

# 'Kaizen Blitz' in Shannon Aerospace

(Organised by The Lean Flight Initiative,  
Shannon Aerospace and Boeing)

## Introduction to Kaizen Blitz

- What follows is a generic summary of one of the key building blocks of the Shannon Aerospace Lean Transformation, our Rapid Improvement Events (RIE's)
- Shannon Aerospace RIE teams work for three weeks, part-time, preparing for the event and collecting data. Teams are comprised of people from throughout our company.
- **Lean Flight Initiative / Airline guests** are invited join the teams from Monday 26 March (08:00) to Friday 30 March (14:00) for the very busy, hands-on, application of Lean Tools and physical transformation of an area / process.
- Shannon Teams work for three further weeks, part-time, sustaining and documenting the process
- No prior Lean or Maintenance experience is necessary.
- Accommodation can be arranged on request. Transportation will be organised for participants. (Entertainment will be courtesy of The Boeing Company)

## Very Basic Outline of Event Week:

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Monday 26 Mar:

From data collected by Shannon Team, summarise map of 'Current State', visualise 'Ideal State' and begin mapping an achievable 'Future State'.

Tuesday 27 Mar:

Complete Future State Map; Plan the 'Big Changes'

Wed' 28 Mar:

Make the changes. Try it out. Begin to de-bug.

Thurs' 29 Mar:

Standardise the Work

Fri 30 Mar:

Brief the organisation

# Event Overview



Shannon Team  
Preparation

## LFI / Airline Participation

Shannon Team  
Sustainment

Week 1

Baseline  
current state

Week 2

Collect  
data

Week 3

Plan the  
changes &  
prepare

Week 4

Event Week  
Implement  
changes

Week 5

Finish  
changes  
& de-bug

Week 6

Sustain the  
new process

Week 7

Consolidate  
& settle



# LFI / Airline Team Member



- Team Members will assist in the delivery of the Quad of Aims
- No prior experience is required
- Please just be open-minded and involved in the event
- Ask questions about the process/area under review (We look for 5-Whys)
- Please help us to see the waste and generate ideas to eliminate it
- ‘Out-of-the-box’ ideas are welcome (we may not see them)
- Help us to identify solutions (we seek 7-Ways)
- Help us select the ‘best’ option
- Roll up your sleeves and help us to build it
- Help us to review the experience and learning for the week.
- Feel free to join in communicating our solution within Shannon Aerospace and within the LFI



## Facilitation of Events:

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- The Simpler Consulting Group will facilitate all four events
- Facilitators from the Boeing Lean Enterprise Office and CAS Office will be on-site as LFI Co-ordinators and to support any specific Airline Queries

## Events to be run in Shannon: March 26 – March 30 2007

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- Reducing the Engineering Query Response Time (across the Enterprise)
- Ramp Equipment Care and Storage. Development of Standard Work and Visual Management
- Personnel Recruitment Process. Reduction of Cycle Time and Development of Standard Work and Visual Management
- Upholstery Workshop Processes. Development of Standard Work and Visual Management

Sample Quad of Aims.....

Presentation Title  
Date



# DRAFT : Quad of Aims: Engineering Query Response Time Reduction (across the Enterprise)

**Purpose**  
 Design a system for handling Engineering Queries (Airline / MRO <-> OEM <-> MRO / Airline) that supports SAL in reliably (SAL 2P TAKT) meeting our commitments to Airline Customers and to grow our business

- EXTERNAL Customer Benefit**
- More reliable airframe maintenance
  - Reduced costs and down time
  - Reduction in Customer involvement in MRO service
- INTERNAL Customer Benefit**
- Clear Query Process, Better visibility and predictability
  - Reduced frustration levels
  - Reduced disruption to work and flow

- Deliverables - SAL**
- Standard Work for our Engineering Query Process (Customer / AMT <-> Hub <-> Engineering <-> Customer / AMT)
  - Clear Standards for Data required (for Hub, for SAL Engineering, For OEM)
- Deliverables – SAL - OEM**
- Gain an understanding of OEM requirements
  - Standard Work to efficiently match OEM needs
  - Visible Status, KPI's between SAL and OEM
  - Develop an agreed Process for Escalation OEM <-> SAL
  - Process Owner Implementation Plan including Standard Work, 6S, KPI's taken through training into Sustainment

- Metrics**
- Reduction in complaints from SAL Airline Customers relating to Engineering Query delays and additional costs (Measures.....)
  - Reduction in Waive-offs from OEM (towards Zero)
  - Reduce the total query cycle time to match flow (Static & Pulse) line requirements



# Events



- no shortcuts... learn by doing



# Learning is '.....By Doing'

## Training is 'as required' in the Event Week

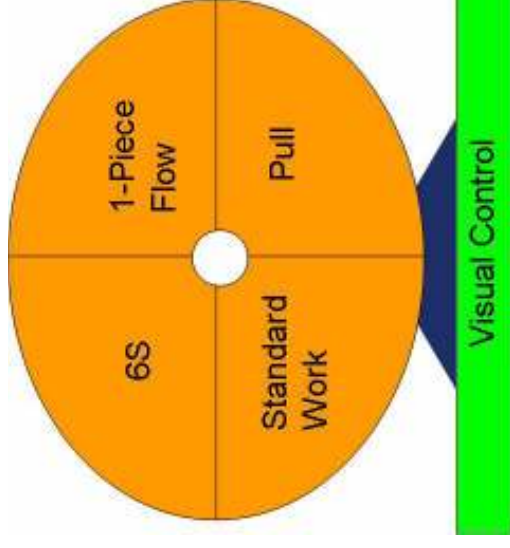
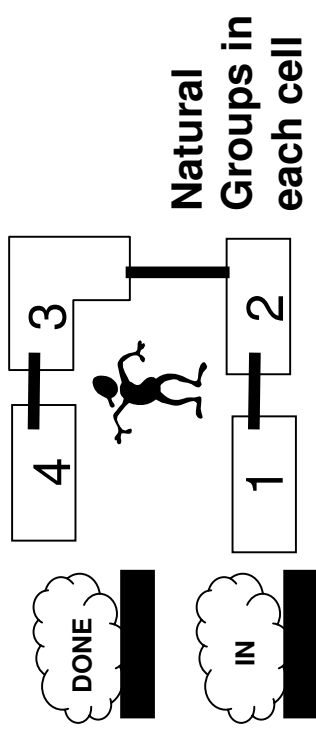
### *use the tools*

- TAKT TIME
- TIME OBSERVATION
- BAR CHART
- SPAGHETTI DIAGRAM
- FLOW DIAGRAM
- STANDARD WORK DOCUMENT
- VISUAL MANAGEMENT BOARD
- SMED

### *see the waste*

- INJURIES
- DEFECTS
- INVENTORY
- OVERPRODUCTION
- WAITING TIME
- MOTION
- TRANSPORTATION
- PROCESSING WASTE

### *remove waste and create flow*



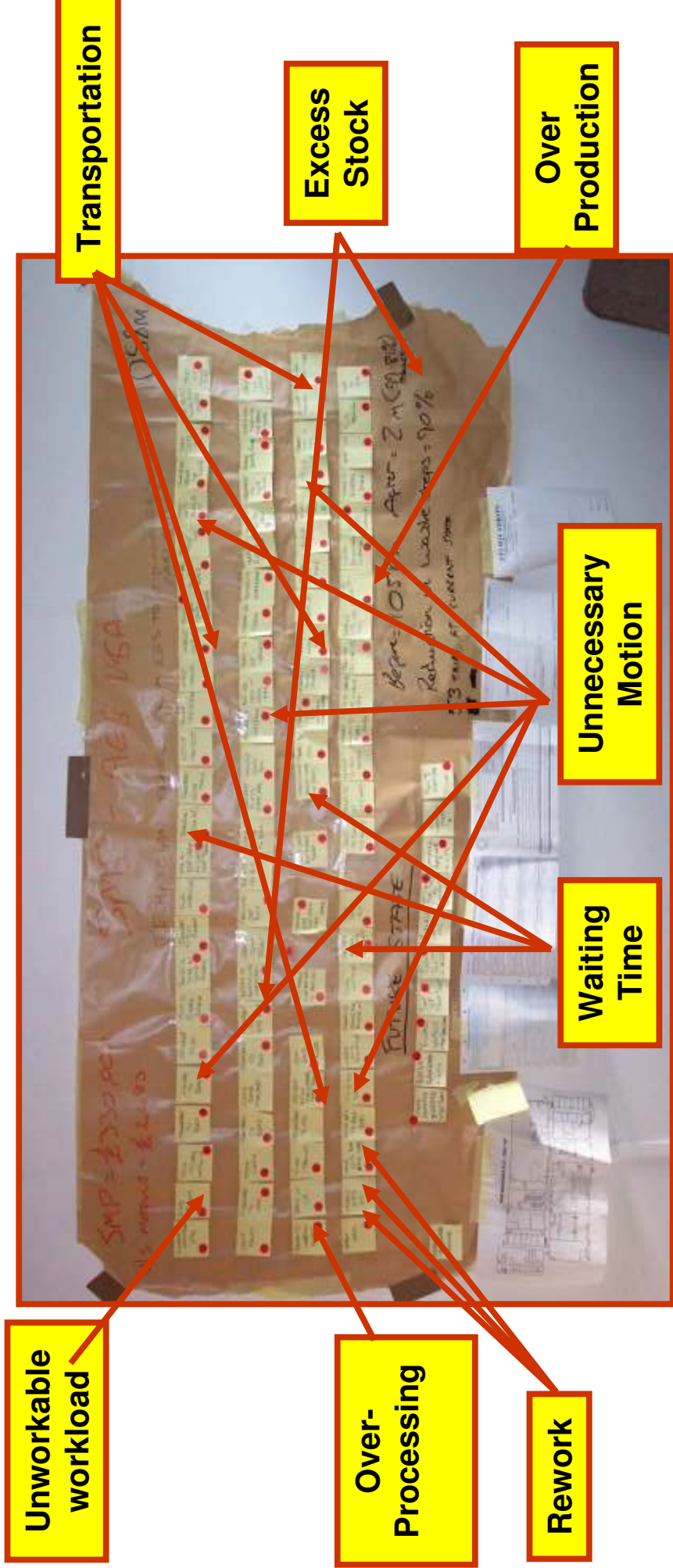
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# *Some of the tools....*

# Value Stream Mapping

Red dot..... denotes waste

Green dot..... denotes Value

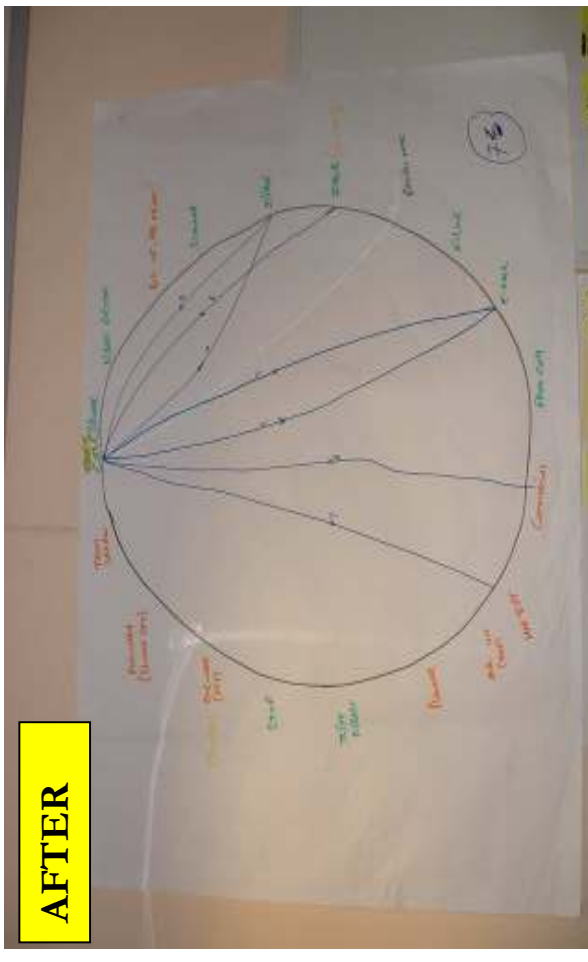
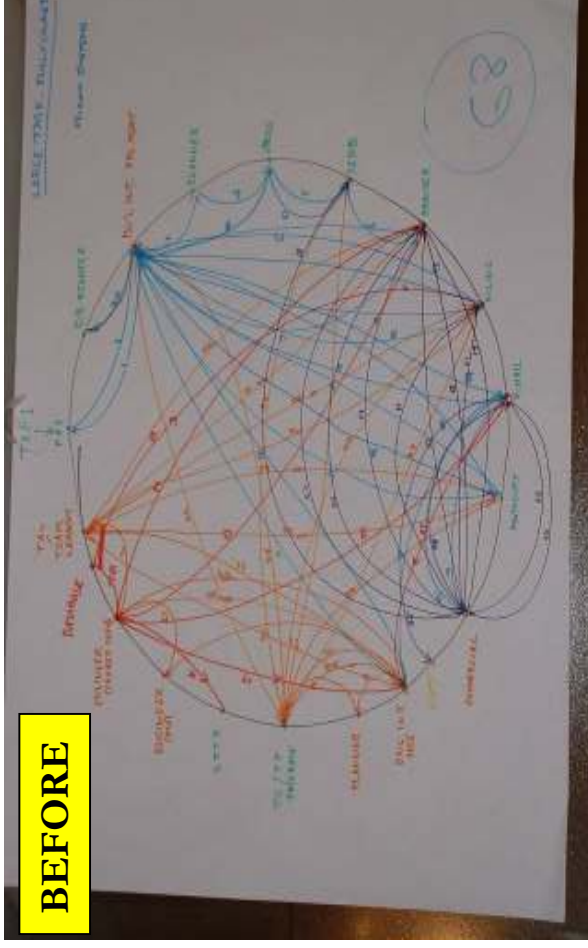


Applying the 8 wastes to a Value Stream Map



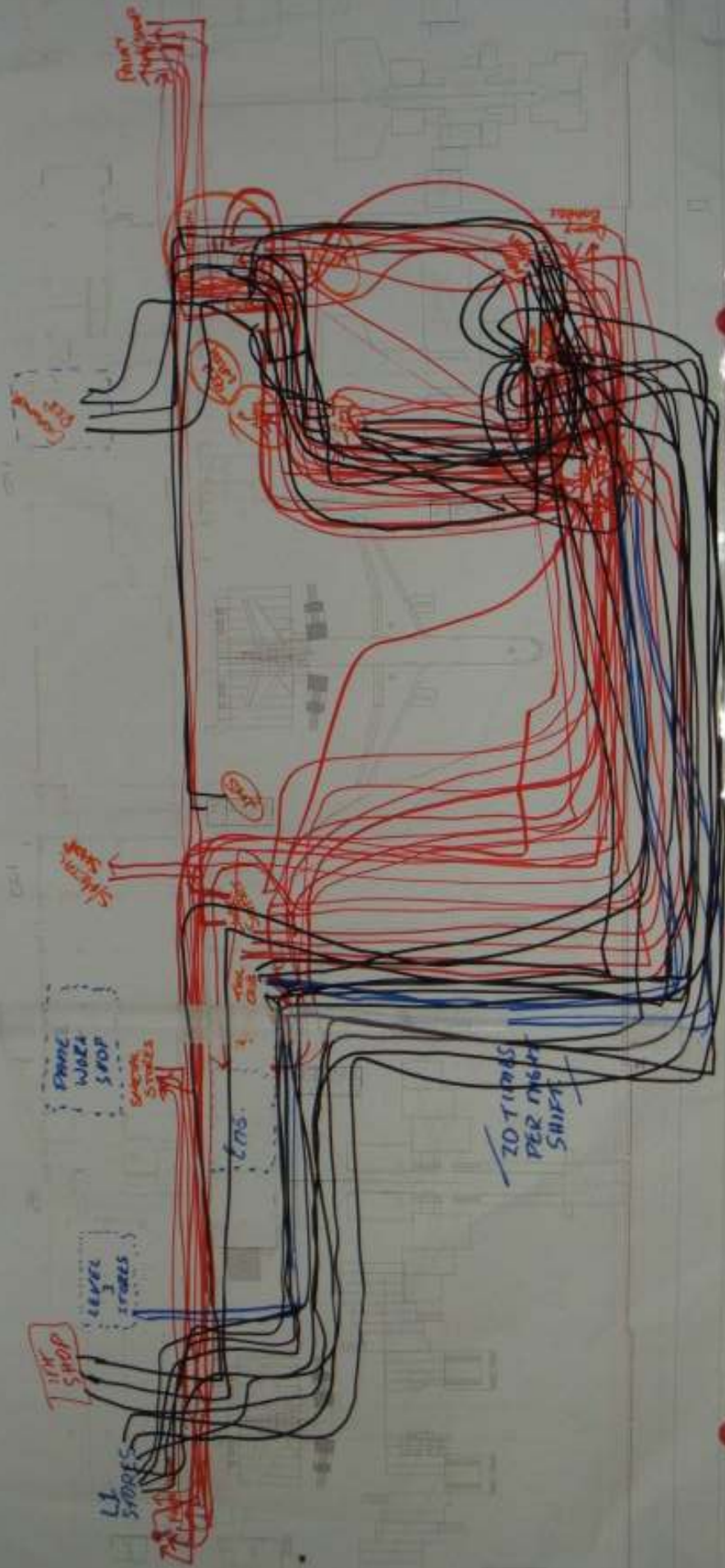
## Circle Diagram

- Purpose: to help see movement of people & transportation of Information. Circle Diagram makes waste visible & obvious
- We stand back, observe the team members ... notice where do they go and ask ... why?

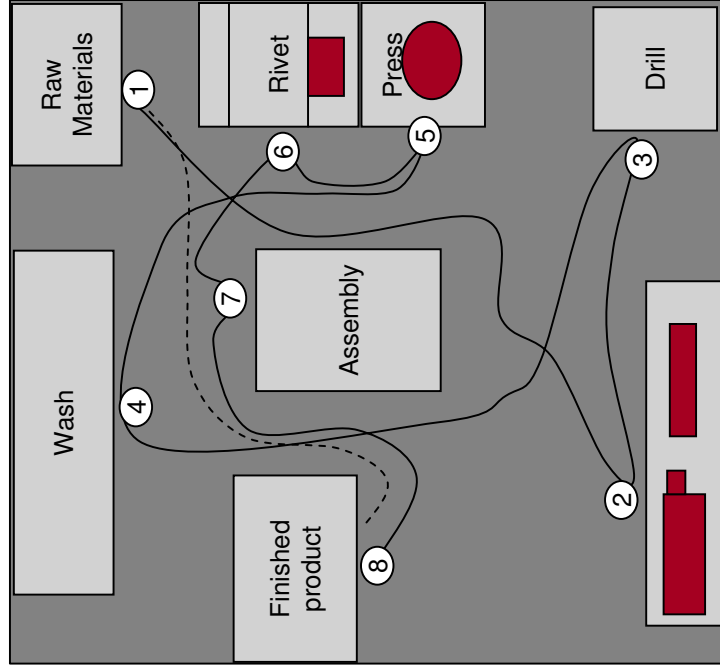


# Hangar Process Spaghetti Diagram

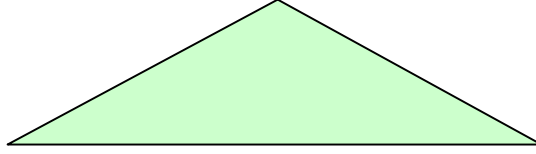
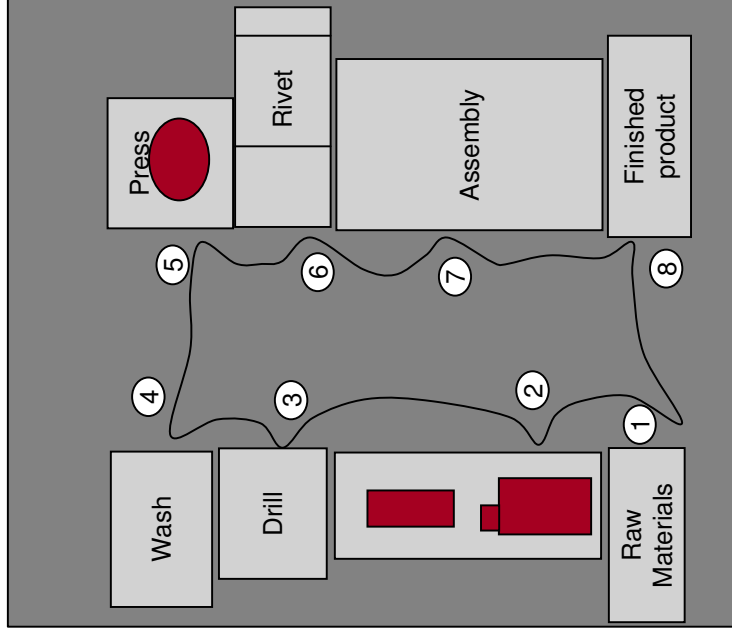
(10Km walked to repair floor structures on one aircraft!)



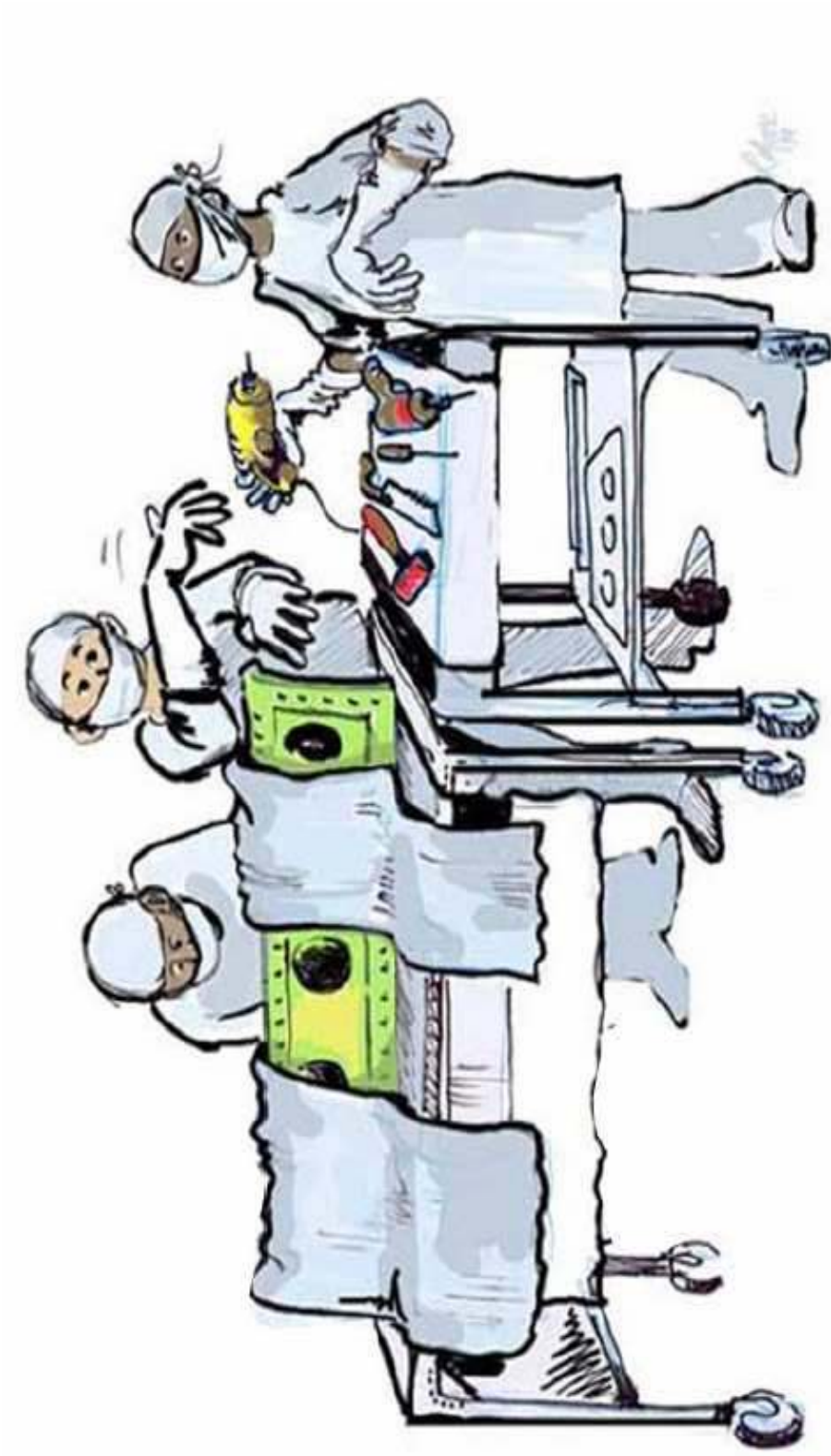
**Before**



**After**



# “Point of Use” Work Instructions, Tools, Materials



## Questions:

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