Impeller Innovation: The secret to how the US sent a man to the moon



At this month's Honey Buzz, **Jim Dawton** gives senior industry figures a preview of Impeller Innovation; a model that he is presenting to the UK Government, industry, and the investor community as a way to stop wasting money in the name of innovation. At the end of his incredible talk, he encouraged us to challenge his theory, improve it, modify it – and do it.

So why Impeller Innovation? The difference between a propeller and an impeller is that the former moves with whatever it's propelling, and the latter doesn't. The old innovation funnel is a propeller; every time a project crashes you lose your investment. It's fragile and expensive. If you create an impeller you only need one, and you can use it again and again.

If you're curious to know how the US used reverse funnel innovation to beat Russia in the race to the moon, and how this applies to your business right now, then keep reading ...



The Buzz evening highlights ...

1. The innovation funnel is more like a colander

If the so-called innovation funnel acted like a funnel then everything you put into it would come out the other end. In practice, the funnel is nothing more than a definition of need. Without using the funnel, you just have ideas floating about.

Once you define your need you can choose which ideas to put into the funnel with the hope of coming up with a solution.



This might sound okay in theory, but it's not a funnel - it's an innovation colander. It's not a good business model. You put in more ideas than you extract, it's inefficient, and most people call that innovation. A better definition of innovation would be 'the successful commercialisation of a novel idea'. It's not about getting to market; it's about making money.

Why is innovation defined as successful commercialisation rather than just the realisation of an idea? Someone can innovate in philosophy, and the ideas can have an impact without being commercial.

Adrian Wheeler, Founder of The Fairlight Project I used to consider myself a consumer designer. What I do now is develop new concepts and solutions that didn't have a problem before the market. Then I find the right customer.

Russell Mulchansingh, Senior Innovation Manager at Cancer Research UK

2. Welcome to the graveyard... of good ideas

How do entrepreneurs bridge the 'valley of death'; the period between early stages of start-up and becoming commercially successful? In the case of public funding, the Government is the promoter of the need. They incentivise people to commercialise their IP. They won't fund a project until they receive a project plan. They don't know what the answer is, only the idea.

Then a different type of person takes over to monitor business development. Their job is to account for the project spend, not the idea or solution. You are rewarded for running a well-managed project, spending your budget accurately and on time. And because the funnel is a colander, people leave before they reach the valley and start at the beginning again.

When someone buys you out, all the talent behind the idea leaves. They go back to the beginning of the funnel and start again. Those people never end up creating anything of value that is seen by the market.

Lua Cooper, Campus Director at The Iron Yard



The existing model is funding small companies to remain small companies. We should call it, 'don't feed the pigeons.

Jim Dawton,
Director of Impeller Ventures



3. The start-up cycle is a culture, not a necessity

If you're commercially minded, you don't want to be a start-up for very long. Start-ups are a culture, a way of life. You might have a product, but the only value is the IP because you don't have any sales or revenue. This encourages investment half way down the funnel. Then industry buys the idea when it pops out the funnel and they go off and make money with it.

Did you know that a British inventor, Kane Kramer, created the iPod back in the 1970's? It wasn't desirable or usable, and there wasn't the necessary infrastructure at that time. Tony Fadell bought the patent and went to Apple with the idea. He later founded Nest Labs, who invented the Nest Learning Thermostat, and sold it to Google two years later for \$3.2 billion.

4. Forget data, we're now entering the age of the customer

Our economy is changing. It used to be that the value was in manufacturing, which is when Great Britain was the manufacturing capital of the world. By the mid-20th Century distribution and logistics became more profitable than manufacturing, then more recently we have seen a shift towards information and data gathering. Now we're entering the age of the customer.

Big companies can afford to have people constantly employed to secure grants and see projects through to the next stage. The rich get richer.

Iain Sanderson, Chairman of The Lightning Car Company

We convince ourselves that there is value in IP, but there really isn't. Not unless it's commercialised.

Jim Dawton,
Director of Impeller Ventures

The dynamic realisation is understanding the shift from b2c to c2b. The tech sector understand this and are able to be agile since they are starting at zero.

Lulu Laidlaw-Smith, Commercial Partner at Honey Creative





The US is in a different economic cycle to us. The UK has been enjoying wealth that was created from the era of manufacturing, and we haven't had to work very hard since then. We are great at the ideas, but not so good at commercialising them. We convince ourselves that there is value in IP, but an idea is worthless without knowing how to make money from it.

It used to be about information, but now we're entering the age of the customer. How do you own a customer? Through design.

Jim Dawton, Director of Impeller Ventures

5. What happens when we're forced to innovate?

The only reason we have an innovation funnel is because everyone thinks that innovation is difficult. It isn't, it's just hard work. During WW1 and WW2 we created RADAR, jet engines and other inventions because we had an urgent need. The way this happened was through a reverse funnel. The need is the same, but the focus is on commercialising the innovation.

One characteristic of the old innovation funnel is that you can hedge your bets. You throw as much at the funnel as possible and hope something comes out the other end. But what if you don't know what to put in the funnel? It's much better to begin halfway down the funnel and skip three years. Start by defining what you want to achieve and work towards that.

In the US the stakes are higher for people in employment. They need their jobs for family security and healthcare. When you start a company and the people working for you feel like they carry as much risk as you do, it's all or nothing. The company has to succeed.

Lua Cooper,
Campus Director at The Iron Yard



The conflict between the US and Russia pushed both countries to keep innovating. Since then everyone took a break.

Lua Cooper, Campus Director at The Iron Yard



True innovators, Elon Musk and Henry Ford illustrate how solutions identified, deliver real innovation in line with your impeller methodology.

Lulu Laidlaw-Smith, Commercial Director at Honey Creative







6. The answer is experts ... and a Design Authority

How do you skip three years of the innovation funnel? Assemble a panel of experts. The problem is, everyone loves a consumer and nobody loves an expert. Ask ten experts what the answer is and you'll get ten different answers. But not if you bring in a Design Authority, someone to act like a sponge and soak up the collective expertise to find the right solution.

Jonathan Ive once took part in a public conversation with Sir Christopher Frayling at the Royal Geographical Society. Frayling asked how Apple engages users in the creative process. Ive said that they don't. Frayling asked if he cares about the user at all. Ive said that, as a designer, he spends every minute of the day thinking about people, observing them, caring about what they do.

A design authority can be a triangulation. It doesn't have to be a single person. At Apple the Design Authority was Steve Jobs, Jonathan Ive, and Tony Fadell. They combined authority, design, and business.

Director of Impeller Ventures

Companies benchmark Apple and Tesla in terms of design, but they are not democracies. Almost all of the examples of great design come from a genius holding onto one idea for a long period of time.

Richard Gamble, Global Design Director at Reckitt Benckiser





7. Ideas need Desirability, Usability, Viability and Feasibility

A healthy business is one that is equally concerned with desirability, usability, viability and feasibility. Designers are often great at creating desirability and usability, but they need people who understand the viability and feasibility. Tesla are leading the way with electric cars because they combine all of these to create something that fits into people's daily lives.

Can this be applied to help people onto the property ladder? Huf Haus could partner with the government to offer affordable housing. The problem in the UK is that people invest in property, and prefab builds are associated with post-war temporary housing. We need a different model in the UK for making money out of property that is not about owning bricks.

I wanted to make an electric car that looks like a DB9, so it's desirable for people to drive. Tesla are successful because their design stands up against other luxury cars like a BMW 5 series.

lain Sanderson, Chairman at The Lightning Car Company

Huf Haus doesn't resonate with the Brits. You need land and to be surrounded by forest, not living in central London.

Monique Borst, Food Business Development Consultant



What a shame that designers feel they have to package great new innovation to fit in with people's lives. Look at Modernism and other movements; styles can change.

Adrian Wheeler, Founder of The Fairlight Project

8. Want to know how the US beat Russia to the moon?

My reverse funnel innovation isn't rocket science, but it's what put man on the moon.

Jim Dawton, Director of Impeller Ventures







JFK went to congress and delivered a famous speech. He didn't tell them that he had a problem, or that he had an idea and needed money to test his theory. Instead he told them that he knows what the answer is. He was going to put a man on the moon within a decade and bring him back again. The head of NASA then knew exactly what he needed to deliver.

If you give someone the solution they know what you want and they can deliver it. In other words, tell them what it looks like and then let them analyse the solution. When Steve Jobs said the answer is a tablet computer, analysts said he would lose sales from laptops and computers. Jobs said it's impossible to measure desirability; the public will want all three.

I once used research to prove that a made-up brand-name could beat an existing brand's awareness and salience.
By starting at the end of the funnel with 'the promise', all we had to do was pull through the solution: faster, more efficient, and a successful launch within 15 months.

Chris Collis, Director at Marketing Walk

9. How to use the impeller funnel to commercialise ideas

Instead of the traditional innovation funnel, how about this: Give your idea away for free to industry. Approach a large company that is not good at doing new things, but has scale. Tell them the answer, show them the evidence, talk them through the impact it could have, present your business model. Then tell them you gave it to their competitor two weeks ago.

If they're entrepreneurial, they'll still be interested. Propose a SPV (special purpose vehicle) business plan, where you create a safe space to take the risks. From that platform, you launch the business as joint partners. If the Government funds you for 40% of the cost, your new partners only have to pay out 60%. The bad news (for them) is that you take the 40%.

L'Oréal are very fast paced, innovative and profitable. They have a lot of different silos, so they employ people to be silo jumpers. They call them generalists.

James Langdon, Innovation & Digital Manager at BOL Remind them that this is 40% of nothing. You have all the investment you need, but you don't touch the Government money for now. Instead you jump the valley of death in two weeks or two months, but certainly not two years. Your only objective is to be first to market and to make revenue. This business has never been a start-up; it's a new way of innovating.

The worst thing about the traditional innovation funnel is that, if it takes you five years to get to market, the market has already changed by the time you launch.

Richard Gamble, Global Design Director at Reckitt Benckiser

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10. There's still hope ...

So how does this new innovation system work in practice? Say the Government decides that there needs to be more creativity in the UK and that the problem is a lack of meeting rooms. You could invent Skype, but that would take years. Instead, you invite your panel of experts to the pub and tell them that you need them to come up with a solution. One of them tells you that a pub is a meeting space, so maybe the answer is for pubs to open longer hours.

But another expert points out that if people are drunk all the time then productivity will go down. So it's not the answer, but we only wasted 20 minutes. Then, on the subject of drinks, another expert remarks that tea has caffeine and that it reminds him of a trip he went on years ago to South America where they drink this highly caffeinated beverage called coffee.

Maybe coffee is the answer to making people more productive? It's a nice idea but the trouble is that it doesn't solve the problem of meeting space. So then another expert suggests that you could create a space to sell the coffee, much like a pub. So the team takes this plan to Whitbread and, using the model above, open up a coffee shop together.

If the shop fails, they've lost two weeks. But if it's successful then maybe it gives them the confidence to invest in making their own coffee. It might take them three years to bring it to market, but what if they spoke to another expert – maybe an academic – who has dedicated his career to researching coffee and claims he can get them to market in three months?

What do you think?

Join the discussion and tell us your thoughts ...

Many people call themselves entrepreneurs, but they are motivated by ideas only.
I would argue that an entrepreneur is motivated by profit.

Jim Dawton,
Director of Impeller Ventures



He tells them that he can develop a coffee that takes only 3-4 days to make a drink; based on the length of time it takes to make wine or beer. You tell him that you need him to make a drink that takes 45 seconds to make. Now you're not aimlessly pursuing a product, you have set clear parameters to work to. The best part of this is, because you gave away 60% of the business to Whitbread, you are a minority shareholder. You already have a built-in exit plan.

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lulu@honey.co.uk 07917 608 224



