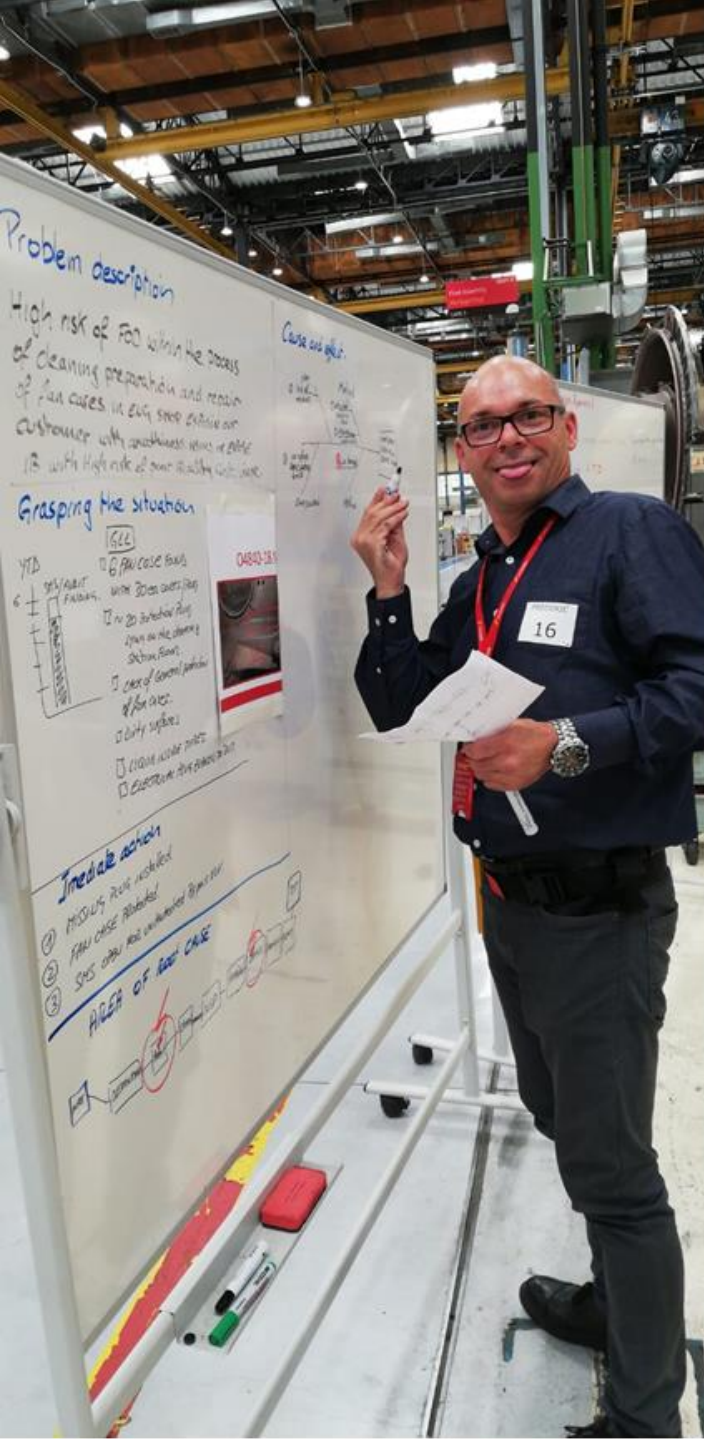




FLY TO SURVIVE

Our Lean Lessons from
COVID -19

UK **Lean** Summit 2023



¡Hola!



FREDERIC SCHNIDER
Manager Lean MRO





Darren Walsh, Director & Leadership Coach, With Making Lean Work & Lean Enterprise Academy Ltd

With over **25 years experience working with the likes of Sega, Boston Scientific, Parker, Zodiac Aerospace.**

Delivered training and coaching to more than 1,200 delegates and for business sector leaders in Europe, helping them **discover a better way to make lean and continuous improvement work for their organisations.**

My main focus area, is seeking to discover **why organisations and business leaders around the world struggle to make lean and continuous improvement work in their businesses.**



Learning Objectives

- About challenges IBERIA faced and how they responded
- The 4 key primary processes that enable every organisation
- How to plan, map and implement value stream improvement
- How to Identify waste and develop a future state improvement plan
- The 8 lean guidelines that make a value stream lean
- Creating flow in non-standard environment of maintenance, service and repair
- How to manage unpredictable work
- Challenges in mapping and implementing the future state

Housekeeping



➤ Safety: Alarms, Exits & PPE



➤ Comfort: Breaks, Restrooms, Connectivity



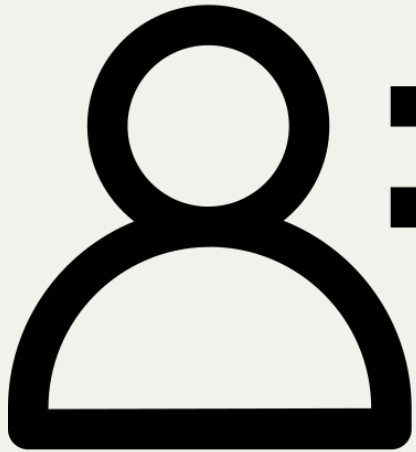
➤ Style: Learning



➤ Materials: PDF

Introduction & Challenge

60 Seconds Each

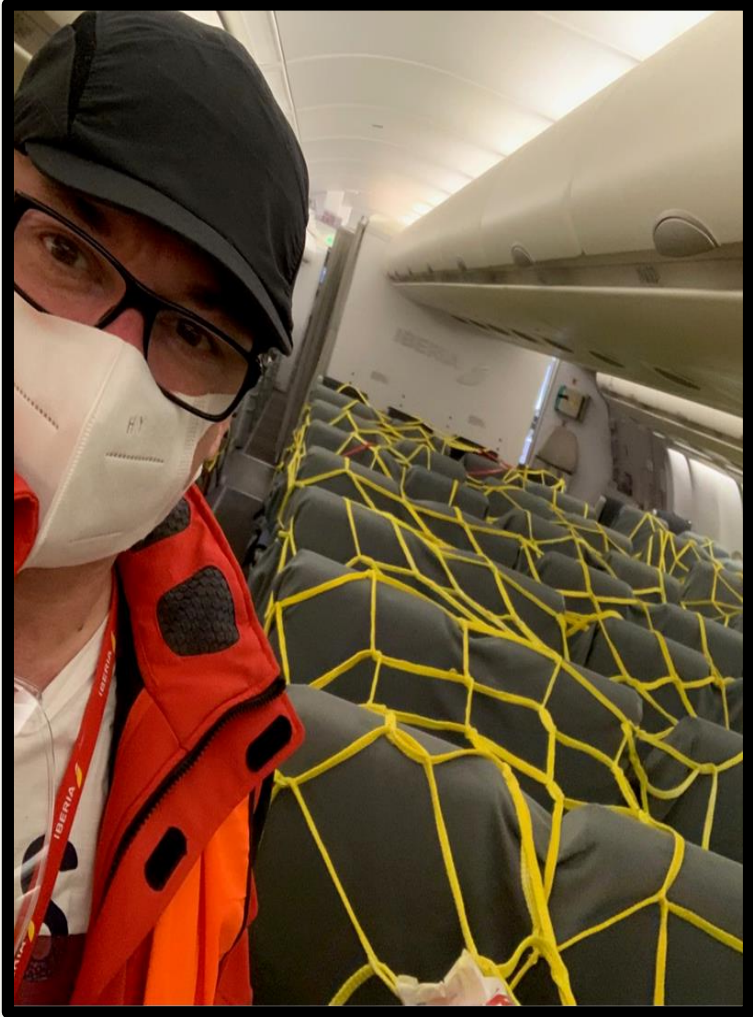


➤ Who you are?

➤ Your organisation and role?

➤ What's your business and improvement challenge?

COVID pandemic started for us exactly like yours...



But... this is what especially happened to us...



Europe Air traffic

February 28th 2020 vs March 27th 2020



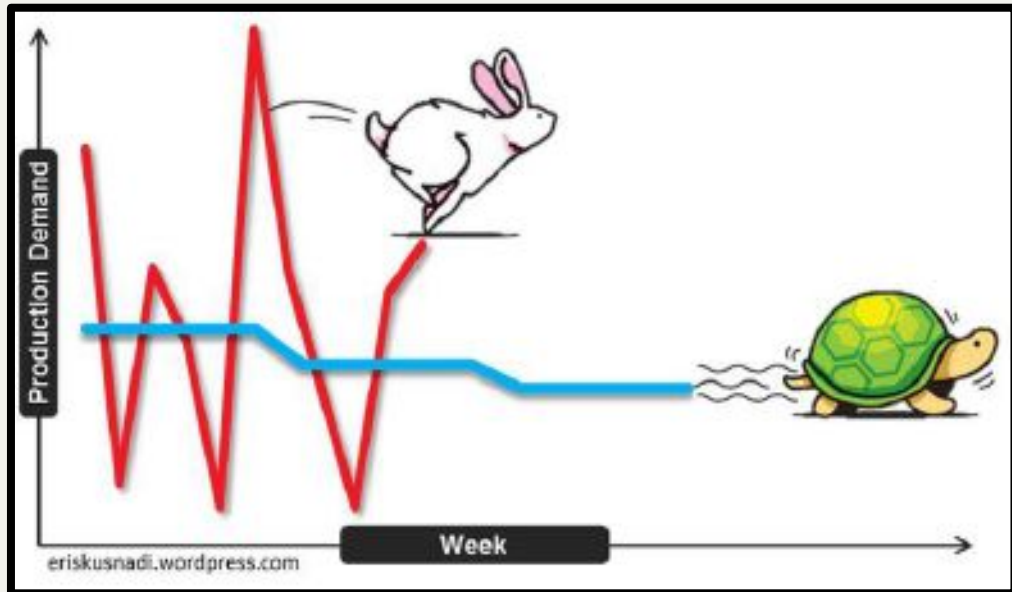
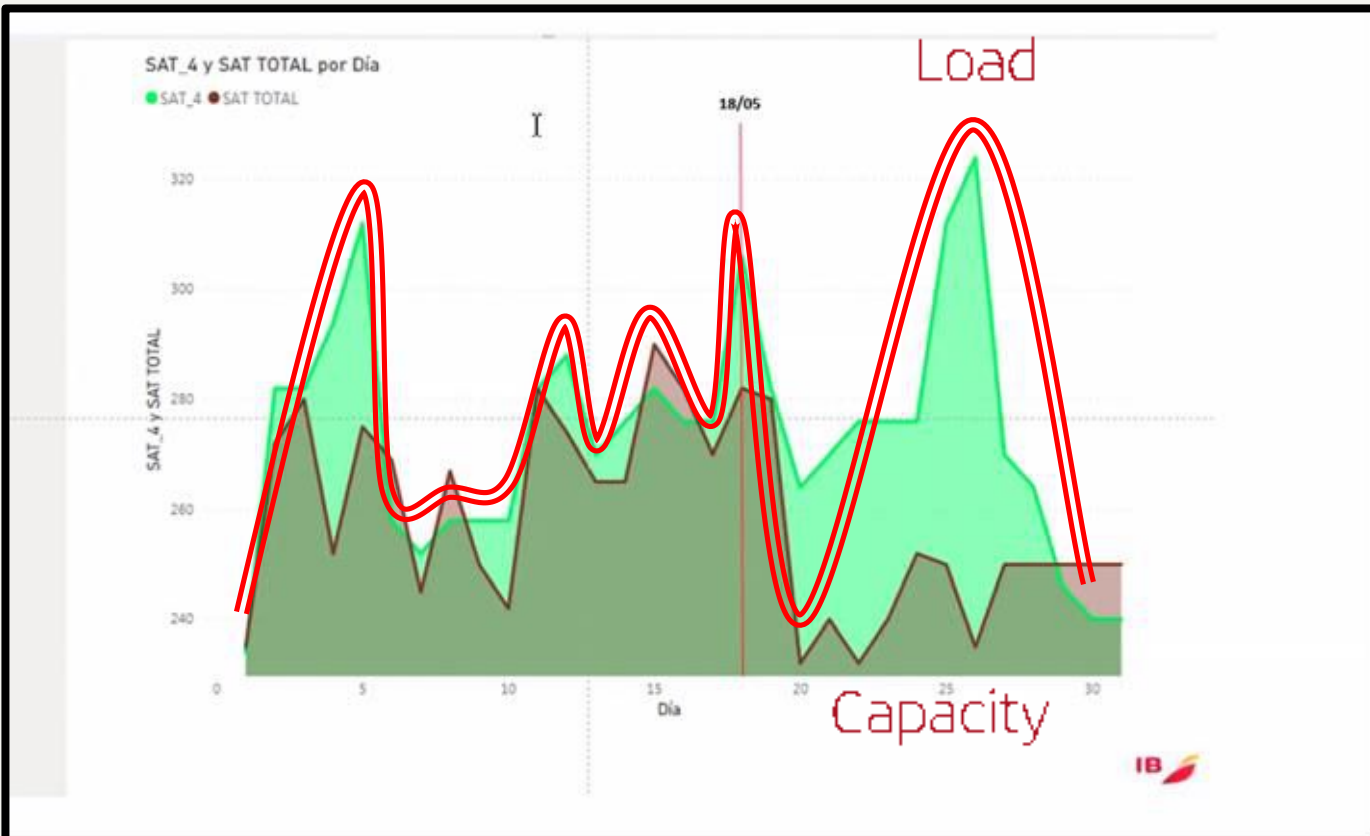
Hundreds of Aircraft grounded...



Hundreds of Aircraft grounded...

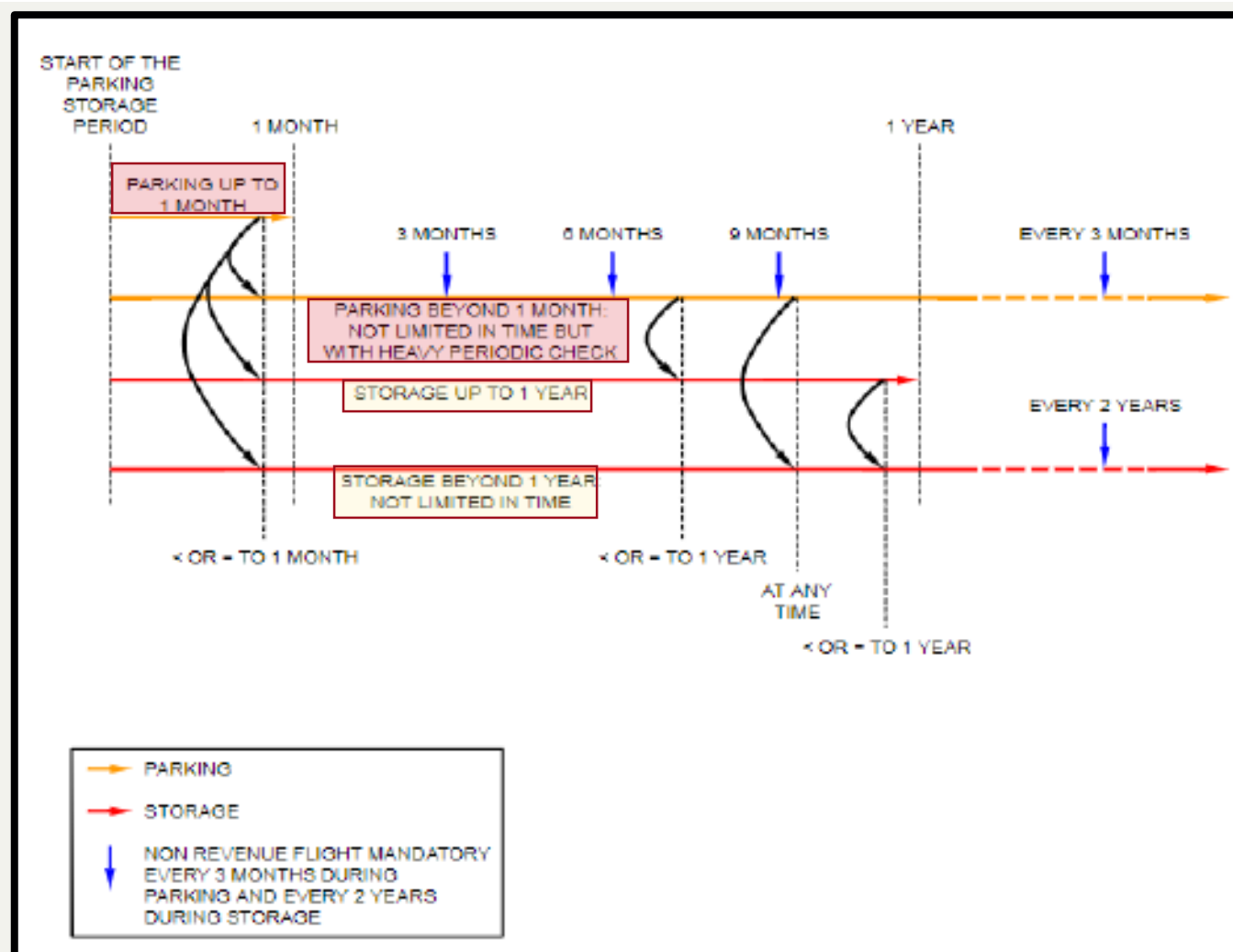


Unevenness in the system. Where is the Flow ?



Whip effect

What is the work to be done what are we trying to solve?



Two preservation types with different requirements for Return to Operation

Parked Aircraft – Main visual differences



Stored Aircraft – Main visual differences



Two preservation types with different requirements for Return to Operation

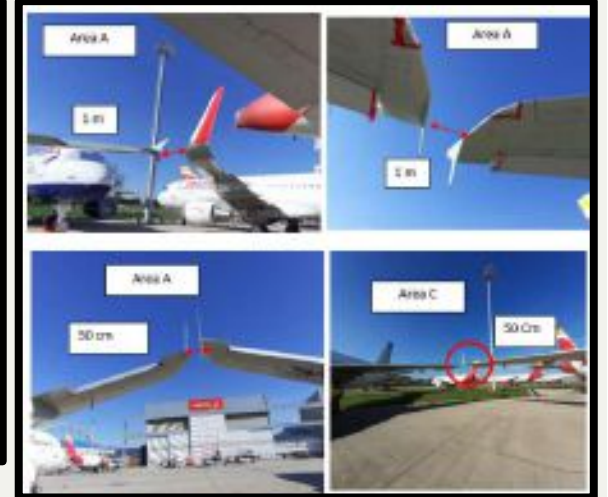
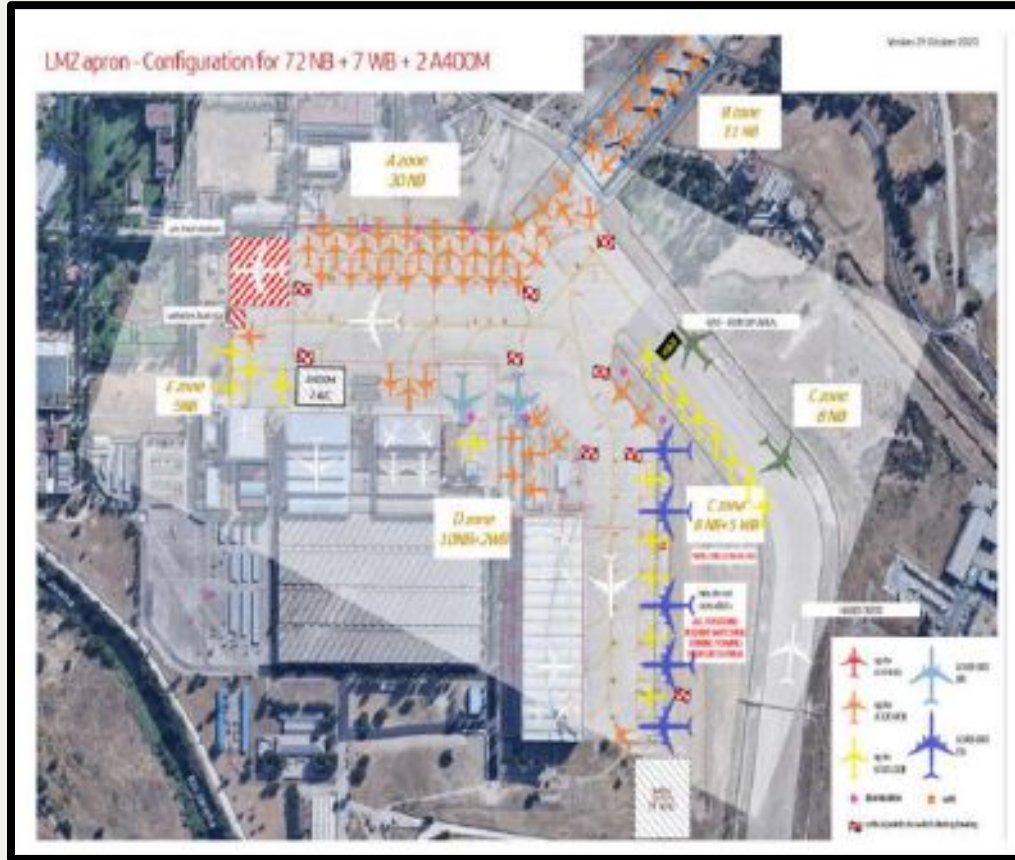
Parked Aircraft – Main visual differences



Stored Aircraft – Main visual differences

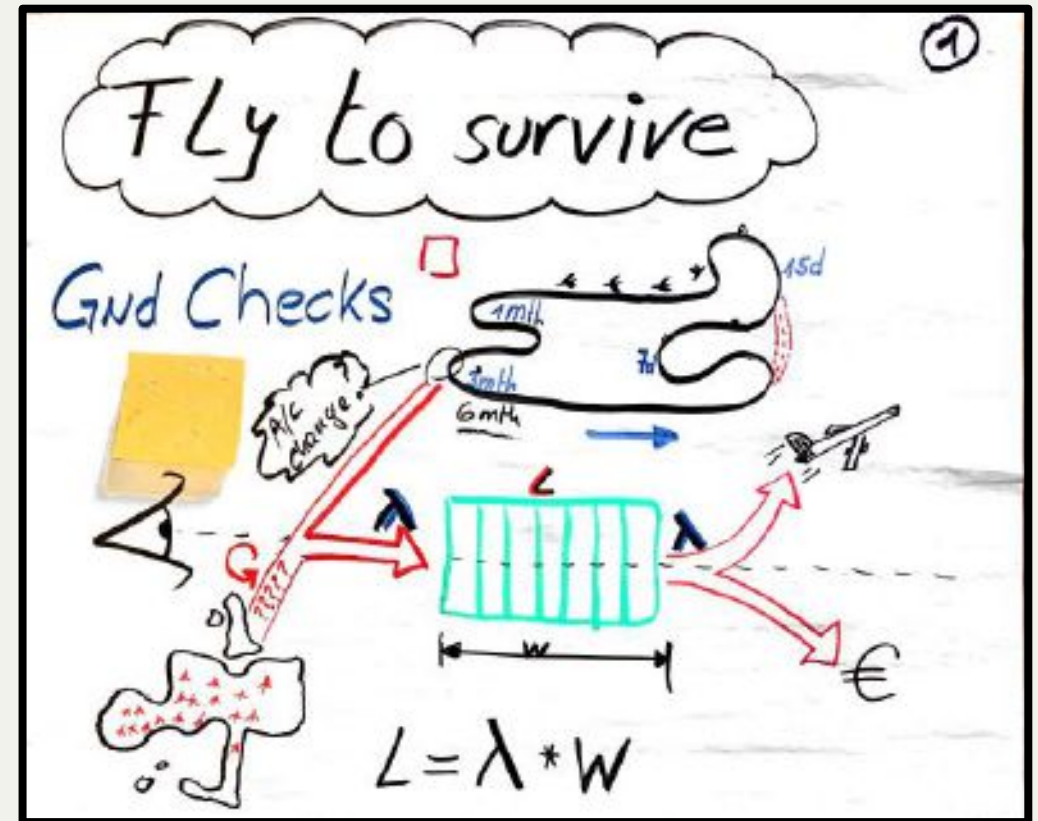


Aircraft Parking Headache



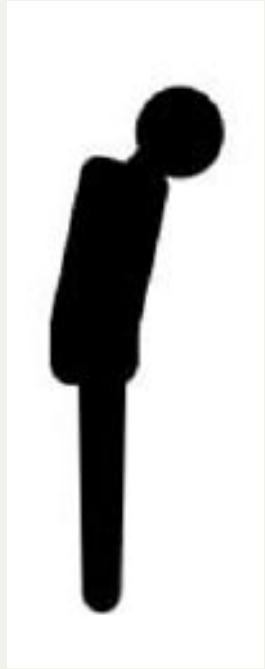
- To absolutely ensure safety and a good work environment
- To keep operator work steps close together for continuous value added cycle operation to flow.

From home working to keeping people safe at work:

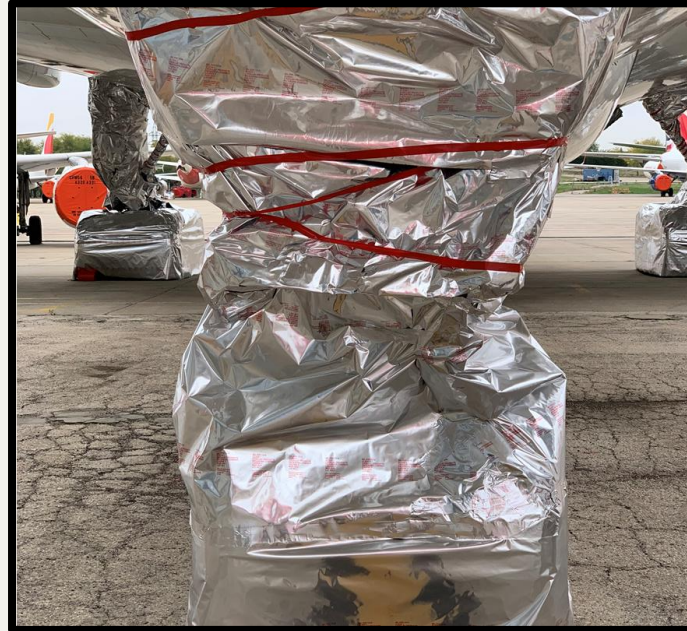


Seeing the opportunities & grasping the situation...

Learning to See - Go & understand the work.



700 CM!

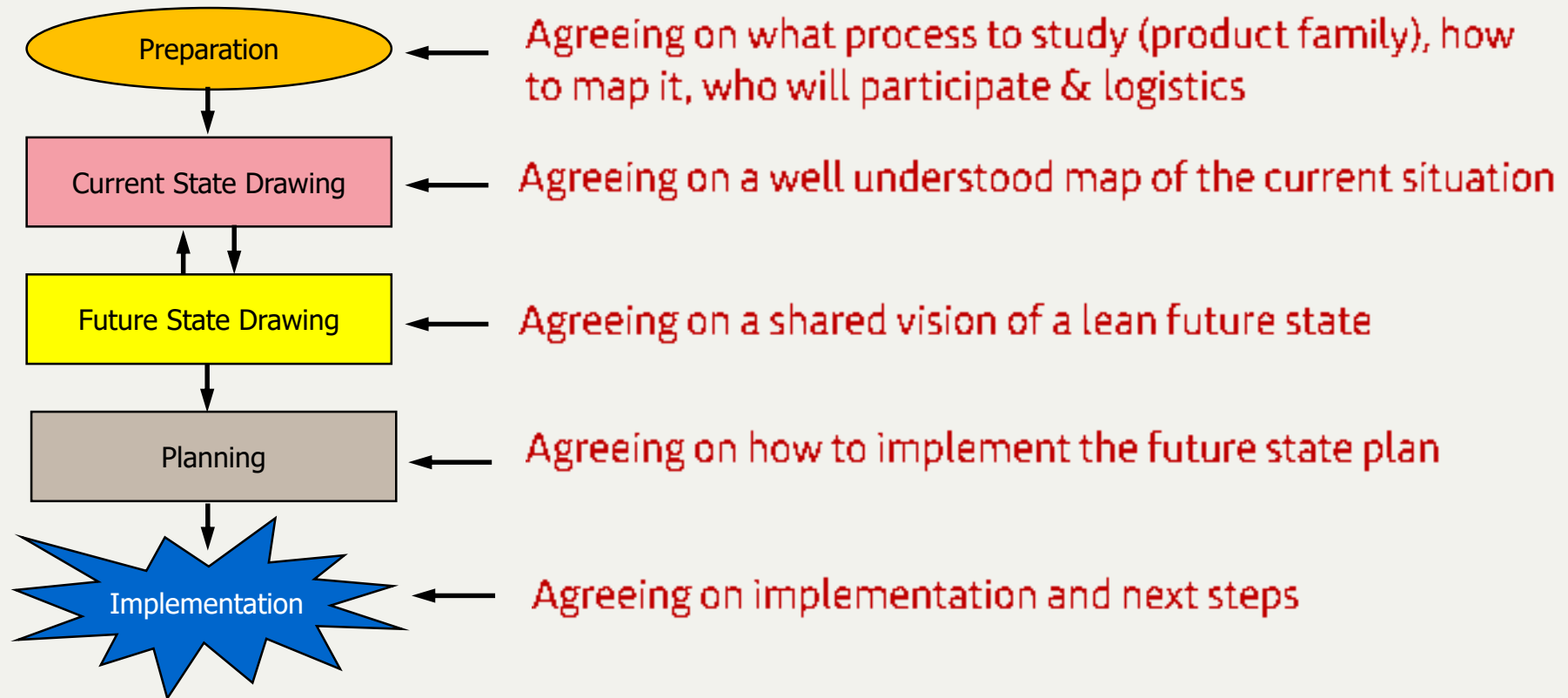


How can we make this any simpler?

The journey from service to ship to service to shelve...



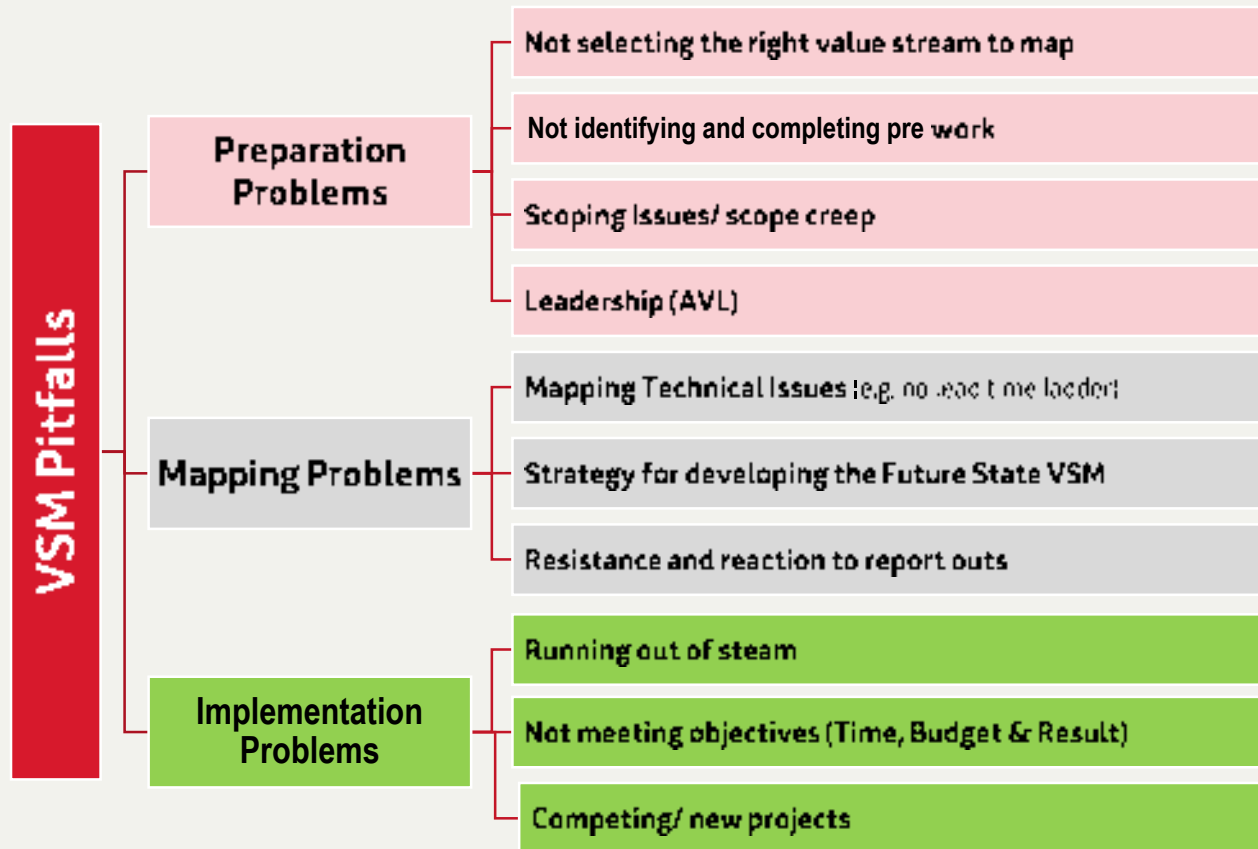
Value Stream Mapping / Transformation steps



Source: Learning to See, Mike Rother, John Shook

4 primary processes in an organisation

Value Stream Mapping / Transformation steps



Potential Direct Causes

- Making assumptions, not knowing how to prioritise value streams.
- Gaps in knowledge & capability (not gathering relevant data).
- Lack of leadership throughout the value stream transformation

Parking & Storage Current State map



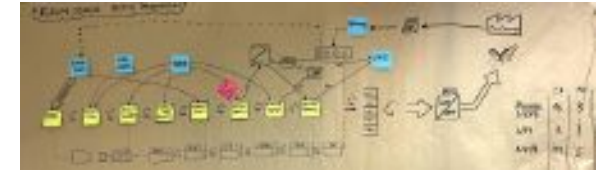
Original state

Designing the Future State

Making a Value Stream Lean ?



What made our Value stream Lean(er)



1. What is the **Takt Time**?
2. Where or will you produce to **finish goods**(Supermarket) from which the customer pulls, or directly to return to flight?
3. Where can we use **continuous Flow / FIFO**?
4. Where will we need to use the supermarket **Pull system** to control the production of the upstream process?
5. At what **single point** in the production Chain (the pacemaker process will we **Schedule** production?
6. How will we **level the production mix** at the pacemaker process? **Interval / Pitch**
7. What incremental work (NVA) will we consistently release and take away from the process?
8. What process improvement will be necessary?

Source: Learning to See
Mike Rother, John Shook

How fast should we produce at the pit stop?

→ What is the takt time?

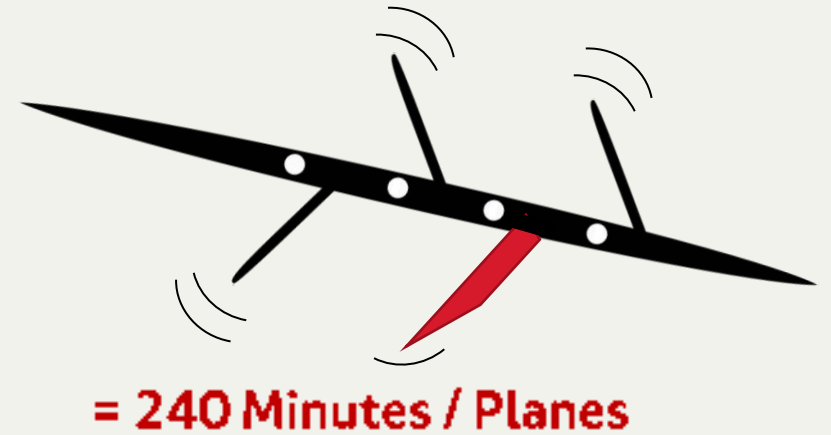
EG;- 90 A/C to be delivered Betw. 01-20 JUNE = 4.5 A/C/day Demand
 - Available Mhrs 3x8 shift = 18h or 1080' min / 4.5 = 240' min

A/C	EA	XA	EB	XB	EC	XC	
1	0	240	240	960	960	1080	
2	240	480	960	1680	1680	1800	w 480'
3	480	720	1680	2400	2400	2520	w 720'

CT 720' Good?
 CT 720'

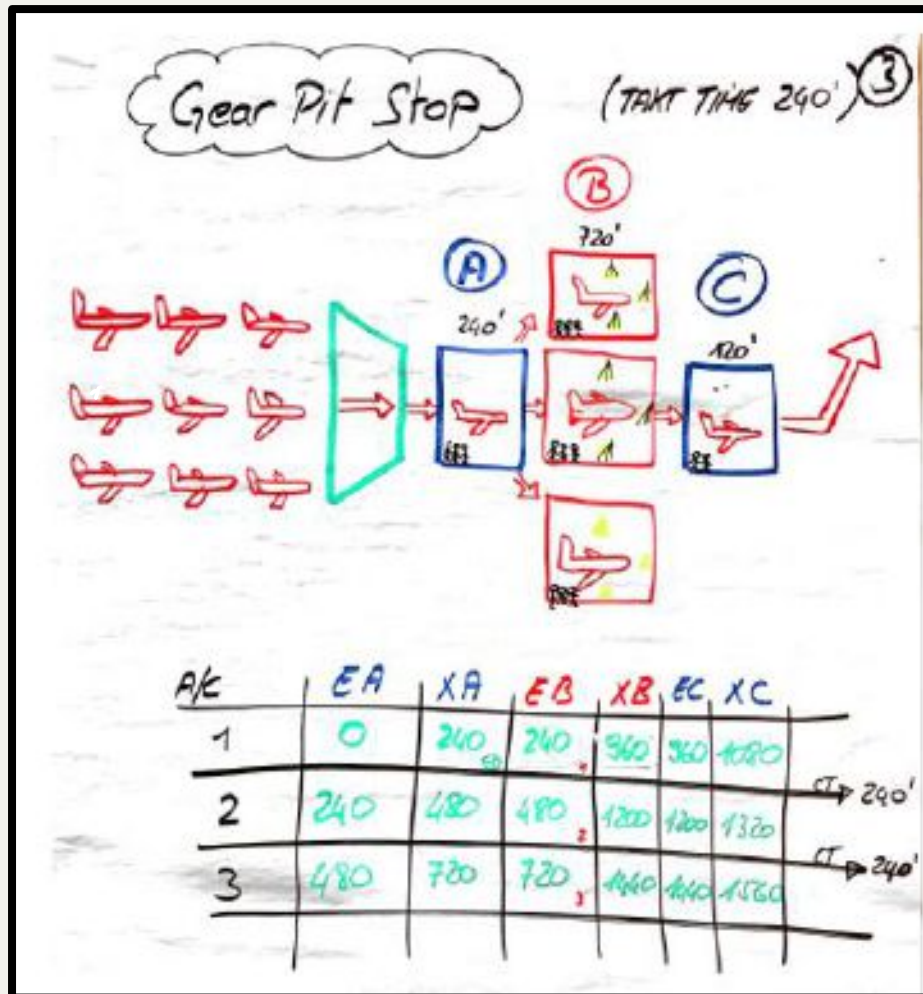
$$\text{Takt Time} = \frac{\text{Available Time}}{\text{Demand}}$$

1080 Minutes / day
 4,5 Planes / day



Improve the process Performance by identifying the bottle neck

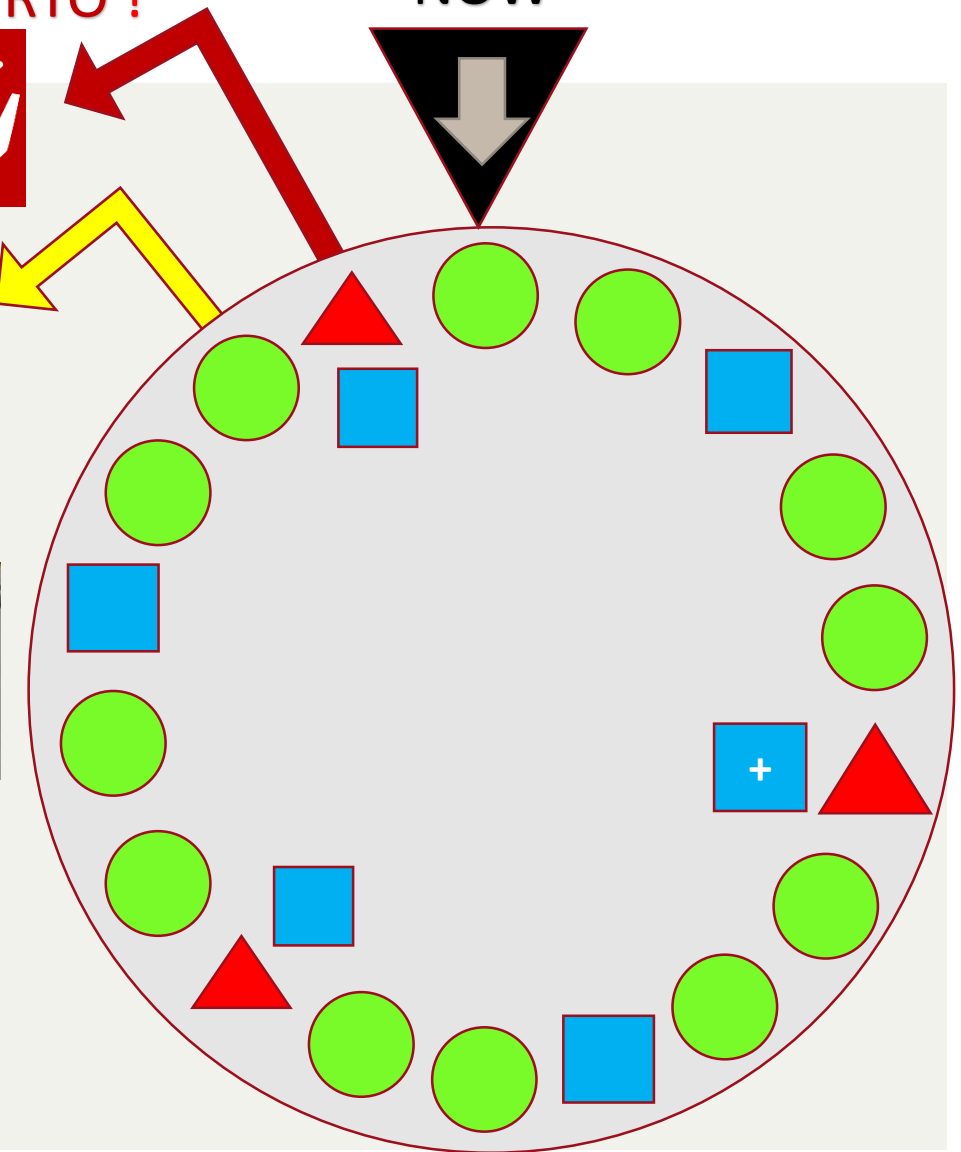
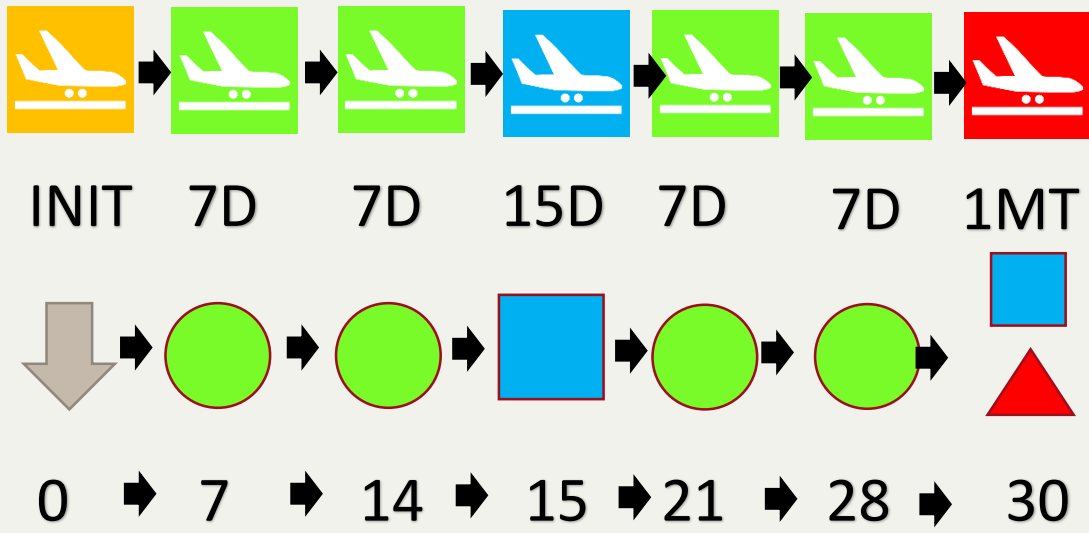
A closer look with Eyes for Flow...



FTS Parking Flow sequence

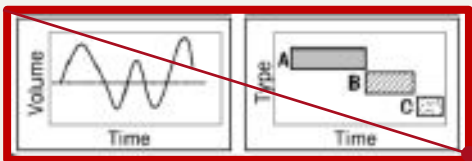
2 wheel turns
6 month RTO !

NOW

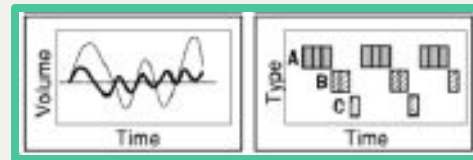


The big advantage of the flow Parking preservation is its repeatability!

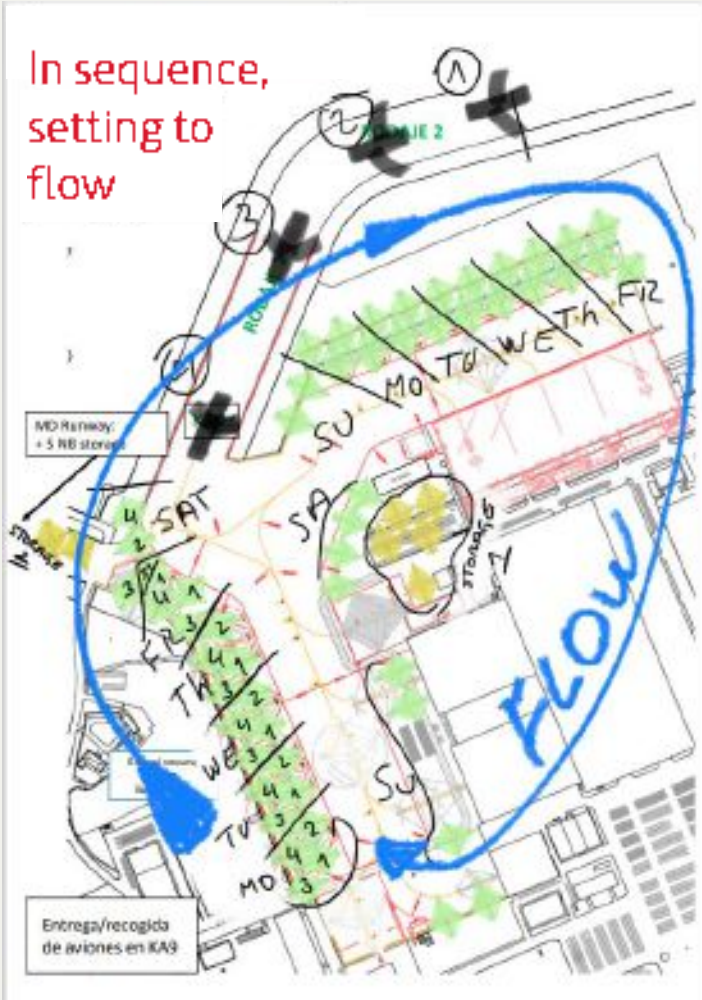
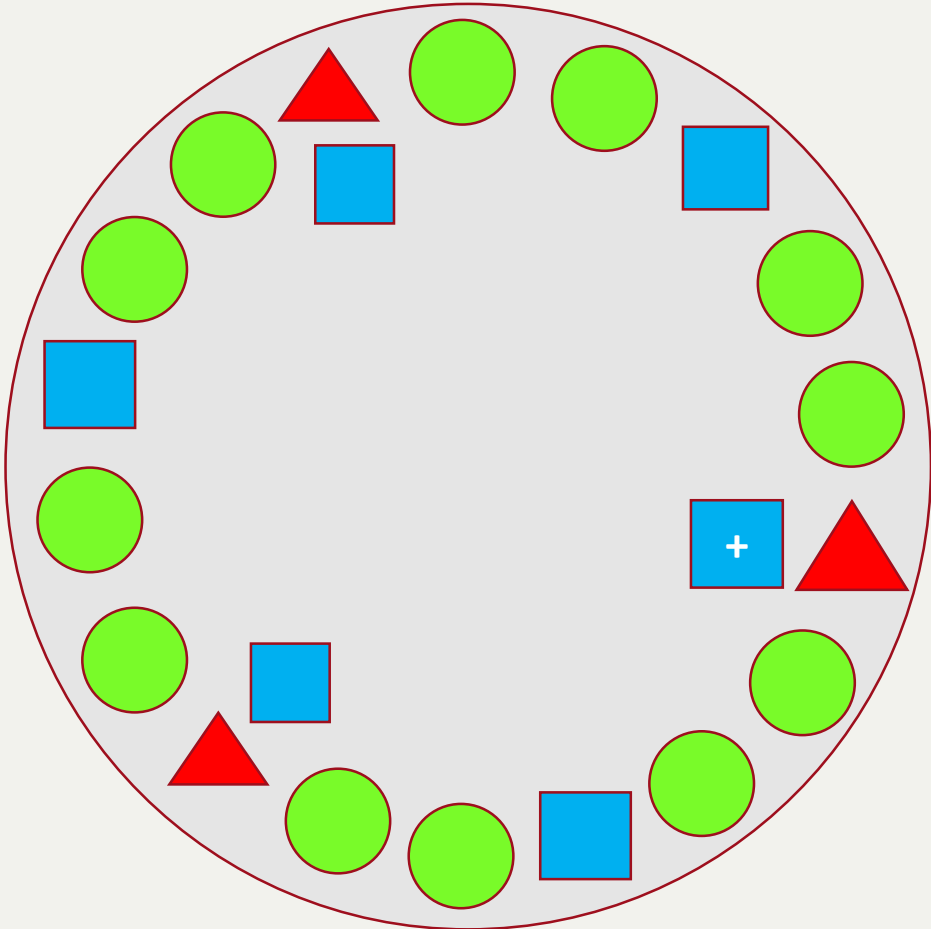
Joining divided processes – Finish Goods Strategy



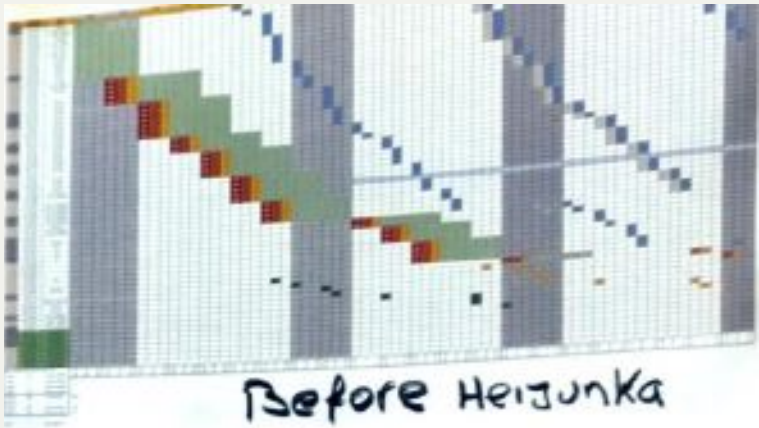
How do I know what to work on next?



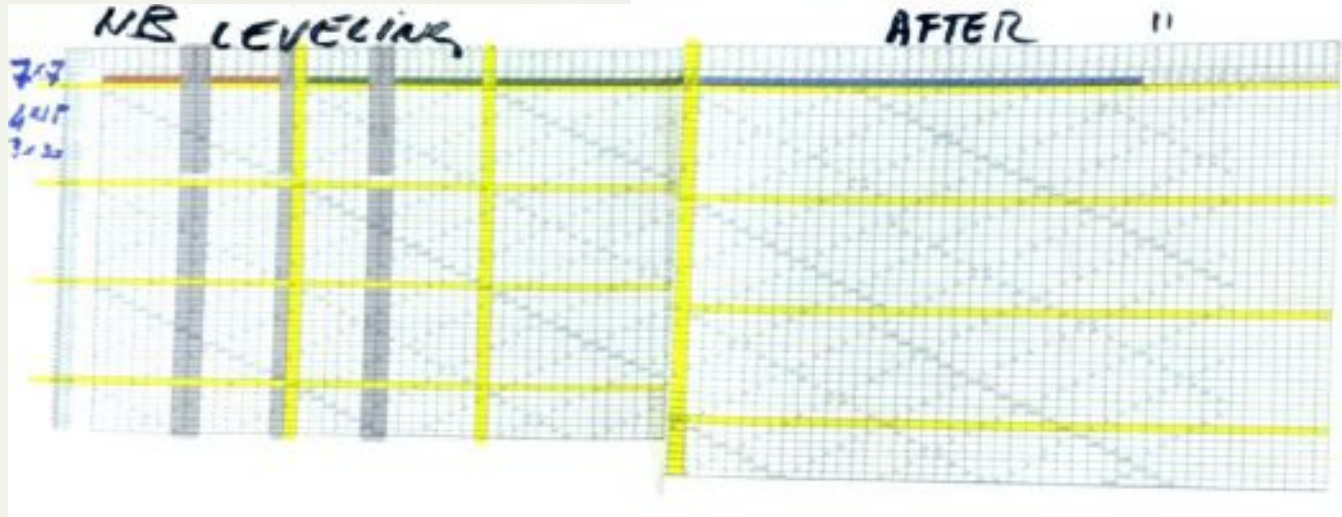
Parking Flow layout



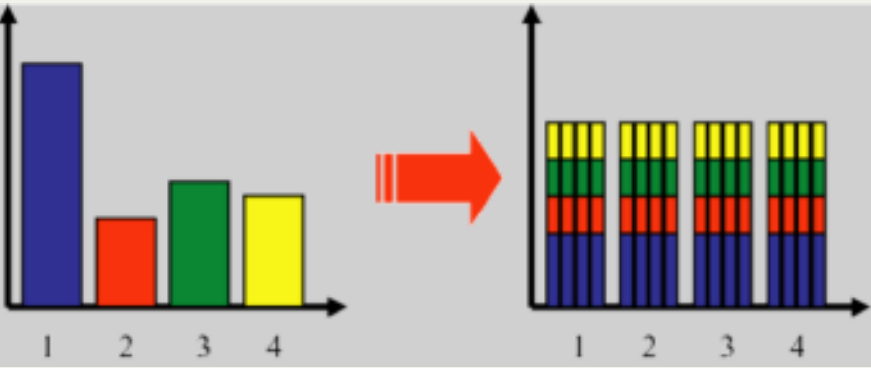
Load Leveling / Leveling the Mix



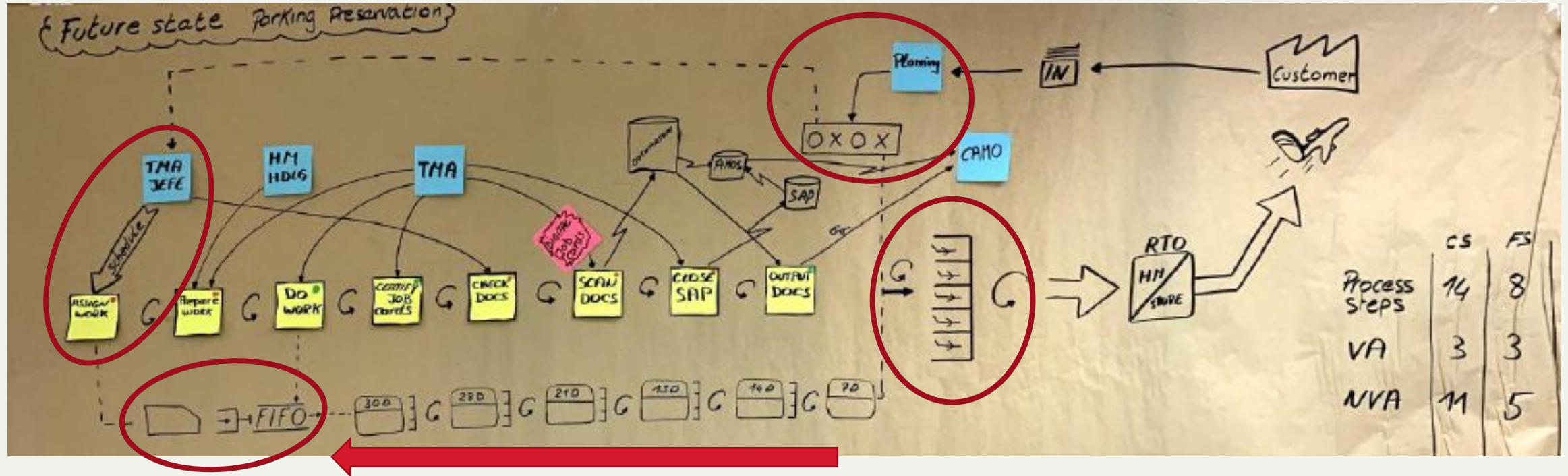
AFTER "



Levelling the pacemaker



Designing the Future state



Connecting to the customer and regulating the flow

Standardized day, The Greens



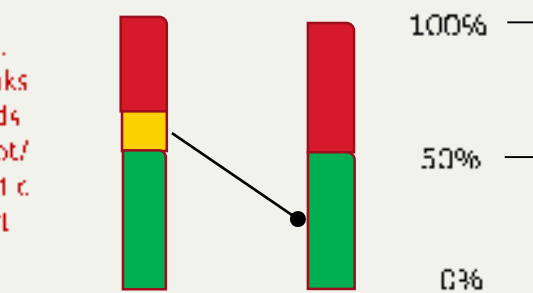
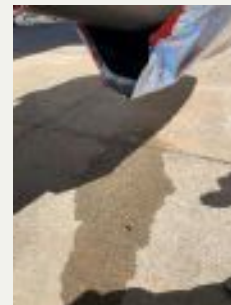
Level the Customer demand

Setting the pace, distributing the work



We Knew if we were ahead / behind every 30 minutes

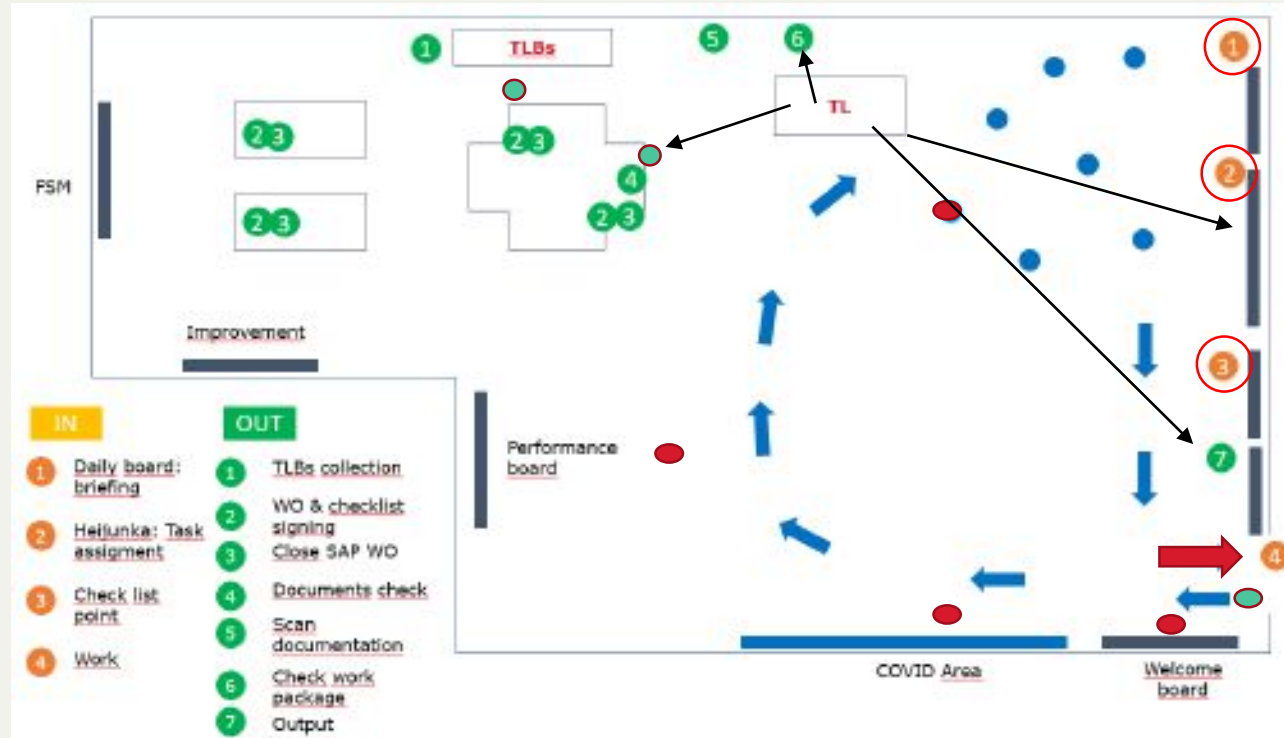
Managing Unpredictables; The Reds



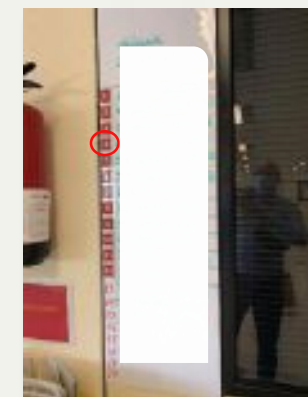
Problem & Unpredictables Reporting



New Standard for new problem



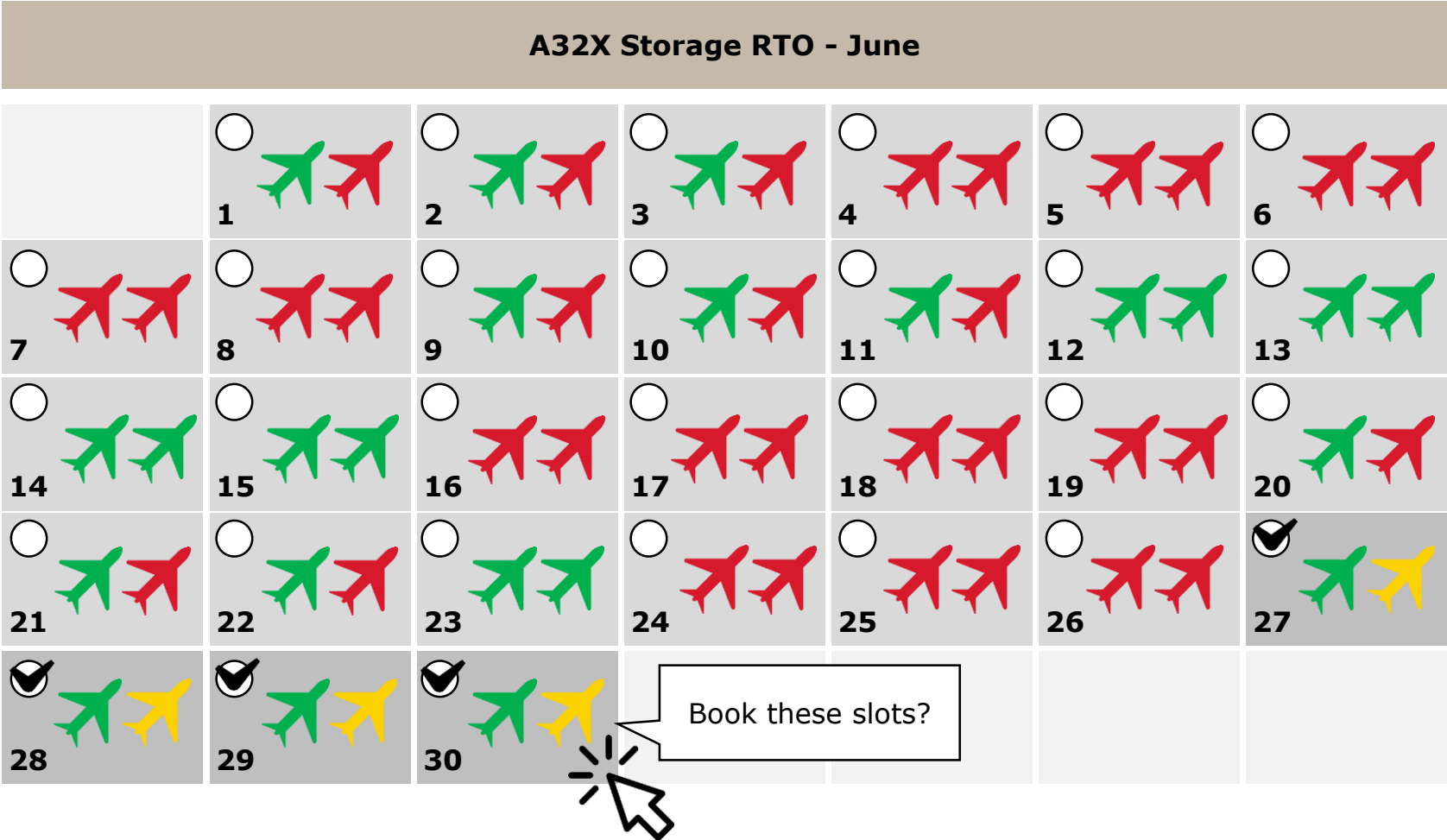
DATE	DESCRIPTION	STATUS	ASSIGNED TO	COMPLETION DATE
2023-10-26	Task 1: Initial setup	Completed	John Doe	2023-10-26
2023-10-27	Task 2: Material procurement	In Progress	Jane Smith	2023-10-28
2023-10-28	Task 3: Safety training	Not Started	Mike Johnson	2023-10-29
2023-10-29	Task 4: Quality control	Completed	Sarah Lee	2023-10-29
2023-10-30	Task 5: Final inspection	Completed	David Kim	2023-10-30



Implementing, Sustaining, Improving

In order to properly control and manage our resources and capacity we designed a booking slot system

RTOBooking.com concept



- **Improved customer support.** A place where all the customers can:
 - **Check the availability of slots** in our organization
 - **Book slots**
- **Visual management** of current **situation** making **easier** the **planning** and control of the works to be performed

The future became present Improvements Results



REDUCION

- Lead Times ↓ 90%
- Inventory ↓ 70%
- Floor Space ↓ 50%
- Defects ↓ 60%
- People Motion ↓ 50%
- Set Up Time ↓ 90%

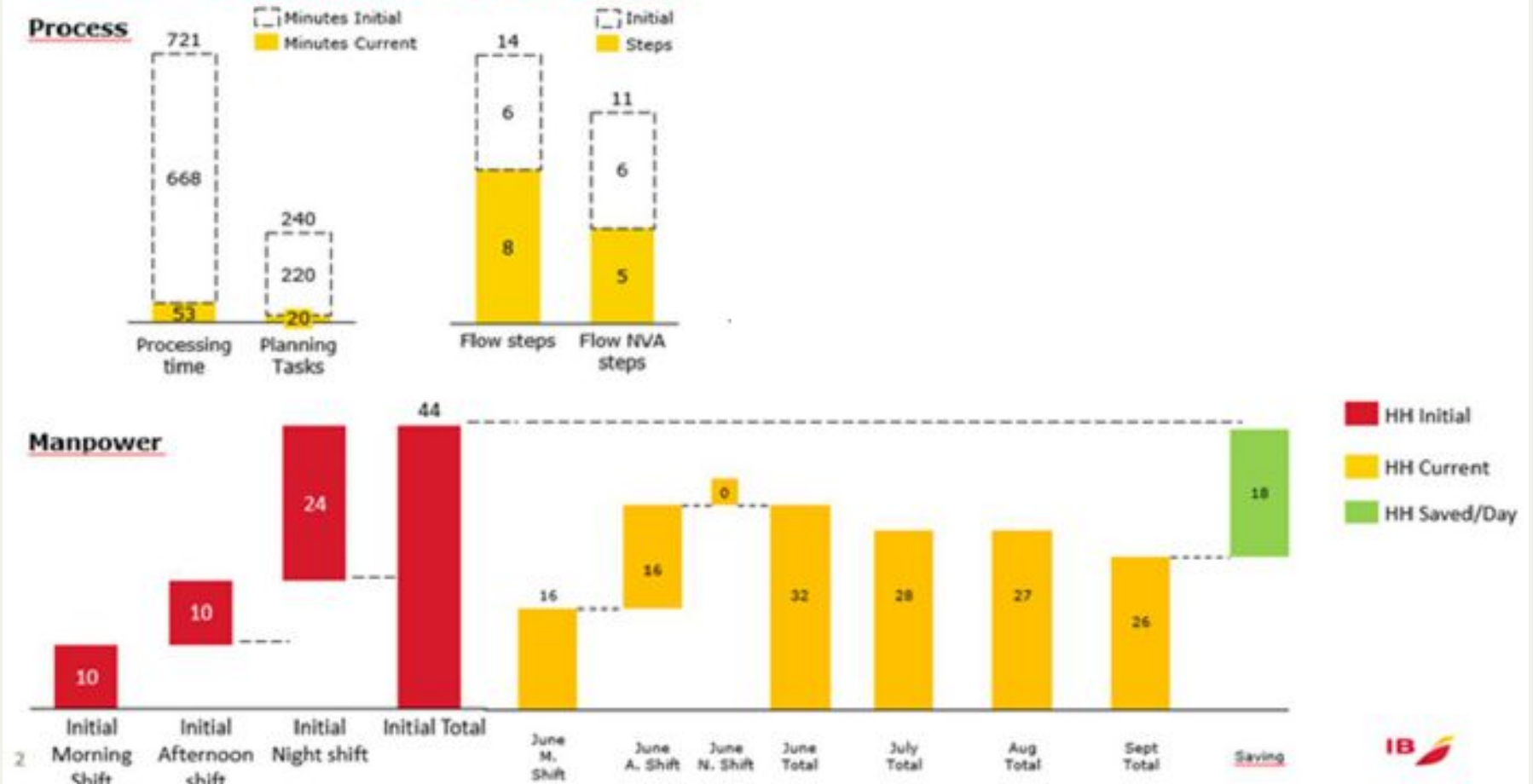
Planning Time 12x faster ↑

Processing Time 13x faster ↑

Connect Customer to the Shop Floor – Pull



Parking & Storage: Current State



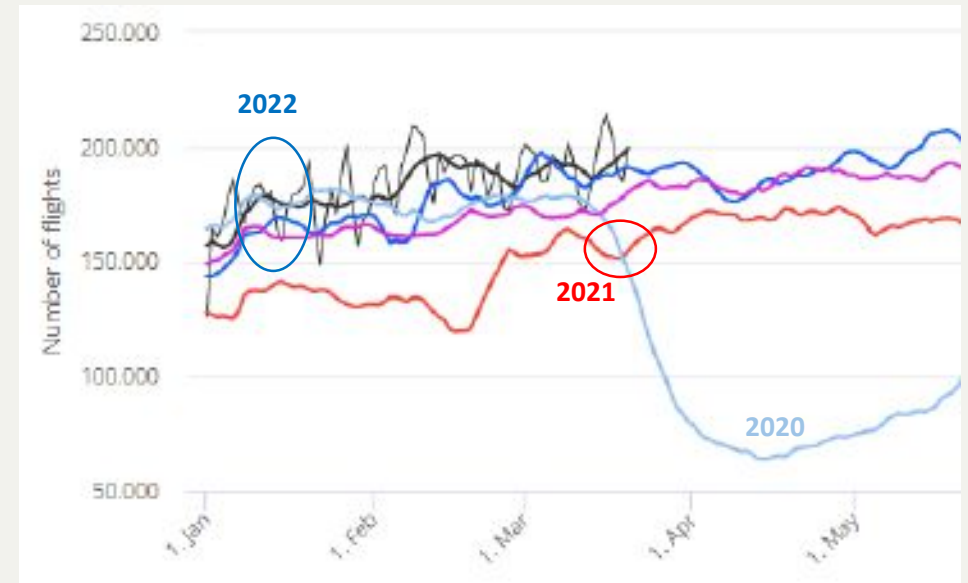
Sustainment & Thoughts

- Continuous adaptation to environmental changes... (& people)
- Consistent and specific (lean) blowing activity.



Three leadership routines:

1. Check alignment/ People are working on the right element, and do they need Help?
2. Check and embed standards (ensure the problem does not arise from variation from the standards.
3. Help Chain, Ensure the team gets Help on the problems they can not solve.



Thank You

