

THE PROBLEM WITH PROBLEM SOLVING

- WHY SUCCESS SOLVING IS AS IMPORTANT AS PROBLEM SOLVING.

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Problem solving is an effective and much used tool but it also causes people to feel blamed and guilty thereby damaging the work environment, and by only focusing on what is not working, businesses miss the opportunity to learn from their successes. By learning from a success it is possibly to repeat it and the solving process affirms wanted behaviour through appreciative inquiry in to actions and strengthens the work environment. Businesses must therefore balance between solving problems and solving success and this can be done by applying existing methods with reframed questions.

PROBLEM SOLVING AND LEAN

Problem solving is an inherent part of lean manufacturing and in this context it is used as a method where *"waste is removed from the process"* (Sobek & Smalley). One method for problem solving is the A3 tool (Figure 1) which many Danish companies use (e.g. LEGO, Novo Nordisk, Maersk, Lundbeck) and much literature has been written about this method.

A3 Systematic Problem Solving (SPS)		Problem No.	A3 Category	Department	Date	SPS No.
1	Initial Problem Perception					
2	Problem Clarification 1. The A3 reported & the investigation					
3	Point of Cause					
4	Countermeasures (Corrective)					
5	Cause & Effect (Fishbone)					
6	Cause Investigation Symbols for result: O: No recurrence, A: Countermeasures to the problem, X: Root Cause					
7	Countermeasures (Corrective actions)					
8	Sharing					

Figure 1 – The A3 form as used at Novo Nordisk. The A3 form is a tool to guide a person through the following process; systematic understanding of the problem, identification of plausible causes, root cause identification, countermeasure implementation to prevent recurrence and finally sharing of knowledge.

The purpose of problem solving is in the literature defined as:

... to understand and improve the system (Continuous improvement and learning - Liker).

and

"...Continuously strengthen the processes" (Sobek & Smalley)

and thus actions were taken to start requesting special support during start-up. 3 – A concern about new equipment was discovered and actions were taken to mitigate the risk.

This process led the department manager of the moulding department Bo Holm Jensen to conclude the following:

“We have to learn from our successes if we are to succeed... It is about creating a culture where we get the energy to mobilize every single person’s strengths in the improvement activities”.

The consequence of only solving problems is that all your focus is on reactively understanding and avoiding problems from recurring. But as the above example shows it is possible to strengthen and improve processes by reactively understanding a success and making it recur.

There is a third approach to process improvement which is to pro-actively choosing to improve a process without anything extraordinary has happened. So whereas both success solving and problem solving is a reactive approach, the pro-active approach is to take charge of the process improvement by being curious and not only wait for something to happen.

It is therefore necessary to view problem solving as one of three elements in Process Improvement with the other two being ‘Success solving’ and ‘Pro-active improvement’ (Figure 3).

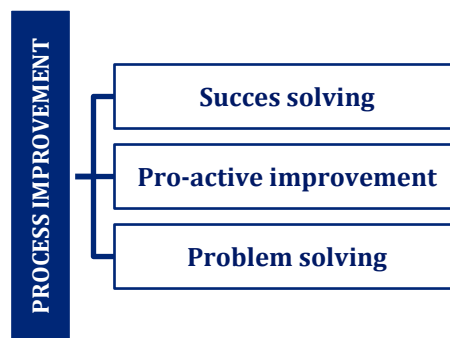


Figure 3 – The three approaches to process improvement.

So what is success solving?

THE RECIPE FOR SUCCES

Success solving focuses on understanding an unexpected positive deviation from the expected (Figure 4) with the purpose of learning what happened, and then changing the system permanently so the success becomes a new standard for the process.

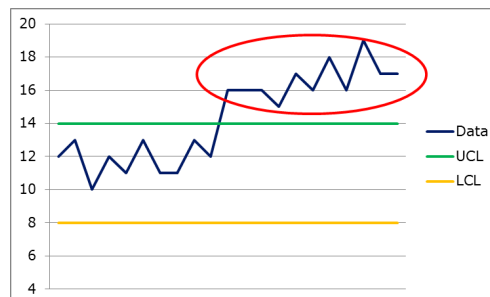


Figure 4 – A positive deviation from the expected

Much production equipment has a theoretical limit due to design constraints, but all equipment is a part of a socio-technical system where humans and equipment interact, and it is often in this interface that performance of the equipment is defined. Research has shown that about 70% of all problems in an organization are related to collaboration, and when it comes to human behaviour discussing the right behaviour is more giving than discussing the wrong behaviour, so the need for success solving is pressing and the potential for businesses is huge.

Another example is from a HR department where it was investigated how collaboration across countries could be improved and this was done by systematically analysing the examples of good collaboration (Figure 5).

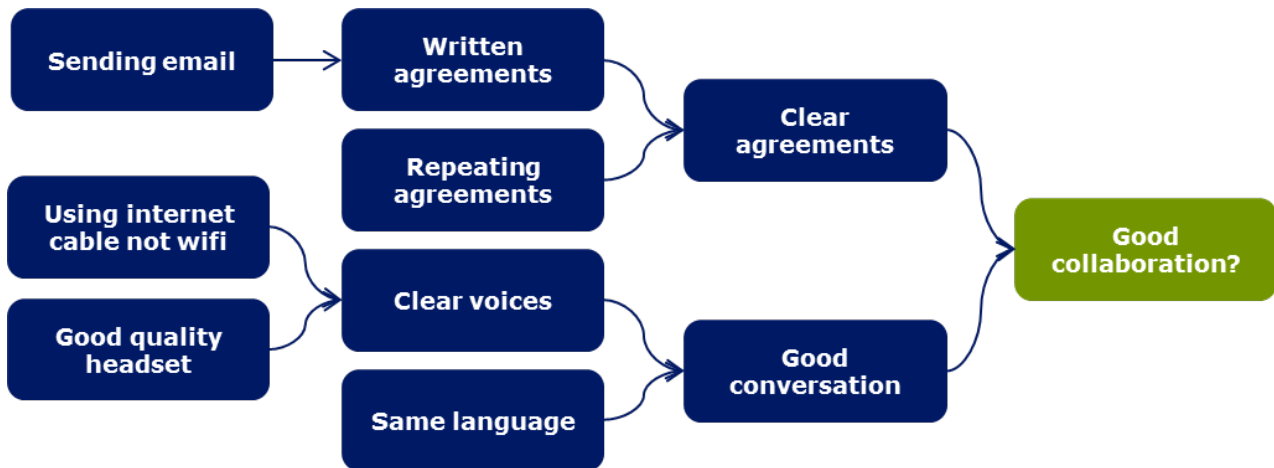


Figure 5 – The mapping of success factors for the good collaboration across countries.

There are also consequences for a company’s culture when choosing to do success solving. By recreating a success it is possibly to re-create the energy from the original success and people feel appreciated when someone asks sincere questions about an extraordinary result (Leduma, Whitney et.al, Cooperride & Whitney). Plus pointing attention to successes can help create a high performance culture because employees in positive focused cultures get more energy from coming to work and perceive the organisation positively (Smith, Plowman & Duchon).

ALL QUESTIONS MATTERS

The fact that the questions asked matters is known from research done by Karl Tomm that has defined four different categories of questions based on their intent and assumption (Figure 6).

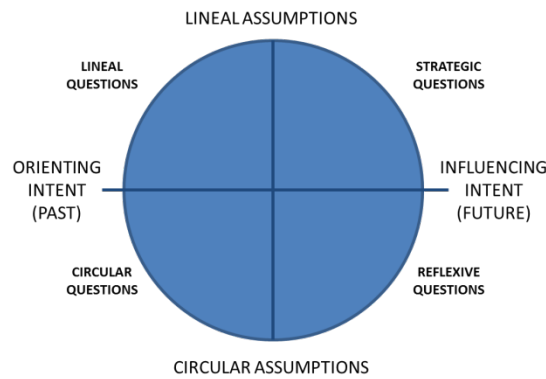


Figure 6 – Karl Tomm four categories of questions

The lineal questions are often associated with problem solving and clarification, but when these questions are directed toward a problem related to a person it can cause feelings of shame and guilt. But it is interesting what happens when the same lineal question technic is applied to a success, because then it becomes a positive investigation of a success which can lead to pride and feeling appreciated.

BALANCING CHOICE OF METHOD

This is not a criticism of problem solving because it is both necessary and useful; by choosing to do problem solving an organisation signals to the employees that it tries to improve their work environment by removing obstacles. In some industries problems must be handled e.g. in the pharmaceutical business or in companies that are ISO certified.

Plus if organisations choose to only focus on success/positive issues and suppress problems it can create a tense work environment where difficult issues are not welcome and make employees feel guilt when they bring a problem to attention.

The point here is that an organisation should choose its improvement focus and apply the method that is useful for them, but they should do this knowing the consequences related to choice of method.

No matter the choice of method it is necessary that an organisation makes someone responsible for the improvement processes and give the *mandate*, *time* and *competences* to do this. All the improvement approaches (Figure 3) must create learning in an organisation before they can be considered a success and all methods can fail in doing this, but if enough time, the necessary mandate and the right competences is assigned this risk of failing is mitigated.

LEAN NEXT LEVEL

This article is a result of a research project done at a Danish production site where the connection between appreciative inquiry and lean is trying to be established due to the need to add a human element in lean. The lessons learned from Toyota is the basis for lean but there is a difference between car manufacturing in Japan and injection moulding in Denmark so how do we take the best from lean and apply it in a different context? By solving success and understanding the production system as a socio-technical system hopefully

more knowledge is added and made ready for others to apply and test. Because if organisations want to become best-in-class they must understand how to engage their employees and understand how to earn their passion, ideas and creativity.

REFERENCES:

Understanding A3 Thinking - A Critical Component of Toyota's PDCA Management System; Durward K. Sobek II. & Art Smalley; 2008

Everyday Sensegiving - A Closer Look at Successful Plant Managers; Anne D. Smith, Donde Ashmos Plowman & Dennis Duchon; Journal of Applied Behavioral Science 2010 46: 220.

The appreciative inquiry summit - A practitioners guide for leading large-group change; James d. Ludema, Diana Whitney, Bernard J. Mohr and Thomas J. Griffin.; 2003

Appreciative inquiry - A Positive Revolution in Change; David L. Cooperrider & Diana Whitney; 2005