#### **Continuous Improvement Toolkit**

#### **How-How Diagram**



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#### The Continuous Improvement Map

Managing		Deciding & Selecting					Planning & Project Management*				
Risk PDF	C D	ecision Bala	ance Sheet	Impo	rtance-Urge	ncy I	Mapping	Daily Plann	ing	PERT/CP	M
FMEA RAID	Log* For	ce Field Ana	alysis	Cost	Benefit Anal	ysis	MOST	RACI M	atrix	Activity Ne <sup>,</sup>	tworks
Risk Assessme	nt* Brea	ik-even Ana	alysis V	oting	TPN Analy	/sis	<u>SWO</u>	<u>Analysis</u>	<u>Stak</u>	<u>eholder An</u>	alysis
Fault Tree Analys	sis Decision	cision Tree Pick Char			ur Field Mati	rix	Project Charter Improvement Roadmaps				
Traffic Light Asses	sment Critic	al-to Tree	QFD	Port	folio Matrix		PD	CA Policy [	Deployn	nent Gant	t Charts
Lean Measures	Kano Analy	sis Mat	rix Diagram	Paired	I Compariso	n	DMAIC Ka	izen Events	Cor	trol Planni	na
Bottleneck Analysis	** Cost of C	Quality* Pu	ugh Matrix	Prioritiz	ation Matrix		A3 Thinking	Standard	work		control
	OEE	<u>KPIs</u> P	areto Analys	sis Ca	&E Matrix			Cross Tra	aining	Implem	onting
Process Yield	Descriptive	criptive Statistics ANOVA			un <sup>quare</sup> Ca	der	Standing	Value An	alvsis	Soluti	ions**
Capability Indices	Probabilit	y Distributi	ons Hypo	thesis Te	esting Des	sian		t Mistake	Proofir	na Ergo	nomics
<u>Gap Analysis*</u>	Histograms	& Boxplots	Multi vai	i Studies	S Confid	ance		Simulation	TPM	Autor	nation
Reliability Analysis	Graphical	Analysis	Scatter Plo	ots Co	orrelation	Po	arossion	Pull	Flow	Just in <sup>-</sup>	Time
Understanding	MSA Rur	n Charts	5 Whys F	Root Cau	ise Analysis		ta Spooning	Visual M	anagen	nent	5S
Performance Bonchmarking*	<ul> <li>Control C</li> </ul>	harts	Fishbone	Diagram	Tree Diag	uram*		Waste An	alvsis (	Quick Char	ngeover
Data collection plat	samp	lina Mor	phological A	nalvsis	How How	Dioc	SIPUC	ocess Rede	sian	Time Valu	e Map
Chock Shoots	torniouro Br	ainstorming		)ED**	Attributo Ar	Diag	is Snaghe	tti Diagram	Value	e Stream N	Apping
		Affinity	Diagram	Relat	tionshin Man		* Flow F	Process Cha	irts S	Service Blu	eprints
Data	Focus Groups	Minc	Mapping*	Later	al Thinking	F	Flowcharting	IDEF0	Pr	ocess Mar	ping
Collection	Observations	Suggestig	on systems	Creat	ing Ideas		Desi	gning & A	nalvzi	ng Proce	esses
					0						-

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- Once you have discovered why a problem occurs, you then need to find a permanent solution to the problem.
- In many cases, you don't even need to analyze the root causes of a problem.
- □ You just need to solve the problem right away.
- These low hanging fruits may be quick wins or larger projects that may involve capital expenditure.



□ For example, after reviewing a process, you may have identified non-value added activities that you want to reduce or eliminate.

#### Other examples:

- Modify a procedure.
- Train employees.
- Improve management reports.
- Error proof a process.
- Change workplace layout.
- Infrastructure initiatives.



- How-How Diagram is used when seeking a practical solution to a problem.
- It works by repeatedly asking: 'How can this be solved?'.



- It provides an effective structure for organizing and sequencing possible options as well as the rewards and risks associated with each option.
- At each stage, there might be multiple answers to the 'How' questions, and the result is a hierarchical tree-structure.

#### Drawing the Diagram:

- □ State the problem clearly then write it on a post-it card.
- Place it to the left of a large work area on the wall.
- □ Ask 'How can this problem be solved?'.
- Let the team write their answers on a post-it, then stick them up.
- Repeat this sequence of breaking down the problem once more.
- Keep asking "How" until you have no more answers or until you are satisfied with the improvement ideas.
- Prioritize then select the key and applicable solutions to implement.



**Example –** Reduce the Amount of Energy:



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**Example –** Identify Ways to Reduce Spoilage:



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#### **Further Information:**

- It is similar to the 5 Why's but a different question is asked (an adaptation of the root cause analysis).
- It is especially useful when creating or exploring a plan of action.
- It helps to break down the solution into more explicit elements.
- It shows a range of possible solutions all in one place.

