

A Best Practices Approach to Creating the Next Medtech Hotspot

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The year is 2050, and the global population is approaching 10 billion people. Average life expectancy is over 80 years old for many regions in the world. These are just two of the factors driving the growth of MedTech. The question is, how will we keep up? The answer lies in current MedTech hotspots, their infrastructure, and resources.

The ongoing challenges posed by population growth and ageing are a concern for governments, policymakers and health-related industries alike. While MedTech is not immune to these challenges, the key to mitigating these issues may well lie within industry's leading innovation hubs. A typical hotspot is composed of large multinationals, which dominate and utilise M&A for growth, and startups, which foster the innovation to create great products and leverage technology to relieve the cost on healthcare. The difficulty lies in the reliance on a few hotspots, mainly in Europe and North America, to address pressing issues. The solution? To create more hotspots globally, using the tried and tested approaches from these hotspots in Europe and the US.

The earliest traces of medical devices are from 950BC in Egypt, a prosthetic toe made from wood and leather. Fast forward to 1816, and René Laennec of France had just created the first stethoscope. We have come a long way since then, as we look at ways integrate AI into medical devices and digital health products. This rapid growth is no doubt due to MedTech hotspots such as Ireland, California, Minnesota, Massachusetts, and Munich where government, industry, and academia work in tandem to facilitate industry growth.

The creation of any medical technology requires regulatory approval, highly specialised knowledge, a runway of investment, and access to resources.

Given it can take up to seven years for a MedTech firm to complete clinical trials and finally start selling, it should come as no surprise that access to financial capital is essential. To succeed as MedTech hotspot, there needs access to investment for each stage of firm growth. For example, in Ireland, in the pre-firm phase, grants typically provide the pathway to conduct research into the feasibility of the project. From there, many will work with researchers and a commercialisation fund to develop the product. Finally, the startup is ready to begin looking for finance from investors, which often provides the runway to see the company through clinical trials and beyond.

The industry is built upon human knowledge, our knowledge of biology and technology, and pushing the boundaries of both requires exceptional human capital. By analysing the leading MedTech clusters in the world, it should come as no surprise that they are highly regarded in such specialty disciplines. San Francisco, Massachusetts, and Minnesota are all home to highly recognised universities which pride themselves on their medical and technology related departments.

From my research on leading MedTech hotspots, we know that strong financial and human capital are vital, but it must be complimented with specialised training and infrastructure. For example, consider Munich, which has world class universities and several venture capital firms. In 2018, the partnership of Roche, and Plug and Play, brought about the creation of a Digital Health focused accelerator to foster and support further innovation. Similarly, in the US and Ireland, programs such

as Stanford's BioDesign, and Galway's BioInnovate, are designed to train the next generation of healthcare entrepreneurs. Each of these hotspots also hosts specifically designed facilities for conducting clinical trials, making the journey to commercialisation more efficient.

While the MedTech industry is heavily regulated, these regulations are critical for both patient safety and the future of the industry. Despite their rigorous and costly nature, regulatory standards can drive innovation as they set the bar for the minimum standard. However, in a world so connected, we are not tied to rules and regulations of our own market, and many companies now go to market on different continents than their origin.

Despite its long history, the rapid advances in the medical and technology fields ensure growth in the industry. As we battle some of the most pressing health challenges in the world today, how we create the next MedTech hotspot may be instrumental in ensuring we overcome those challenges. By emulating current MedTech hotspots - prioritizing high quality education, constructing industry specific infrastructure, organising staggered investment opportunities, and providing entrepreneurial training - we enable MedTech entrepreneurs to go from R&D to IPO. But more than that, we alleviate the strain on healthcare systems, and optimise the opportunity for health innovators to mitigate the effects of aging and ultimately, save lives.

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