

# **LPS Implementation using physical and digital Visual Management-based tools: A case Study in Luxembourg**

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# CONTEXT AND CHALLENGES :

LUXEMBOURG INSTITUTE of SCIENCE and TECHNOLOGY



# AGENDA

- Context and Challenges
- 1<sup>st</sup> Iteration
- 2<sup>nd</sup> Iteration
- Conclusion

# CONTEXT AND CHALLENGES :

**1<sup>st</sup> Implementation :**  
 New Building, all trades project  
 No experience in LPS



**Problem Identification**

**PARTIAL** Implementation  
 Lack of **TRAINING**, Barghav 2015  
**COMPLEX** Make Ready, Ebb 2018  
**MIX** all Discussions

**Objective :** Improve LPS  
 “discussion” Implementation

**Co Design of physical Meeting supports** with Project Team and **Development** by LIST

**Test in situ + direct feedbacks**

**2<sup>nd</sup> Implementation :**  
 Existing Building, all trades project  
 No experience in LPS



**Problem Identification**

Performance, Workload, Covid 19

**Objective :**  
 Improve **EFFICIENCY** and **FLEXIBILITY**

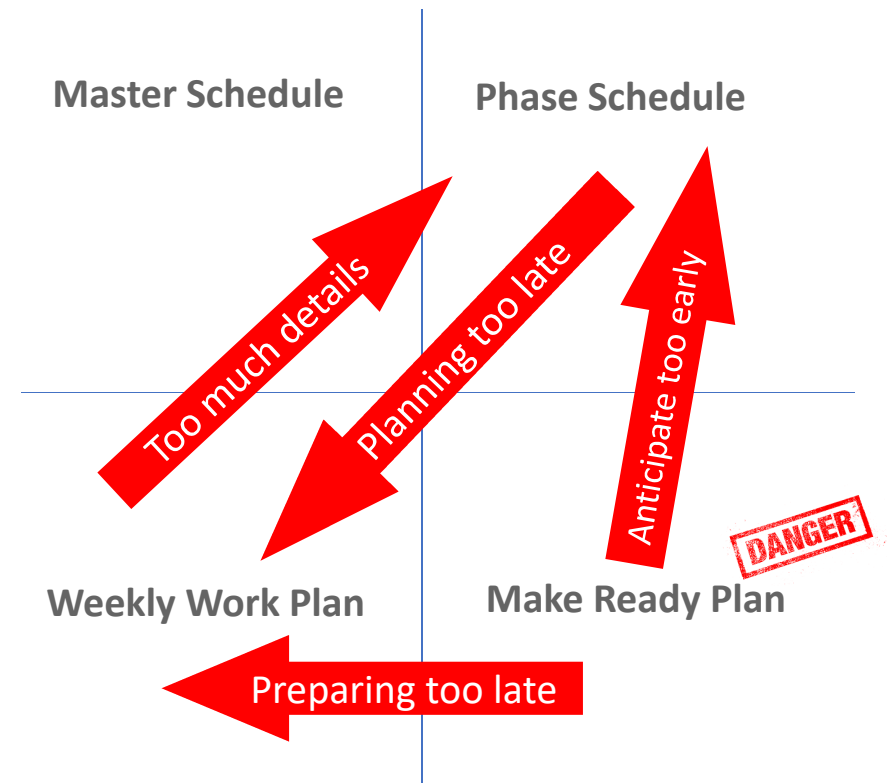
**Co Design** on an IT Obeya Solution **Development** by LIST

**Test in situ + direct feedbacks**

# 1ST IMPLEMENTATION : PROBLEM

**Problems :**  
Partial Implementation

**Causes :**  
Mix LPS “discussions”  
Lack of training  
Complex Make ready



## 1ST IMPLEMENTATION : OBJECTIVE

### **Objective : Improve LPS Discussion Implementation**

Bring more structure, help understand each LPS “Discussion”, ease use

#### **Solution 1 :**

Dedicated Visual Management based Tool to support each “discussion”

#### **Solution 2 :**

Facilitate Make Ready Implementation using Visual Management

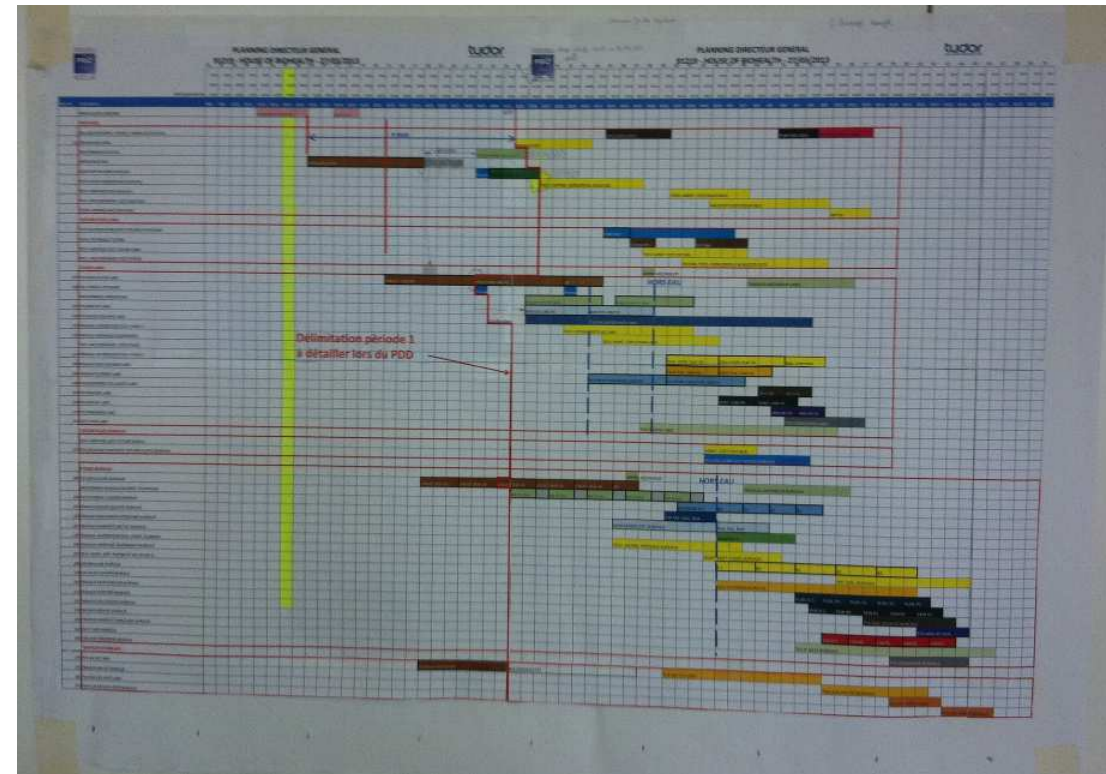
# 1ST IMPLEMENTATION : DESIGN & DEVELOPMENT

## Solution 1

Dedicated Visual Management based Tool to support for each “discussion”

## Support #1 : Master Schedule

- **Horizon** : Whole Project
- **LOD** : Month
- **Focus on** :
  - Global Construction milestones & Logic



# 1ST IMPLEMENTATION : DESIGN & DEVELOPMENT

## Solution 1

Dedicated Visual Management based Tool to support for each “discussion”

## Support #2 : Phase Schedule

- **Horizon** : 4 months
- **LOD** : Week
- **Focus on** :
  - Activities breakdown
  - Handoffs
  - Work Load
  - Planning Constraints





# 1ST IMPLEMENTATION : DESIGN & DEVELOPMENT

## Solution 1

Dedicated Visual Management based Tool to support for each “discussion”

## Support #3 : Make Work Ready

- **Horizon** : 6-8 weeks
- **LOD** : Day
- **Focus on** :
  - Tasks breakdown
  - Production Constraints Identification (Information / Resources / Previous Task)
  - Constraint removal



# 1ST IMPLEMENTATION : DESIGN & DEVELOPMENT

## Solution 1

Dedicated Visual Management based Tool to support for each “discussion”

## Support #4 : Weekly Work Plan

- **Horizon** : 1 week + Current week
- **LOD** : Day
- **Focus on** :
  - Production Commitment
  - Production Follow up



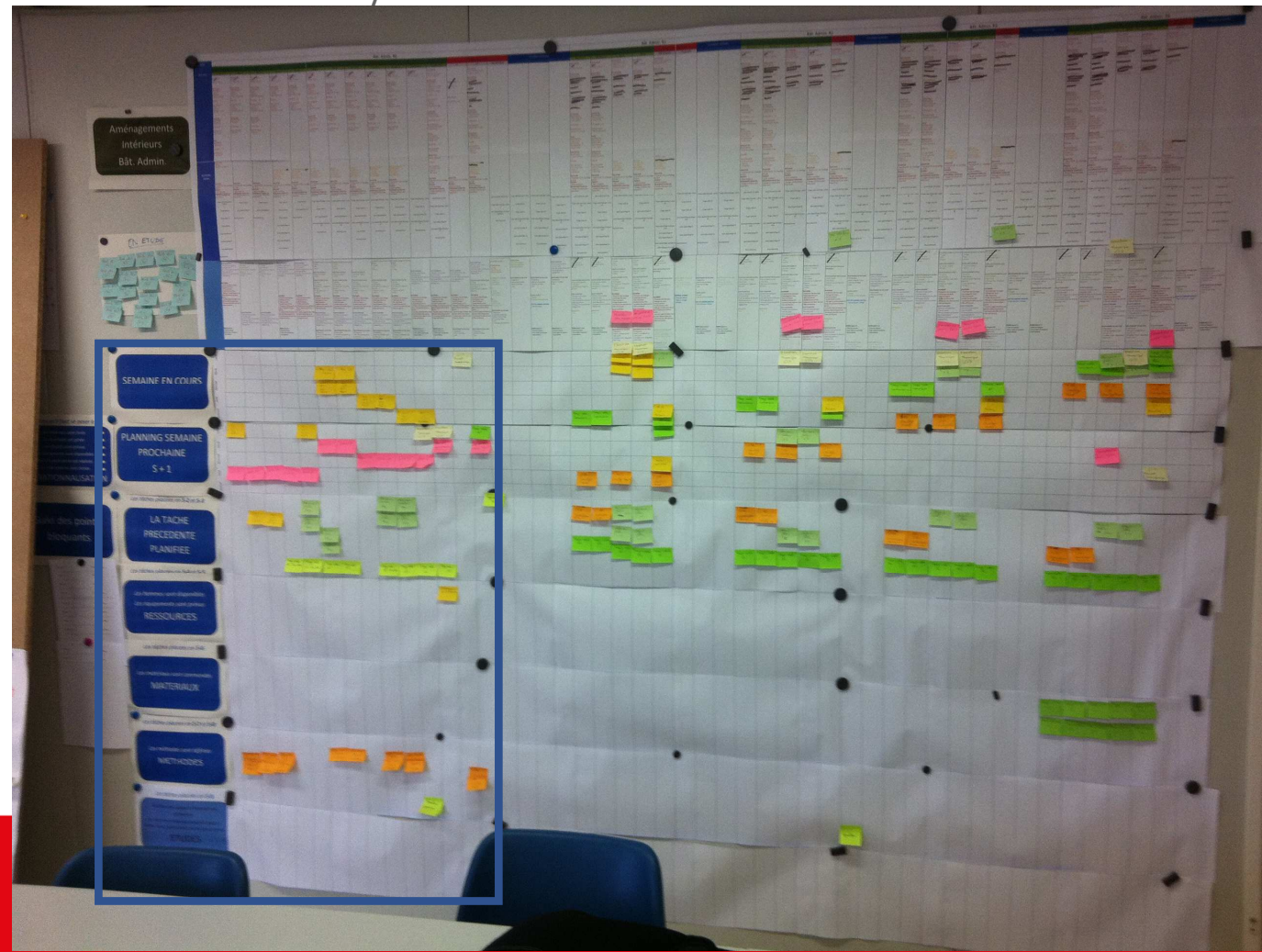
# 1ST IMPLEMENTATION : DESIGN & DEVELOPMENT

Task Maturity level

## Solution 2 :

Facilitate Make Ready Implementation using Visual Management

Using Maturity level according to constraint removal



# 1ST IMPLEMENTATION : EVALUATION

## Pros

Improve Last Planner Involvement

Tools bring structure to meetings

Support skills acquisition

Facilitate All Discussion  
implementation

## Cons

Post it manipulation

Updating all boards

Communicating data (photo)

Space requirement

And in 2020.... CoVID 19

## 2<sup>ND</sup> IMPLEMENTATION : PROBLEMS

### Problems :

Post it manipulation  
Communicating data (photo)  
Updating all boards  
Space requirement  
And in 2020.... CoVID 19

### Causes :

Physical Support

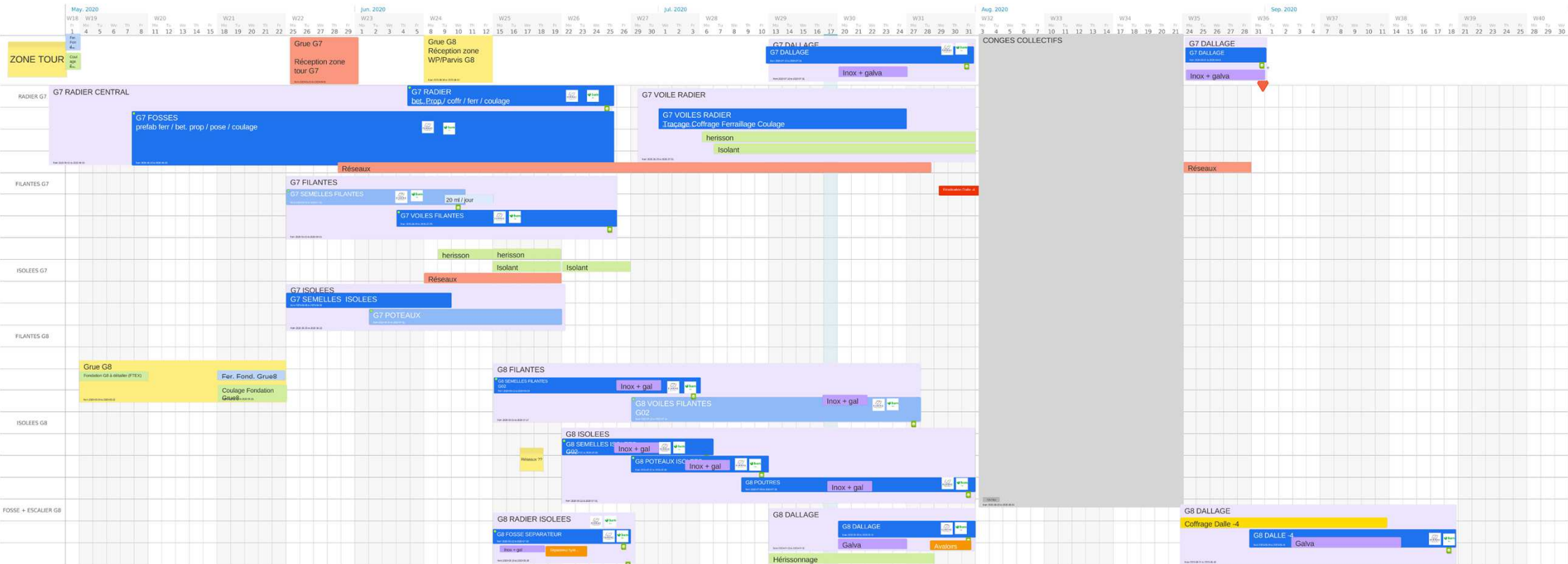
## 2<sup>ND</sup> IMPLEMENTATION : OBJECTIVE

**Objective : Improve LPS Meeting  
Efficiency and Flexibility**

**Solution 1 :**

Digital Post-it Solution to implement  
LPS

# 2<sup>ND</sup> IMPLEMENTATION : DESIGN & DEVELOPMENT

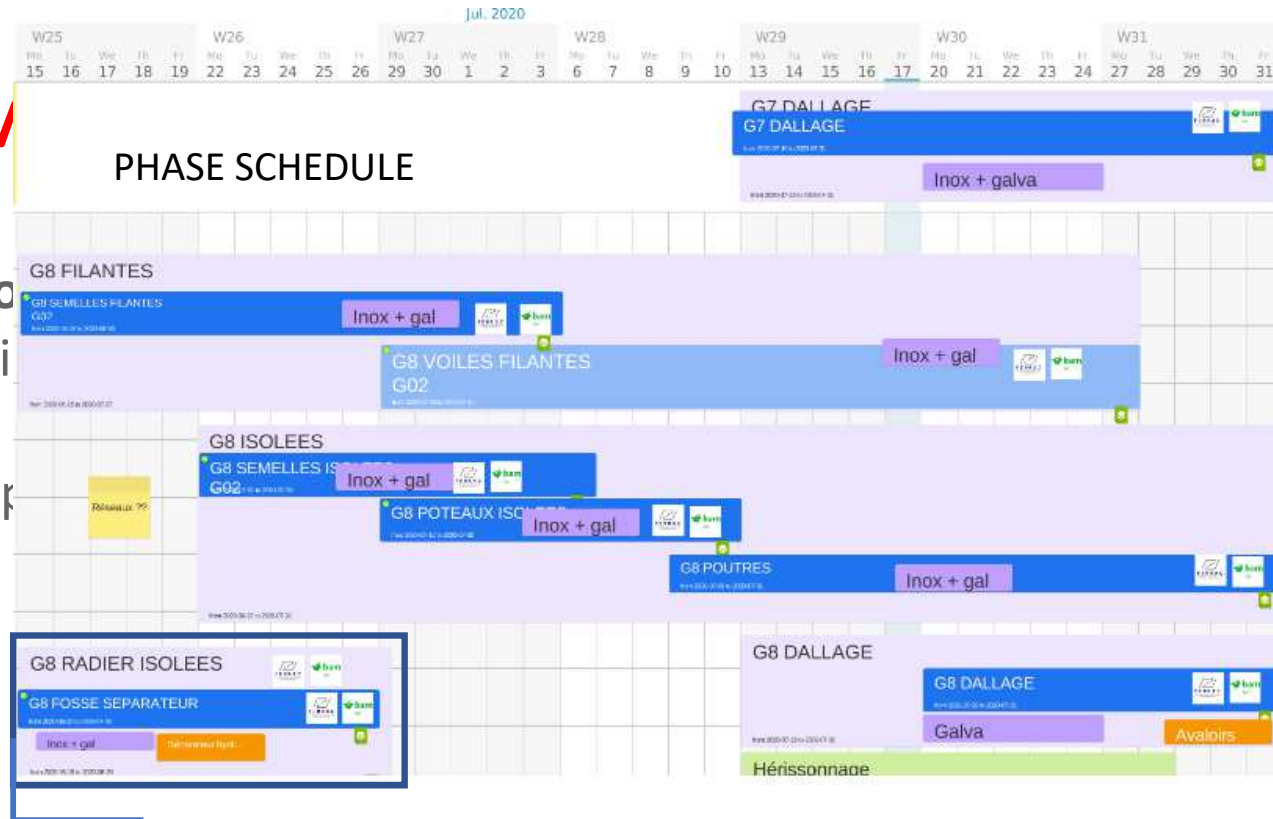


2<sup>ND</sup> IM

PHASE SCHEDULE

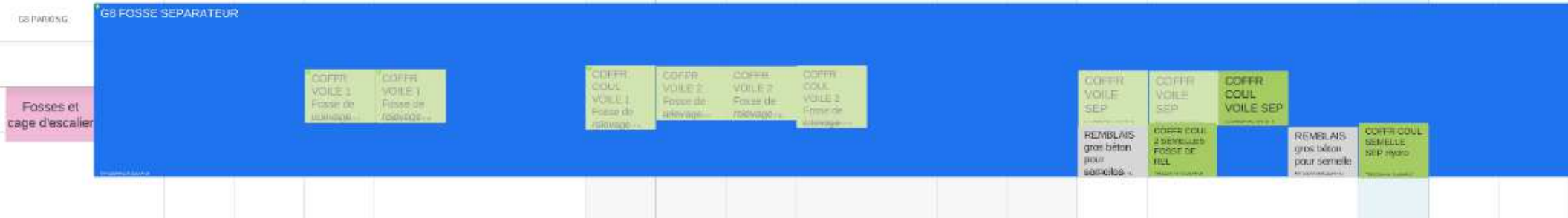
IT

So  
Di  
Up



Synchronization  
between Phase  
Schedule and  
Weekly Work Plan

WWP



Fosses et cage d'escalier



## 2<sup>ND</sup> IMPLEMENTATION : DESIGN & DEVELOPMENT

### Solution 1 :

Digital Post-it Solution to implement LPS

Space requirement :



## 2<sup>ND</sup> IMPLEMENTATION : DESIGN & DEVELOPMENT

### Solution 1 :

Digital Post-it Solution to implement LPS

And in 2020.... CoVID 19

- Online tool
- All Participants can contribute with a device
- (In the meeting room or remotly)



## 2<sup>ND</sup> IMPLEMENTATION : EVALUATION

### Pros

Gain Time

Gain Space

Improve Data Communication

Improve Data Accessibility

### Cons

Need Extra Design for Users

...But is compensated by the investment required (Touch Screen and an software licence)

Material Risk

Need Extra training with the software

# CONCLUSIONS AND PERSPECTIVES

**A LPS Operational toolbox can Improve implementation**

**Visual management is highly recommended to support Make ready**

**Digital Solutions can improve even more LPS Implementation but need to invest time and money first**

**Project In Progress : Digital Make Ready**

**THANK YOU!**

**Contact Details**