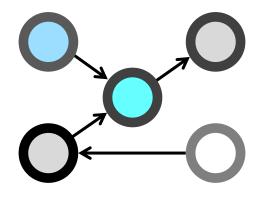
Continuous Improvement Toolkit

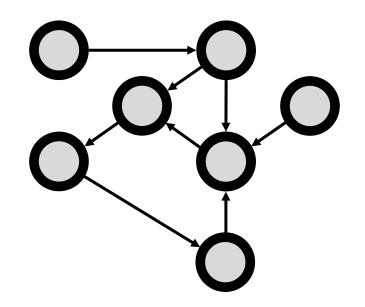
Relationship Mapping



The Continuous Improvement Map

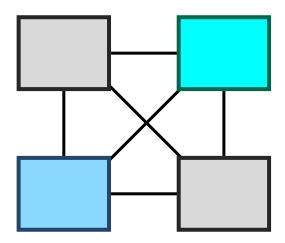
Managing	Deciding	& Selecting	Planning & Project Management*
Risk PDPC	Decision Balance Sheet	Importance-Urgency	Mapping Daily Planning PERT/CPM
FMEA RAID Log*	Force Field Analysis	Cost Benefit Analy <mark>sis</mark>	MOST RACI Matrix Activity Networks
Risk Assessment*	Break-even Analysis Vot	ting TPN Analy <mark>sis</mark>	SWOT Analysis Stakeholder Analysis
Fault Tree Analysis De	ecision Tree Pick Chart	Four Field Matri <mark>x</mark>	Project Charter Improvement Roadmaps
Traffic Light Assessment	Critical-to Tree QFD	Portfolio Matrix	PDCA Policy Deployment Gantt Charts
Lean Measures Kan	o Analysis Matrix Diagram	Paired Comparison	DMAIC Kaizen Events Control Planning
Bottleneck Analysis** Co	ost of Quality* Pugh Matrix F	Prioritization Matrix	A3 Thinking Standard work Document control
OEI Process Yield	E <u>KPIs</u> Pareto Analysis	C&E Matrix	standing Cross Training Implementing
	scriptive Statistics ANOVA	Chi-Sauara	& Effect Value Analysis Solutions**
Pro	obability Distributions Hypoth	nesis Testing Design	of Experiment Mistake Proofing Ergonomics
	grams & Boxplots Multi vari	Studies Confidence	e Intervals Simulation TPM Automation
Reliability Analysis Understanding	aphical Analysis Scatter Plots	6 Correlation Re	egression Pull Flow Just in Time
Performance MSA	Run Charts 5 Whys Ro	oot Cause Analysis Da	ata Snooping Visual Management 5S
	ontrol Charts Fishbone D		
Data collection planner* Sampling Morphological Analysis How-How Diagram** Process Redesign Time Value Map			
Check Sheets Interview	_{/S} Brainstorming SCAMPE	R** Attribute Analys	sis Spaghetti Diagram Value Stream Mapping
Questionnaires Focus	Groups Affinity Diagram	Relationship Mapping	* Flow Process Charts Service Blueprints
Data	Mind Mapping*	Lateral Thinking	Flowcharting IDEF0 Process Mapping
Collection Observa	Suggestion systems	Creating Ideas	Designing & Analyzing Processes

- Relations in a complex situation don't necessarily fit into familiar structures such as hierarchies.
- Links can be in any direction and between any pair of items.



What is a Relationship Map?

- A visual display that shows the relationships between individual items.
- Allows to see and analyze the logical links between the different elements of any situation.



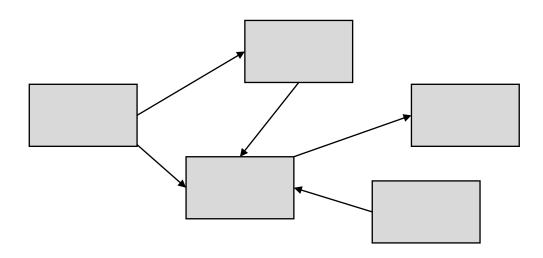
Example:

Your network of personal and social relations can be represented in a form of map.



Interrelationship Digraph:

- □ An example of a relationship map.
- Shows the cause and effect relationships involved in a process or problem.



Uses:

- To understand and organize any type of logical relationships between ideas, factors or issues.
- To show the relations between one or more problems and their causes.
- When solving a problem to identify the ideas of greatest impact for improvement.
- To show relationships and interactions of individuals and teams working together.
- To organize social networks to meet your personal and social goals.

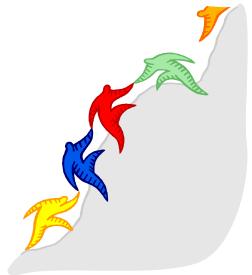


Benefits:

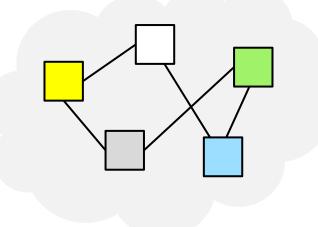
- Helps bring the most important and expensive causes into attention so that you focus your efforts on what really matters.
- Helps when planning to improve relationships among team members to increase morale and productivity.

Helps identify:

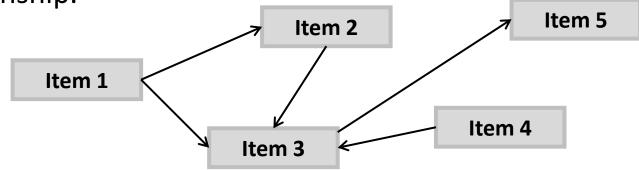
- Team communication patterns.
- Indirect influence patterns.
- Frequency of interactions.
- Importance of interactions.



- □ Comes after a data collection or an idea-generation exercise.
- Consists of nodes and lines.
- Lines are used to connect related nodes.
- Each node is connected with one or more nodes to denote a direct relationship.

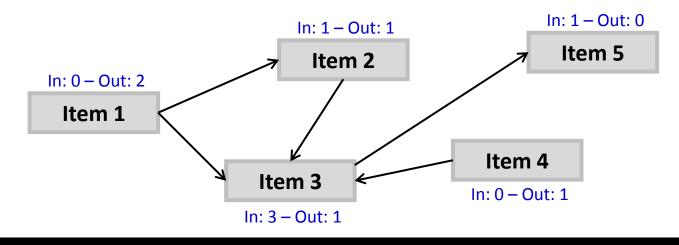


- □ Influence relationships can be represented using arrows.
- Arrows should be drawn from the element that influences to the one being influenced.
- If two elements influence each other, the arrow should be drawn to reflect the stronger influence.
- Line thickness can be used to indicate the strength of the relationship.



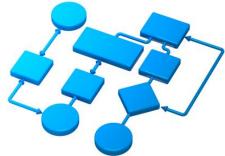
Analyze the Situation:

- □ Connections can be counted once they have been indentified.
- □ The nodes with the most connections are the **key elements**.
- The nodes that have primarily outgoing arrows indicate potential causes.
- Arrows flowing only away from a node indicate a **root cause**.

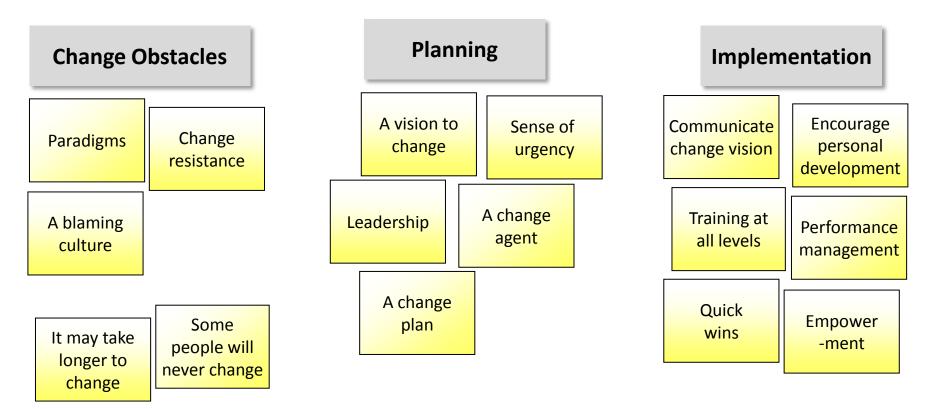


How to Construct a Relationship Map:

- Clearly explain the purpose for constructing the relationship map.
- Brainstorm or collect the problem elements.
- Write them on note cards, then place them on a flipchart.
- Look for causal relationships between each and every element.
- Draw an arrow from each element to the ones it causes or influences.
- □ Repeat this until all elements have been reviewed.
- Count the number of incoming and outgoing arrows.
- Write the totals beside each element.
- Identify and mark those elements that are likely to be the real causes.
- Plan and implement actions to solve the problem.

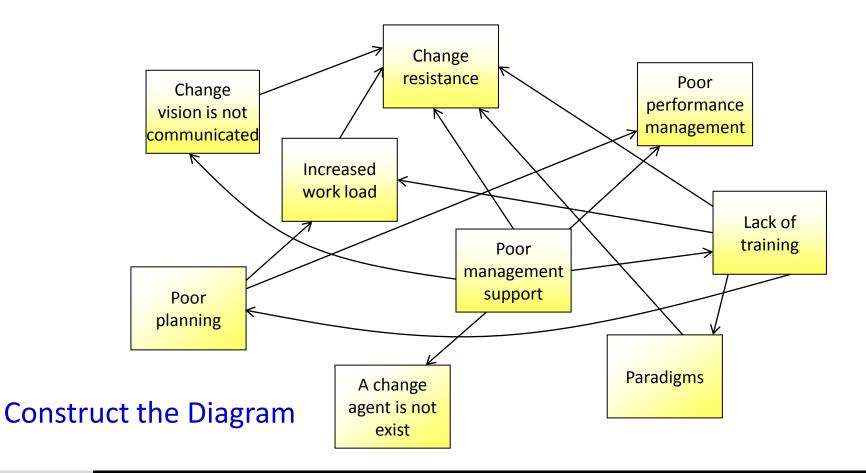


Example – Why a Change Initiative has Failed?

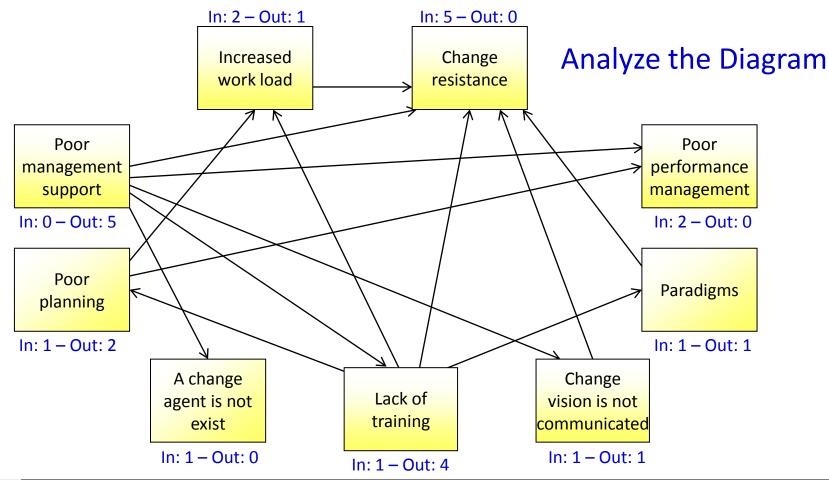


Brainstorming or Affinity Diagram

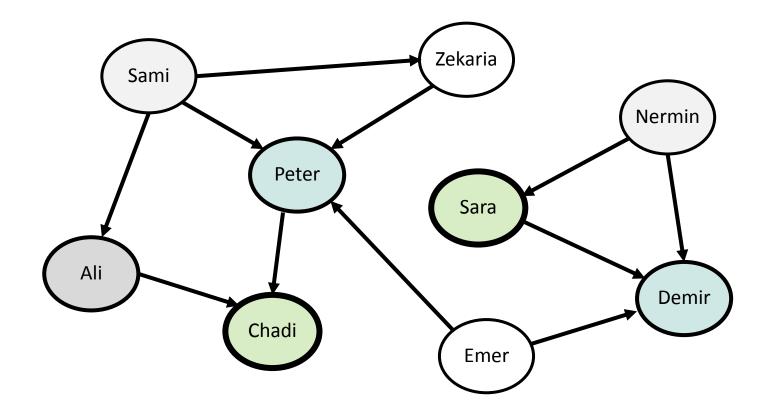
Example – Why a Change Initiative has Failed?



Example – Why a Change Initiative has Failed?



Example – Examine the Indirect Influence Patterns within a Team:



Further Information:

- This tool is useful in project management where you identify where relationships may need improving in order for a project to be successful.
- Another variation is the influence diagram which is used to plan or forecast the flow of a process to identify the supporting factors and the potential blockages.