

Transformation Process in Operations Management



- Core model: converts inputs into outputs with added value



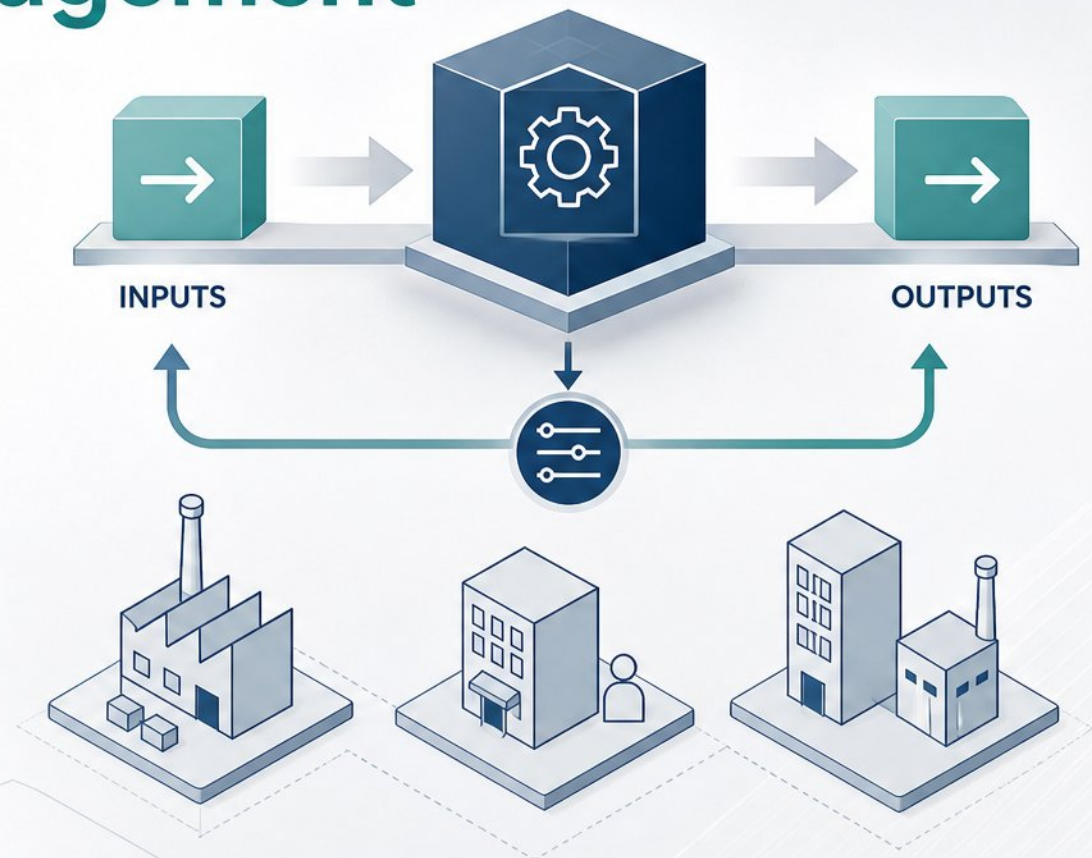
- Applies across manufacturing, service, and hybrid operations



- Work is a system with feedback and control



- Preview: model, inputs/outputs, design, flow, quality, improvement



The Transformation System and How Work Flows



- Systems convert inputs into outputs through transformation processes



- Feedback loops enable control, learning, and continuous improvement

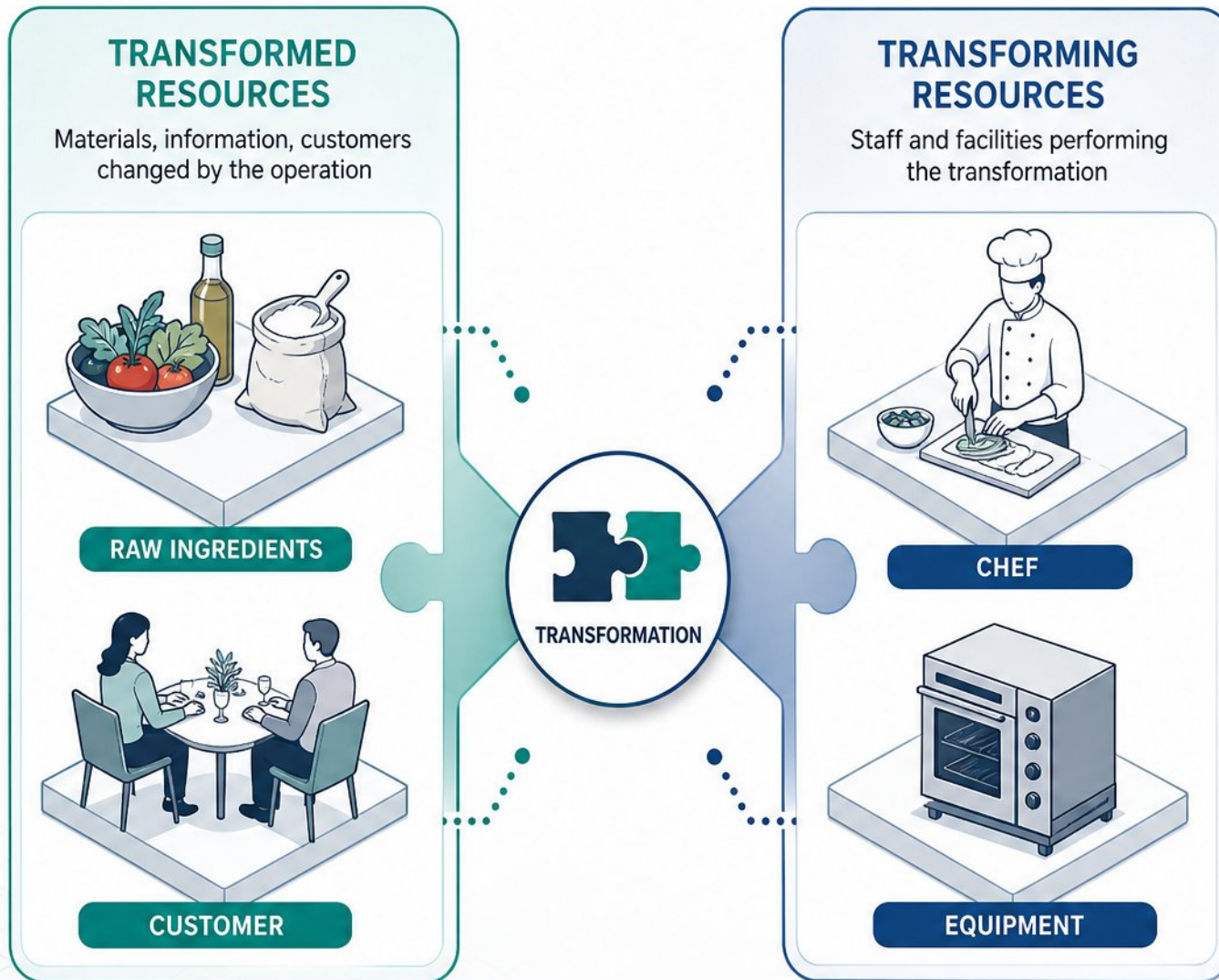


- Macro operations sequence micro operations across the value chain



- Value is added by changing form, location, ownership, or state

Inputs: Transformed and Transforming Resources



- + Transformed resources: materials, information, customers changed by the operation
- + Transforming resources: staff and facilities performing the transformation
- + Restaurant example: chefs and equipment transform food; customers also transformed by dining experience
- + Balance between resource types drives cost, quality, and throughput

Outputs, Value, and Customer Outcomes



- Classify outputs: goods, services, or hybrid offerings
- Goods are tangible; services are intangible experiences
- Hybrids combine a tangible product with a service experience
- Quality means fitness for purpose and conformance to requirements
- Outcomes include the full customer experience, not just the item

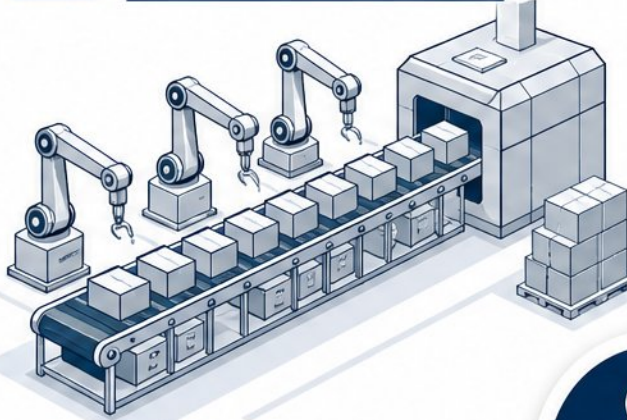
The Four V's: How Operations Differ

- Four V's: volume, variety, variation, visibility
- High volume standardizes, lowers unit cost
- High variety demands flexibility and coordination
- Variation requires buffers, flexible labor, scheduling
- Visibility raises responsiveness and error recovery



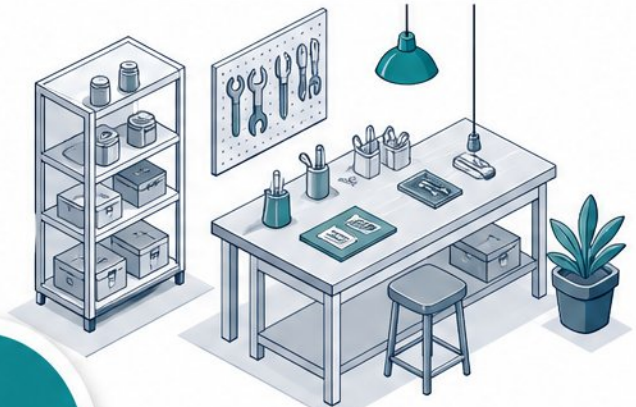
VOLUME

High-Volume Factory Line



VARIETY

Boutique Workshop



VARIATION

Seasonal Holiday Service

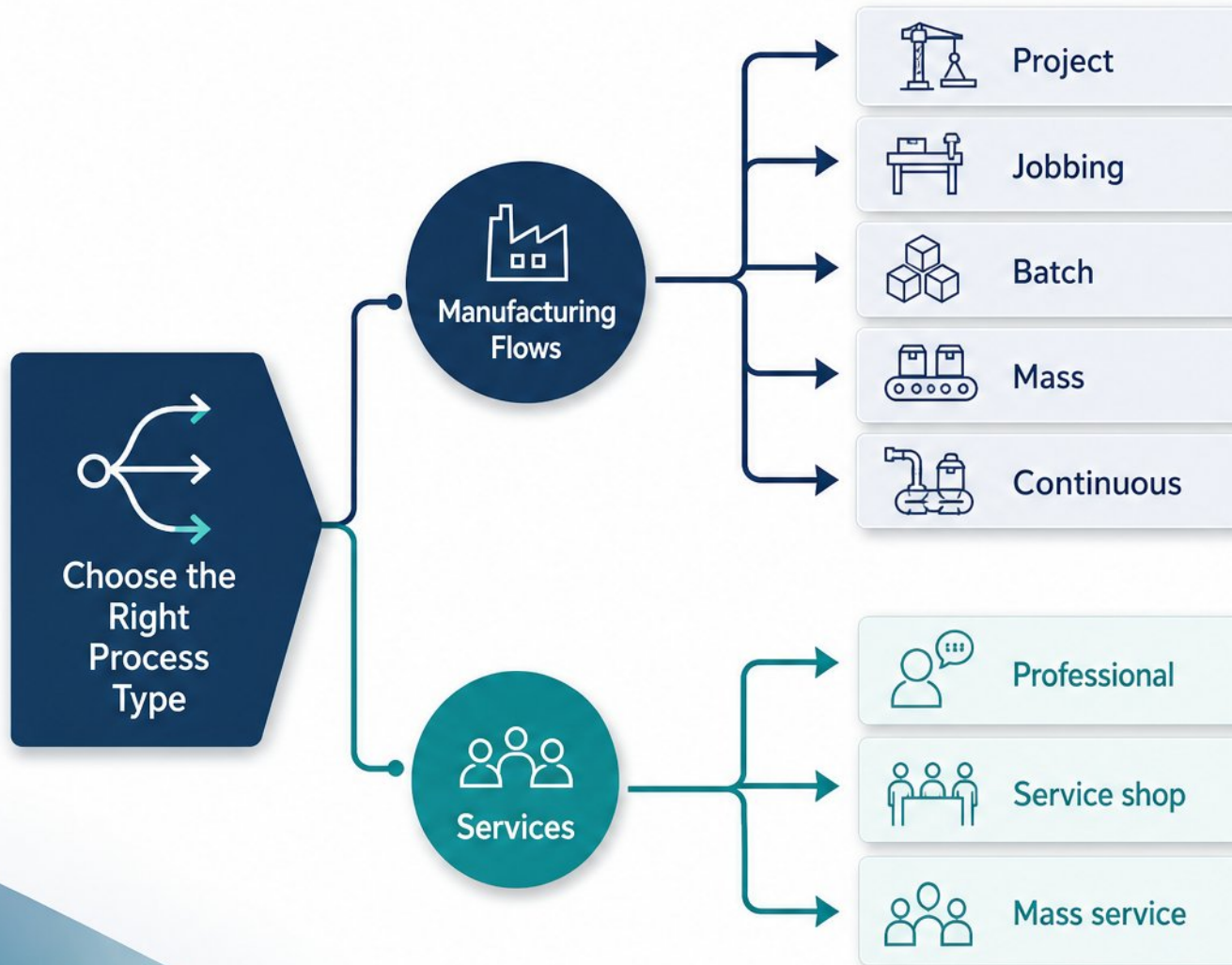


VISIBILITY

High-Contact Customer Desk



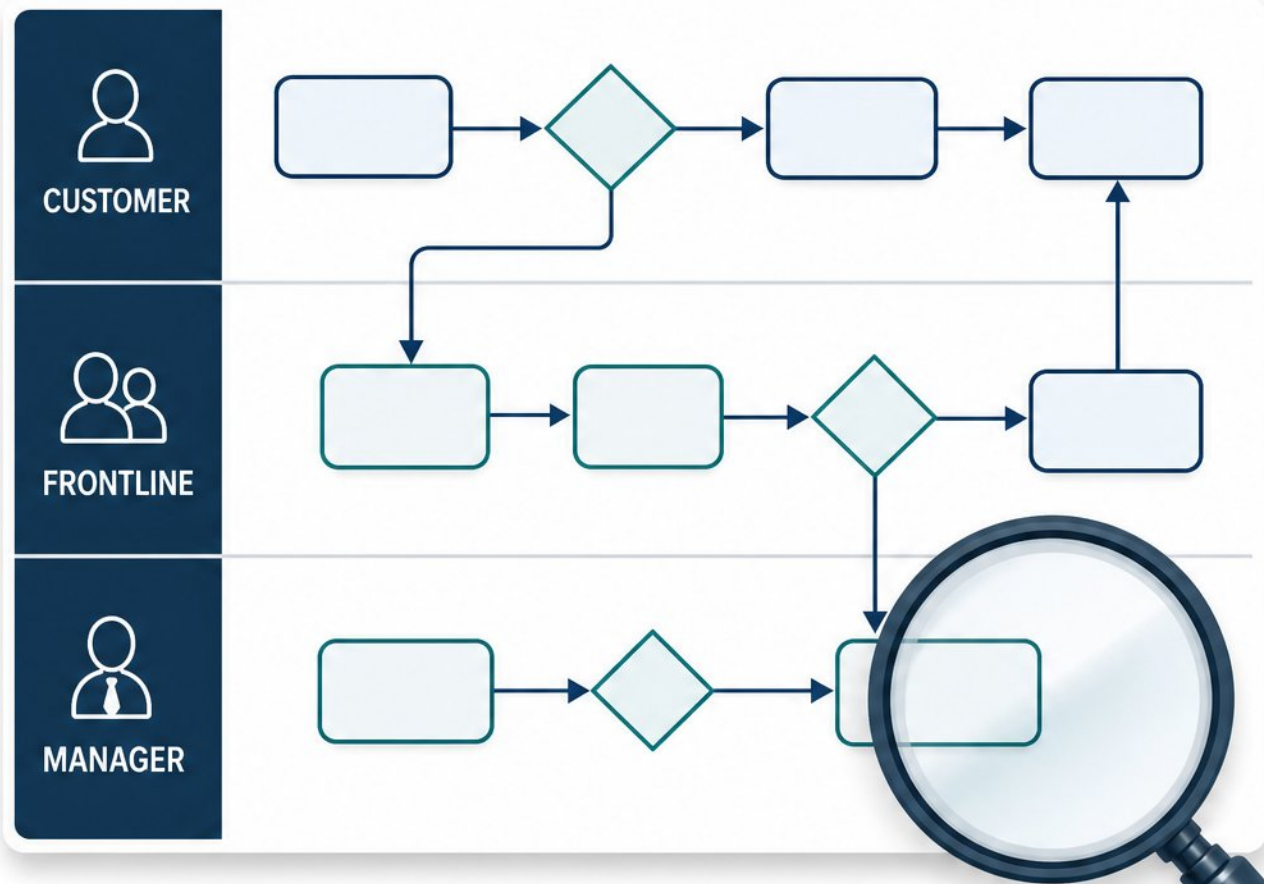
Choosing the Right Process Type



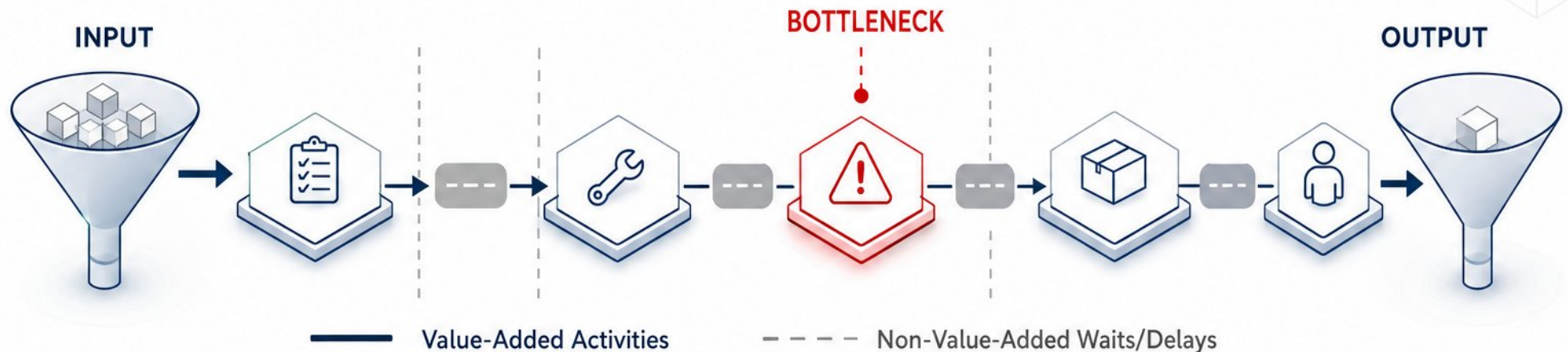
- Manufacturing flows: project, jobbing, batch, mass, continuous
- Services range from professional, through service shop, to mass service
- Process choice follows volume, variety, and customer contact
- Fit between process and the Four V's drives performance and trade-offs

Mapping the Transformation Flow

- Flowcharts document steps and decision logic
- Swimlanes reveal handoffs and accountability gaps
- Value stream maps add time, inventory, and information flow
- VSM exposes waiting: 80% of lead time is often non-value-added
- Process maps capture what happens; VSM captures what happens plus delay



Finding Waste, Delays, and Bottlenecks



- Waste: any activity adding no customer value



- Bottleneck: process step with lowest capacity



- Value-added time: actual work; lead time: includes delays



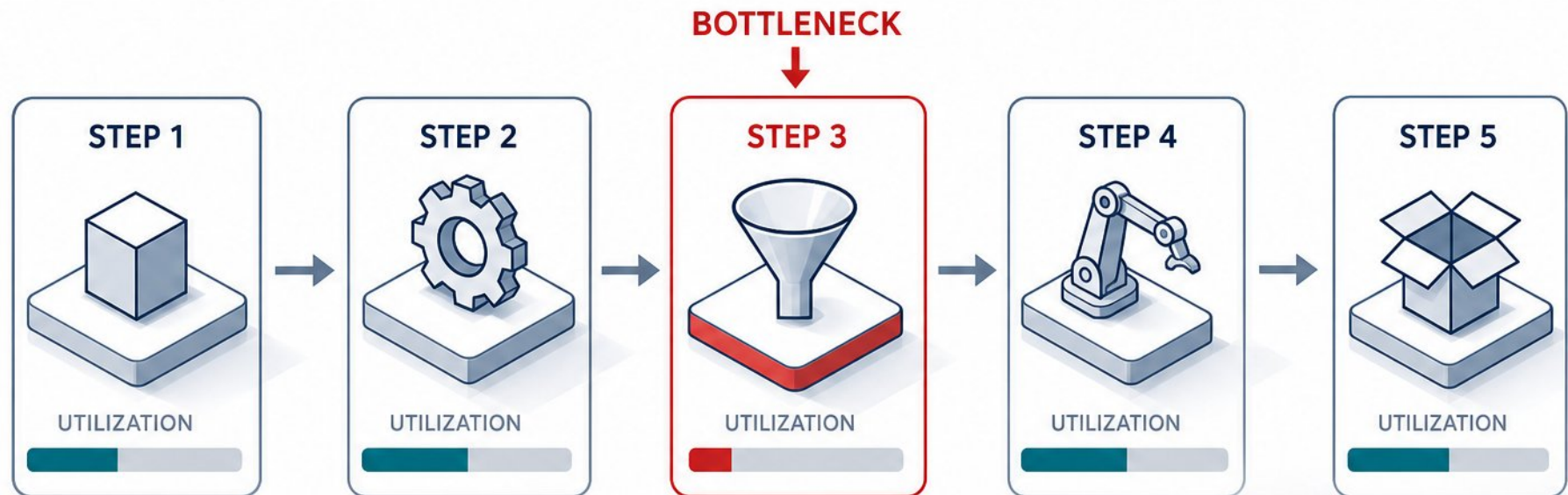
- VSM maps expose waits, excess motion, defects, and unused skills



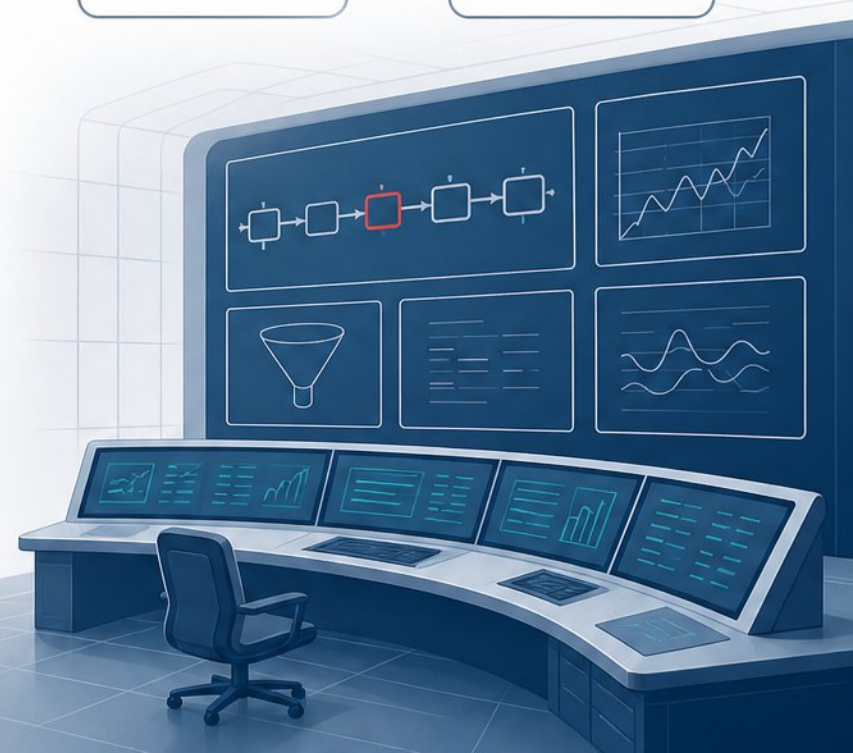
- Compare current vs. future state maps to target improvements



Capacity, Demand, and Flow Control



- Capacity is the limiting factor; calculate per process step
- Bottleneck: lowest-capacity step sets process capacity
- $\text{Utilization} = \text{flow rate} \div \text{capacity}$; flow rate is the minimum of demand and capacity
- Dependent events plus variation create unstable flow
- Bottleneck logic: identify, exploit, subordinate, elevate, repeat
- Balance flows, not capacities, to avoid overload



Building Quality into the Transformation



- Quality means conformance to requirements and fitness for purpose



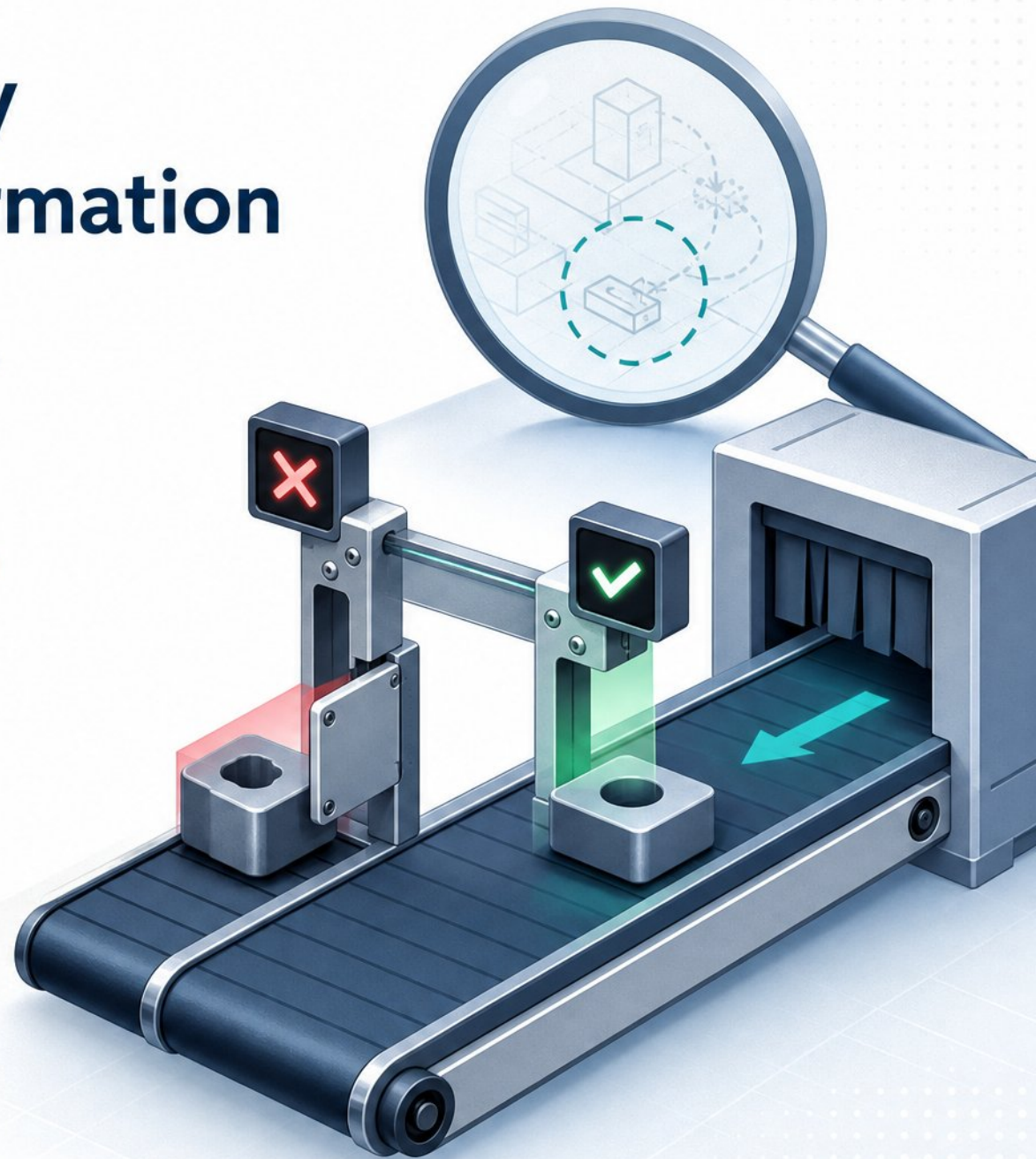
- Prevention via error-proofing beats end-of-line inspection



- Inspection adds cost; defects still slip through



- Frontline staff stop defects and feed back input and process problems



Continuous Improvement and Lean Thinking



- **Continuous improvement:** an ongoing system activity, not a one-time project



- **Lean focus:** value, waste removal, and flow



- **PDCA cycle:** Plan, Do, Check, Act to standardize or adjust



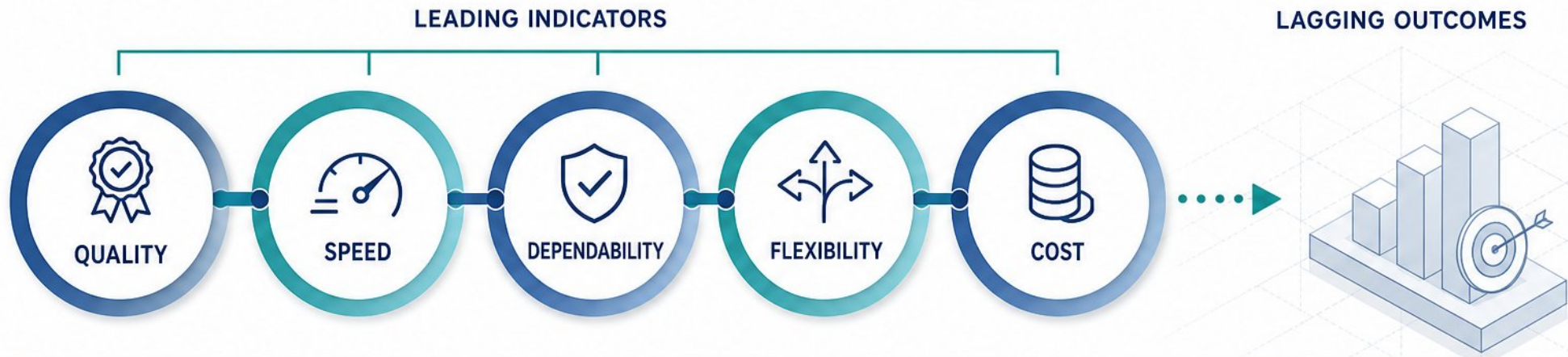
- **Kaizen:** daily, incremental, team-led improvements at the workplace



- **Standardization** creates the baseline; improvements must update the standard



Measuring Transformation Performance



- **Quality:** doing things right, error-free outputs



- **Speed:** doing things fast, short lead times



- **Dependability:** delivering on time, as promised



- **Flexibility:** adapting to volume, mix, or delivery changes



- **Cost:** doing things economically; reduced by excellence in the other four



- **Objectives trade off**—choose which to prioritize, then align measures

Diagnosing a Transformation Process

1

Define Scope
& Objectives



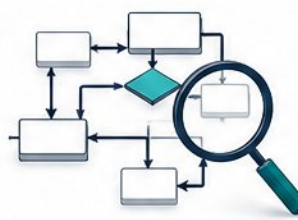
2

Gemba Walks
& Interviews



3

Map the
Current State



4

Identify the
Primary Constraint



5

Benchmark
& Compare



- Guide diagnoses with scope, current state mapping, data, and benchmarking



- Build fact-based pictures through gemba walks, interviews, and key metrics



- Spot the primary constraint by the gap that cascades most widely



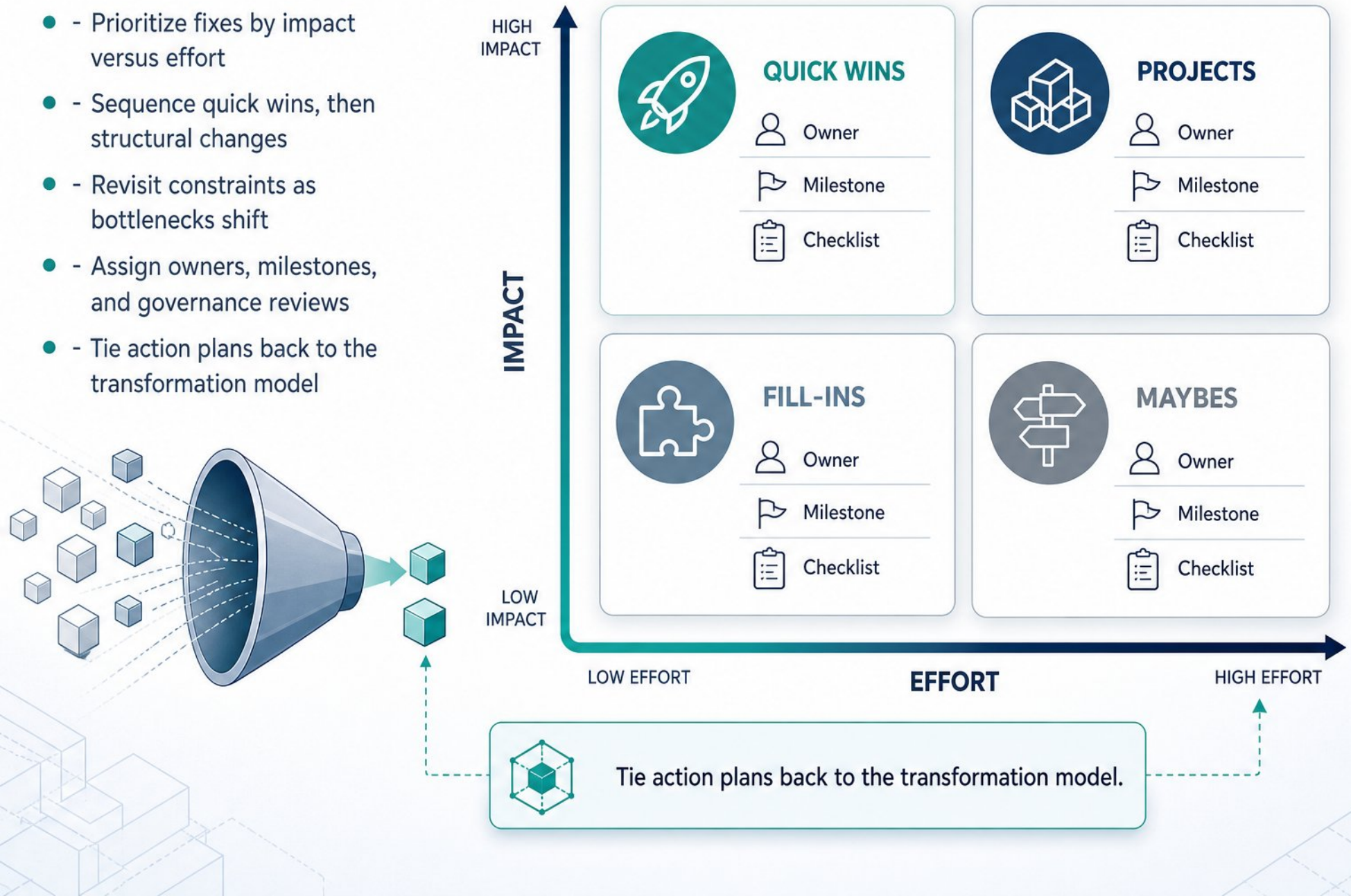
- Quantify gaps in time, cost, and customer impact to drive priorities



- Turn findings into action plans with owners, milestones, and governance

Action Planning for Process Owners and Frontline Managers

- - Prioritize fixes by impact versus effort
- - Sequence quick wins, then structural changes
- - Revisit constraints as bottlenecks shift
- - Assign owners, milestones, and governance reviews
- - Tie action plans back to the transformation model



PersonWise.

PersonWise • AI digital-human course platform



Scan the code or click anywhere to watch this course live, with voice Q&A

personwise.ai/t/4f6be8aa/public