A TELECOM DNA WITH A DIGITAL PERSONALITY

Digital services may make or mar the prospects of telecom companies. With the industry at crossroads, we bring you a conversation between **Peter Sany**, President and Chief Executive Officer (CEO), TM Forum, and **Avi Kulshrestha**, Industry Head – Communications, Media & Entertainment, Europe, and Global Head, Telecoms OEM, Infosys. This discussion elaborates on how telcos can reinvent their offerings to morph into digital enterprises.

Q **Avi Kulshrestha**

A **Peter Sany**

Q: *Welcome Peter. Telecommunication companies have witnessed trying times in the last fifteen years, yet they have managed to survive. They have transitioned from analogue to digital in fixed telephony, adopted mobile technology, and allowed people to connect their computers to the copper wire network, enabling them to exchange data with one another. On every occasion, telecom operators have risen to the challenge and successfully connected millions of people, adding them to their client lists. Now, however, the biggest disruption of all times, the digital disruption, is forcing a shift in the telecom operator's value chain. This is not like anything we have seen before in this sector. With your vantage point as the President and CEO of TM Forum, what do you think the future holds for the telecom industry?*

A: Our industry is a continuous work-in-progress. Every shift in technology makes living and working more inclusive. For instance, we have experienced several revolutions in our lifetime — from fixed line to wireline to wireless. Now, we are seeing boundaries blurring between the physical and the virtual worlds.

The emergence of completely new digital native enterprises will rattle the right of existence of many traditional players. The winners will be those CSPs who can successfully morph from being vertically oriented players to becoming horizontal players, providing a value-added digital backbone of high-security, low latency network, and ecosystem-topical platforms to enable a rich applications bouquet at every customer touchpoint.

If we step back in time, the end of telecom monopolies paved the way for healthy competition. The Internet provided a level playing field for companies, which helped spur the proliferation of Internet telephony. Now, we can brace ourselves for the next big leap, with technology companies such as Microsoft, Google, and others investing in fiber optic networks. It is a fascinating game between incumbents and disruptors. The horizon brims with fascinating possibilities because we have a robust infrastructure that needs to be monetized.

While the future looks promising, we need to be cautious about the sustainability of certain stakeholders. The communications industry has witnessed capex investments on an unprecedented scale in every successive generation of network technology. However, the changing, competitive landscape between traditional players, new entrants, and asymmetrical regulations increases the risk of not receiving fair returns on investments. As we speak, the European Commission is setting the framework for a unified digital market, allowing free Wi-Fi access and unlimited roaming across the European Union.

We now live in an era of digitalization of everything. Barriers between traditional industry verticals are breaking down and a set of globally and locally interconnected ecosystems are emerging, ranging from 'smart cities' to completely overhauled global manufacturing and supply chain models based on 3D printing or telemedicine, to name a few. We will soon see the emergence of completely new digital native enterprises that will rattle the right of existence of many traditional players. This transformation brings great opportunities for those communication service providers (CSPs) who successfully morph from being vertically oriented players to 'L-shaped' digital service providers (DSP). An 'L-shaped' enterprise will offer its own vertical products and also become a horizontal player, providing a value-added digital backbone of high-security, low-latency network, and ecosystem-topical platforms that enable a rich bouquet of applications at every customer touchpoint.

On the 'vertical' side, video and augmented reality hold a lot of promise. These applications may well become ubiquitous for personal, interpersonal, and business purposes. High-quality, real-time video-streaming coupled with augmented reality (AR) may just be a game changer. If we look into a crystal ball, we can see this video and AR medley raising the bar in healthcare via telemedicine, for timely and accurate medical intervention. Also, the interplay between video and AR applications not only lends a new dimension to the field of entertainment and gaming, but also to industrial production and service management.

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So let me summarize what lies ahead — I believe that the disrupters challenging the incumbents will ensure that the industry remains in the best of health and renews itself. All said and done, enterprises embracing a digital ecosystem will thrive with a compelling lifetime proposition. No one is better placed than the telecommunications / communications service provider (CSP) industry to become the major provider of the digital backbone for any industry and some of the emerging ecosystem-specific platforms.

Q: *Very true! In India, Reliance Jio is investing over US$20 billion to create a digital marketplace. The start-up offers data tariffs as low as US$0.7-per-gigabyte and has an ambitious target of reaching 100 million customers within four months of commercial launch! All of this makes a robust digital backbone, a business imperative. The operators are looking to create new revenue streams and differentiated experiences for their customers. They like to offer more than just connectivity, and would be targeting lifestyle-based experiences, aspirations, and needs of the customers, especially with the advent of the API and platforms economy. In this context, how would a telco differentiate itself from its peers, in order to engage and retain customers?*

A: Your examples show the significantly different production cost point that is

becoming the entry ticket to play in the new digital world. Our industry needs to make massive improvements in terms of costs, flexibility, speed, and agility in order to remain viable. An open, standards-based, and highly granular architecture will provide the basis for quickly and infinitely reconfigurable digital services, products, and businesses.

Let me dwell on the granularity in our industry, which started with legacy carriers who developed their own technologies, software, billing systems, and customer platforms. In the next phase, these companies implemented more modular, best-of-breed application stacks. Mobility services now demand even greater granularity to deliver on-demand, orchestrated applications, which can be delivered more efficiently using APIs for accelerated development and rollout. DevOps plays an important role in improving the time-to-market or new applications and digital services.

Yet another area that demands attention is open architecture. Enterprises need to collaborate with enabling partners in order to break down monolithic blocks into smaller modules. Service-oriented architecture (SOA) allows you to co-create and accelerate application development with partners and even 'frenemies' within the ecosystem. All of this is the need of the hour to deliver a seamless, connected user experience. You need to be at the heart of the customer journey and influence the end-to-end customer experience decisively.

Let me illustrate this with an example. When I order dinner to be delivered home from my smartphone, as I drive back from work or travel by train, I expect more than just a clear and uninterrupted call from 'origination' to 'termination' from my service provider. Remember, I could be zipping in my car on a motorway or entering a tunnel on the metro rail while I make the call, so the reception and coverage may be average, at best.

However, I expect my service provider to transcend the 'hygiene' factor of 99.99 percent completed calls. Can I go a step further and pull up another app on my phone and select a cuisine, then drill down and order a couple of dishes, and then pair the cuisine with a bottle of wine? Can I make an informed choice from a range of dining options by distilling reviews from social media? Can I estimate the time taken for dinner to be served at my table from the live traffic updates on my cell phone? From my point of view, as the consumer, I don't care who is providing and integrating all of these services. I care that my experience is simple and seamlessly end-to-end, and that my dinner arrives home when I do, still hot and ready to eat.

If you think I am setting the bar too high for service providers, you need to at least meet, if not exceed, the expectations of the millennial demographic. If enterprises need to serve the critical mass of the digital generation, they need to have the building blocks in place to integrate services for delivering a compelling customer experience.

Q: *The Internet of Everything is already making an impact on our lives. I became a father a couple of months ago. My newborn son arrived at our home, which has about 20 connected devices for just three co-inhabitants. By 2020, the world's population is estimated to be 7.5 billion, whereas there will be an estimated 50 billon devices connected to and communicating with each other. Our everyday patterns of behavior have already changed — from how we buy things and consume them, to how we interact with each other via social networks and how we interact with machines. What kind of experience can customers look forward to in this hyper-connected environment?*

A: Congratulations, Avi. Your son is the newest member of a rapidly growing digital club. He belongs to a generation that will navigate the journey of life from a smartphone. In Estonia, for instance, every newborn enjoys free broadband as a birth right. 'Digital' is a way of life, with the state providing 600 e-services to citizens and 2,400 services to businesses.

While I closely follow the animated conversation about a hyper-connected environment, I believe the industry and its lead players need to focus on 'open' standards and interoperability to deliver a seamless customer experience. Conventional wisdom suggests that we are moving from a 'talking heads' paradigm to an 'interacting devices' one. So, billions of devices will be connected and will interface with each other, but the ecosystem of devices and users is more nuanced and provides a reality check for stakeholders.

Let me take a step back from this discussion about connected devices. Do I really want my smart watch to connect with my refrigerator to replenish groceries? I'm afraid not. We need to see the intrinsic value of connectivity and extrapolate the value for users. Global supply chains, automated production, and power grids can capitalize on 'interconnectedness.' Let me add a caveat: We are talking about critical applications that need to be supported by secure and reliable connectivity. Thus, as a service provider, I need to ensure near-100-percent availability for users to manage and control their domain.

Q: *Brilliant! What's the payback for industry players? Will OTT service providers cannibalize revenues further? Or will it be an opportunity to explore new revenue streams and innovative business models for incumbents?*

A: Let me elevate this conversation by several notches. If our industry stakeholders provide a smart, integrated customer experience, one or a couple of these companies may well rule the world. Imagine a scenario where a digital service provider has a robust digital backbone, enriched with a bouquet of services and visibility into customer insights, to cross-promote and monetize services in near-real-time. So, if every conceivable service that I require is available at one megastore on my cell phone, I would turn to my service provider to enjoy an omnichannel experience.

For enterprise users, digital service providers can support mission-critical applications such as surveillance of deep sea oil and gas field assets or enabling robotic surgery via best-in-class, always-on, secure video capabilities. Such a bespoke service can be eminently monetized if the service provider is acutely cognizant of the latency and security of the network.

We are looking at different horses for different courses. Some players may leverage telemedicine in niche areas of healthcare. In the Netherlands, one company uses AR to help cardiac patients or their attendants locate automated external defibrillators all over town. Other players can focus on platforms for smart cities. Governance can be smooth only when digital becomes a part of the social fabric. Did you know that Jun, a town in Spain, has zero bureaucracy? The residents of Jun use Twitter for almost everything — from booking a doctor's appointment to reporting petty crimes.

The future is waiting to be seized by a new breed of digital service providers. If you

Today's children are part of a rapidly growing digital club — a generation that will navigate the journey of life from a smartphone.

allow me to indulge in some more crystal ball-gazing, I predict that leaders will emerge from traditional telecom companies that have made the transition to communication services providers and then morphed into digital service providers. Having said that, I do not rule out a rank outsider disrupting the pecking order!

Avi Kulshrestha: *Thank you Peter. We live in interesting times!*

About the Participants

Peter Sany

President and Chief Executive Officer, TM Forum

Peter orchestrates the day-to day operations of TM Forum. He is a respected industry thought leader and a senior international business executive and entrepreneur with a unique wealth of experience. For 14 years, he has successfully performed across the sales, marketing, and general management functions of a large multinational ICT company. He also has 12 years of experience as a business-oriented CIO and as a member of executive boards in large multinational companies in the pharmaceutical, telecommunications, and finance industries. Among his numerous career accomplishments, Peter was named the CIO / IT Executive of the Year by Computerwoche, an IDG publication. Peter also founded, successfully ran, and then sold itcps Management Consulting AG, a provider of business and technology consultancy services for all industries. He is based in Switzerland, speaks several languages fluently, has conducted business globally in developed as well as emerging markets, and has lived in a few different countries. Additionally, Peter is a seasoned non-executive director on various boards.

Avi Kulshrestha

Industry Head – Communications, Media, & Entertainment, Europe, and Global Head, Telecoms OEM, Infosys

Avi heads Infosys business for Communications, Media, Entertainment, and OEMs for Infosys Europe. He is responsible for creating strategy and driving business growth through four sub-verticals for Europe. He is responsible for helping CSPs, media businesses, and OEMs 'renew' their existing business while adding 'new' capabilities and revenue streams. Avi has worked extensively in the European Telecommunications and IT industry for the last two decades. He also sits on the Communications Industry Council of Tele Management Forum (TM Forum). The Advisory Council is appointed by the board of TM Forum to shape and drive the Forum's strategic work programs for the global communications industry.

Avi lives in London with his wife, Nikoleta, and son, George.

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