



Centre Hospitalier Intercommunal
Robert Ballanger

Unique Device Identification of Surgical Instruments



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Summary



- Presentation of Robert Ballanger Hospital
- The evolution of the traceability of sterile medical devices
- The project of Unique Device Identification
- Our next GS1 projects





Robert Ballanger Hospital

- Intercity hospital serving a population of 400,000 persons
- 650 beds
 - 450 beds in acute care (medical, chirurgicall and maternity)
 - 200 psychiatry beds
- Outpatient clinic and pharmacy inside Villepinte detention center
- CDG airport hospital





Traceability of Medical Devices in Robert Ballanger Hospital



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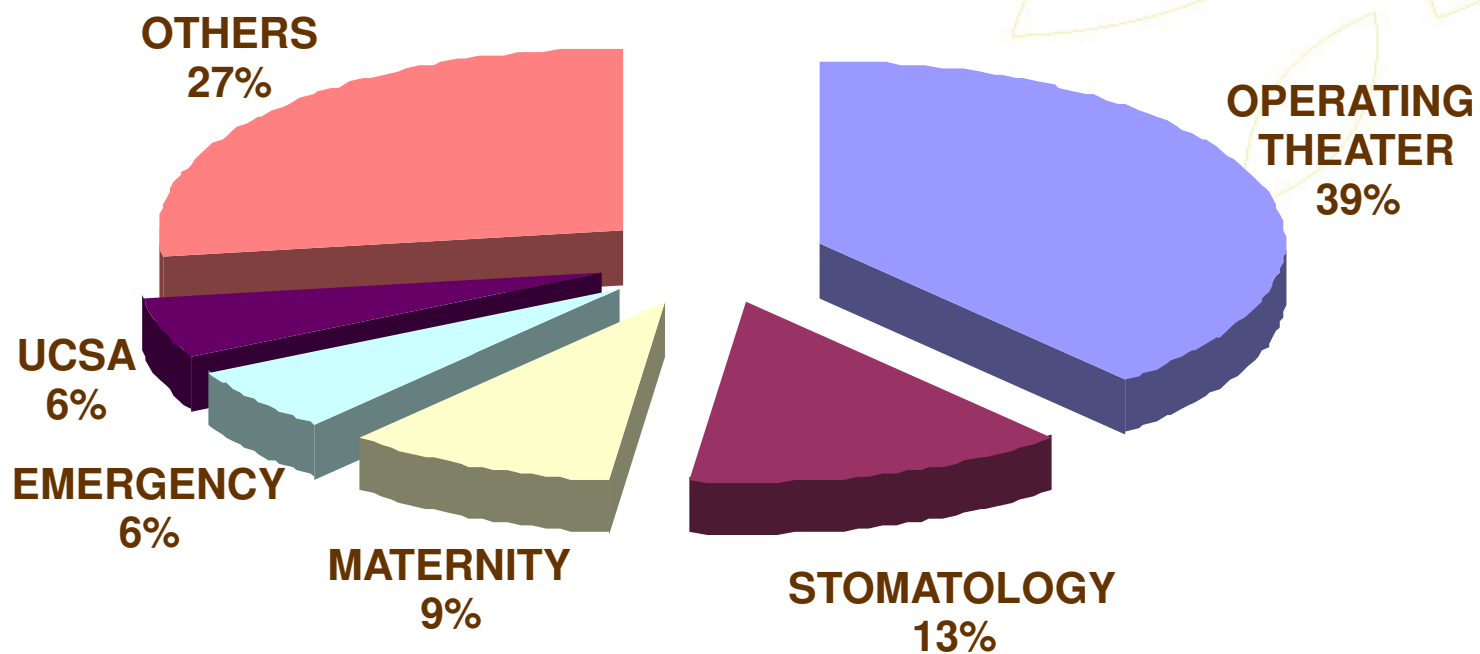
Sterilization unit



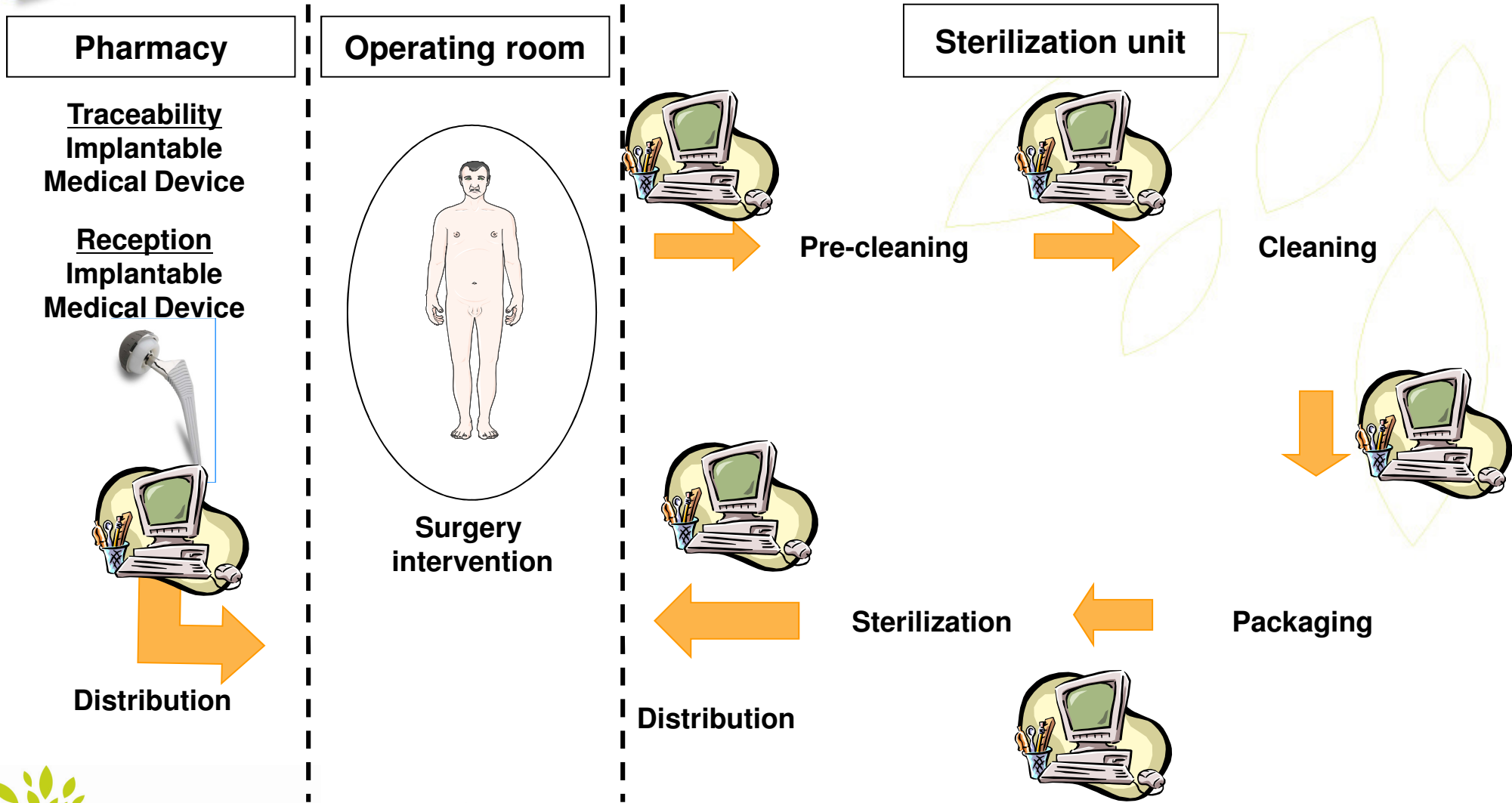
- 120 000 sterilized devices per year
- 20 000 surgery boxes per year



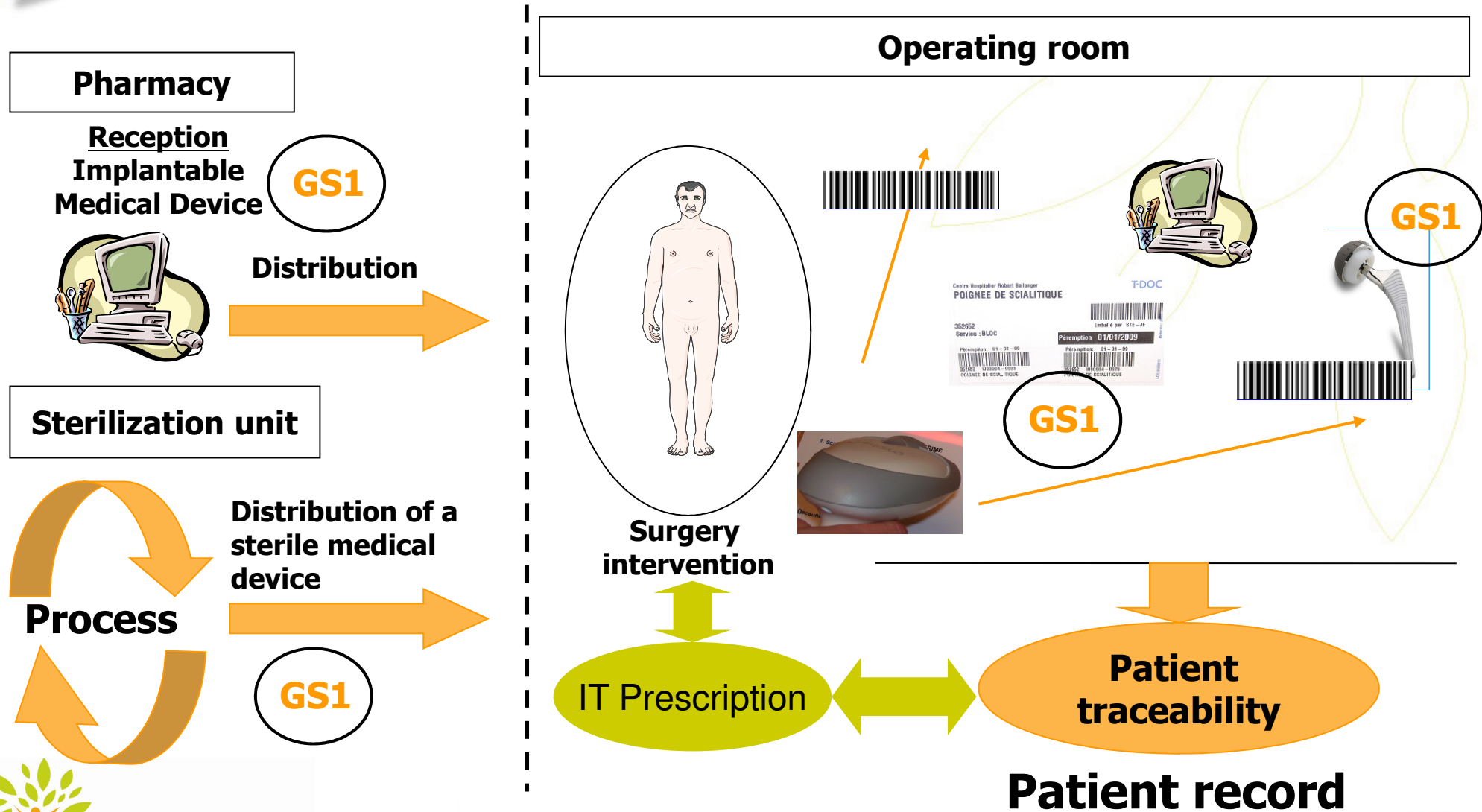
Repartition of the sterilisation unit activity



Traceability



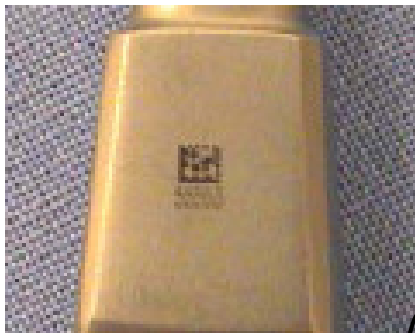
Traceability of Medical Devices with GS1 Standards



Unique Device Identification The CHIRB choice

DATAMATRIX

Laser



GS1

+

Industrial tagging
Easy reading
Industrial treatment
of instrument

-

Time to tag Devices

Infodot



+

Easy and fast tagging
Cost

-

Deterioration faster
than the others



Traceability in year 2009

The Robert Ballanger Hospital choice

DATAMATRIX		2009	% Traceability of instruments	% Traceability of sterilisations / year
INFODOT	Clinical services	4 000	35%	
LASER	Operating theater	1 000	10%	20%



DATA MATRIX LASER



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Non conformity of surgical boxes

8.7% of No Conformity

**Problem of packaging
5 %**

**Quality of Instruments
3.7%**

Can be resolved by UDI

Can Not be resolved by UDI

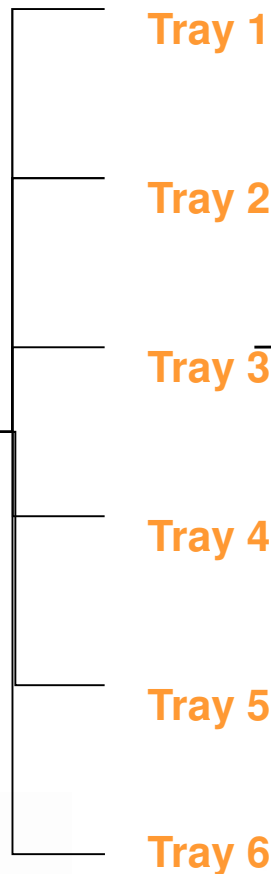
Number of instruments to tag

6 Trays / reference

39 instruments / tray

1 reference

**Caesarean
Tray**



Article name	N°	Quantity
BOITE INOX 42X18X9 CM	B120	1
MANCHE DE BISTOURI N° 4	M330	1
CISEAUX MAYO DROIT 16 CM	C111	1
CISEAUX MAYO COURBE 18 CM	C112	1
PINCE DISSECTION A/G 14 CM	P124	1
PINCE DISSECTION S/G 14 CM	P125	1
PINCES KOCHER A/G 14 CM	P126	6
PINCES KELLY DROITES S/G 14 CM	P127	6
PINCES KELLY COURBES S/G 14 CM	P128	6
PINCES A CHAMPS BACKHAUSS 12	P129	4
PINCE A PANSEMENT DROITE 24 CM	P130	1
PORTE-AIGUILLES MAYO-HEGAR 18	A440	1
PORTE-AIGUILLES DE DOYEN 14 CM	A441	1
ECARTEUR DE FARABEUF 12 CM	E550	1
ECARTEUR FARABEUF 15 CM	E551	1
VALVES DE KELLY 23 CM	V660	2
VALVES VAGINALES DE DOYEN 90 MM	V661	2
PINCE DISSECTION S/G 20 CM	D770	1
PINCE DISSECTION A/G 25 CM	D771	1

**234 instruments
for the reference
“Caesarean Tray”**



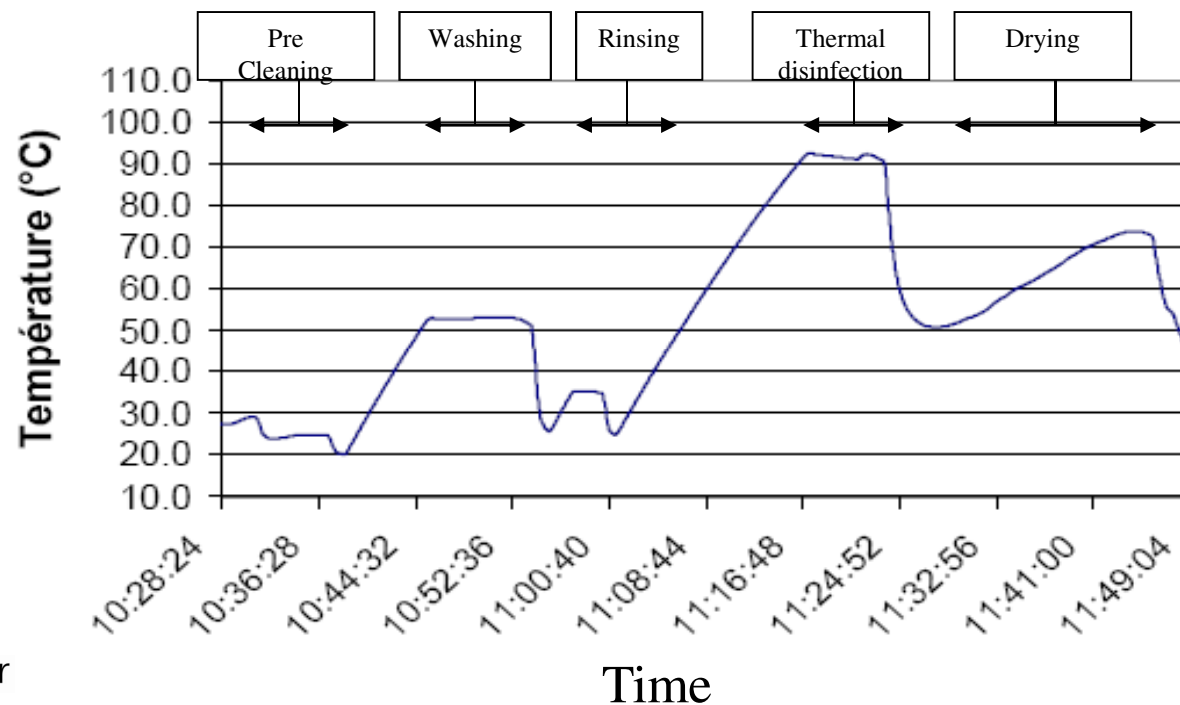
Number of instruments to tag

Surgical specialities									
	Orthopaedics	Visceral	Obstetric	ORL	Stomato	Urology	Infantil	Ophtalmo	Sum
Number of references	138	30	15	34	53	32	14	15	331
Number of trays	222	78	51	72	98	54	25	33	633
Trays which can not be tagged (implants)	60	2	0	6	18	8	0	1	95
Number of instruments to tag	3 270	1 899	1 107	945	1 673	712	672	382	10 660

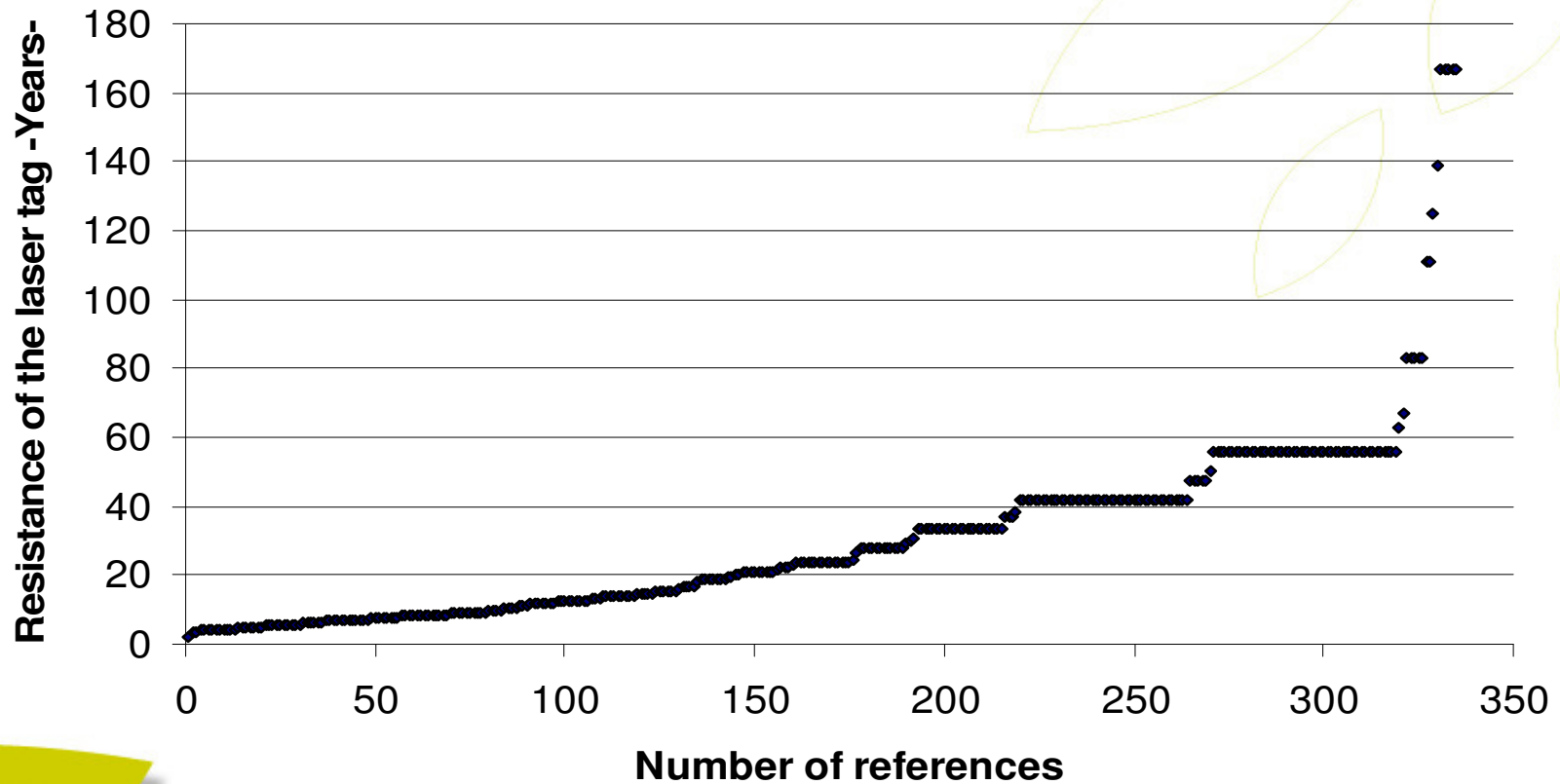


Tag resistance to sterilisation

- Test on 8 different instruments :
 - 95% inox – 5% titanium
 - laser datamatrix, stamping, infodot, RFID
- Result : 100% lisibility on Inox laser marked instruments after 200 sterilisation cycles



Resistance of the laser tag

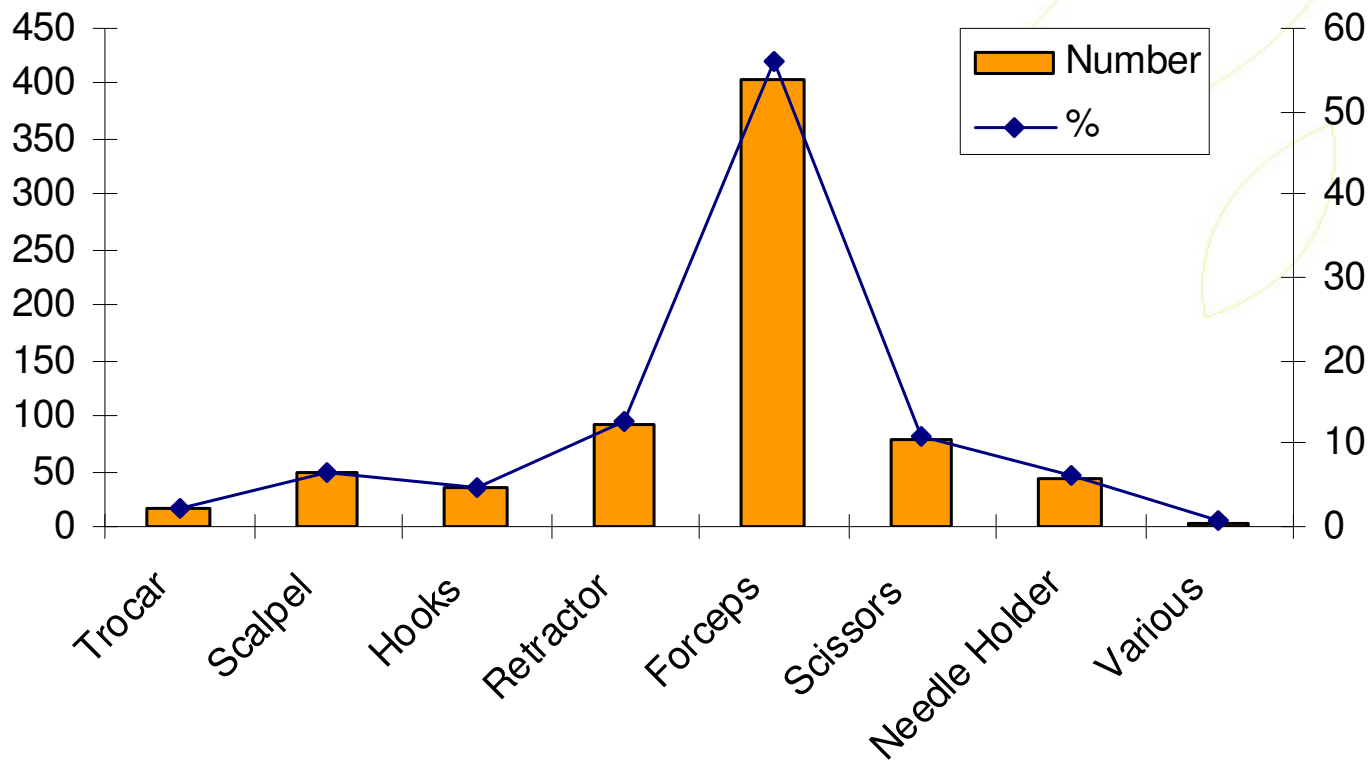


Number of instruments to tag

Life time of the tags : 200 cycles

Tag life time (LT) in years (based on number of sterilisation cycles / year)	N° references	N° Trays	N° instruments	N° tagging / 10 years	N° tagging / 20 years
LT < 2 years	1	3	30	161	323
2 years ≤ LT < 5 years	16	97	2 545	5 893	11 787
5 years ≤ LT < 10 years	66	148	3 438	5 053	10 106
10 years ≤ LT < 20 years	61	114	2 406	5 656	3 589
20 years ≤ LT	191	272	2 241	3 899	2 241
Total	335	634	10 660		
Number of markings if life cycle of <u>instruments</u> is 10 years				20 663	
Number of markings if life cycle of <u>instruments</u> is 20 years					28 045

Type of Tagged Instruments



N=719 Instruments Tagged



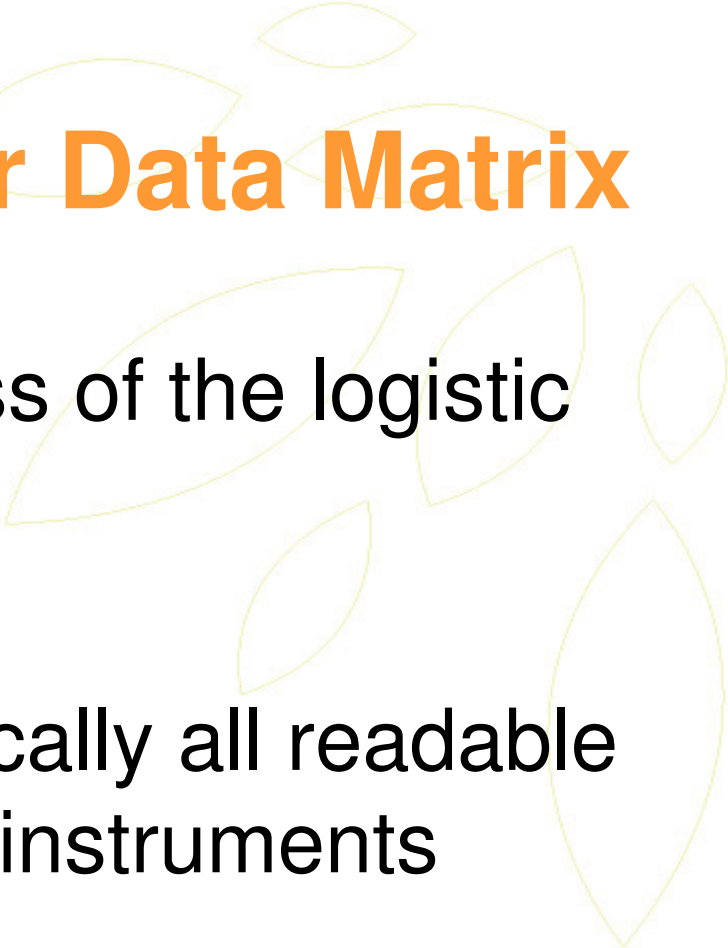
Logistic data

- 360 instruments can be tagged a week
 - Depending on supplier (500 a week for our French supplier)
 - Depending on the numbers of instruments that can be sent per week
- Percentage of code readable : >97%
 - 100 % technically readable when tested after their laser marking
 - Our choice : keeping speed of work by not reading very small instruments





Conclusion – Laser Data Matrix

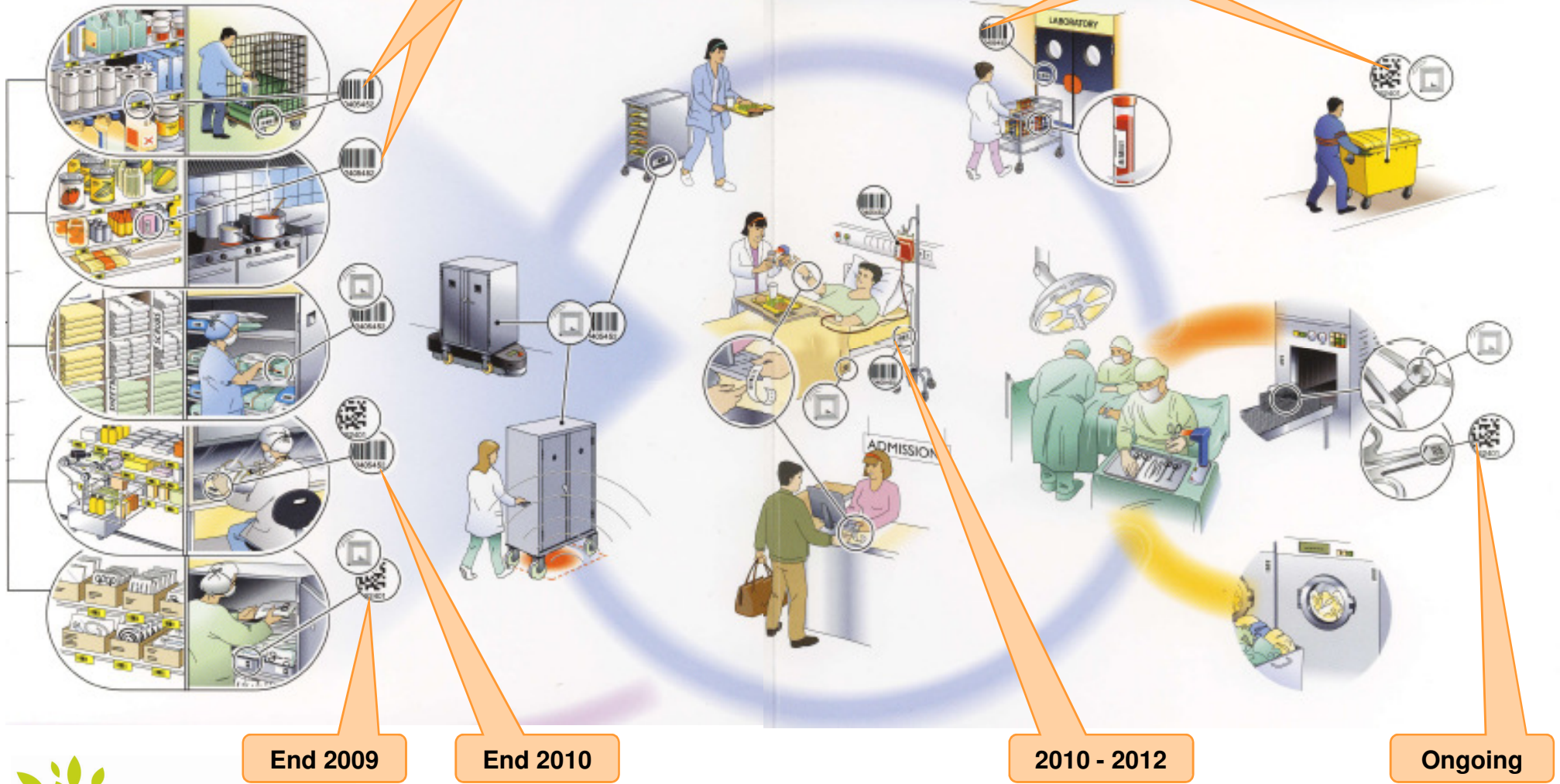
- First results show the easiness of the logistic of tagging
 - Laser 2D barcodes are practically all readable and it is possible to tag small instruments
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Our next GS1 projects

April 2010

2010 - 2012



End 2009

End 2010

2010 - 2012

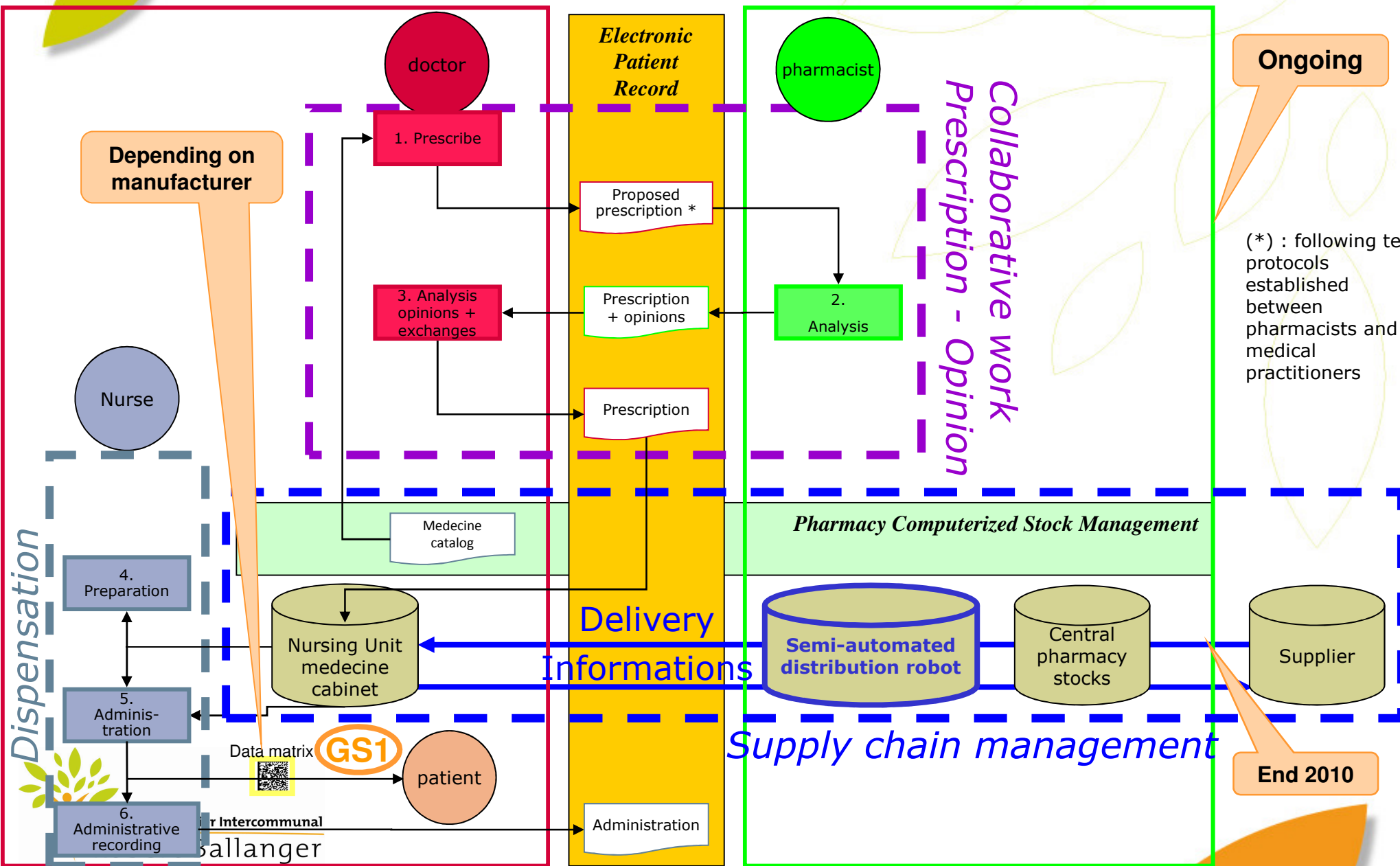
Ongoing



Link between prescription and material flow (GS1) : a focus on drug process

Ward / Nursing unit

Pharmacy





What are we all aiming for?

Improving patient safety



- And GS1 standards are helping us ...

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