



Problemsolving 101

By Dave Garwood

Problem identifiers are a dime a dozen. Problem solvers are an endangered species! Why? Procrastination seems to be a major root cause. "If you laid all our managers end to end, they still wouldn't reach a decision," growled an irritated employee. Other frustrated managers chime in ... "Expecting a decision on which solution to use to fix a problem around here is hopeless. Problems hang in limbo while we have meeting after meeting in endless debate." "We just can't seem to make a decision, pick a solution and implement it. Our core competency is paralysis through analysis. We can't make a decision and take action to fix the problem." "We had the same problem last year. We couldn't agree on a solution. Turf wars cloud the issue. Every alternative was shot down. So, here we are one year later and we have the same unsolved problem. And the same painful consequences." The problems linger on for weeks or months while a futile search for solutions leads to nothing happening. Frustrations intensify. There is a proven process to quickly select a solution and put the problem in the rear view mirror. Before discussing the process, agreement on four issues is necessary. 1. A best or even a good solution does not likely exist. All of the alternative solutions have significant downsides. Some are just worse than others. 2. The alternative solutions will likely have a negative impact on someone's key performance metric. Individuals will have to decide to do what is best for the business, not what is best for them. Most people call this playing "team ball." 3. The worst decision is no decision. This option must be avoided. 4. Decide who is going to be responsible for implementing the solution – last. First, decide what to do, then how to do it and lastly who is going to do it. Remember WHAT, HOW and last ...WHO.

A Guaranteed Path to Success

Step 1: Agree on the problem. Do not start identifying solutions until reaching a consensus on problem definition. Here's an example: Security Manufacturing sells and manufactures Model 101 electronic instruments. They sell about 500 units a year. The customers can select several options – 1 of 10 power supplies, 1 of 20 transmitting frequencies and 1 of 5 output displays. Some options are much more popular than others and each option requires a unique set of parts. The purchase part lead times, including raw materials, range from 2-12 weeks. Two weeks are required to fabricate parts. Final assembly requires 2 weeks. Therefore, the total time (time fence) to buy material and make the product is 16 weeks. They must deliver the instruments 3 weeks after receipt of the customer order to be competitive. It takes longer to make the product than the customer is willing to wait for delivery. That's the problem. Security is searching for a solution to simultaneously keep the customers happy and cost effectively deliver these products. Excessive engineering changes, short runs, poor food in the company cafeteria and limited parking lot spaces are valid concerns for a few individuals, but don't let the discussion focus on solving world hunger! Limit the scope of the problem definition.

Step 2: Identify alternative solutions. Once the problem is agreed upon, start listing all the potential solutions. Toss all possibilities out on the table, even if at first blush they



appear not to be feasible. Leave no stone unturned! The TQM rules of brainstorming apply here. It's too soon to pass judgment and discard any solutions. Here are a few alternative solutions to Security Manufacturing's problem: 1) Build all 1000 products (10 X 20 X 5 = 1000 option combinations) to a forecast and maintain some of each in finished goods inventory. 2) Forecast the 35 (10+20+5) options independently and maintain an inventory of parts. Then final assemble after receipt of the customer order. 3) Forecast only a few popular products and have those available in inventory for 3 week delivery. Make all of the other products to order, requiring a 16-week lead time from the customers for "specials." 4) Eliminate several of the options from the catalog, i.e. don't tease the customers and the sales force with expectations that we never planned to meet. This will reduce the number of products (or options) to forecast and keep in inventory. 5) Build all products after receipt of order, i.e. 16-week customer delivery lead time on all orders. 6) Slash the lead times and drive the time fence to less than 3 weeks. Then build all 1000 products to order with a 2-week delivery lead time. 7) Do nothing. What are the chances everyone will agree on a single alternative solution? Zero! Each solution will have pros, cons and risks. It's important for everyone to understand the pluses, minuses, risks and impact of each. It is also important for them to be objective and not become a "champion" of a single solution. This is the debate phase of solving problems. At Security Manufacturing, the reactions to the proposed alternatives were: Alternative 1 would require a substantial inventory investment and likely result in some obsolete inventory. They have a potential of 1000 SKUs and only sell a total of 500 units per year. Obviously, some of the 1000 SKUs will not be sold, but which ones? The CFO is wincing. Alternative 5 would likely drive sales to zero. Customers won't wait 16 weeks. Alternatives 3 and 4 would require some agreement on criteria for elimination of some options. The risk is not servicing some market needs. Lots of growling from the sales staff about these alternatives. Alternative 6 was the sales department's unanimous choice. The manufacturing folks were very skeptical of the likelihood of this happening. They doubt that the suppliers will cooperate. Alternative 2 seems to be a good compromise solution. Inventory would be maintained in a flexible state. A new "lean" manufacturing process would be required to cost effectively build small lots to order. Security has always been a ship from stock company. Costs were minimized with long production runs. Sales is not comfortable forecasting options as opposed to products and no one else wants the forecasting job! Costing, pricing, forecasting, manufacturing process and order entry without SKU numbers draws concerns from several key players. This would be a very different way to run the business for Security Manufacturing. None of the alternatives have unanimous support. Security is on a path to choose Alternative 7 by default! While Security Manufacturing has identified several solutions, none of them are acceptable to everyone. This is normal. During the debate phase, anticipate different (and usually emotional) points of view on each suggestion. In fact, encourage "creative conflict" while simultaneously avoiding "destructive conflict." Here are the key behaviors to facilitate creative conflict:

- No personal attacks. Focus discussion on issues, not individuals. As Stephen Covey suggests, "seek to understand before being understood."
- Discuss each alternative on its own merits. Do not try to determine a 'best' solution during debate



- Avoid hidden agendas. Problem resolution will be hindered if personal gain is allowed to be a driver.
- Don't try to determine "who" would be responsible for implementation of each alternative. Trying to decide who before how often distorts the objectivity of reaching a consensus decision on the solution. This is the "how stage." We are seeking an alternative that is best for the business, not what is best for individuals.
- Be sure to list "do nothing" as an option. This is the default if we do not select a solution and act on it. Talk about the consequences of "no decision." The results will be exactly what we are getting now. It will be business as usual. And as Dr Phil would say, "How's that working for ya?" The goal is to reach a consensus and get everyone working as a team committed to the consensus solution. My friend and mentor, the late Oliver Wight, had a great expression – "we must choose the least worst choice."

Step 3: Stop the debate. Draw the decision line. Sense when the discussion is degenerating into a "thrashing stage." That is the clue that it is time to stop debating and make a decision. After listing all of the alternatives and discussing the impact of each, ask if there are anymore. If not, it's time to cast ballots. The polls are closing. It's decision time. The only wrong choice is no choice – Alternative 7.

Note: Consensus does not mean 100% agreement. Many individuals will not get their way. Tell them to get over it. Pick one and move on. One approach is to use the "last fighter standing" method. Keep the debate going until only one is left standing. Stamina, not brains drives the decision. Not good. Heartfelt accountability for effectively implementing the solution will be lost. If the discussion of alternative solutions is done in an open, non-threatening, objective manner, the "least worst alternative" usually surfaces. A consensus is reached. But sometimes a leader must step forward and pick one. The other members then must decide to play ball or go help another company. It is time for everyone to pull on the same end of the rope.

Step 4: Commitment. Visualize this. The quarterback patiently listens in the huddle to input from the other players. All have different ideas for the next play. With the 30 second clock winding down, the quarterback decides. A long pass to the end zone. As they break huddle, the wide receiver mumbles, "I ain't running clear down there. It's 70 yards and I'm tired. Anyway, I don't think he can throw it that far!" The wide receiver just let us know he wants to watch the game from the sidelines and wear a different color uniform next week. We need everyone committed to the chosen play – on the field or in business. We can't have 11 quarterbacks. Once an alternative solution has been selected, everyone must execute with dedicated conviction. No looking back or second guessing. This approach to finding a solution and solving problems works every time. Guaranteed. Stop the filibustering and decide to decide!