Project Management

Project Management Tools

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Project management tools

- Aims
  - To introduce management tools that are available for project managers.
- Expected Outcomes
  - Students are able to apply management tools in various conditions.
- References

  - William, R.T. 2013. Project Management. Random Exports
  - Heagney, J. 2012. Fundamentals of Project Management. American Management Association.
  - Richardson and Gary, L. 2010. Project Management theory and practice. Taylor and Francis.

Content

- Management tools
- Tool selection

No.	Type	Description
1	Brainstorming	Mainly purpose for generating various ideas and to find several solutions.
2	Thought Process Map	Representing graphically series of ideas.
3	Quality Functional Deployment	Correlation between customer requirements to several parameters.
4	Kano Model	Tool to distinguish types of product requirements which significantly / not significantly influence to the customer satisfaction.
5	Affinity Diagram	Organize ideas generated by team members.
6	Fishbone Diagram	To graphically identify possible causes related to the problem and discover root causes as possible.
7	Check sheet	A form used to allow a team to systematically record a data.
8	Pareto chart	Bar graph where y-axis represents frequency of occurrence.
9	Nominal Grouping Technique	A decision making tool used by utilizing the opinion by each team member.
10	Delphi technique	A tool to achieve aggregate opinions from experts at particular area.
11	SWOT analysis	A tool that identify whether to use/not use a component.

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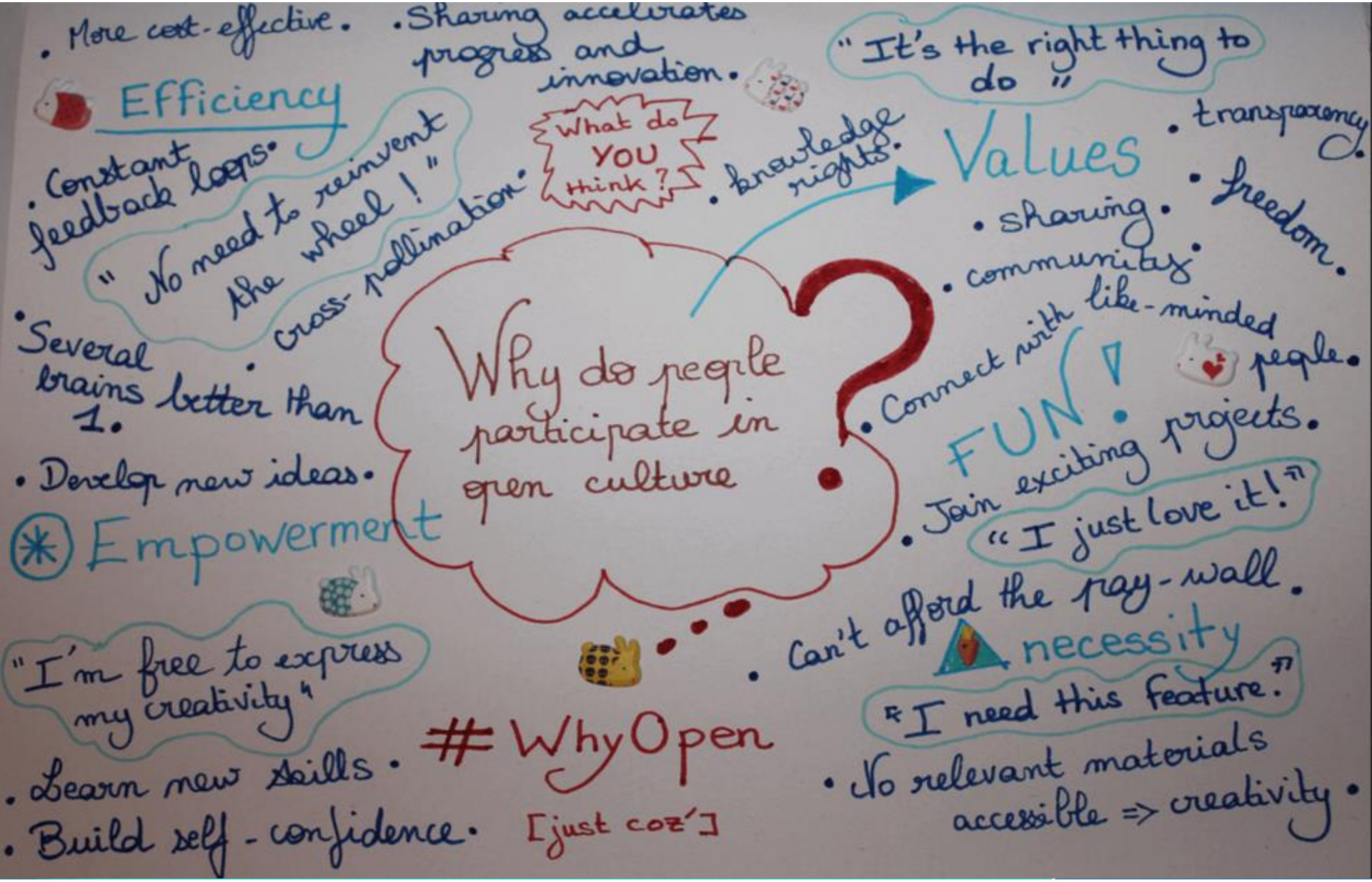

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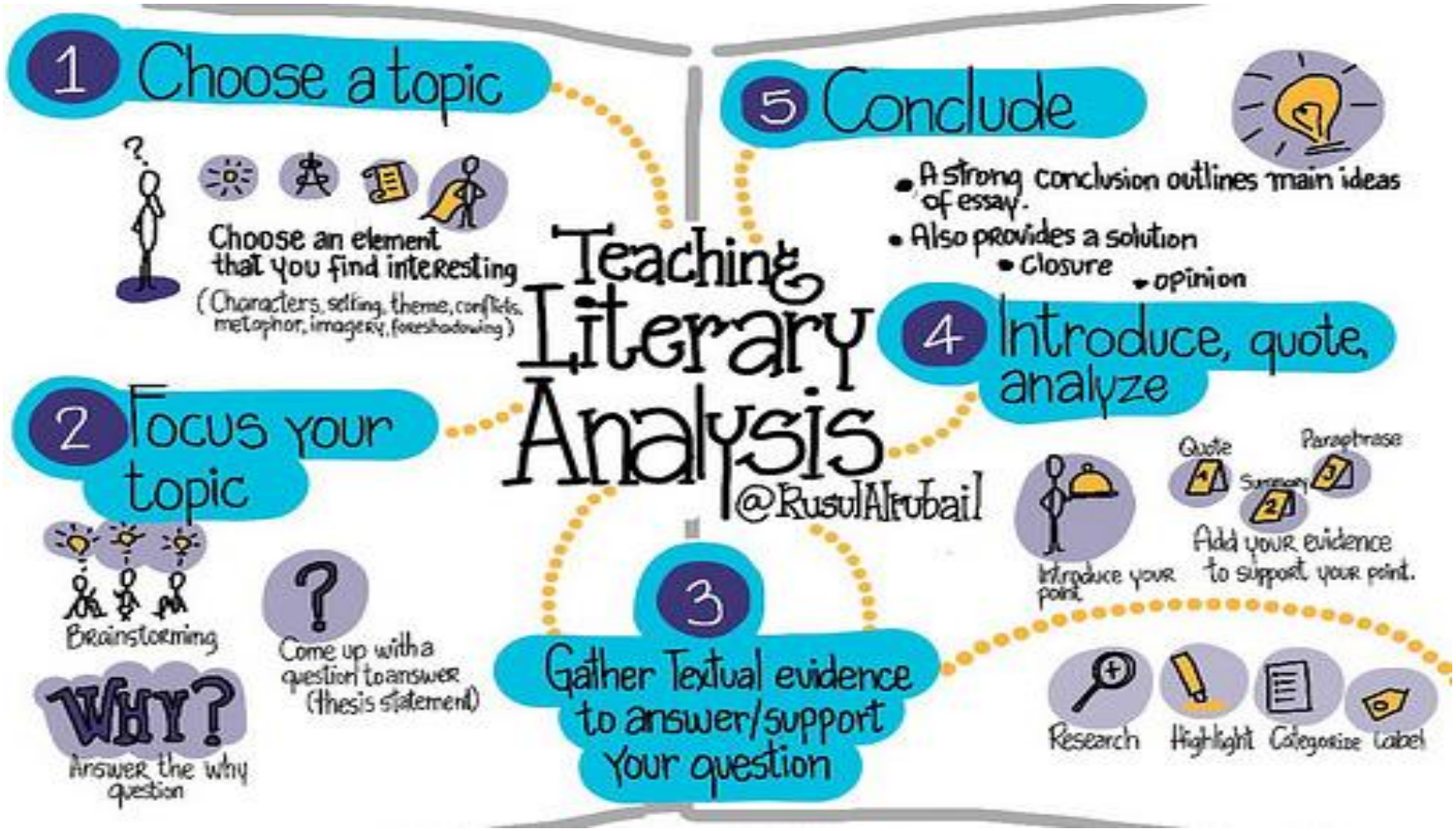

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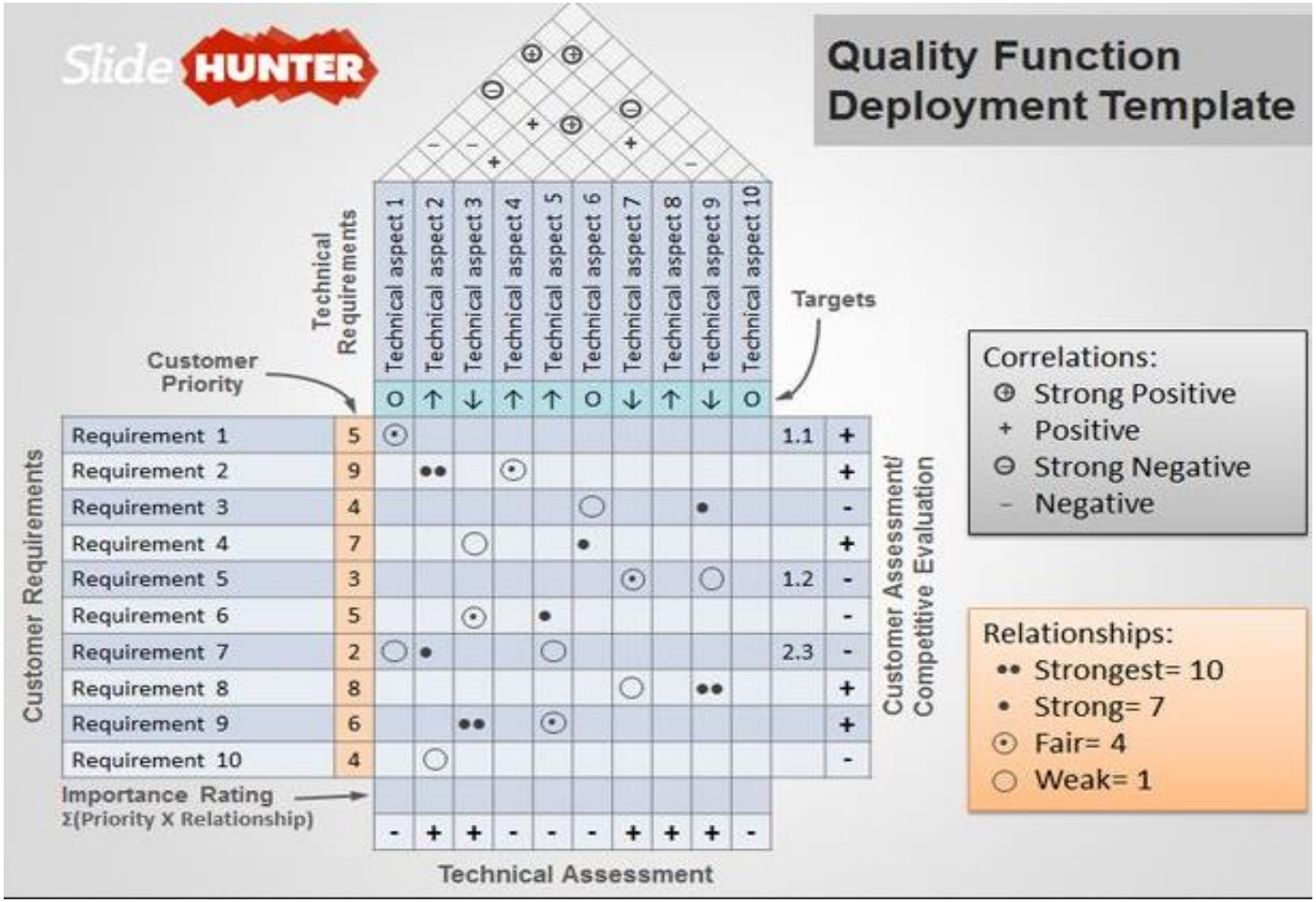

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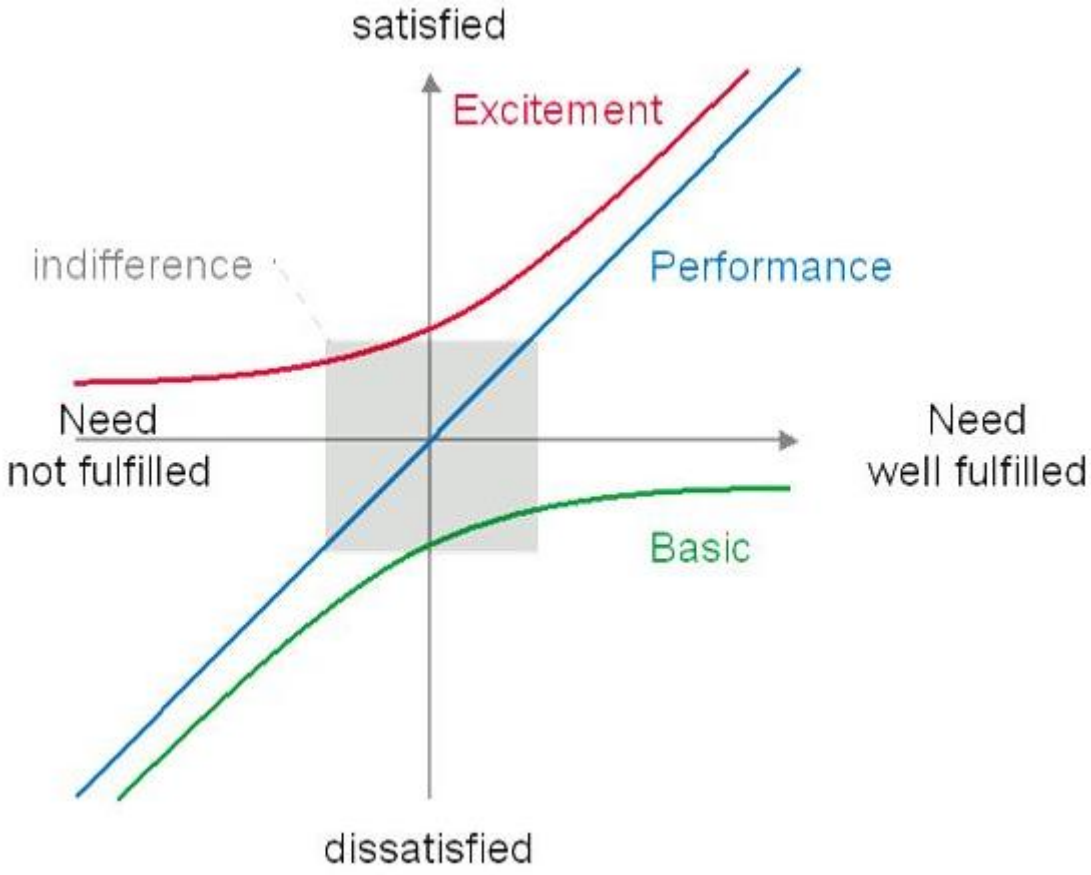

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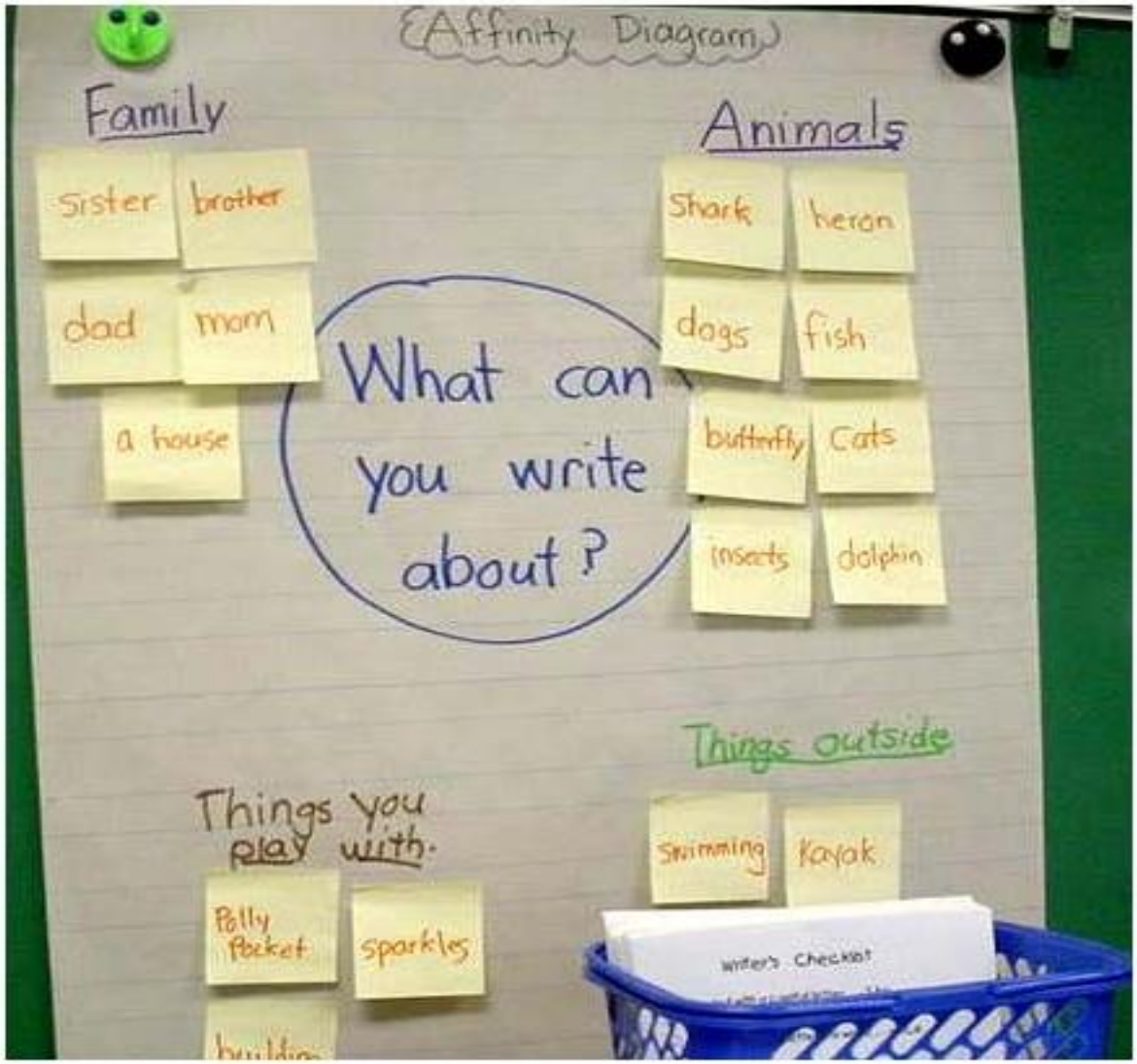

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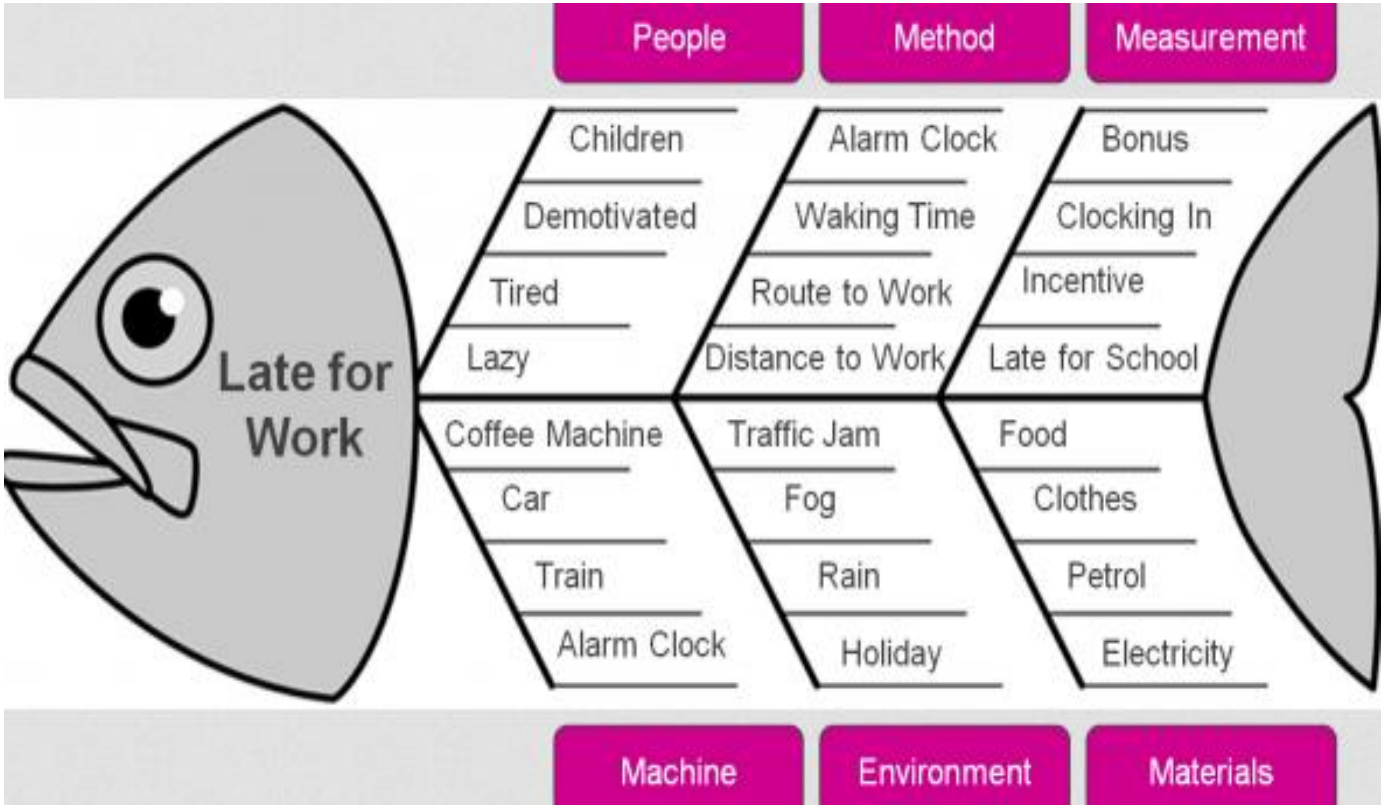

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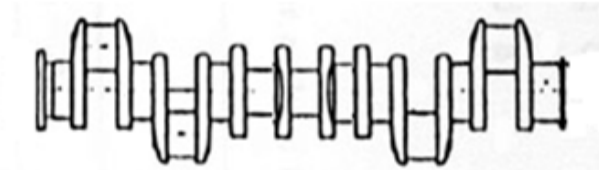
BEFORE

CRANKSHAFT DATA SHEET



									Job No.:	WO-ENG 0902		
									Description.:	Genset		
									Engine Model. :	Detroit Diesel 7163-7305		
									Shaft No. :	NIL		
									Engine No. :	16VA017311		
Measuring Point.:		**Basic Diameter**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Main Journal Dia.:	A	Max : 114.305	114.273	114.283	114.290	114.288	114.282	114.287	114.287	114.286	114.286	114.287
	B	Min : 114.262	114.277	114.290	114.288	114.288	114.287	114.292	114.287	114.288	114.280	114.286
Crankpin Dia.:	A	Max : 76.205	183 / 180	184 / 181	191 / 197	187 / 186	187 / 186	181 / 183	190 / 190	173 / 177		
	B	Min : 76.162	183 / 178	179 / 176	187 / 192	184 / 183	187 / 186	178 / 177	187 / 190	178 / 176		
Alignment.:			/	/	/	/	/	/	/	/	/	/

Main Journal Roughness Test. :	Ra: 0.20 µm	Main Journal Radius. :	NIL
Crankpin Roughness Test. :	Ra: 0.26 µm	Crankpin Radius. :	NIL
Main Journal Hardness Test. :	47.1 HRC		
Crankpin Hardness Test. :	49.3 HRC		
Crack Test / Magnetic Dynaflux Test. :	NIL		

Remarks. :

- All main journals and crankpins within tolerance.

Recommendation: All main journals and crankpins requires polishing.

Page 1

Page 2

Crankshaft | camshaft1 | camshaft2 | camshaft3 | camshaft4 | Line Boring | Conrod | Cylinder Head | Milling Boring

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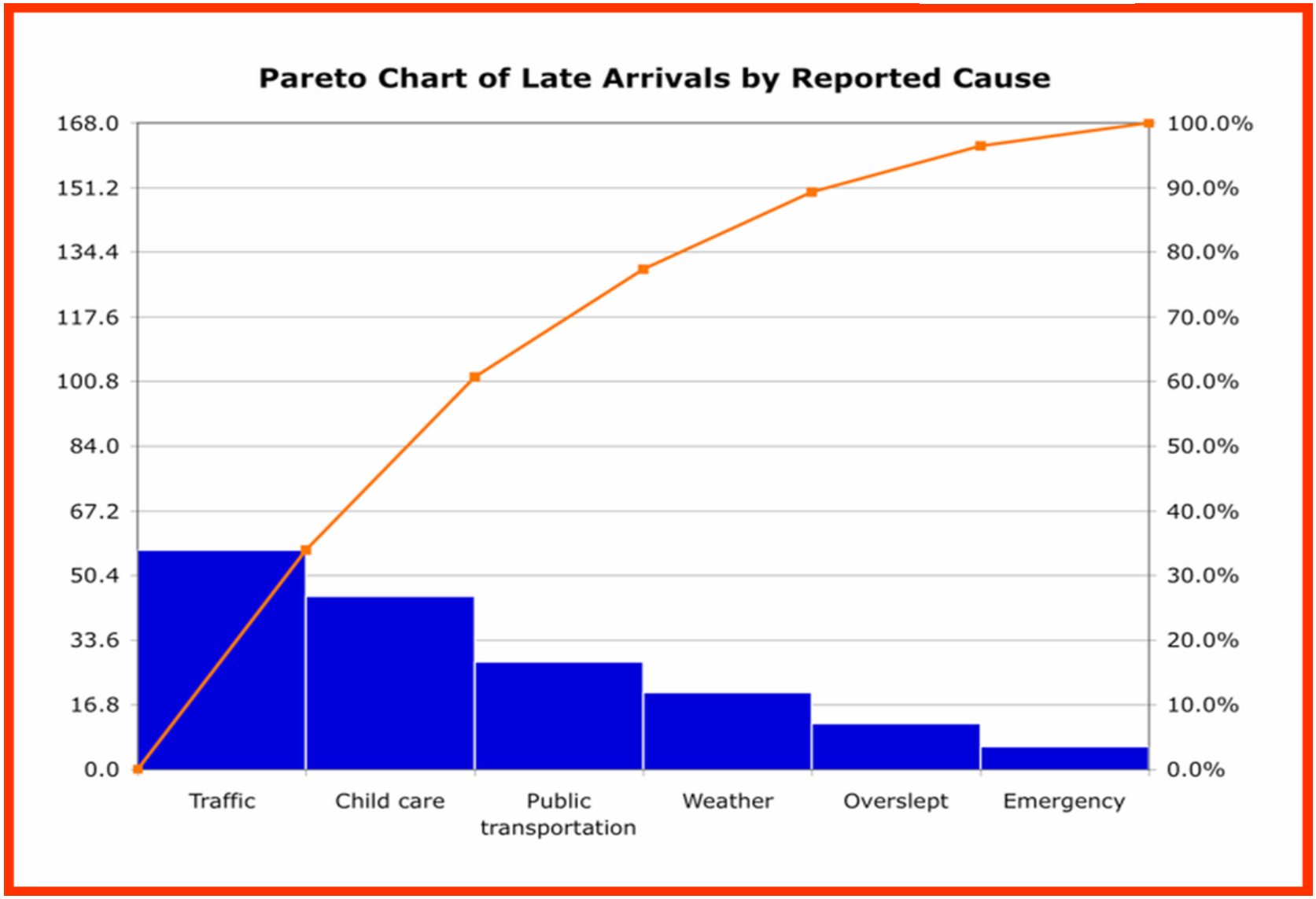

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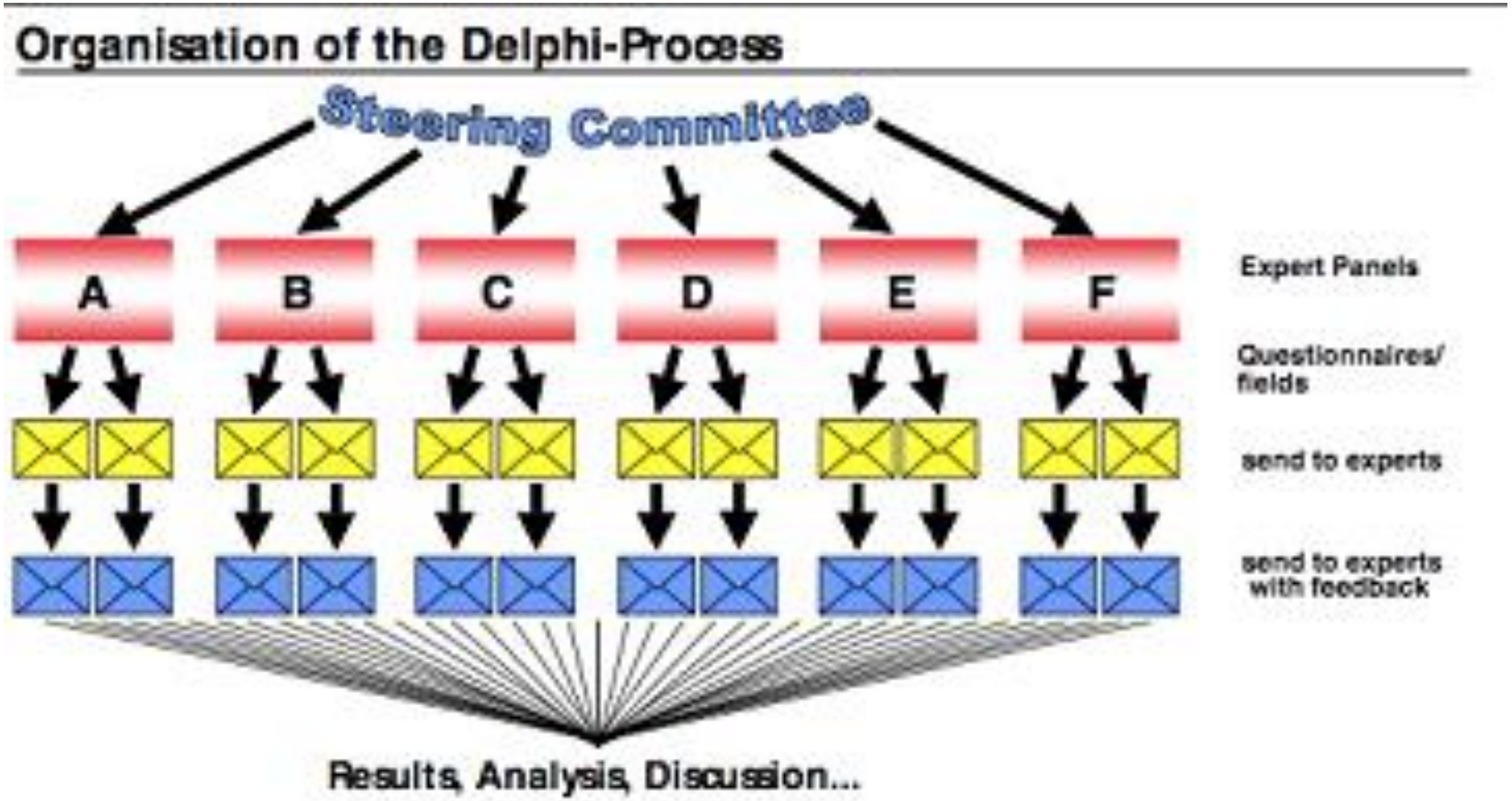

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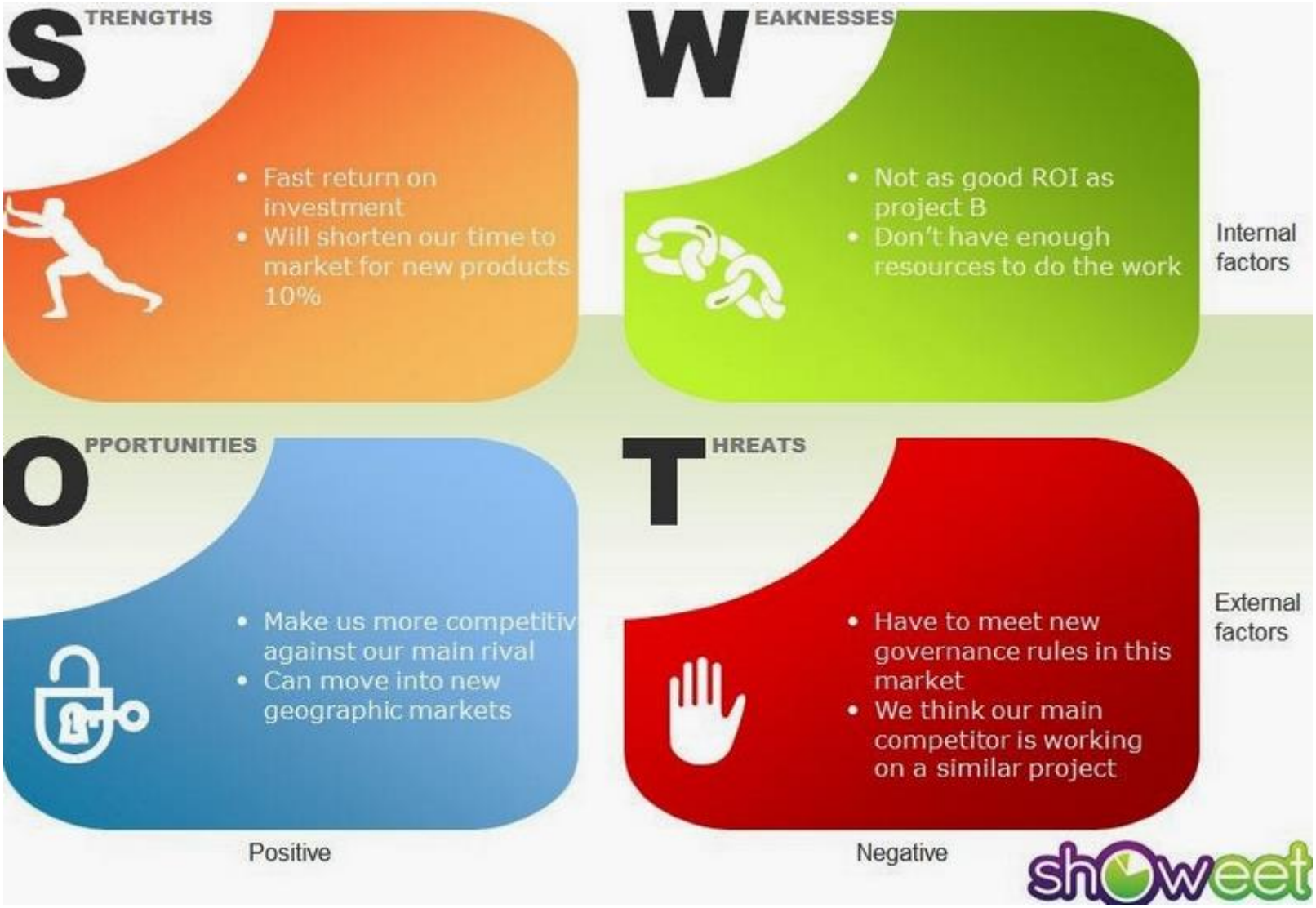

Tool	Generating Idea	Making Decision
Brainstorming		
TMAP		
QFD		
Kano model		
Affinity diagram		
Fishbone diagram		
Check sheet		
NGT		
Delphi technique		
Pareto chart		
SWOT		

Conclusion

- Conclusion #1
  - Students are able to apply management tools in various conditions.

Project Management

Lecture 2

Dr Mohd Yazid