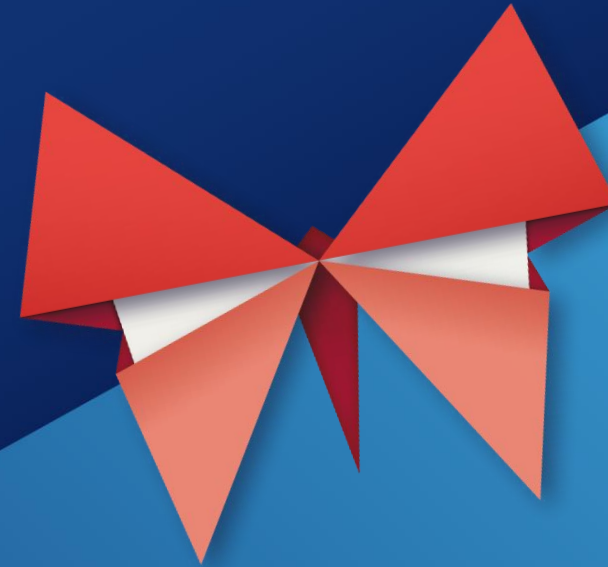


# 7 KEY CAPABILITIES for a Supply Chain Lean Transformation

(E2E, Demand Driven, Agile & Lean)

A New Paradigm for achieving Breakthrough Results and Competitive Advantage in Customer Service & Profitability



Webinar & White Paper



GEMBAKAIZEN™

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# 7 Key Capabilities for a Supply Chain Lean Transformation

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**Why we Need  
E2E, DD, Agile &  
Lean Supply  
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**2. Implement a  
Pull Planning  
System**

**3. Create Material  
& Information  
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**4. Increase  
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**5. Reinforce the  
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**6. Manage  
Change,  
Instability & Risks**

**7. Pilot, Assess,  
Benchmark &  
Scale**

## INTRODUCTION & OVERVIEW

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# Why we need E2E, DD, Agile & Lean Supply Chains

- Be Aware of Problems, Opportunities & New Paradigms
- Set Supply Chain Targets-To-Improve
- Understand Lean Design Principles (E2E, DD Pull, Flow Efficiency, Resource Efficiency)
- Study Benchmark Cases

# Why we Need E2E, DD, Agile & Lean Supply Chains

Customer Satisfaction – Main Source of Innovation & Competitiveness

**Customer Experience and Satisfaction**  
must be the **drivers** of the organisation

Deliver **exactly WHAT** the customer wants,  
**WHERE** it's wanted and **WHEN** it's wanted...  
and **MUCH FASTER** than the Competition !

- Organisations must be **ready to respond** and **quickly adapt** to:
  - Increasing customer expectations
  - Rapidly changing markets
  - Volatility of demand
- **Agility and flexibility** are therefore critical to thrive and provide the best customer experience



## KEY CAPABILITY 1

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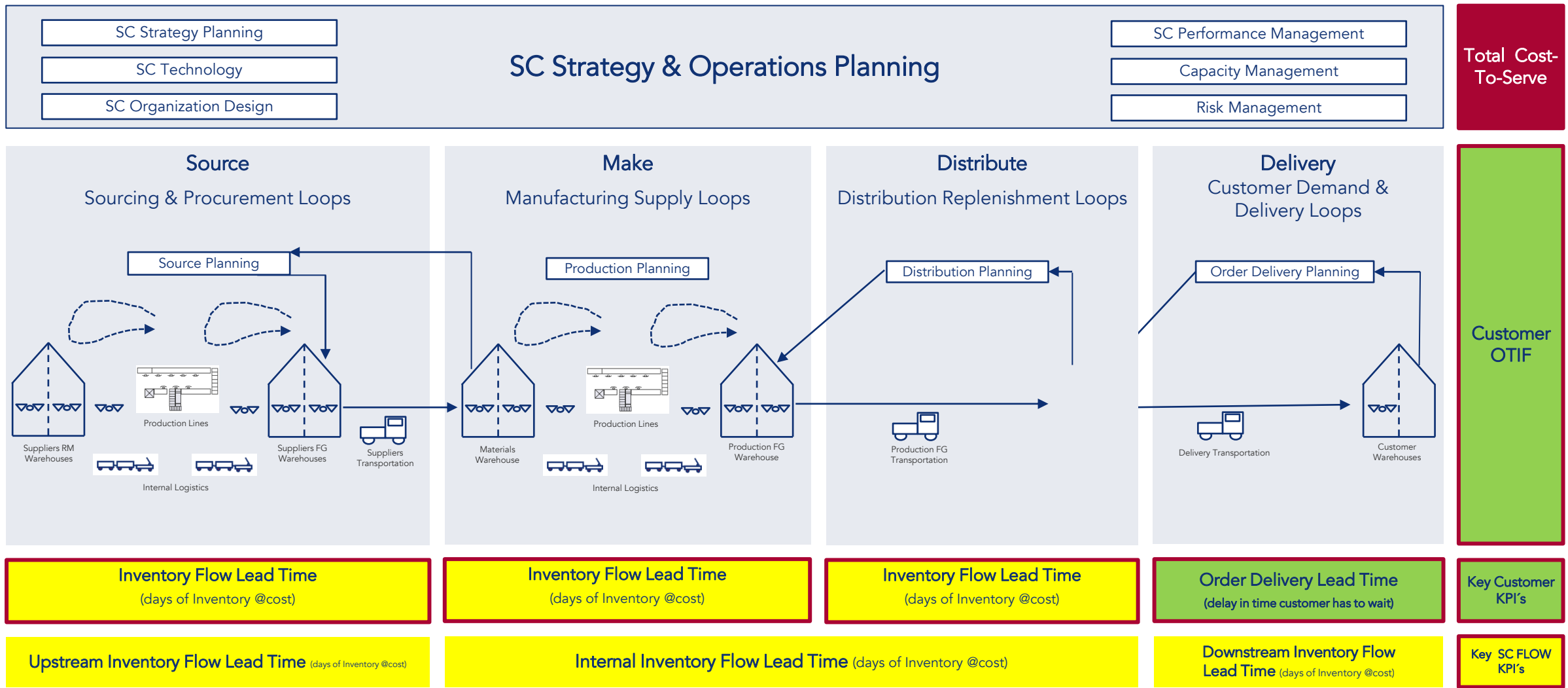
# Strategic E2E Mapping of the Supply Chain

- Map the E2E Supply Chain and Learn to See the Logistics Loops
- Develop an E2E Lean Vision
- Prioritise a Roadmap
- Develop a Business Case

# Strategic E2E Mapping of the Supply Chain

Important to Focus on the Vital Few Performance Metrics (OTIF, Customer Delivery Time, Inventory Flow Lead-times & Total Cost-To-Serve)

Learning to See the Logistics Loops (important to fully understand how it works, where are Flow Breakers & other Constraints)



## KEY CAPABILITY 2

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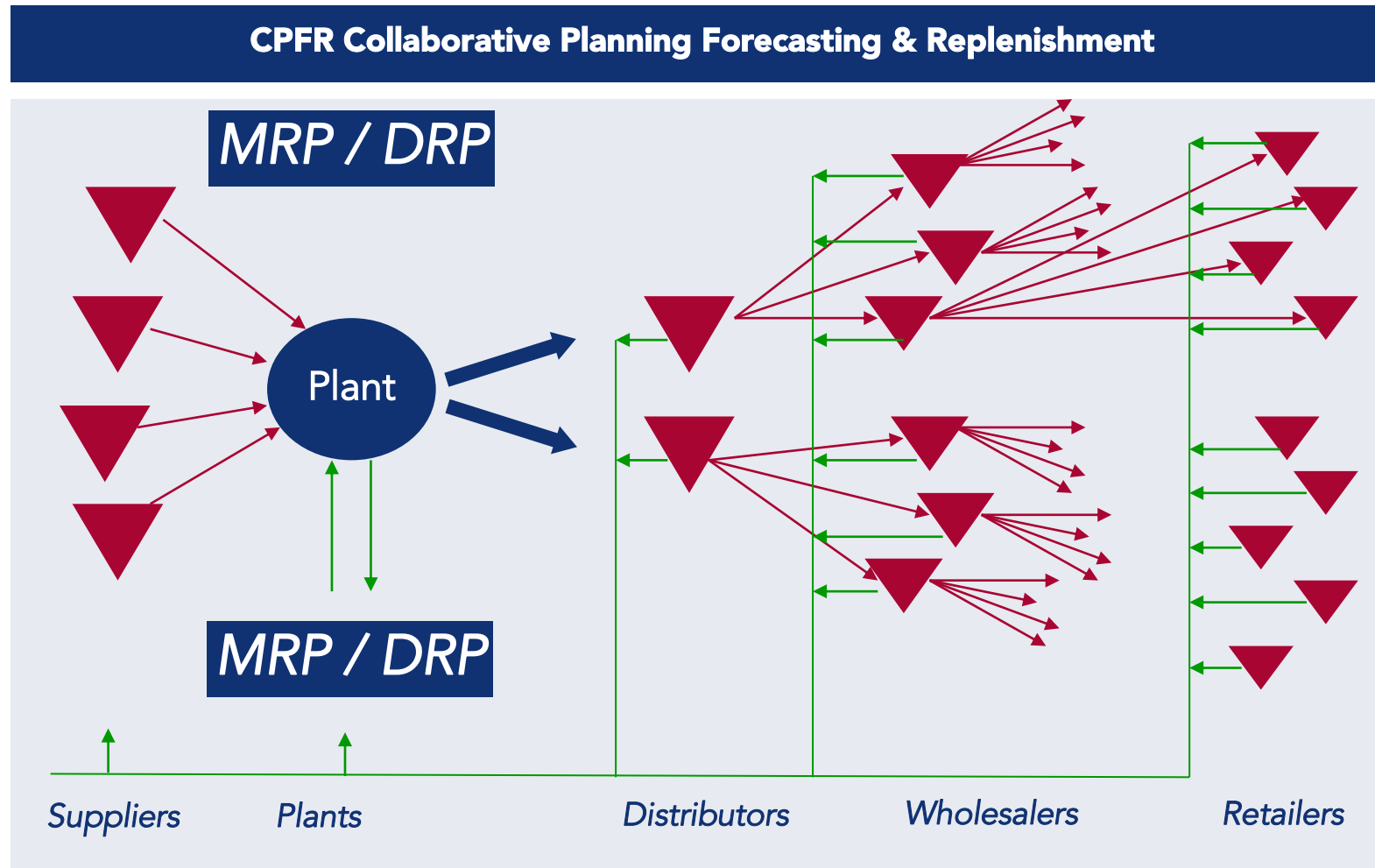
# Implement a Pull Planning System

- Implement a Demand Driven Pull S&OP
- Implement Demand Driven Pull S&OE
- Implement Levelling (higher planning frequency & small batches)
- Implement Synchronisation (Kanban & Junjo stock policies)

# Implement Pull Planning

Traditional Approach to Supply Chain Agility – CPFR

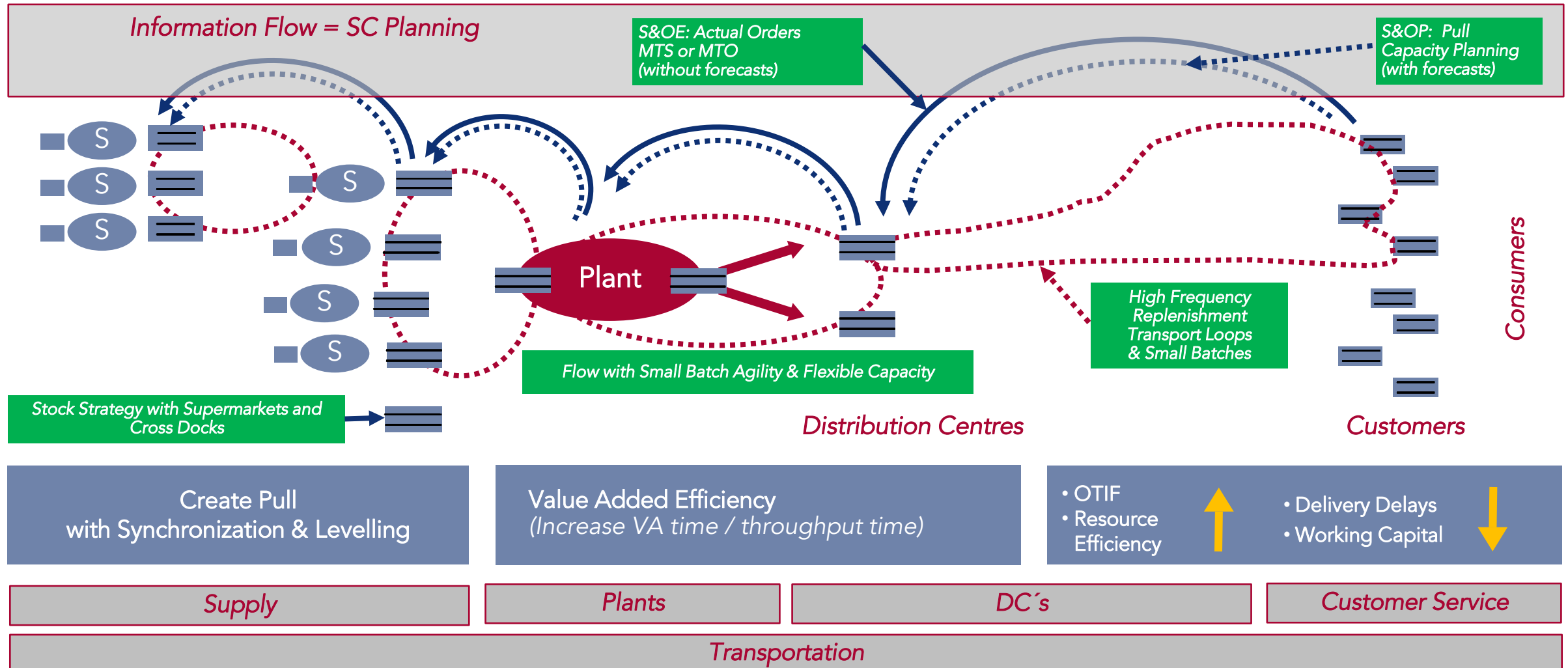
Improve **Collaboration** around Forecasting and Synchronize Centrally with MRP / DRP Systems





# Implement Pull Planning

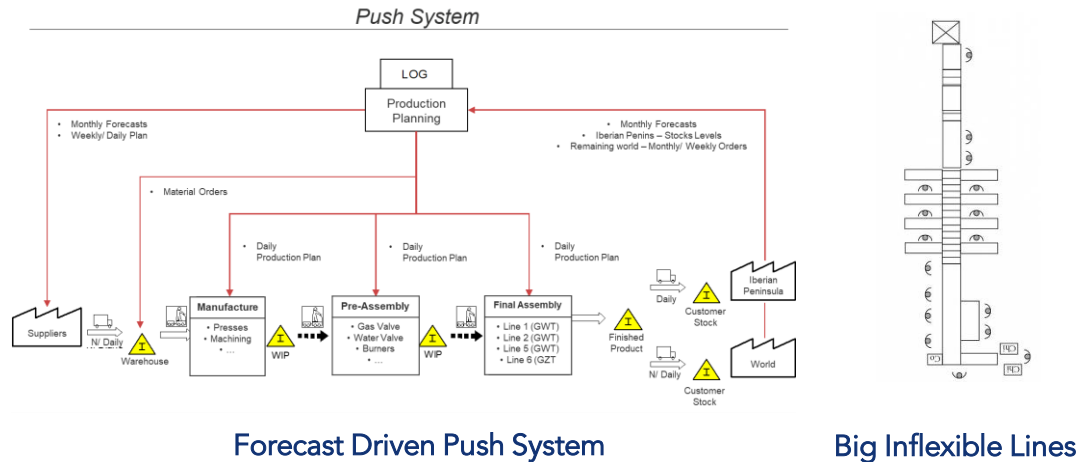
## A New Paradigm - Pull Demand-driven Supply Chains



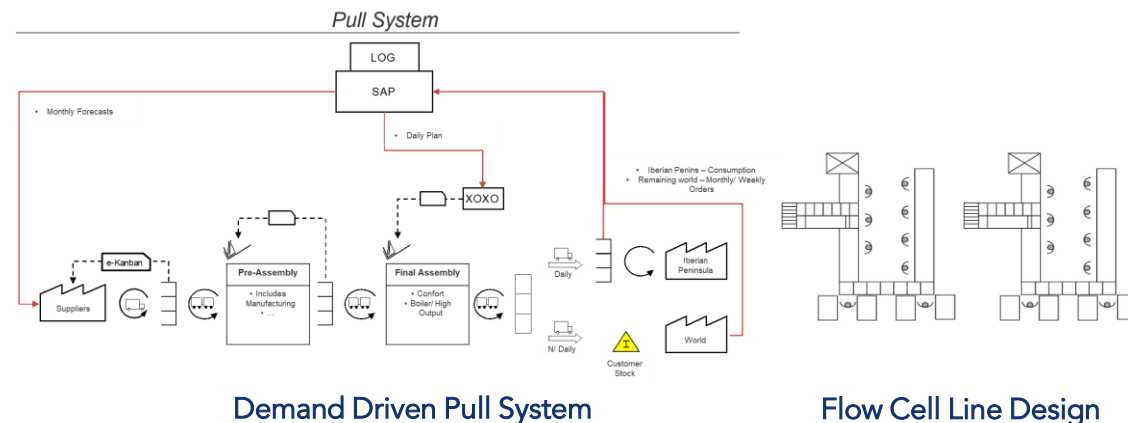
# Implement Pull Planning

A Pull Flow Transformation Use Case (fully explained in the Kaizen in SC Book)

## STRATEGIC VALUE STREAM MAP BEFORE



## STRATEGIC VALUE STREAM MAP AFTER



## Problems

- Finished goods inventory coverage of 15 days with a customer service level of 93% = dysfunctional inventory
- Raw materials and parts stock coverage of 30 days
- Additional 1 to 5 days of WIP in production and assembly lines
- 50% of planned production lost due to lack of parts and poor line efficiency

## Root Causes

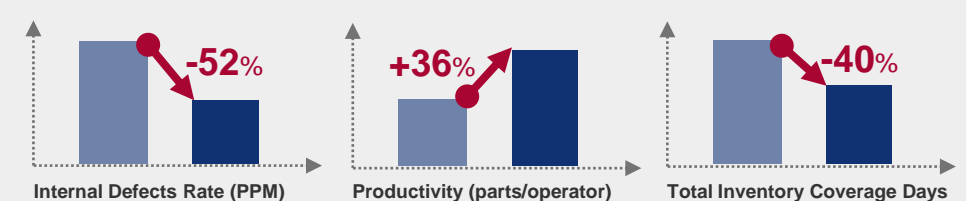
- Finished goods planning based on order forecasts: forecast errors between -18% and 16%
- Functional layout: preassembly lines separated from final assembly lines
- Operators isolated from each other, back supply, supply of large pallet-sized containers, poor operator standard work, low line balancing efficiency
- Delivery to final assembly line by forklifts, under the instruction of operators or supervisors

## Solution Approach

- Pull planning algorithm used on a daily basis to compare a certain replenishment level with the current stock of finished goods and create the production orders according to deviations
- Transformation of orders into KANBAN and planning on a daily basis through a logistics box
- Daily schedule determined by freezing one day of production and according to levelling rules
- Transformation of one assembly line to two with fewer product references on each; Zero changeover time; Balanced operation time between operators; Small containers on the border of line
- Three Mizusumashi circuits for purchased parts, sub-assemblies and finished goods

**Payback**  
5 months

**Savings**  
£3m/year



## KEY CAPABILITY 3

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# Create Material & Information Flow

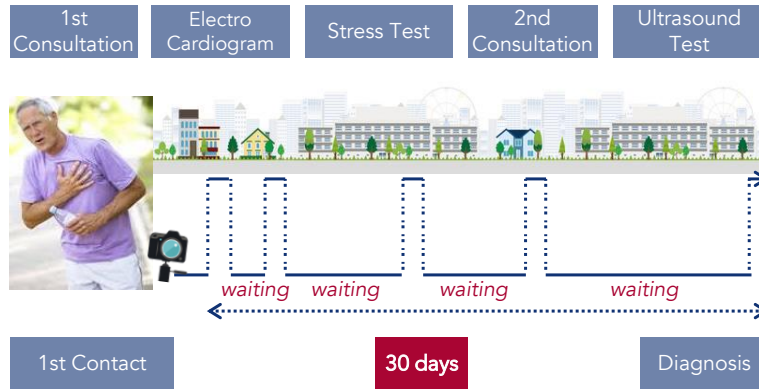
- Create Flow in Production
- Create Flow in Warehouses
- Creation Flow in Transportation
- Streamline the Information Flow

# Create Material & Information Flow

A New Paradigm - Flow Efficiency and Customer Value Added (check the book "this is Lean")

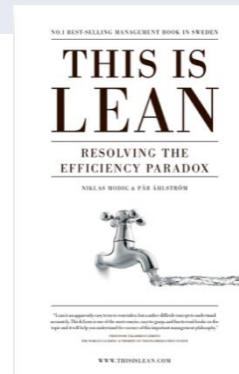
Additional Reading  
Material !

**RESOURCE EFFICIENCY** = 30 days to get a  
Heart Pain Diagnosis

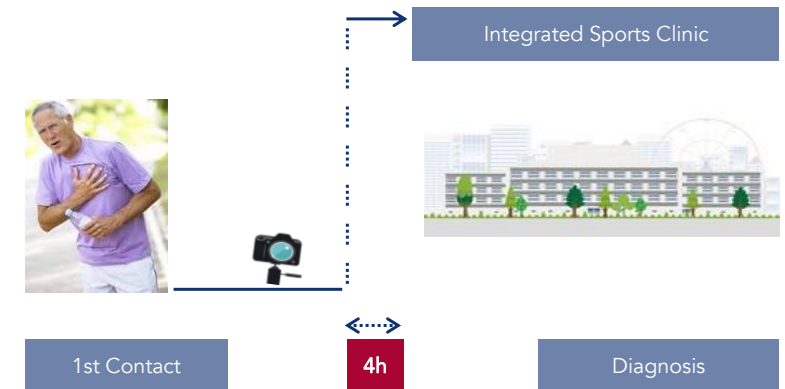


STRATEGIC CHOICES DETERMINE WHAT **NEEDS**  
ARE PUT INTO FOCUS:

1. Who is the CUSTOMER ?
2. What is the FLOW UNIT ?
3. Define VA for the FLOW UNIT



**FLOW EFFICIENCY** = 4 hours in an  
Integrated Clinic



## 4 Types of Flow Units:

Products (Materials), Information, People & Projects

**FLOW EFFICIENCY = VALUE ADDED TRANSFER DENSITY (VA / THROUGHPUT TIME)**

## KEY CAPABILITY 4

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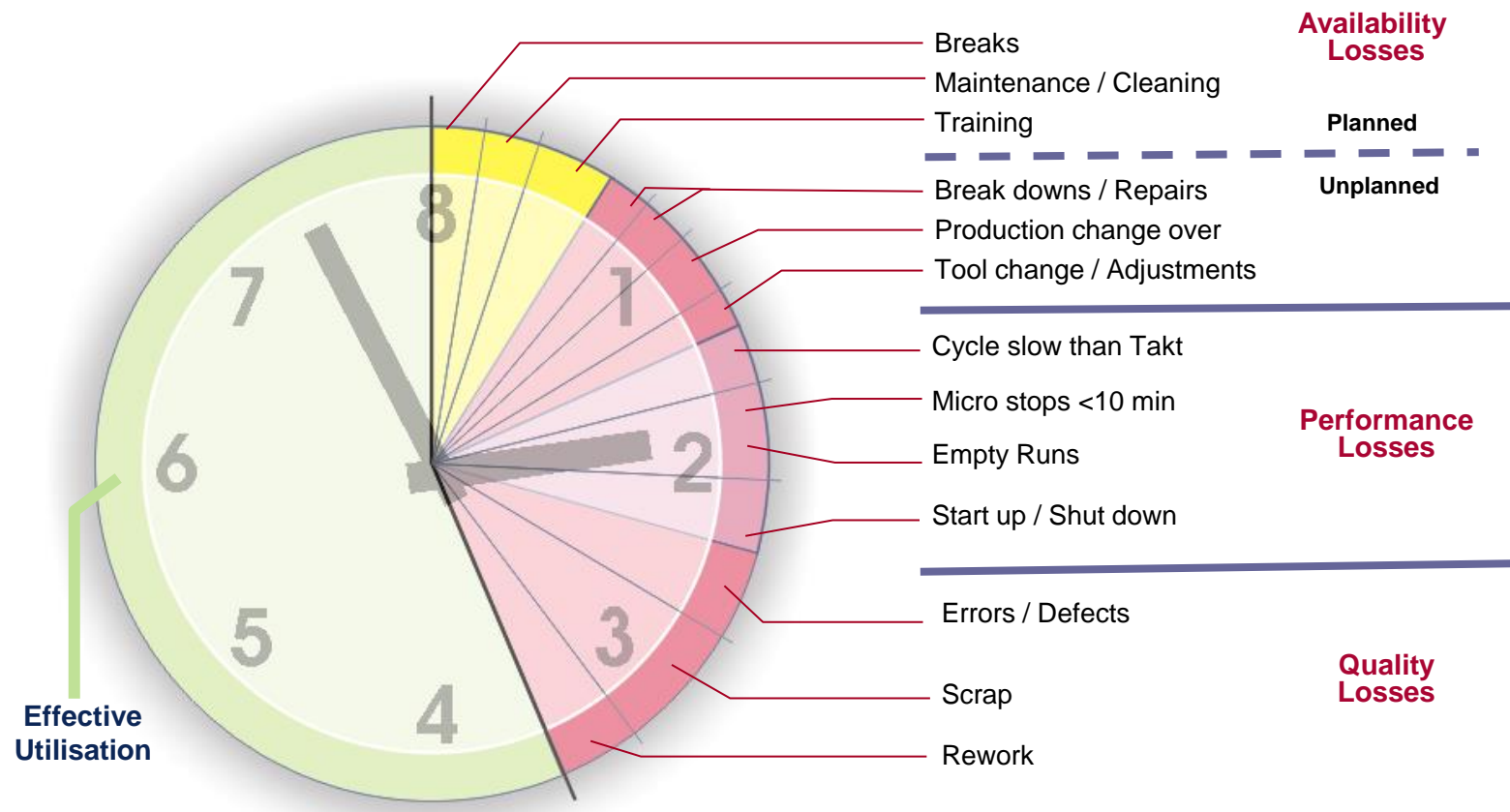
# Increase Resource Efficiency

- Improve OEE in Production
- Improve Efficiency in Warehouses
- Improve Efficiency in Transportation
- Innovate with Digital & Automation - Technology (but respect the Pull Flow System Blueprint)

# Increase Resource Efficiency

Types of Losses that affect Equipment Overall Equipment Efficiency - O.E.E.

There are Many Opportunities to Increase Efficiency with Organisation & Low Cost Automation



- Improve **OEE Overall Equipment Efficiency** with TPM world Class Kaizen:
  - Focused (Kobetsu) Kaizen
  - Autonomous Maintenance
  - Planned Maintenance
  - Education & Training
  - Early Equipment Planning
  - Safety & Environment
- Improve Efficiency in **Warehouses** by streamlining Shelf Design, Inbound, Outbound & Planning
- Improve Efficiency in **Transportation** by streamlining Truck Planning, Loading & Unloading
- Innovate and use the most effective **Technologies** including Ind4.0, Data Analytics & Optimization, Digitalization...
- ...but always maintain the **Process Flow Design VSM Blueprint** and keep an eye on High Investment ROI

## KEY CAPABILITY 5

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# Reinforce the Kaizen Culture

- Implement Daily Kaizen in Natural Teams (the Team of Teams Organisation)
- Learn how to do Focused Kaizen Events
- Implement a Strategy Deployment Process
- Educate & Train with a Kaizen Lean Academy

# Reinforce the Kaizen Culture

## Daily Performance & Problem Solving Board - Standard Layout

DAILY RESULT

TREND  
OVER TIME

DAILY COUNTER-  
MEASURES

PARTE OF  
ROOT CAUSES

PROBLEM  
SOLVING

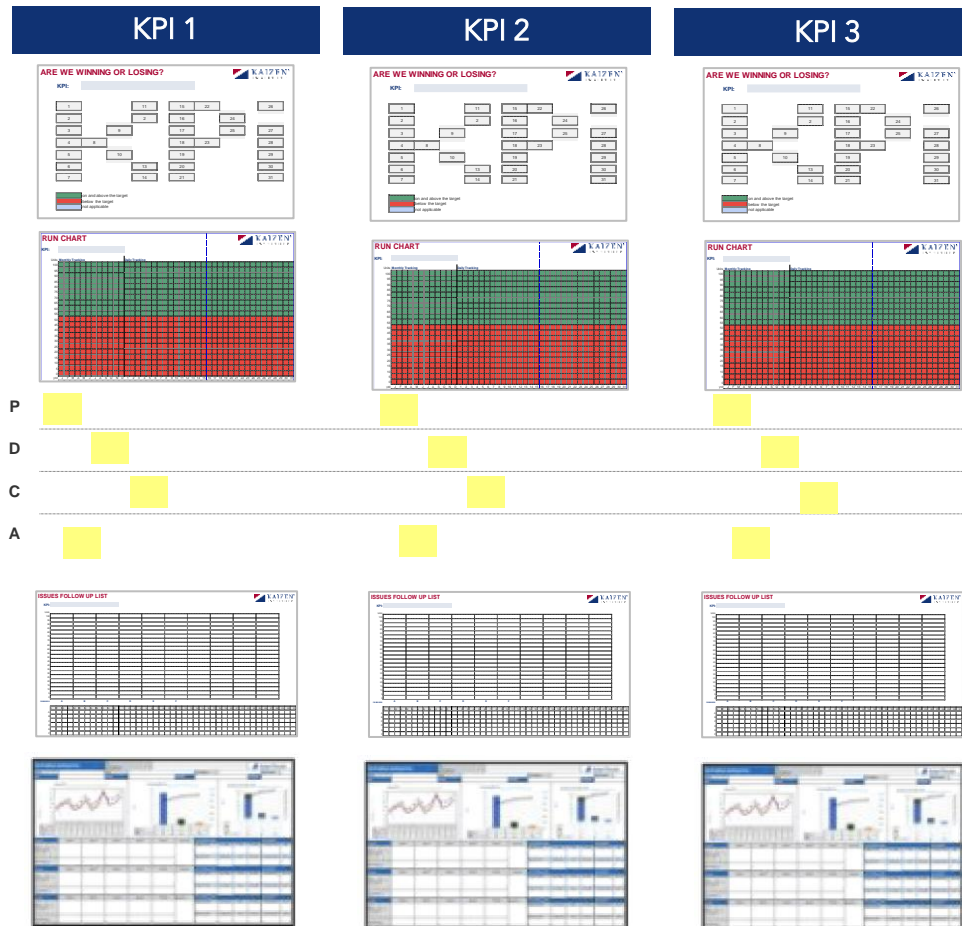
Are we winning or losing in 3 seconds?

How does the metric behave over time?

What action will we take daily?

What are the main causes over time?

Systemic problem-solving and countermeasures to improve



### • All Natural Teams should be able to answer the Following Questions:

- Are we winning or losing in 3 seconds?
- How does the metric behave over time?
- What action will we take daily?
- What are the main causes over time?
- How can we eliminate Systemic Problem with Effective Countermeasures to improve

### • Other Kaizen Culture Skills:

- Learn how to do Focused Kaizen Events
- Implement a Strategy Deployment Process
- Educate & Train with a Kaizen Lean Academy



# Reinforce the Kaizen Culture

WHY do we need DAILY KAIZEN™... from Firefighting to Kaizen Mindsets (original Kaizen Books)



## From the traditional management model where **Firefighting** is common

- Recurring Problems which are solved again and again
- Surprises, Delays and Month End Pressures
- High amounts of Muda (Non Value Added tasks)
- Inability to sustain Improvements



## To a **KAIZEN™** Improvement Culture with the following Behaviours

- Problem Solving with Visual Management
- Standardisation
- Improvement
- Gemba Team Member Development (instruction and relationships)

**GOAL = STEADILY INCREASE THE PORTION OF THE ORGANISATION THAT WORKS ON IMPROVEMENT**

## KEY CAPABILITY 6

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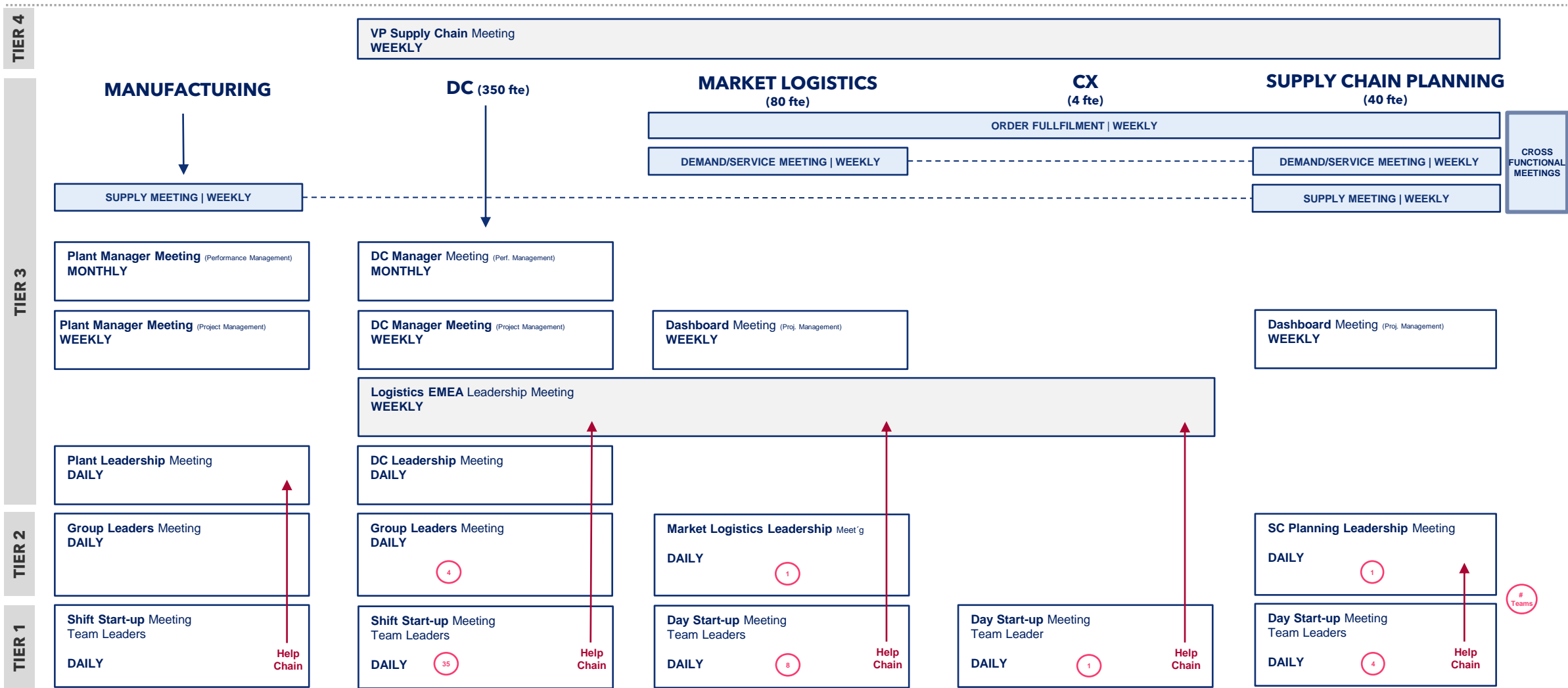
# Manage Change, Instability & Risks

- Engage Top Management in E2E Supply Chain Transformation
- Implement a Tiered Help Chain
- Do Focused Risk Management Kaizen Events
- Explore Tactics to Fight Instability

# Manage Change, Instability & Risks

## An Example of Tiered Help Chain Team Meeting

Additional Reading  
Material !



## KEY CAPABILITY 7

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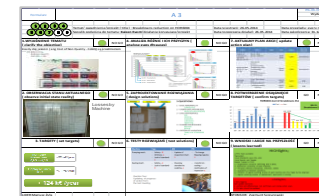
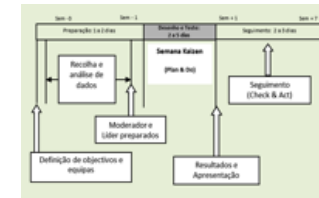
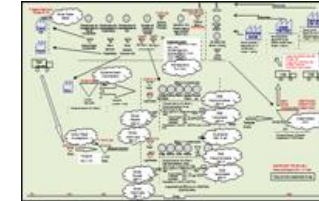
# Pilot, Assess, Benchmark & Scale

- Engage in Pilots & Benefits Tracking
- Develop and Use an Assessment Maturity Model
- Do Internal & External Benchmarking
- Go Quickly with a Deploy & Scale Process

# Pilot, Assess, Benchmark & Scale

## Typical Implementation Roadmap

	SPRINT 1			SPRINT 2			SPRINT 3			SPRINT 4		
STEPS	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
<b>VALUE STREAM ANALYSIS</b>												
Current situation analysis												
Training												
Vision of the Future Situation												
Implementation plan with Workshops Gemba KAIZEN™												
Business Case												
<b>MISSION CONTROL ROOM</b>												
Project management practice with mission control												
<b>KAIZEN™ EVENTS</b>												
Workshop												
Confirmation Workshop (SDCA)												
<b>VALUE REVIEW</b>												
Review cycle performance												
Review goals for next cycles												
Plan next sprints' implementation												



# Pilot, Assess, Benchmark & Scale

## How to Scale Implementation?

Additional Reading  
Material !

Step by step to implement an entire system in all the teams of a value stream / department

### TEAM DEVELOPMENT PROGRAMME (TDP)

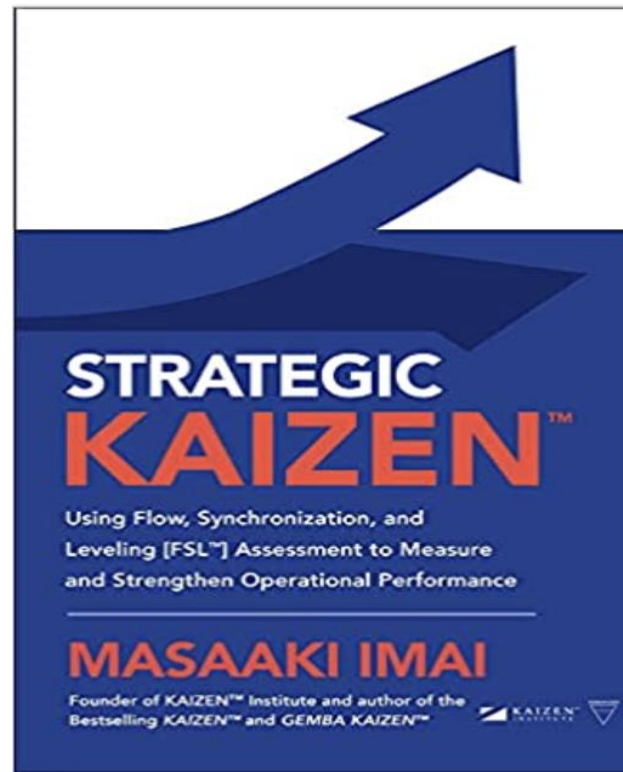


# How can I Learn More

Learn all the Details with Kaizen Books

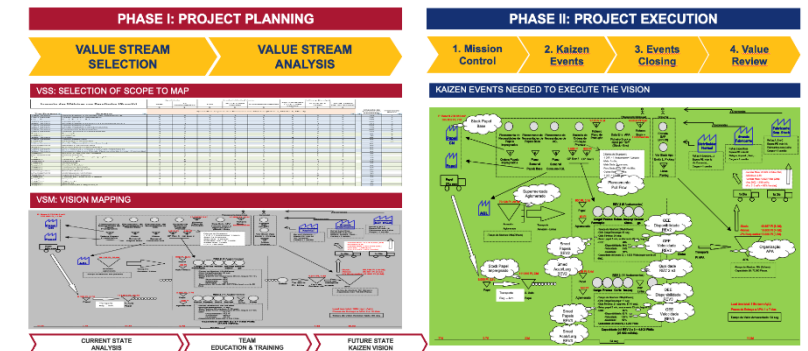


The Global Reference in Supply Chain Transformation



Latest Book about Strategic Assessment of Supply Chains

- Reading Materials
- Learning by Doing - Select & Start a Pilot Strategic E2E Value Stream Mapping



**WANT TO LEARN MORE: READ THESE BOOKS...**

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