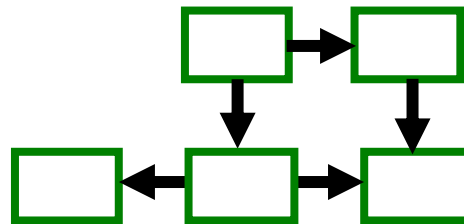


# Continuous Improvement Toolkit

## Relationship Mapping



## Managing Risk

PDPC  
FMEA RAID Logs  
Fault Tree Analysis  
Risk Assessment\*  
Traffic Light Assessment

## Deciding & Selecting

Pros and Cons  
Break-even Analysis  
Force Field Analysis  
Decision Tree  
QFD  
Kano Analysis  
Critical-to Tree  
Pugh Matrix  
Matrix Diagram  
TPN Analysis  
Voting  
SWOT  
Prioritization Matrix  
Paired Comparison

## Planning & Project Management\*

RACI Matrix Stakeholders Analysis  
PEST PERT/CPM Activity Diagram  
Roadmaps Project Charter Gantt Chart  
PDCA Control Planning Gap Analysis  
Hoshin Kanri Kaizen  
Tree Diagram\*\* Standard work

## Understanding Performance

Lean Measures KPIs  
OEE Capability Indices  
MSA RTY Descriptive Statistics  
Cost of Quality  
Reliability Analysis  
Graphical Analysis  
Run Charts  
Control Charts  
Benchmarking  
Sampling  
Focus groups Interviews  
Photography Check Sheets  
Measles Charts Surveys  
Data Critical Incident Technique  
Collection Observations

## Understanding Cause & Effect

Cause & Effect Matrix  
Confidence Intervals  
Probability Distributions ANOVA  
ANOVA  
Design of Experiments  
Regression  
Multi-Vari Charts  
Fishbone Diagram  
5 Whys  
Chi-Square Test  
TRIZ\*\*\*  
Brainstorming  
Analogy  
SCAMPER\*\*\*  
Nominal Group Technique  
Mind Mapping\*  
Affinity Diagram  
Attribute Analysis  
Lateral Thinking  
Visioning

## Understanding Cause & Effect

Simulation TPM  
Mistake Proofing  
Pull Systems JIT Ergonomics  
Work Balancing Automation  
Bottleneck Analysis  
Flow  
Value Analysis  
Wastes Analysis  
SMED  
Time Value Map  
Process Redesign  
IDEF0  
Value Stream Mapping  
SIPOC  
Flow Process Chart  
Process Mapping  
Flowcharting  
Service Blueprints

## Relations Mapping\*

## Identifying & Implementing Solutions\*\*\*

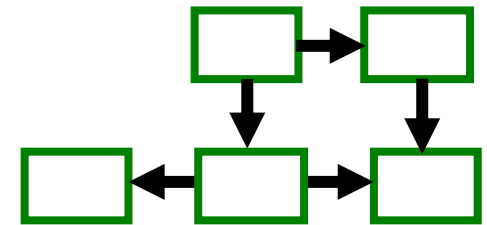
Visual Management  
5S  
Value Stream Mapping  
SIPOC  
Process Mapping  
Service Blueprints

## Creating Ideas\*\*

## Designing & Analyzing Processes

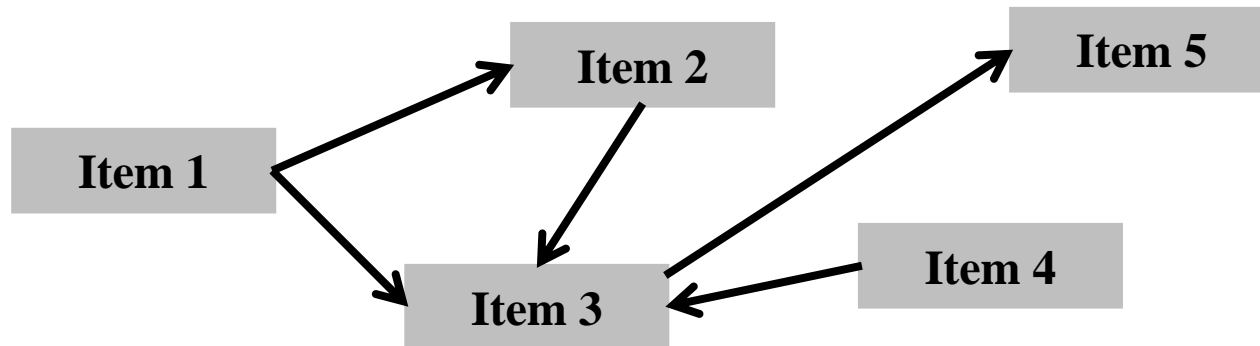
## - Relationship Mapping

- ❑ Used to clarify and understand complex relationships.
- ❑ In some cases, relationships cannot be organized into familiar structures such as hierarchies or matrices.
- ❑ Relationship Mapping addresses these situations.
- ❑ It shows relationships between items with a network of boxes and arrows.
- ❑ It's mainly used to show the relationship between one or more problems and their causes **“Cause and Effect Relations Diagram”**.



## - Relationship Mapping

- ❑ Arrows show direct relationship between individual items.
- ❑ Arrows flowing only away from a cause indicate a root cause.
- ❑ A cause with multiple arrows flowing into it indicates a bottleneck.
- ❑ Key causes may be highlighted in some way, such as double circling.



## - Relationship Mapping

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### When to Use It?

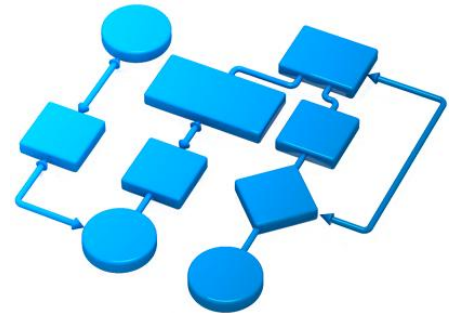
- ❑ To map cause-effect relationships.
- ❑ To map other type of logical relationships.
- ❑ Show any complex relationship between problem elements.
- ❑ When the problem is perceived as being a symptom of a more important underlying problem.
- ❑ When analyzing complex situations where there are multiple interrelated issues.



## - Relations Mapping

### Approach:

- ❑ Identify the type of relationship to be mapped.
- ❑ Define then write each problem on a flipchart.
- ❑ Ask: “What must be done to make this happen?”.
- ❑ Produce the set of items to be related in the diagram using a Brainstorming (or NGT) session.
- ❑ Use **Voting** if there is no agreement.
- ❑ Review and update the diagram as necessary.
- ❑ Identify and mark key items (bottlenecks, root causes, etc.).
- ❑ Plan and implement concrete actions to address key items.



## - Relationship Mapping

### **In Project Management:**

- ❑ To check if there are any relationships that need building to ensure that a project gets off the ground.
- ❑ To assess where they have strong healthy relationships, or where relationships are weak.
- ❑ Will help you to identify where relationships may need improving in order for a project to be successful.
- ❑ Line thickness indicates how healthy or strong the relationship is.

