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What It Means to Have Unified Service Experience

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Imagine a world where all *around* you and even *on* you, data is being collected and analyzed and information is being stored. In an always-online world, the demand for faster, more affordable, more convenient Internet services grows along with remote, more predictive maintenance and remote monitoring of the network provider's network. Add home health care, asset tracking and monitoring and soon your mind begins to race with all the potential and all the possibilities.



The Fourth Industrial Revolution is well underway, and it opens a whole new set of opportunities for digital service providers.

The power of 5G on network preparedness

As Stéphane Téral, Technology Fellow – Telecommunications Mobile Infrastructure and Carrier Economics, IHS Markit | Technology, now a part of Informa Tech, has said: "A key ingredient to 5G transition is building an open-standard based SDN/NFV network driven by intelligent automation. And when a full stack 5G network is in place, end-to-end network slicing is crucial to its commercial success. Network slicing will enable faster monetization of the 5G network."

5G may be a mobile technology, but it is going to be a major turning point for Communication Service Providers (CSPs). This is because of the immense data traffic flow that it will enable and the demands it will make of the terrestrial networks in terms of volume, speed, flexibility, network slicing and associated automated network management.

Now, at the dawn of 5G, CSPs must ensure they are in the game as 5G begins to enable IoT, ML and AI and the associated billions of devices collecting data.



Improving customer experience is imperative

In order to compete in the telco industry, CSPs will require future-proof networks designed with architectures that enable them to respond to demand with the same elasticity as cloud services do today. This digital transformation impacts every aspect of the network. CSPs will need to be free of time-consuming planning, installation, provisioning and cumbersome maintenance processes. Hardware-defined networks need to shift to software-defined. While open interfaces and standard protocols, in combination with a central controller, are needed to integrate multiple technologies into a common software service platform, full network slicing capabilities will be critical.

This innovation-driven approach will drive a marketplace, Virtual Network Exchange (Intercarrier), and closed-loop SDN enabled by 5G, IOT and advanced SDN solutions for CSPs. This is part of the digital transformation journey to becoming a

digital service provider positioned for the enterprise that demands ease of use, visibility and solution-oriented offerings.

The software-driven approach in network automation, enabled with SDN and NFV, allows CSPs to gather telemetry, analysis, and monitoring data. This data can be used for security purposes as well as allowing CSPs to have a network with intelligent fault remediation capabilities.

At the same time, CSPs can be supporting dynamic and real-time, on-demand availability for their existing products and services; supporting automated service delivery and new streams of revenue; lowering OPEX and CAPEX; and improving network security with enhanced visibility.

Owning the customer relationship is crucial

Customer experience is no longer just about retention and reducing customer churn. Now, it is also about ensuring CSPs stay relevant and are in the middle of digital service delivery and the whole digital economy. What will really matter to operators in the future is to own the customer relationship and to provide personalized digital services.

Some CSPs have not dipped their toes into the cold reality of preparing for 5G. If you are one of them, here is a **list of minimal preparations** to undertake right now:

- 1) Implement Software Defined Networking (SDN) and Network Function Virtualization (NFV) including but not limited to real-time, on-demand provisioning and real-time network changes, improved network efficiency, latency reduction, cost reductions, faster time-to market and better testing.
- 2) Become experts in and implement Artificial Intelligence as well as real-time, proactive network management proactive security and automation.
- 3) Work with and become experts in edge computing and focus on network efficiency, cost reduction, and latency reduction in IoT readiness and edge security.
- 4) Work on, implement, and become experts in network slicing as well as network efficiency and cost and latency reduction for IoT readiness.

Stop the hurry up and wait

Becoming a digital service provider in the Fourth Industrial Revolution will take time. Your business, people, and processes will all need to evolve as you serve your customers. But you can't get there if you don't get started. The collective power of being able to figure out how to unify the various orchestration points—and enabling automation through Northbound API to the portal—is key to the future of becoming a digital service provider.

Words of advice on where to start

Just Do It. Take a lesson from Nike and jump in. These projects are large, complex, and usually intimidating, but it will break down for you once you jump in. Don't spin on your roadmap and get stuck on planning everything perfectly. Become agile in thought and action. The plan will change anyway, so plan on change. But you must get started. You need to have buy-in and commitment from your executive stakeholders. Identify projects that you know you can deliver and that will have a visible impact to get the momentum you need. Start executing on short wins with a big vision.

Question like a 4-year-old. Begin to ask the question; “Why?” – Question everything! Simplify every process and screen that you can. You should have two goals for all of your customer touchpoints. First, make it as simple as possible and second, if you can't get the information on your own, then don't ever make the customer key in anything more than once. Reduce complexity to improve the customer experience and prepare your organizations for future growth and flexibility.

Create a Culture of Innovation. Encourage risk-taking. First, employees need roots and wings. They need to feel secure to bring new ideas (especially outside-the-box ideas) to the table. If you want new, innovative thinking, drive your creative teams to have accountability for the organization's objectives. They need to have openness of responsibility for key focus areas, core capabilities, and commitments to stakeholders. Then you want to ensure they have your trust by giving them broad discretion to conduct their work in service of those parameters.

If your teams are spending too much time obsessing about budget and deadlines, your ideas will wither before they have a chance to take root. Innovation and creativity will require allowance for your innovative people to bypass barriers as well as hierarchies. It will require institutional humility. When your employees stop failing, you will know that you have completely squelched all innovation from your teams. The art and understanding of what is possible can bring incredible ideas to the table.

Pain is inevitable. Suffering is optional. Expect some pain. As Buddhists are known to say; “If you can do something about it, no need to worry. If you can’t do anything about it, why worry?” Focus on, and listen to, your customers more than your competition. Suffering arises when you buy into the false belief that your pain is permanent. It’s time to attack your problems as a company. It may be a painful process to transform your business, but if you don’t you will only prolong the suffering.

Think big, act small. Think at least three, five and 10 years ahead, but plan and work on 90-day projects. Start with projects you know will be successful and will have high impact in order to gain momentum. There doesn’t need to be an intricate three-year plan that takes 6-12 months to strategize and budget. Keep your horizon and your focus on the short-term—six months or so—and realize that you don’t need to replace what you have in order to differentiate in the market. Consider keeping the legacy systems you have and focus on processes and workflow, operations automation, and product enablement at the click of a button for your users. In this fast-paced world, it is important to find quick wins and drive continued buy-in and demand. Learn, evolve, rinse and repeat.

The impact is coming

5G is right around the corner, and CSPs have delayed their decisions for so long that they will not be ready for the coming explosion. As an added bonus, implementing the above capabilities will only enhance your profitability in the meantime. We were seeing it as 2019 ended and in early 2020: a few bankruptcies here, additional selloffs, and M&A as some providers have struggled to keep up. Some of this is expected as organizations adjust to become more efficient, which means spending

less time on fewer people and less of your resources on provisioning and managing customer services.

All the recommendations discussed here will greatly enhance your customer experience, but it is important to also understand that all of these steps will prepare your organization for the advent of 5G and the impact of the IoT.