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KEY CAPABILITY #1

Strategic E2E Mapping of the Supply Chain

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

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Strategic E2E Mapping of the Supply Chain

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

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

SC Strategy Planning
SC Technology
SC Organization Design

SC Strategy & Operations Planning

SC Performance Management
Capacity Management
Risk Management

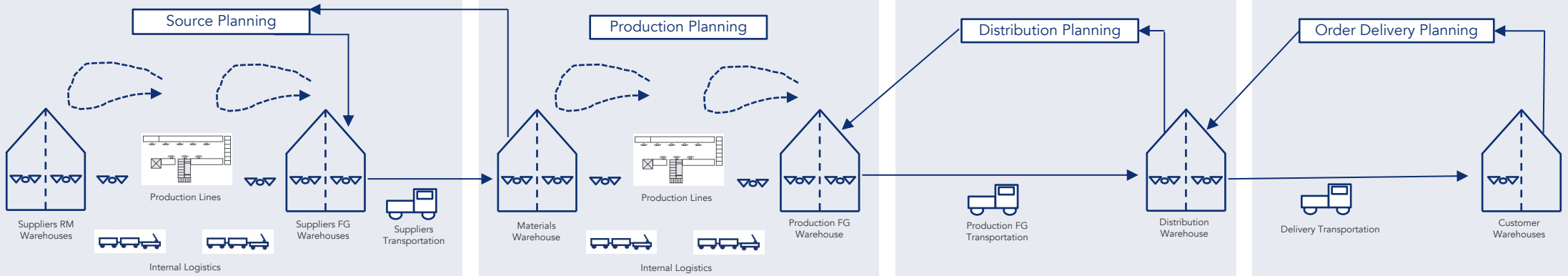
Total Cost-To-Serve

Source
Sourcing & Procurement Loops

Make
Manufacturing Supply Loops

Distribute
Distribution Replenishment Loops

Delivery
Customer Demand & Delivery Loops



Customer OTIF

Inventory Flow Lead Time (days of Inventory @cost)

Inventory Flow Lead Time (days of Inventory @cost)

Inventory Flow Lead Time (days of Inventory @cost)

Order Delivery Lead Time (delay in time customer has to wait)

Key Customer KPI´s

Upstream Inventory Flow Lead Time (days of Inventory @cost)

Internal Inventory Flow Lead Time (days of Inventory @cost)

Downstream Inventory Flow Lead Time (days of Inventory @cost)

Key SC FLOW KPI´s

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Strategic E2E Mapping of the Supply Chain

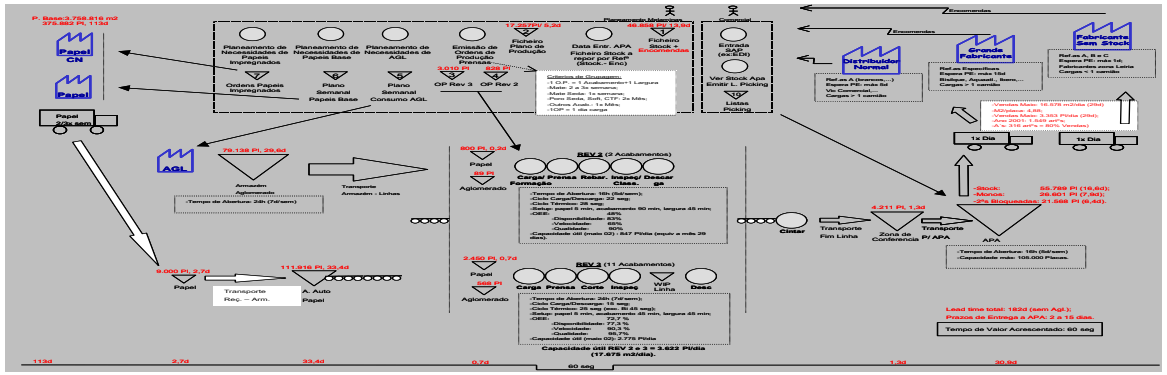
2 Phases: Planning + Execution

PHASE I: PROJECT PLANNING

SCOPE & VALUE STREAM LOOP SELECTION → VALUE STREAM ANALYSIS

SELECTION OF SCOPE TO MAP

VSM: VALUE STREAM MAPPING,ANALYSIS & DEVELOPING A PULL SYSTEM VISION

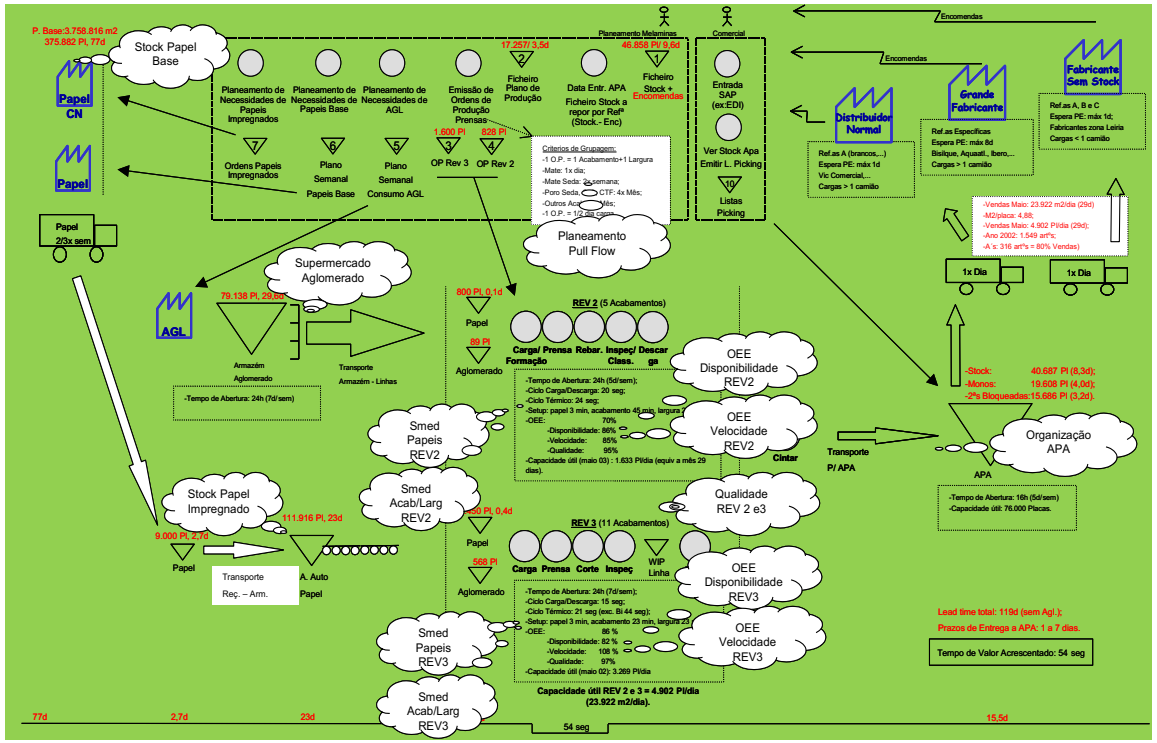


CURRENT STATE ANALYSIS → TEAM EDUCATION & TRAINING → FUTURE STATE KAIZEN VISION

PHASE II: PROJECT EXECUTION

1. Mission Control → 2. Kaizen Events → 3. Events Closing → 4. Value Review

KAIZEN EVENTS NEEDED TO EXECUTE THE VISION



Strategic E2E Mapping of the Supply Chain

Implementation Process with 2 Phases

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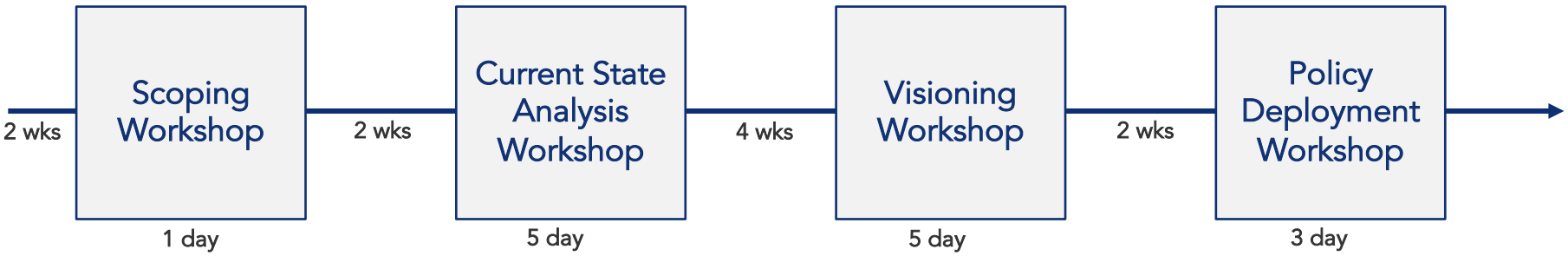
Additional Reading Material !

I. PLANNING PHASE (Finishes with Roadmap)

All Workshops Include Preparation work with Project Leads + Intensive Days with a Multifunctional Team
Intensive Days include Training (Concepts & Gemba Observation)



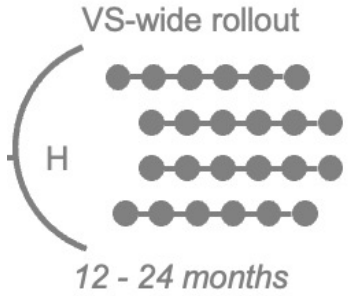
- Select the Value Stream Scope
- Identify & Prioritize Business Needs (Growth, Cash Profitability, etc)
- Setup VSM Team for Workshop 2
- Translate prioritized Needs into key Value Stream Requirements (metrics & targets)
- Plan Workshop 2

- Product Portfolio & Demand Segmentation (Volume / Variability
- Macro Mapping of the Supply Chain
- Quantification of Main KPI´s related to Leadtime, OTIF, Inventory & Cost
- Detailed Deep Dive Mapping of Specific SC Loops (Order to Delivery, Warehouse Replenishment, Etc…
- Quantification of All Improvement Opportunities

- Complete VSM Deep Dives
- Design Ideal Sate
- Aspirational Goals set to Translate the end state ambition
- Identify Future State Short & Long Term Improvements
- Document needed Kaizen Events with A3 Initiation Plans
- Define Implementation Roadmap for 12 to 24 months

- **Invite Top Management Stakeholders from BU, Region, ISC & Key Functions**
- Review Current State Analysis
- Review Vision of Ideal State
- Review Implementation Roadmap
- **Develop Business Case with TTI´s: Targets To Improve and Investment**
- **Decide Implementation Owners & Governance Process**

II. IMPLEMENTATION PHASE



- E2E Value Stream Improvement Policy Execution
- Organized in 3 Month Sprints
- Each 3 Month Sprints has a certain number of Kaizen Events
- Steering Meeting Every Month at 2 Levels:
  - Area Project Review
  - Program Governance
- Use of Obeya Rooms for Project management (Mission Control)
- Project Retrospectives every 3 Months

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CONCLUSIONS & NEXT STEPS

How can I Learn More

- Reading Materials
- Learning by Doing - Select & Start a **Pilot** Strategic E2E Value Stream Mapping
- Get Support from Kaizen Institute (or another Sensei)
- Make a Performance Based Partnership with the Sensei
- For more information contact ecoimbra@kaizen.com

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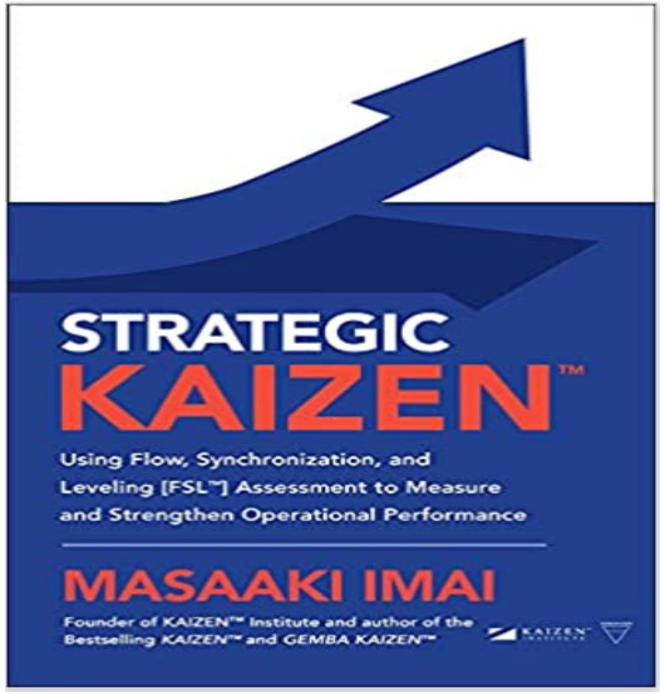
How can I Learn More

Learn all the Details with Kaizen Books

The Global Reference Book in Supply Chain Transformation



The Last Book about Strategic Assessment of Supply Chains

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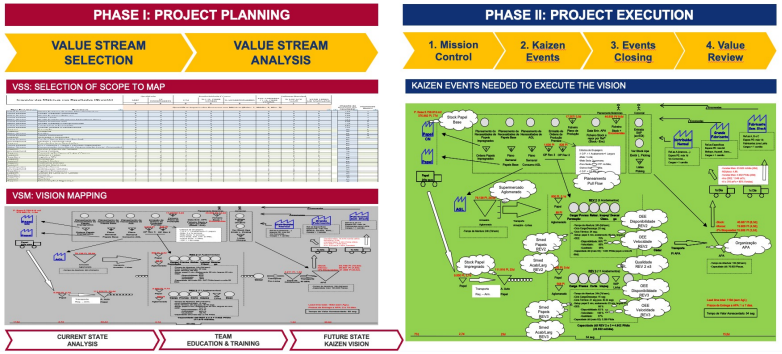

WANT TO LEARN MORE: ORDER THIS BOOKS…

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How can I Learn More

Develop a Successful Pilot Project (to serve as a Beacon)

CASE	COMPANY	PROBLEM	SOLUTION	RESULTS
Plant Design	VOLVO	• Old line with a lot of material and operator movements	• New Layout and line design with • 50% less space • Mizusumashi Standard Work - 20% increase in Productivity	• Quantifiable benefits 3,300,000 Euros / year. • Total investment: 1,125,000 Euros. • R.O.I .: 4 months. • State-of-the-art factory design
Flow Improvement	BOSCH	• Line Design not Flexible & Isolated Islands • Low Frequency Logistics • Central Push Planning System	• One Piece Flow Shojinka Lines • Creation of Flow in Internal Logistics • Pull Planning System with Levelling	• -52% internal defects rate • 36% increase in Productivity • -40% Total Inventory Coverage
Factory & Planning Design	AMORIM	• Functional Layout • High lead-time • Management difficulties	• Flow Layout • Stock Reduction • Standard Work • SMED	• 50% area reduction • 40% productivity increase • 89% lead-time reduction • 38% Setup Time Reduction • 8% Service-level improvement
Factory & Planning Design	EUGSTER / FRISMAG	• Low Productivity • Push Supply • High model changeover time	• U shape line with frontal supply • Pre-assemblies near point of use • Pull Supply (With levelling box) • Setup Time = 0 • Standard Work	• 26% productivity increase • 52% area reduction • 21% to 0% ergonomics' critical stations
OTHER REFERENCES	TOYOTA, Ford, BMW, efacec, SIEMENS, GRUPO SALVADOR CAETANO, SAKTHI PORTUGAL			

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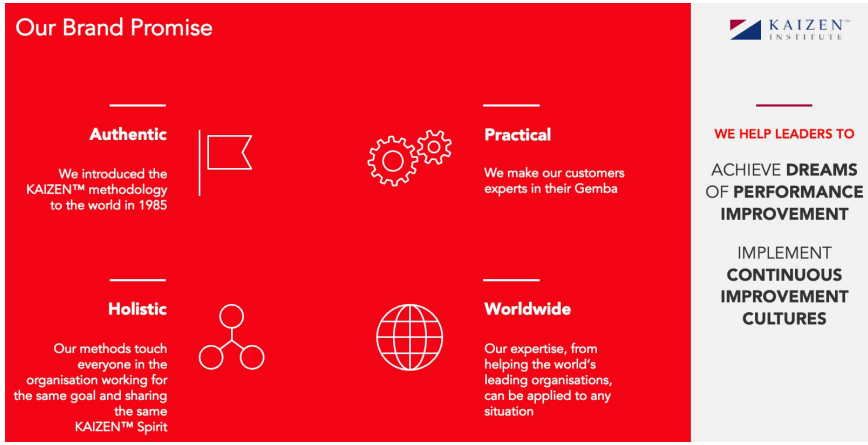

LEARNING BY DOING WITH A SUCCESSFUL PILOT PROJECT

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