

Driving Business Value in Manufacturing Through Unified Communications



The business communications environment has changed. Most agree it has become more complex - whether it is about the manufacturer communicating with customers, allowing employees to communicate effectively or communications as a key element of a manufacturing company's overall success.

Key Challenges in the Changing Manufacturing Environment

On the one hand, customers expect fast response time and outstanding customer service. On the other hand, employees may be spread across the country or the globe and need to be able to collaborate and communicate as if the barriers of mobility and distance do not exist.

The enterprise needs to be able to provide advanced capabilities in a manner that is cost-effective yet keeps several steps ahead of the competition in terms of how the business is run and how you interact with your customers.

For manufacturers, competitive differentiation comes from creating, organizing, and sharing information across the enterprise better than your competitors. Problems emerge when the flow of information is not smooth. For instance, if the logistics system does not show delivery then manufacturers do not get paid; and if data does not show border crossings accurately, then too much duty can sap profits.

Process "Silos" Impair Business Effectiveness

Most firms have already invested in intra-process automation and control (within functional process areas). However, firms tend to approach Business Process Management (BPM) on a narrowly scoped basis.

The larger opportunity going forward is inter-process automation and control, across the enterprise, customers, and trading partners. Improving processes that cross functional boundaries requires coordination, collaboration, potentially shared funding, and compromises among leaders of the different functions.

For example, Volvo is very focused on cross-functional process integration. The opportunity with Volvo is developing tighter cross-functional integration between its Powertrain division (which makes diesel engines, transmissions, and axels) and the company's five vehicle groups. It is also about creating better processes between their supply-chain partners and Volvo's manufacturing operations.

With the impact of globalization, process optimization becomes even more challenging. Today's global economy, that includes offshoring, outsourcing, and complex ecosystems, has created an even more complex environment for process optimization.

The vision is to connect the CRM, ERP, industry applications and back office applications, allowing smoother communication.

Unfortunately, the reality is that there are gaps in this communication process, and human intervention is still required in almost every business process. Communication and collaboration are still required to bridge the gap between back-end systems. (See Diagram 1 for key challenges)

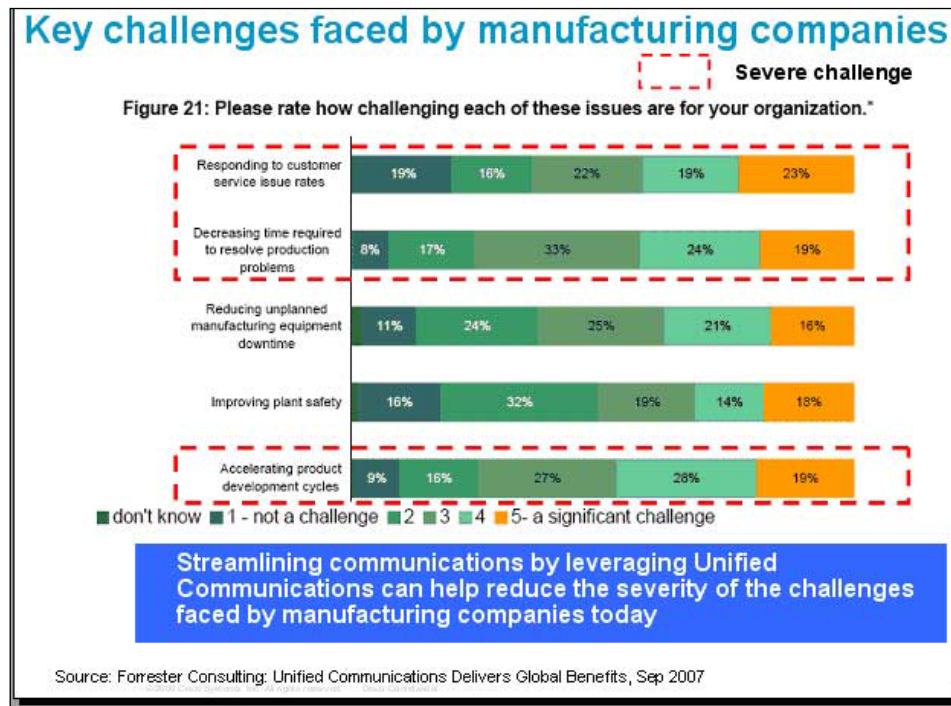


Diagram 1

Example: Communication Challenges Can Mean Lost Sales

There are many examples of how critical effective communications have become to core processes for today's manufacturers. For example on the sales side. A company had an issue with communication handoffs in their lead conversion process.

When a customer call came in, there was frequently several days of delay in routing the customer call effectively from the call center agent to the appropriate field salesperson. In an instance, a customer actually called to order 100 pieces of equipment and the order was lost because it took two weeks to communicate the lead to the sales team.

Imagine a situation where a hot lead could be transferred in real-time outside the call center to an available resource to field the inquiry. This would reduce "revenue leakage" due to communication delays and also show amazing nimbleness and responsiveness to customers even when calling into large organizations.

Transforming Manufacturing with Unified Communications

The consequence of doing nothing is clear. When Unified Communications is integrated with back-end systems, it can provide the missing link in many situations, and bring together communications and IT.

How can more effective communications be enabled by using open, standards-based technology to help employees "unify" their communications regardless of the device they happen to be using at the time?

Cisco addresses these complexities with the Unified Communications portfolio - a complete enterprise class system, that securely integrates voice, video and other collaborative applications into intelligent network communication solutions.

Effective communications can directly impact businesses' top and bottom line and create a more personal way of communicating.

Having an effective communication infrastructure translates into:

- More effective way to conduct business:
- Eliminate communications complexity and reach the right resource the first time
- Respond faster to customers
- Truly collaborative environment that is without borders
- Enable user-controlled productivity anywhere, anytime with any device
- Open solution that fits into the existing environment
- Standards-based, secure systems, built into an intelligent, integrated network

Cisco's experience with customers who deploy Unified Communications are seeing business value from three key elements:

- Cost savings: This is a critically important driver of "how to pay for" Unified Communications deployment from an IT point of view.
- Employee efficiency and productivity: This is a soft benefit but a very important one to the business.
- Driving Business Transformation: Potentially the biggest driver of benefits with a concrete impact on business operating metrics like revenue, customer satisfaction, etc.

Driving Business Transformation Benefits Across the Value Chain

Unified Communication can drive business transformation benefits across the entire manufacturing value chain.

For a typical manufacturing company, the business revolves around four core business processes: design, make, sell, and service. The challenges and pain points and how Unified Communication will impact vary dramatically by business process. (see Diagram 2)

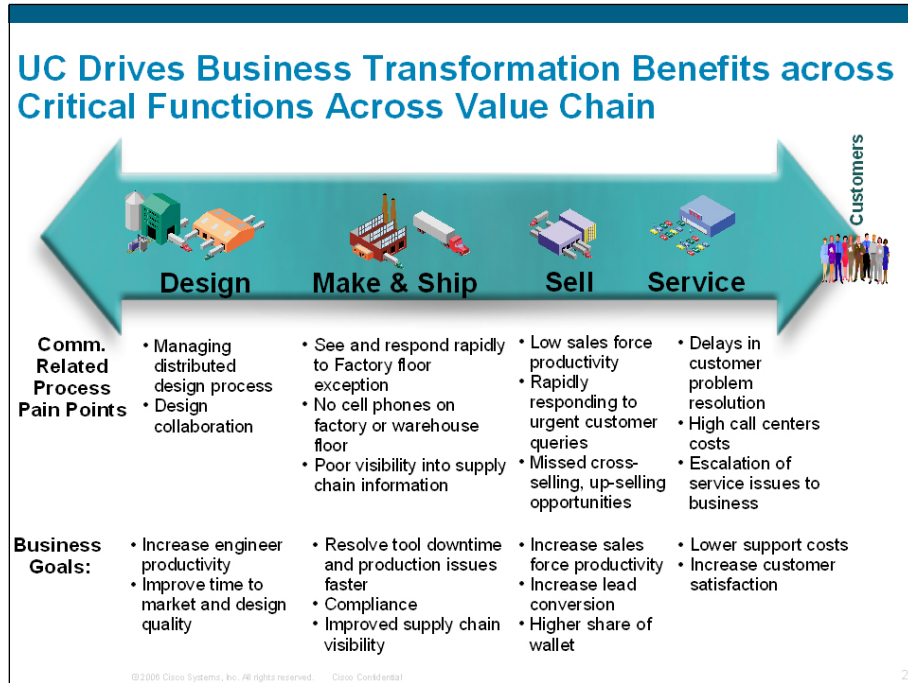


Diagram 2

Today, many manufacturers have a distributed global workforce, comprising teams of R&D engineers in different countries who demand teaming and collaborative environments.

Unified Communications can help to provide more collaborative design environments. In turn, this can drive faster resolution of daily and routine design tasks like engineering change notifications, and reduce product development time and costs through the use of voice, web and video collaboration. (see Diagram 3)

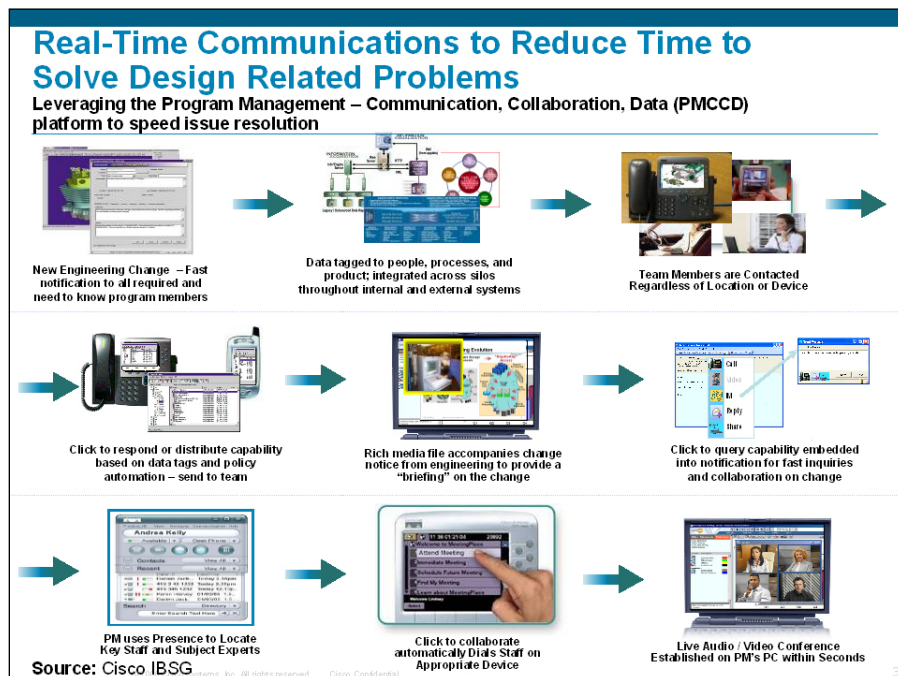


Diagram 3

Unified Communications can Transform Manufacturing Processes

Critical success factors for manufacturing companies include the need to maximize equipment availability, ensuring efficient information exchange between different parts of the supply chain and the applications that support these processes.

A lot of manufacturing companies have a "last mile access" problem, which is poor communications at the plant floor. This is often because people on shop floors do not spend a lot of time at desks with laptops, or cell-phone reception is poor, and there is a lack of interoperability between push-to-talk (Nextel kind of devices) phones and desk-phones/cell-phones etc.

Unified Communications can help solve the last mile access issue by providing full IP phone capabilities on a handheld device that is cheap to operate with no cell-phone plans required. These phones can be exchanged across shifts by using user-specific identifiers, and by providing access to important performance tracking information, such as Overall Equipment Effectiveness (OEE) and equipment downtime reports, etc.

One of the biggest risks in manufacturing is having a factory product line go down - thousands or millions of dollars of production are at risk for every hour or every day that the line is down. Should this happen, it is critical that the company get that line up and functioning as quickly as possible.

In such a situation, Unified Communications can step in (see Diagram 4). Those responsible for solving the problem can use Cisco MeetingPlace to automatically outdial a pre-defined team of people responsible for problem resolution. With one click, MeetingPlace will reach out to those people simultaneously, based on business rules - cell phone, pager, work phone, home phone, whatever is the fastest manner of reaching them. Then it will automatically bring them into an audio conference.

The team can enter the meeting via a Cisco IP touch-screen phone, or via the telephony user interface on their cell phone. The meeting can easily move from a simple audio conference to a web conference if documents need to be shared. The meeting can also shift to a video conference if video content (such as a real-time view of the machinery on the line) needs to be reviewed to solve the problem.

The decisions made will kick-off multiple follow-on activities. All the key meetings, discussions and decisions are tracked, recorded & archived, and made part of a searchable, permanent product record. All stakeholders are then notified. The business benefit? More rapid resolution of the problem, saving minutes or even hours of factory downtime.

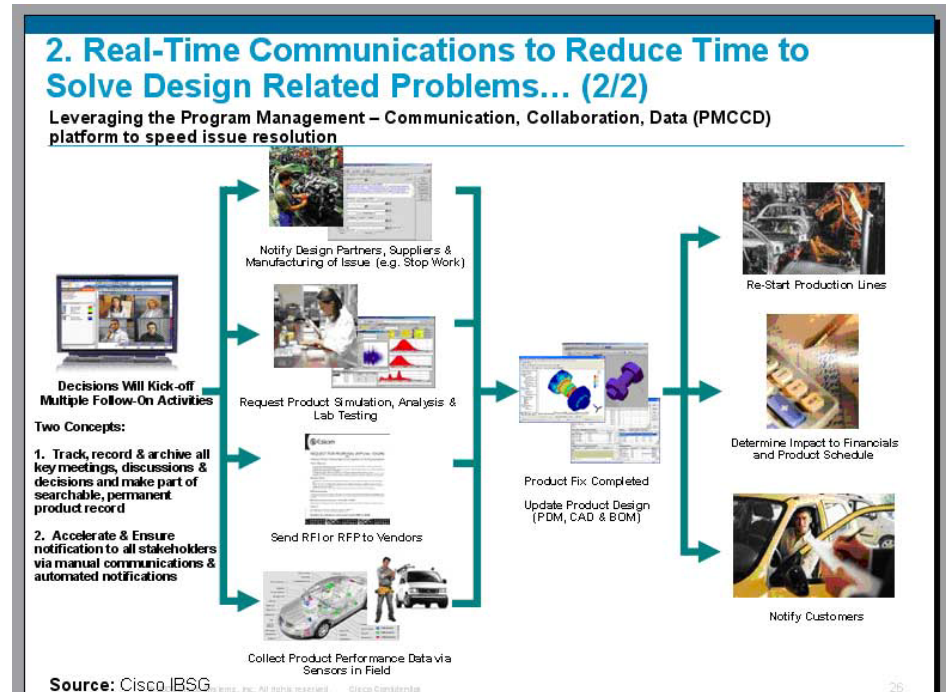


Diagram 4

Rich Media Solutions Enable Remote Testing & Save Travel

In a manufacturing environment, rich media video conferencing can be used to both reduce end-to-end testing time as well as save travel costs.

In this scenario, a test lab in London was having problems with a test method on a detergent product. The test lab needed help in diagnosing what was going wrong in the test process. It was determined that subject matter experts needed to be engaged to diagnose the problem, but they needed to see the test procedure first hand.

The company had two choices, either to bring the subject matter experts to London to work side by side with the test team, or try to enable collaboration in some other way.

With Unified Communications, the team organized a video conference, and send out the information to the experts over their Cisco IP phone. The experts logged into the video conference, looked at the test process (on any video enabled device) and quickly determined the root cause of the problem.

Not only was the problem resolved without having to wait for the experts to reach London, but the company saved over \$5,400 in travel expenses by not having to send the experts to London.

Video on Demand Solutions Can Address Staffing Issues

Over the next 5-10 years, manufacturers will face high numbers of retiring workers, and a shortage of talented workers to replace them. In addition, companies typically lack a model to capture knowledge, and building expertise takes time.

In such a situation, Unified Communications technology can play a key enabling role in the following areas:

- Enable next-generation eLearning (video on demand, simulation, just in time, embedded in business applications)
- Intelligent products (self monitoring equipment, RFID)
- Virtualization of subject matter experts

Unified Communications technology like Video on demand can also be used to certify factory workers on key safety and other compliance tasks. It can be used to share the following information:

- Compliance checklist
- Documents to share with workers
- On-demand compliance expert
- VOD explanations
- Knowledge database keyword search
- Automated click to comply ensures all processes completed

Unified Communications can Transform Customer Service Processes

Unified Communications can make field sales and support staff more efficient and effective. Mobility tools have the potential to significantly improve mobile worker productivity. Tools like Unified Mobility, Presence, and Collaboration solutions can help to achieve the following: Unified Communications can help to transform the customer service processes. Specifically, it can optimize call center operations to improve customer experience while reducing costs, enabling faster problem resolution.

- Leverage contact center solutions to prevent leakage of revenue opportunities and to differentiate one-self from the competition.
- Shorten sales cycle timelines through use of collaboration and mobility tools.
- Leverage collaboration and video-on-demand to drive faster ramp-up of sales force and dealer community on new products.

It can also leverage mobility and Presence to deliver service expertise to field service teams working at customer sites. Finally, being connected can help to increase responsiveness to dealer networks.

Cisco Unified Communications for Manufacturing Solutions

Cisco Unified Communications for manufacturing solutions comprise a portfolio of proven, cost-effective voice and data products that support innovative communication applications. These applications are delivered over a single Cisco Intelligent Networked Manufacturing infrastructure, which extends to multiple plant locations, meets stringent quality of service (QoS) requirements, and delivers optimal availability and security. The Cisco Intelligent Networked Manufacturing architecture integrates with existing manufacturing systems, protecting these critical investments while enabling migration to fully unified communications solutions.

Cisco Unified Communication solutions transform how people find information, work together, and share data across widespread locations.

- **Access:** Access enables people to make or receive calls and view calendars, data, and email anywhere. Whether in offices or connected using mobile devices, employees have immediate access to the people and information they need, when they need it.
- **Collaboration:** With Cisco solutions, suppliers, logistics providers, production, and engineering teams can easily collaborate using consistent, real-time information.
- **Improved customer service:** Innovative communication capabilities integrate with customer service applications to maximize call center performance and customer satisfaction.
- **Safety and security:** By integrating network-based video security solutions, companies can enhance employee safety, accelerate troubleshooting, and better protect corporate assets.

Cisco offers a range of voice conferencing and meeting solutions that enable people to easily meet in real time - with the push of a button. In addition, Cisco Intelligent Networked Manufacturing infrastructure also supports revolutionary new in-person meeting technology known as Cisco TelePresence. Cisco TelePresence enables people to collaborate and share information across functions, departments, and geographical boundaries. Manufacturers can respond to customer demands, gather product feedback more easily, and accelerate response to operational concerns.

Meeting participants can greet and communicate as naturally as if they were at the same table - no matter where they are. Cisco TelePresence integrates with enterprise groupware, such as Microsoft Outlook, and all other Cisco Unified Communications solutions.