



# COMPLEXITY DRIVERS IN MANUFACTURING

*Which impact you the most?*

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Complexity in a manufacturing enterprise is the new reality. In addition to everyday activities, you're tasked with driving out costs, cultivating empowered organizational behaviors, deploying new technologies, and satisfying increasingly discerning customers - and don't forget the need to progress quickly. So where does complexity in manufacturing come from and how can you identify what is impacting your operations?



COMPLEXITY  
DRIVERS  
NO. 1

## GLOBALIZATION

Business processes are layered and interwoven to manage what has, in many organizations, been: previously taken for granted, particularly in smaller footprint companies; effectively communicating across oceans and time zones, managing company culture, and mitigating logistical challenges.

- » Does it take you longer to collect data, complete your team meetings, gain approvals, understand who is responsible for what?
- » Are you spending more time reporting out than getting the job done?
- » Do you need a manual to understand how to implement a process change?



## COMPLEXITY DRIVERS NO. 2

### CHANGING MARKET CONDITIONS

Markets are dynamic and volatile; conditions change in a seemingly endless continuum. Changing conditions in markets that provide input or supply to manufacturing (like raw materials, labor and staff, process technology, and information technology) drive complexity. In this case, new business processes grow and manifest to exponentially support the acquisition of these resources in a timely and cost-effective manner.

- » Does it take you longer to acquire resources?
- » Are you –
  - » Spending more time negotiating cost and delivery?
  - » Justifying what used to be obvious?
  - » Using systems or being managed by them?



## COMPLEXITY DRIVERS NO. 3

### MERGERS & ACQUISITIONS

Has your organization merged with or acquired another organization? Perhaps a supplier has gone through a merger. The art of the deal is a sign of the times.

- » Are you dealing with redundancies – several people do the job of one, a system for each process?
- » Do organizational silos exist (our way – their way)?
- » Are there seemingly unreasonable expectations to deliver?



## COMPLEXITY DRIVERS NO. 4

### CUSTOMER DEMANDS

Customer demand is increasingly characterized by shorter lead times, random ordering patterns, and greater shipping flexibility. New paradigms for customer service are being born out of the “right product - right quantity - right documentation - right condition - right place - right time” mantra. Living with these new paradigms typically requires a step change in process and system complexity.

- » Has face time and dialogue with customers increased?
- » Are you thinking WWOCW (what-would-our-customer-want) more and more?
- » Are you reacting more than you are planning?



## COMPLEXITY DRIVERS NO. 5

### PARTNERSHIPS & ALLIANCES

As our working environment expands and business becomes increasingly difficult to scale and grow, alliances have become a means to achieve greater levels of success. Organizations forming alliances or partnerships require strong collaboration, effective use of common and isolated systems and procedures, and a melding of the minds to create consensus and agreement to move forward. All of this now becomes more complex and difficult to obtain.

- » Are you –
  - » Serving many masters?
  - » Continuously melding process and practice?
  - » Navigating politics or obstacles?
  - » Trying to integrate resources and craft roles & responsibilities?



## COMPLEXITY DRIVERS NO. 6

### PRODUCT PORTFOLIOS

Customer choices drive complexity in product portfolios. The increasing desire for more options and alternatives often creates challenges for manufacturers in meeting the required product mix and production schedules. This leads to greater sophistication in processes such as sales and operations planning, layered production methodologies, and business processes scaled to support quick reaction to dynamic production requirements.

- » Are you -
  - > Planning more and more for what will come versus what is at hand?
  - > Seeing smaller and smaller lot sizes?
  - > Managing process flow harder?
  - > Pushing operations to interact with sales and marketing?



## COMPLEXITY DRIVERS NO. 7

### ORGANIZATIONAL STRUCTURE

Organizations are typically well structured to succeed. They expand and contract almost seamlessly. It is when they pull apart into individual silos that redundancy, and consequently complexity, sets in. Information technology systems, business processes, individual roles and responsibilities, and communication streams are examples of where complexity can set in.

- » Are you -
  - > Finding it difficult to make timely decisions - is the check-off becoming longer and longer?
  - > Getting mixed signals and directions?
  - > Spending more time in meetings than managing operations?

If you answered yes to several questions, complexity is driving your manufacturing enterprise and you need to take a more proactive approach to managing it before it affects your ability to properly focus. Think of it this way - complexity hits hardest when we're trying to get things done; stifling our ability to execute work streams and initiatives.

Project Managers have figured this out. By applying a concerted project management effort, it won't be as daunting as you think. Good Project Managers can help organizations identify impacts to manufacturing processes and create a comprehensive plan to address them, allowing you to resolve problems and issues before they occur. Proactive planning will also afford you the comfort of knowing which complexity drivers are avoidable and will make the ones that are here to stay easier to control. Don't let these complexity drivers stifle your ability to move forward; embrace them by creating an organization capable of meeting ever-changing business requirements.

### *Integrated Project Management Company, Inc.*

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