How to Build and Sustain an Internal Value Methodology Program for Business Growth

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Abstract:

This technical paper discusses the important things to understand in developing and sustaining an internal Value Methodology (VM) program for any business or organization. It focuses on those items which are necessary for the senior management of the organization to understand upfront before seeking to initiate an internal Value Methodology program, those items which will be important to ensure the program is sustainable for the future of the organization, and various options for managing and establishing the program that have worked well in organizations which the author has been associated with over a 21 year period of time in the Value Methodology business. If you have any interest in helping an organization to develop an internal Value Methodology program, you will want to ensure that you attend this presentation at the SAVE Summit in Austin, TX.

About the Author:

Jim Bolton has been a member of the SAVE International® Board of Directors for 10 years, a Past President of SAVE International, a past 6-year member on the SAVE International Certification Board of Directors, and is now the current Executive Director for the Miles Value Foundation. For the last 3 ½ years, he has been and is currently the President and Owner of Bolton Value Consulting LLC, where he has specialized in helping various organization successfully develop internal Value Methodology programs in-house. These organizations include various global companies as Mahindra and Mahindra, Haworth Incorporated, Gardner Denver, JCI-Hitachi, IPEG, Autoliv, Eaton Corporation, Wabco, and others. Each of these organizations have multiple number of employees trained as Value Methodology Associates in multiple locations and multiple business units.

Introduction:

Many organizations today have the need for an internal Value Methodology program, but they are just not sure how to get them started, what the benefits are to having an internal program, and what are the items that need to be in place to ensure that their program, once established, can be sustainable for the future. All of these topics are included in this technical paper as well as samples of the VM tools necessary to establish a successful VM Workshop, the important tools necessary to include in that VM Workshop, and how to ensure that the ideas coming out of that VM Workshop will become implemented by the organization in a short period of time so that they will obtain excellent business success.

So far, I have never seen an organization that can't benefit or has not benefited from utilizing the Value Methodology with a disciplined approach as long as they are willing to follow the guidelines of the VM process. Helping organizations understand and following these guidelines is half of the battle to ensuring that they will have great success when utilizing the VM process. I take pride in ensuring that the organizations I work with not only understand but agree to these guidelines because my ultimate goal, is for that organization to obtain a great first experience when utilizing the VM process, whether it be a manufacturing organization, a construction project, or a government contract. Introducing and utilizing VM properly is, and will always be, the most important way to ensure this business is successful and sustainable for future generations.

Important things to understand upfront:

One of the most important things to ensure any organization understands about the VM process, it that it must engage all of the various departments with that organization if they are going to successful in implementing an internal VM program. This means that the senior management of the organization needs to ensure their department engages in the VM process in the following ways:

1. Engaged in the project(s) to be selected for VM evaluation
2. Engaged to contribute the right departmental team members for VM study
3. Engaged in the management report-out meeting during the presentation phase to the management.

If all of the cross-functional departments commit to this engagement, then this will be the first big step towards ensuring the long-term sustainability of the VM process within that organization. These various departments will vary depending upon if the VM project is for a manufacturing based company vs. a construction based company vs. a government agency. Some examples of the required departments that need to be involved with various types of organization are included below:

Departments required to engage for a manufacturing based company:

1. Product Design
2. Marketing and or Sales
3. Procurement (Purchasing or Sourcing)
4. Program (Project) Management
5. Manufacturing or Process Engineering or Operations
6. Quality, Plant, or Reliability Engineering
7. Finance or Cost Estimating or Target Costing Engineering

Departments required to engage for a building construction based company:

1. Architectural Design
2. Structural-Civil Engineering Design
3. Mechanical Design
4. Electrical Design
5. HVAC and Plumbing Design
6. Geotechnical Design
7. Consulting Specialists as necessary
8. Cost Estimators
9. Owners, Sponsors, etc.

Since each value study requires different personnel depending upon the type of project, it would be impossible to include all of the various scenarios for each type of study, but the main point, is the study must contain a fully cross-functional team depending upon what is being analyzed.

The next important aspect to ensure full team engagement, is to ensure each cross-functional department involved in the potential value study as an opportunity to help select the project. The project should be selected based upon a variety of different considerations such as:

1. The longevity of the product or life cycle for the construction project being proposed
2. The current profit margin of the product or the expected life cycle cost of the construction project
3. Any quality / reliability issues with the product or construction constrains or issues of the project
4. The current and potential product market share or owners usage and expense expectations
5. Consider the 3 Voices of Customer feedback:

For Manufacturing Projects:	For Construction Projects:
a. Voice of the Distributor or marketing outlet	a. Voice of the project owner or sponsor
b. Voice of the Shopper (shops but buys the competition's product), and	b. Voice of the project developer and
c. Voice of the Consumer (shops and buys your product)	c. Voice of those whom plan to use the project

Team Selection and VM Workshop Tools required:

The next important subject to discuss with the cross-functional departments are the requirements for selecting team members for the value study team. Consider selecting your best departmental team members:

1. That have the right experience for the project being studied,
2. Whom would be open to accepting new ideas,
3. Whom are known to actually listen and can be team players,
4. Whom don't have time but will overachieve to cover,
5. Whom are not available but will excel in spite of it,
6. Whom are most inquisitive and willing to think differently,
7. Whom are not willing to just follow the status quo,
8. Whom have innovative minds and are 'free spirits'.

3-Day Workshop Agenda:					
VM Workshop Location:					
Workshop Dates:					
Line #	Day	Start Time	End Time	Agenda Subject/Title	Training Team
1	1	8:30	9:00	Objectives, Expectations, Introduction to VE	Facilitator
2	1	9:00	10:30	Information Phase - Marketing/Quality/Supplier Review	Team
3	1	10:30	10:45	Break	All
4	1	10:45	12:15	Actual Teardown of Competitive Products (Processes)	Team
5	1	12:15	1:15	Lunch	All
6	1	1:15	1:45	Functional Analysis Training	Facilitator
7	1	1:45	3:15	System Functional Analysis (Build FAST Diagrams)	Team
8	1	3:15	3:30	Break	All
9	1	3:30	3:45	Cost Function Worksheet Training	Facilitator
10	1	3:45	5:45	Complete Cost Function Worksheet	Team
11	1	5:45	6:00	Day 1 Wrap-up and adjourn	All
12	2	8:30	9:00	Creativity Phase Training	Facilitator
13	2	9:00	10:30	Creativity by Function	Team
14	2	10:30	10:45	Break	All
15	2	10:45	12:15	Creativity by Function	Team
16	2	12:15	1:15	Lunch	All
17	2	1:15	1:45	Creativity by Function	Team
18	2	1:45	2:00	Evaluation Phase Training	Facilitator
19	2	2:00	3:30	Evaluation Phase using Cost Ranking Matrix	Team
20	2	3:30	3:45	Break	All
21	2	3:45	5:45	Prioritize Ranking of Ideas in Groups	Team
22	2	5:45	6:00	Day 2 Wrap-up and adjourn	All
23	3	8:30	9:00	Development Phase Training	Facilitator
24	3	9:00	10:30	Business Case or Value Engr'g Proposal Development	Team
25	3	10:30	10:45	Break	All
26	3	10:45	12:30	Business Case or Value Engr'g Proposal Development	Team
27	3	12:30	1:30	Lunch	All
28	3	1:30	3:45	Finalize Business Cases or Value Engr'g Proposals	Team
29	3	3:45	4:00	Break (Time to combine Business Cases/VEP for review	All
30	3	4:00	5:30	Management Report-out Meeting	Team
31	3	5:30	6:00	Workshop Wrap-up and adjourn	All

When building an internal VM program, excellent planning is required which first starts off with a pre-workshop meeting scheduled at least two week prior to any upcoming VM Workshop. All members (at least one from each department) elected to participate in the actual value study by the cross-functional management team need to participate in this pre-workshop meeting to ensure each study team member is aware of the data which they must prepare for the workshop. A well-defined agenda must be presented at this meeting by the VM facilitator and a decision needs to be confirmed during this meeting on the best site for the actual workshop. See Figure 1 as a typical agenda for a 3-day VM Workshop.

Figure 1 (Typical Agenda for a 3-dayValue Methodology Workshop)

In addition, a well-defined checklist needs to be presented at this meeting by the VM facilitator so that all of the value study team members not only know what data they must collect, but when that data is due back to the facilitator to ensure the right data is available for the actual workshop. Without all of the right data being confirmed available, an excellent VM facilitator should refuse to facilitate the VM Workshop, as

Item #	Item Description	Decision or Action Required	Responsible Person	Target Date
1	Time and Dates for Workshop		Workshop Sponsor	
2	Location of Workshop (room reservations, lunch,etc.)		Workshop Sponsor	
3	Personnel Committed to attend	See attached list	Workshop Sponsor	
4	Logistics (flight and hotel reservations)	Each individual to confirm their own	All Team Members	
5	Support Required at Workshop (Admin. Name)			
	a. Computer projector secured for all three days		Workshop Sponsor	
	b. Easel and flip chart paper available		Workshop Sponsor	
6	Target Costing and Quality Status and Objectives	Current and Objectives to be clearly defined		
	a. Target Cost vs. Current Cost for Product being studied		Finance Representative	
	b. Quality Target vs.Current Status for Product evaluated		Quality Representative	
7	Costed Bill of Material with material & processing infor.	See Product BOM Sample tab attached	Finance / Project Leader	
8	Process Operations including time and distance	See Process Review Sample tab attached	Manufacturing Engineer	
9	Supplier and in-house quality & warranty data or targets	input will be included in workbook	Quality/Reliability Repr.	
10	Sample Components (assembled and unassembled)	need key parts compared to competitors	Project/Technical Leader	
11	Assembly and all Component Drawings	need in electronic format for reference	Project/Technical Leader	
12	Process Tool and Routing Worksheets	Need sent by target date	Manufacturing Engineer	
13	Tooling & Maintenance Reports (equipment up-time, etc.)	Need sent by target date	Manufacturing Engineer	
14	Process Flow Diagrams	Need sent by target date	Manufacturing Engineer	
15	Supplier Logistics (Manuf. Location of purchased parts)	See Supplier Logistics tab attached	Procurement/Purchasing	
16	DFMEA	need in electronic format for reference	Project/Technical Leader	
17	PFMEA	need in electronic format for reference	Manufacturing Engineer	
18	Selection of Products for Competitive Analysis at event	Competitive Products needed at workshop	Marketing Representative	
19	Competitive Alternative Process Opportunities	Gather ideas from associates at plant	Manufacturing Engineer	
20	Marketing Strategy and Competitive Situation	Final result should be customer needs		
	a. Marketing Report of competitors & future strategy	identified in terms of product properties	Marketing Representative	
	b. Trends and customer desires per Voice of Customer		Marketing Representative	
	c. Completed QFD or House of Quality from VOC		Marketing Representative	
21	Time and Date for Management Review			
	a. E-mail invitation to management members		Workshop Sponsor	
	b. Establish Video-Phone Conf. call for this meeting		Workshop Sponsor	
	c. Distribute management report-out meeting notice		Workshop Sponsor	
22	No cell phones, pagers, no laptop computers (email etc.)		All team members	

Figure 2 (Typical Checklist for a Manufacturing based Product VM Workshop)

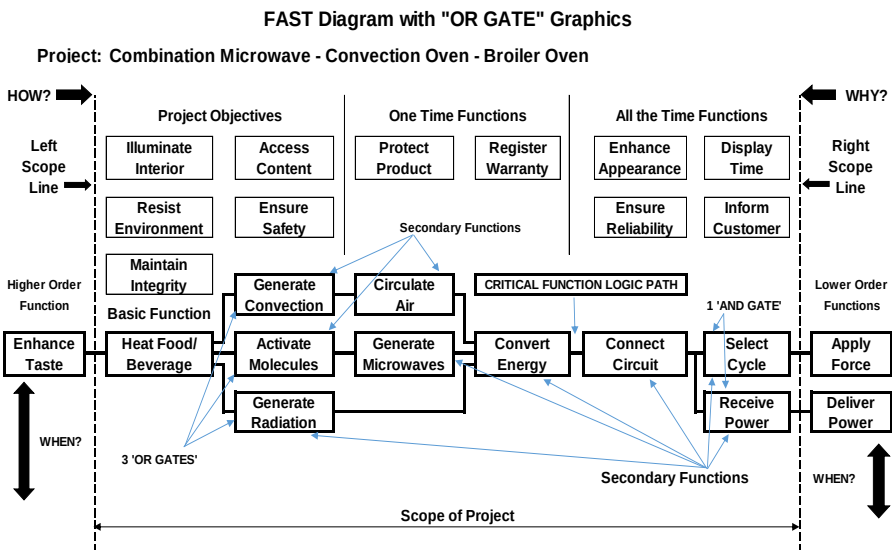
optimum results will certainly not be achieved. Figure 2 to the left shows a typical checklist for a VM product workshop.

The next most important item to understand is how the various VM tools are utilized in the VM process. To simplify this paper, all of the VM examples will be utilized with a manufacturing based product and, in particular, a multi-function microwave-convection-broiler oven. First we will use a method called random function identification to identify all of the functions for the complete product and then, also for all it is major subsystems or components in that product per the Random Function Identification Chart (Figure 3) to the left.

No.	Component, Process, and/or System Description	Component Cost	Function	
			Verb	Noun
	Combination Oven		Heat	Food/Beverage
1	Magnetron	$38.00	Generate	Microwaves
			Convert	Energy
			Connect	Circuit
2	H. V. TRANSFORMER	$30.00	Convert	Energy
			Connect	Circuit
3	HEATING ELEMENT	$14.00	Generate	Radiation
			Connect	Circuit
4	STRUCTRAL COMPONENTS	$2.50	Maintain	Integrity
5	COOLING FAN & MOTOR	$7.00	Circulate	Air
			Connect	Circuit
6	TURNTABLE & MOTOR	$11.00	Activate	Molecules
			Maintain	Integrity
7	CONTROL PANEL	$27.00	Select	Cycle
			Enhance	Appearance
			Connect	Circuit
8	CARTON	$10.75	Protect	Product
			Inform	Customer
9	WRAPPER (CABINET)	$8.75	Ensure	Safety
			Resist	Environment
			Enhance	Appearance
10	WIRE HARNESS	$5.50	Connect	Circuit
			Ensure	Safety
11	CAVITY	$16.00	Ensure	Safety
			Support	Contents
12	DOOR SYSTEM	$13.10	Access	Contents
			Enhance	Appearance
			Ensure	Safety
			Maintain	Integrity
13	CLOCK	$1.10	Display	Time
			Register	Warranty
			Enhance	Appearance
14	BULB-SOCKET STSTEM	$0.75	Illuminate	Interior
15	INSTRUCTIONS	$0.45	Inform	Customer
			Ensure	Safety
			Ensure	Reliability
16	POWER CORD	$3.65	Receive	Power
			Connect	Circuit

Figure 3 (Random Function Identification Chart)

After the random function identification chart is completed for the whole system as well as all of its subsystems or components, the next step is to transfer all of these functions onto a function organizational chart called a FAST Diagram. When building the FAST Diagram, all of the functions identified in the random function identification chart must be included in the FAST Diagram in order to ensure that all of the 'Voice of the Customer' requirements are identified.



A FAST Diagram for this combination microwave-convection-broiler oven is shown in Figure 4 to the left.

In this FAST Diagram example you will notice a triple 'or gate' as there are three independent methods to operate this combination oven. One may operate it as a microwave only, as a convection oven only, or a broiler oven only. The

Figure 4 (FAST Diagram for combination microwave-convection-broiler oven)

Function Resource Matrix Technique

*Resources and/ or performance attributes

Subject: COMBINATION MICROWAVE-CONVECTION-BROILER OVEN

Figure 5 (Function Resource Matrix Worksheet)

COMPONENT	QTY.	UNIT COST	COST	FUNCTION - Active Verb / Measurable Noun																				
				Generate Radiation	Circulate Air	Activate Molecules	Convert Energy	Connect Circuit	Select Cycle	Generate Microwaves	Generate Convection	Illuminate Interior	Access Produc	Resist Environment	Ensure Safety	Protect Product	Register Warranty	Inform Customer	Display Time	Enhance Appearance	Ensure Reliability	Receive Power	Maintain Integrity
MAGNETRON	1	1	$38.00			30%	4%	2%		60%				2%							2%		
HIGH V. TRANSFORMER	1	1	$30.00				94%	2%						2%							2%		
CONTROL PANEL	1	1	$27.00					2%	90%					5%							5%		
CAVITY	1	1	$16.00		2%							3%		3%	55%					5%			30%
HEATING ELEMENT	1	1	$14.00	45%			6%	2%													2%		
DOOR SYSTEM	1	1	$13.10										81%	2%	10%						2%		5%
TURNTABLE & MOTOR	1	1	$11.00			25%	66%	2%													2%		5%
CARTON	1	1	$10.75													95%		5%					
CABINET WRAPPER	1	1	$8.75											5%	65%	20%				10%			
COOLING FAN & MOTOR	1	1	$7.00		46%		4%	2%			46%										2%		
WIRE HARNESS	1	1	$5.50					100%															
POWER CORD	1	1	$3.65					10%														90%	
STRUCTUAL COMPONENTS	1	1	$3.35											5%									95%
CLOCK	1	1	$1.10																90%	10%			
BULB-SOCKET SYSTEM	1	1	$0.75				8%	2%				90%											
INSTRUCTIONS/USER GUIDE	1	1	$0.05												3%		2%	95%					
TOTALS			$190	$6.30	$3.54	$14.15	$38.16	$8.42	$24.30	$22.80	$3.22	$1.16	$10.61	$4.06	$15.80	$11.96	$0.00	$0.58	$0.99	$1.79	$3.61	$9.29	$9.19
FUNCTION - PERCENTAGE:			100%	3.32%	1.86%	7.45%	20.08%	4.43%	12.8%	12.00%	1.69%	0.61%	5.58%	2.14%	8.32%	6.30%	0.0005%	0.31%	0.52%	0.94%	1.90%	1.73%	4.84%

Figure 5 (Function Resource Matrix Worksheet)

Creativity By Function (Brainstorming Form)

Figure 6

Date: Jan. 24-26, 2012
Team: Norkopping, Sweden
VM Leader: Jim Bolton

IMPLEMENTATION DIFFICULTY
RUNNING CHANGE | DIGIT CHANGE | MODEL CHANGE
A | B | C
D | E | F
COST SAVINGS

Lic.	Rap.	Idea	FUNCTION	Explanation of Idea in Detail
	A	A1	Maintain Integrity	Add ribs or beads or waffling to sheet metal parts to add integrity & reduce gage
	A	A2	Connect Circuit	Mains filter integrated in power PCB
	A	A3	Ensure Reliability	Ensure part alignment of parts to have better gap alignment (Tolerances etc)
	A	A4	Enhance Appearance	Create cost competitive front aesthetics
	A	A5	Select Cycle	Use touch controls instead of knobs and buttoms
	A	A6	Enhance Appearance	Evaluate alternative materials for premium line to come closer to family line
	A	A7	Maintain Integrity	Standardize fixation holes of handles
	A	A8	Apply Force	Reduce assembly time by continous flow manufacturing process with Phoenix
	A	A9	Connect Circuit	Make or buy study for painted parts and PCB assemblies,
	B	B1	Access Content	Robust door and locking system
	B	B2	Enhance Appearance	Eliminate external wrapper or replace by other material
	B	B3	Convert Energy	Develop our own inverter
	B	B4	Convert Energy	Standardize all FC motor in Norrköping with Shunde
	B	B5	Maintain Integrity	Reduce Cavity thickness to 0.4 mm, front 0.5 mm
	B	B6	Enhance Appearance	Reduce screen printing, standardize symbols and position
	B	B7	Inform Customer	Get rid of cook books (only on website)
	B	B8	Maintain Integrity	Remove door perforation, inner glass and glueing operation
	B	B9	Access Content	Evaluate make vs. Buy on door assembly
	C	C1	Connect Circuit	Use plugs in harness instead of single connector
	C	C2	Maintain Integrity	Minimize number of different screws
	C	C3	Apply Force	Integrate hooks and positioning point in parts for easier assembly
	C	C4	Connect Circuit	Integration of PCBs for buttons to reduce harness issues

Figure 6 (Creativity by Function-Brainstorming Form)

last step in the function phase of the workshop is to distribute the resources required for this product across all of functions to understand which function has the most required resources. In this case, cost was the resource which was most important to the manufacturing organization, so the cost of each of the subsystems and components was distributed across all of the functions to determine which function was the highest cost driver for this product. The VM tool which can accomplish this task is the Function Resource Matrix Worksheet per Figure 5 above.

The next step in the VM process is the creativity phase, however, it is often not properly linked to the function phase which is where the power of the VM loses its effectiveness. The whole purpose of utilizing functions

is to brainstorm by function in the creativity phase of the VM workshop according to the function resource priority established in this Function Resource Matrix Worksheet just developed. The creativity by function (brainstorming form) is shown in Figure 6 above.

How to Organize for Long-term Effectiveness, Sustainability, and Business Success:

Next I would like to discuss how to develop an internal VM program for long-term, effectiveness, sustainability, and business success. I developed internal VM programs for two major global manufacturing based companies, TRW Automotive (now ZF) for 11 years, and then after that, for Whirlpool Corporation for another 6 ½ years besides other organizations as a consultant. Both TRW and Whirlpool benefited from utilizing the VM process, but each in very different ways. TRW decided to develop an internal Value Engineering Department that reported directly to the global VP of Engineering for TRW where each of the 78 (when I left in December 2007) SAVE International certified members facilitated their own VM Workshops and then coordinated the implementation of those value study ideas into production. I was the staff specialist responsible for training these team members, and ensuring the global process was consistent in all locations. These value engineers did have to work with engineering, design, the test lab, purchasing and other departments to obtain support for these ideas, but they acted as the project manager for all of those ideas that resulted from the value studies they facilitated. The average value engineer would be handling 8-10 projects and any given point in time and each had a goal to achieve $2.0M USD of savings annually from those projects that he was managing.

On the other hand, Whirlpool already had a strong cost improvement team in place, however, what they lacked were great ideas that would save the big dollars that the organization expected of them. They decided to develop a global internal Design for Value (DFV) Department within Whirlpool (headed up by myself) which reported also up to the global VM of Engineering, however, this was a much smaller team which basically acted as internal VM specialist group within the organization globally. Each of the six Regional DFV Managers were responsible for facilitating multiple VM Workshops within their region (USA, Mexico, Europe, India, China, and Latin America) for all products that where manufactured within that Region. Although the ideas were turned over to the already established cost improvement implementation team members within each region, they were still responsible for tracking the financial benefit to that regional on a quarterly basis and each had a financial target depending upon the sales volume within that region. On the average these team members facilitated between 16-20 VM workshops per year plus the co-ordination work with the cost improvement team to remove roadblocks and ensure prompt implementation. While both of these organizations had great success with the VM process, there were advantages and disadvantages to both systems.

The advantage of the TRW Automotive internal VM process are as follows:

1. Each engineer had total responsibility to manage each project to optimize for best results
2. The VM metric within TRW was very visible and success was dependent on their implementation
3. Teamwork was very important since as program managers, they needed organizational support

The advantages of the Whirlpool internal VM process are as follows:

1. More VM studies and new ideas could be conducted annually due to the implementation team.
2. Since VM Regional Managers had responsibility for all products in the region, ideas from one product might be able to be implemented on other products within the same or other regions.
3. Since they were the VM specialist in their region, they were well respected by everyone in the region and utilized heavily to help that region achieve their financial and business targets.

The disadvantages of the TRW Automotive VM process are as follows:

1. The value engineers often had to compete for both design and validation resources.
2. Value engineer workshop skills were generally not as perfected due to their implementation roles.
3. Value engineers did not have the chance to attend SAVE Summits to learn from other VM users.

The disadvantages of the Whirlpool VM process are as follows:

1. The VM Regional Managers, at times, had difficulty pushing their VM projects through the system because they did not own the implementation process.
2. Cost saving targets for the VM Regional Managers were not as transparent to the regional management teams even though I shared those goals with the regional senior staff.
3. Since the VM Regional Managers cost saving targets were not owned by the implementation team members, this responsibility caused unnecessary delays at times.

Overall, as you can see, there is no perfect method to utilize this VM internal process within any given organization. The most important thing to remember, is work with the organization to determine how the VM process might fit in with the other existing tools that organization might already have to obtain cost leadership. There is no magic bullet here, but flexibility and a general courage not to weaken the VM process by eliminating the heart of it, functions and function analysis,- that is my real encouragement to all of you.

How to ensure an internal VM program will be sustainable for the future:

First and foremost, top cross-functional management commitment will be necessary. If all departments are not fully engaged and are believers in the VM process, it will eventually fail. I personally believe in order for the VM process to be internally successful over time in any organization, there must be a cultural change that organization is willing to commit to for the future. Without that commitment to a cultural change for that organization, the VM process will ultimately drown. Every team member in every department needs to see how his or her responsibility within that organization can play a part in that cultural change. As I say in my own workshops, if you have no 'skin in the game' then the game will be over quickly and you will be the loser. I seek to only invite value study team members whom have a role that only they can fulfill, and I am sure to assign them with a task to submit that data that maybe only they have access to or know. Then and only then, to they feel they have some 'skin in the game'.

Secondly, proper attention must be given to training and certification. Without the right knowledge about the VM process and some 'hands-on experience' with it, can you really appreciate the power of this VM process discovered 70 years ago by Larry Miles. Once you experience the feeling of function-inspired change, will you become a true believer in the VM process! Everything else will seem like child's play.

Thirdly, proper recognition is another important factor to develop a sustainable internal VM. In today world of reduced workforces causing those left to assume more responsibility, recognition is often lost in the shuffle. If the VM process is going to be sustainable for any length of time in an organization, those whom have used it well to bring great results, need to be recognized for their diligent efforts. While at Whirlpool, I encouraged all of my DFV Regional Managers to write an annual technical paper and submit it to the committee for presentation at the next annual SAVE Summit, and all of them were successful in their attempts resulting in them being able to attend the next conference and mingle with other VM practitioners from around the world. It was also a way for me to recognize them for their hard work, many nights away from their families, and get a chance to interact with the other Regional Managers on my team. I also gave each of them a gift each year because they were doing a great job and I really appreciated their efforts, even if some people in their own region didn't.

Fourthly, choosing the right VM Leader for an organization is critical to sustainability. It is important to choose someone:

1. Already highly respected within the organization.
2. With the right skill sets:
    a. For a manufacturing organization, an individual whom has both product and process knowledge
    b. An accomplished or has the potential to become a great leader
    c. A team player but also one whom can work well independently

Conclusion and closing remarks

In summary, establishing a successful internal VM process in not for the 'faint of heart' – it is a lot of work over a period of time with diligence, perseverance, and an excellent understanding of what it takes to be successful. Since establishing my own consulting business, I have noticed that those organizations that have internal VM programs which are really successful, are those with a senior management team member whom is a strong believer in the VM process, is willing to dedicate necessary resources, work with other senior cross-functional management team members for engagement, and is willing to remove the roadblocks which always occur in any organization. As a consultant, my greatest success story in building an internal VM process within an organization was with a company called Mahindra and Mahindra. They are the largest SUV manufacturer and the largest tractor manufacturer in India and they also have a tractor manufacturing facility in Texas. I started with them back in 2012 with a Module I Workshop which I actually facilitated over two consecutive weekends (Saturday and Sunday) since I was working for Whirlpool at the time Monday-Friday. My first exposure to a gentleman by the name of Nitin Tikle, whom was a Senior Manager in their procurement department at the time, was very inspirational for me. He believed in the VM process even though he had little experience with it. He also believed in me.

That was the start of something great for Mahindra and great for me. Over the next few years, after having a good first experience with the VM process, I was invited back several times to train his organization initially in the SUV division, and then later in the farm division. Today they have a global department dedicated to the enhancement of value for their organization utilizing the VM process internally. They have one CVS, many VMA's, and a second gentlemen whom was with Mahindra when I started working with him whom just took his CVS examination about a month ago at this writing. Even though he is no longer at Mahindra, I still agreed to be his CVS advisor and support him through his CVS pursuit. Mahindra now presents 10-12 technical papers every year at the INVEST annual conference and this past fall, they took first and second place in the technical papers completion. I am not a judge, but have been involved in attending those conferences in the last 10 years. This organization took off with the VM process, not because of me, but because one senior leader in the company decided to give the VM process a try and has made a commitment for his organization to this process. He is the head of that VM department and now also a Vice President within the procurement department of the Mahindra group.

Many large organizations today just have too many different, and many times conflicting, priorities which causes confusion, frustration, and overall apathy after a period of time. Unfortunately, sometimes the smaller the organization, the greater the sustainability and effectiveness of the VM process. I had a small company, IPEG, which makes injection molding equipment, contact me this past year. The gentlemen I spoke with, was their VP of Global Manufacturing. He had some previous experience with the VM process, so initially invited me to an annual management team meeting to facilitate a one-day hands-on VM workshop. About one month later, I facilitated a Module I workshop for them. They had a great result from that workshop, and then invited me back a few months later to facilitate another VM workshop for them in their only other significant location in the USA. Although they are a small organization compared to Mahindra, they too are experiencing some great results due to a senior executive whom believes in the VM process and is changing the culture of his company. All of this to say, small or large, VM can work when given a chance and when an organizational top executive understands the power of this valuable tool.