



Applied Systems Thinking

Use the Power of Structure to Create Lasting Change

**From the AST Library
Leveraging Change
Article 4**

Using Systems Thinking to Facilitate Product Launch By Michael R. Goodman

Some years ago I was approached by a California-based software firm focused on electronic design automation. Their software enabled hardware engineers to efficiently design electronic devices for computers. Among their key clients were global computer design and hardware companies such as IBM, HP, Intel, and Motorola. They wanted help with problems related to the roll out of their new products and ramping up of sales for these products.

Specifically, they wanted assistance in developing a clear intervention strategy and action plan for addressing their Time to Volume (TTV) performance, a measure that tracked the sales performance of their new software products.

As pictured on the next page in **Diagram 1-2**, the TTV was defined as the time in months the product took to reach their targeted or forecasted sales volume. If the actual TTV was longer than the expected this was a problem. It meant that their new products were not “taking off” and that they were not able to shift their client base to the next generation software.

Unfortunately, their data for the past 24-36 months or so of new product launches indicated that not only was the TTV of the new products much longer than planned but they actually were not reaching the expected sales volume at all. This was the very serious business condition that prompted the request for my help. The obvious focusing question was: “Why was the TTV of our new products failing to meet expectations?”

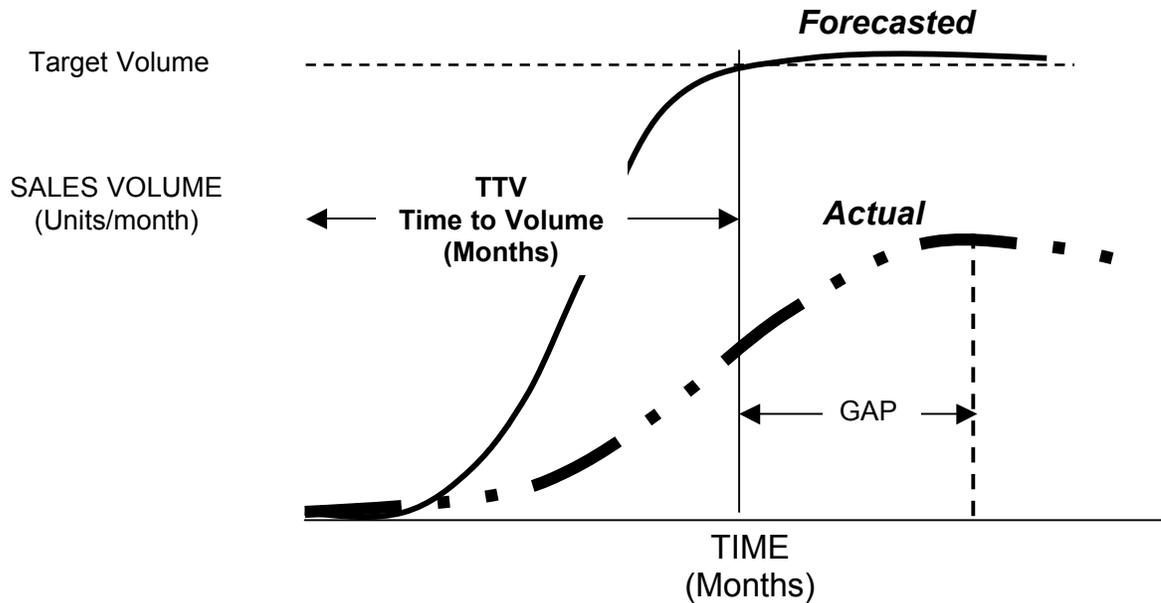


Diagram 1-2

The executive VP that contacted me was convinced their TTV problem was systemic in nature and required a new and different approach for its ultimate resolution. He also felt that the field (sales, marketing, and service) and the “factory” (software developers) needed to work together efficiently and leverage their resources if the TTV issue was to be resolved.

At this point the factory was sure that the field was not supportive of the new products and never even seriously tried to sell them to their key customers. The field pointed the blame at the factory as being out of touch with real customer needs and unresponsive to the field’s suggestions and feedback about the new software. There was a lot of blame and finger pointing going on between the two entities. Finally, the VP wanted his senior managers to recognize, own and resolve the TTV issue on their own and break the dependency on top management to fix the problem for them.

I collected some data and gathered some stories through phone interviews and agreed to take on the assignment. The intervention developed naturally into three phases.

The **first phase** was the **design and facilitation** of a two day offsite of all the top senior managers (60 people) around the TTV issue. Here the intent was to get collective agreement about what the issue was and NOT to try to solve it. It was also intended to introduce many of the tools of systems thinking to the senior managers and have them apply the tools to the issue in cross organizational teams while they were all together. It was intended to be a learning process for everyone.

The **second phase** was an **intensive mapping process** around the TTV issue starting with the data generated at the offsite with a smaller task force of representatives from the large group. A key design element here was the fact that the members developed the system maps with only minimal assistance from the outside consultant, myself in this case. My role was to teach and show them the process and their job was to apply it with some coaching support from me. The strategy was to develop internal capacity in systems thinking for the company through "learning by doing" on a compelling business issue as well as generate deeper ownership of the analysis.

An example of one of the archetype stories that the team developed is shown below. A fix that backfires, it is titled "The Field Isolates the Factory." It captures how the field responds to new products that they perceive as being flawed or a poor fit for their customer's needs. The field's responses in fact isolate the factory (software designers) from the customers (marketplace) and longer-term erode the factory's ability to develop high quality and appropriate products for the field's customers.

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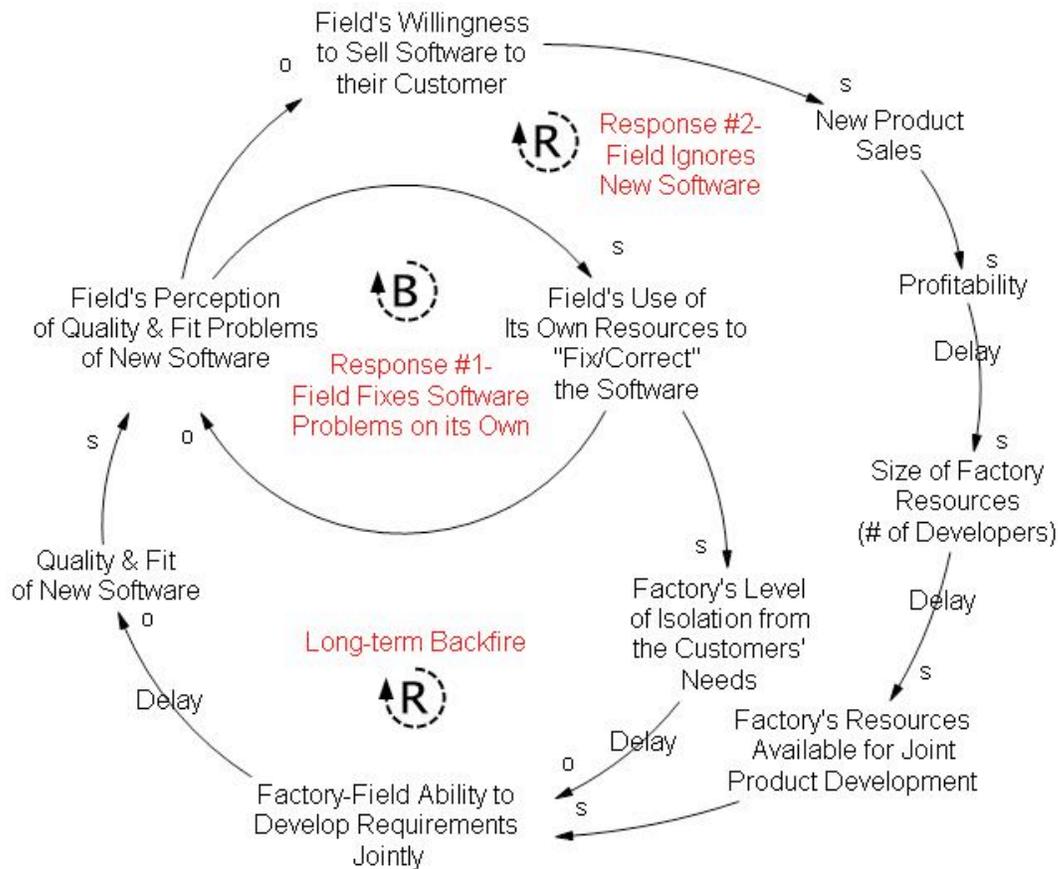


Diagram 2-2 Fixes that Backfire: Field Isolates the Factory

The **last phase** focused on **developing and implementing "systemic" recommendations**. Here it was again the task force's job to step back from the mapping process systemic and see what emerged related to higher leverage "fixes" to the TTV problem. They identified key mental models and applied interventions to the diagrams they had generated. They then prepared an executive presentation for the VP and fellow senior managers detailing their analysis and making the systemic case for interventions.

The process described above generated a variety of impacts in different ways along the way. For one thing the process and tools of systems thinking both broadened and deepened understanding and ownership of the TTV problem across the field and factory. The senior managers after two days together recognized there was a lot more to the story that involved all parts of the organization and that there was need for a system wide, long-term approach. Blame was no longer the easy way out.

One simple indicator of this was a poll I took at the beginning of the offsite and then repeated at the very end. Just as we began, I asked for a show of hands from the participants as to whether they thought they knew what the TTV problem was and how to fix it. About 80-90 percent of the hands went up indicating they were pretty sure they knew what the cause was and what the solution was. I then repeated the same questions at the very end of the session and the results were quite startling. No one raised their hand! From my perspective after two days the group truly came to "admire" the TTV problem. They were now open to looking much further down the iceberg. There was no simple obvious fix and everyone was implicated. This was progress.

Another impact was the fact the senior managers initiated their own process to work the issue. It was they who chartered a task force that included thought leaders from the field and the factory and launched the second phase --- not the VP or the consultant.

Additionally, a critical part of the whole process was that "undiscussables" and "sacred cows" were finally surfaced publicly. Apparently this had never really happened before at least in a larger group setting. The use of loops and archetypes made it safe for "difficult" stories and "truths" to be shared without the typical finger pointing or defensiveness that often happens around high stake issues. By way of example, the task force labeled or headlined each of their archetype stories (there were eight to ten different archetype stories that emerged from the analysis) with descriptive and insightful themes such as:

- "The Field Isolates the Factory"
- "Heroism Undermines the Product Development Process"
- "Divided We Fail"
- "Planning by Panic"
- "Poor Product Fit Gets Worse"

The identification of the mental models from both the field and the factory that lay behind many of the actions and reactions captured in the loops were also extremely telling.

The bottom line that emerged out of this systems thinking application was that there was a significant shift within the organization from “who is responsible for this?” to “how are we all contributing to the problem?” The archetypes and mental models revealed a wider and deeper story that touched all parts of the company and made the compelling case why it was everyone’s problem to solve. The task force was able to identify a number of tactical and strategic recommendations including an early warning and measurement system that were readily supported by all the senior managers.

This article was translated into Dutch and published as a chapter in this recently published book: *Systeemdenken (Dutch), Holland, 2006* by Bill Bryan, Michael Goodman, Jaap Schaveling, Den Haag;

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