

## **Innovation By Design – Collaboration is the key to cross the Pitfalls in the Innovation Process**

The core philosophy of Innovation by Design is collaborative working, which is seen to be indispensable to innovation. It is collaboration that activates the process of the seven Cs. Therefore, a core team, an enterprise-wide team and an external team has to be in place for the innovation process to kick off. The innovation journey itself can be broken into distinct stages which are marked by the pitfalls that lie along the journey. The pitfalls thus serve as landmarks in the innovation journey.

In research-led or technology-led as well as in innovation led by user need, there are challenges that lie across the whole spectrum of the innovation process. These challenges are captured in visualising pitfalls as "valleys of death". These valleys grow deeper and deeper with progress in the innovation journey because there is more at stake in advanced stages of the innovation process. It is useful to visualise the various stages in this process as journeys through what can be called the "seven Cs of innovation".

At the first landmark -- that is at the brink of the first 'valley of death' -- where there is a new perceived need in the field or a new technological or research discovery that necessitates innovation, a concept needs to be showcased in the form of a mock-up or a CAD model. This concept exists at the level of perception at this stage, not being given the shape and detail of a prototype as yet. The project has to travel through the seven Cs now. The 'cause' is clear and warrants a solution, which calls for a process that moves through the seven Cs. Here the 'connection' that happens is through the perceptions of the users with regard to the concept presented to them. Both positive and negative perceptions provide invaluable insights.

These insights then trigger the next process through the seven Cs. The cause remains constant although it can be understood with some difference, the context becomes clearer and comprehension improves considerably. The collaborative team undergoes changes at this stage because a real prototype is being built. Which means that experts need to be involved towards this end. All three teams on the collaborative model may reflect this change. Here, the 'connection' is through a more tangible product or system which can

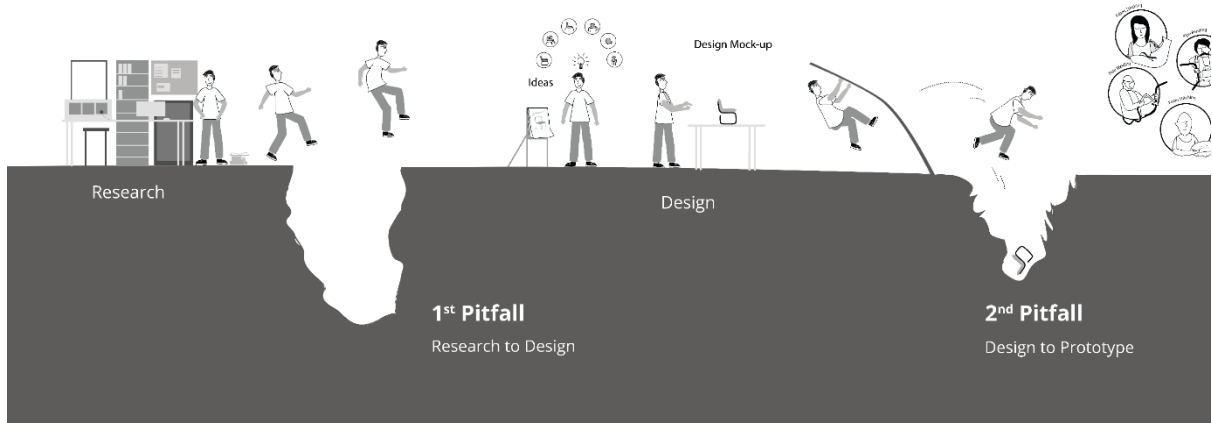
actually be 'used'. There is often a detailed explanation given to the users at this stage so that more concrete feedback may be obtained. Problems and advantages in the product/service become clearer. Finance becomes an important concern at this stage. Once again, the collaborative network changes to reflect the dynamism of the process. The management has a greater role to play now. The feedback from users that has been obtained makes the context sharper and the comprehension stronger at the third process through the seven Cs. The 'check' too reflects these insights. Crafting needs considerable manufacturing and development skills at this juncture as pilot production is underway.

User testing upon pilot production happens with a large number of users. These users also come from a variety of segments. In the final process through the seven Cs, the context and comprehension are further refined. The product may now have multiple versions to cater to different user segments if the context so demands. Costing will have to be explored thoroughly and there may be significant changes in materials and technology. It is with all these inputs that 'crafting' is undertaken for large-scale manufacturing.

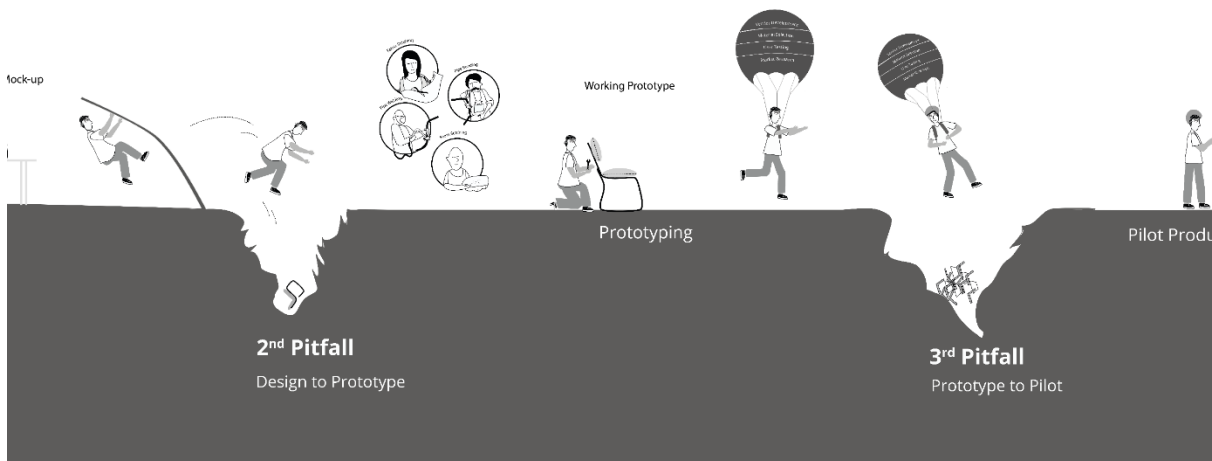
If, in the 'connection' that follows, it is found that users are satisfied and delighted with the product, creating a demand for it, 'innovation' can be said to have happened. However, if this is not the case, the entire process may have to be repeated through the seven Cs with corresponding changes in the collaborative team. The bottom line is that only when user satisfaction is evident and there is demand for the product/service then only it can be called innovation.

The pictorial depiction below shows the Innovation journey of a Chair from idea to mass production.

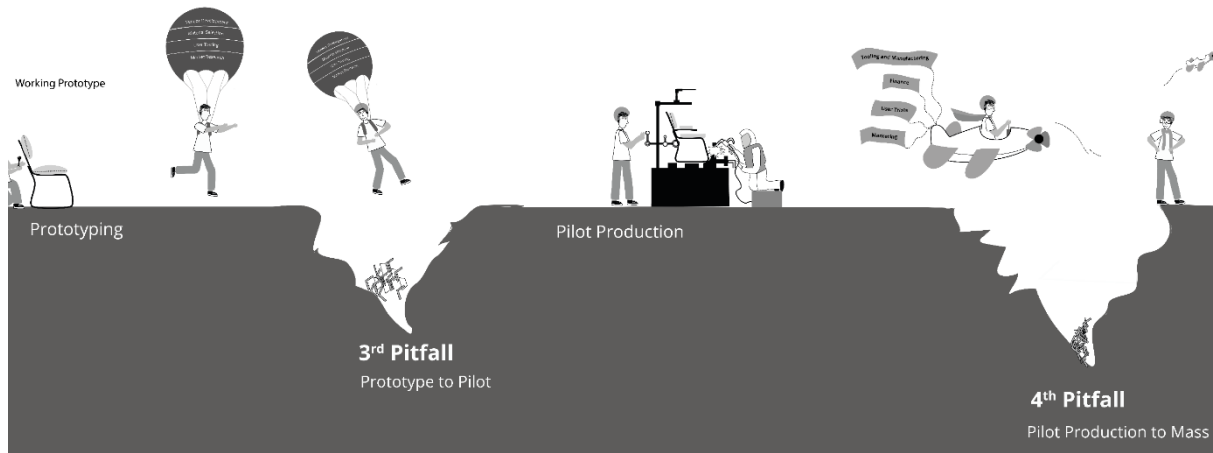
### 1<sup>st</sup> Pitfall



### 2<sup>nd</sup> Pitfall



### 3<sup>rd</sup> Pitfall



### 4<sup>th</sup> Pitfall

