

Miracles by Design

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Imagine working in a place where you and your colleagues help perform miracles every day. Miracles like the blind being given sight for the first time. The deaf handed the opportunity to hear. These are not just hopeful predictions from the crystal ball of futuristic medicine. The very best creative minds are making the impossible possible right now in medical devices.

New technologies are being developed every day to enable the 'miracle' cures to become readily available. The sector has a growing customer base in an aging population that is living longer than ever and the pressure to look and feel younger and healthier is rising. The demand for new medical devices to deliver these requirements is white hot.

In developing its products the industry uses a unique blend of creative science, technology and engineering. At present it possesses world-class scientists but accessing the best technology and the right mix of scientific engineering is not easy, especially when speed is of the essence.

Innovative and commercially viable new products are spending too long in the lab due to poor R&D processes, sometimes getting stuck behind a secondary product that isn't complete or fully tested, or that is waiting on new technology to enable it to move forward. The sector needs to act sooner rather than later to transform the way it works to get the profitable new products to market faster.

However, it is actually pretty hard for medical devices companies to pull together all the different scientific, engineering and technology disciplines needed to ensure that a new product is ready to fly. People working in these areas are experts in their own fields, which is both the solution and the problem! Getting hold of complementary expertise to solve a technical challenge is not easy if you know little or nothing about the latest innovations in an area that is not your own.

And what about the sales and marketing required to take the new product to market? The right expert may not be in-house, and even if they are, where do they fit in the process, and how much influence do they have on the new product design based on their market and customer research and knowledge?

Medical devices companies need to talk to process experts who can help them build a well-defined, gated R&D process that will effectively manage the introduction of commercially viable new products in a timely way. The process will ensure the right internal experts will get involved at the right moment to influence, encourage or halt the progress of new products that don't match pre-determined criteria. These criteria need to be both technical and commercial; aligned to the company strategy and capability. And, by taking a more structured approach, experts in different

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areas from around the business will be clearer on their contribution which will become more efficient and timely, and the clear guidelines will encourage knowledge share and harmonious working that will help build internal capability in the whole process going forward. Fewer people working in silos, more as part of a team.

There are also ways to find the missing scientific and technology insights. There are industry bodies and associations such as the Institute of Medical Devices at the University of Strathclyde (www.strath.ac.uk/simd/) that can offer an independent and knowledgeable evaluation of what is in your R&D pipeline and what the missing science and technology aspects might be that can help you move forward in a broad range of products. These people have a detailed understanding of the science behind a wide variety of products and can provide the 'missing knowledge' or help introduce them to another complementary partner to suit their needs.

The medical devices industry is aware of the huge demand for its products, including that coming from the massive healthcare providers such as the UK's NHS. The sector is growing at a rate of about 10% per annum. There is everything to play for. The sector now needs to focus on putting a strong R&D foundation in place, and work a bit smarter in finding the missing pieces to the jigsaw. It will then be in a strong position to take full advantage of consumer's growing excitement for products that are capable of performing health miracles in the 21st century.

Nostrapharmus says: **“Effective and timely innovation in medicine and healthcare technology is required to address the world's healthcare problems. This can only be brought about by the convergence of engineering, science and medicine.”**



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