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Springboard

SUSTAINABILITY THROUGHOUT THE SPRINGBOARD DESIGN PROCESS

LAUNCH AND POST LAUNCH

A BLOG SERIES BY CATRIONA ELDRIDGE

INTRODUCTION

Springboard Pro uses a 5-stage development process:

1. **Opportunity and Research**
2. **Concept and Feasibility**
3. **Design and Verification**
4. **Validation and Preparation for Launch**
5. **Launch and Post-launch**

Like many other companies, we are aware of the growing climate crisis, and the increasing pressures from legislation and consumers to develop sustainable, environmentally friendly products. This article series explores how to design for sustainability at each of our five product development stages.

Increasingly, patients, purchasers, users, government bodies and medical device companies themselves are actively seeking to reduce the climate impact of medical devices, and improve their sustainability.

SUSTAINABILITY AT STAGE 5: LAUNCH AND POST LAUNCH

The launch and post-launch stage examines the device in use; does its real performance match the expected performance, and vitally, does it meet the user, regulatory, and business requirements? If improvements are necessary, they can be implemented at this stage, under change control. Stage 5 looks very much towards the future of the device, and can in fact be carried out on an established device. It can include root cause analyses of user feedback, identifying the cause of issues, breakages or failures, and guides both small improvements and what to focus on in any next generation device.

The main focus of sustainability in this stage is similar to the focus in Stage 1: identifying and guiding areas for improvement. Although there can be some design changes made at this stage, the time for large alterations is really at the beginning of the development process, so while Stage 5 may see some small tweaks, it is more likely to guide foundational design in a new iteration or device than it is to make major changes. How sustainable the device really is in practice can be evaluated at this stage- how much of the waste generated at end of life is actually being recycled? Is the end-of-life management actually what was planned for in the earlier stages? Are patients able to use the device efficiently, e.g. without wasting pharmaceuticals? Does the device work for its full intended lifetime?

Stage 5 can also include a formal assessment of the device's sustainability, typically in the form of a Life Cycle Assessment, or LCA.

This is a framework laid out in ISO 14040 for assessing the impact of a product or process, over its entire lifecycle. More companies are now publicly committing to improving their environmental impact and the sustainability of their products; LCA reports are a recognized method for reporting on product sustainability, and the requirements for making public claims based on an LCA are laid out in the ISO standard.

In the UK, the Green Claims Code also governs what claims companies can make about their environmental impact: such claims should cover the whole life cycle of the product in question, and be backed by up to date, credible evidence. Evidence like this is found in a well designed LCA.

CONCLUSION

The final stage in the design process, Stage 5 echoes Stage 1- both identify areas for improvement and can guide future work. The majority of the sustainability work done at this stage is observing how the device functions in use- making design changes at this stage requires redoing large parts of Stages 3 and 4.

Like Stage 1, Stage 5 gives insight for the next iteration of design.

Now is the time to look at market impact and to identify areas where we can do more in future iterations.

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