



RFID

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SEPTEMBER 30 - OCTOBER 1, 2020

Hospital Uses RFID to Improve Visibility of Operating Room Uniforms and Control Inventory



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The Jewish General Hospital

Some key numbers

CIUSSS, JGH, CHSLD, CLSC,...

- 637 beds
- 30 000 admissions
- 4 500 deliveries
- 13 500 surgeries
- 600 000 external consults
- 90 000 visits to the emergency room
- 4 500 employees JGH / 10 000 CIUSS
- 646 doctors
- 226 residents
- 1 429 nurses



The Jewish General Hospital History and context



The Jewish General Hospital History and context

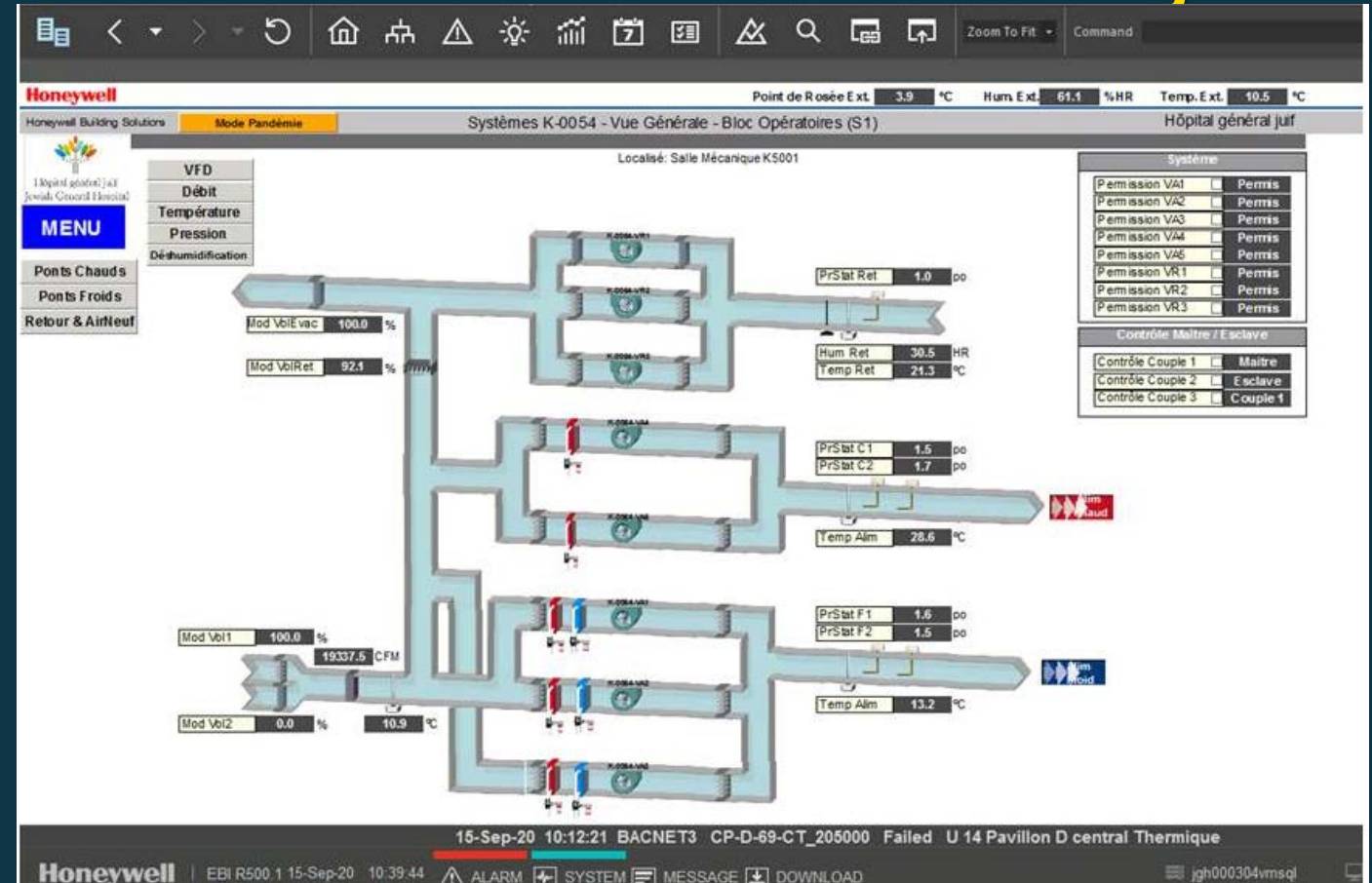


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The Jewish General Hospital Space that you don't see and Connected Objects



The Jewish General Hospital

Building safety, Patient safety, connected health

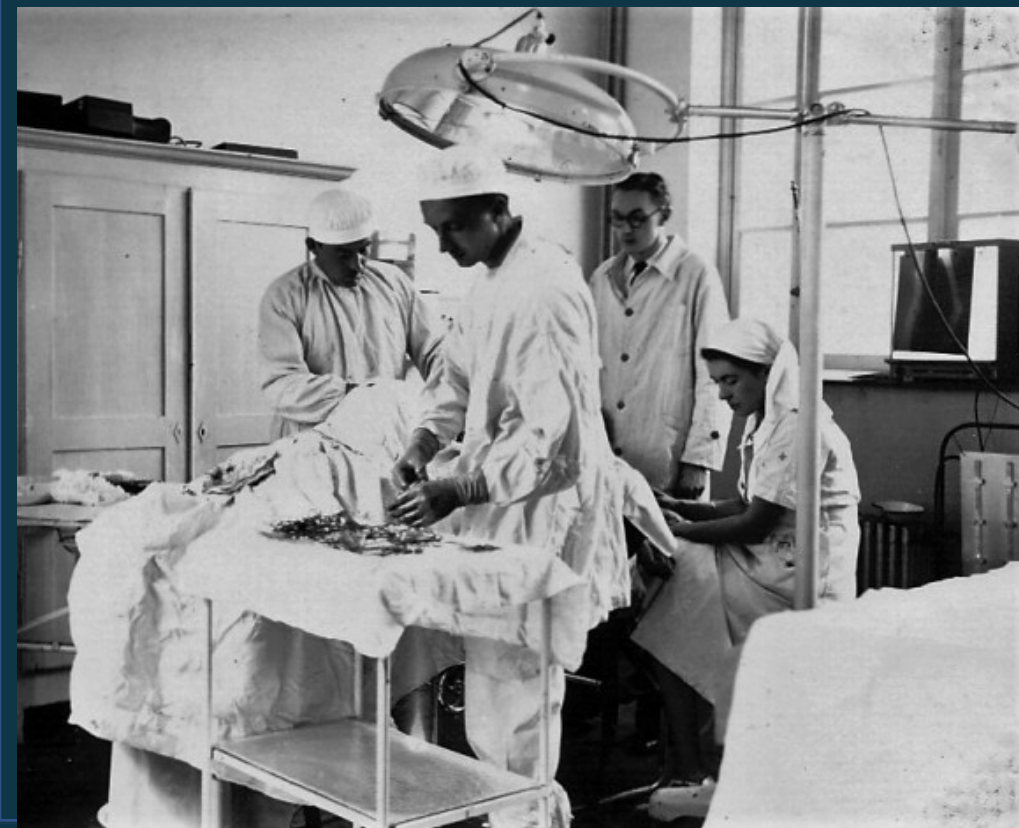


The Jewish General Hospital

The importance of logistics!

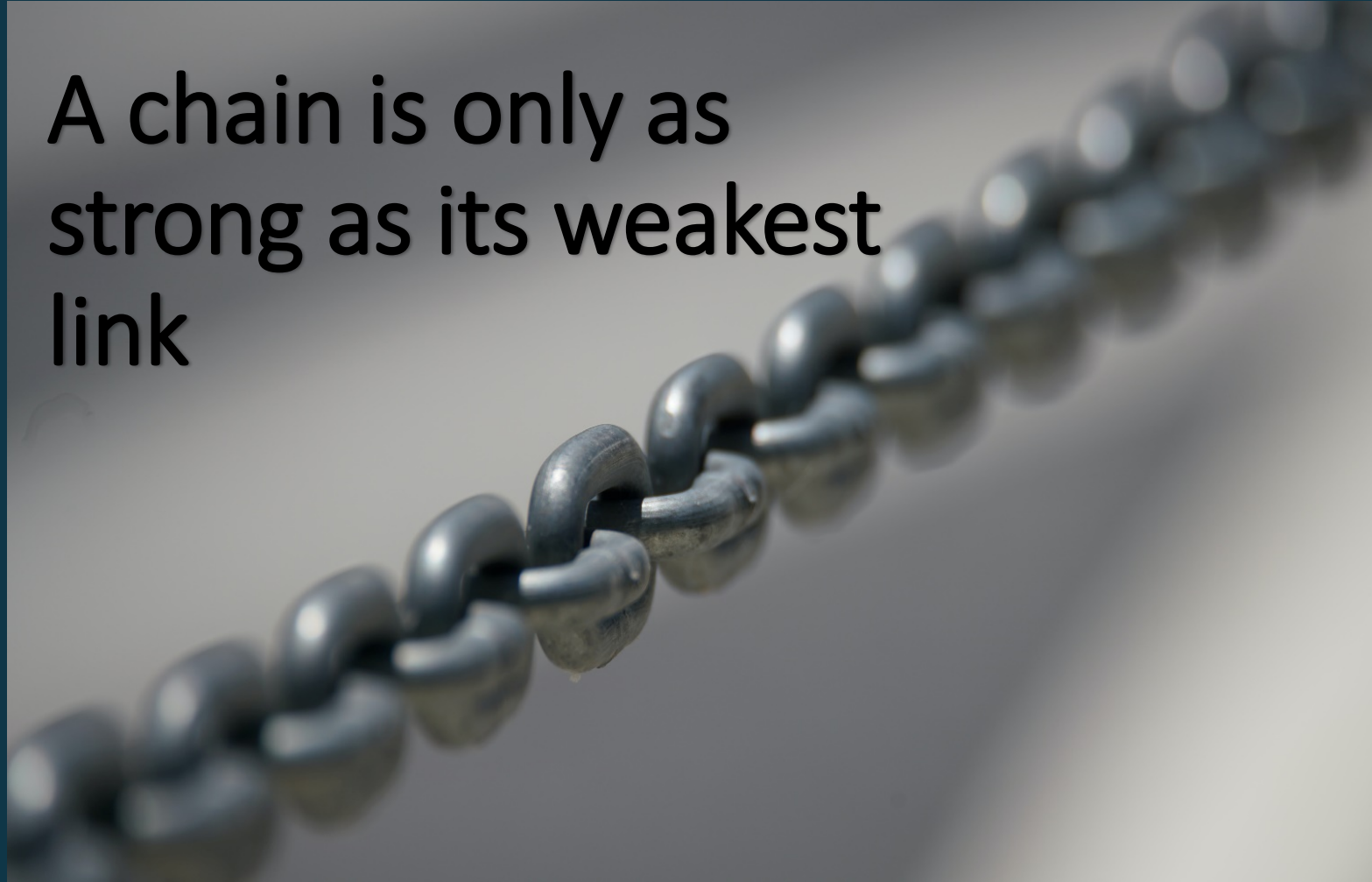


The Jewish General Hospital Evolution, complexity and IoT



Hospital Logistics

A chain is only as strong as its weakest link



OR uniforms – Business case

- Goal: Design and implement an improved logistics uniform distribution system to meet our objectives:
 - Control inventory
 - Ensure availability of sizes
 - Be able to pull statistics and KPIs to better manage
 - Reduce level of inventory
 - Improve Infection control

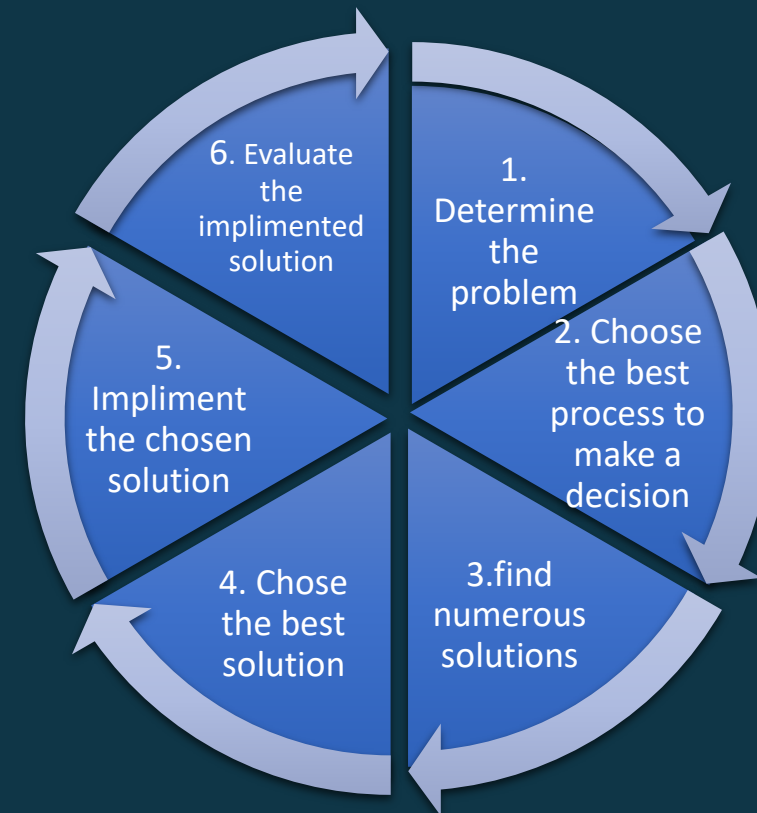
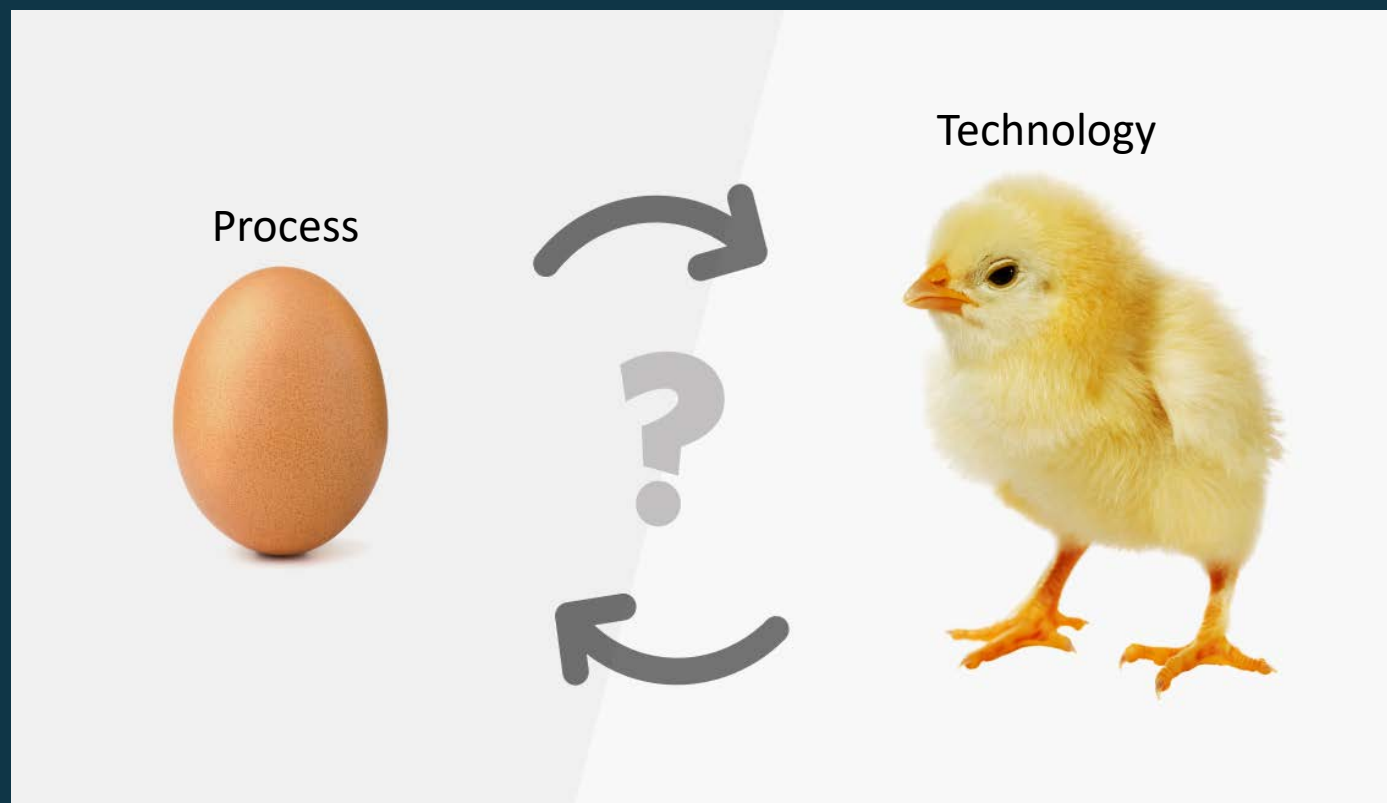


Scrubs: The problem

- Theft
- Frequent shortages
- Inefficient replenishment
- Very high level of inventory
- Disorganization
- Poor infection control



Technology or process first?



Solution Search

- Research via our partnership with the IoT lab at UQAM
- Visiting clean show to learn about options in the market
- Benchmarking
- Distribution process analysis





Our scrubs distribution system: White box and White C



How it works

- UHF chips
- Credits and profiles for users
- Access with Hospital ID card
- Automatically scans and returns credits in real time when uniforms are returned



Technology Involved

- Intelligent cabinets
- IT infrastructure
- Card readers
- Middleware
- Antenas
- UHF tags



Application of tags

- Sewn into the tag from the supplier

Applied using thermopress



Challenges with implementation

- Preparing uniforms for the launch
- Large amount of inventory in circulation
- Maintaining procedure still to this day due to hoarded inventory being returned
- Technology
- Change management...

Change management

- Include stakeholders!!
 - Increase acceptance
 - Valuable input
 - Optimize to their needs
- Fear of change amongst users
- and...management change management!!!



Time Frame

Research
(1 year)

Planning and
preparation
(6 months)

Documentation
/ purchasing
(3 months)

Delivery
(3 months)

Go live
1 week!

ROI & soft benefits

- In the first phase of the project after 1 year, no additional uniforms needed to be purchased (15k\$ CAD/Year savings)
- Increase user satisfaction and confidence
- Increased control
- Auto-learning Logistic replenishment
- Increased visibility
- Improved Infection prevention and control (especially White C)
- Traceability



2019: Challenges came with the Pandemic...



- Drastic increase of scubs consumption
- Drastic increase in stocks and volumes in circulation
- Geographic distribution across institution
- Change management on huge scale
- Inputting massive amounts of data

ROI & soft benefits – Pandemic...

- In the first phase of the project after 1 year, no additional uniforms needed to be purchased (~~15k\$ CAD/Year savings~~) **20X**
- Increase user satisfaction and confidence
- Increased control - **Mandatory**
- Auto-learning Logistic replenishment
- Increased visibility - **Mandatory**
- Improved Infection prevention and control (especially White C) - **Mandatory**
- Traceability - **Mandatory**



La Presse +

• *“Technology is a gift from God. After the gift of life it is perhaps the greatest of God’s gifts. It is the mother of civilizations, of arts and of sciences.”*

• -Freeman Dyson

THANK YOU

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