XYZ Company’s Problem with Stockouts

- XYZ Company was losing sales due to stockouts…management had roughly estimated that more than $1 Million per year of sales was being lost because customers wanted to order items that were reflected as being in stock (on their website), but were NOT actually in stock.
- As you can imagine, not only would the customer NOT get their immediate need met, they would often ALSO be frustrated at the website “telling” them a product was available but then finding out it actually was not.
- And of course this problem ALSO undermined the company’s overall strategy and value proposition of being the ONE place to go for ANYTHING its customers needed.

The first step was to really understand the problem

Albert Einstein said: “If I only had 60 minutes to solve a problem, I would spend 54 minutes (90% of the time) DEFINING it…and 6 minutes (10% of the time) actually SOLVING it.”

- We led the team through the building of a “problem tree”…a picture of all the possible causes of “lost sales due to stockouts”, arranged in the form of a precedence diagram to show how certain problems caused other problems. (This is similar to the idea of a “fishbone”, or Ishikawa, diagram, but without preconceived categories of problems, AND, while a very good initial one can be built with the collective wisdom of a knowledgeable team, it must also be validated with real data.)
- The team estimated the frequency with which certain problems occurred, and then collected some data to see if their estimates were reasonable.
The Big Opportunity Hidden in Plain Sight (New York City retailer referred to as XYZ)

The following picture shows the Problem Tree for “Lost Sales Due To Stockouts”.

The middle “branch” of the tree, “vendor won’t sell us something”, was determined to be the biggest reason for lost sales due to stockouts, and so it was explored in great depth.

“Tree” – Causes of Lost Sales Due to Stockouts
The Big Opportunity Hidden in Plain Sight  

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As we got deeper into the tree, a “curious” problem was discovered...the Vendor’s ACTUAL catalog numbers did NOT match what XYZ showed on their internal systems as vendor catalog numbers. As we began to ask the team questions about this curious problem, here is what was discovered...

**XYZ’s systems could NOT handle many of the vendor catalog numbers, for two reasons:**
- In some cases, the vendor catalog numbers were simply too many digits...in a particular field in XYZ’s internal systems, numbers of only 12 digits could be handled.
- In other cases, the vendor catalog numbers had special characters in them, like – or /, and XYZ could not handle these special characters in that same field in their internal systems.

**But what was even more curious to us was the way XYZ had chosen to deal with the internal system issue:**
- We asked: “How are you dealing with these two problems with vendor catalog numbers?” And the team said: “We have a procedure in our Data Entry department to convert them to our own version of the vendor’s catalog number that would closely approximate the vendor’s number. For example, we remove special characters altogether, and if the vendors number has too many digits, we only use 12 of their digits. (At first glance, this solution sort of seems to make some sense...XYZ Company certainly thought it did, and had been doing it this way for many years.)
- We then asked: “What percentage of Vendor catalog numbers have one of these two problems?” And after a little data gathering, the team said: “About 50% of them.”
- We said: “HOLD ON A MINUTE! You mean you actually CHOOSE to use “wrong” vendor catalog numbers for the 50% of your products that COULD USE EXACT numbers immediately?” (i.e. the ones that had neither of the data field limitations). (Recall too that this would have amounted to WRONG numbers on about 75,000 SKUs!) And the team said: “Yes...we want to have standard practices in our Data Entry area, instead of two sets of practices.” (Notice that this was an attempt to improve a functional area rather than the end-to-end process and its results!)
But there was still one more very curious thing about this situation:

- As we were working with the team to decide which problems to prioritize for immediate Quick Win efforts, they prioritized this vendor catalog number problem as LAST ON THE LIST!
- We then asked: “Who uses this number?”. And the team said: “Sales people, warehouse and shipping people, buyers who deal with vendors, customer service people, and accounts payable people.” We said: “In other words, practically EVERYONE, right?”. And the team said (sheepishly): “YES, it seems so!”.
- We then asked: “Do you want to change your votes on which issues to prioritize for immediate Quick Wins?”. And the team said: “OF COURSE!!”.
- Once the team understood the “ripple effect” of this problem throughout the company’s end-to-end sales and procurement processes, they quickly saw that it was VERY IMPORTANT to fix right away.

And it turned out to be VERY EASY TO FIX!!!

- It only took 10 hours or so of programming to fix the data field problem in XYZ’s internal systems.
- And consider how easy implementation was: All they had to do in the Data Entry group was to UN-IMPLEMENT…i.e. STOP…their practice of converting vendor numbers. And all they had to do with people throughout the company was let them know that vendor numbers going forward would be reflected EXACTLY on XYZ’s internal systems.
- Note: By the time this new solution was actually implemented, XYZ Company no longer needed our help (which is a plus for XYZ Company). But it also means that we are not sure of the ultimate effect this fixed problem had on “lost sales due to stockouts”. All we know is that the team AND management were very confident it would have a significantly positive impact!!
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Following is another picture of the “Problem Tree” with the red boxes showing the “ripple effect” that the vendor catalog number problem had on other problems...with this overall chain of problems ultimately causing a significant part of “Lost Sales Due To Stockouts”.

“Tree” – Causes of Lost Sales Due to Stockouts
Some critical lessons from this story

- XYZ Company totally underestimated the impact of what seemed to be a small problem, because they had NOT considered its impact on their end-to-end processes.
- Furthermore, XYZ Company actually CAUSED the problem to be EVEN WORSE than necessary by instituting a policy to have standard…flawed…practices in the Data Entry department (a functional rather than end-to-end process orientation).
- Furthermore, once the problem was clearly understood, it was EXTREMELY EASY to fix!
- And finally, implementation was easy because all XYZ really had to do was STOP certain procedures…it turned out to be UN-IMPLEMENTATION!

Our role in this project

- Our role was to provide a “process” for a small team to follow, to clearly define the problem, support their diagnose with real data, and zero in on the most important root cause to fix first.
- The reality is that mostly what we did was to ask them the right series of the right questions…which really amounts to giving them a new “thought process” for finding and solving problems.
- Once the root cause was clearly found and supported with data…and the solution identified…the team needed no further help from us to implement the new approach and begin to drive greater results.