Scoping LeanIT:
asking the right questions

Daniel T Jones

THE LEAN ENTERPRISE ACADEMY

Introduction

Why is this Lean IT Summit important?

- **Time to move from value streams to value creation systems**
- **Time to integrate functions into lean management**

What is the problem we are trying to solve?

- **Not just to improve the efficiency of IT**
- **But to harness IT to enable value creation**

Lean is the practice of using the scientific method to solve business problems in order to create value

The Toyota Example

Toyota created a **unique synthesis**
of three improvement streams: -

Process thinking – organising the flow of work

Learning – by doing and reflecting

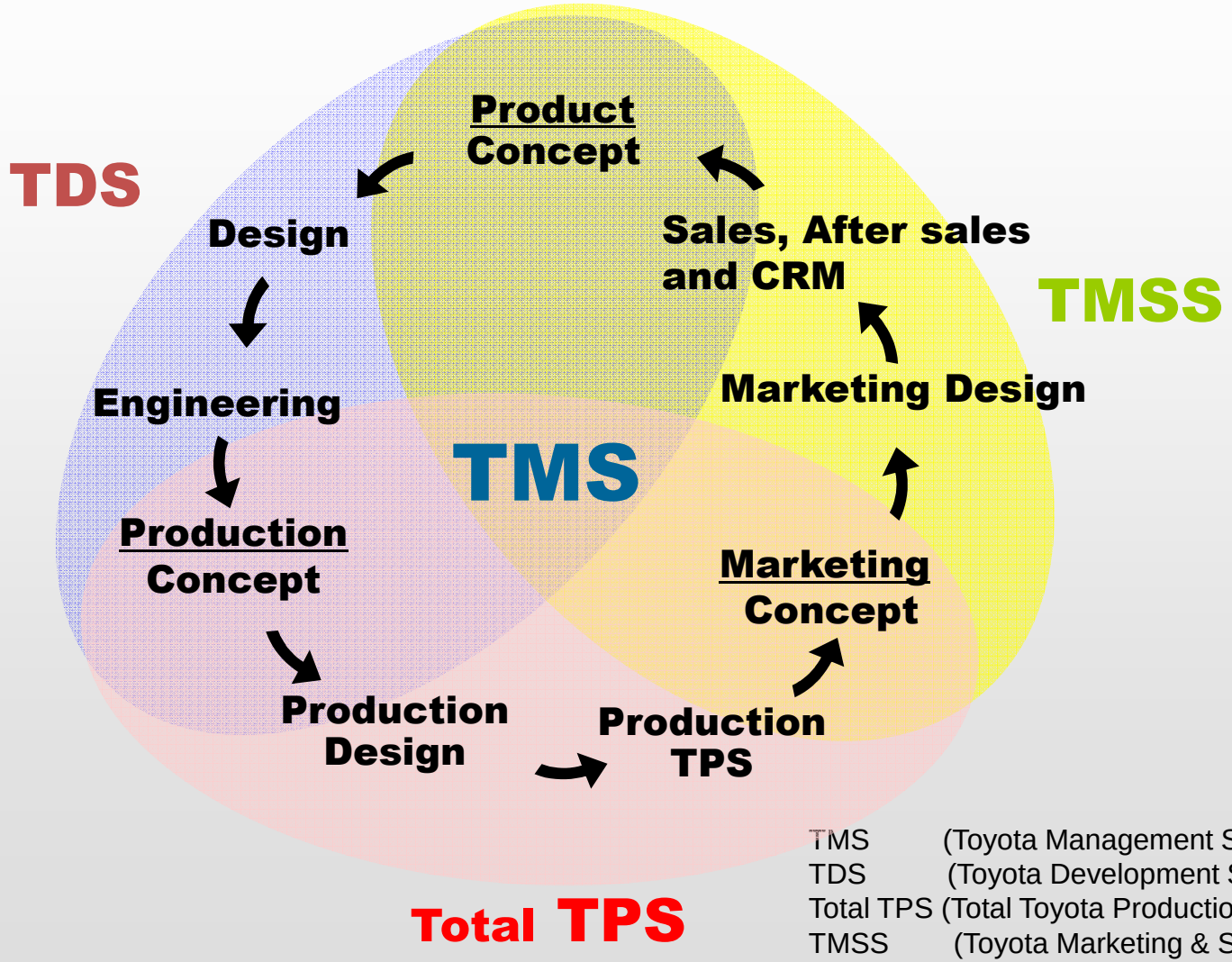
Quality – using the scientific approach

Out of this came many new **tools** and techniques

The lean **principles** for designing value streams

And a different **way of managing** and leading

Toyota Business System



TMS (Toyota Management System)
TDS (Toyota Development System)
Total TPS (Total Toyota Production System)
TMSS (Toyota Marketing & Sales System)

Toyota Management Tools

Category	Contents	Activity
TMS Management System	1.Corporate management	1-1. Capital of senior management
		1-2. Policy deployment
		1-3. Organizational power
		1-4. Improvement effort
		1-5. Audit
		1-6. Customer relation
	2. Finance (Financial accounting)	2-1. Financial income
		2-2. Financial strength: Stability
		2-3. Financial strength: Growth
		2-4. Profit control: Short term
		2-5. Profit planning: Mid & long term
		2-6. Management structure
	3. Cost planning (Management accounting)	3-1. Current cost
		3-2. Cost planning
		3-3. Capital investment
		3-4. Budget control
		3-5. Purchasing
		3-6. Cost competitiveness
	4. Globalization	4-1. Global strategy
		4-2. Education
		4-3. Local company
		4-4. Support organization
		4-5. Export competitiveness power
		4-6. Global purchasing
TDS Development System	5. Pull planning	5-1. Pull planning
		5-2. Organization, product development
		5-3. Oobeya (Project management room)
		5-4. Gyaku RE (Resident Engineer)
		5-5. Quality assurance standard
	6. Design review (DR)	6-1. DR with competitor
		6-2. DR for concept
		6-3. DR for products
		6-4. DR for components
		6-5. DR for drawing
		6-6. DRBFM
	7. Design to cost	7-1. Cost planning
		7-2. VE/ VA
		7-3. Parts commoditization, Module
		7-4. Weight planning
	8. Feedback system	8-1. Feedback sheet
		8-2. Design process & process
		8-3. Design check sheet
	9. Technical know-how	9-1. Design standard
		9-2. Technical standard
		9-3. Technical report

Category	Contents	Activity
Total TPS Production System	10. Production planning	10-1. Target setting
		10-2. Production planning
		10-3. Long-term factory plan
		10-4. Project plan, oobeya
		10-5. Technical member, Oobeya
		10-6. Organization and role
	11. Quality management	11-1. Quality assurance
		11-2. Quality into process
		11-3. QA Network
	12. Process & Production Design	12-1. Target setting
		12-2. Process design review (DR)
		12-3. Cost planning
		12-4. Pre-production check sheet
		12-5. Supplier management
	13. Production and TPS	13-1. Basic concept of TPS
		13-2. Total TPS Overview
		13-3. 5S
		13-4. Quickening personnel, workshop
		13-5. Process improvement
		13-6. Process improvement training
		13-7. Logistics improvement: Kanban
		13-8. Kanban: Training
TMSS Marketing and Sales System	14. Product and brand	14-1. Global top
		14-2. Competitors
		14-3. Bland power
		14-4. Customer expectation
		14-5. Customer claim and complain
	15. Product planning	15-1. Organization & meeting structure
		15-2. Market needs
		15-3. Evaluation of own products
		15-4. Forecast demand
		15-5. SE activity with development
	16. Sales planning	16-1. Organization & meeting structure
		16-2. Sales planning
		16-3. Promotion
		16-4. Sales exhibition
		16-5. Price setting
	17. Internal organization	17-1. Sales
		17-2. Used car
		17-3. Service & maintenance
		17-4. Dealer support
		17-5. Education plan
	18. External organization	18-1. Global sales ratio
		18-2. Subsidiary
		18-3. Organization
		18-4. Logistics

Oobeya Management Levels

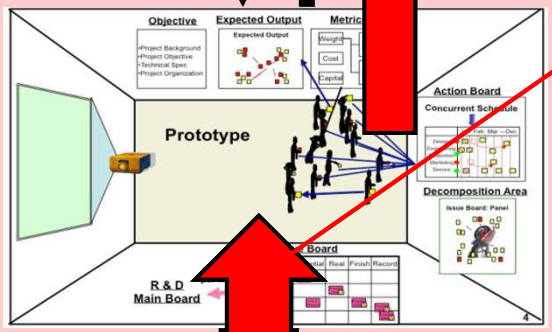
Visualization
Hierarchy—3 levels only

Decisions

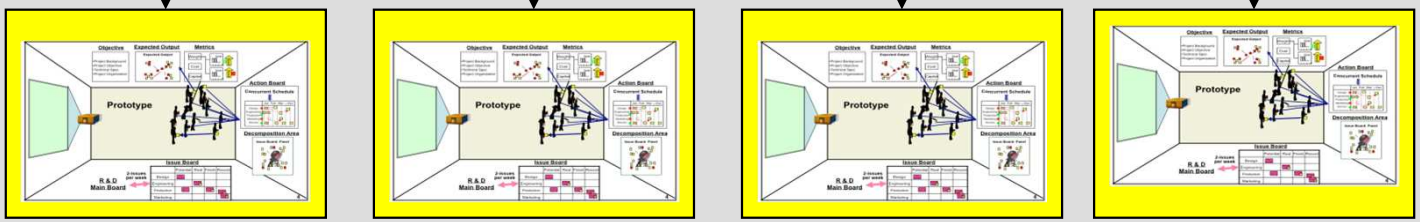
Targets
Metrics

Policy

Executive
(Main) Board



Escalate two decision-ready issues per meeting cycle



Visualization of GEMBA (Work place)

The Tasks of Management

To determine what is important

How to focus everyone on the vital few?

To deploy the right improvements

How to close the performance gaps?

To create stability, flow and synchronisation

How to unblock obstacles to flow?

To create the next generation of managers

How to solve problems and collaborate?

To prepare to meet future challenges

How to do new things?

Deciding what's Important

- **Analyse the strategic objectives – to understand the significance of focusing on quality > time > cost**
- **See the organisation as a collection of value streams – the deep causes of variation > overburden > waste**
- **Translate objectives > performance gaps > physical targets > impact on sales, cash, cost and capex**

Focusing on the Vital Few

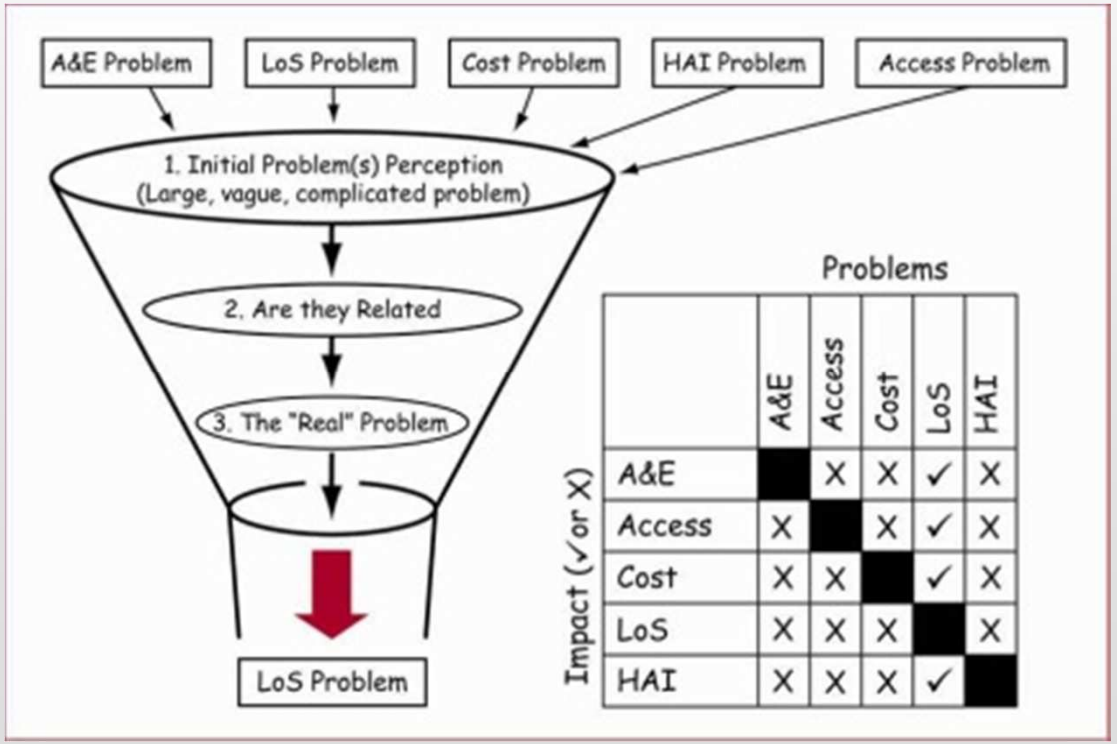
Reducing Hospital Acquired Infections

Seeing emergency patients within 4 hours

Seeing elective patients within 18 weeks

Reducing length of stay

Reducing costs



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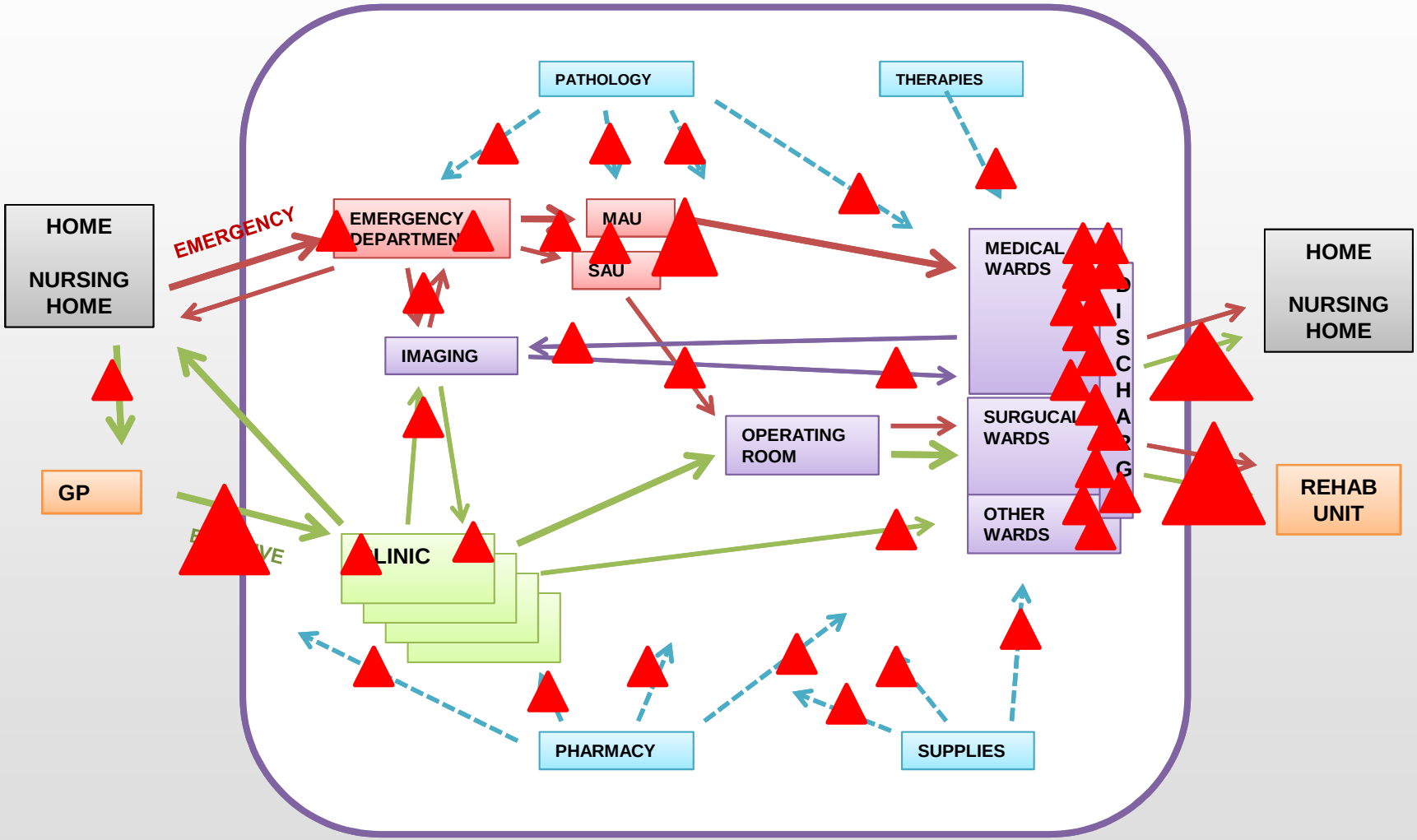
Streamlining Hospital Flows



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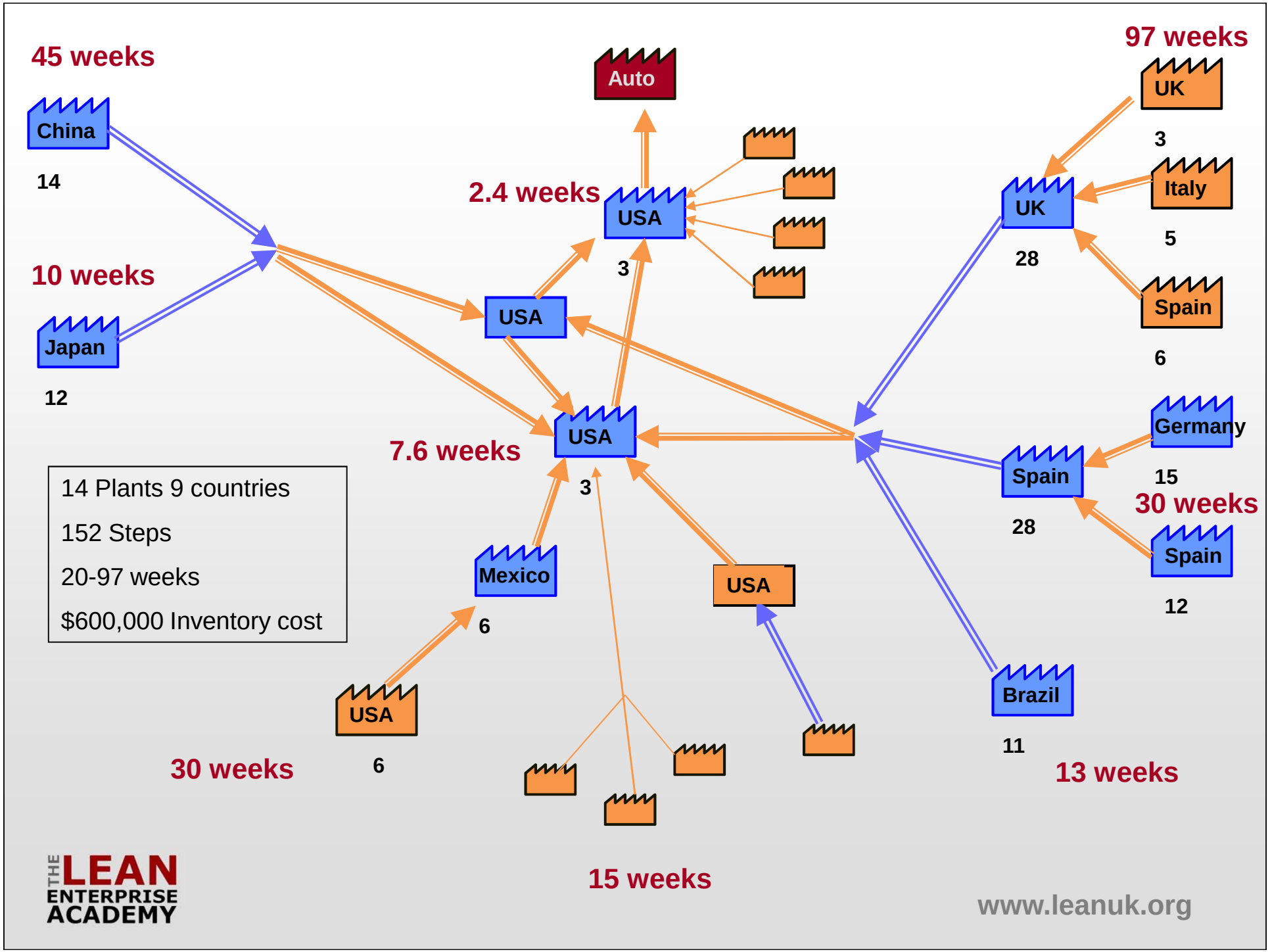
Selecting the right Problems

- **Agree which gaps and targets are most important**
- **Dialogue down the organisation to translate gaps into actions – using catch-ball strategy deployment**
- **Give project and value stream managers the end-to-end responsibility to gain agreement to act, to agree the resources and review progress to deliver results**
- **Then to deselect the less important**

The Construction Story

- Joined the **Rethinking Construction Task Force**
- Our diagnosis - incomplete design - fragmented skills - rework everywhere - over budget, late and lots of snags
- Joint design process, partnerships with constructors, synchronise make and assembly
- Construction of Terminal 5 **on time and on budget**
- Team went on to do St Pancras and the Olympic Venues – best prepared so far


45 weeks
China
14
10 weeks
Japan
12
Auto
2.4 weeks
USA
3
USA
USA
3
7.6 weeks
14 Plants 9 countries
152 Steps
20-97 weeks
$600,000 Inventory cost
Mexico
6
USA
6
30 weeks
USA
15 weeks
97 weeks
UK
3
Italy
5
UK
28
Spain
6
Germany
15
Spain
28
30 weeks
Spain
12
Brazil
11
13 weeks
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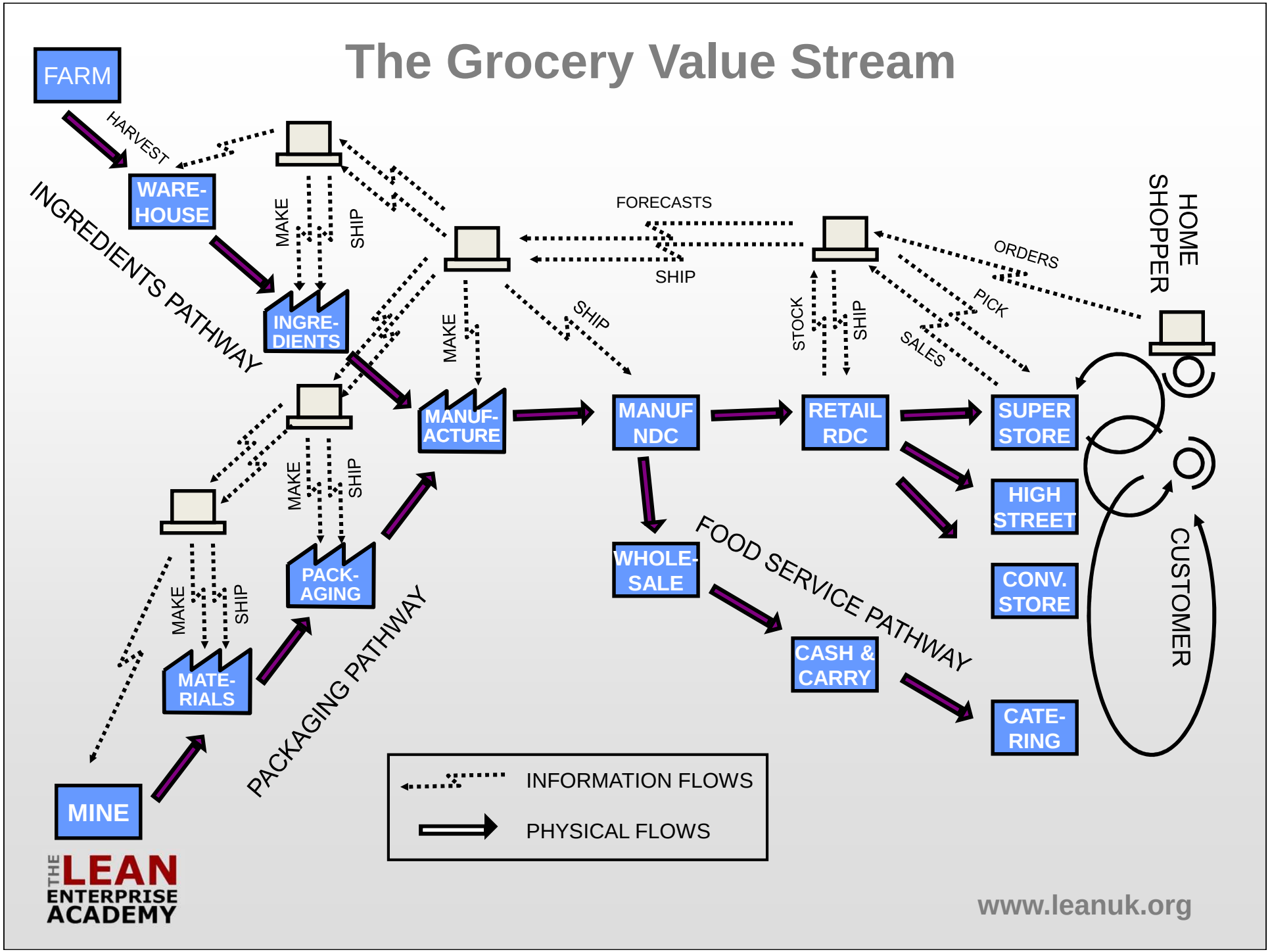
The Grocery Value Stream
FARM
HARVEST
WARE-HOUSE
INGREDIENTS PATHWAY
MAKE
SHIP
INGRE-DIENTS
FORECASTS
SHIP
MAKE
SHIP
MANUF-ACTURE
MANUF NDC
RETAIL RDC
STOCK
SHIP
ORDERS
PICK
SALES
HOME SHOPPER
SUPER STORE
HIGH STREET
CONV. STORE
CATE-RING
CUSTOMER
MAKE
SHIP
PACK-AGING
PACKAGING PATHWAY
WHOLE-SALE
FOOD SERVICE PATHWAY
CASH & CARRY
MAKE
SHIP
MATE-RIALS
MINE
INFORMATION FLOWS
PHYSICAL FLOWS
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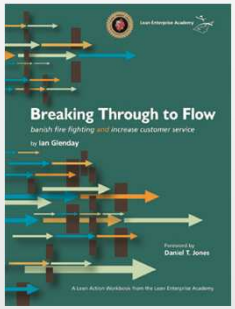
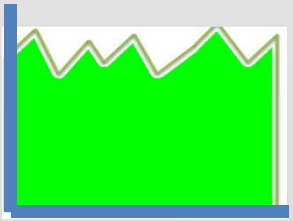
6% SKUs =
50% Volume

Batch Logic

30% SKUs =
1% Volume

- Multi-product production means
  batching - long lead times - lots of stock
  long supply chains – slow to respond
- Separate the few high volume SKUs
  make them every week or every day
- Plus capacity to make the tail quickly
- Let inventories rather than production take the strain – to cover variation in demand
- Only schedule what varies
  fixed plans for what does not





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Just the Start

- **The web is shifting power to consumers – now informed, empowered and impatient**
- **Consumers must now become an integral part of the supply stream**
- **Households are mini-businesses – full of complex processes that need to be managed**
- **What we do is to help them to create value in their lives and to manage their consumption**
- **Consumers will in future manage their own data and share it with chosen providers**

Value Stream Lessons

- **Command and control systems are expensive and inflexible**
- **Point optimisation leads to sub-optimal solutions**
- **System driven variability and amplification is the biggest cause of waste**
- **Scheduling everything the same way delays everything**
- **Created demand reflects poorly understood demand and a poorly designed process**
- **Bid low and make money on the changes costs more and causes lots of rework**

Transformation Design

- Rolling out staff driven training programmes from HQ rarely delivers sustained results
- Lean is not just a tool box for eliminating waste – but the capabilities to respond and solve problems that are learnt by doing
- Lean is a line management responsibility
- Begin proof of concept experiments quickly, evaluate and then share practices
- Focus efforts only on what delivers results

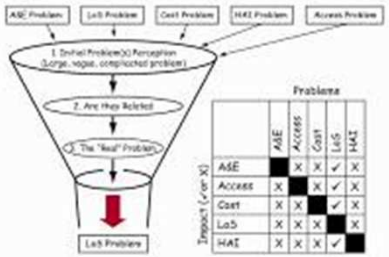
A3 Action Plan

Title: Justification for Middletons's Emergency Medical Process Re-Design

Version: v2 **Date: 21/11/07**
Author: JB

What is the problem?

Medical LoS is our BIG problem and is having an adverse effect on our other Big 4

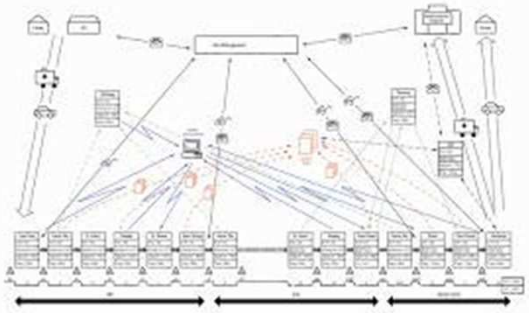


Current condition:

1571 minutes (15%) Treatment Time

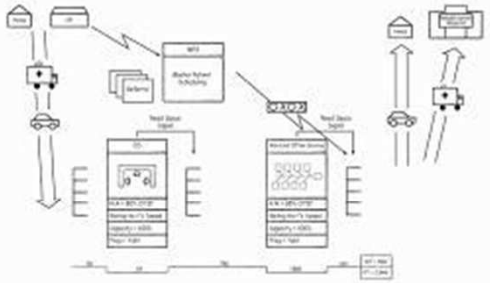
V's

9415 minutes (85%) Waiting Time



Proposed countermeasures:

- Create Stability thro' Ops Management
- Place 'offline' services 'online' & get them operating to takt
- Create Continuous Flow
- Introduce Buffers where we cannot Flow
- Create a Single Point of Schedule (Pacemaker)



Plan:

Target condition: Reduce Waiting Time by 64%, therefore reduce average LoS for Medical Patients by 4.94 days

Root Cause Analysis:

- No real plan for patients (hence no actual)
- Departmental working hours are not synchronised
- Capacity (staff) not calculated to meet Demand
- Frequency of interventions not designed to meet Demand

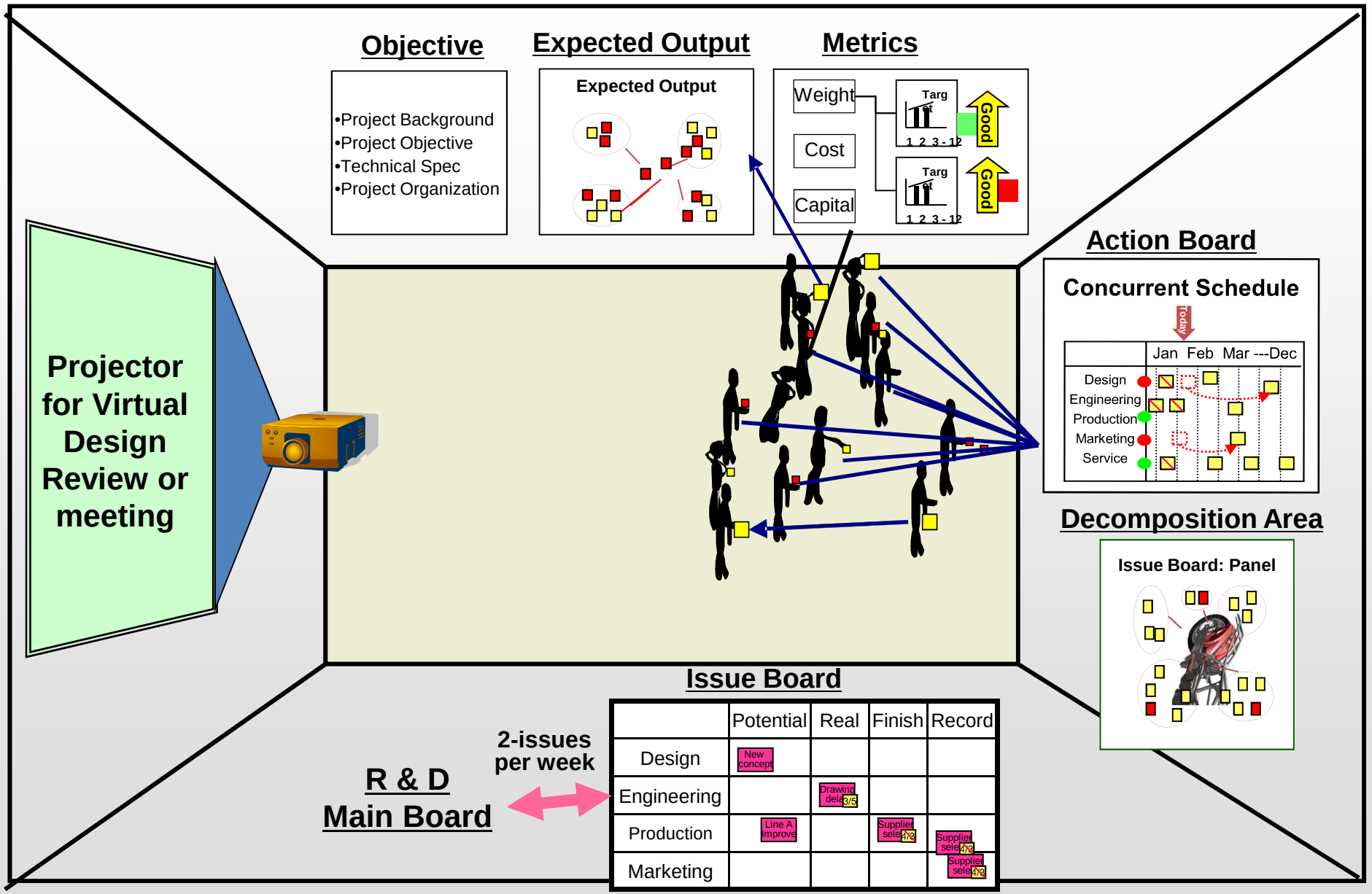
Follow Up:

- Conflicting Cost Improvement Initiatives in departments & divisions
- Who will do this work
- How will we know if the actions have the impact needed?

Responsible: JB Team members: BW/NE/JE/ML/HW

Agreed by: MT **Date:** 08/11/07

Oobeya: ”Big Project Room”



Improving Management Effectiveness

Focus on the vital few and deselect

To free up unnecessary effort and cost

Visual, frequent, stand up project reviews

To keep on track and resolve issues fast

Create stability and Gemba management

To eliminate fire-fighting and emails

Develop the next generation of managers

By mentoring A3s and Gemba learning

Prepare to meet future challenges

Designing lean solutions for the web era

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