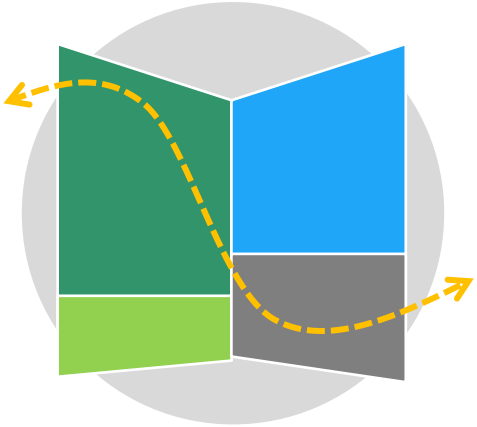
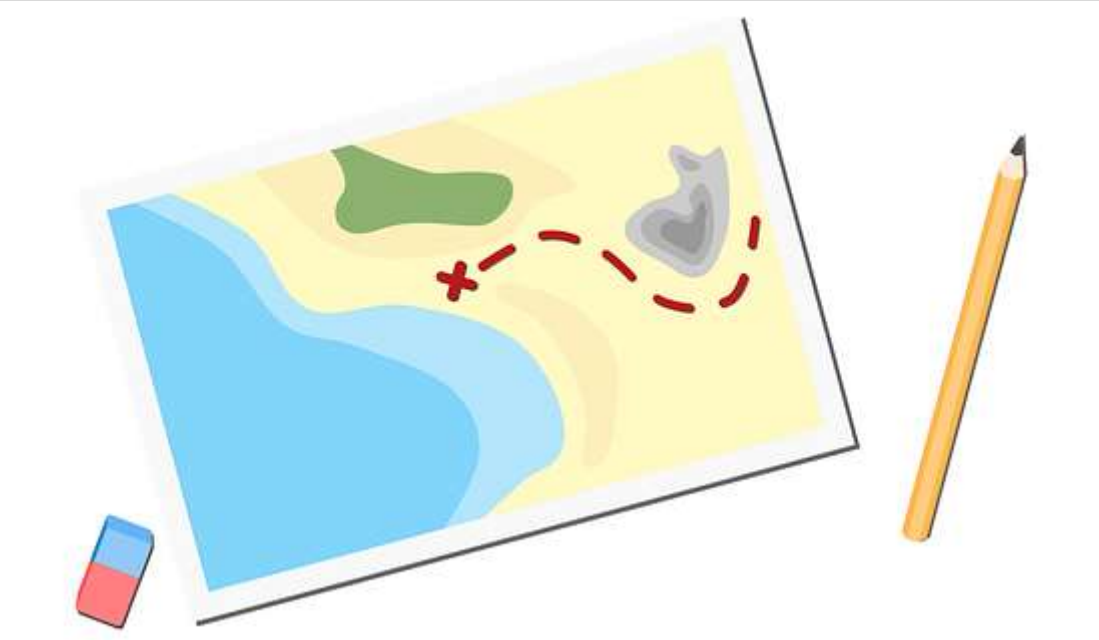
Continuous Improvement Toolkit

VALUE STREAM MAPPING



VALUE STREAM MAPPING

A **high-level** visual representation of a business process which helps to understand the flow of value through the process as perceived by the customer.



VALUE STREAM MAPPING

Used to identify **opportunities** for reducing waste and improving quality and performance.

By making the non-value-added activities **easier to identify**, and this is the heart of improving any business process.

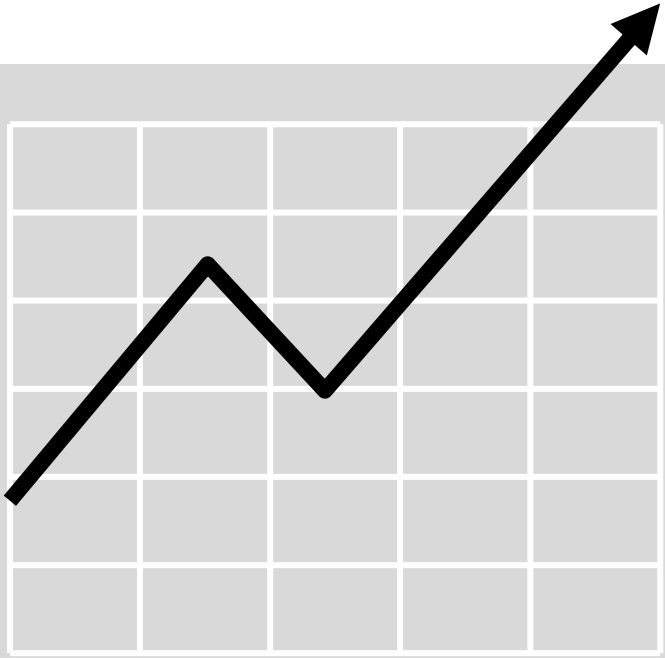
VALUE STREAM MAPPING

Involves the value-added and non-value-added work needed to create the **products and services** in response to customer needs.

Provides a graphical representation of the **information and material flows**.

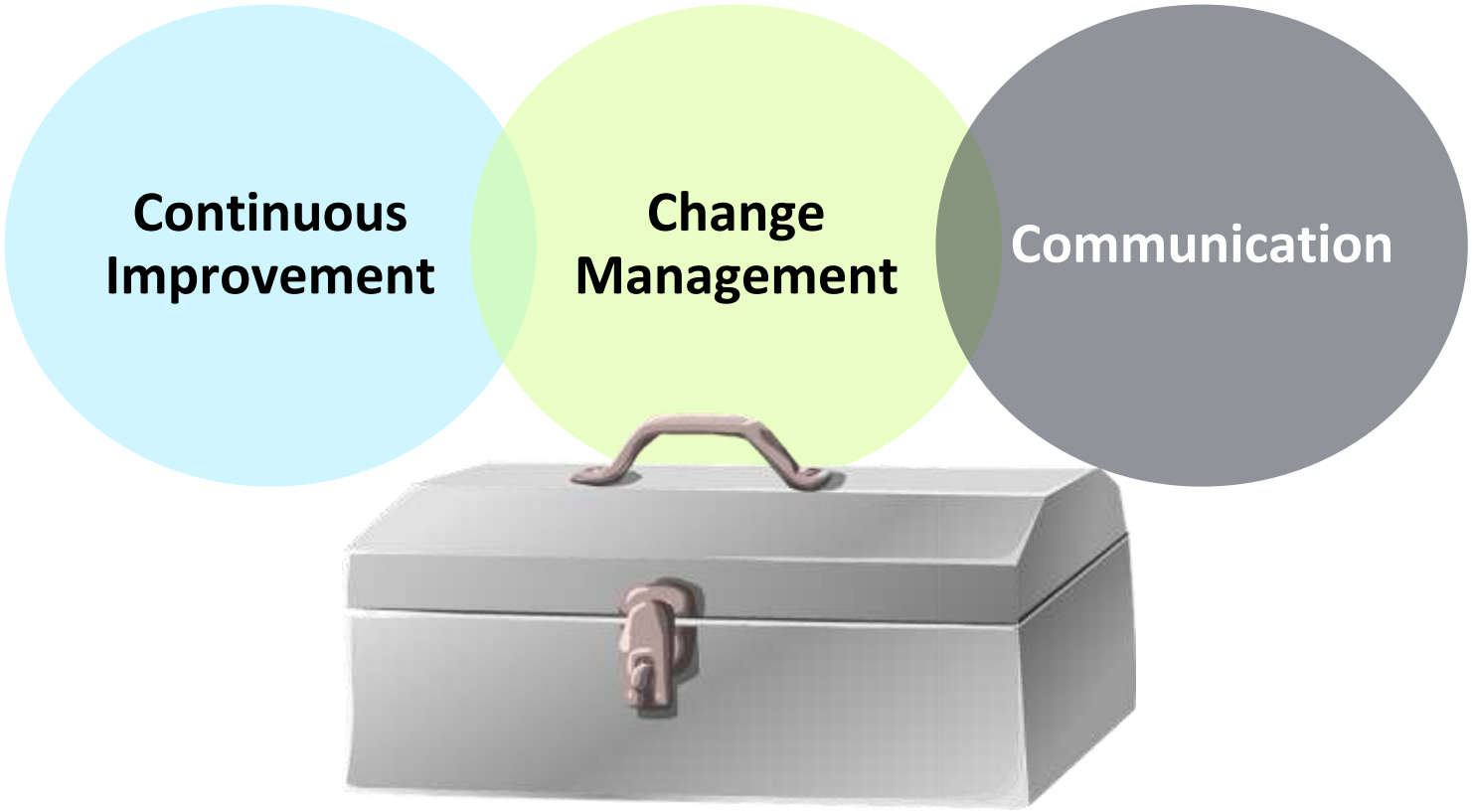
VALUE STREAM MAPPING

Considered an **improvement tool** rather than just a definition of how the process operates or should operate.



VALUE STREAM MAPPING

Considered as a tool for . . .



VALUE STREAM MAPPING

Considered as a tool for . . .

Continuous Improvement

Change Management

Communication

A team may see an opportunity for maximizing the production rate to match the rate of customer demand

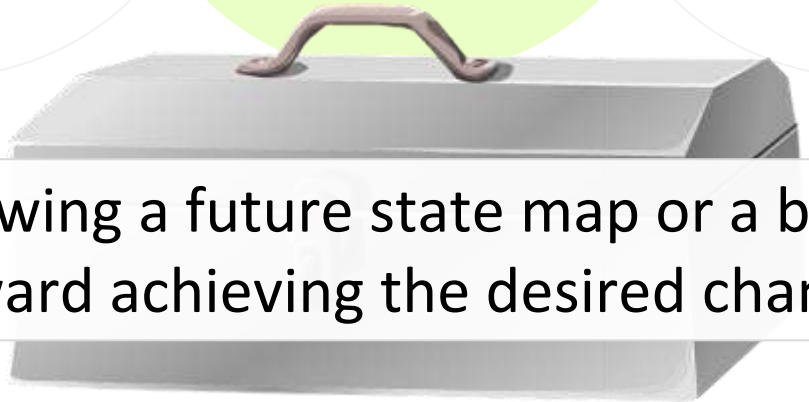
VALUE STREAM MAPPING

Considered as a tool for . . .

Continuous Improvement

Change Management

Communication



Useful for drawing a future state map or a blue-sky vision toward achieving the desired change

VALUE STREAM MAPPING

Considered as a tool for . . .

Continuous Improvement

Change Management

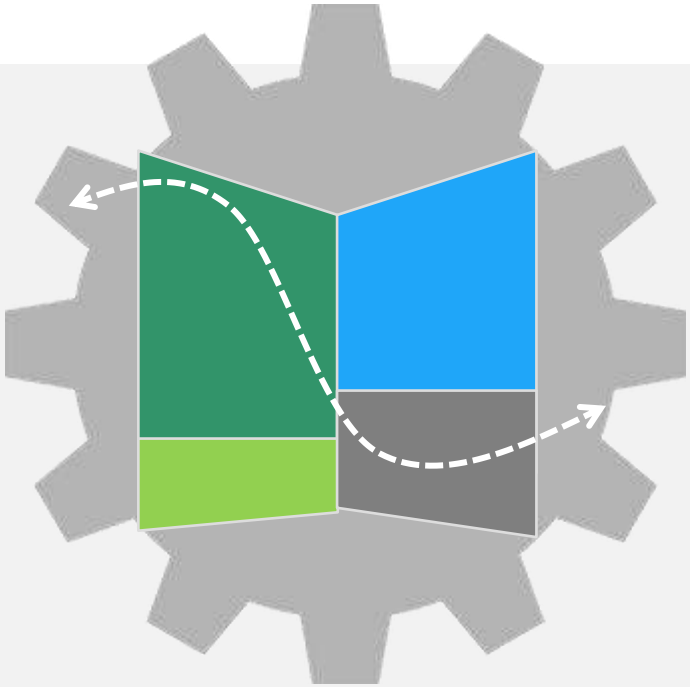
Communication

Effectively communicates where to focus the continuous improvement and change efforts

VALUE STREAM MAPPING

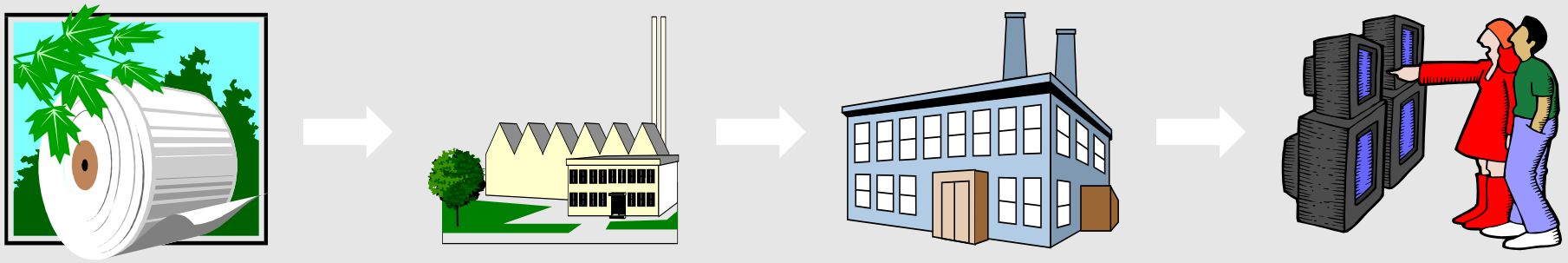
Often considered as the first and last thing to do during a **Lean** project.

It is a **dynamic tool** and should be updated continually as the process improved.



VALUE STREAM MAPPING

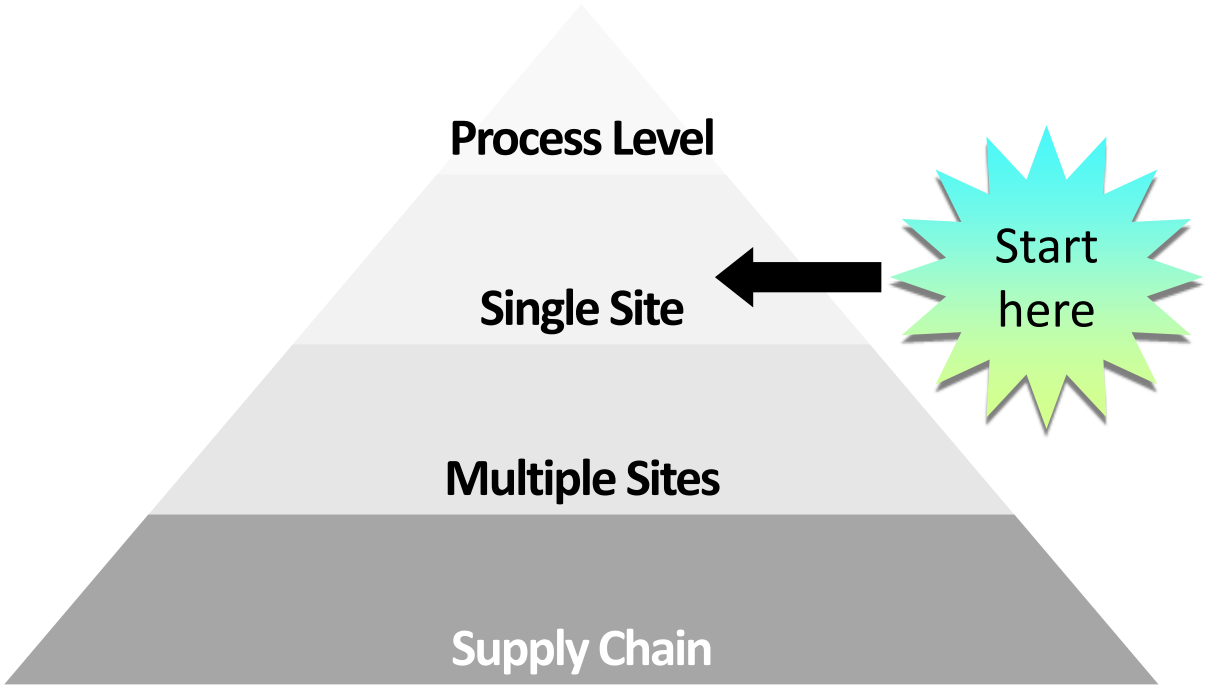
Often associated with **manufacturing**.



Can also be applied in product development and **service environments** such as healthcare, hospitality and logistics

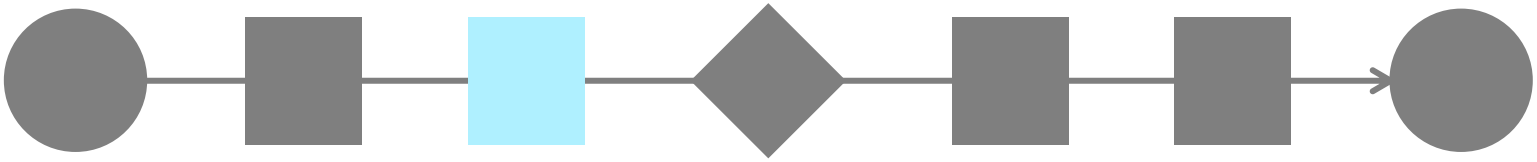
VALUE STREAM MAPPING

Often used to improve an end-to-end process in a **single site**.



VALUE STREAM MAPPING

- Tends to display **more information** than a typical process map or flowchart.
- However, a value stream map does not track all possible paths and decisions a process can take.



It should focus only on the high-level **flow of value** from start to finish

VALUE STREAM MAPPING

Preferred over other process mapping techniques . . .

When you want to find out the **Lean opportunities** that exist in your core processes

When you want to know the various **inventories and delays** exist in your processes

When you want to know the various **business systems** used by your processes

10

20

30

40

When you want to improve productivity, utilization, and load distribution of staff

When you want to know the effectiveness of your **customer service approach**

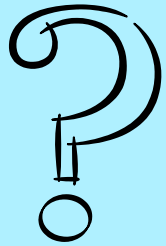
When you want to present the **health** of your processes to the top management

VALUE STREAM MAPPING

BENEFITS

Helps to understand the flow of value as perceived by the **customer**.

Provides the opportunity to understand what is happening **today**.



Gives **everyone** a chance to see how their work fits into the big picture.

Provides the opportunity to discuss and plan the needed **improvements**.

VALUE STREAM MAPPING

BENEFITS

Helps making the process as close to **lean** as possible.

Enables to see the big picture **from beginning to end**.

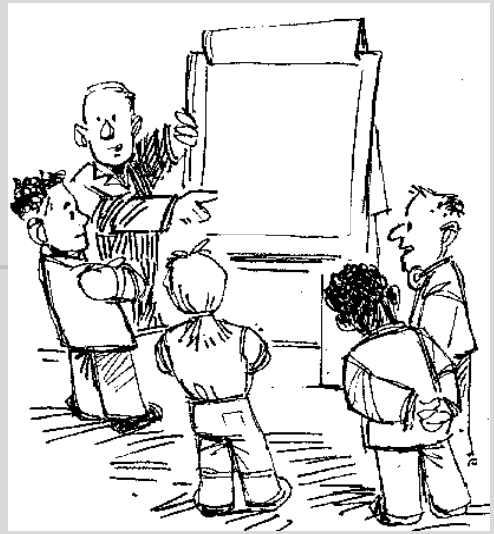
Helps identify and eliminate **waste** within the value stream.

Helps establishing a **future state** vision.

VALUE STREAM MAPPING

BENEFITS

Enables to see where problems lie within processes . . .

Non-value-added activities	Problems and inconsistencies	Delays	
Bottlenecks	Excessive inventory levels	Other forms of waste	

VALUE STREAM MAPPING

Other Benefits

Provides important **descriptive information** for the operation

Help understanding and improving **workplace organization**

Enable to see how improvements in one area will impact on **other areas**

Provides a **framework** for conversations and problem-solving

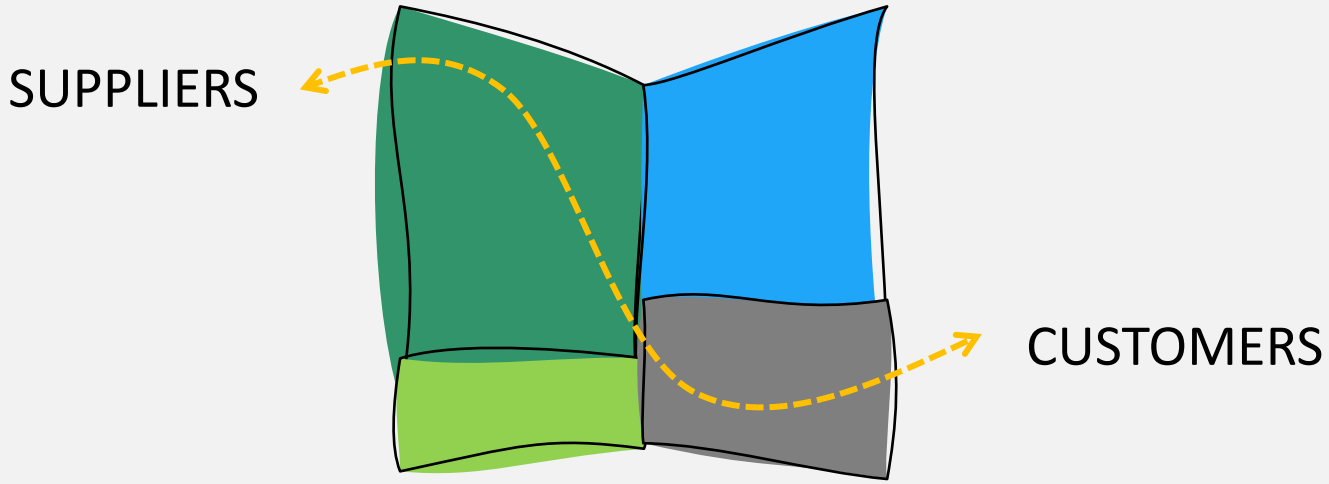
Provides a common **visual language** to understand complex processes

Demonstrates the **interaction** between material flow and information flow

Provides **direction** for streamlining, transformation and change

VALUE STREAM MAPPING

A **Value Stream** is the set of activities required to convert raw materials to finished products in the hands of the customer.

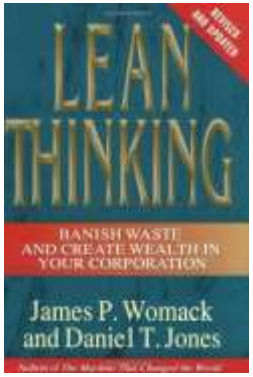


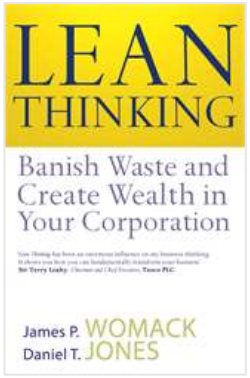
The **product** here may indicate any part, service or the combination of both

VALUE STREAM MAPPING

Value Stream – Other Definitions

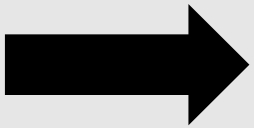
> “The set of all the specific actions required to bring a specific product through the three critical business management tasks; problem solving, information management, and physical transformation.”
>
> Womack and Jones



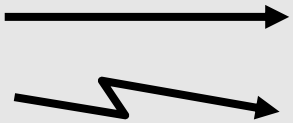


VALUE STREAM MAPPING

A value stream map is the **flow layout** of the material and information flows



Material flow, where products flow through the stream

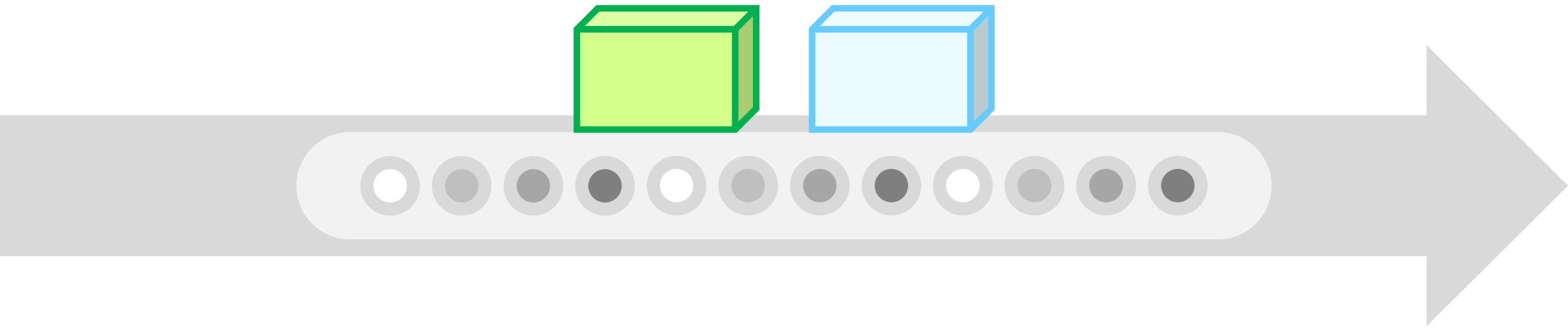


Manual and electronic **information flow** along with the material flow

VALUE STREAM MAPPING

Material Flow

Includes processing, handling, transport and storage.



Material flows involve **physical product flow** from suppliers to consumers, as well as the returns of products, rework, recycling and disposal

VALUE STREAM MAPPING

Information Flow

Important to the effective control of the material flow.

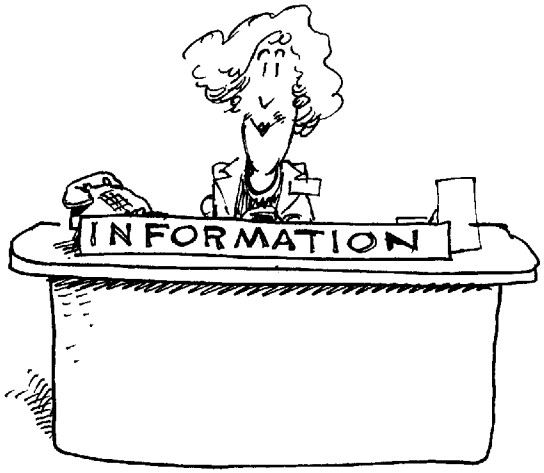
Information is important to ensure that customers and suppliers will provide and receive information before any physical product or material is shipped or received.

VALUE STREAM MAPPING

Information Flow – Information Types

Manual – information that is passed on manually or verbally

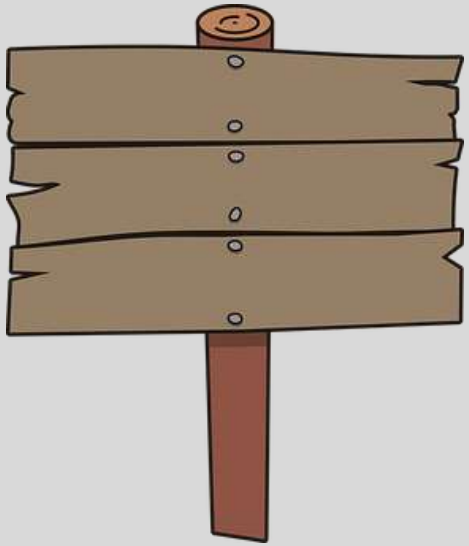
Electronic – information that is passed on via telephone, fax, email, etc.



VALUE STREAM MAPPING

Information flow may include . . .

- Demand forecasts
- The transmission of orders
- Schedules, instructions, approvals and reports
- Financial related flows
- Verbal discussions and communication



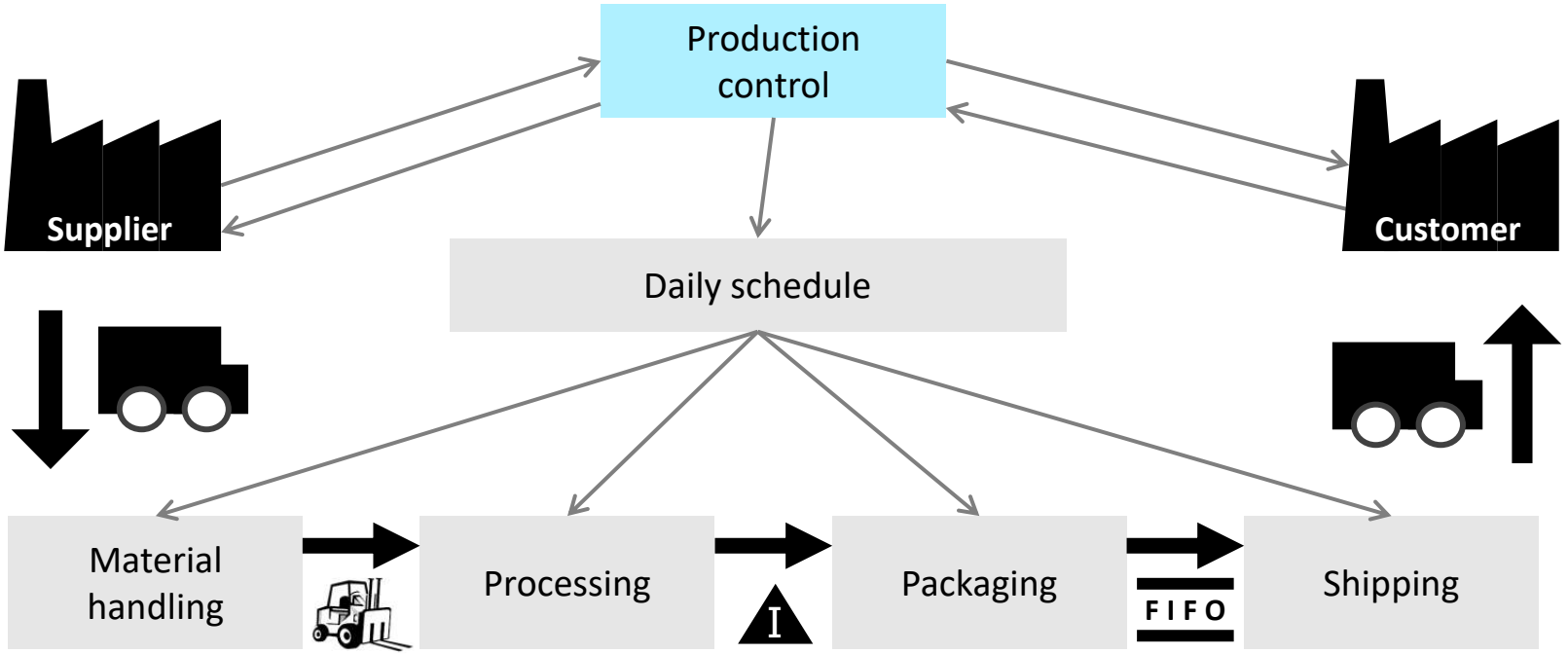
VALUE STREAM MAPPING

Inventory

It is also important to look at the amount of stored raw materials, work in process (WIP), and finished products.

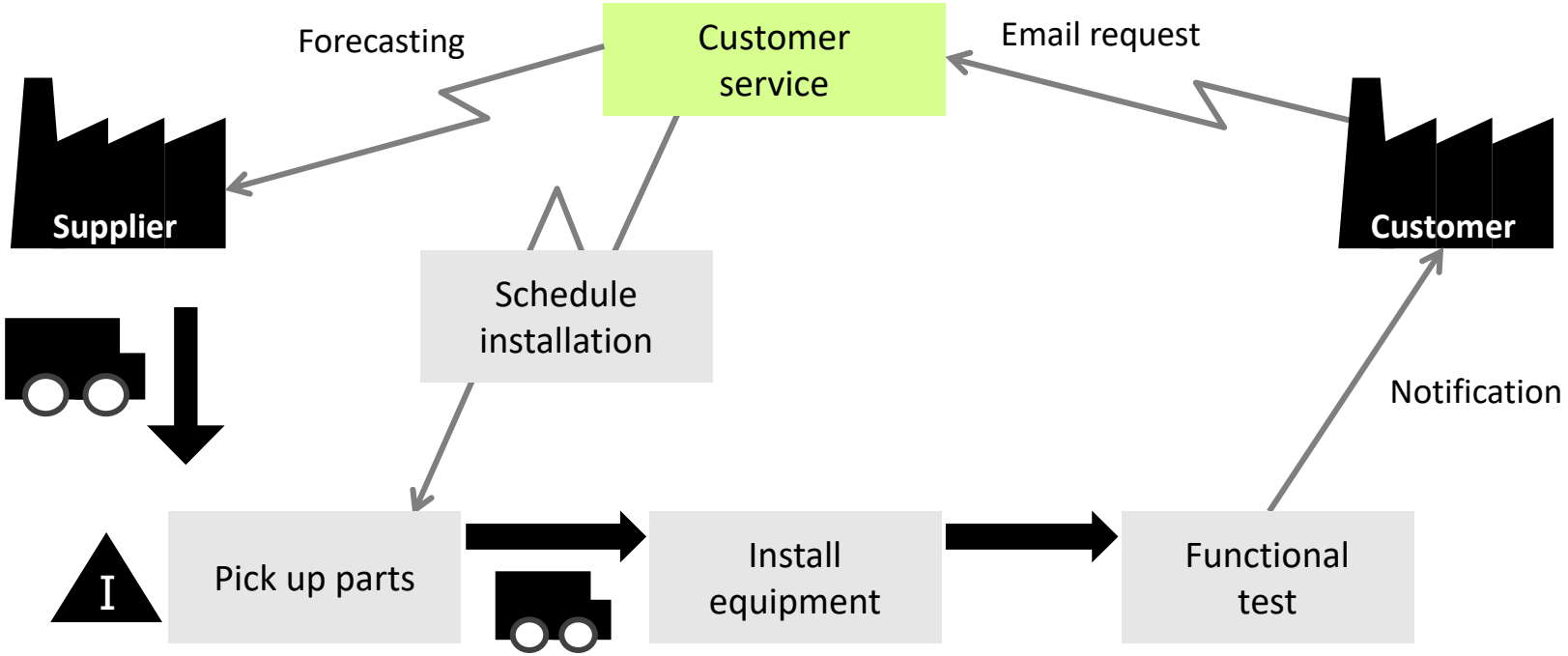
VALUE STREAM MAPPING

Manufacturing Example



VALUE STREAM MAPPING

Non-Manufacturing Example – Equipment Installation



VALUE STREAM MAPPING

Which Product to Select?

No need to map the flow of every product, but the production of a **single product** or single product family

Consider a product which has a **high business impact**

Consider long lead time and **high-volume** products or services

VALUE STREAM MAPPING

Which Product to Select?

A **Product Family Matrix** may help!

PRODUCT	PRESS	SHAPE	BEND	PAINT	PACKAGE
A	X	X		X	X
B	X		X	X	X
C			X	X	X
D		X		X	X

Produce a **single flow diagram** that is suitable for all product families

VALUE STREAM MAPPING

Value Stream Mapping Process

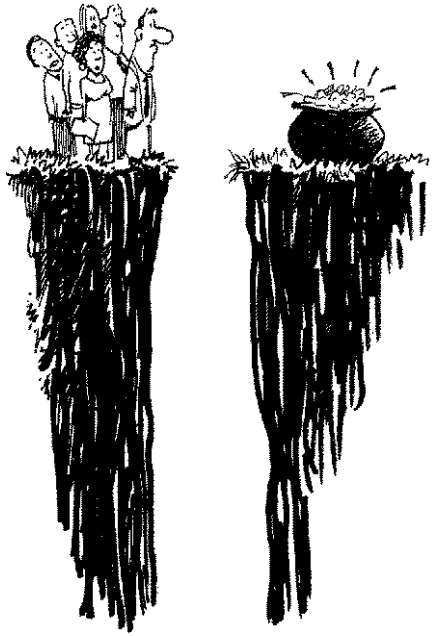
1. Select the Value Stream
2. Draw the Current State Map
3. Draw the Future State Map
4. Develop and Implement Improvements

VALUE STREAM MAPPING

Value Stream Mapping Process – **Current State Map**

Value stream mapping begins by defining the **current state** as it is today.

This allows to identify waste and areas where improvement can be made**.**

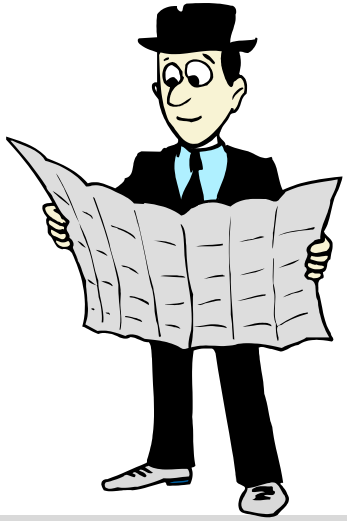


VALUE STREAM MAPPING

Value Stream Mapping Process – **Current State Map**

Develops an **understanding** of how the value stream operates today

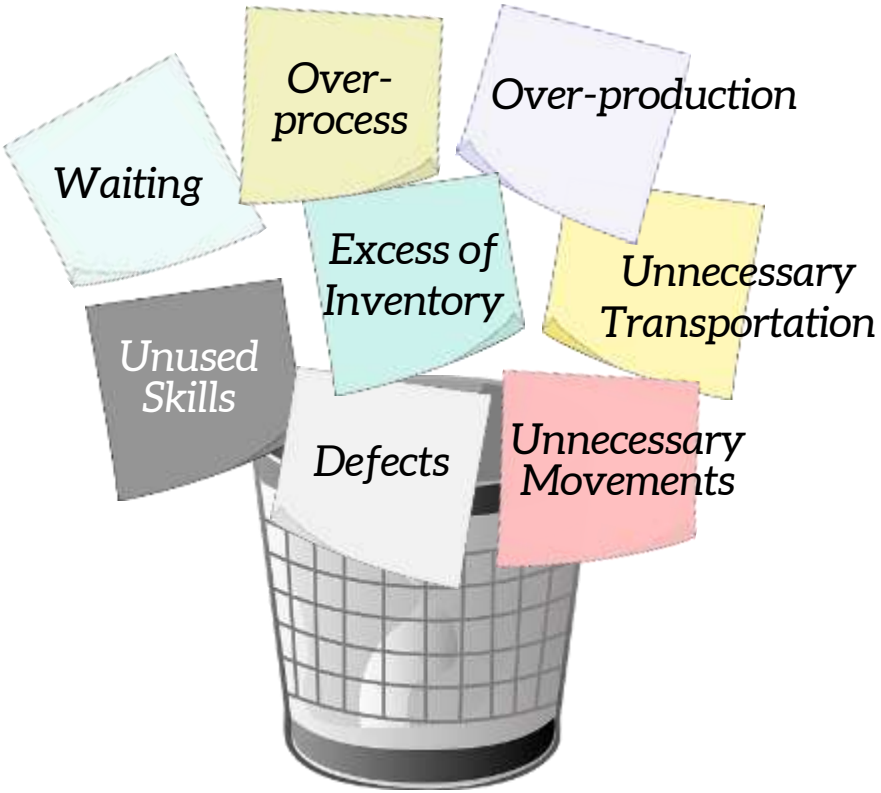
Helps identify the **waste elements** and improvement areas



Focus on understanding the existing flow of **one** product or service at once

VALUE STREAM MAPPING

Consider the Eight Types of Waste



VALUE STREAM MAPPING

Value Stream Mapping Process – **Future State Map**

Once the current state is mapped, and after studying the flow of materials and information and identifying the waste, it is time to create a **future state map** of how the process should be.

VALUE STREAM MAPPING

Value Stream Mapping Process – **Future State Map**

It is the ideal state or **blueprint** that you want to achieve toward implementing a lean system.

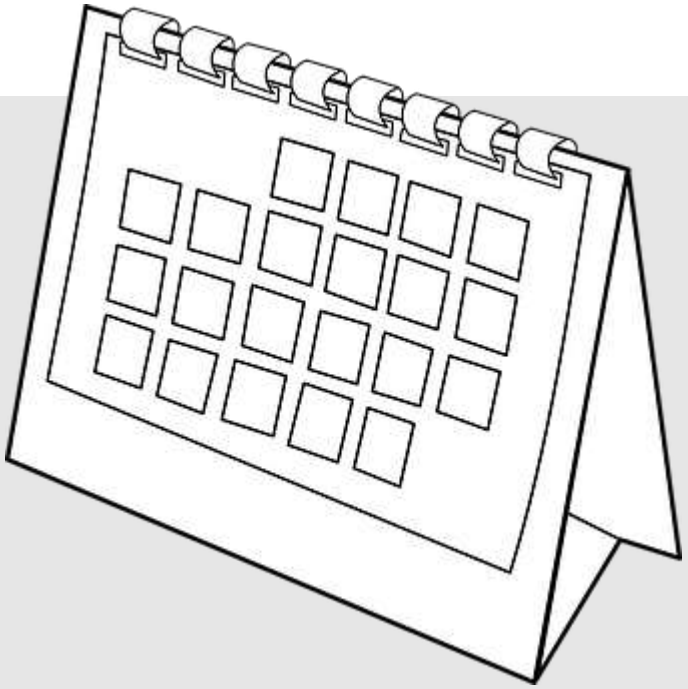
Should be based on **Lean principles** such as flow, pull and perfection to create a more streamlined production flow.

VALUE STREAM MAPPING

Value Stream Mapping Process – **Future State Map**

What does **future** mean?

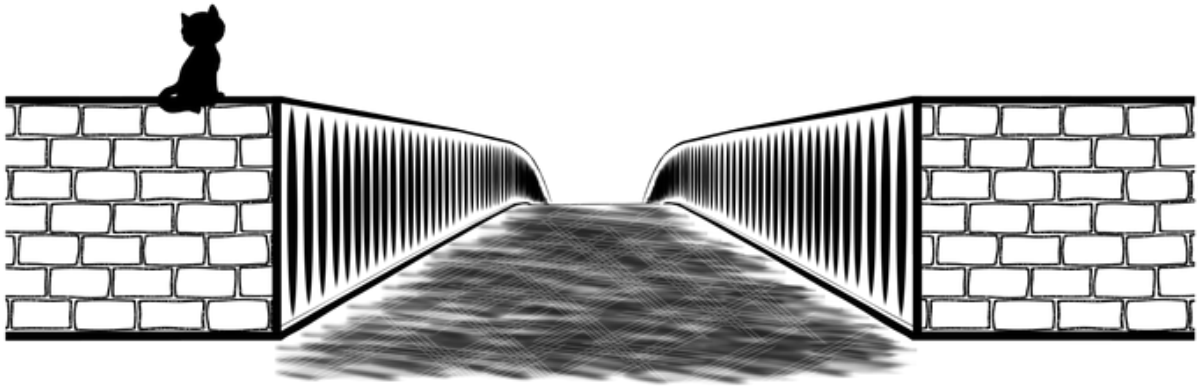
It is important to define what is meant by **'future'** before beginning to develop the future state.



VALUE STREAM MAPPING

Value Stream Mapping Process – **Implementation Plan**

- Between the current and the future states there is a **gap**.
- An implementation plan should be developed and implemented to bridge the gap and get to the future state.



VALUE STREAM MAPPING

Value Stream Mapping Process – **Implementation Plan**

Remember that this is a **project** that needs to be owned, tracked and monitored throughout its life cycle.

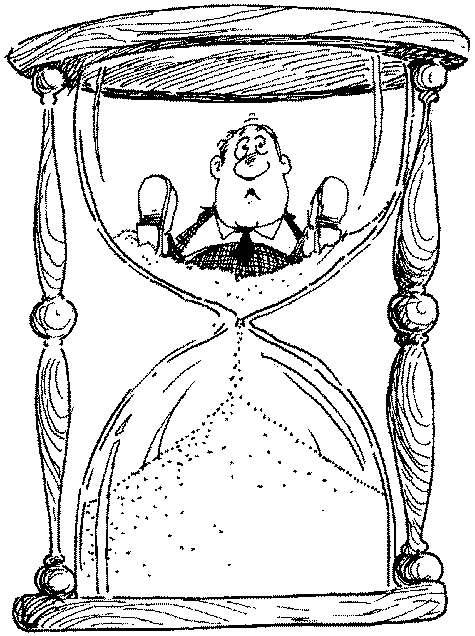
Select the Value Stream	Draw the Current State	Draw the Future State	Plan & Implement Improvements

VALUE STREAM MAPPING

Value Stream Mapping Process – **Implementation Plan**

When the future state becomes a **reality**, it becomes the new current state.

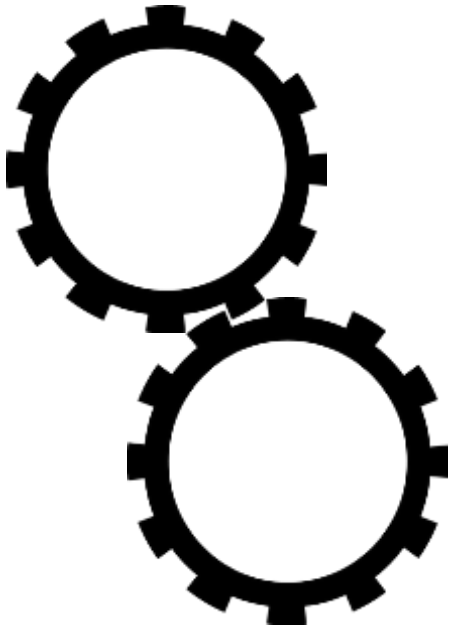
The process will start all over again, and this is the essence of **continuous improvement**.



VALUE STREAM MAPPING

Hints

- A current state map without a future-state vision is a waste.
- A future state map without an action plan to achieve it is a **waste**.
- Avoid focusing on improvement opportunities with little impact.
- Information is better to be collected from the actual place (Gemba).

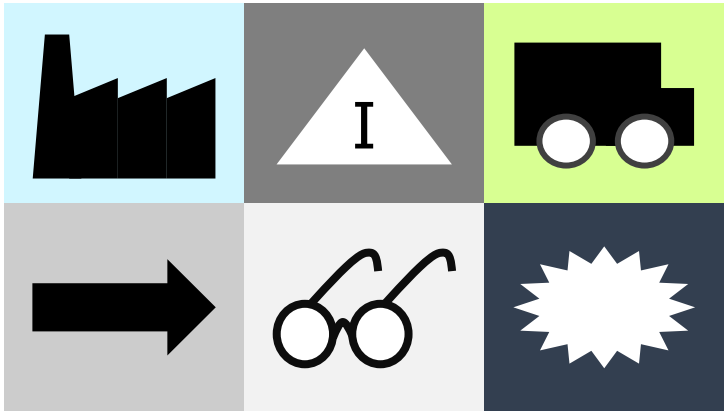


VALUE STREAM MAPPING

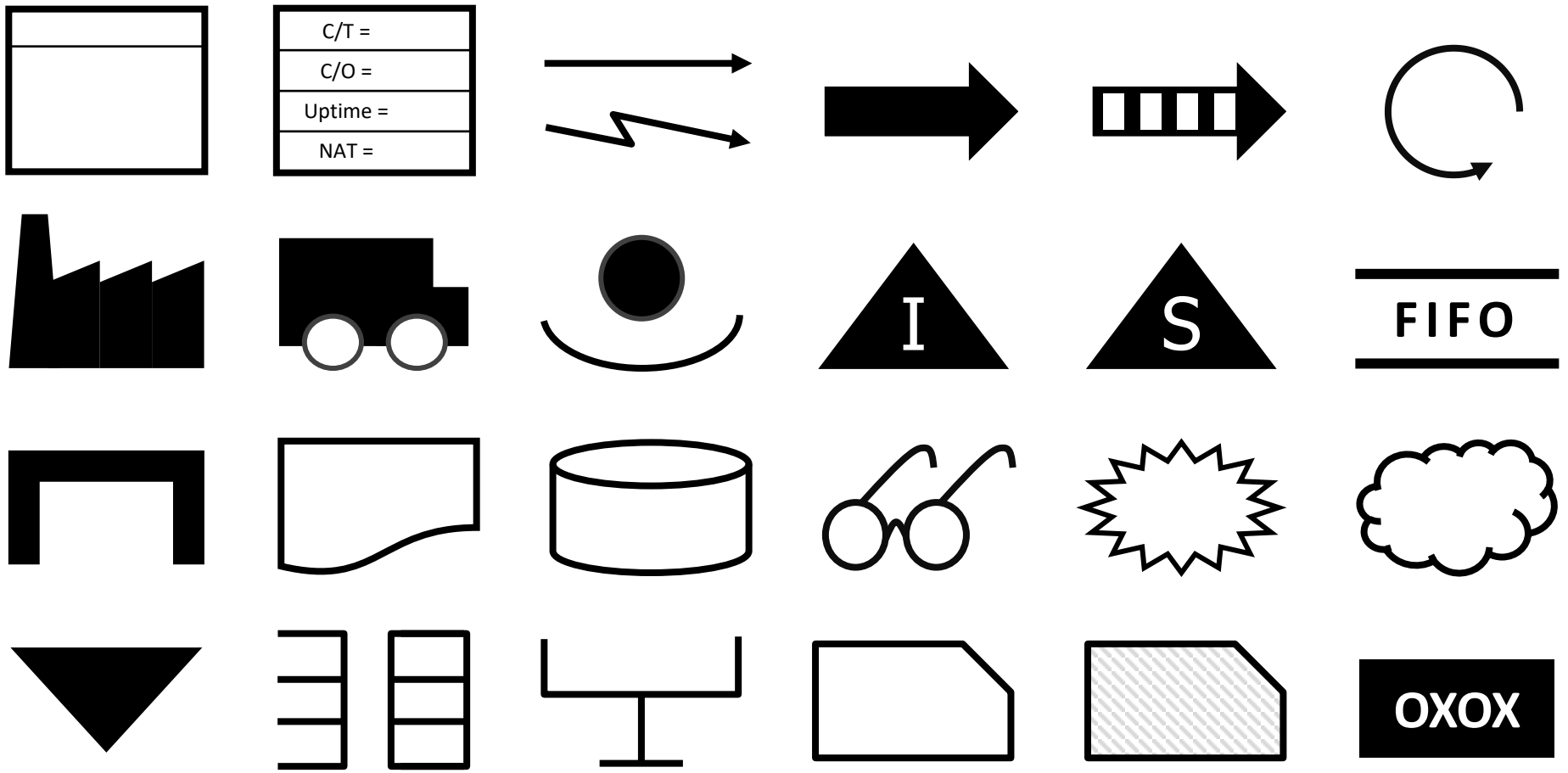
Value Stream Mapping Symbols

Value stream mapping uses a set of symbols to denote the various details**.**

The type of symbols that are used usually depends on the **industry** and the type of work.



VALUE STREAM MAPPING



VALUE STREAM MAPPING

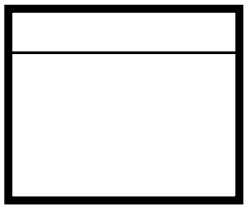
The list is by
no means complete!

You may design **your own symbols** to express your details

New symbols should be **simple** and easy to design

New symbols should be **understandable** by everyone

VALUE STREAM MAPPING



Process box

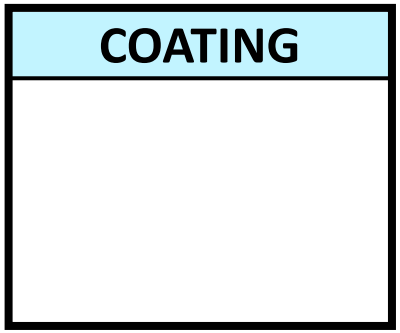
Data box

Information flow

Material flow

Push

Withdrawal



Process or operation box

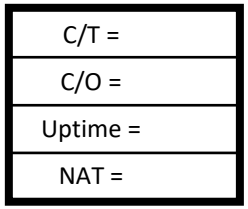
Covers one area of continuous flow, where materials flow without being stored, queued or delayed.

Used when a part is intentionally changed in any of its characteristics, assembled or disassembled, or arranged for another operation, transportation, inspection, or storage.

Also used to represent a person (or department) doing work, or when information is given or received.

VALUE STREAM MAPPING

Process box



Data box

Information flow

Material flow

Push

Withdrawal

COATING
C/T = 2.3 seconds
C/O = 52 minutes
Uptime = 85%
NAT = 25,200 seconds
Scrap rate = 3.1%

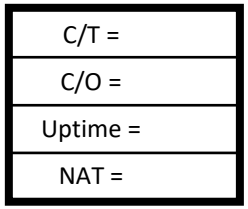
Data box

Optionally used to list key information related to processes.

Can be placed under other symbols (e.g., transportation, inventory or key customers or suppliers) to list key information.

VALUE STREAM MAPPING

Process box



Data box

Information flow

Material flow

Push

Withdrawal

Drawing
Prod. Rate = 2450
C/T = 30 sec
C/O = N/A
Uptime = 98%

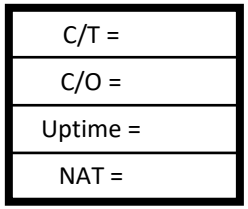
Rinsing
Prod. Rate = 2400
C/T = 376 sec
C/O = 60 min
Uptime = 94 %

Helps later when creating the value stream timeline and the value stream summary box, and when comparing between the different workstations or processes.

For example, analyzing which workstation has the maximum number of operators or has the maximum change-over time.

VALUE STREAM MAPPING

Process box



Data box

Information flow

Material flow

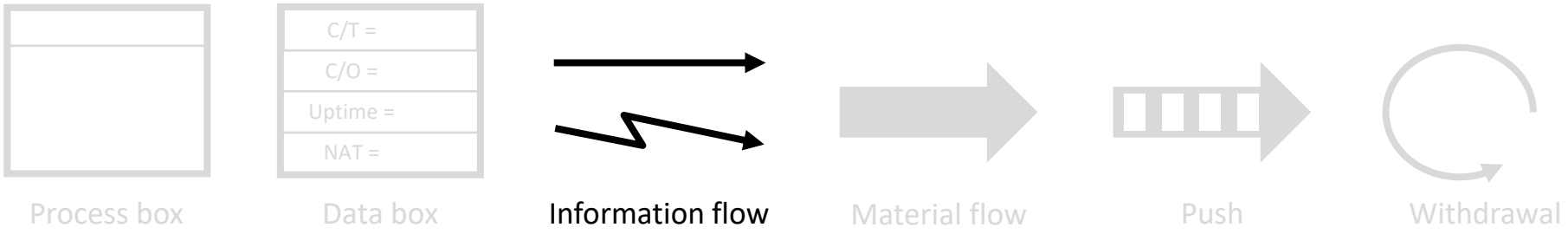
Push

Withdrawal

Information related to processes depend on the needs and may include:

Cycle times (C/T)	Changeover times (C/O)	Net available working times (NAT)
Defect or scrap rates	Machine uptime rates	Production rates or EPE
Processing times	Setup times	Number of workers per machine
Batch sizes	Maximum capacities	Number of product variations
Rework rates	Product flow (push or pull)	Overall equipment effectiveness

VALUE STREAM MAPPING



Manual information flow

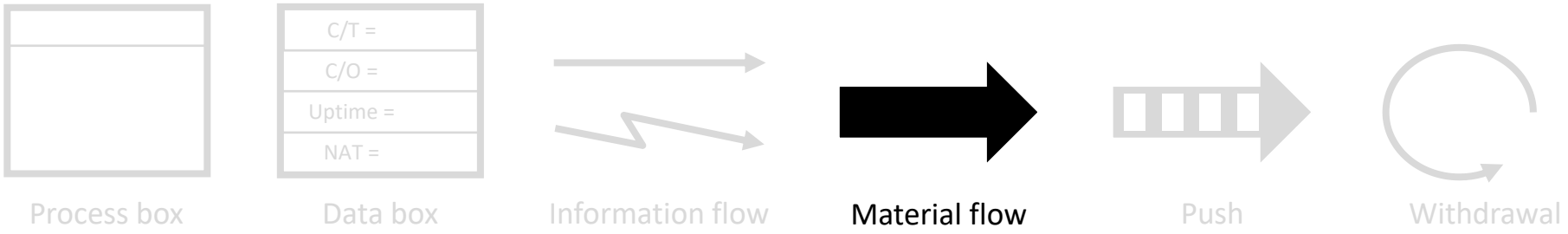
Generally used to represent flow of information.

Electronic information flow

Can be accompanied with text or other icons to indicate the type of information, the frequency of information interchange, and the type of media used (telephones, emails, Intranets, LANs, etc.).

Some lean practitioners simply use the straight arrow for all types of information flow.

VALUE STREAM MAPPING



Material flow or shipping

Represents the transfer or movement of materials from one process to the next.
Also represents the movement of raw materials from suppliers to the receiving areas (accompanied with the shipping frequency).
Also represents the movement of finished goods from the shipping areas to the customers (accompanied with the shipping frequency).

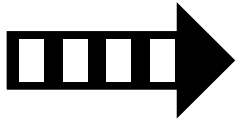
VALUE STREAM MAPPING

Process box

Data box

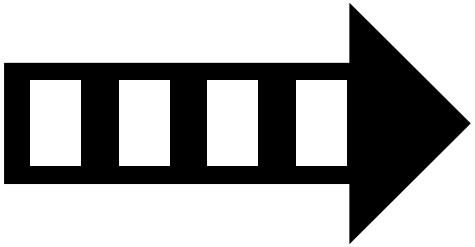
Information flow

Material flow



Push

Withdrawal

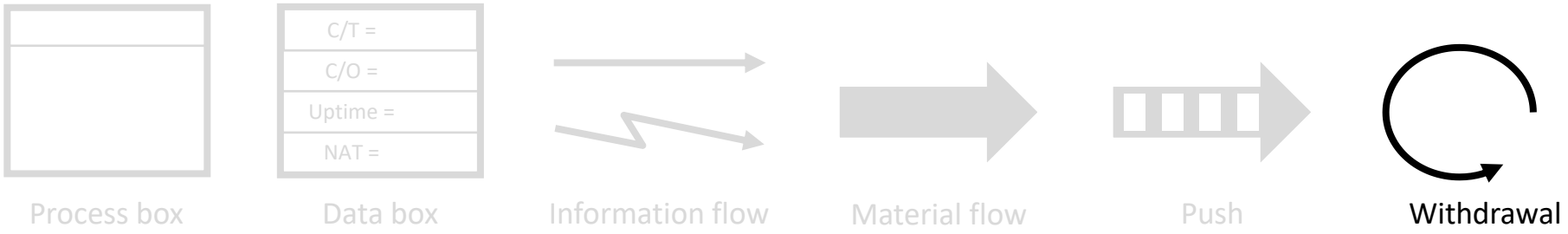


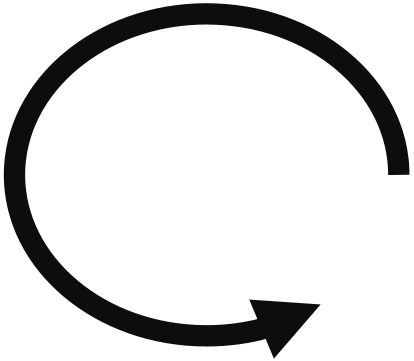
A push arrow

Pushing the materials from one process to the next.

Represents a material flow that is not controlled by a pull system.

VALUE STREAM MAPPING

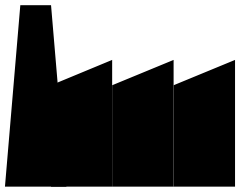




Material withdrawal
or physical pull

Used when the material is pulled from the supplying process to the supplied process.

VALUE STREAM MAPPING



External body

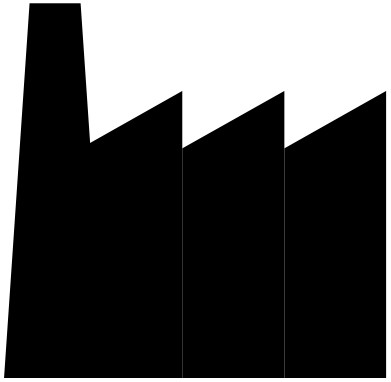
Transport

Worker

Inventory

Safety stock

FIFO sequence

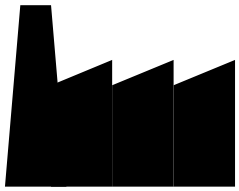


Firm name
(supplier or customer)

Represents an external body to the organization, and mainly indicates the key suppliers and customers along the value chain.

Often accompanied with a data box underneath which covers the characteristics of that supplier or customer.

VALUE STREAM MAPPING



External body

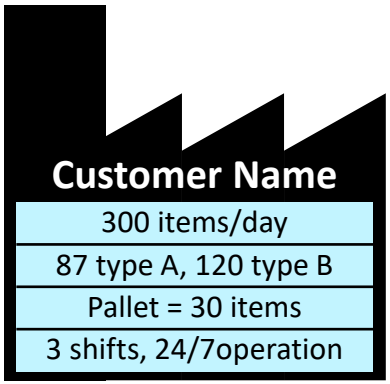
Transport

Worker

Inventory

Safety stock

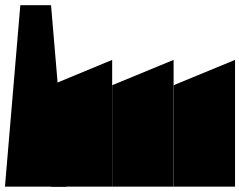
FIFO sequence



Information related to customers may include; number of customers, demand rate (items/day), packaging size requirement, actual and required lead times, error rates, customer shift pattern, product mix, etc.

Usually there is only one customer shown, but you may have more than one.

VALUE STREAM MAPPING



External body

Transport

Worker

Inventory

Safety stock

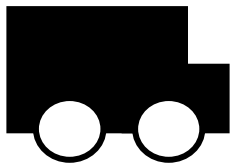
FIFO sequence

Information related to suppliers may include; number of suppliers, demand rate (items/day), packaging size requirement, actual and required lead times, error rates, supplier shift pattern, the different types of materials, etc.

Usually there is only one supplier shown, but you may have more than one.

VALUE STREAM MAPPING

External body

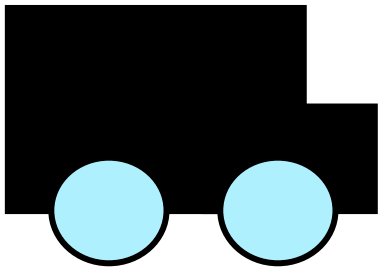

Transport

Worker

Inventory

Safety stock

FIFO sequence


Transport or Shipment

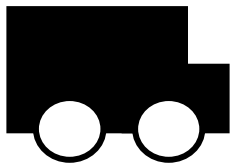
Represents how raw materials are brought in and how finished goods are sent out.

Also represents the transport of raw materials, WIP, or products within the facility by an operator.

Date related to transportation may include; distance traveled, transportation time, transportation frequency, number of product types, etc.

VALUE STREAM MAPPING

External body

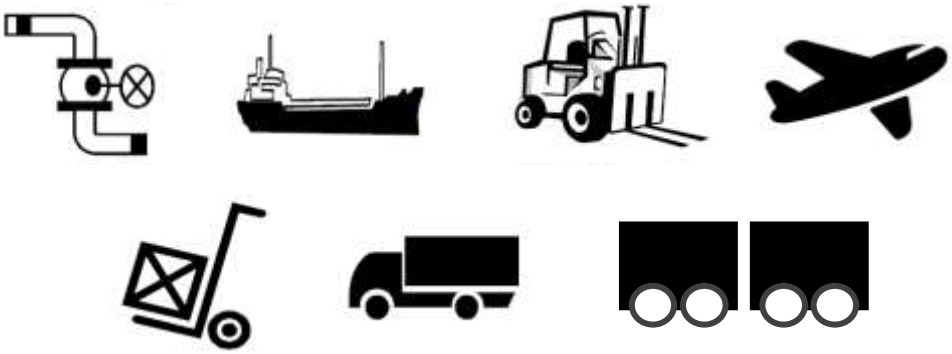

Transport

Worker

Inventory

Safety stock

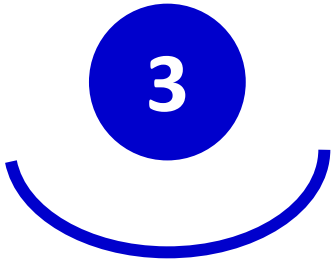
FIFO sequence



Transportation can be of three types:
1- External (e.g. trucking).
2- Internal (e.g. forklifts).
3- Conveying between processes.

VALUE STREAM MAPPING

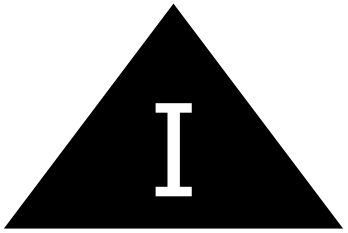
External body | Transport | Worker | Inventory | Safety stock | FIFO sequence



Usually placed in a process box to represents the number of workers deployed at a particular workstation.

VALUE STREAM MAPPING

External body | Transport | Worker | Inventory | Safety stock | FIFO sequence



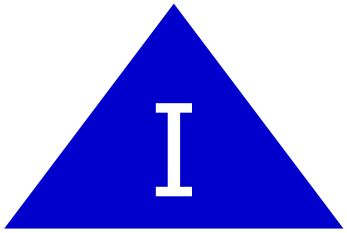
Inventory

Represents the storage locations for raw materials, work-in-process (WIP), and finished products throughout the value stream.

Date related to inventory may include; inventory type, amount of inventory, queue or delay time, number of product types in the inventory, etc.

VALUE STREAM MAPPING

External body | Transport | Worker | Inventory | Safety stock | FIFO sequence



Pieces

You can write a number below the triangle to indicate the approximate amount of inventory observed, or the maximum capacity.

You may indicate that the inventory is uncontrolled or has no fixed upper limit by leaving the triangle without a number.

VALUE STREAM MAPPING

External body

Transport

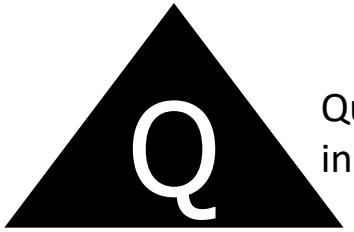
Worker

Inventory

Safety stock

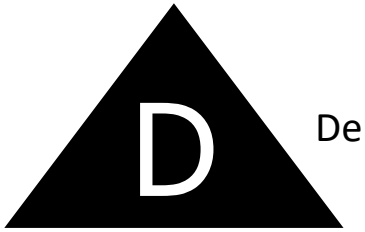
FIFO sequence

These are not standard symbols and rarely used.



Quality inspection

Occurs when a product is examined against pre-defined quality standards to determine whether defective products are being produced.

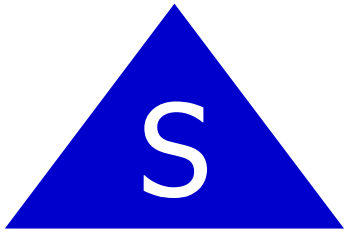


Delay

Represents unplanned accumulation of materials or products without a prior plan. Also represents a delay in the process, such as waiting for approval.

VALUE STREAM MAPPING

External body | Transport | Worker | Inventory | **Safety stock** | FIFO sequence



Pieces

Represents a safety stock against problems such as unplanned breakdowns, to protect the production system against failure or sudden fluctuations in customer demands.

VALUE STREAM MAPPING

External body

Transport

Worker

Inventory

Safety stock

FIFO sequence

MAX =

FIFO

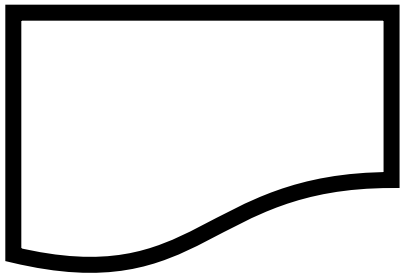
FIFO lane

First In First Out lane is used to show where parts are stored or transferred to the next process in a FIFO sequence (queue).

You may write either the maximum capacity or the current capacity above or below the FIFO lane.

VALUE STREAM MAPPING

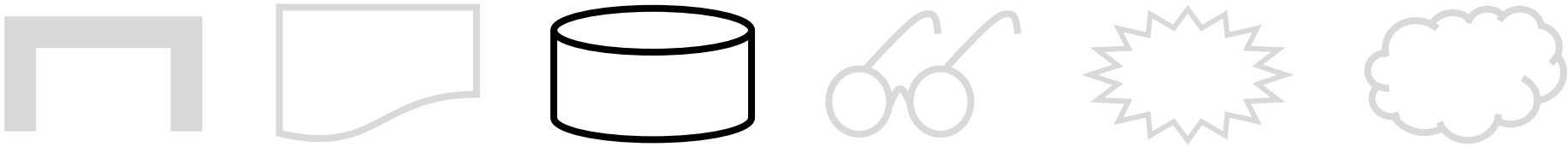
Work cell | Document / report | Business system | Go see | Kaizen burst | Improvement idea



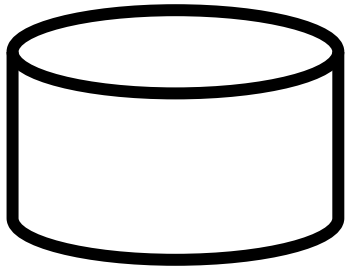
Document or report

Represents a document, form or report that is generated throughout the value stream. More than one report can be represented through the use of multiple symbols behind each other.

VALUE STREAM MAPPING



Work cell | Document / report | Business system | Go see | Kaizen burst | Improvement idea



Business System

Represents a centralized system (ERP or MRP).

Note that value stream mapping considers not only the process, but also the management systems and information systems that support the process

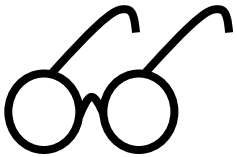
Note that a production control or scheduling system can also be represented using a plain box.

VALUE STREAM MAPPING

Work cell

Document / report

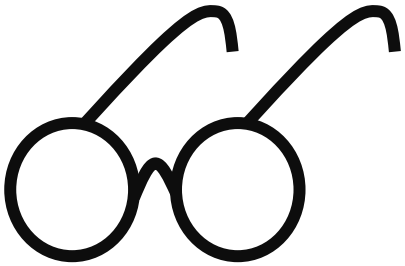
Business system



Go see

Kaizen burst

Improvement idea



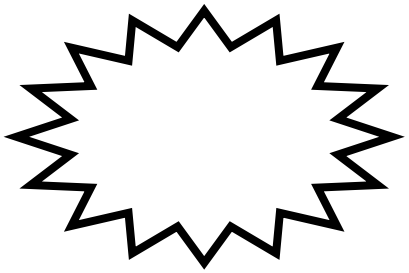
Visually checking and gathering of information

Visually checking material and information flows to ensure they meet quality standards and quantity requirements.

For example, a supervisor may visually check the material flow to seek for discrepancies, visually inspect a sample product as part of his routine job, or visually check the amount of inventory to decides what to produce next.

VALUE STREAM MAPPING

Work cell | Document / report | Business system | Go see | Kaizen burst | Improvement idea



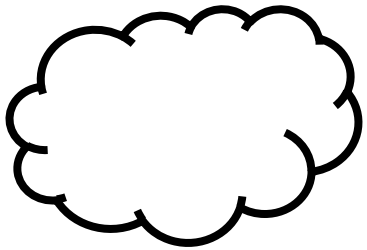
Kaizen or lightening Burst

Used to indicate issues and problems throughout the value stream.

Kaizen bursts help launch appropriate kaizen events for continuous improvement.

VALUE STREAM MAPPING

Work cell | Document / report | Business system | Go see | Kaizen burst | Improvement idea

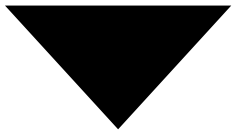


Improvement idea

Used to indicate a solution, suggestion, or improvement idea.

The team can highlight improvement opportunities that are critical to achieve the future state of the value stream.

VALUE STREAM MAPPING



Signal Kanban

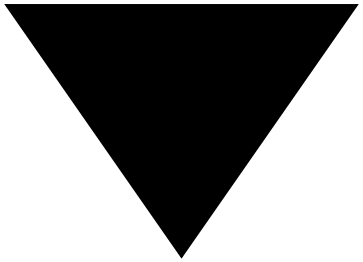
Supermarket

Kanban post

Production Kanban

Withdrawal Kanban

Load leveling

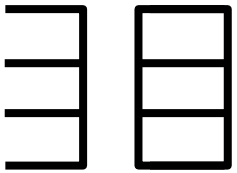


Improvement idea

Used when the on-hand inventory levels in the supermarket between two processes drops to a minimum or the trigger point.

VALUE STREAM MAPPING

Signal Kanban



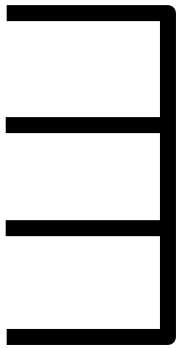
Supermarket

Kanban post

Production Kanban

Withdrawal Kanban

Load leveling



Supermarket

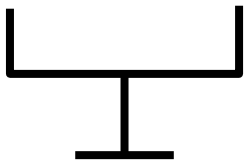
Represents an inventory supermarket or the end point of a Kanban loop.

For a supermarket to be complete, an information flow should come out of it and bring a Kanban back to one of the preceding processes or transports.

VALUE STREAM MAPPING

Signal Kanban

Supermarket

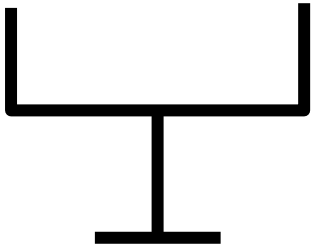


Kanban post

Production Kanban

Withdrawal Kanban

Load leveling



Kanban post

A location where Kanban signals reside for pickup.

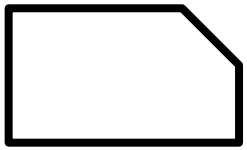
Often used with two-card systems to exchange withdrawal and production Kanban.

VALUE STREAM MAPPING

Signal Kanban

Supermarket

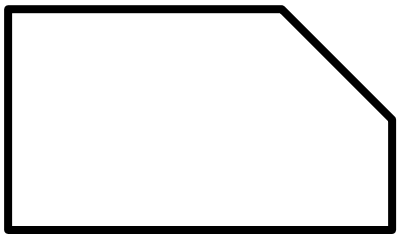
Kanban post



Production Kanban

Withdrawal Kanban

Load leveling



Production Kanban

Used to signal the supplying process to trigger production and provide a pre-defined number of parts to the next process.

Usually drawn on top of the information flow going back from a supermarket to a preceding process or transport.

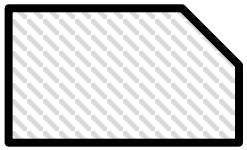
VALUE STREAM MAPPING

Signal Kanban

Supermarket

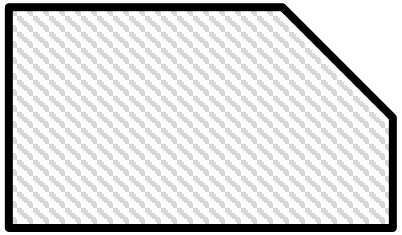
Kanban post

Production Kanban



Withdrawal Kanban

Load leveling



Withdrawal Kanban

A note card or device that instructs the material handler or operator to go to the supermarket and withdraw parts needed at the receiving process.

VALUE STREAM MAPPING

Signal Kanban

Supermarket

Kanban post

Production Kanban

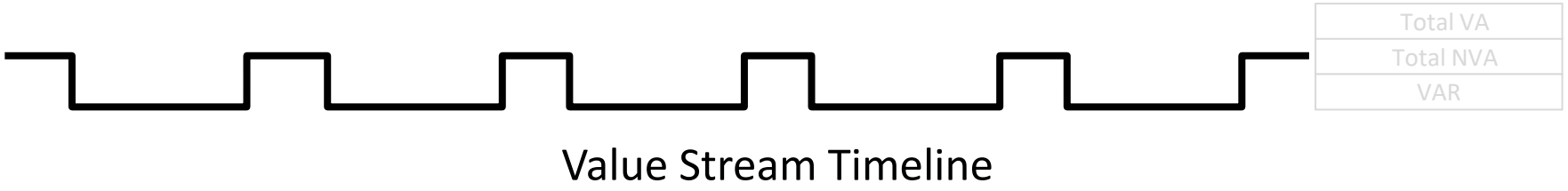
Withdrawal Kanban

Load leveling

Load leveling

Part of the information flow in a Kanban loop. It is a tool to batch Kanbans in order to level the production volume and production mix over a period.

VALUE STREAM MAPPING



Value Stream Timeline

The value stream timeline is the sum of time spent at all stages represented in ‘hills’ and ‘valleys’

The hills represent the waiting non-value-added time whereas the valleys represent the processing value-added time.

The value stream timeline is used to facilitate the calculation of the value-added ratio (VAR) or the process cycle efficiency (PCE).

Remember that not all processing time is value-added.

VALUE STREAM MAPPING

Value Stream Summary Box

The results are often summarized at the right of the timeline in a summary box.

Many organizations use the Value-Added Ratio (VAR) metric to measure the performance of their end-to-end process.

VAR = Total Value Add Time (Processing Time) / Total Lead Time

Other metrics can be added to the value stream summary as required.

VALUE STREAM MAPPING

Zone the Map

Title & date

Information flow
External customers & suppliers
Secondary processes

Material flow
Primary processes
Delays & inventory between processes

Timeline & value stream summary

VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Establish the team and include people working in the process

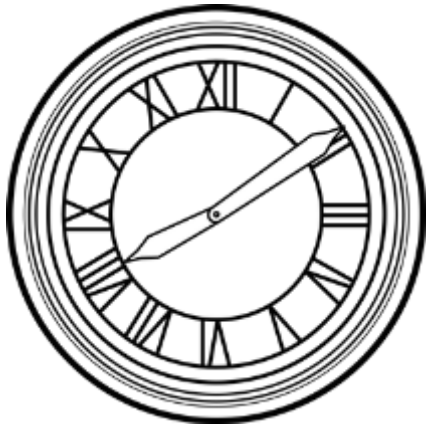
Clearly explain the **purpose** for creating the value stream map

VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Identify and agree on the **product family** and the value stream that needs to be mapped

Discuss with your team how are you going to map the process

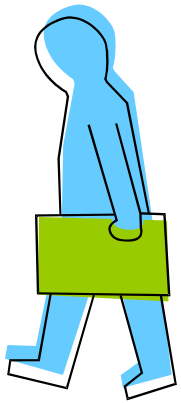


VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Physically **walk the flow** starting from the customer and working backwards

Capture all relevant data and performance information as you walk. Note down any issues or concerns

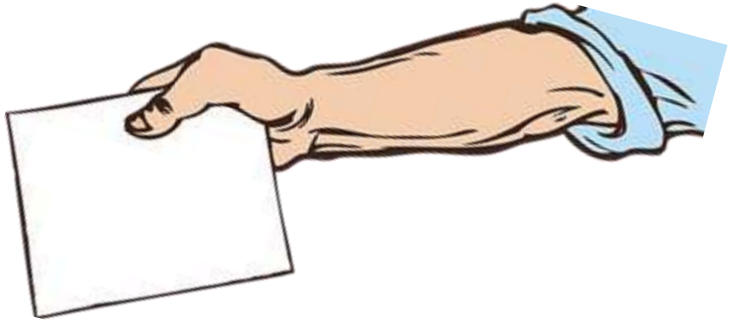


VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Walk **the information** flow and collect examples of relevant records, instructions, checklists, etc.

Always record what you see not what you are told is normally there



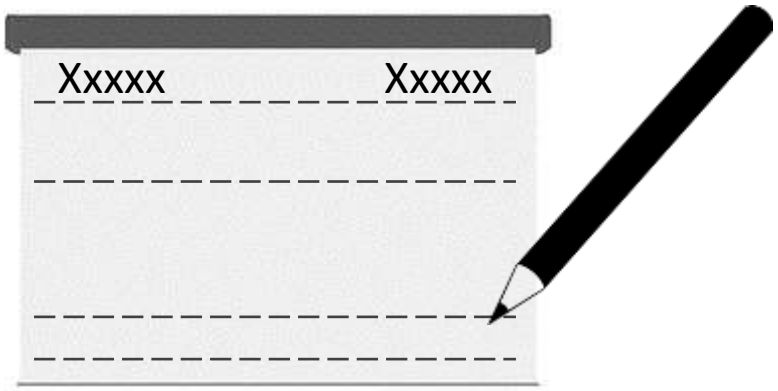
VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Use a flipchart or whiteboard to allow the team to draw the **current state**

Start with the title, date and state (current or future)

Consider zoning the map

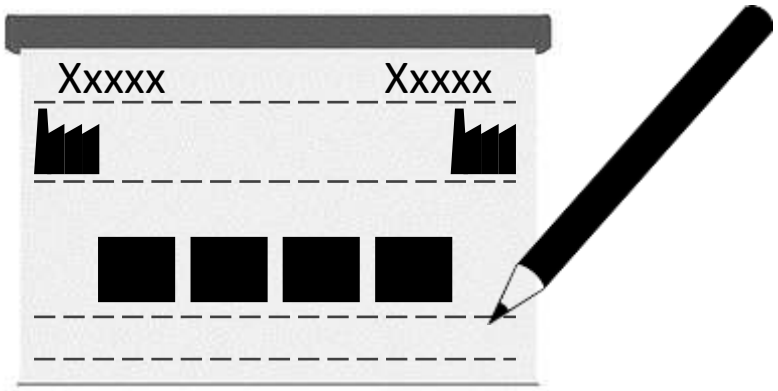


VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Map the material flow including processes, inventory, delays and transportation

Identify the main processes and complete the data boxes

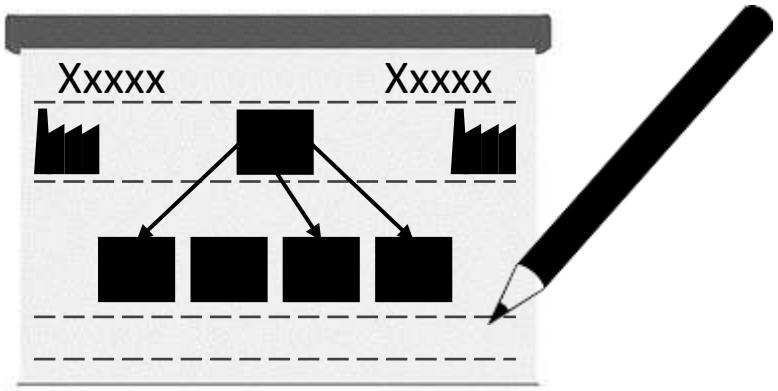


VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Map the information flow and the secondary processes

Add any other information you feel is relevant to the map (current schedule, amount of inventory, etc.)

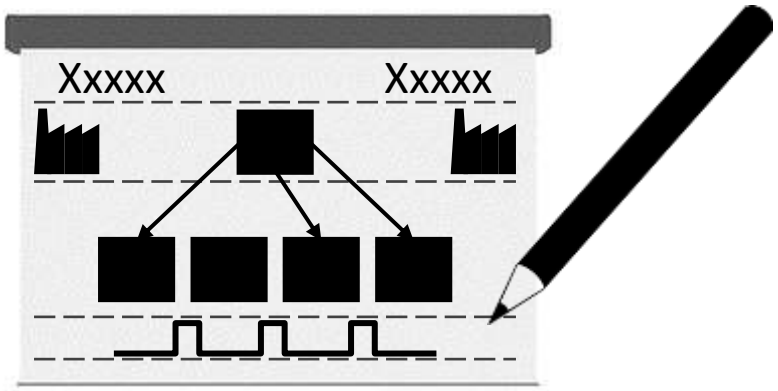


VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Add the value stream timeline and the value stream summary

Calculate value stream summary metrics such as processing time, lead time and value-added ratio

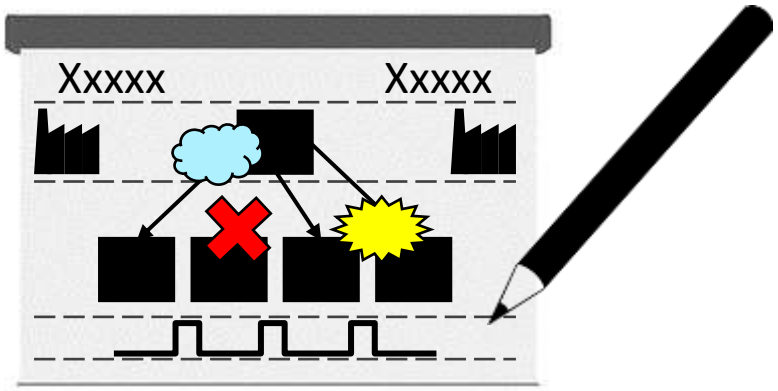


VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Look for the non-value-added activities, delays and other form of waste

Record on the map the different types of waste, delays, observations, suggestions, ideas, etc.



VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Gather the team again to visualize the ideal state and develop the future state map

Start only when the current state map is understood and agreed

VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

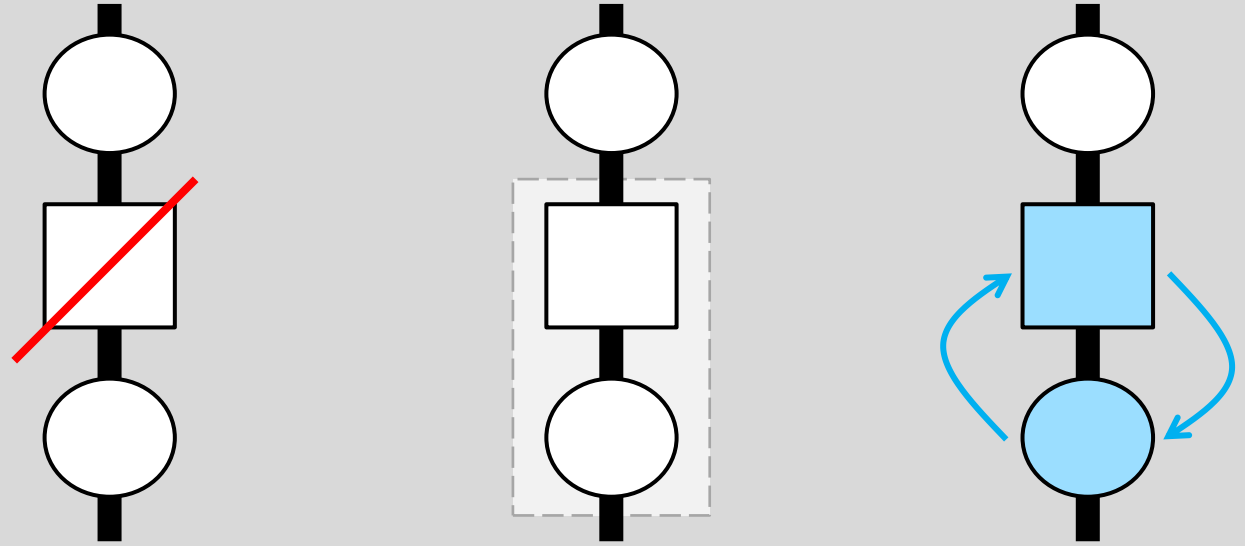
Look for . . .

Steps that can be simplified or eliminated	Build-ups of inventory	Stock shortages
Long travel distances	Bottlenecks	High scrap and rework rates
Too few or too many staff in key areas	Lengthy checking or approval periods	5S and safety issues

VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Optimize and organize processes . . .



Elimination

Combination

Change sequence

VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Look for . . .

- Significant variations in cycle times or demand levels
- Long value stream cycle times
- Poor value stream ratios
- Different time basis compared with key customers

VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Brainstorm ways to eliminate the waste. Ask questions like?

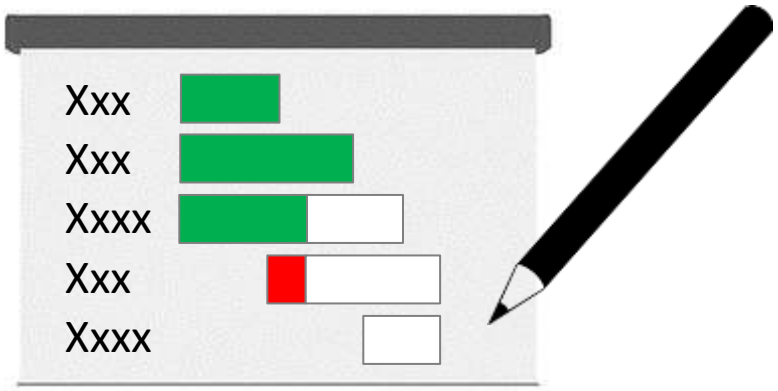
- Are things done in the right sequence?
- Does information arrive on time?
- Can any paperwork be eliminated? Is automation possible?
- Are existing systems used in optimum way?
- Is information available, reliable and up-to-date?
- Is information really used in decision making?
- Are there any quick wins possible?

VALUE STREAM MAPPING

How to Conduct a Value Stream Mapping Exercise

Plan and implement **actions** to achieve the future state

Assign responsibilities and identify milestones and recourses



VALUE STREAM MAPPING

Guidelines for Developing the Future State Map

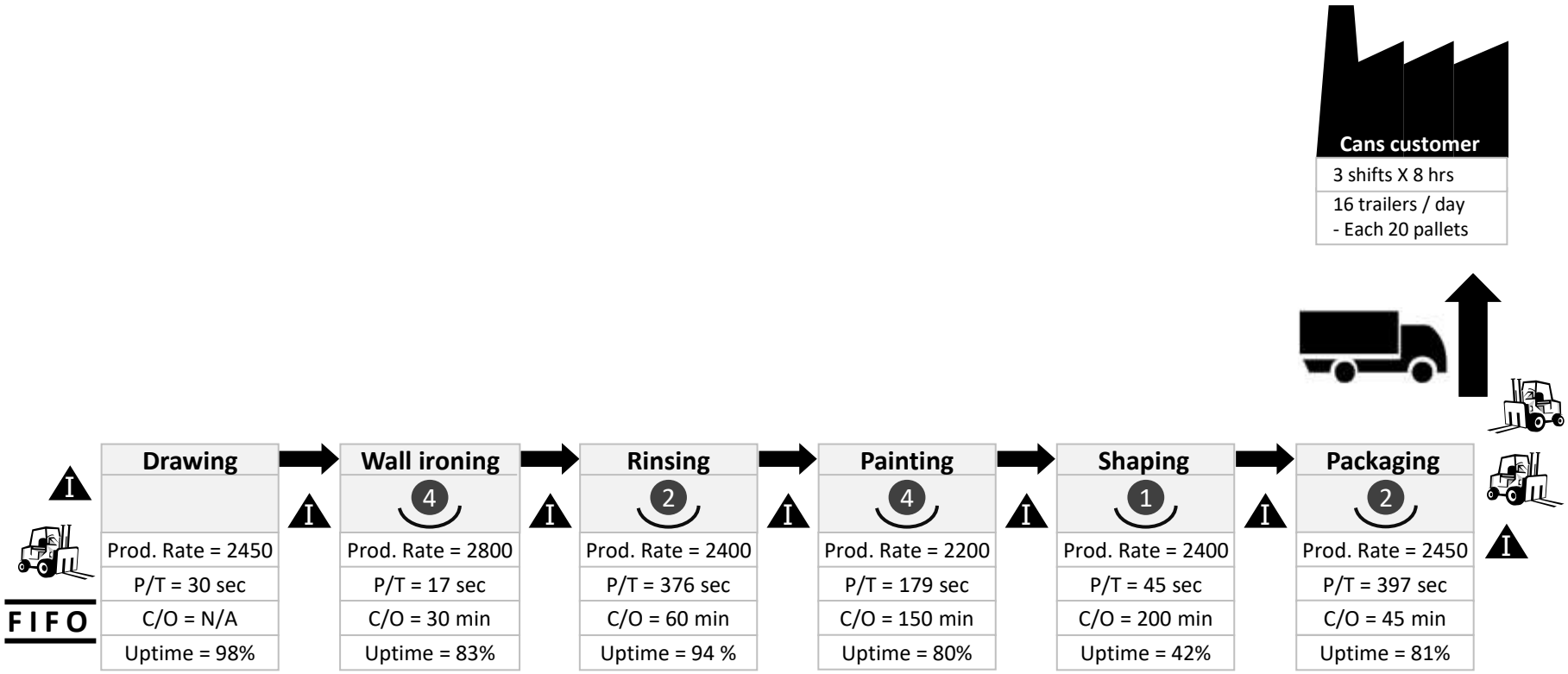
Develop continuous flow wherever possible eliminated	Use pull and Kanban systems where continuous flow is not possible	Produce to Takt time
Scheduling based on the pacemaker process	Level the production load on the pacemaker process (Level the production volume)	Distribute the production of different products evenly (level the production rate)
Optimize the number of people	Improve uptime	Reduce inventory

VALUE STREAM MAPPING

Example – Start with customer requirements

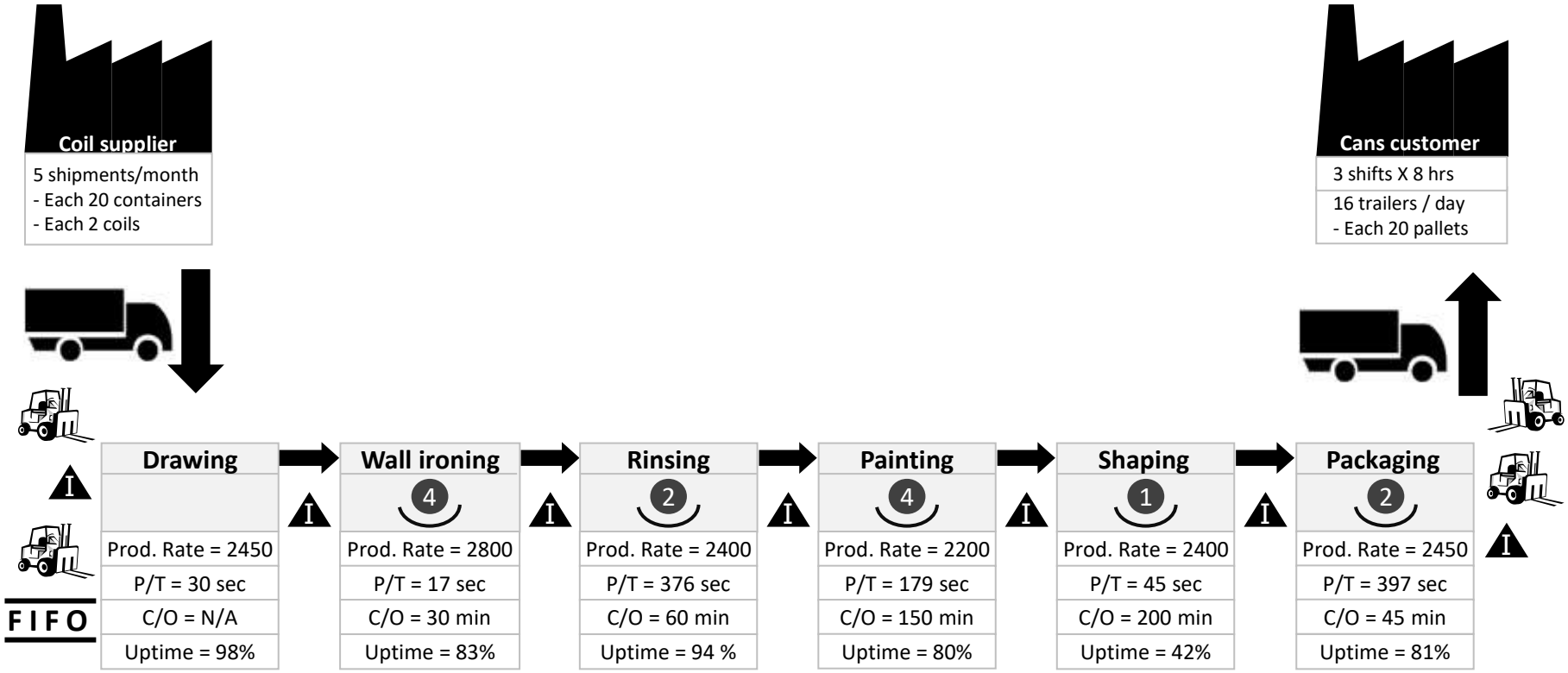
VALUE STREAM MAPPING

Example – Start with customer requirements



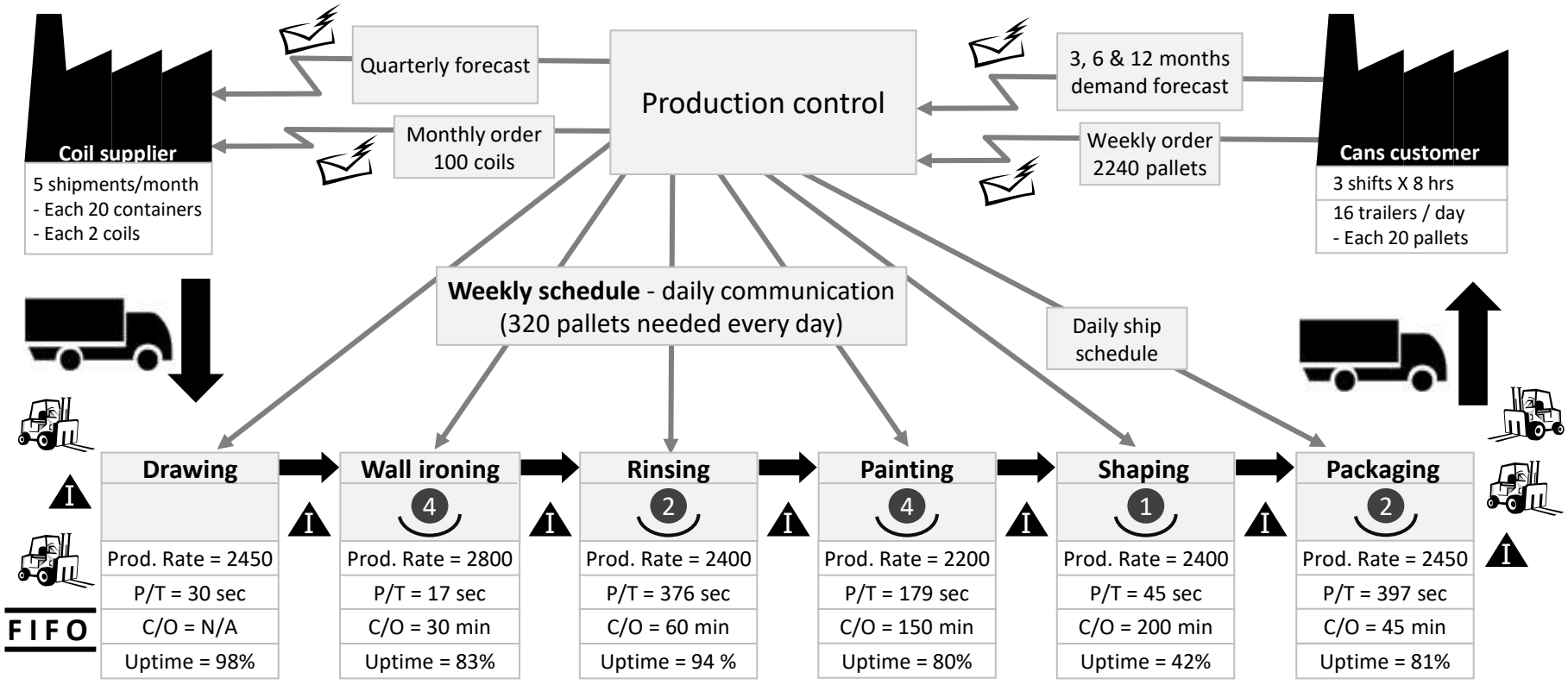
VALUE STREAM MAPPING

Example – Start with customer requirements



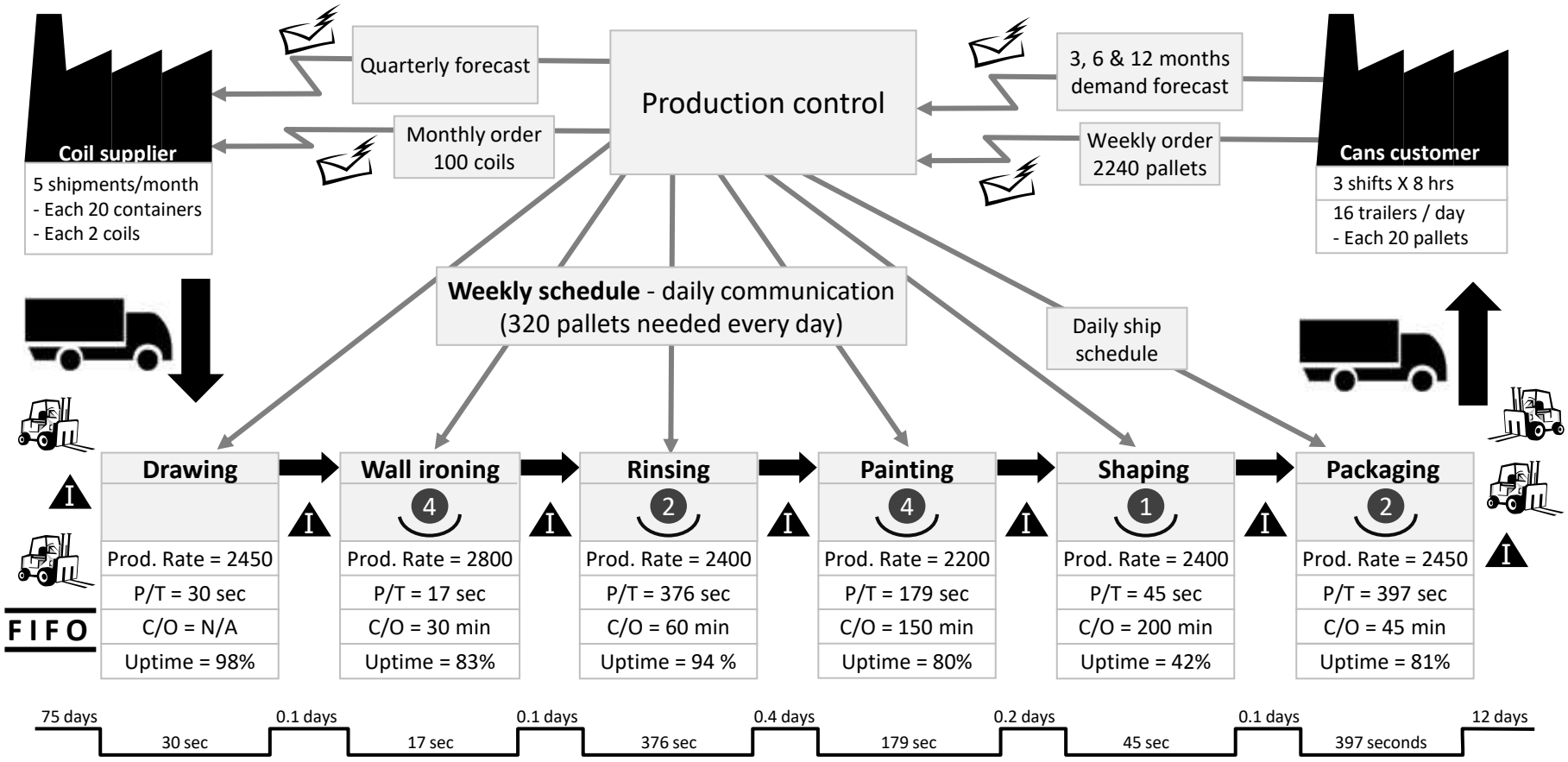
VALUE STREAM MAPPING

Example – Start with customer requirements



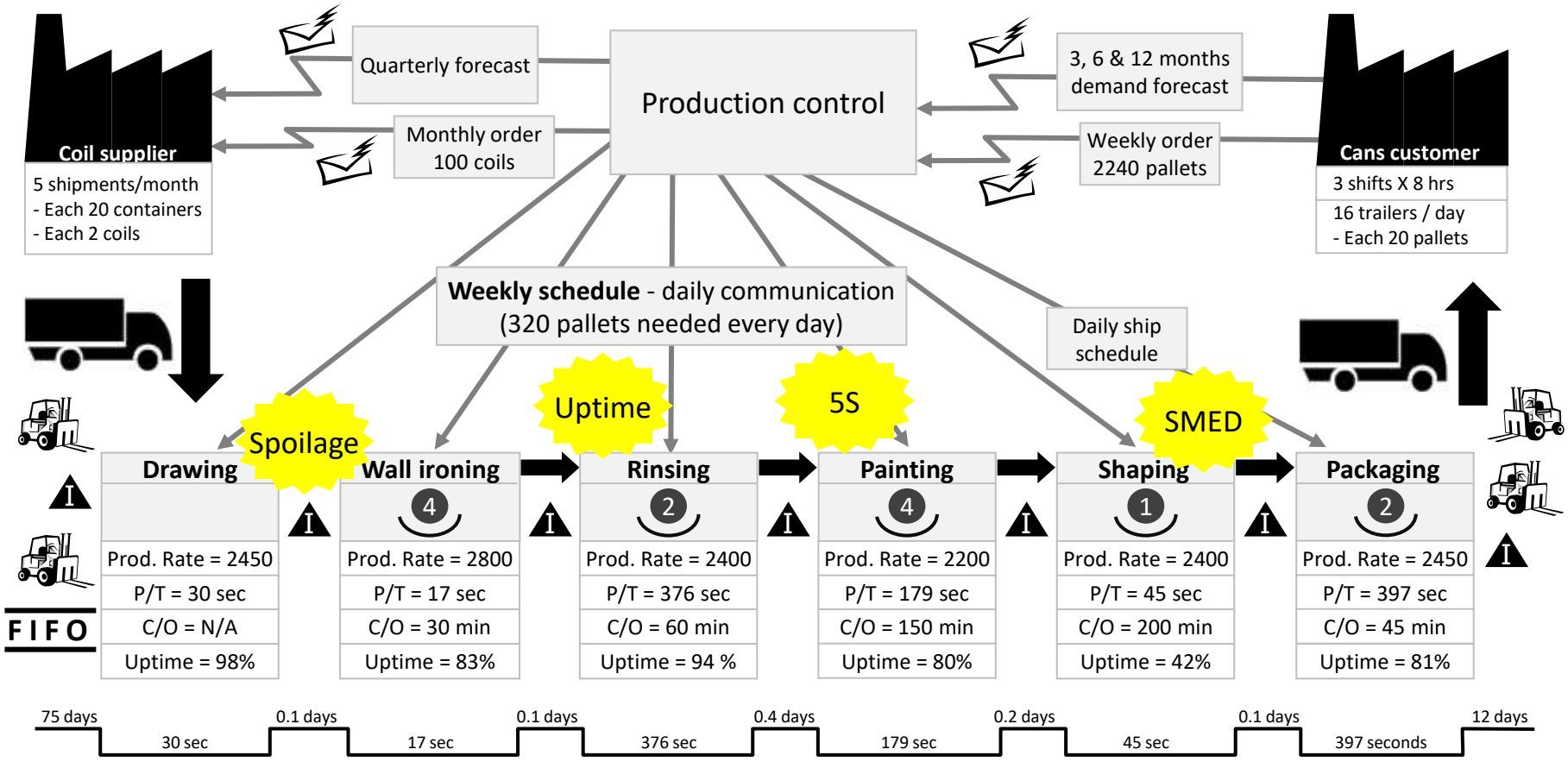
VALUE STREAM MAPPING

Example – Start with customer requirements



VALUE STREAM MAPPING

Example – Start with customer requirements



VALUE STREAM MAPPING

Further Information

Like many other lean tools, developing a value stream map for the sake of doing the map will not help much.

You should first have a problem that needs to be solved.

VALUE STREAM MAPPING

Further Information

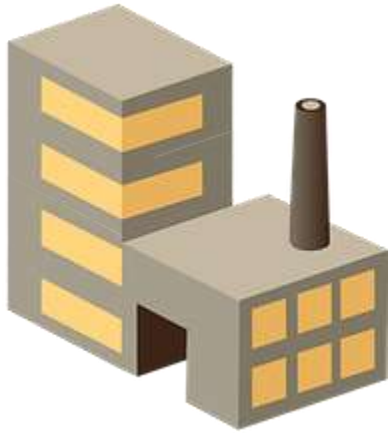
Try to be specific and include only what you think is **relevant** for your situation.

For example, if inventories are not part of the problem, it would be a waste to count them**.**

VALUE STREAM MAPPING

Further Information

Problems that are not related to the material or information flow are unlikely to benefit from value stream maps (e.g., administrative areas and indirect areas and support services).



VALUE STREAM MAPPING

Further Information

There are many **software applications** and **online services** that allow the creation of value stream maps.

For example, you can generate value stream maps in **Minitab Workspace**.

VALUE STREAM MAPPING

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