



The Global Language of Business

# Barcodes add to supply chain efficiency and patient safety

subtitle:GS1 standards adoption in the Cardiac Cath. Lab.

GS1 Healthcare Webinar

---

Mr. Sotiris Tsiafos-Tsiaras, Military Pharmacist and Hospital Supply Chain Supervisor

Mr. Sam Lappas, Officer Nurse at the Cardiac Cath lab

401 Athens General Army Hospital in Greece

October 7, 2021



# GS1 Competition Law Caution

---

- GS1 operates under the GS1 Competition Law Caution. Strict compliance with competition 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 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>

# Please identify yourself: Name & organisation



## How to change your screen name:

**1**

After launching the Zoom meeting, click on the "Participants" icon at the bottom of the window.



**2**

In the "Participants" list on the right side of the Zoom window, hover over your name and click on the "Rename" button.



**3**

Type in the display name you'd like to appear in the meeting and click on "OK".





# Welcome and thank you for attending!

---

- Welcome to our October 2021 webinar.

Thank you to our guest speaker **Mr. Sotiris Tsiafos-Tsiaras**, Military Pharmacist, Hospital Supply Chain Supervisor and **Mr. Sam Lappas**, Officer Nurse at the Cardiac Cath Lab at 401 Athens General Army Hospital in Greece

- Some housekeeping for today:
  - All attendees will be in listening-only mode
  - If you have questions during the presentation, please type them into the questions area and these will be monitored then answered at the end of the call
- After the webinar:
  - Within a week, the recording will be posted to: [http://www.gs1.org/healthcare/hpac\\_webinars](http://www.gs1.org/healthcare/hpac_webinars)
  - All previous webinars are posted to this location, please feel free to use this resource and the link

# GS1 Healthcare Webinars

**Create a forum for the global clinical provider environment for thought leaders and adopters of GS1 Standards in healthcare. The final goal: improve patient safety, cost efficiency and staff productivity through the implementation of GS1 standards.**

**A forum for sharing and discussion**

**Identification of projects and case studies**

**A source of expertise and advice**

- The practical realities of implementation of GS1 Standards in the care giving environment in regard to the impact on clinical care and patient interaction
- Supporting the adoption of GS1 Standards in healthcare providers and retail pharmacies
- For publication, presentation and sharing
- To those involved in GS1 standards development, the wider Healthcare stakeholder community and senior executives/decision-makers to gain their buy-in and support for implementation of GS1 Standards

# Specific GS1 Healthcare Activities

## Webinars

- Bimonthly webinars open to all stakeholders interested in learning about GS1 standards implementation in the care giving environment.
- [http://www.gs1.org/healthcare/hpac\\_webinars](http://www.gs1.org/healthcare/hpac_webinars)

## Awards

- At each global GS1 Healthcare Conference
- Provider Implementation Best Case Study Award
- Provider Recognition Award
- The prize: travel & accommodation to attend the next GS1 Healthcare conference
- <http://www.gs1.org/healthcare/hpac>

GS1 Healthcare holds global conferences each year. In 2020, due to the pandemic we moved to Virtual Events.

The next GS1 Healthcare Virtual Event is scheduled from November 16-19, 2021. We will have significant Healthcare Provider participation on the agenda.

# Presenting today



## Sotiris Tsiafos-Tsiaras



Colonel Pharmacist, MSc  
Logistics & Supply Chain  
Management;  
401 Athens General Army  
Hospital;  
Former OR Traceability  
Manager;  
Recently logistics specialist  
in the Greek national  
covid-19 vaccination  
campaign task force

## Sam Lappas

Officer Nurse, Cardiac Cath Lab.  
401 Athens General Army Hospital



# 401 General Military Hospital of Athens





# Hospital Facts & Data



- Largest Military Hospital in Greece
  - 600 beds
  - 8 Active Operating Rooms
  - Cardiac Catheterization & Vascular Embolism Lab.
  - Cardiac surgery dept.
- 
- In **2020**:
  - 15.400 inpatients, 94.800 outpatients
  - 3.466 Operations (800 in the Cath. Lab)
  - ~ 12.000.000 € annual spend on pharmaceuticals & medical devices



# How did we get here ?



**2014 - 15**

Warehouse Management System  
implementation at the Greek Army Medical Supplies Centre



**Jan. 2018**

Started barcode scanning in the Cath. Lab.

**Sep. 2017**

Beginning of implementation in the O.R.



# (Not Only) Supply Chain Issues

---

- Proprietary hospital-only codes, difficulty in identifying items.
- **Manual** registering of items (Excel Catalogues)
- **No LOT/BATCH** or **Serial** registration/tracking
- Limited – inaccurate stock **visibility**
- Huge **paperwork** for the nursing staff (huge carbon footprint also!)
- Hundreds of valuable **hours lost** in administrative tasks
- Risk of **errors!**

# Business Case

---



- In an extremely difficult economic environment, we needed to:
  - ❖ **Improve hospital supply chain operations**
  - ❖ **Improve overall efficiency**
  - ❖ **Cut-down costs**
  - ❖ **Enhance patient safety**

# Business Case



- **Standardisation** of master item data & automated data **capture**
- GS1 system of standards: Global, robust, flexible, expandable
- **In-house development** of the software, funding needed only for the hardware
- **Multiple benefits:** Supply chain efficiency, patient safety, less working hours wasted
- A **proof-of-concept** in one operating theatre



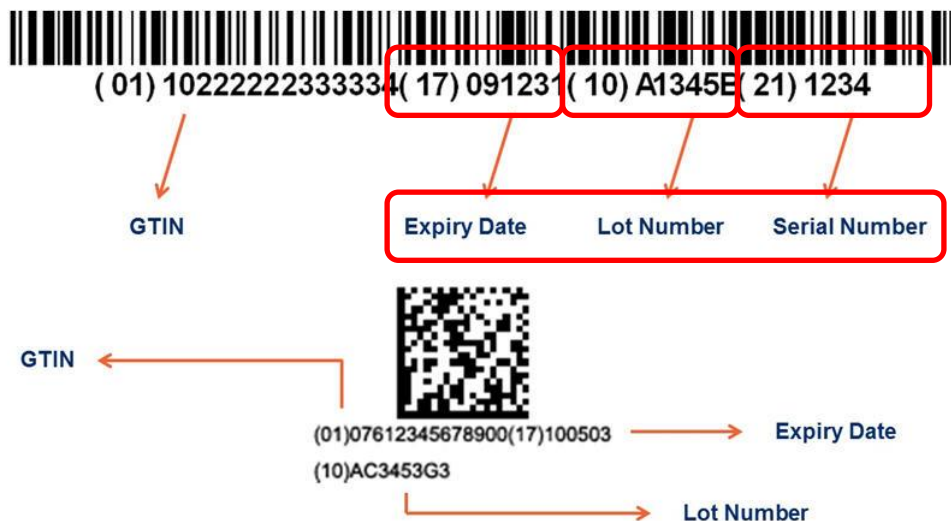
## SELECTED ITEMS

- **High-Risk / High-Cost medical devices**
  - Single-use surgical instruments
  - Implants (orthopaedic, heart replacement valves, intra-ocular lens etc.)
  - Cardiac and vascular stents, embolisation coils
- **High turnover items**
  - Surgical sutures, other high-volume consumables

# Implementation

## Main types of barcodes:

### GS1-128 and GS1 DataMatrix®

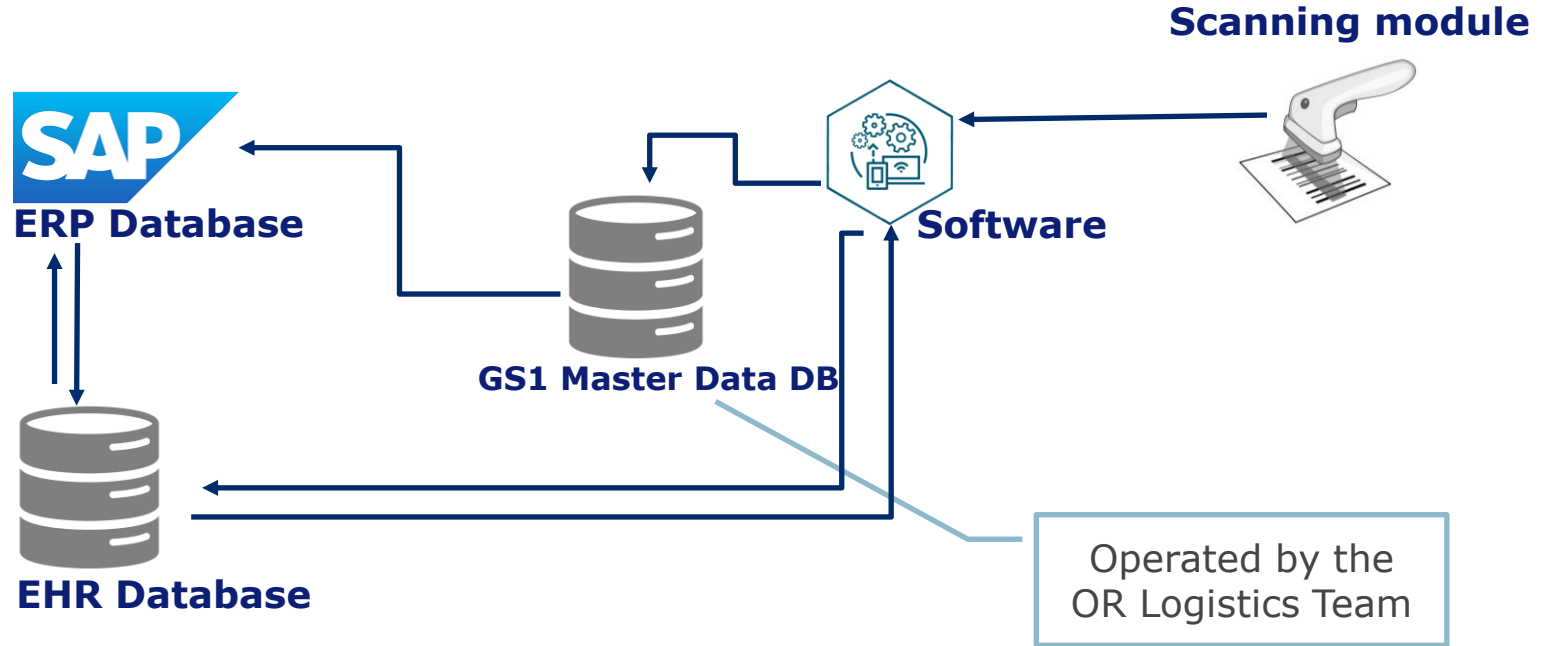


*Scanning at the  
"Point Of Care"*

capturing crucial  
item data:

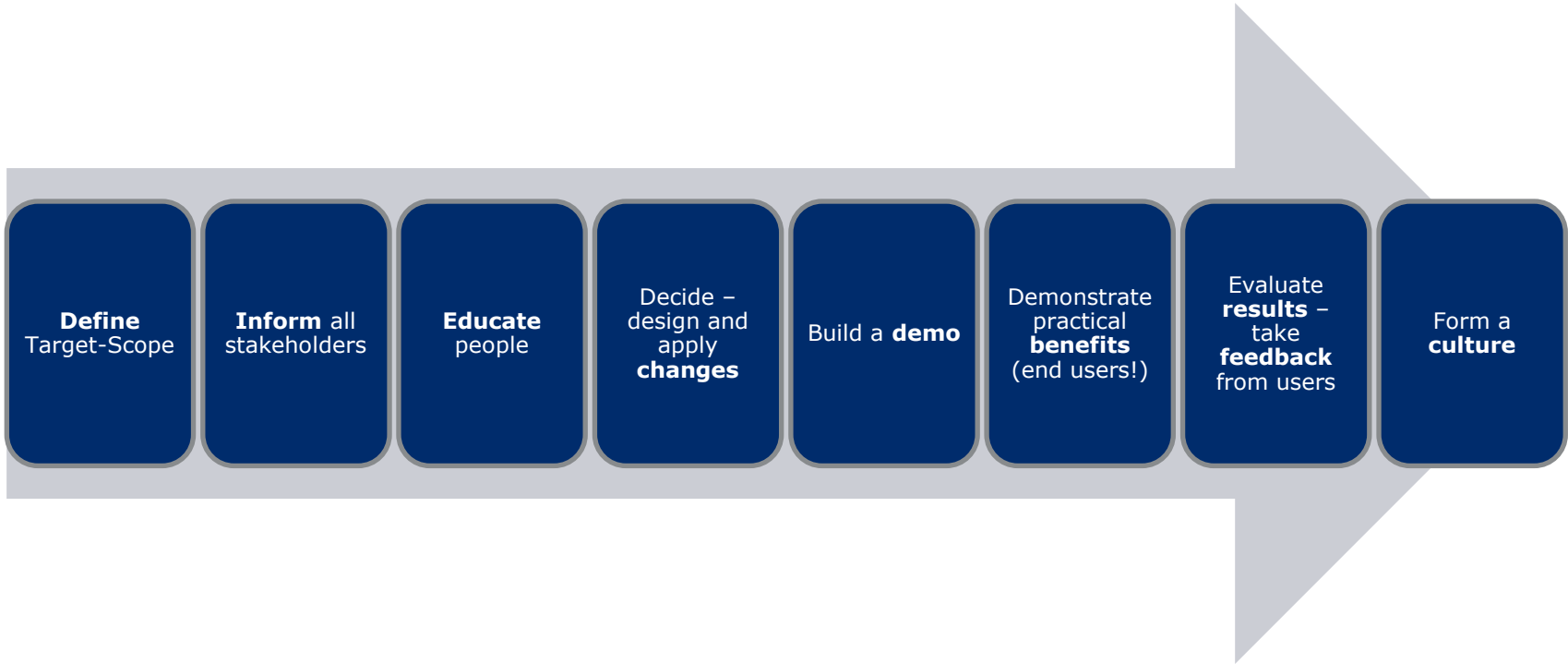
- **GTIN**
- **LOT/BATCH**
- **(SERIAL)**
- **EXP DATE**

# Implementation - IT





# Implementation Strategy



# Key Implementation Points



# Personnel Engagement



- Be there when needed
- Ask the right questions
- Take feedback!

## EXPLAIN

- Why we do this?
- Explain action plan
- Explain Benefits

## SUPPORT

## EDUCATE

- Barcode basics
- Simple language
- No technical jargon!!

## TRAIN

- Team meetings
- On-the-job training

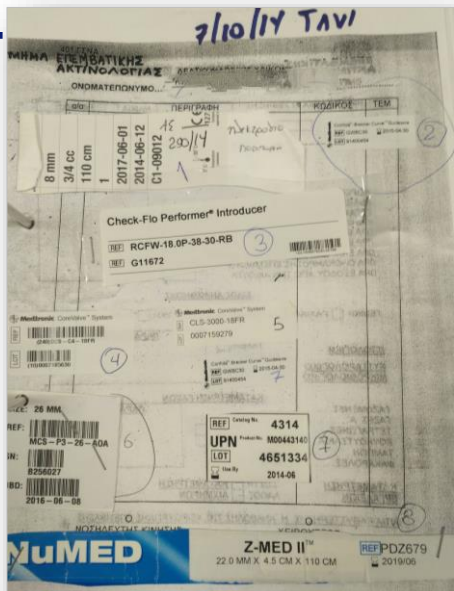


# Outcomes



## STANDARDISED, ACCURATE, TRUSTED DATA

2014



2021

**ΑΝΑΦΟΡΑ ΚΙΝΗΣΗΣ (ΑΝΑ LOT/SERIAL)** Τετάρτη, 29 Σεπτεμβρίου 2021

ΕΙΔΟΣ ΚΙΝΗΣΗΣ: ΑΝΑΘΩΣΗ ΣΕ ΑΣΘΕΝΗ

ΕΠΙΘΥΜΗΤΑ: ΕΙΔΟΣ ΠΑΡΑΣΤΑΤΙΚΟΥ: ΔΕΛΤΙΟ ΔΙΑΘΕΣΗΣ ΣΕ ΑΣΘΕΝΗ

ΑΡΙΘΜΟΣ ΠΡΟ-ΠΑΡΑΤΕΛΙΑΣ: ΑΡΙΘΜΟΣ ΠΑΡΑΣΤΑΤΙΚΟΥ: 20027

ΠΡΟΚΑΛΕΥΣΗ: ΗΜΕΡ/ΝΙΑ ΠΑΡΑΣΤΑΤΙΚΟΥ: 22/07/2021

ΑΡΙΘ. ΣΥΜΒΑΣΗΣ/ΠΑΡΑΤΕΛΙΑΣ: ☐ ΠΑΡΑΚΑΤΑΘΗΚΗ

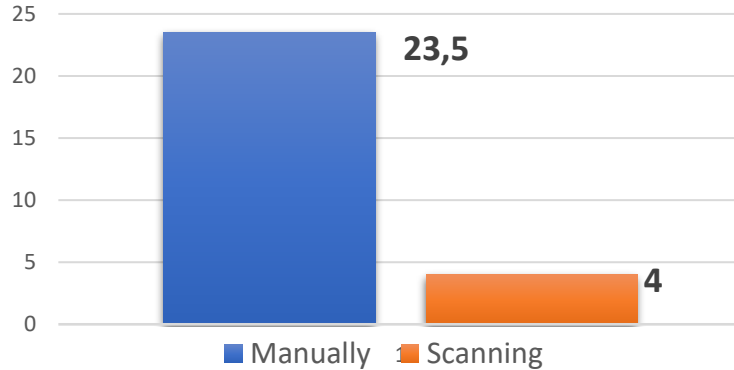
GTIN	REF No - ΠΕΡΙΓΡΑΦΗ ΕΙΔΟΥΣ	LOT/BATCH	ΗΜΕΡΙΑ ΑΝΗΣΣ	MM	TEM
00643169108363	ATLS24 - ATLS24   ΣΕΤ ΑΥΤΟΜΕΛΑΤΤΗΣ ΜΕΤΡΩΝΙΚΗΣ ΑΥΤΟΛΟΓ   MEDTRONIC	0219306543		ΣΕΤ	-1
00801902101501	RA-04220-W - ΚΑΘΕΤΗΡΑΣ ΚΕΡΚΙΔΙΚΗΣ ΑΡΘΡΙΑΣ 20G (TEM)			TEM	-1
00884389136761	9010CEA - 9010CEA   ΜΠΑΟΥΖΑ ΧΕΙΡΟΥΡΓΙΚΗ ΕΝΔΥΣΜΕΝΗ L ΑΠΟΣΤΕΙΡΩΜΕΝΗ 1ος ΧΡΗΣΗΣ	20HAS007		TEM	-2
00884389137089	9513CEA - 9513CEA   ΜΠΑΟΥΖΑ ΧΕΙΡΟΥΡΓΙΚΗ ΕΝΔΥΣΜΕΝΗ ΧΛ ΑΠΟΣΤΕΙΡΩΜΕΝΗ 1ος ΧΡΗΣΗΣ	20HAS010		TEM	-4
02200040100638	- ΣΕΤ ΓΕΝΙΚΗΣ ΑΝΑΙΣΘΗΣΙΑΣ 401 ΓΙΝΑ (ΣΕΤ)			ΣΕΤ	-1
02200040100113	FD 100L - FD100L   ΣΤΥΛΟ ΔΙΑΘΕΡΜΙΑΣ 1ος ΧΡΗΣΗΣ ΜΕ ΚΑΛΩΔΙΟ ΚΑΙ ΜΠΟΥΤΟΝ   INSIDE MEDICAL	20120301		TEM	-2
02200040104654	07061 - 07061   ΒΕΛΟΝΑ ΚΙΡΧΟΦΕΡ ΜΟΝΗΣ ΛΟΓΩΧΕ 1.8 x 310mm	18T673		TEM	-1
02200040104807	TR03 - TR03   ΜΑΡΚΔΟΡΟΣ ΔΕΡΜΑΤΟΣ ΜΕ ΧΑΡΑΚΑ ΑΠΟΣΤΕΙΡΩΜΕΝΟΣ 1ος ΧΡΗΣΗΣ   INSIDE MEDICAL	20122001		TEM	-2
02200040105026	HC-PFB-33W - HC-PFB-33W   ΣΥΡΡΑΠΤΙΚΟ ΔΕΡΜΑΤΟΣ 1ος ΧΡΗΣΗΣ   TOPOMED	20200403		TEM	-1
02200040105194	50-150102 - ΜΑΣΤΑΡΗ ΚΕΦΑΛΗΣ ΤΕΤΡΑΓΩΝΟ (TEM)	20200803		TEM	-1
02200040105323	Ble-150mm - Ble-150mm   ΤΙΠ ΔΙΑΘΕΡΜΙΑΣ ΜΑΛΟΥ 150mm, ΑΠΟΣΤΕΙΡΩΜΕΝΟ 1ος ΧΡ.			TEM	-1
0045928002121	8700036SP - ΣΥΣΤΗΜΗ ΕΓΧΥΣΗΣ INFUSOMAT SPACE LINE (TEM)			TEM	-2
04052199551685	2583238 - 2583238   ΣΑΚΟΣ ΑΥΤΟΚΟΛΗΤΟΥ ΜΕ ΔΙΠΛΗ ΘΗΚΗ ΕΡΓΑΣΙΩΝ 43x38cm ΑΠΟΣΤΕΙΡΩΜΕΝΟΣ 1ος ΧΡ.   PAUL HARTMANN HELIAS AE	000351287		TEM	-2
06941813664765	NL22030F4 - NL22030F4   ΡΑΜΜΑ 2-0 ΜΟΝΟΚΛΑΣΙΟ ΝΥΛΟΝ ΒΕΛ 30mm 3/8 ΚΥΚΛΟΥ ΑΝΤΙΣΤΡ. ΚΟΤΤ. ΜΙΚΡΟΣ ΡΑΜΜΑΤΟΣ 75cm   ΕΥΡΟΚΑΡΤ	181221		TEM	-2
07395502081224	6065501040 - 6065501040   ΜΕΤΑΛΛΙΚΟ ΡΥΧΟΣ ΑΝΑΡΡΟΦΗΣΗΣ 4,0 x 150mm 8G   ΓΕΤΡΙΜΠ ΕΠΕ	201004		TEM	-1
07460691950191	PK260 - ΣΥΣΤΗΜΑ ΑΡΘΡΙΑΚΗΣ ΓΡΑΜΜΗΣ ΜΑΝΩΛΙΤΙΝΗΣ ΕΡΓΑΣΙΑΣ			TEM	-1



# Outcomes

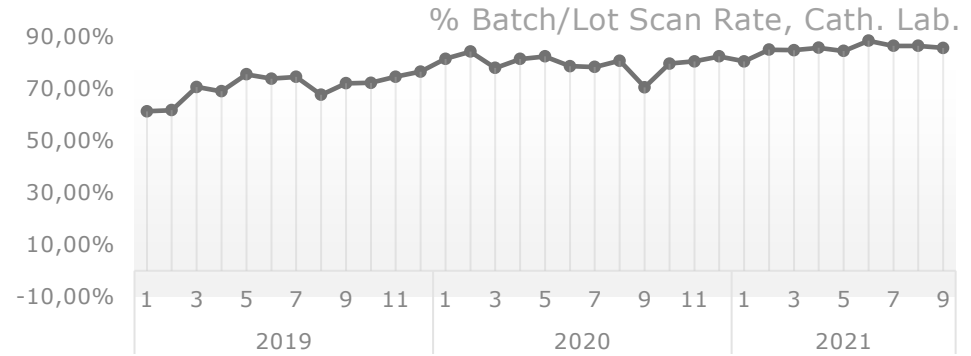


Duration (mins) for counting 60 stents in the Cath. Lab



- ✓ Complete & **trusted data!**
- ✓ Easy **tracking** of items/LOTs/serials/patients
- ✓ **Check of expired items** on the shelf and during a procedure

- ✓ **Less time** in administrative tasks (Cath. Lab, billing Dept.)
- ✓ **Less paperwork** (but still a lot of it !)
- ✓ Operational **efficiency**



# Outcomes



- ❖ More than **75.000 € savings** in the Cath. Lab during 2018 – Aug. 2021

Cost of items replaced by suppliers before reaching their expiration date (contract term)

- ❖ Over **50% reduction** in waste between 2018 – 2020

Cost of items that reached the end of their shelf life

- ❖ More effective purchasing strategy



# Cath. Lab Implementation Wrap-up



## *What **worked**:*



- ❖ Staff engagement, training
- ❖ Supplier's cooperation
- ❖ Excellent scan rates from the beginning
- ❖ Implementation roadmap

## *What **didn't work**:*



- ❖ Various levels of familiarisation with the processes
- ❖ Difficulty to engage clinicians
- ❖ Multiple barcodes on packages confuse people

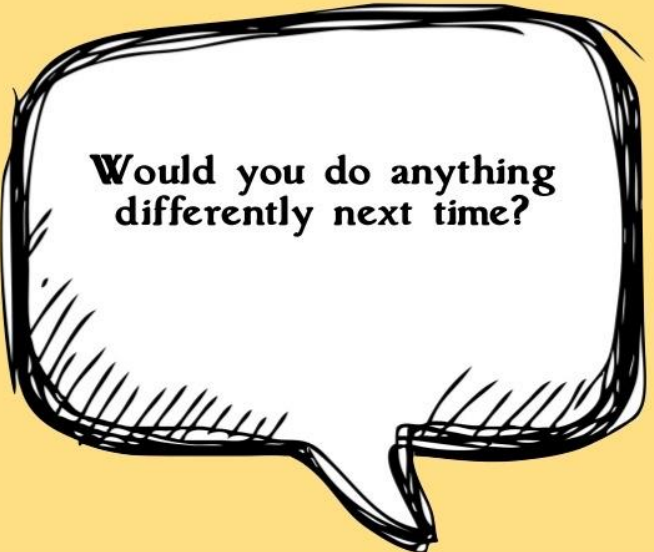
# Cath. Lab Implementation Wrap-up

An illustration of a person in a dark suit pushing a large, light-colored rock up a green hill. The word "CHALLENGES" is written in large, white, capital letters across the side of the rock. To the right of the person, there is a bulleted list of four challenges.

- Introduce a new way of work
- Gain trust
- Talk different language to various teams
- Usability of the software



# Cath. Lab Implementation Wrap-up

A hand-drawn speech bubble with a thick black outline and a tail pointing towards the bottom right. The interior is white, and the background of the entire slide section is a solid yellow color.

Would you do anything differently next time?

- **Start from the Cath. Lab!**
- **Clinicians' more active engagement**



# Lessons Learned

---

- ❖ **Start small. Don't try to change everything at once.** Don't rush changes.  
Change in Healthcare is by default slow and time-consuming.
- ❖ **Seek advice-guidance** from your local GS1 office. **Engage your IT & procurement** from the very beginning of the project
- ❖ Choose the department that is **easier to start** / engage.  
(Cath Lab is ideal because of fully GS1 compliant products)
- ❖ End users need to see the immediate **benefits in their every-day tasks. Listen carefully** to their remarks/requests and **stay close to them.**

# Lessons Learned



**Your people are the key!**  
Their **engagement** and **commitment** will bring success.



# One last word



ST. JAMES'S  
HOSPITAL



# Thank you !

(01)09312345678904

*Sotiris Tsiafos-Tsiaras,  
Mil. Pharmacist  
s.tsiaras@gmail.com*

*Sam Lappas,  
Officer Nurse  
samlappas@yahoo.gr*

*401 Athens General Military Hospital, Greece*



# GS1 Healthcare webinar: Questions and contact details



Els van der Wilden  
Director Healthcare Providers  
GS1

Tel +31615545868  
eMail [els.vanderwilden@gs1.org](mailto:els.vanderwilden@gs1.org)

[www.gs1.org](http://www.gs1.org)

