

## Kickstarting Disruptive Innovation

DIGITAL HEALTH LEARNING NETWORK,

CAMBRIDGE DIGITAL INNOVATION

*Hughes Hall, University of Cambridge*

### Key Findings:

- Encouraging innovation / disruption within pharmaceutical companies is challenging due to healthcare being conservative, heavily regulated, and having established business models
- Companies are currently finding more success in nurturing innovation by separating “experiments” from mainstream operations in “skunk works” that are buffered through organisational distance, and alternative reporting metrics
- Some companies are addressing the issues around conservatism and established mind-set, through (i) formal training, (ii) investing in creating physical spaces for innovation development that are distinct from the rest of the company, and (iii) using external networks (people, start-ups, companies)

Companies, large and small, have devoted substantial amounts of time and resources to the pursuit of innovation. At the inaugural meeting of the Digital Health Learning Network in March 2017, the group shared insights on nurturing disruptive innovations in the pharmaceutical industry.

### **Innovation – Do we need it?**

Historically, the UK has been a global leader in the research and development of new medicines. However, increasing globalisation of the industry combined with decreasing productivity has transformed the drug discovery landscape and challenged its position as an innovation leader.

Companies are reporting greater increases in global discovery investment outside the UK, and recent reports have indicated that the UK is losing out relative to wider global investment (Nair et al., 2016). To maintain its position as a central innovative player and to continue attracting global investment in this changing landscape has become a pressing challenge for the UK industry. Companies large and small all have to adapt to this changing environment. The only question is – how?

## **Disruptive innovation at the edge**

Innovation initiatives – be they new products, services, processes or business models – fail more often than they succeed, and the innovators that do succeed face the subsequent challenge of sustaining their innovations. Innovation experts have explained this effect partially to the lack of a robust innovation strategy, without which, “innovation improvement efforts can easily become a grab bag of much-touted best practices” (Pisano, 2015).

One of the strategies used for spotting disruptive trends is to “head to the periphery”. Often, companies that manage to innovate successfully are seen as “peripheral companies”, that is, companies that are either in a completely different industry, or are small, technical start-ups. The rationale for the success of these peripheral companies can be found both in the freedom from lack of institutional incumbents and barriers, and also the increased potential for creative ideas through inter-disciplinary perspectives and an open-ness to new mind-sets (Anthony, 2012).

## **Size can be important**

Larger companies can capitalise on their size to gain a competitive innovative edge by establishing innovation hubs, internal corporate ventures, acquiring other companies and so on. These companies have much leverage over smaller, less-experienced start-ups: they have access to a wealth of resources, a robust supply chain and sales force, an extensive network, a strong brand, and they will also have considerable experience and capability within their industry (Blank, 2014). Perhaps most importantly, the consequences of failure are less potent for a large organisation dipping their toes in an unexplored ocean, and smaller companies often end up having to look for alternative solutions to survive.

However, these perks and capabilities are also accompanied by challenges. Experts often become incumbents; often, senior individuals who have control over resources may not want to venture into something they do not fully comprehend. One of the DHLN members, also Chief Digital Officer at a global pharmaceutical company, shares his insights:

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*“Introducing digital innovations to a healthcare business is particularly challenging due to conservative nature of the whole business. We have learnt quickly that if the business benefits are not immediately realised, the innovation is seen either as a novelty, or a distraction. To ensure the ideas receive the appropriate time to develop (and avoid early disillusion) we should avoid fanfare, and run our “experiments” in organisationally distant parts of the everyday business, only bringing them to full corporate attention when the impact and large-scale adoption can be easily described. The “fail fast” approach aims to terminate experiments as soon as we sense failure, rather than use “faith” or “belief” to prolong tests. Understanding this it would be advisable to discuss about affordable losses instead of net present value calculations only. Using Design Thinking methodology is also something that we have seen as a valuable way of creating something that*

*really benefits all the possible stakeholders. Healthcare business is still learning how to really be customer centric”*

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*Vignette, DHLN forum discussion*

The annual corporate budgeting cycle is in itself a barrier to innovation strategy implementation (CameoWorks, 2012). As a result, tools and methodologies such as skunkworks projects, ring-fencing or internal venture funds may help carry out innovation successfully outside the day-to-day operations of the business. However, none of these are possible without a culture of innovation.

### **Culture of cultivation and innovation**

The incentive for innovation is not always prioritised, or apparent. As the Director of Clinical Information Technology and Solutions at one of the world’s largest pharmaceuticals explains, “there are tonnes of digital initiatives at my firm, but it is tough to get all of them implemented. Also, the company is not paid by how many ideas you have, but by how many pills you sell”. The short-termist profit-drive in large companies have long been identified as a significant barrier to long-term, radical innovation (Storey, 2000; Hadjimanolis, 2003). Apart from market-related and governmental barriers – classified as external barriers –, there are also internal, organisational barriers to innovation, such as organisational culture (Hadjimanolis, 2003).

Organisational culture – the shared norms, values and beliefs of the company – (Schein, 1990), can become a significant barrier to innovation, when the existing beliefs and values of the company are not supportive of change (Hadjimanolis, 2003).

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*“To win time for nascent innovations, the team lead at a global major Pharmaceutical company’s R&D function presented one of the senior budget-owners with a plant pot showing a few green shoots. The senior manager was asked to identify the flowers from the weeds. He answered that more time was needed before the weeds could be identified and removed. The Innovation Lead then replied that this was also the case with digital innovations – they need patience to identify which ones could be important, so standard budgeting processes could not be applied. **The company has now adjusted its approach to innovation providing innovation spaces at different locations and providing trainings in innovation strategies to encourage innovation development”***

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*Vignette, DHLN forum discussion*

Sometimes, issues and differences may be quite literally “cultural”. On a geographical level, resources in a multi-national may be concentrated or more abundant in certain regions (e.g. US) rather than in others (e.g. Europe), immediately restricting the innovation potential for a

large proportion of the global company. From a socio-cultural perspective, culture may also have significant implications on innovation outcomes. We have found that in certain countries and cultures (such as Israel or hyper-lab) it is easier to acquire patients and easier to experiment; these countries are more aggressive and open-minded to innovation, and are more often than not also enthusiastic about digital and technological transformations.

## Findings

By definition, every innovation is different, and as such there is no silver bullet strategy as to how to proceed. It is important to remember that innovations develop amongst people within organisations and that innovations are co-designed and implemented by groups of individuals within the organization and new ways of engaging externally within the wider ecosystem. . By carefully configuring its organizational structure, fostering a culture of cultivation and change, and innovating with a wider lens across the business ecosystem, organisations as large and incumbent as the pharmaceutical giants of this world will still be able to perform disruptive transformations.

*All this to kickstart innovation and we have not even begun discussing sustaining these innovations yet...*

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