul>
<p><b>AUTONOMOUS REGIONS</b></p>	<ul style="list-style-type: none"> <li>• HEALTH PLANNING</li> <li>• PUBLIC HEALTH</li> <li>• HEALTHCARE SERVICES MANAGEMENT ←</li> </ul>

- There are 804 hospitals operating in Spain:
  - ✓ National Health System: 315 H. (105.505 beds)
  - ✓ Ministry of Defence: 4 H. (995 beds)
  - ✓ Mutual of Accidents and Occupational Diseases: 20 H. (1.468 beds)
  - ✓ Private functional dependence: 465 H. (53.013 beds)

# The Spanish Healthcare Landscape



Private Sector (25%)  
vs  
Public Sector (75%)

**For the Public sector:**  
17 Autonomous Healthcare  
Service Areas in Spain



**9 Healthcare Services Areas  
are promoting GS1 Standards (\*)**

(\*) 2 Healthcare Services Areas  
have a project (2013)

# Objectives of the study

- **Collect the needs and functionalities** covered by the current model/s of data synchronization.
- **Highlight the strengths and weaknesses** of the current model/s and the impact in terms of efficiency in trade relations with suppliers.
- **Comparative analysis cost/benefit** of the current model/s vs the GDSN model.
- **Analyze the Data Quality in the DD.BB.** of the study participants.
- **Demonstrate** that lack of data synchronisation affects product costs from the very first time of ordering, and patient safety.

## Vision/Strategy (1-3 year objective)

- Engage the local community in GDSN implementation initiative.
- Education on Data Quality and GDSN.
- Develop GS1 Data Model for medical devices in coordination with the central government and the autonomous regions.
- Run Initial Implementations and report on findings.
- In parallel: GDSN deployment in Pharma with Pharmaceutical companies and Distributors.

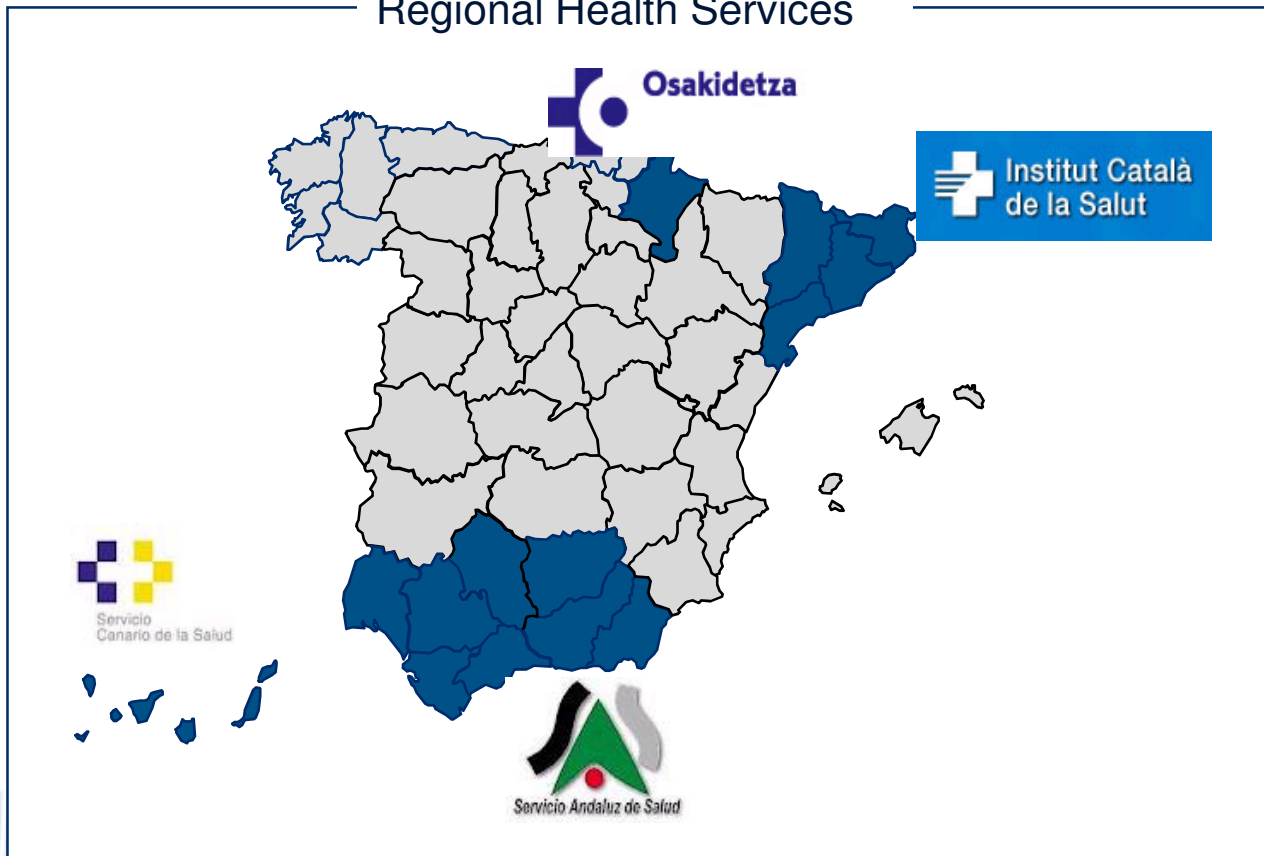




ims INTELLIGENCE.  
APPLIED.

The aim of the project is to evaluate the quality of data of the Medical Devices products

### Regional Health Services



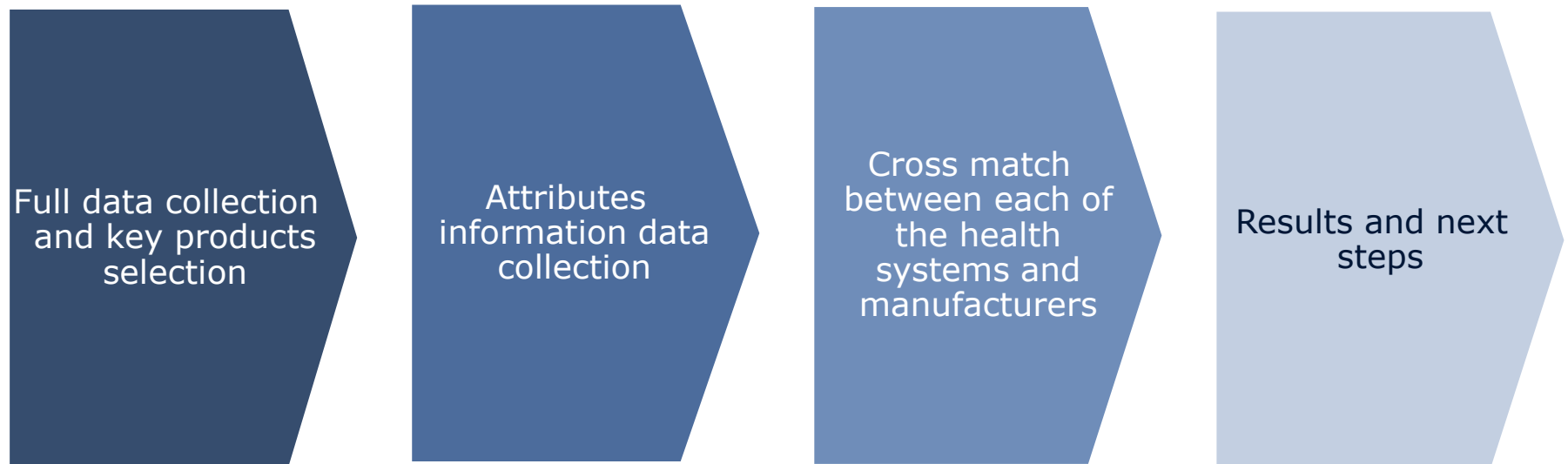
### Companies







## The methodology aims to identify inefficiencies on the medical devices stakeholders records



The project is driven by GS1 Spain, getting the players onboard and analyzing the results, and IMS, receiving, processing and getting the results to be analyzed and shared for next steps



ims INTELLIGENCE.  
APPLIED.

# Each Health System sent their DDBB with all the products for each manufacturer

## Participants

Osakidetza

Institut Català de la Salut

Servicio Canario de la Salud

Servicio Andalúz de Salud

Boston Scientific  
Defining tomorrow, today.

BD

3M

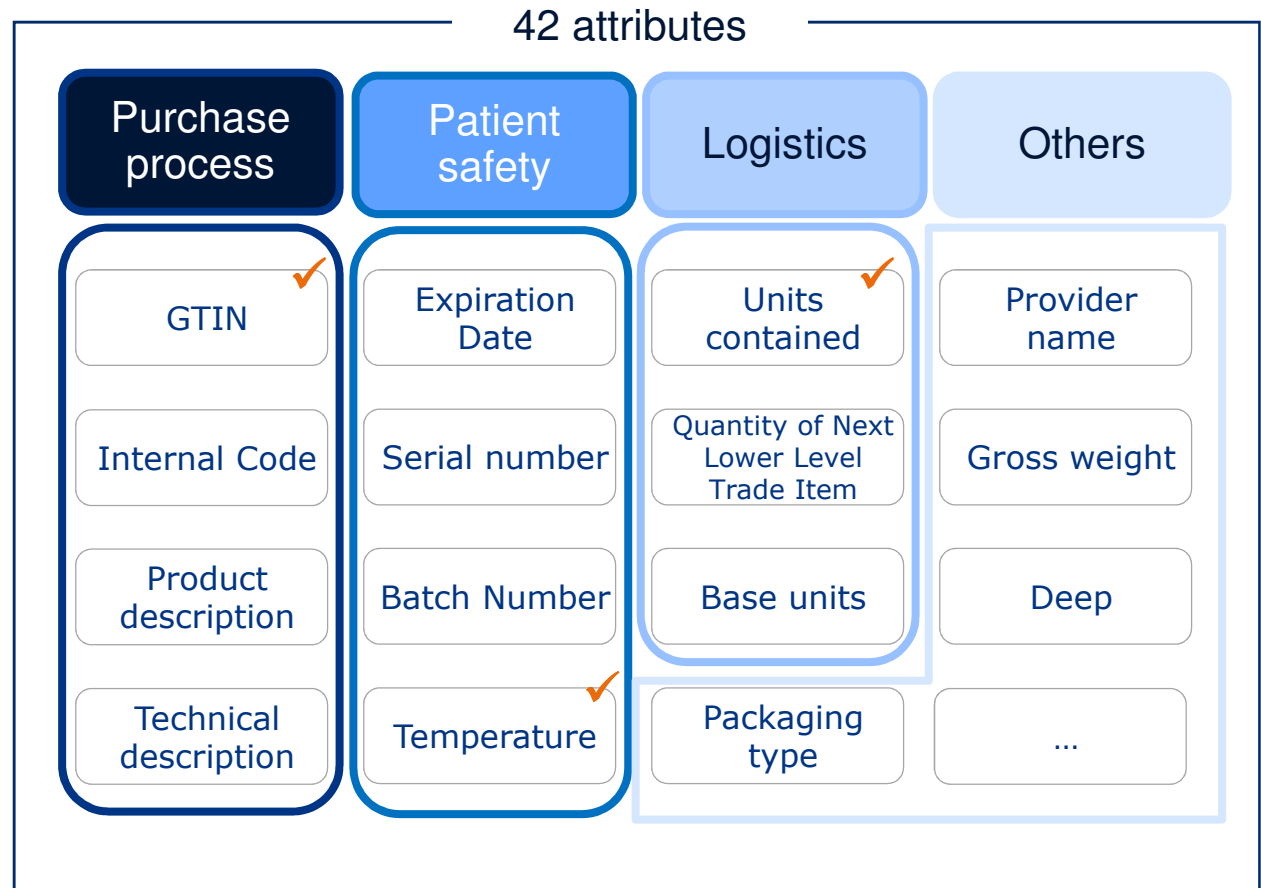
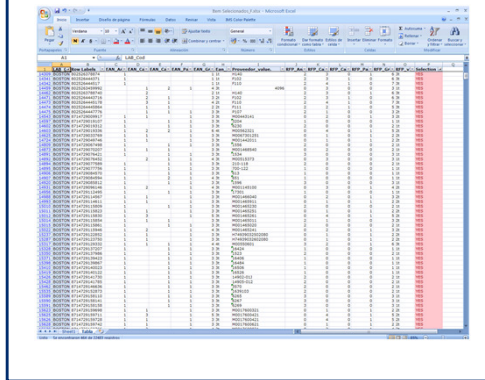
Johnson & Johnson  
MEDICAL

## 22.483 products

## 1.018 products selected for the study

For those 1.018 products, we asked the information related to 42 attributes to both health systems and manufacturers to be compared

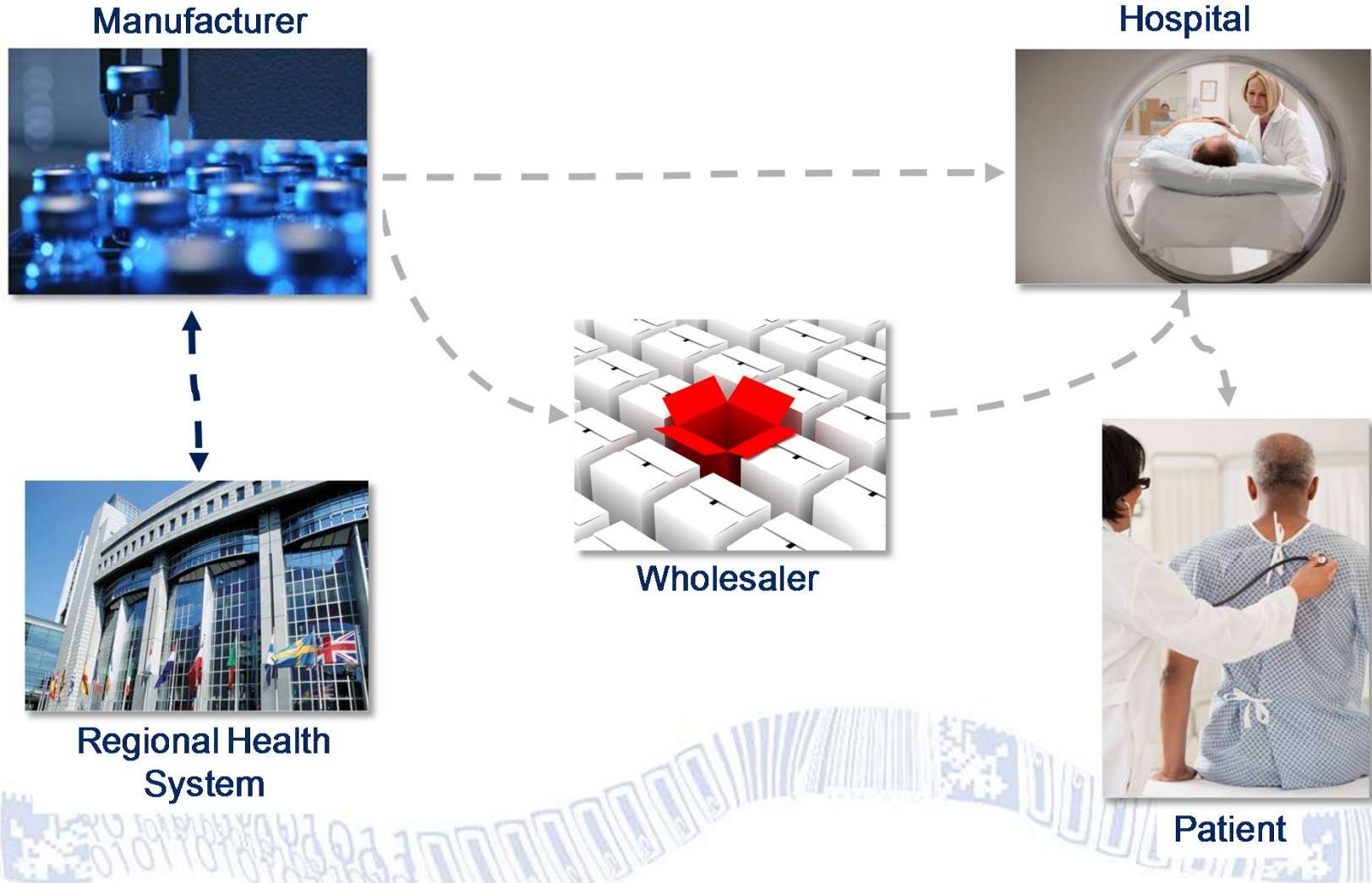
1.018 products





ims INTELLIGENCE.  
APPLIED.

# The product distribution flow is affected by the quality of the databases records





# When we crossed the GTIN between players, 14-25% of the records don't match

<b>Items Selected by GTIN</b>	1018
-------------------------------	------

	Items Seleted
MNF1	112
MNF2	464
MNF3	151
MNF4	291

<b>Region 1 Records provided</b>	712	70%
----------------------------------	-----	-----

Labs	Records Matched	%Match selected
MNF1	22	20%
MNF2	255	55%
MNF3	101	67%
MNF4	204	70%
Others (not Matched)	130	18%
Total	712	

<b>Region 3 Records provided</b>	514	50%
----------------------------------	-----	-----

Labs	Records Matched	%Match selected
MNF1	30	27%
MNF2	230	50%
MNF3	60	40%
MNF4	63	22%
Others (not Matched)	131	25%
Total	514	

<b>Region 2 Records provided</b>	1018	100%
----------------------------------	------	------

Labs	Records Matched	%Match selected
MNF1	48	43%
MNF2	395	85%
MNF3	102	68%
MNF4	204	70%
Others (not Matched)	269	26%
Total	1018	

<b>Region 4 Records provided</b>	697	68%
----------------------------------	-----	-----

Labs	Records Matched	%Match selected
MNF1	5	4%
MNF2	356	77%
MNF3	50	33%
MNF4	188	65%
Others (not Matched)	98	14%
Total	697	



## When analyzing the product description, we found that any of the records match

While the manufacturers are using the product name attribute, the health governments are not using this attribute but the “free description and short free description” to describe the product. Those two attributes are much more difficult to match as they are normally manually fielded.

GTIN	Player	Nombre Funcional	DescripcionLibre	DescripciónLibreCorta
30382903001850	CCAA2		Xeringa de 3 cossos de 2 ml amb connexió luer concèntrica .Apirògena, estèril i d'un sol ús. Cos transparent, amb escala impresa	Xeringa 3 cossos 2 ml luer concèntrica
30382903001850	MNF3	Jeringa 3 piezas	Jeringa de tres piezas, cuerpo, émbolo y junta de estanqueidad. Cono luer concéntrico. Capacidad 2 ml. Cilindro transparente. Graduación impresa, imborrable y de fácil lectura, con impresión acentuada de la escala. Anillo de seguridad reforzado. No conti	Jeringa 3 piezas 2 ml

The quantity of products in each box is well codified by the players

Although there is just one regional government and three manufacturers providing the information

Row Labels	Ref Code	CCAA	Contenidas(CCAA)	LAB	Contenidas(Lab)
10382903520524	352052	CCAA2	125	MNF3	125
18711428049142	TNT100	CCAA2	125	MNF1	125
8426750117263	12559	CCAA2	400	MNF4	
8714729296638	M00545281	CCAA2	10	MNF2	10
8426750673301	TX30V	CCAA2	3	MNF4	

CCAA1, CCAA3 and CCAA4 haven't provided this key information in their records. MNF4 has neither delivered it.





## When comparing the temperature, all the players describe it differently

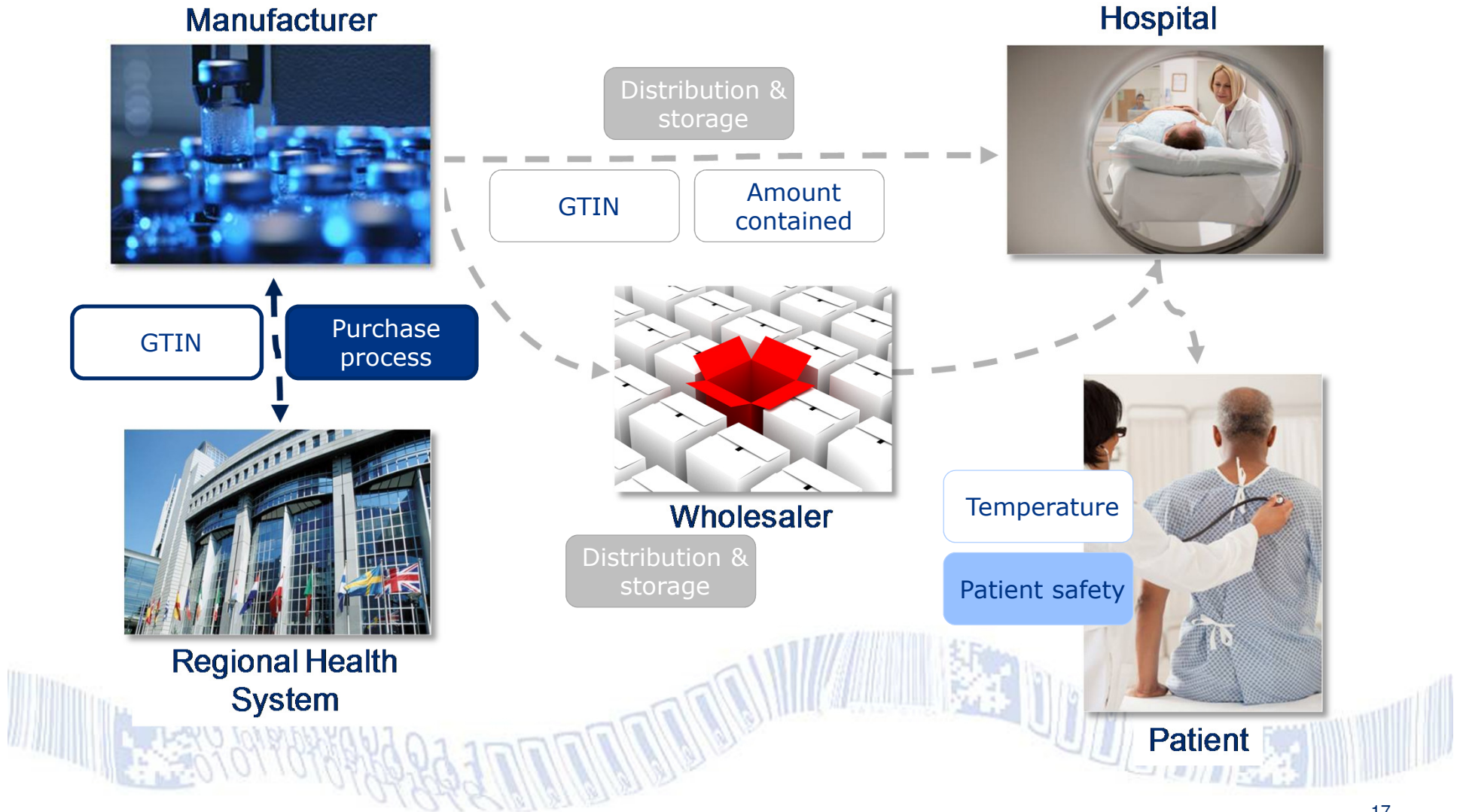
While the health systems are describing the temperature in grades (25º, 30º, 10º, etc...), the manufacturers are describing it in detail. This mismatch in the way both parties are describing the temperature happens between all the health systems and manufactures, each one using a different way of describing it

Row Labels	RefCode	CCAA	Temperature (CCAA)	LAB	Temperature (MNF)
30382903001850	300185	CCAA2	25	MNF3	AL - Almacenar en lugar fresco, oscuro y seco.
8426750746043	534-552S	CCAA2		MNF1	
8714729019336	M00562321	CCAA2	25	MNF4	SI - Sin instrucciones
50707387469035	3346E	CCAA2	25	MNF2	N





# The lack of match in the databases make the purchase and storage process, as well as the patient safety inefficient



## This situation has a direct impact in all the stakeholders of the market

### Regional Health Systems

- Purchase process inefficient due to mismatch of the GTIN
- Products not delivered on time and as needed

### Wholesalers

- Product delivery mistakes due to mismatch of the GTIN
- Issues of stock in the storage due to mismatch of the quantity

### Hospitals and Wholesalers

- Product needed not available on time
- Inefficiency on hospital stock and consumption process
- Product delivery mistakes due to mismatch of the GTIN
- Issues of stock in the storage due to mismatch of the quantity



## This situation has a direct impact in all the stakeholders of the market

Manufacturers

- Purchase process inefficient due to mismatch of the GTIN
- Transport costs and inefficiency in the logistic process
- Cost of the products not correctly treated in the distribution flow
- Client dissatisfaction

Patients

- Patient healthy needs to be ensured and may happen the product has not treated correctly through the distribution flow
- They are the final product user, directly impacted by the inefficiencies of the system





# Conclusions

1. Bad Data Quality across Health Regional Services product data catalogues.
2. Data Quality is the key for operational excellence and patient safety.
3. Lack of standardized product identification transmit the errors in to other important processes along supply chain.
4. Requirement of an harmonized Data Model across health regional services:
  - Attributes
  - Definitions
  - Validation rules





# Contact Details



Sergi Vilella  
Health Technical Responsible  
GS1 Spain  
+34 932 523 900  
svilella@gs1es.org

Fernando Priego  
Sr Manager, Production, GO  
IMS Health  
+34 915 578 500  
FPriegoCrespo@es.imshealth.com

