Are Telcos Brands Being Left Behind in the Innovation Cycle?

Mobilise
Telcos and Big Tech Companies

There have been some insightful discussions recently regarding the convergence between big tech companies (Facebook, Amazon, Google, Microsoft, etc.) and the telecoms industry. We have seen a string of Telco related acquisitions by Microsoft, strategic investments from Google, Facebook and Amazon and direct investment in connectivity-related projects with project Loon, Google Fi or project Kuiper. All this activity by big tech in the telco industry leads me to wonder if whether before long the telecoms industry, as we know it, could be swallowed up by big tech.

If I am blunt, given the way Telco have been divesting their physical assets via the sale of their infrastructure to the "TowerCo's". Combined with the advent of 5G requiring an increased reliance on the expertise of the vendors, what is the Telco’s left with? One could argue they are now just a Brand. It doesn’t seem hard to imagine a world where mobile network operators have become little more than a facilitator in the big tech value chain, enabling them to deliver their core products or services better.
Think of a scenario where Amazon acquires a mobile operator to improve connectivity along the Amazon supply chain, for example. With consumer telco services becoming a non-core business unit. Perhaps this is an example that is more in the realm of fiction than reality. Still, my point is that, to me, there is a general feeling that big tech is encroaching, and have been allowed to encroach, in on telecoms companies, and primarily through the fact that big tech has figured out how to innovate better than Telcos.

Telcos have been the driving force behind mobile, a technology that has connected millions, driven prosperity and socioeconomic growth across the globe. But has the traditional telco business model been exhausted? And if the Telcos are failing to innovate are they at risk of being relegated to just a cog in a much bigger machine? In this report, we look at why continuous innovation is so fundamental but why it can also be so hard to execute on.

To kick things off with a bang, we use one of the telecoms industries most spectacular demises to illustrate how in today’s world without a platform for innovation, even the seemingly untouchable corporate giants can fall.
Nokia’s “Burning Platform” Memo

When you think of iconic business documents, chances are the first thing to come to mind is not “memos.” Thousands of mundane memos are written every day, covering everything from hiring decisions to holiday party details to the correct way to dispose of a stinky sandwich in an office kitchen. Every once in a while, a memo can reflect a business at a truly extraordinary moment — and can benefit the broader business world at large. From Slack’s founder on how to sell experiences over products to executives at Nokia and Yahoo offering critical views of their business operations, memos can provide an important look into the operations and strategic decisions of a company.

The memo was written two years before Microsoft acquired Nokia when the company was faltering in the telecom world. Nokia had that year announced a partnership that would make Windows Phone 7 the primary operating system on its smartphones. At the time, Windows Phone 7’s market share was negligible; iOS and Android, on the other hand, held a combined 90% share of smartphone sales.

Apple and Google radically redefined what was expected of a smartphone, and the shift toward the two largest players in the market happened quickly. In 2011, Elop recognised the danger this shift put Nokia in.
Elop uses the analogy of a man standing on a burning platform to argue that Nokia was failing to keep pace with Apple and Google and that the company was at a critical juncture, they could either make drastic changes to the business or, essentially, abandon ship. When Nokia “missed big trends,” it fell behind the industry leaders.

Nokia had been a power player in a phone landscape dominated by devices. But with the advent of the iPhone and the Android, the game was different. The new battle was over ecosystems. “Not only the hardware and software of the device, but developers, applications, e-commerce, advertising, search, social applications, location-based services, unified communications, and many other things.” And it was this major innovation that lead to our now ubiquitous Connected World that in turn allowed the “Big Tech” to flourish and dominate.

Nokia failed to recognise how the landscape was shifting under its feet — and the company was now paying the price, one could argue that in fact Microsoft themselves paid the price for not recognising the demise in appeal of the of the Nokia devices in the mind of the consumer. In the long term Microsoft would eventually ride that out and today are gaining a significant foothold in the Telco world albeit via the acquisition route. Nokia is just one specific example of a company that failed to innovate, but history is littered with the ruins of companies with similar stories. Companies who once seemed invincible but have been unable to adapt to the changing conditions around them.

Nokia Smartphone Sales Before & After Elop Effect in Millions of Smartphones

Source: TomiAhonen Consulting from Nokia Quarterly Data
So, why is it so hard to innovate?

We recently wrote a post on LinkedIn discussing BCG’s innovative companies list and in particular, highlighting how difficult it is for companies to remain ‘innovative’ in today’s world. The list of top innovators has featured a total of 162 different companies across its 14 editions to date. This year’s top seed, Apple, is one of only eight companies to have been included every year, alongside Alphabet, Amazon, HP, IBM, Microsoft, Samsung and Toyota.

BCG state that the most innovative companies are those that view the need to continually innovate as a top priority. "Committed innovators" have the winning hand, the report says, with almost 60% reporting an increased proportion of sales from products and services launched within the past three years. This highlights the importance of a company employing a process of continuous innovation. It sounds obvious, but if it is so obvious, why are so few companies able to continuously innovate?
Some of the key reasons we see why it is hard for telecoms companies to innovate:

**Skills shortage:**
This can range from a short of technological know-how to a deficiency in skills to drive the process of change.

**Shortage in team or bandwidth, i.e. operational priorities:**
This is one of the most common, many businesses recognise the importance of innovation but don’t have sufficient resource to drive.

**Legacy systems:**
Legacy technology systems that are either inflexible or too costly, both from a risk and CAPEX perspective, to make change.

Perhaps overriding these specifics is the cultural problem in the way that Telco’s tend to work in “silos” with often little or no clear medium for wider collaboration.

So, through our example of Nokia, we see how hard it is to innovate and referencing the BCG report we also see it isn’t enough anymore just to come up with one killer product. So, what’s the solution? We argue that the most important priority for any business in today’s faced-paced technology-driven world is not to prioritise focus on creating a winning product or service but to focus on building an innovation platform that ensures a continuous stream of winning products or services.

What do we mean by an innovation platform? We describe an innovation platform as having three main elements:

- **An innovation process:** A step by step guide for how to innovate and deliver value through a new product, service or business efficiency.
- **Cultural innovation:** Which includes fostering a collaborative and honest environment complimented with the team and resources to.
- **Technology enablement:** The technical systems and surrounding change process that gives the business the flexibility to execute change regularly.

In the following sections, we breakdown each of these innovation platform elements and describe ways to achieve them.
Part 1: An Innovation Process

An innovation process, in our description, is a series of activities that when performed in the correct sequence and with sufficient resources, provide a replicable formula for innovation. Not only does this step by step approach spur creative thinking and structure product delivery, but it also introduces a high degree of predictability into any new initiative. From a business perspective, this predictability translates to higher project success rate and a reduction in budget risk. As a secondary benefit, this step by step process represents a blueprint that all stakeholders can align to, and refer back to, at any stage in the process, which ultimately helps with team cohesion.

Mobilise follows a clear innovation process as shown below, this can vary based on environment or scenario, but the steps usually remain constant, and the cycle is the crucial part.

It’s a 5-step process, repeated every 6 months, which ensures that:

**Track 1**: New disruptive ideas are constantly being generated
**Track 2**: Ideas get to both markets as efficiently as possible

Underneath these steps are a multitude of subtasks which, when executed end to end, deliver to the business, the desired value, be it a product, service or operational efficiency. We use this innovation process to help guide our clients through products and services development including ideation, validation, proposition development and delivery when using our M-Connect Digital BSS platform.
Part 2: Cultural Innovation

The best way we can describe Cultural Innovation is to use the real-world case study of Pixar. In particular, we refer to Ed Catmull's, co-founder and former president of Pixar, views on the importance of culture in driving innovation which is discussed at length in his book Creativity Inc.: Overcoming the Unseen Forces That Stand in the Way of True Inspiration.

Ed Catmull doesn't think that innovations come from good ideas. It comes from talented people — like Pixar's hundreds of animators and producers — collaborating to make something greater than the sum of its parts. To Catmull, the blueprint of an innovative organisation is a strong culture rooted in open and honest communication. The stage for innovation is set when creatives from diverse backgrounds feel empowered to share ideas that aren't fully developed and give each other compassionate, constructive feedback. Without a culture of honesty, people shy away from asking for help or sharing bold, risky proposals. Such an approach can lead to missed deadlines, mediocre products, and inconsistent quality.

People at Pixar think that great stories begin with an "ugly baby"— a seemingly bad idea. Yet, the studio has produced blockbuster after blockbuster, from "Toy Story" to "Coco," that outperform their budgets by creating an environment in which all kinds of ideas are shared and nurtured.
So how did Pixar build a culture of creativity? Pixar's iconic culture, to which Catmull attributes the company's ongoing success, began to take shape during the production of "Toy Story," its first feature-length animation. The "Toy Story" directors and producers had a unique working relationship. According to Catmull, "Since they trusted one another, they could have very intense and heated discussions; they always knew that the passion was about the story and wasn't personal."

It also helped reshape the ending of "Wall-E," a movie which ended up making almost 3x its production budget.

What are some of the key learnings from all this? Few film studios have achieved anything resembling the amount of success that Pixar achieved under Catmull. Since 1995, Pixar has put out over 20 feature films that have grossed a combined total of more than $14B and garnered almost 40 Academy Awards. The key

"The stage for innovation is set when creatives from diverse backgrounds feel empowered to share ideas that aren't fully developed and give each other compassionate, constructive feedback."

That gave rise to Pixar's brain trust — a peer-driven feedback system for directors. At any point, directors can present whatever they have to a group of other directors, producers, and writers — like-minded creatives — and get honest feedback on how their projects are going. In addition to the brain trust model, Pixar uses the practice of dailies to encourage continuous feedback and build trust between team members. Animators review their progress with the director at the end of each day, setting aside any fear about presenting unfinished work.

These ideas helped Pixar figure out the crucial second act of "Toy Story 3," which earned over $1B. It allowed the director of "Inside Out" gain confidence in his vision — telling a story from the point of view of emotions living inside the mind. And to that success has been Pixar’s ability to attract and retain the best people — not purely design skills, or storytelling ability, or any other kind of secret sauce. The initial production on "Toy Story 2," according to Catmull himself, did not go well. The leaders from the first "Toy Story" were busy on another movie, and so the project was taken up by another team at Pixar. It wasn’t until John Lasseter, Joe Ranft, Andrew Stanton, and Lee Unkrich rejoined the production that the film got back on track. "It taught us an important lesson about the primacy of people over ideas," Catmull writes of the incident, "If you give a good idea to a mediocre team, they will screw it up; if you give a mediocre idea to a great team, they will either fix it or throw it away and come up with something that works."
The standard Hollywood studio doesn’t think in terms of "teams" this way. Instead, as Fast Company co-founder Bill Taylor writes for the Harvard Business Review, what you get in the traditional Hollywood model is that "highly talented people agree to terms, do their jobs, and move on to the next project." It’s essentially a mercenary approach. At Pixar, on the other hand, you have "a tight-knit company of long-term collaborators who stick together, learn from one another, and strive to improve with every production." Everything from the creative freedom of the brain trust to Pixar University — which offers employees access to classes on everything from fine art to illustration — is designed to promote this kind of retention. The result is that when Pixar writers or directors have hits, they don’t go looking for a payday from another studio — they strap in and get ready for their next Pixar film.

Ironically, Telco’s should be ideally placed to adopt this model, but all too often project teams are separated by department "silos" and the cross fertilization of ideas is stifled. Indeed it is often passively discouraged by department heads protecting their agenda.

We are first to acknowledge that cultural innovation is arguably the most challenging of all elements in the innovation platform to develop. Particularly, in mature businesses where ways of working can be deep-rooted and unchanged for decades, even though we would suggest that these are just the types of businesses need of change the most. In our experience, often it is just the impact of bringing in a fresh team with fresh perspectives and a new approach that can be the catalyst to driving cultural change amongst the existing personnel. Often uncovering hidden talents that just needed an opportunity to shine.
Part 3: Technology Enablement

New tools can make a big difference, and across all industries, new technologies, especially digital and data-based technologies, are powerful tools. At leading companies, technology is evolving from a functional silo to a foundation for breakthroughs in products, services, and business models. The core in all cases is the creation of a technology platform that can be leveraged repeatedly to deliver business value. However, without the right technology to enable change a business can have fantastic processes or a great culture but eventually deliver little or no value. All the components of the innovation platform, as we describe it, need to exist simultaneously.

One of the challenges we often see in driving innovation is inflexibility resulting from legacy infrastructure. This is particularly acute with mature businesses that have been implementing incremental change on the same technology stack for many years. Often the result of the common Telco silo approach or perhaps more accurately described as the ‘band aid’ approach where before long technical teams are left with a behemoth of a system that is genuinely complex, and risky, to change. It is an exceptional CTO that is able to influence fellow Board Members that a more ‘Holistic’ approach whilst more costly initially will pay dividends in the future. All too often the watercooler chat in the technical department becomes ‘I’m not putting my neck on the line to make that change!’

“Without the right technology to enable change a business can have fantastic processes or a great culture but eventually deliver little or no value. All the components of the innovation platform, as we describe it, need to exist simultaneously.”

In telecoms, we see an opportunity for a new type of technology strategy, which is an ecosystem approach to architecture design. This approach is where the telecoms network becomes a central component of a broader ecosystem of products and services, often across industry verticals. Some similar examples of this approach can be seen with the likes of Jio of India with their Jio Digital Life ecosystem.
For the consumer, Jio Digital is centred around the main MyJio app which serves to handle the subscribers personal Jio Account and links the subscriber to a digital lifestyle Hub. Jio offers 12 different apps in its lifestyle hub (such as Chat, TV, Health, Music, News) available on both Google Play and Apple Store. This is a great way to drive data consumption, but more importantly, Jio has created an ecosystem that drives continued customer engagement whilst at the same time creating stickiness with its offer which, ultimately, drives greater customer lifetime value.

The concept of cross-selling or upselling complementary products in the telco world is not new; we talk extensively about product bundling in our post [bundling in telecoms, what’s next?](#). However, this broader ecosystem approach, such as the Jio Digital service, which incorporates a wide range of vertical industries, can be far more technically complex to implement and more importantly maintain.

To illustrate this ecosystem approach, we can reference our M-Connect architecture. From this diagram, it is obvious to see that there are many network components to consider when assessing or implementing future proof, digital-first, technology stacks. However, in this example, we will focus on one of the elements we see as the most important to delivering an ecosystem approach, which is the orchestration layer.
The orchestration layer provides Application or service orchestration which is the process of integrating two or more applications and/or services to automate a process or synchronise data in real-time. Often, point-to-point integration may be used as the path of least resistance. However, point-to-point integration always leads to a complex tangle of application dependencies (often referred to as "spaghetti code") that is very hard to manage, monitor and maintain. Application orchestration provides a) an approach to integration that decouples applications from each other, b) capabilities for message routing, security, transformation and reliability and c) most importantly, a way to manage and monitor your integrations centrally.

A fundamental design principle in our solution is the separation of the Processing APIs (where all the business logic and services will be configured) from the System Integration APIs. This enables us to isolate the technology from the business logic and services, helping service providers to avoid vendor lock-in as well as minimising implementation complexity when introducing new 3rd party services, which is often a key objective in an ecosystem approach.
For example, if a service provider wanted to swap out an existing charging system, our solution will be able to integrate to the new charging system by only updating the System Integrations APIs, with no impact on the processing APIs.

This design principle suits very well the ecosystem approach as it gives the flexibility to create complex integration architectures that involve multiple external parties whilst at the same time simplifying integration activities.

Also crucial in technology enablement is the software development methodology used. In particular, we refer to a change in the development methodology that leans closer to a DevOps approach rather than the traditional waterfall approach. DevOps is a set of practices that combines software development and IT operations. It aims to shorten the systems development life cycle and provide continuous delivery with high software quality. At Mobilise, we have developed our own software delivery methodology influenced by the agile methodology, but with supplementary structure and governance.

The telco is inherently slow-moving, and in my experience, this is a by-product of the standards-based approach and high QoS/availability that Telco was born out of. The culture has been very much a zero-failure approach to new product or service deployment, which in many ways is hard to argue with. In contrast the big tech approach is to embrace failure but do it fast and in a controlled way. When you view these two approaches in the context of the fast-paced technology world we live in today, it feels logical that a quick and iterative approach would prove optimal. Not to mention that a waterfall type approach by design just doesn’t allow teams the agility or to move fast enough to keep up with the pace of change today.
In conclusion

Adopting these practices is far from easy—companies encounter a host of organisational and cultural hurdles—and it typically involves a journey that is measured in years. The challenges can be daunting: breaking down organisational silos, shifting to an agile process, moving from a heavy IT architecture to modular systems, and overcoming internal resistance.

One of the most difficult—and important—organisational and cultural shifts is moving from a traditional “waterfall” approach to project development, in which stopping a project is seen as tantamount to failure. Rather shifting to an agile approach that sets as many ideas racing as possible and quickly and happily kills off the ones that fail to show potential. Companies that make this change also become good at taking in ideas from all kinds of sources, including internal idea labs, external scouting, thought leader monitoring, vendor relationships, crowd sourcing, and academic partnerships.

One last take away, Telco’s do have vast reserves of knowledge, experience and talent that can be harnessed for innovation, but if they do not take steps very soon to do so, they run the risk of finding themselves eaten for lunch by Big Tech.
About Mobilise

Mobilise was founded in 2011 by Hamish White, who noticed a gap in the market for a consulting company specialising in MVNOs and mobile technology. In response, he set up Mobilise Consulting, building upon his decades of experience in consulting for MVNOs and MNOs.

Mobilise Consulting now provides innovative mobile solutions to companies across the globe, enabling the realisation of corporate goals and new initiatives at low overhead. It offers consultancy services to MVNOs and others looking to enter the telecoms industry, including strategy, business casing, feasibility study, project management, solution architecture and service operations.

In 2015, Mobilise set up a new business unit, Mobilise Technology, which specialises in software development and providing connectivity and hybrid solutions to the telecoms industry. Mobilise rebranded the group to Mobilise Global in 2018.

About the Author:

Hamish White

Hamish White is the founder and CEO of Mobilise and is a hands-on telecoms entrepreneur with 19 years’ experience supporting Tier 1 & Tier 2 International Telecommunications Operators.

Before founding Mobilise, he worked as a consultant launching and growing start-up telecoms companies primarily in the MVNO domain. This included the launch of 8 MVNOs across 5 countries.

His background is in technology; however, his management experience spans the end to end telecoms value chain including in depth knowledge of sales & marketing, commercial, finance, operations and technology functions.

Hamish specialises in helping companies with digital transformation and establishing mobile strategies.