



Pull Systems

? What is It

A lean pull system has the purpose of creating a workflow where work is pulled only if there is a demand for it. build products based on actual demand and not on forecasts. By doing so, a company can focus on eliminating waste activities in the production process.

🕒 When

- Determine the right type of pull connection when designing a **Future State VSM**.
- Need for **inventory** control and reduction.
- Lean Transformation.

🎯 Goals

- To **eliminate interruptions** by limiting the Work in Process.
- **Visualize** the workflow and manage flow.
- Improve the **value stream**.

📊 How



Continuous Flow

Work cell with Continuous Flow. **One by one** and with a maximum **inventory of one** between the workstations.



Sequential Pull

Fixed Quantity. Defined Sequence. Buffer designed.



Replenishment Pull

Supermarket. **maximum** number of products is waiting to be worked on. Kanban system.

When to use what type of connection.

	Process Reliability (Good and on time)		Changeover times		Lead times		Demand Variation & Part usage		Part cost	
	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
1 Continuous Flow	Problem	X	X	Problem	X	Problem	X	X	X	X
2 FIFO	Problem	X	X	Problem	X	X	X	X	X	X
3 Supermarket/Kanban	X	X	Choose FIFO	X	X	X	X	Problem	X	Problem
4 Push			X					X		X

Kanban Calculation

Kanban Cards

$$= \frac{\text{Daily demand} \times \text{Safety buffer} \times \text{Lead time}}{\text{Kanban containers}}$$

$$K = \frac{D \times (1 + SB) \times KCT}{C}$$

💡 Hints

- A pull system allows workers to pull their next task if they can start working on it.
- Reducing inventory will uncover other problems. Address those problems., don't revert the pull system.

👤 Example

