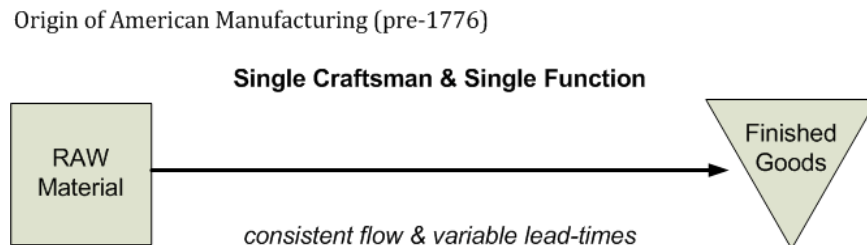


It's Time for Organizational Rebirth: *Organizational alignment has been the constraint since the 1930's*

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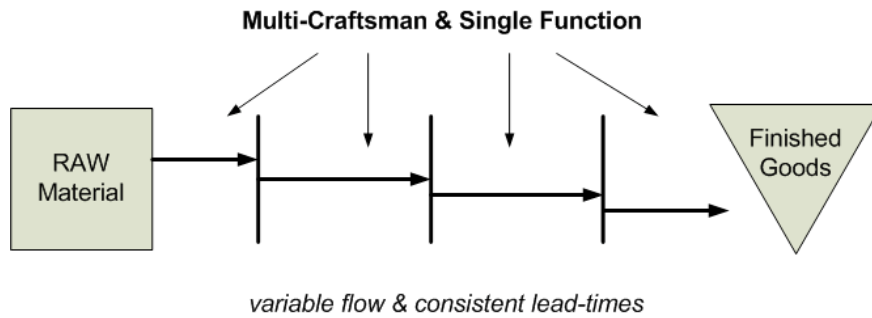
American manufacturing pride stems from a long heritage of craftsmen, steel workers and automotive workers, and dates back to companies like Ford and General Motors Corporation which thrived during the pre-globalization dogfights of the 1930's. Prior to the introduction of Toyota to the American automotive consumer, Henry Ford and General Motors' President Alfred Sloan were the true innovators of industry. Ford, with his concept of the assembly line in 1913, and Sloan, who created numerous accounting breakthroughs which still remain visible today, propelled the automotive industry to the top of America's list of most influential business leaders. But what impact did these two industrialists have on today's manufacturing economy? Is it possible that Sloan and Ford created manufacturing models and paradigms that would withstand more than seventy years of modernization?

The Evolution of Organizational Misalignment



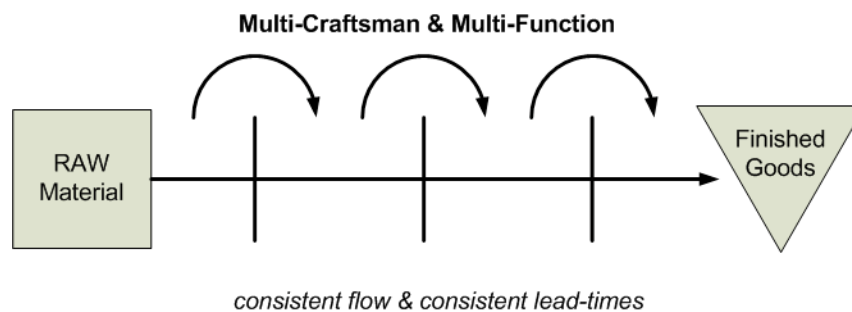
137 years before Henry Ford's notion of divisible assembly processes, manufacturing existed as a pure, mysterious and noble craft of making something which was valued by another from nothing but raw material, ingenuity and skill. In 1776, a Scottish gentleman, philosopher and economist by the name of Adam Smith first outlined the organizational and economic principle of 'Division of Labor' which revolutionized manufacturing by segmenting the natural processes or steps required to produce a commodity – anything which is in demand and has no qualitative differentiation across markets. Smith's theory was based on breaking down steps from raw material to finished goods in order to increase efficiency of the entire process by allowing craftsmen to specialize in one or more steps. This concept was widely embraced and inspired the industrial revolution. Now let's hold on for just one minute. In 1776 a Scottish guy took a process which was performed by one craftsman, broken it down into parts and used multiple craftsmen to make the same product faster. Ok, the concept of division of labor was based on increasing flow through capital investment in machines – craftsmen in this instance.

Division of Labor (1776)



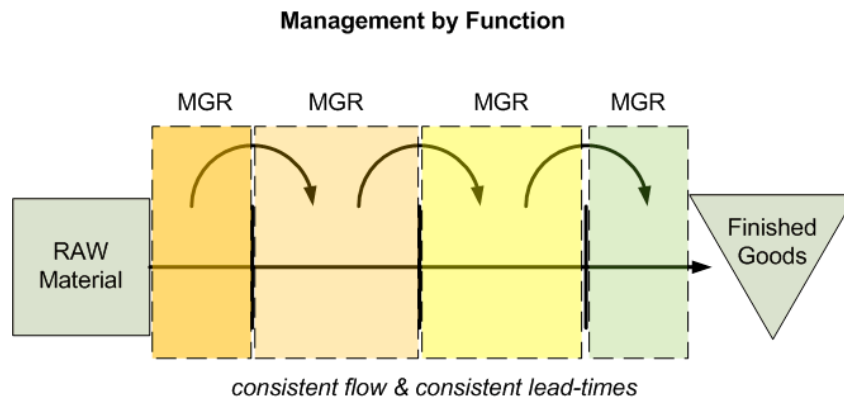
In 1913, Henry Ford was looking to revolutionize manufacturing in order to meet an ever-growing consumer demand, which he did by once again dividing the manufacturing process into simple subassemblies. This concept was not far from Adam Smith's. Ford looked for natural steps in what appeared to be a very complex process, found an opportunity to standardize and specialize each step, and introduced the concept of batching - although not referred to as batching the way we now understand it - in order to keep the manufacturing process moving. In the same fashion as Smith, Ford increased production by using more machines (people, still, in 1913) working in subassembly processes. As Ford's business continued to realize uncontested success, at growth rates rarely seen since 1920, Ford transformed this process into what is still a 21st century manufacturing model known as the 'Assembly Line', fondly referred to as the mass production, "make all you can" model. Ford's assembly line has withstood more than fifty years of scrutiny and challenges from overseas competitors like Toyota and is still widely practiced in more than 60% of American manufacturing.

Assembly Line (1913)



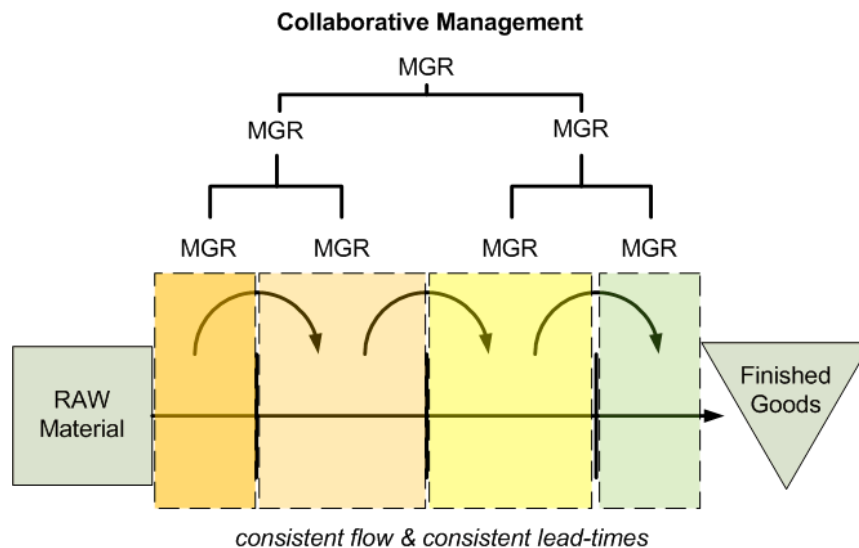
Ten years after Ford's revelation, a competitor appeared in the American automotive industry, a gentleman who had served as the President of one of Ford's more predominant parts suppliers and a man who understood the challenges and limitations of the assembly line model. In 1923, Alfred Sloan arrived on the scene as President of the newly formed General Motors Corporation. Sloan, an electrical engineering graduate of MIT and innovator of industrial economics, was most famous for his ability to manage complex operations using only financial statistics. Sloan's mark on American manufacturing was introduced as a re-engineering of Smith's former 'Division of Labor', except this time Sloan was applying the concept to management rather than the manufacturing process. Following Ford's assembly line process, Sloan broke each step or process division into functional silos - a term phrased many years later - whereby a single manager would have full fiscal responsibility over a single silo. For example, in a four-step process Sloan would have four managers, one for each process.

Division of Labor (1923)



Starting to sound a bit familiar? As a man who thrived on economics and financial statistics, Sloan mentored his managers to use only financials to run their business, driving the importance of concepts such as Return-On-Investment (ROI), and establishing the paradigm that everything, including inventory and people, had a cash value. Relative to today's Lean environment, this meant that stockpiling inventory or WIP was a good thing as it increased the cash value of the manufacturing organization. Through GM's success in the early 1930's, eventually surpassing Ford, Sloan went on to grow the business upward, providing managers upon managers to further build coordination and collaboration between silos. Again, Sloan's model for improvement was based on adding people to the process in order to increase productivity.

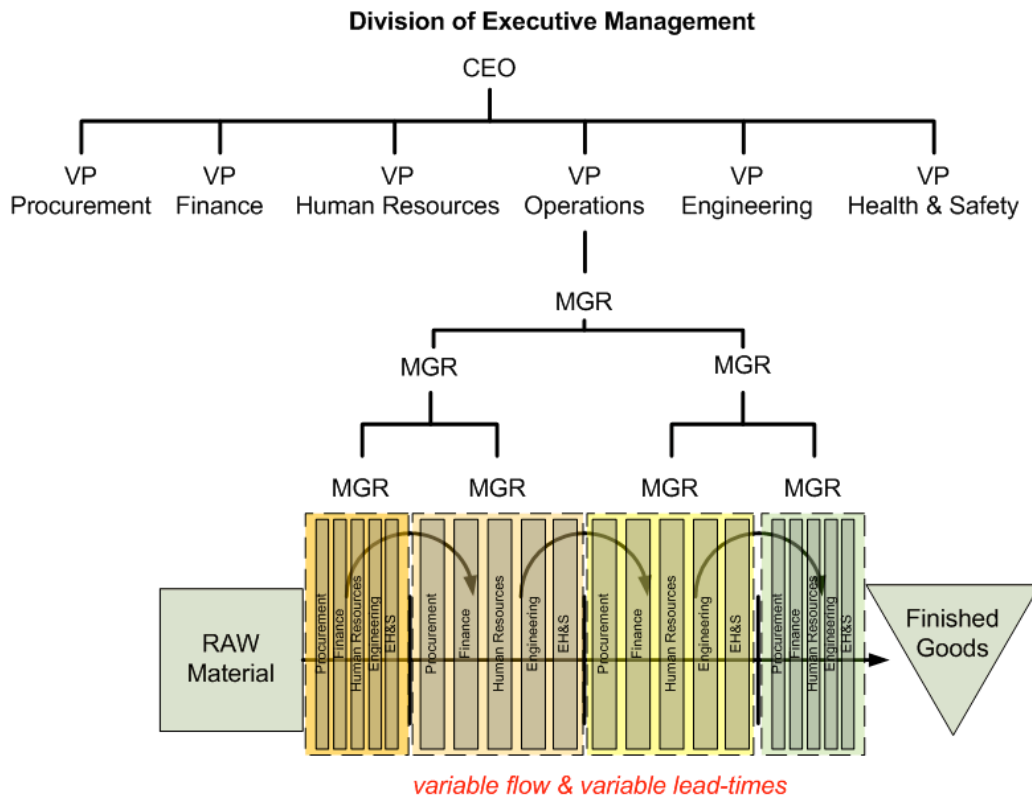
Division of Labor (1930's)



As you can see, today's organizational structures still resemble Sloan's collaborative style of functional management. However, as American companies have become more and more globalized we can see yet another division based on where decisions are being made which

impact the manufacturing process. Due to Securities and Exchange Commission (SEC) regulations which govern publicly traded companies and current business acumen, business decisions are being made further away from the manufacturing floor. Companies are stretching across geographic boundaries and now require greater numbers of corporate resources to sustain the collaborative management philosophy. As a result, corporate America has formed executive functions to manage aspects of manufacturing outside of the day-to-day operations, functions like Health & Safety, Finance, Legal, Human Resources and Engineering. Still in pursuit of Sloan's managerial behavior, these executive functions are guiding business processes by the numbers with respect to their individual objectives. In many cases, each executive function is responsible for and has therefore subdivided the assembly processes based on organizational disciplines. Human Resources, for example, governs compensations and benefits for manufacturing operators, while Engineering makes decisions regarding capital investment and asset replacement within each assembly process. As a result, Operations Managers are left managing the process of manufacturing with little influence over assets or people.

Division of Labor (2000's)

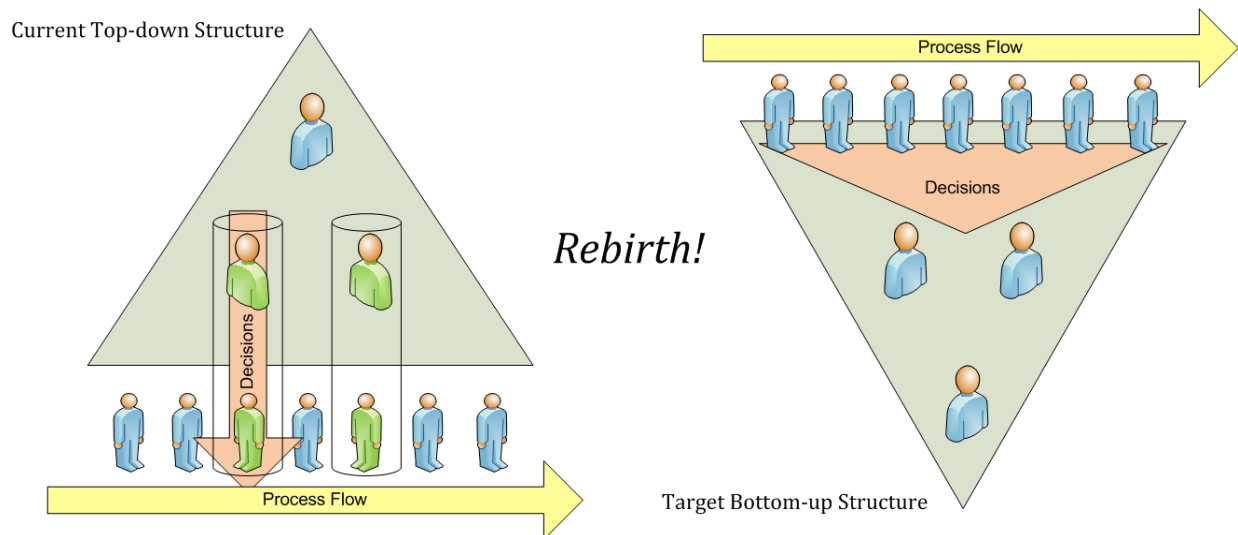


Looking at this division of executive management illustration, it's painfully obvious to see how a complex manufacturing process that was once simplified by fundamental concepts has now become convoluted and messy. Instead of decisions, which impact productivity, being made at the Craftsman level as they were in the early days, they are now being made at the highest, most removed level based on limited financial data. On top of that, the data is segregated allowing decisions to be made in parts within a modest view of the global enterprise, resulting in a complete reversal of performance within the manufacturing process. For more than 200 years

keen business minds have implemented organizational structures designed to improve the consistency of flow and lead-times, but today's organizations are delivering the opposite, creating vulnerability in American manufacturing and opening the door for foreign competitors.

Organizational Alignment for Lean Manufacturing

As Toyota's production system, now referred to as Lean Manufacturing, has inspired American businesses into action, we must once again look at aligning our organizational structures with the manufacturing process. Lean thinking changes our manufacturing process in an effort to eliminate waste, creating more flexibility when responding to consumer demand while reducing the overall cost of operating. Lean Manufacturing, however, was designed and proven in a business culture that empowered its workforce with the knowledge and skills necessary to make decisions that impacted productivity, flow, variation and waste. Lean is not a set of tools and techniques that any organization can adopt; it's a business model that changes how your organization functions, collectively. If you've examined Toyota's organizational structure, you've realized that Management is scarce, resembling the 1923 collaborative style put in place by Sloan. Similarly, Toyota's model resembles Ford's concept of increasing throughput by increasing the number of people on the floor, continuing to break down the manufacturing process into manageable parts, yet manageable by the operator vs. manager. Undoubtedly, Lean manufacturing is a highly beneficial improvement strategy for American business, but Lean cannot be successful within the existing culture and structure. It's time for an organizational rebirth!



As a business leader, our first role should be to lead the people, and to manage the process second. If we are consistent and effective in the first, the people will support the second. This is the new paradigm of organizations that have embraced transformational change and have succeeded at aligning their organizations without a formal "re-org" or major shift in structure. As a process improvement consultant, I'm not a fan of restructuring for the sake of restructuring. In fact, and as history might allude to, restructuring often does more harm than good. At the least it creates tension and frustration amongst business leaders that is counterproductive. Organizational alignment, in this discussion, is focused on the natural order of decision making that impacts the tactical day-to-day process of manufacturing. Decisions that guide optimization of existing processes should be made as close to the action as possible. Decisions which

impact long-term strategic objectives, in contrast, should be made at the collaborative management levels. This presents us with the root of our problem. As Sloan and Ford worked to chase consumer demand in the 1930's they were forced to make changes to their structures to separate the tactical issues, those that impacted the quality of their product and the rate at which their product could be produced, from the strategic issues that differentiated their product from that of their competitors, and as we've seen with the modernization of business across borders, these once effective structures lost their focus and are not in alignment with the methodologies we need to compete. Lean means to work without waste and the opportunities lost due to ineffective decision-making practices, which are constrained by our structures, is the biggest waste of them all.

The rebirth of American organizations can be summarized by saying that philosophy must align with the people, and processes must be aligned with methodologies (tools). Teach people the values of your business and the philosophies that must be maintained in order to preserve those values. Empower people with the tools they need (e.g. Lean) so that they may manage the process in order to sustain the business values. This is a cultural shift that will literally transform your organization without ever changing the functional structure. For example, one of the more predominant philosophies of Lean is "systems thinking". Systems thinking requires your organization to first examine the business as a whole in order to evaluate the effectiveness of existing processes in relation to business objectives. Once examined in whole, systems thinking requires a detailed evaluation of the sub-systems within each process to illustrate the points of collaboration and areas of constraint that are currently limiting further optimization of existing processes. In our current organizational structures, blinded by functional boundaries, people are limited in their knowledge of the whole system, focused narrowly on the sub-systems within their own discipline with limited awareness of the impact they have on the overall enterprise. With regards to training, most employees are trained in a single discipline, such as operating manufacturing equipment, accounting practices, or procurement policies, and are unfamiliar with the business philosophies of other disciplines. As a consultant, I've observed that companies that attempted to implement Lean within these types of structures spent a considerable amount of time and money training and coaching people to implement systems thinking practices with little to no benefits realized over many years. In comparison, companies that began their implementations with an organizational rebirth, focusing first on the alignment of philosophies and followed by the implementation of tools, recognized significant returns within the first twelve months. The core constraint of the unsuccessful Lean implementations was conflicting philosophies, promulgated by misaligned, siloed organizational structures.

Leading Organizational Transformation

As you might imagine, organizational transformation starts at the top. Business leaders must model the behavior that they expect on the plant floor and therefore lead by crossing functional boundaries. I recently read an article in the Harvard Business Review that illustrated one company's efforts to do just that. The CEO, pressured by shareholders to execute improvement initiatives in order to increase profitability and market share, aligned his executive leadership as a cross-functional team, challenging them to examine each of their initiatives, looking for synergies and points of collaboration. Continuing with his focus on organizational alignment, the CEO revamped the company's performance management model in order to reinforce the collaborative and cross-functional environment during the execution of initiatives, effectively holding the entire executive team accountable for the results of each campaign.

Leading organizational transformation is a process in itself, one that begins by creating a higher level of understanding with regards to the entire system. Once your leadership team is aware of the synergetic philosophies of your business they are able to cascade the transformation effort down through the organization, building desire within their subordinates to stretch across functional boundaries as well. However, as we've mentioned, organizational change doesn't stop with understanding and desire. The next step is to raise the level of knowledge within the organization with regards to methodologies that impact the manufacturing process. Using Lean as the example, your leadership team must commit to educating all employees on Lean techniques and tools, and give up control when it comes to day-to-day decision making. In doing so, leaders will create a formidable ability amongst the people to identify sub-system constraints, waste and opportunities for optimization, and empower people to take action. Finally, to ensure that decisions made on the floor translate into favorable benefits to the overall enterprise, managers, following Sloan's model, must evaluate the numbers. Performance management is a key element of organizational and individual change, and supports the age-old saying of "what gets measured gets managed". As part of your organizational transformation, executive metrics must cascade down through functional divisions in order to reinforce the actions of people. Performance measures on the manufacturing floor which are designed to quickly and easily identify opportunities for improvement should have a direct link to those measures which are evaluated by managers, which subsequently link to executive measures. This reinforces the "bottom-up" structure illustrated earlier, whereby decisions are evaluated at each level of your organizational structure, in an efficient and timely manner, in order to gage the overall impact on the system.

Conclusion

The business models put in place by Henry Ford and Alfred Sloan are still predominant, and can be highly effective; however, their legacy is not the models themselves, but rather the philosophy behind the creation of the models that should be embraced by American manufacturers. Ford and Sloan improved business as we know it today because they saw an immediate push to align their organizational structures with the needs of the times. Jobs were in high demand, consumers were in high supply, and competition was limited. Organizational transformation is once again the need of this time period. People are in high demand, consumers are wiser and more particular, and competition is growing, in every industry, by the year. The era of organizational rebirth is upon us, acting now will allow manufacturers to embrace leading-edge methodologies in order to sustain the traditions of American manufacturing.

*Darrin Wikoff, CMRP, has spent the majority of the past seven years focused on organizational change leadership and training. As a consultant and adult education facilitator, Darrin empowers his students and clients with the skills and knowledge necessary to implement business transformation initiatives like Lean Manufacturing, Total Productive Maintenance and Reliability Excellence. If you'd like to learn more about this topic and how **Organizational Rebirth** can improve your bottom line, please contact Darrin at dwikoff@LCE.com, or request more information via info@LCE.com.*