

Welcome

to

Virtual (Online) Training Program

on

“Accelerate SMEs Advancement Program – New Approaches & Strategies to enhance SMEs Global Competitiveness”

On

02-03-2021 At 02.30 PM

at

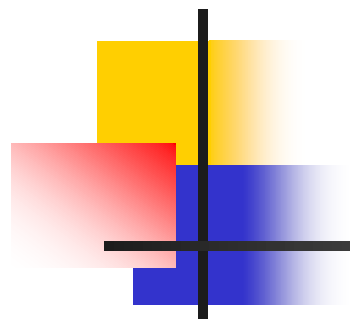
Indian Institute of Corporate Affair

By –

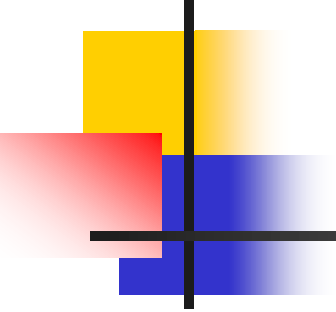
SANJAY DWIVEDI , Chief Executive Consultant

How SMEs in India can become World Class destination for multinationals

- 
- Integration of growing manufacturing sector (including MSMEs integration) into Global Value Chain
 - Linkages of Least Developing Countries (LDCs) and Developing Countries (DCs) into India's Global Value Chain (GVCs)
 - Supply Chain Management for Global competitiveness



Part-1
Integration of growing manufacturing sector
(including MSMEs integration)
into
Global Value Chain

- 
1. THREE-YEAR REVENUE AND EXPENDITURE
 2. ECONOMIC TRANSFORMATION IN MAJOR SECTORS
 3. REGIONAL DEVELOPMENT
 4. GROWTH ENABLERS
 5. GOVERNMENT
 6. SOCIAL SECTORS
 7. SUSTAINABILITY

Atma Nirbhar Bharat Abhiyan



GOVERNMENT REFORMS

- Increase in borrowing limits of state governments
- Privatisation of Public Sector Enterprise

MSMEs AND INDUSTRY

- Collateral free loans for businesses
- Fund of funds will be set up for MSMEs
 - PM Garib Kalyan Yojana
 - Subordinate debt for MSMEs
- Disallowing global tenders of up to Rs 200 crore
- Change in definition of MSMEs

MIGRANT WORKERS

- ✓ One Nation One Card
- ✓ Free food grain Supply to migrants

ENERGY

- Liquidity support for discoms
- Elimination of Regulatory Assets
- Commercial coal mining
- Reduction in cross-subsidy

SOCIAL SECTOR

- ❖ National Digital Health Blueprint
- ❖ Additional Allocation for MGNREGS
- ❖ Technology driven education: PM eVidya, National Foundational Literacy and Numeracy Mission

AGRICULTURE AND ALLIED SECTORS

- Concessional Credit Boost to farmers
 - Agri Infrastructure Fund
- Emergency working capital for farmers
- Animal Husbandry infrastructure development
- Amendments to the Essential Commodities Act
 - Agriculture marketing reforms



Human Capital

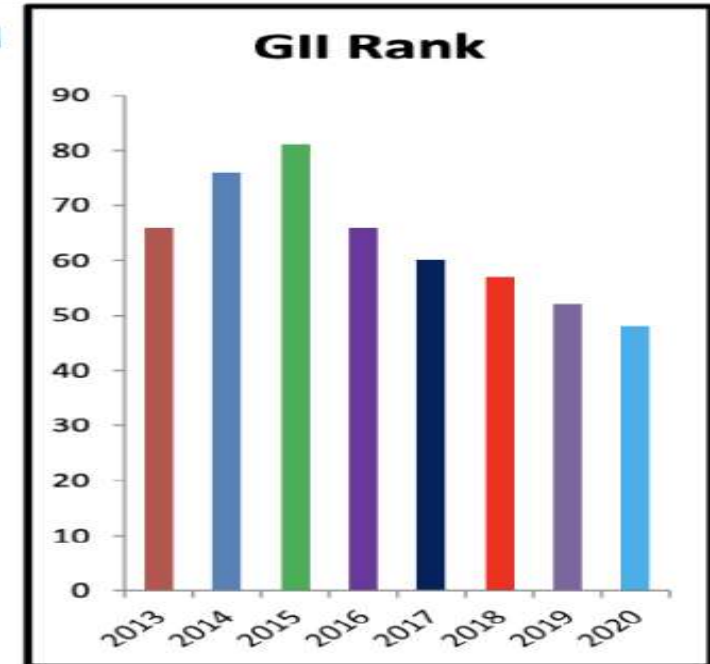
EDUCATION

- Revamped Post Matric Scholarship Scheme for welfare of SCs
- 100 new Sainik schools
- 750 Eklavya schools in tribal areas



SKILLS

- ❖ Realigning National Apprenticeship Training scheme for graduates and diploma holders in Engineering
- ❖ Partnership with UAE and Japan in area of skill development and recognition

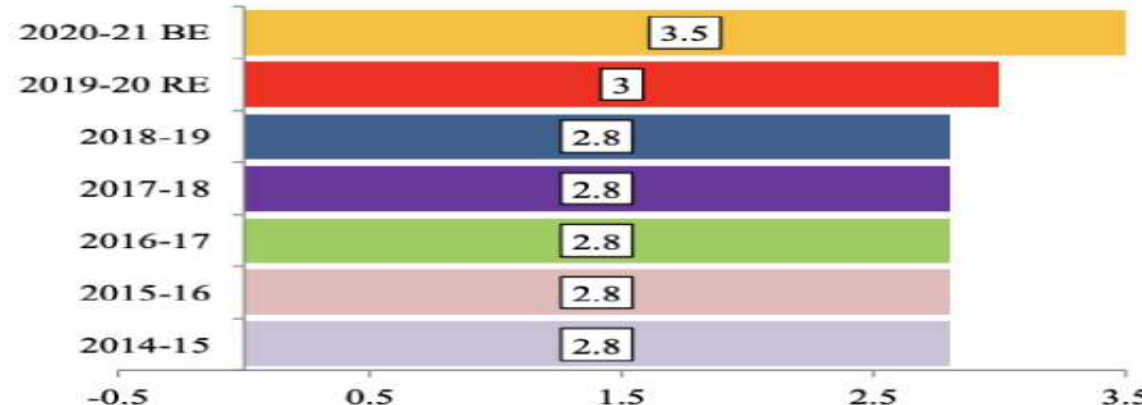


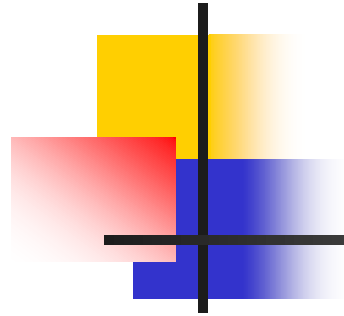
R&D

- ✓ National Research Foundation with outlay of ₹50,000 crore over 5 years
- ✓ National Language Translation Mission to boost internet access
- ✓ Deep Ocean Mission for ocean exploration and biodiversity conservation



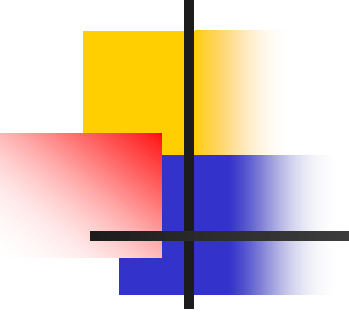
Expenditure on Education as per cent of GDP





Part-2
Linkages of Least Developing Countries (LDCs)
and
Developing Countries (DCs)
into
India's Global Value Chain (GVCs)

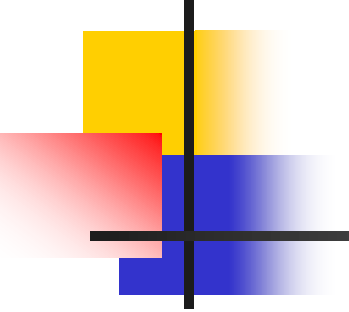
The Case Studies From Different Regions and Sectors of Least Developed Countries



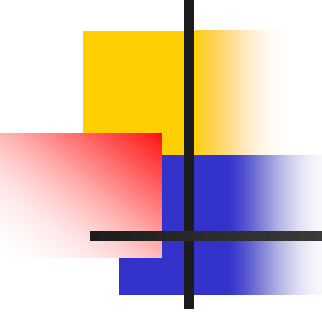
The case studies selected to cover different regions and sectors which were either emerging regions or a competitive sector in selected host countries.

1. The awareness or understanding of the GVCs;
2. Cooperation and types of linkages in GVCs;
3. The relevance of technological skills, standards and intellectual property rights
4. The role expected from governments.

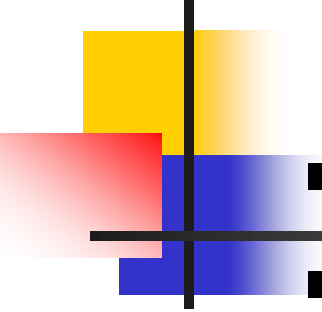
Types of Updating Least Developed Countries

- 
- Process Updating- System Updating (Quality System Updating, Environment Management System and Good Manufacturing Practices etc.
 - Product Updating
 - Functional Updating
 - Chain Updating

Least Developed Countries (LDCs) in the Global Value Chain (GVC): Trends, Determinants, and Challenges

- 
- A companion development priority is to continue the pursuit of lowering trade costs.
 - The transit and trade facilitation agenda now under discussion in the WTO is one important step in doing so.

Towards a policy agenda

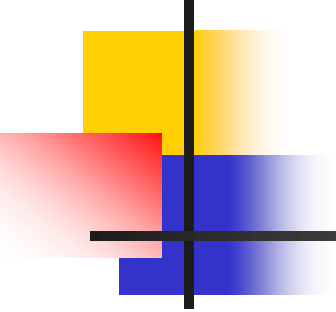
- 
- Measures for building productive capacity
 - Measures for trade-related infrastructure
 - Measures to create access to inputs and logistics for agriculture
 - Measures to strengthen trade and industrial policies
 - Measures for social upgrading

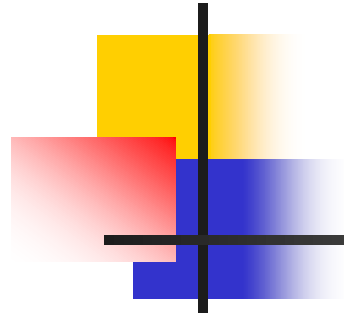
Defining the least developed countries



Forty-eight countries are currently designated by the United Nations as least developed countries (LDCs). These are: Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, Timor-Leste, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen and Zambia.

Some of the Example of Contribution of Developed Industries in Least Developed Countries

- 
- Toyota in South Africa
 - Volkswagen in Mexico
 - Tata Motors in India)
 - The software sector (i.e. Microsoft in Egypt and IBM in Viet Nam)
 - The cinema and audio visuals sector (i.e. Caracol in Colombia and NuMetro in Nigeria).



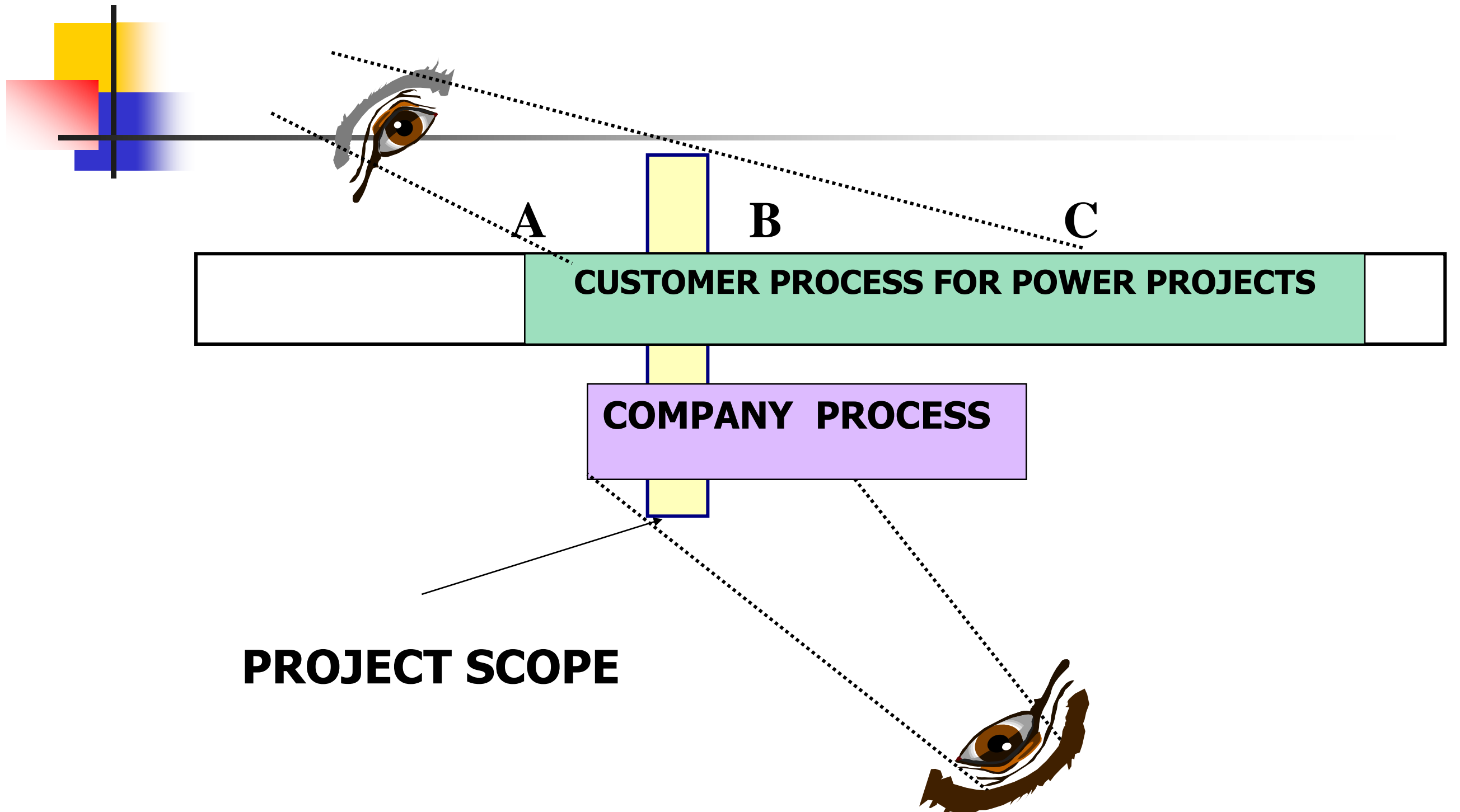
Part-3

Supply Chain Management for Global competitiveness

Integrating Developing Countries' SMEs into Global Value Chains

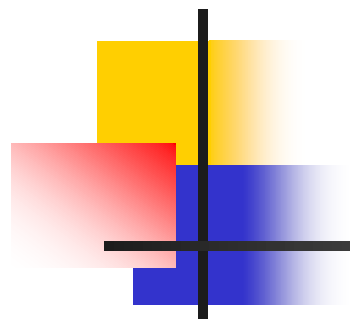
- 
-
1. Skills development.
 2. Technological upgrading
 3. Quality and standards
 4. Transnational Corporations–SME linkages
 5. Clusters and territorial development
 6. Intellectual property rights protection.

CUSTOMER'S VIEW OF COMPANY'S CONTRIBUTION

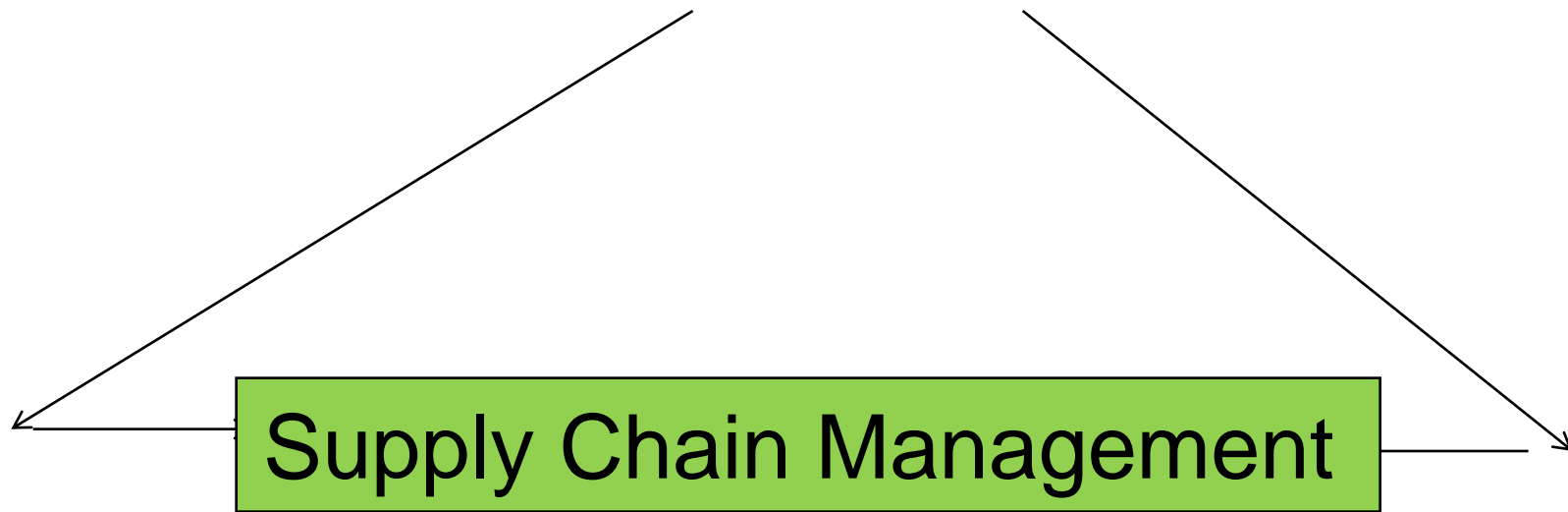


PROJECT SCOPE

TRADITIONAL VIEW OF COMPANY'S CONTRIBUTION



Engineering + Procurement + Construction



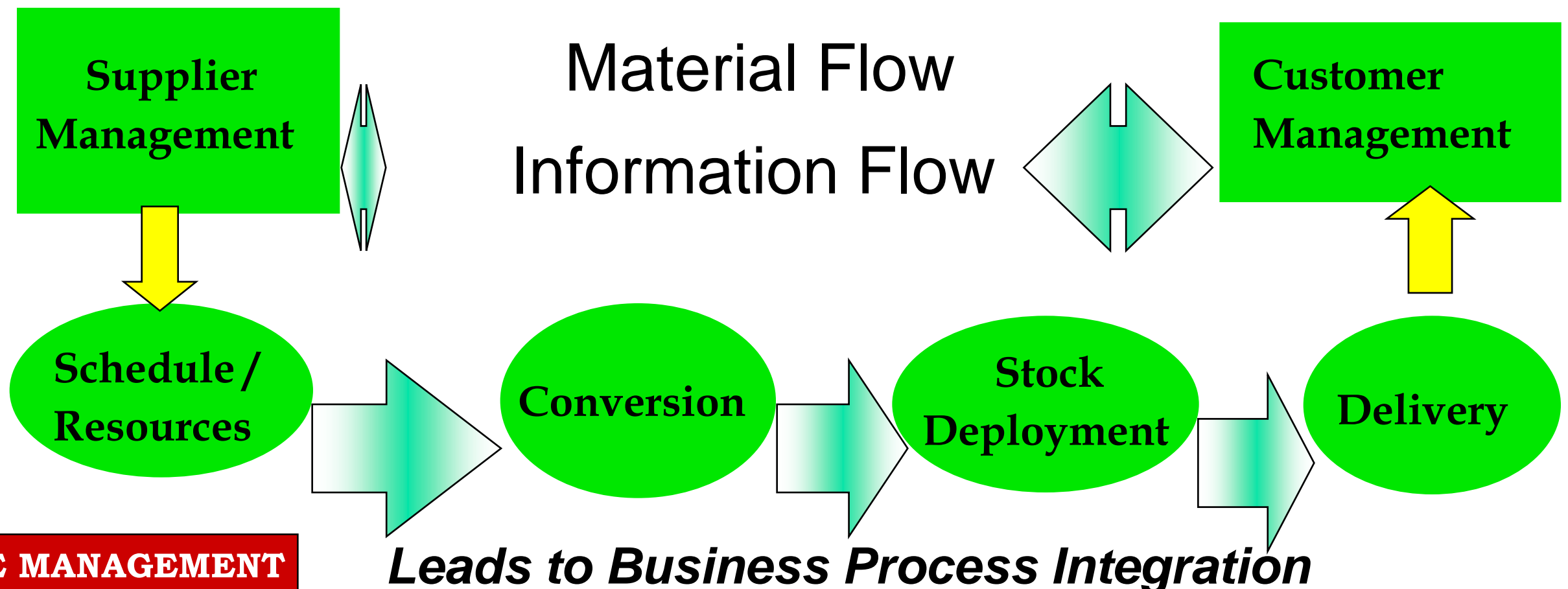
SUPPLY CHAIN MANAGEMENT

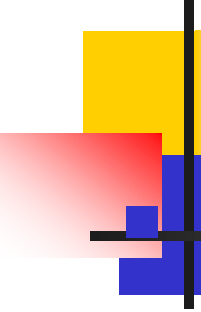
- Value Chain
- Supply side- raw materials, inbound logistics and production processes
- Demand side- outbound logistics, marketing and sales.



WHAT IS SUPPLY CHAIN MANAGEMENT

" Is the strategic management of activities involved in the acquisition and conversion of materials to finished products delivered to the customer





Supply chain is the system by which organizations source, make and deliver their products or services according to market demand.

- Supply chain management operations and decisions are ultimately triggered by demand signals at the ultimate consumer level.
- Supply chain as defined by experienced practitioners extends from suppliers' suppliers to customers' customers.



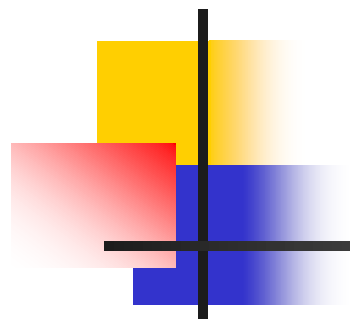
SUPPLY CHAIN INCLUDES :

- **MATERIAL FLOWS**
- **INFORMATION FLOWS**
- **FINANCIAL FLOWS**



SUPPLY CHAIN MANAGEMENT IS FACILITATED BY

- **PROCESSES**
- **STRUCTURE**
- **TECHNOLOGY**



Supply Chain Management (Measure, Improve and Control) is Lead Time management

The objective is reduce lead time from the present status to Zero Lead Time

Go for continual Improvement through P-D-C-A

Material Requirement Planning (MRP-1)

Types of Techniques



```
graph TD; A[Types of Techniques] --> B[PUSH]; A --> C[PULL]; B --> B1[MRP1]; B --> B2[MRP2]; B --> B3[ERP]; C --> C1[JIT]; C --> C2[KANBAN];
```

PUSH

MRP1
MRP2
ERP

PULL

JIT
KANBAN

Material Requirement Planning (MRP-1)

- 
- Introduction of MRP in 1960's by Dr. Joseph Orlicky.
-

- **Definition:**

MRP is a software based production, planning and inventory control system used to manage the manufacturing process.

It is a computer based system in which the given Master Schedule is exploded with Bills of Material, into the required amount of raw material, parts and subassemblies needed to produce the final products in each time period of say a week or month (called as "Buckets")

Key Elements Of MRP 1



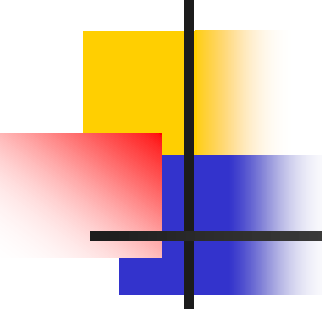
- **Demand Forecasting:-**

It is the quantity demanded per year or per unit time which indirectly helps in knowing quantity to be supplied.

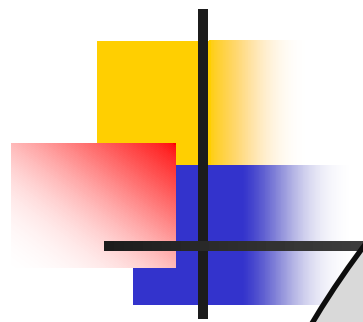
- **Master Production Schedule (MPS):-**

MPS is a series of time phased quantities for each item that a company manufactures. It gives the details of the products to be manufactured over the given space of time.

Manufacturing Resource Planning (MRP II)



It is defined as a method for the effective planning of all resources of a manufacturing company. Ideally it addresses operational planning in units, financial planning in dollars, and has a simulation capability to answer “what-if” questions and extension of closed-loop MRP.



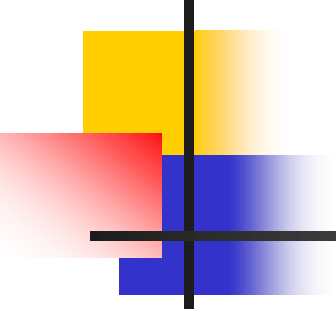
MRP

- Manufacturing-Centric/Push Mgt.
- Master production schedule
- Final production schedule
- Inventory management
- Bills of Materials
- Gross Requirement Generation
- Net Requirement Generation
- Recorder point Calculation
- Automatic Replenishment

MRP II

- Capacity Requirement planning
- Production Control
- Marketing Interface
- Accounting Interface
- Financial Interface
- Personnel Interface
- Supplier Interface
- Customer Interface

Operating Environment

- 
- Government
 - Regulation
 - Safety
 - Economy
 - Effects demand
 - Shortage and surpluses
 - Competition is now global
 - Reduced costs of transportation
 - Communications, reduced costs and increased speed

Operating Environment (Continued...)



- Customers Demand

- Lower Prices
- Improved Quality
- Reduced Lead Time
- Improved pre-sale and after-sale service
- Product and volume flexibility

Quality



- Order Qualifiers:

- Customer requirements for price, quality, delivery etc

- Order Winners:

- Those characteristics that persuade customer to select a product or service

“Today’s order winners are tomorrow’s order qualifiers”

Manufacturing Strategy

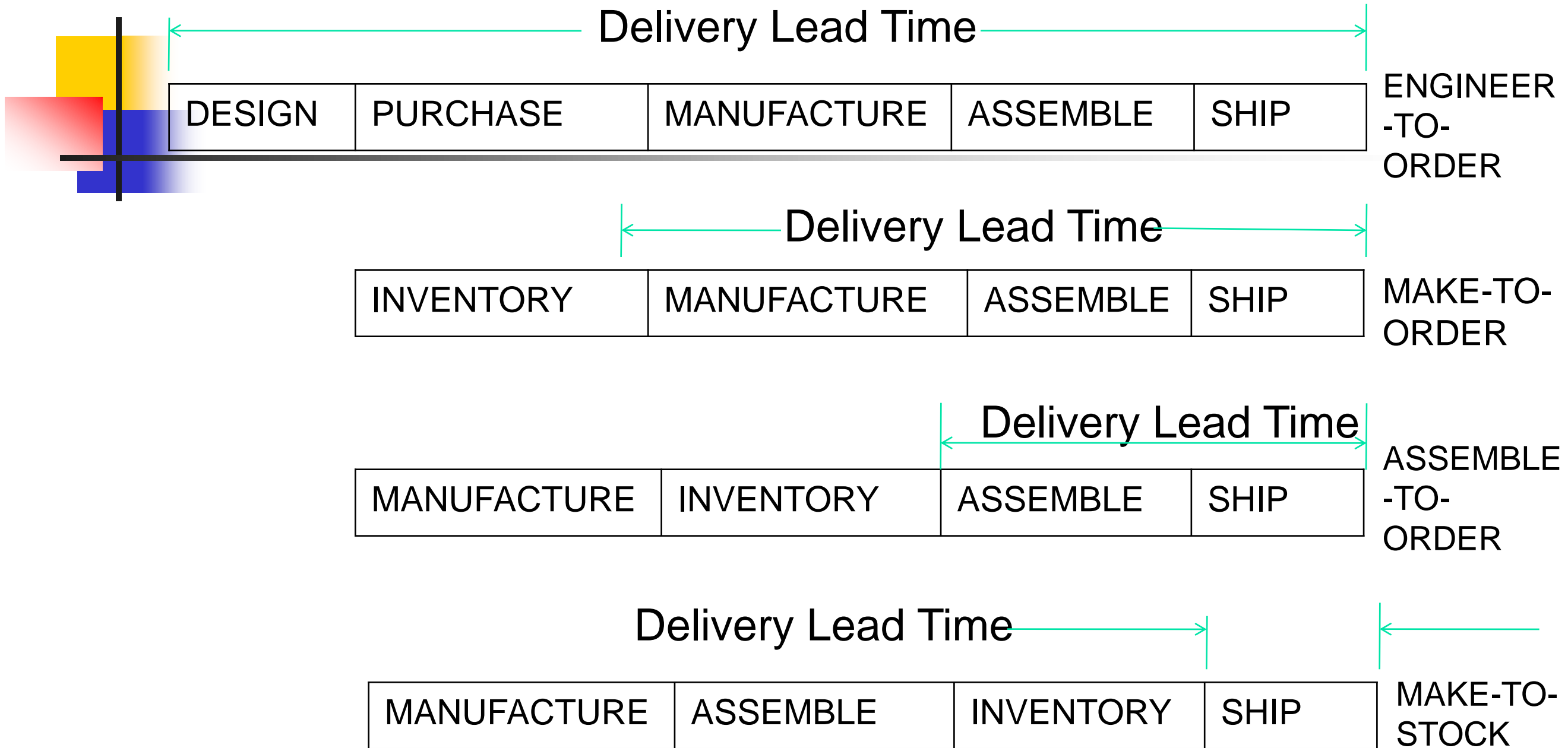
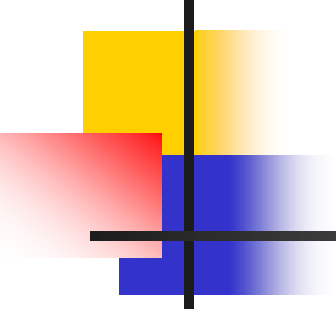
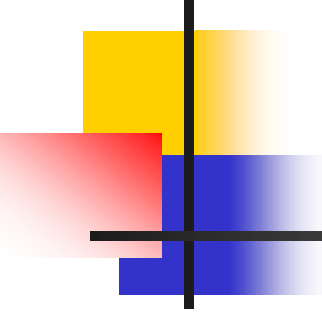


Figure 1.1 Manufacturing Strategy and Lead Time

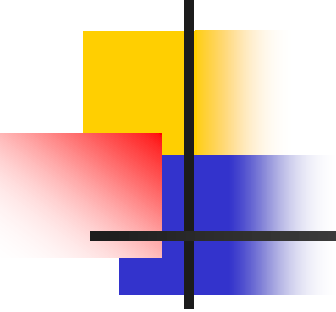
Engineer-to-Order

- 
- Manufacture does not start until the order is received
 - Custom Design
 - Unique Products
 - Long Lead Time
 - Inventory purchased after order is received

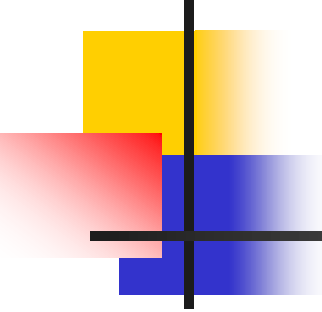
Make-to-Order

- 
- Manufacture does not start until the order is received
 - Often uses standard components
 - Little design time
 - Lead Time is reduced
 - Inventory held as raw materials

Assemble-to-Order

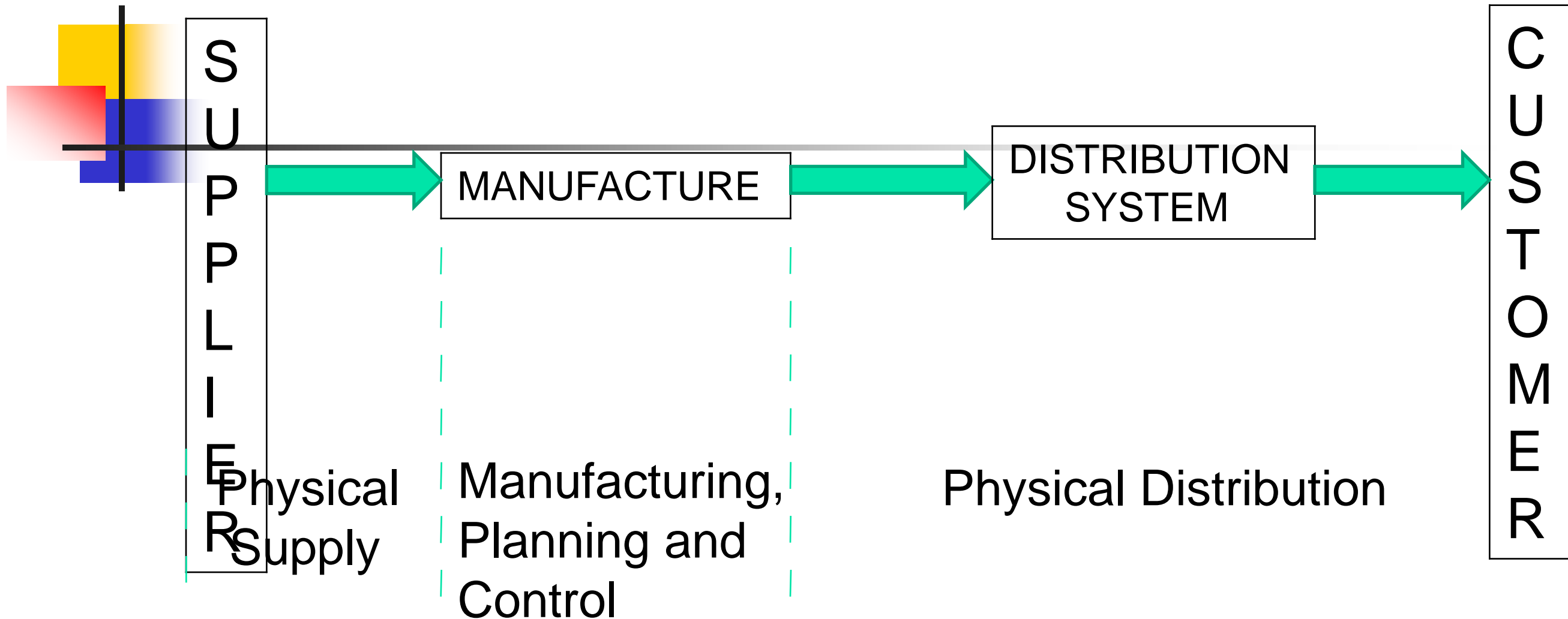
- 
- Manufacture Inventories standard components
 - No Design time required
 - Assembly only required
 - Shorter Lead Time
 - Inventory held as standard components

Make-to-Stock

- 
- Manufacture produces the goods in anticipation of customer demand
 - Little customer involvement with Design
 - Assembly only required
 - Shortest Lead Time
 - Inventory held as finished goods

The Supply Chain Concept

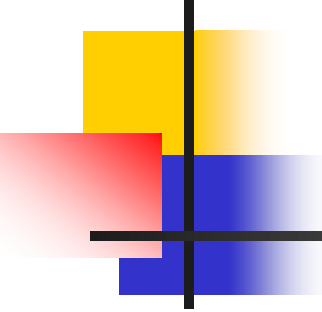
Supply-production-distribution system



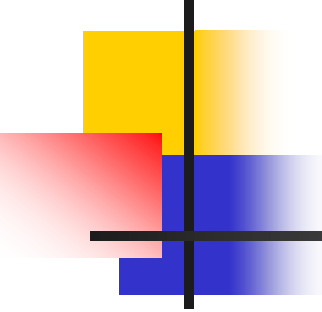
DOMINANT FLOW OF PRODUCTS AND SERVICES

DOMINANT FLOW OF DEMAND AND DESIGN INFORMATION

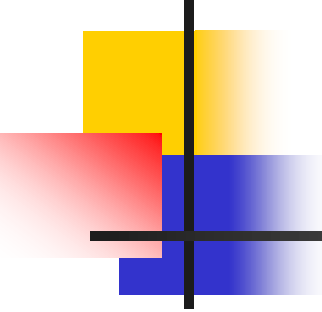
The Supply Chain Concept

- 
- Includes all activities and processes to supply a product or service to the customer
 - Links many companies
 - Has a number of supplier/customer relationships
 - May contain intermediaries such as: wholesalers, warehouses and retailers

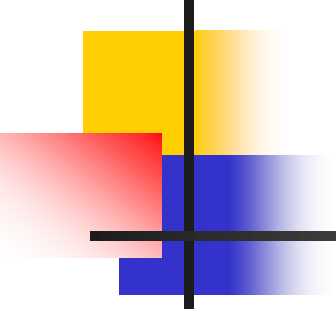
Historical and Current Perspective

- 
- In the past there were well defined and rigid boundaries between organizations
 - JIT viewed suppliers as partners
 - mutual analysis for cost reduction
 - mutual product design
 - greatly reduced inventory
 - improved communications (Internet, EDI)

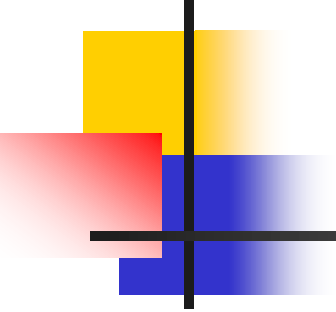
Growth of Supply Chain Concept

- 
- Integrated systems (ERP) and the sharing of information
 - Global competition and supply
 - Flexible Designs – reduced product life cycles
 - JIT approach to interorganizational relations
 - Subcontracting or outsourcing work

Current Supply Chain Concept

- 
- Manage the flow of materials
 - Share information through the internet
 - Transfer funds electronically
 - Recover, recycle or reuse materials

Conflicts in Traditional Systems

- 
- Company main objectives
 1. Best customer service
 2. Lowest production costs
 3. Lowest inventory investment
 4. Lowest distribution costs

Conflicts in Traditional Systems

FUNCTION

Marketing

OBJECTIVE

- High Revenues
- High Product Availability

IMPLICATION

High	Customer Service
Low	Service

Production

- Low Production Cost
- High-Level Production
- Long Production Runs

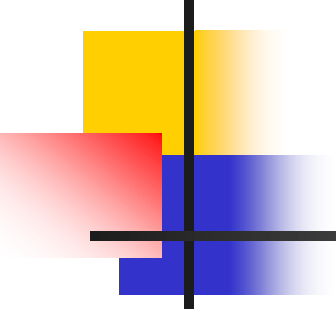
Many	Disruptions to Production
Few	

Finance

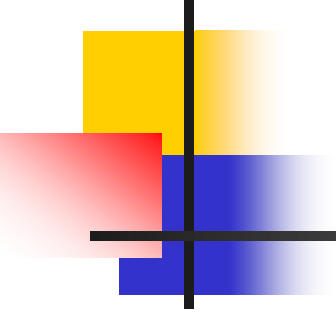
- Low Investment and Cost
- Fewer Fixed Cost
- Low Inventories

High	Inventories
Low	

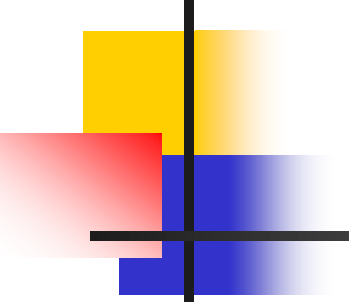
Manufacturing Planning and Control

- 
- Planning and Controlling the flow of materials through the manufacturing process through:
 - Production Planning
 - Implementation and Control
 - Inventory Management

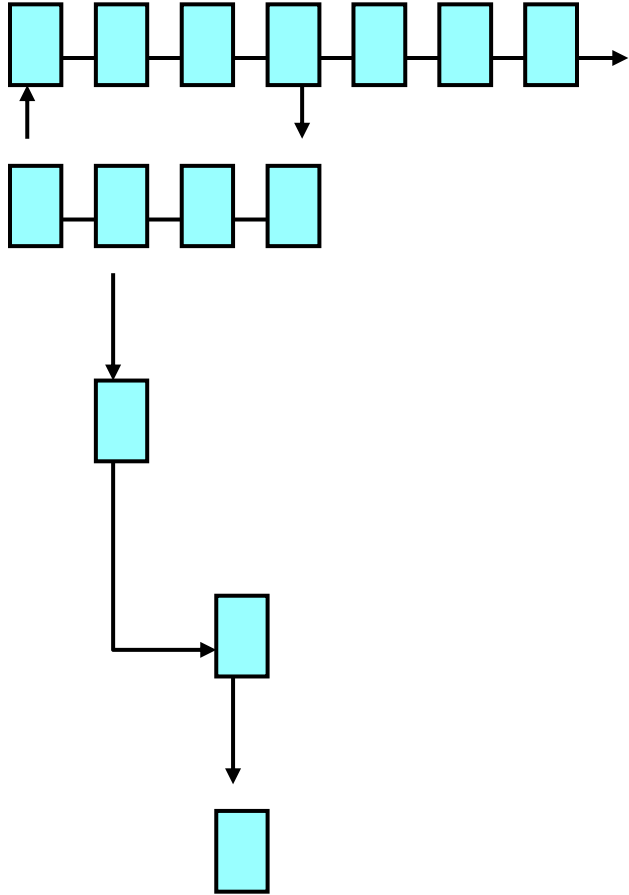
Process Specifications

- 
- Recorded on a Route Sheet
 - Describe how the product is made
 - Operations required to make the product
 - Sequence of operations
 - Equipment and accessories required
 - Standard time to perform each operation

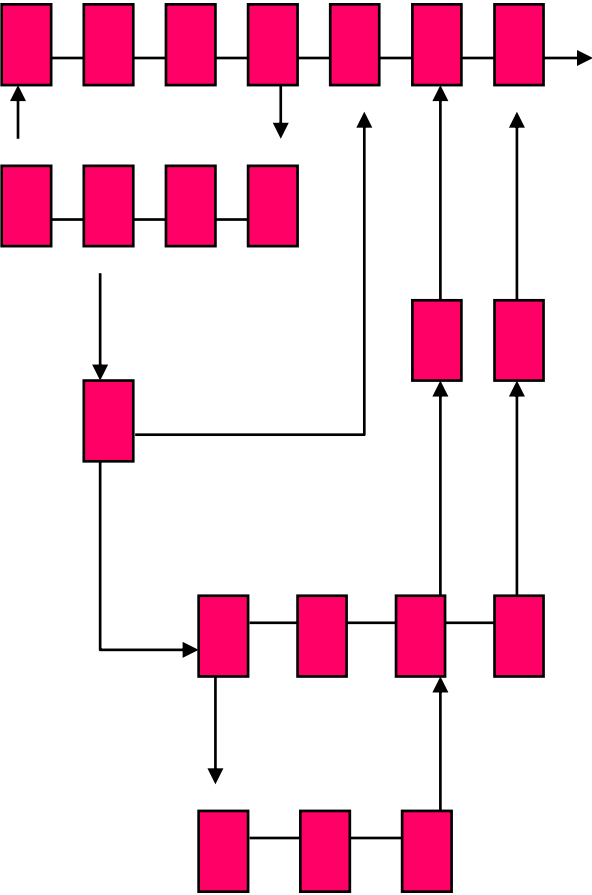
Ideal Supply Chain Management



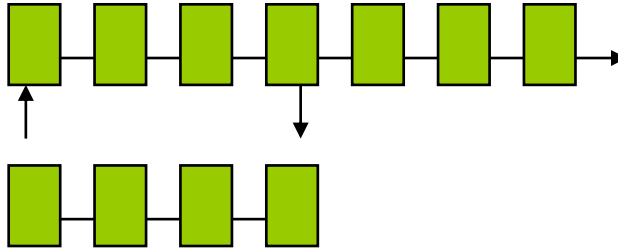
What you think it is



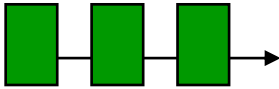
What it really is



What it should be



What it could be



Lead Time Improvement Tools and Techniques

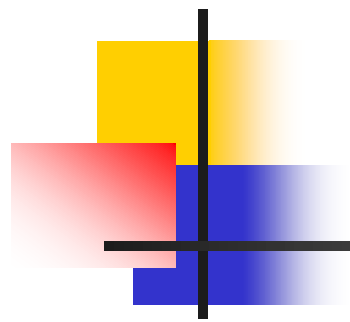


MEASUREMENT

- Supplier Rating

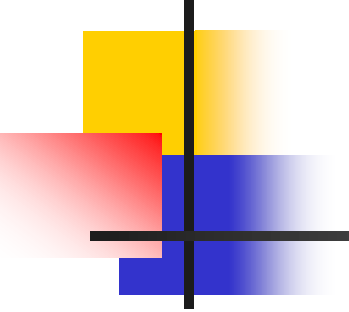
IMPROVEMENT

- Quality Plan
- Advance Production Quality Plan (APQP)
- Part Production Approval Process
- Planning tool (Bar Chart, Grant Chart, Mile Stone Chart)
- Critical Path Math
- Performance/Project/Program Evaluation Review Techniques (PERT)

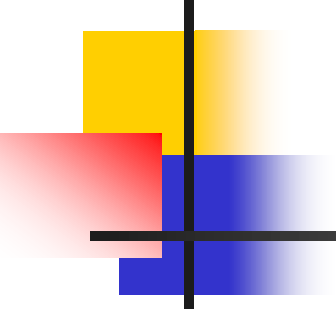


Japanese's Approach
for
Business Performance
through
'Zero Defect, Zero Effect'
to 'Make in India'

Japanese's Approach

- 
- **5S**
 - **TOTAL PRODUCTIVE MAINTENANCE**
 - **KANBAN**
 - **VISIBLE MANAGEMENT (Visual Control)**
 - **PROCESS ORIENTED MANAGEMENT**
 - **CROSS- FUNCTIONAL MANAGEMENT/ QUALITY CIRCLE**
 - **JUST –IN- TIME MANAGEMENT**
 - **STATISTICAL PROCESS CONTROL**
 - **PDCA CYCLE**

Benifts from Japanese's Approach

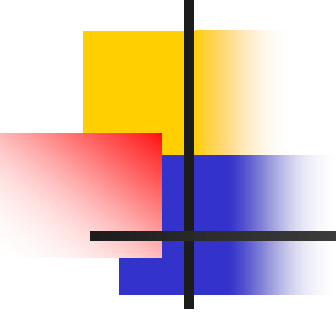
- 
- Reduce inventory and product obsolescence.
 - Reduces waste and scrap
 - Provides flexibility in production
 - Increases Output
 - Reduces Total Cost



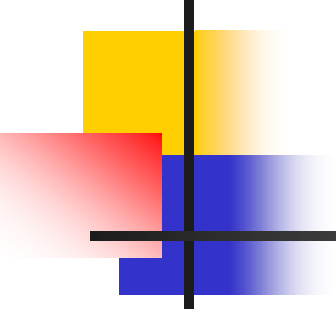
“Just in Time”

Back Bone for Business Excellence

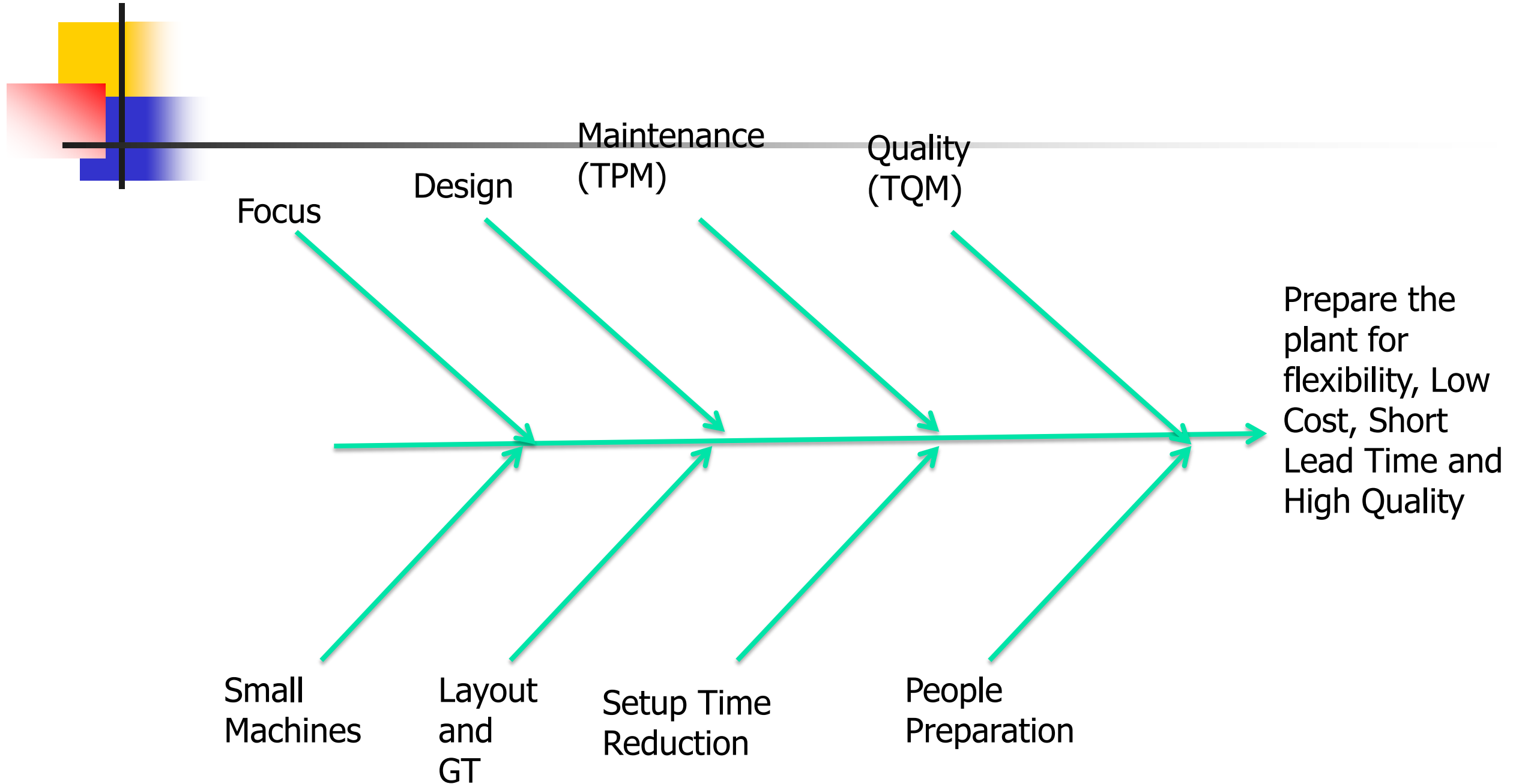
Synonyms for JIT

- 
-
- Continuous flow manufacturing
 - Zero inventory
 - Keep moving material manufacture
 - Time bases competitiveness
 - Synchronous manufacturing

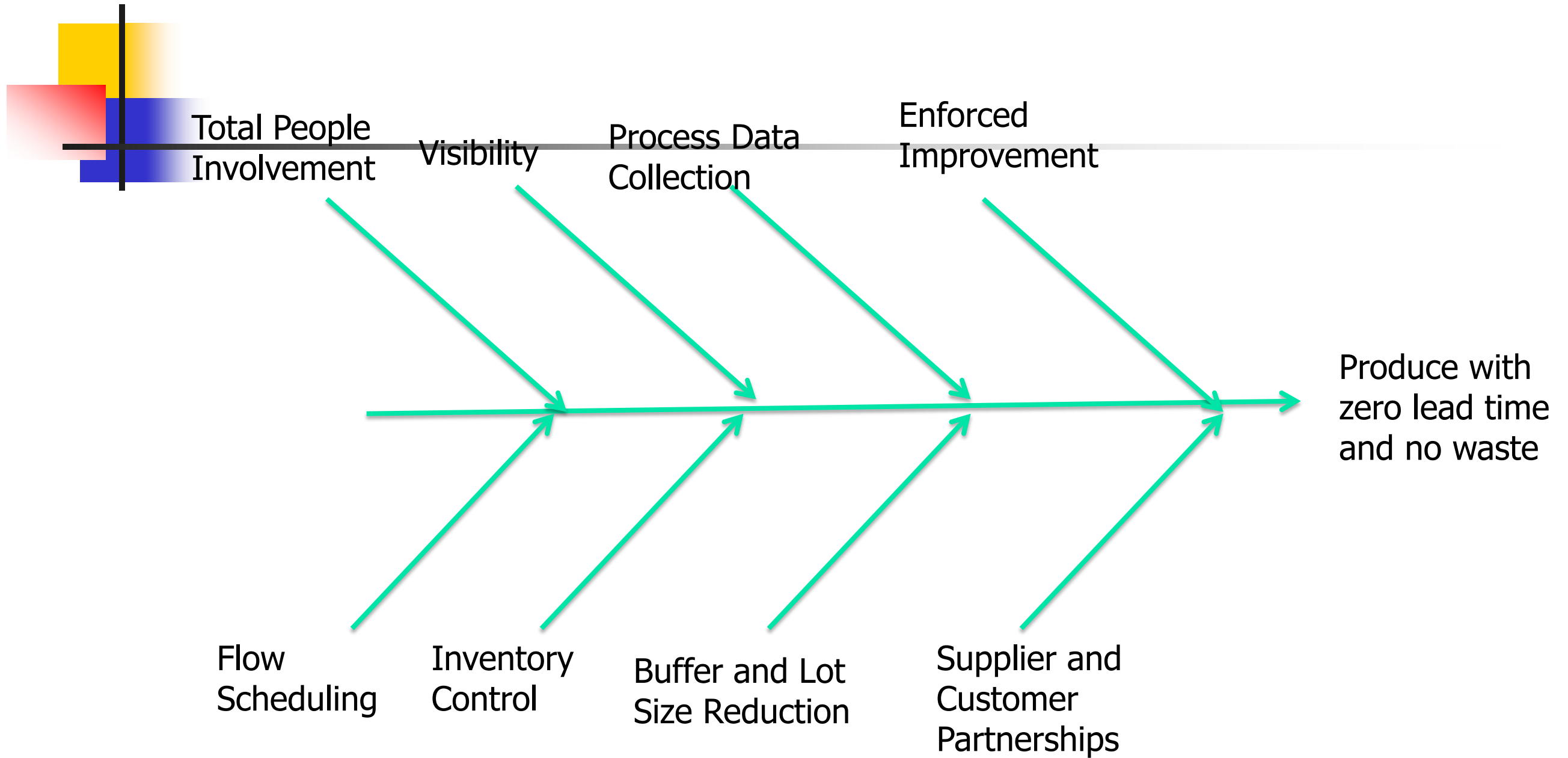
JIT Stages

- 
- JIT techniques are classified into Two stages:
 - Stage 1: The stage 1 techniques are concerned with preparing the plant for flow, flexibility, short lead time and high quality. They may be said to be the prerequisites for JIT.
 - Stage 2: The stage 2 set of techniques generally build on stage 1 set, and comprise those techniques allows operations to run in JIT manner, that is with short (Zero?) lead time and little (Zero?) waste.

JIT Stage 1:



JIT Stage 2



JIT Stage 1: Design

Effect	Causes	Sub Cause
Ease of manufacturing with control quality speed	Parts Reduction	<ol style="list-style-type: none"> 1. GT Data Base 2. Modular Specs. 3. Value Eng
	Communication	<ol style="list-style-type: none"> 1. Design as operators 2. Location of design office 3. Feedback meetings
	Option Reduction	<ol style="list-style-type: none"> 1. Pareto 2. Value Eng.
	Design for manufacturing	<ol style="list-style-type: none"> 1. Manufacture Vs. The customer 2. EMI 3. Option AS Late AS POSS 4. Capability awareness 5. Concurrent Engineering
	Supplier Involvement	<ol style="list-style-type: none"> 1. Open Specification 2. Early consulting 3. Trust 4. Supplier as experts 5. Inter shop floor visits

JIT Stage 1: Maintenance

Effect	Causes	Sub Cause
Maintenance tool, Equipment available when needed with Low cost	People	<ol style="list-style-type: none"> 1. Operator Responsibility: cleanliness aircraft style check use of senses simple tasks 2. Maintenance staff: standard procedure improvement operator training more complex task
	Data	<ol style="list-style-type: none"> 1. Visible charts : on machine, on shop floor 2. MIS: Inventory history, maintenance cycles
	Support	<ol style="list-style-type: none"> 1. Condition monitoring: failure type awareness 2. Fast response MTTR: Lights, sound tool location, trolleys response time monitoring 3. Maintenance shifts: Bottleneck awareness "8-4-8-4" cycle

JIT Stage 1: Total Quality

Effect	Causes	Sub Cause
Defect free product and component	People	<ol style="list-style-type: none"> 1. No fears 2. Education 3. Teams: SGIA circles 4. Training: 7 tools & FMEA 5. Responsibility
	Support	<ol style="list-style-type: none"> 1. Design involvement 2. Supplier involvement 3. Maintenance of tools & Gauge etc 4. Under cap schedule 5. Communication: Procedures customer costs standards 85/15 principle
	Detection	<ol style="list-style-type: none"> 1. POKA YOKA 2. Operators: as inspectors use of all senses 3. Process chart analysis 4. Visibility: lights chart 5. Internal customer feedback 6. Line stop
	Prevention	<ol style="list-style-type: none"> 1. SPC 2. Capability 3. Housekeeping 4. At source principle

JIT Stage 1: Small Machine

Effect	Causes	Sub Cause
Flexibility cost, layout, cash flow, latest tech	Self development machine	<ol style="list-style-type: none">1. Simplify: mat hand process2. At it's worst when new: poka yoka devices, Quality capable, low cost automation, combined operations
	Small Machine	<ol style="list-style-type: none">1. Demand speed2. Flexible layout: move machine, move people, move both3. Permanently set up: non bottlenecks, idleness no problem4. Suck cost principle
	Old Machine	<ol style="list-style-type: none">1. Permanently set up: non bottlenecks, idleness no problem2. Suck cost principle

JIT Stage 1: Layout

Effect	Causes	Sub Cause
Flow Facilitation with minimum waste	Housekeeping	<ol style="list-style-type: none"> 1. Time allowed 2. Operator ownership 3. Incentives, bonus, awards 4. Cleanliness 5. Orderliness 6. Tidiness
	Support	<ol style="list-style-type: none"> 1. Machine n wheels 2. Human movable containers 3. Gravity feeds 4. Line side delivery 5. Multi access points 6. Small machine
	Improvement	<ol style="list-style-type: none"> 1. Flow length monitoring 2. Process chart analysis 3. Waste check sheets 4. Dynamic Layouts
	Shape	<ol style="list-style-type: none"> 1. U shape communication pfa 2. Cells & GT: shojinka close by quality
	Place	<ol style="list-style-type: none"> 1. Quality of life at work place: lighting, carpets, noise, ergonomics 2. Autonomous work place 3. Operators Participation

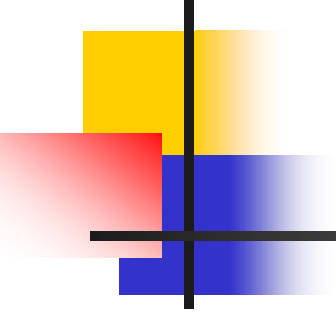
JIT Stage 1: Set Up Reduction

Effect	Causes	Sub Cause
Minimize time taken to change from one batch to another	Administration	<ol style="list-style-type: none">1. Record keeping2. Incentives3. Regular practice4. Clear priorities5. Form team
	Facilitators	<ol style="list-style-type: none">1. Video2. Sequencing3. Regularity4. Maintenance5. Trolleys6. Advance warning
	Classify Activities	<ol style="list-style-type: none">1. Internal: jig design, tool design, quick design, roll through platforms, simultaneous activities2. External: maximum preparation location of tools, dies, pre heating, pre checking

JIT Stage 1: People Preparation

Effect	Causes	Sub Cause
People fit for JIT	Reward, Incentives	1. Bonus system: group based anti over production, anti-defects, pro- improvement
	The production technician	1. Capacity through people 2. QWL: Sets up, check quality, carries out maintenance, produce where needed, make suggestions
	Training	1. Multiple Tasks 2. Multiple functions 3. Job Rotation 4. Creativity 5. Full use of time
	Policy	1. Job security 2. Taylor 3&4 3. SOCIO Tech. 4. MIN SPECS. 5. Line & Staff equality 6. Fewer categories 7. Participation 8. Info. Sharing 9. Hire the whole person: skill, brain, sense, potential

JIT Stage 2:

- 
-
1. People Involvement
 2. Visibility
 3. Process data collection
 4. Improvement
 5. Flow scheduling
 6. Lot size and buffer reduction
 7. Inventory Control
 8. Suppliers

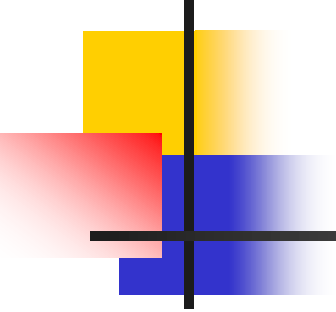
JIT Stage 2: People Involvement

Effect	Causes	Sub Cause
Involve all in improved performance	Education	<ol style="list-style-type: none"> 1. Operators visits: Supplier, Customer, other JIT companies 2. Area: design, quality, maintenance, marketing, purchasing
	Beliefs	<p>Operators</p> <ol style="list-style-type: none"> 1. Opinions valuable 2. Are good problem solver 3. Can be trusted
	Devices	<ol style="list-style-type: none"> 1. Time to listen: and listening skills 2. Teams: circles, SGIAs 3. U not H 4. Manager access 5. Suggestions: with Quick feedback
	Opportunity	<ol style="list-style-type: none"> 1. Under capacity schedule 2. Autonomous groups and super teams 3. Operators ownership 4. Give operators the chance

JIT Stage 2: Visibility

Effect	Causes	Sub Cause
Make progress and problem clear	Quality	<ol style="list-style-type: none">1. Light & sound2. Defect display: by operators, by type3. Problem Pareto & Fishbone4. SPC Charts
	Schedule	<ol style="list-style-type: none">1. Painter stock locations2. KANBAN3. Electronic counts4. Bottleneck Tags
	Other Area	<ol style="list-style-type: none">1. Company performance2. ANDON Boards3. Delay Clocks4. Visible skill chart5. Operator contribution display6. Daily Communication7. Office Locations

JIT Stage 2: Process Data Collection



Effect	Causes	Sub Cause
Collect and use data as it happens	Inventory & Scheduling	<ol style="list-style-type: none">1. BAR coding2. Delay Clocks3. Automatic counting
	Machine	<ol style="list-style-type: none">1. Automatic Condition monitoring2. Run Hour recording3. Status Display: tools, Strokes
	Quality	<ol style="list-style-type: none">1. Operator performance: acknowledge and unacknowledged defects2. POKA YOKA: automatic stop warning3. ON shop floor SPC

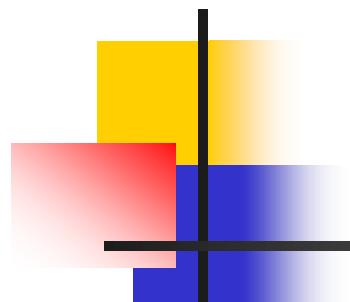
JIT Stage 2: Improvement

Effect	Causes	Sub Cause
Continuously reduce waste	Management	<ol style="list-style-type: none">1. Process Visibility2. Audio Visual warning3. Failure cost apportionment4. Rewards
	Material	<ol style="list-style-type: none">1. Line stop: Shortage, quality, maintenance2. Deliberate inventory withdrawal
	Machines	<ol style="list-style-type: none">1. On going capability studies <p>5 WHYS 7 Wastes</p>
	Methods	<ol style="list-style-type: none">1. Process / Method auditing2. Creative participation3. Line side recording: Pareto based action4. Non Value adding analysis

JIT Stage 2: Flow Scheduling

Effect	Causes	Sub Cause
Keep inventory moving at rates of demand	Pull System	1. KANBAN: internal, external, square card, priority, electronic ping pong
	Regularity	1. Same time every day 2. Linearity
	Schedule Development	1. Mixed model 2. Under capacity schedule 3. INPUT/OUTPUT control 4. Constant sequence 5. Bottleneck capacity control 6. Forward visibility 7. Some every day 8. Schedule stability 9. ADD value late

JIT Stage 2: Lot size & Buffer reduction



Effect	Causes	Sub Cause
Minimize lot size and buffers	Buffers	<ol style="list-style-type: none">1. Holding cost awareness2. Schedule accuracy, feedback loop3. Non bottleneck, buffer elimination4. Awareness of linkage: with maintenance, quality, supplier variability, lead times & multi locations
	Lot size	<ol style="list-style-type: none">1. Linkage with setup times: graphed, recalculated run times2. Non bottleneck transfer lot size3. Bottleneck constraints: greater throughput

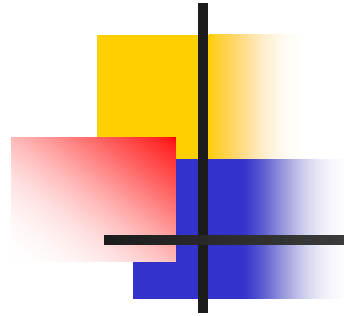
JIT Stage 2: *Inventory control*

Effect	Causes	Sub Cause
Control inventory for flow	Flow preparation	<ol style="list-style-type: none">1. Cycle counting2. Record accuracy3. Bottleneck links4. Visibility5. Window deliveries6. MRP7. Reduction BOM levels8. Standardized container
	Flow monitoring & Control	<ol style="list-style-type: none">1. Input/output control2. Buffer monitoring3. Four wall inventory4. Back flushing5. Bottleneck throughput

JIT Stage 2: Suppliers

Effect	Causes	Sub Cause
Partnership on cost, quality, reliability and long term profit	Cost Reduction	<ol style="list-style-type: none"> 1. Open specs. 2. Cooperation on future design 3. Fewer suppliers 4. Supplier Pareto 5. Cutting lead times
	Delivery	<ol style="list-style-type: none"> 1. Periodic reconciliation 2. Less checking standard containers 3. Delivery time window 4. KANBAN 5. Line side delivery
	Quality	<ol style="list-style-type: none"> 1. Site visits 2. Easy access 3. Joint team 4. Supplier responsibility 5. Product identification
	Reliability	<ol style="list-style-type: none"> 1. Longer term contracts 2. Sole suppliers 3. Blanket orders 4. Schedule stability 5. Cut buffers
	Information	<ol style="list-style-type: none"> 1. EDI 2. 2 way problem notification 3. Schedule visibility 4. 2 way visits 5. Common bar code

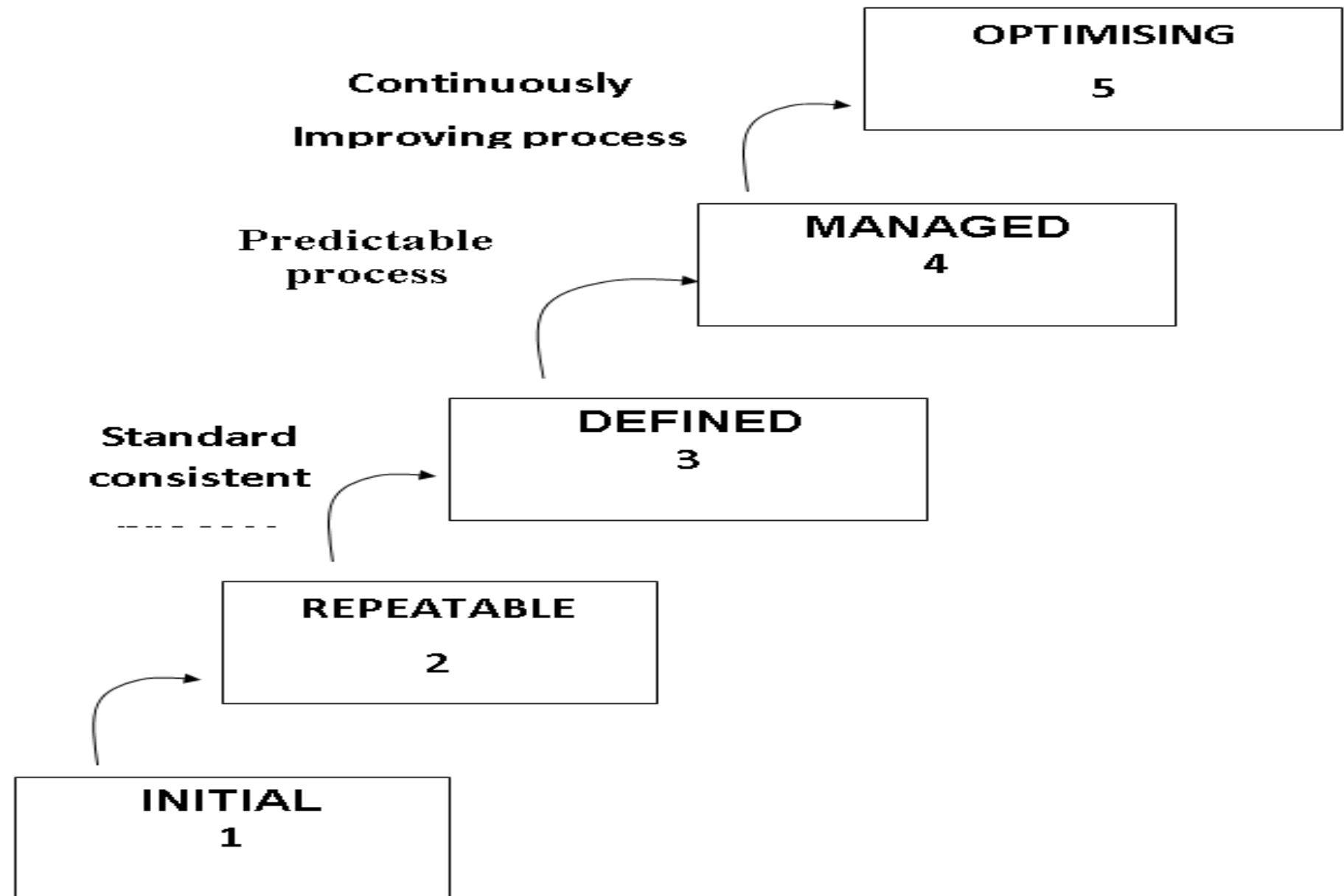
Elements of JIT



- Pull production concept
- Flexible resources
- Cellular manufacturing
- Kanban production control
- Small-lot production
- Quick setups
- High quality
- Supplier networks

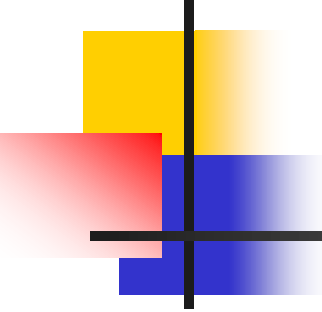
System Approach for Sustainable Improvement

FIVE LEVELS OF PROCESS IMPROVEMENT



Implications of Advancing for Continuous Improvement

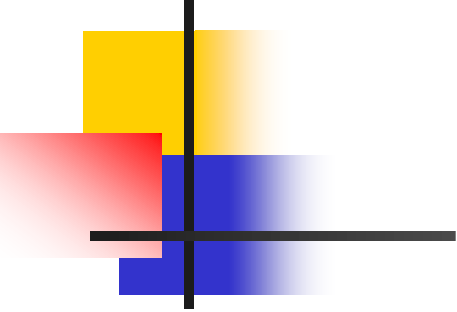
A) PROCESS



Level1	Level 2	Level 3	Level 4	Level 5
Few stable processes Exist or are used.	Processes are Documented ,Repeated	Integrated management is used to standardized the process across the organization to have consistency .	Processes are Quantitatively understood and stabilized predictable.	Processes are continuously and systematically improved optimize .
"Just do it"	Problems are recognized and corrected as they occur.	Problems are anticipated and prevented , or their impacts are minimized.	Sources of individual problems are understood and eliminated.	Common Sources of Problems are Understood and eliminated.

Implications of Advancing for Continuous Improvement

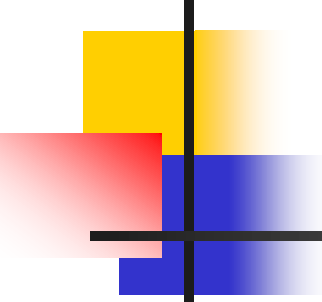
B) People



Level 1	Level 2	Level 3	Level 4	Level 5
Success depends on individual heroics.	Success depends on individuals; management system supports.	Area groups work together, perhaps as an integrated product team	Strong sense of teamwork exists within each project.	Strong sense of teamwork exists across the organization.
"Fire fighting" is a way of life.	Commitments are understood and managed	Training is planned and provided according to roles.		Everyone is involved in process improvement.
Relationships between department are uncoordinated, perhaps even adversarial .	People are trained in coordination, interpersonal relationship.			

Implications of Advancing for Continuous Improvement

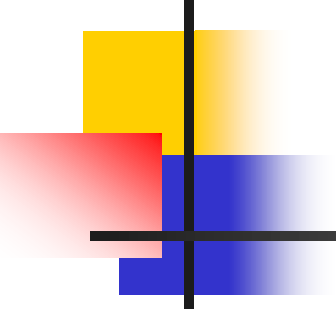
c)Technology



Introduction of new technology is risky.	Technology Supports Established , stable activities.	New technologies are evaluated on a qualitative basis.	New technologies are evaluated on a quantitative basis.	New technologies are proactively pursued and deployed.
--	--	--	---	--

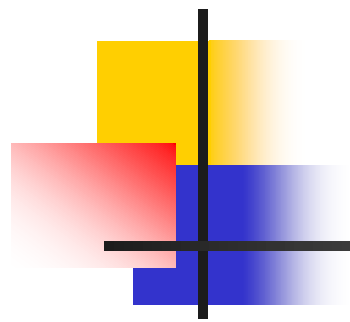
Implications of Advancing for Continuous Improvement

D) Measurement



Data collection and analysis are ad hoc.	Planning and management data used by individuals.	Data are collected and used in all defined processes.	Data definition and collection are standardized across the organization.	Data are used to evaluate and select process improvements.
		Data are systematically shared across projects.	Data are used to understand the understand quantitatively stabilized	

On -Line Off the Session Support



Queries are invited at

mc_3e@yahoo.com

3E MANAGEMENT CONSULTANTS

129-A, Block-D, Sector-26, Noida .

**Thanks
for
participative session**