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# The ODM Challenge: Becoming Leaders in Design Innovation

As they make the jump to ODM status, EMS firms must take control of IP.

**T**he list of electronics manufacturing services companies entering the original design manufacturer market is long and growing longer: Flextronics, Sanmina-SCI, Celestica, Elcoteq, GES, USI, IMI and Pemstar, to name a few.

As the EMS business model changes from manufacturing products on spec for name-brand customers to designing original products and owning the intellectual property, business opportunities and challenges occur:

- Opportunities for new revenue. TFI forecasts faster growth in the ODM sector than in EMS over the next several years.<sup>1</sup>
- Operating two concurrent and distinct business models. EMS and ODM companies are managed differently according to business form, value proposition, cost structure, pricing practices and operating characteristics.<sup>2</sup>
- Leadership in innovating technologies and products that perform new and useful functions while conserving resources and creating sustainable jobs.

The opportunity for leadership in design innovation – and the potential to benefit the electronics industry, the macro economy and society at large – is the focus of this column.

Who are the leaders in electronics innovation? Most lists would include large name-brand OEMs – IBM, HP, Lucent, Sony – or perhaps startup companies with totally new product ideas. Certainly, R&D within blue-chip companies is critical. Less well-known, however, in many OEMs' new products are innovations by ODMs: new computer platforms designed by Foxconn as well as unique products such as Elite Industrial Group's Sound-Bug (which turns any hard surface into a speaker) and printer products with greater functionality in a smaller footprint. Unencumbered by brand definitions or a single market sector, ODMs' design engineers have free reign to develop new concepts leading to saleable products.

EMS companies new to the ODM model may have even more success than longtime players. EMS companies manufacture a range of products for diverse industries such as automotive, industrial, medical, networking and military/aerospace. This holistic experience of improving customers' designs, troubleshooting manufacturing issues, finding cost savings through efficiency

and interfacing directly with end-customers at times gives EMS firms greater insight than OEMs and ODMs to the needs of businesses and consumers.

EMS companies may benefit most in countries whose governments are investing in R&D and education. In the early 1990s, for example, Finland cut government spending by 20%. The two areas not cut: education and R&D. In fact, R&D investment was *increased*. Beneficiaries were not only Finnish citizens whose employment figures are way up, but also Nokia, Elcoteq and other companies who enjoy robust R&D skills and a highly educated workforce. China's central government is considering investing the equivalent of billions of dollars in R&D to elevate its workers' value globally. Already, China graduates hundreds of thousands of engineers each year; depending on the nature of the government investments, EMS and ODM companies in China may leverage these investments to foster innovation.

EMS companies not only have a significant opportunity to provide environmental redesign and recycling services for OEMs, but also an opportunity to design and build new products with superior environmental properties from the outset. It's less expensive and quicker to design a *new* product, with qualifying bills of materials, ease of recycling and other resource-efficient properties, than to revamp an existing one and change processes midstream.

In the last 25 years, the EMS industry has distinguished itself by its growth, the massive conversion to the outsourcing model, its expansion of services and establishment of a multinational footprint. Now as many EMS companies act as ODMs, I challenge the industry to own patents for hundreds of the most innovative, useful and resource-efficient products used by businesses and consumers for the next 25 years. ■

## References

1. Technology Forecasters, *Electronic Manufacturing Outsourcing Report: 5-Year EMS and ODM Forecasts by Industry Sector and Geography*, December 2003.
2. Technology Forecasters, *Original Design Manufacturers: Viable Alternative/Distinct Business Processes*, June 2004.

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