Medical Device Outsourcing Market Growing

Maura Leahy, Creganna Medical Devices - Contract Design Services Division, writes about the benefits of outsourced design engineering.

In 2004, the design engineering segment was valued at 8.6 per cent of the outsourcing market growing to 14.4 per cent in 2009. Of all four segments, the design engineering segment is poised to exhibit the greatest growth.

"Savvy manufacturers have been quick to capitalise on using outsourced design services as a route to cut product development costs and beat competitors to market."

The main categories of medical device outsourcing are:

- design engineering
- component manufacturing
- final goods assembly
- supply chain management to include sterilisation, packaging and warehousing.

In 2004, the global medical device outsourcing market for cardiovascular, endoscopic and orthopaedic devices was valued at $4,022.2 million growing at a CAGR (Compound Annual Growth Rate) of 14 per cent to 2009 when the market is estimated to be valued at $7,734 million according to the Millennium Research Group's Global Markets For Medical Device Outsourcing, 2006.

The trend towards outsourcing medical device design is set to accelerate in the coming years.

Maura Leahy, Creganna Medical Devices - Contract Design Services Division, writes about the benefits of outsourced design engineering.
Outsourced Design Engineering

Outsourced design engineering services enable medical device manufacturers to accelerate product development timelines or access specialist expertise in key product design fields e.g. delivery device systems. Traditionally, design engineering has been conducted in-house by medical device manufacturers.

When the outsourced design business model first emerged, manufacturers had concerns about IP protection but robust client confidentiality processes and systems within the sector has allayed any such unease and manufacturer confidence is high.

Savvy manufacturers have been quick to capitalise on using outsourced design services as a route to cut product development costs and beat competitors to market. As the trend to use outsourced design services accelerates it will underpin a substantial growth in this sector.

Who is Outsourcing Design?

In a growing medical device industry, new entrants to the market are emerging at a rapid pace and are fuelled by burgeoning venture capital investment into the sector. The business model of many new entrants is to bring a product to market, achieve regulatory approval and then sell to a larger manufacturer. Such new ventures seek to operate as virtual companies without the overhead of manufacturing or large R&D functions. Outsourcing of design is an attractive choice for companies operating to this model.

It is not just start-up companies that are driving growth in demand for outsourced design as larger manufacturers endeavour to keep pace with new product introductions. Research from Frost & Sullivan indicates that up to 80 per cent of a medical device firm’s revenues come from products released to the market within the past five years and up to 70 per cent of revenue from product portfolios launched in the last three years.

Despite the larger resource base of leading manufacturers, the rapid pace of innovation is refocusing them on their core competencies and very often their optimum strategy may be to outsource other non-core elements of product R&D. As manufacturers have a number of projects in the development pipeline at any one time and all these projects are competing for the same internal resources, outsourcing design becomes an attractive option for product development teams.

Benefits of Outsourced Design Engineering

The obvious benefits of outsourcing design engineering are accelerated time to market for new product introductions, cost savings and increased profitability. Less obvious benefits arise from the focus of the outsourced design team on modules of the overall innovation.

An outsourced design team will often undertake more intensive end-user research on the area of their design leading to value-adding design outputs. For example, a design partner focussed solely on the delivery mechanism for a medical device may design a superior system that enables the physician to achieve greater device placement accuracy and an overall better outcome for the patient.

Outsourced design teams will also focus on the overall effectiveness of a design from a manufacturing standpoint. They are more likely to refine product design for manufacturability than an R&D engineer who is focused solely on specifications.

Future Increases

Outsourced design engineering is set to flourish in the coming years as an increased number of manufacturers from start-up ventures to large established companies reap the benefits associated with outsourced design engineering - better product design, cost savings and winning the race to market.