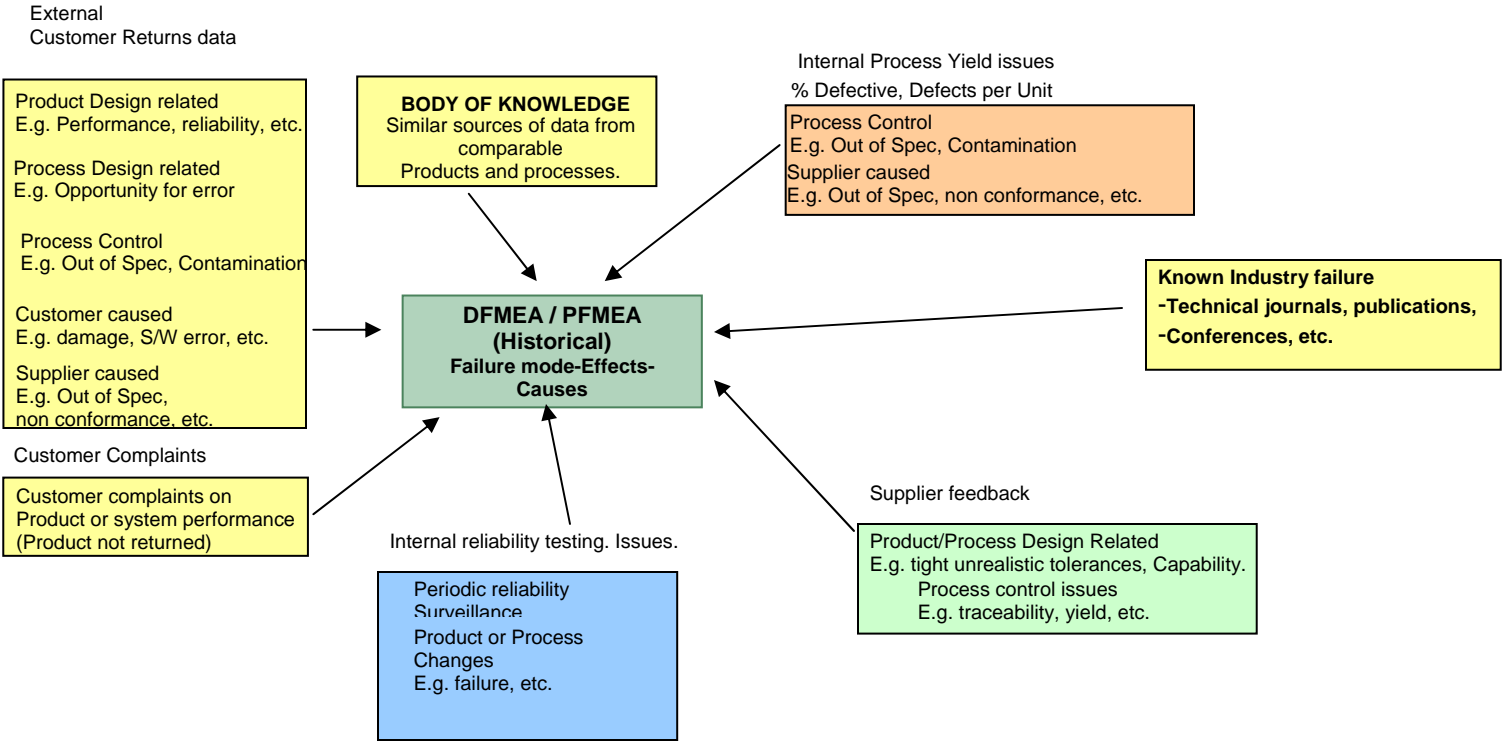


Sub Assembly Description / Process Step	Function	Failure Mode	Local Effects	End Effects	Severity	Causes	Occurrence	Current controls	Detection	RPN
Machining	Outside diameter to fit in cam shaft	Incorrect dimension (Over size)	Re work, re inspection, (added failure costs)	Does not fit at Customer Assembly	8	improper loading, tool wear, incorrect machine setting, incorrect measurement method, and Material Lot Change	7 (Arbitrarily assigned?)	Visual, Automatic gauging, Certificate of Analysis	5 (Arbitrarily assigned?)	280

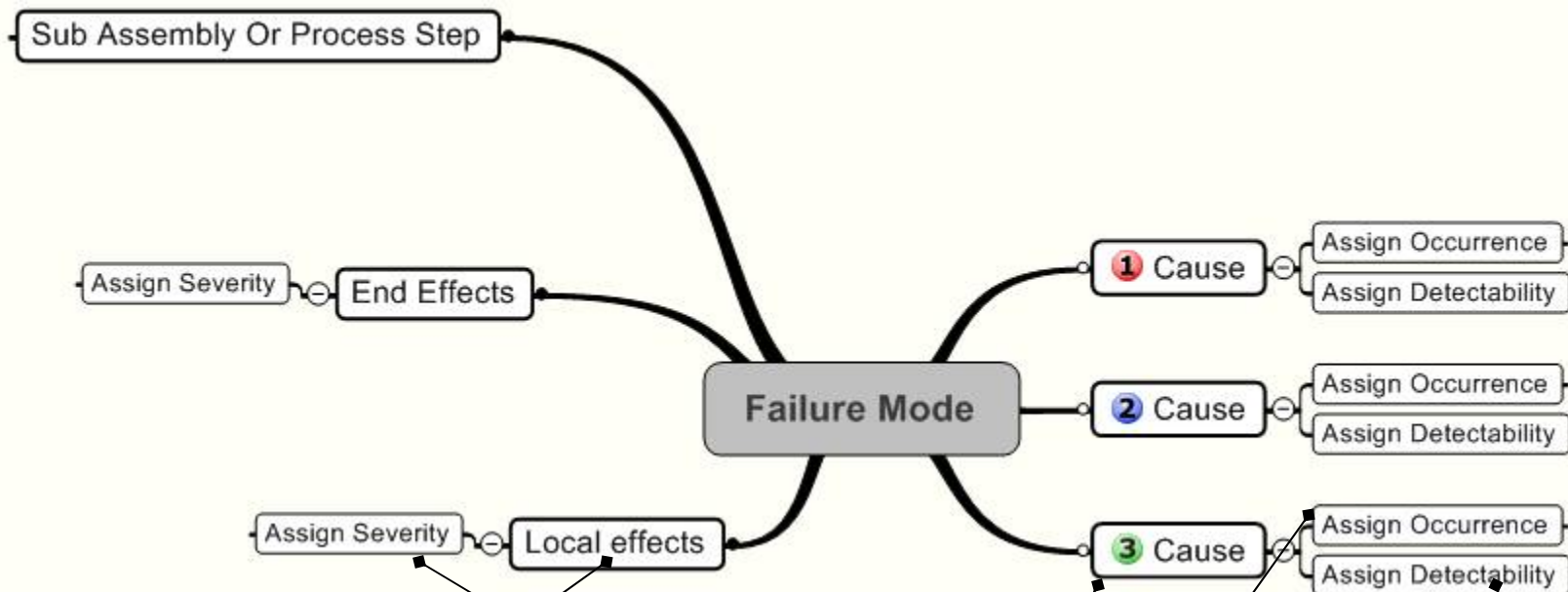
Partial FMEA table / table 1

Bundling of Causes!  
(What will I work on?)

# Sources of data



Collect data from various sources during FMEA planning. It is important to learn from historical knowledge and incorporate preventive measures in the FMEA.



Expanded mind map / Figure 3

Sub Assembly Description / Process Step	Function	Failure Mode	Local Effects	End Effects	Severity	Causes	Occurrence	Current controls	Detection	RPN
Machining	Outside diameter to fit in cam shaft	Incorrect dimension (Over size)	Re work, re - inspection, added failure costs	Does not fit at Customer Assembly	8	Improper loading	8	Visual alignment. (Opportunity for prevention using guided alignment)	7	448
						Tool wear	5	Tool Setter microscope every 100 pieces (Opportunity to set up SPC)	5	200
						Incorrect measurement	2	Automatic gauging	2	32
						Significant Material property differences	3	Verification of Certificate of Analysis Lot size 500 pieces	3	72

Expanded mind map contents populated into appropriate columns of FMEA table. See arrows as an example.

Note: The causes are not bundled. They are individually assessed in separate rows. Scores are assigned correctly and risks prioritized.