

## /// Advanced Visual Management

Many organizations today understand the power and the advantages of Visual Management and are beginning to implement varying aspects of the technique into their operations and processes. At *X-Stream LEAN*, we have been proponents of Visual Management for many years. We've seen the power and the potential that this technique can bring to bear in helping organizations become World-Class. We believe so strongly in this technique that we have developed what we consider an Advanced Visual Management methodology. For example; Advanced Visual Management would enable a person completely unfamiliar with your organization to walk off the street and within 15 minutes be able to determine precisely who is ahead, who is behind, who needs material or information, and who needs assistance without ever asking a single question. If your visitor can accomplish this task successfully, you have truly implemented what we consider Advanced Visual Management.

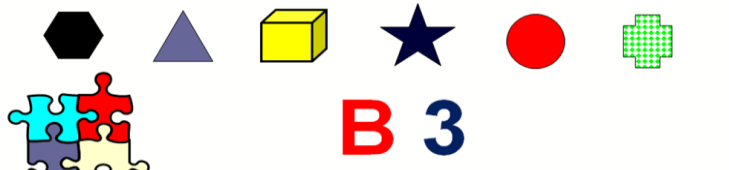
Advanced Visual Management begins with a strong Five S Plus Safety program. An organized workplace is critical to ensure that the people who are doing the work and the management team overseeing the process can immediately see when something is not functionally correct or is abnormal. A standard work procedure and a process that is in control are also essential in order for the workers and for management to understand what is happening and whether what is happening is what is intended. The Five S Plus Safety system also establishes the discipline needed to make the rest of your Advanced Visual Management system work.



**VERY Few Words;  
Just Information...LOTS of Information!**

Advanced Visual Management is based upon a clear and precise presentation of all workplace information and data. The implementation of this technique requires identification of all workplace ambiguities: situations or issues that are unclear or uncertain and that deprive your employees and management team of a clear picture of what is occurring in their process or operation. You also have to implement specific signals that identify specifically who is responsible for an action and when that action should take place. Your work should be designed to immediately identify all problems no matter how trivial. With Advanced Visual Management, you most assuredly have to sweat the small stuff! An organization implementing Advanced Visual Management must have a culture where everyone in the operation understands and accepts responsibility for problem identification and resolution. The “Not My Job” syndrome is the kiss of death for an effective Advanced Visual Management implementation. The organization must also develop a zero tolerance for repeat mistakes. Advanced Visual Management requires that the work instruction and process status information be presented clearly and effectively in critical locations. This information should communicate to every person the past, present, and future data they need in a visual and /or a graphical format. Advanced Visual Management requires you to identify not only what information is critical, but to give considerable thought into how it is presented. Abnormalities and non-conformances must stand out immediately!

To truly understand the power of Visual Management, consider the example of a massive spreadsheet consisting of five or more pages of data. Think of how long it would take for you to analyze and truly understand what those five pages are telling you. Now think of those pages condensed into a graph, chart, or some form of a visual representation and how quickly you can analyze the picture as compared to looking at the raw numbers and words themselves. One need only try to remember the numbers from a spreadsheet from last week as opposed to remembering a picture you last saw several years ago. If we can understand why visualization and visual management can be so powerful at representing data, it should be easy for us to reflect upon how easy it would be for us to begin to manage our businesses using the same concepts.



**One Letter / 6 Colors / 6 Patterns**  
**One Number / 6 colors / 6 Patterns**  
**= 26\*6\*6\*10\*6\*6 = 336,960 Possibilities**

The task of changing the data that is in our forms, spreadsheets, or our documents into symbols that represent that information takes some thought. It doesn't happen automatically, and requires a coherent strategy so that the symbols are flexible enough to represent categories, subcategories, and the divisions of the data with enough context to present the content in a way that is instantly recognizable. You will find that converting data into symbology will allow you to affect permutations that can encode vast sums of data into just a few shapes, colors, patterns, sounds, or smells. For smell, think natural gas, a colorless, odorless gas that is deadly if it could not be detected by the sulfur compound added specifically for detection.

- **How Many Combinations Can Three Letters and Three Numbers Provide?**



- **$N! / (n-r)! = 26! / (26-3)! = 15,600$  for three letters**
- **999 for Three Numbers**
- **$15,600 * 999 = 15,584,400$  possible combinations**

The biggest single problem in most System of Systems is ambiguity. For example, everybody knows what is to be done next, just not specifically who actually needs to do it. Just saying “the work center” needs to do this is to ambiguous and is begging for problems. Advanced Visual Management also requires clear identification of when an action should occur as well as what action should be done. Timing is critical when the goal is perfection, and you need to understand the “when” is just as important as the “whom”. All possible forms of ambiguity must be identified and eliminated. If the who and the when cannot be answered for every conceivable situation more work needs to be done! Establishing clear signals is the most critical piece in designing your system of systems for Advanced Visual Management. The signal should trigger the individual and tell them precisely what should be done and when it should be accomplished. It should also be tied into a Pull System or Kanban System whenever possible. The goal here is to clearly and immediately identify the moment something is abnormal, or when ambiguity raises its head.

In business, we typically focus on just getting things done and using brute force and workarounds in order to make the system work for us. If you're going to successfully implement Advanced Visual Management, your new focus has to be on listening to the system. The organization has to change from a culture of rewarding those who excel at short-term easy fixes to one where the reward system clearly benefits those committed to the long-term strategy of excellence with sustainability and world-class performance. This is never easy. You must always remember no problem is too small. Major systemic crises are nothing more than multiple small problems that have occurred collectively to create a bad situation. The solution to dozens and even hundreds of small problems moves the world! It is no longer acceptable to just do a workaround and not say anything about it. That is the worst thing that an employee can do in an Advanced Visual Management situation. It is every person's job to point out everything that's wrong. Advanced Visual Management also requires an organizational

cultural change that has zero tolerance for mistakes. Often times, the System itself allows the worker to fail. Don't punish the employee... fix the system! Typically, we punish the employee when something goes wrong and demand increased vigilance from everyone else. We send out memos that require people to work smarter and pay more attention and "follow the procedures". We even sometimes write additional new procedures. There are situations where gross negligence or incompetence, or a lack of skill is the cause. We are not saying those issues should not be addressed. However, we've learned that vigilance alone is never an effective strategy. Our processes are perfectly designed and engineered to give us the results we are getting! Any problem experienced is a signal that the system needs work and adjustment. Drive to the root cause and fix that root cause as opposed to just finding a simple workaround. This requires accepting short-term pain and minor delay in the system in order to fix your processes and your operation for the long-term. Remember, accumulated problems can swamp the best of organizations!

**X-Stream LEAN** also uses the concept of Rapid Prototyping to effectively implement Advanced Visual Management. When implementing Rapid Prototyping, numerous small experiments are conducted and possible solutions are tested until the best possible solutions are determined by using data and results as opposed to "gut feel". The emphasis is on trying different ideas, not simply making it pretty. Each experiment should produce data that drives the decision. Using gut feel or firefighting techniques to generate quick fixes will not move you towards World-Class. It will simply prolong your organizations retention of the status quo and ensure you retain a culture of mediocrity. We encourage the use of Rapid Prototyping simulations in full-scale mockups, even using cardboard cutouts, to lessen or eliminate the impact on production schedules. Understanding how to effectively implement Rapid Prototyping is a critical skill any organization could improve upon. Once the chosen solution has been demonstrated to effectively solve the problem at hand, Engineering then converts the successful prototype into a semi-permanent solution. We consider this semi-permanent because the next idea or experimental prototype will change it yet again. This is the epitome of Continuous Improvement. We also employ the technique of collaborative experimentation. Effective solutions should be driven into the rest of the organization without using the cookie-cutter approach. Each team should figure out how to implement the new solution in their own way. The drive for your organization and the change in your culture should be one where every individual strives to constantly improve the system and their own performance every day. Everybody has a stake in making the system work and one should never forget that no one has all the answers. Everybody is responsible and anyone who sees something out of place or out of specification is required to "pull the chain" immediately to stop something they know to be wrong and start corrective action. This requires true teamwork and mutual support across organizational boundaries and it also requires the elimination of political / turf wars. It also means an end to the normal practice of the "Not My Job" mentality. Management's role is to support those who are striving to make the System of Work operate as it is designed and to help you improve your Visual Management system daily.

Last, but not least, you must answer the WIIFM ("What's In It For Me?"). Answering the WIIFM puts in place a critical skill that allows your people to manage the work flow and reduces costs, because each and every employee and manager knows precisely where and how they fit into the system, what their value is, and what their contributions can be. This establishes confidence, accountability, and credibility in both the process and organization. It drives change in the organization and develops a strong self-directed work force that is more competent, more capable, and clearly above average.

Although these techniques are not in and of themselves complicated or even complex, they are extremely difficult to implement successfully and even more difficult to sustain long-term. Is your organization capable? Advanced Visual Management requires significant organizational change and substantial upper management commitment. We like to tell people that when you look at a breakfast of eggs and bacon, the chicken is involved but the pig is committed! The cost for implementing Advanced Visual Management is not so much in dollars as it is in effort, resources, and accountability. The key to success is all about implementing specific and

highly-defined actions as well as establishing clear roles and responsibilities and holding people accountable for accomplishing those items. We believe that an effective Advanced Visual Management implementation is the hallmark of a World-Class organization. The best time to begin is now!

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