

Forecast to alleviate the negative business and operational impacts of a materials shortage

2010 Global Supply Shortage

During the economic recession of 2009, many manufacturers closed plants and slashed their workforces to survive. Electronics component manufacturers were among these, and they have been reluctant to reinvest in growth until the economic turnaround is certain. As a result, many components are now in critical short supply across the globe – from key commodity materials to specialized electronics components.

The good news is that the industry is on the upturn. The Institute for Supply Management reported in July 2010 that economic activity in the manufacturing sector saw its 10th consecutive month of growth – that news is encouraging component manufacturers to ramp-up production once again. The bad news is that the supply-chain backlog is severe, and industry experts anticipate that the shortages will continue through the end of 2010, with some estimates pushing out recovery as far as the first quarter of 2011.

Recovery of the global electronics supply chain is not anticipated until early 2011.

Business Impacts

A global supply shortage creates these key challenges:

- **Excessive lead times** for component availability – some in excess of 20 weeks. For manufacturers, this means an inability to fill customer orders as quickly as may be necessary.
- **Increases in the cost of components** as demand exceeds supply. For manufacturers, this results in a loss of margin or – at worst – the need to raise prices of their products.
- **Vendors pushing out the dates for confirmed orders** as component manufacturers give 11th-hour warning of shortages. For equipment manufacturers, this can result in severely disappointing customers with little advance notice.

At OCM Manufacturing, we have recently encountered lead times well in excess of 20 weeks – and as high as 55 weeks and 93 weeks – as well as price inflation of greater than 1000% on particular components. **While working closely with your electronics manufacturing service (EMS) provider – i.e. OCM – to forecast production volumes is always important, in times like these it is absolutely critical.** Not doing so almost certainly guarantees that you will pay higher costs, experience longer lead times – leading to disappointed customers.

Strategies to Alleviate Business Impacts

Relationships with suppliers are invaluable in times of shortage. OCM Manufacturing's constant efforts to maintain strong relationships with suppliers pays off in crises like these, as suppliers who enjoy dealing with us will often "go the extra mile" to help us secure critical components.

In a supply crisis, we may also examine our purchasing history and, based on that history and our knowledge of our customers, may purchase an extra supply or place scheduled future order for certain parts. But, in a global supply shortage situation, there is only so much any supplier can do to obtain rare materials.

Forecasting is the **ONLY** safeguard against the negative business impacts of a materials shortage.



There is really only one strategy to alleviate the business impacts of materials shortages. By forecasting our need for components 6-12 months in advance, we are able to bond inventory with suppliers. Bonded inventory is a certain percentage of inventory that is set aside for us. We have immediate access to bonded inventory and can generally receive it within days.

Forecasting requires close partnerships between OCM and its customers, and we recommend the following best practices.

Forecasting Best Practices

OEMs and ODMs who provide materials forecasts to us are proactively buffering their businesses and operations against global supply crises. Best practices for materials forecasts include:

Partner with your EMS provider.

Meet quarterly with your EMS provider to discuss potential new business and probabilities of new orders. Based on estimates and plans we can work with you to put bonds and letters of intent in place with suppliers, thereby alleviating many part obsolescence and/or supply shortage issues. This is also the best means of securing competitive pricing.

Partner with your EMS provider – together, you can buffer your business against materials shortage and other supply chain risks.

Also involve your EMS provider in new-product design and planning. In doing so, you will incorporate design-for-manufacturing (DFM) into your development process. Through DFM, we are able to help to avoid single-sourced parts as well as other costly pitfalls, such as unnecessary labour, over-design, and problems with manufacturability.

Specify alternate parts.

When choosing components for your design, specify alternative parts wherever possible, and include these in your bill of materials (BOM). Single-sourcing parts leaves you with no options when a supply shortage affects that part, leading to extreme lead times, jacked-up prices – or both.

Suggest other suppliers.

In some cases, our customers may have access to component sources that we have not looked at. While it is generally in our customers' best interests that we maintain strong relationships with particular suppliers, in times of crisis, we are open to looking at other sources of supply that our customers may suggest.

More Information

For a more detailed discussion about the current supply shortages, we recommend this July 1, 2010 article by Rick Pierson of iSuppli®: <http://www.isuppli.com/Teardowns-Manufacturing-and-Pricing/News/Pages/Severe-Shortages-Impact-Key-Commodity-Components.aspx>

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