

Selling safety systems thinking

Connect business threats & problems to safety issues



By James E. Leemann, Ph.D.

During a recent occupational health and safety management lecture at Tulane, one of my students asked, “How do I sell systems thinking to my boss?”

My initial response centered on selling systems thinking in his boss’s terms rather than the student’s terms. Further elaboration led to discussing the importance of addressing the needs of the boss in terms of financial payback value — the language of decision-makers in organizations.

In my years of practicing systems thinking, I have found systems thinkers are not too dissimilar to safety and health professionals in promoting their approaches to dealing with problems. Admittedly, safety and health professionals are not inclined to use systems thinking approaches because, for the most part, they are not familiar with the methods. (The purpose of this column is to bridge this gap.)

Expanding on my student’s question, let’s assume a plant safety manager (let’s call her Deb) versed in systems thinking methodologies is faced with a significant increase in negative safety-related issues.

Additionally, Deb is aware the plant is suffering from precipitous decline in product manufacturing quality resulting in returns and reworking. Even though Deb has tried to sell systems thinking approaches to the plant manager in the past, he has always responded by saying, “Is it worth the plant’s time and resources to use systems thinking to tackle this problem?”

As Russell Ackoff wrote in his



1979 article, *The Future of Operations Research is Past*, “Managers are not confronted with problems that are independent of each other, but with dynamic situations that consist of complex systems of changing problems that interact with each other. I call such situations *messes*. Managers do not solve problems; they manage *messes*.”¹ More simply stated, a *mess* is a system of problems.

An open-minded inquiry

To understand the plant’s systems, Deb arranged to meet with the plant manager. To his surprise, Deb never mentioned *systems thinking* or one of her methodologies. Instead she questioned him as to what problems and threats he thought the plant and business were facing, and what goals and aspirations he envisioned for the plant to re-establish itself as a company leader. Over the next several weeks, Deb used the same line of questioning with operational, functional, and union leaders across the plant.

These interviews revealed how leaders coped with manufacturing issues, and their explanations for the decline in safety performance. With an inquisitive questioning style and showing genuine curiosity, Deb began to formulate the messes the plant manager and his staff

Who’s going to clean up this mess? Everyone!

were managing through the development of a *Systems Analysis*, *Obstruction Analysis*, and “*Telling the Story*” – *Mess Presentation*.

Working with a small cross-functional team, Deb undertook the creation of a *Systems Analysis*, which detailed the current state of the plant and its environment, how the plant operates, who is affected and how they are affected — without making any value judgments.^{2,3} Once completed, Deb visited with everyone she originally interviewed and others to validate her team’s depiction of the “current state of the plant and its environment.” As throughout this process, she avoided any reference to “systems.” During these interactions she asked if any other issues needed to be included in the current state description.

Deb and her team then undertook creating an *Obstruction Analysis*, which involved describing the characteristics or properties of the organization that prevent its progress toward achieving its goals or its resistance to change.⁴ Typical obstructions include discrepancies and conflicts. Discrepancies are differences between what an organization believes about itself and what actually is the case. Conflicts occur when progress toward one objective produces retrogression toward the others. Conflicting desires can exist within individuals or the organization, or between them.⁵ Again, Deb revisited with those she interviewed to share the *Obstruction Analysis*, without referring to it by name, to gain consensus on her team’s

work and to seek out any new issue that could lead to obstructing progress.

Once Deb and her team had an accurate understanding of the current state of the plant operations and the discrepancies and conflicts the plant's management needed to address, the team synthesized the information into themes that were depicted in a diagram of the *Mess*.

Picture worth a thousand words

The illustration depicted the differences associated with managers who emphasized safety as a priority and those who emphasized work as a priority. With this simulation of the *Mess*, Deb arranged a meeting with the plant's managers. She was able to tell a believable story of the crisis the plant will face if it fails to learn from its own experiences and adapt to environmental changes.⁶ In this case, "environmental changes" equate to the business environment. Deb was able to create a desire for change among the staff members. And she made sure that the story did not

assess blame or make people defensive.⁷

The illustration of the *Mess* was shared with the plant's employees to give them the opportunity to voice their opinions, provide input, and become active participants in the changes that were needed. The employees' growing lack of trust in management began a turn for the better.

So, instead of selling systems thinking, be a systems thinker. Don't spend valuable time promoting your tools or methodologies. Focus your attention on the goals and aspirations of those in decision-making positions. By satisfying their needs, you just might find their willingness to follow your approach to achieving their goals. Finally, the use of mess formulation allows you to discover the patterns of interconnectedness that are taking place in the organization's environment and will lead you during the overall change process.

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1 Ackoff, R.L. 1979. The Future of Operations Research is Past. *J. Opl. Res. Soc.* 30.2, 93-104.

2 Ackoff, R.L. 1981. *Creating The Corporate Future – Plan or Be Planned For*. John Wiley & Sons. New York, NY.

3 Gharajedaghi, J. 1999. *Systems Thinking: Managing Chaos and Complexity – A Platform for Designing Business Architecture*. Butterworth Heinemann. Boston, MA.

4 Ackoff, R.L., J. Magidson and H.J. Addison. 2006. *Idealized Design – Creating an Organization's Future*. Wharton School Publishing. Upper Saddle River, NJ.

5 Ackoff, 1981. pp. 94.

6 Pourdehnad, J. 1992. *Interactive Planning: Its Impact on the Process of an Organization's Development*. Ph.D. Dissertation. Wharton School, University of Pennsylvania.

7 Gharajedaghi, pp. 127.



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