Appendix 13
p. 98, *The Missing Links* by Caroline Mondon (Industrial Press, 2016)
www.themissinglinks.info

Problem solving method

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Process steps	What	Methodology & Tools
1 **« CSI »**	In order to understand the issue and its severity. Collect factual elements on the circumstances in which the problem occurred where it has occurred (gemba), when it has occurred (real time) and using the actual parts / components / items / documents, etc….Use the actual / real data whether it is "good" or "bad" (genchi gembutsu).	Use 4W2HWD **W**ho detected the issue? **W**hat is the issue? **W**here? **W**hen? **H**ow did it happen / How was it detected? **H**ow many parts? **W**hy is it a problem? **D**id this happen before?
2 **Sort within 24 hours**	Sort any goods which could be at risk wherever they are in the supply chain. Protect the customer, analyze records and historical data to find out more factual details and better understand the issue.	Sorting procedure and specific sorting criteria. Analysis of records. Segregate non-conforming items (i.e. with visual identification, quarantine….). Communicate outcome of sorting activity to stakeholders.

3 **Compare**	Compare the condition in which the problem occurred and the condition in which it was not detected with the conditions for "good" / conforming product or service. The comparison helps to understand possible root causes (factor). Compare the standard conditions with the conditions in which the problem occurred.	FTA (*Factor Tree Analysis*), 5 Why 4 M 4 P List of possible root cause factors (Man, Machine, Material, Method, People, Procedure, Parts, Process…), associated control points, standards with tolerances for occurrence and non-detection.
4 **Reproduce within 5 days**	Reproduce the issue to verify the linkages between potential root causes and effect. Make decisions on corrective actions.	Test procedure / protocol and recording standards. Drill down root causes into smaller elements
5 **Summarize**	Summarize the findings from investigations into key elements related to occurrence and non-detection. Identify management elements to avoid re-occurrence.	LLC (*Lesson Learnt Card*) All documents related to investigation / analysis including visuals (photo of non-conforming part compared to "good" part, details of conditions….)
6 **Share within 10 days**	Share the learnings with stakeholders and train them to the new ways of working.	LLC (*Lesson Learnt Card*) Knowledge database, best practice sharing.
7 **Sustain**	Sustain the robustness of the new ways of working with updated standards and associated audits.	Audit questionnaire, control plan, FMEA, quality system.

Inspired by « *Logical Thinking–PDCA/FTA* » with permission from Valeo.

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