FACING CHALLENGES & ACCELERATING DIGITAL TRANSFORMATION IN TELECOMMUNICATIONS

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The concept of digital transformation has promised many benefits for the telecommunications industry, including operational efficiency, agility and competitiveness. This was meant to push Telcos into a new age, enabling increased innovation, resilience in rapidly changing markets, and ultimately increased profits.

With internet of things (IoT), however, the telecom industry is struggling to successfully deploy digital solutions and capture the anticipated value.

THE CHALLENGES OF DIGITAL TRANSFORMATION

There are an array of problems telcos must face when adopting digital technologies.
Here are four of the most common barriers:

1- Justifying the upfront cost

Outlaying huge sums of your budget, as well as internal resources, is a risky concept if the likely outcome is a failed pilot.
It's perfectly reasonable to approach digital transformation from an ROI perspective, estimating the potential value derived from projects. Proper KPIs should be prepared before proceeding to a proof-of-concept roll-out to suggest whether the program has been successful before a substantial investment is made.

2- Skills Gap

Depending on the nature of the project, it is likely that highly skilled technical employees will need to be hired. Not only will it be difficult to find these key resources, but it will be quite expensive. Furthermore, with existing employees and managers, training will be required to ensure they are capable of using the newly deployed technologies.

3- Operational Pressure on IT Departments

 As telco operations become more complex and interconnected, the pressure on IT resources may grow significantly. There is more data than ever being generated, and as teams try to wrangle the many different types, the sources from which it is extracted, and the systems that manage it, there will likely be pushback from IT teams.

4- Cyber Security

This is a rising challenge facing telcos due to the need to introduce innovation without adding vulnerabilities to their networks or their customers, particularly since many telcos are embracing open software, agile development and a growing ecosystem of development and service partners. Telco clients demand more public, private and hybrid cloud services. Telcos must manage a number of third-party systems and sort out dispersed responsibilities to ensure the right governance and response mechanisms are in place, and must broaden the cyber risk agenda to include digital security risk (covering identity, API security, connected

ACCELERATING DIGITAL TRANSFORMATION

Telcos have increased investment in digital transformation and will continue to do so. They are therefore adopting a faster approach for integrating digital solutions to bring their operations into the digital era, allowing them to capture the many promised benefits. Telcos should define a roadmap consisting of six major steps to increase their chances of success:

1- Organizational Restructuring

The purpose of restructuring is to change the business model and deliver a comprehensive improvement in business processes and procedures, complemented with a review of staff capabilities and responsibilities. This should align top management with the new digital era, enabling their leadership and support of the transformation program.

2- Enhancing Internal communication

It is vital to build trust between everyone involved in the digital transformation process so that problems can be quickly identified, and new solutions can be effectively implemented as a team. A lack of communication will stand in the way of change and will lead to a complete failure.

3- Customer centricity

Technological progress and changing government regulations give consumers more flexibility in choosing their communications service provider. It is critical that telcos differentiate themselves by providing the best personalized experience for their most valuable customers – monitoring every interaction of their customers' experiences to spot opportunities for improvement. In the experience economy, the cycle time to sense, analyze, and respond to the customer experience is a big competitive differentiator. Telcos should intertwine their business systems' operational performance data with experience

data, which comes "in the moment" from customers. Combining both data helps ensure that every business decision is based on both facts and feelings. By connecting the front and back offices, telcos link all their internal processes with the customer experience.

4- Identify Key Performance Indicators

Depending on the systems and processes to be implemented or in place, digital transformation champions should identify which key performance indicators (KPIs) should be tracked to enable them to improve the telcos' performance, and which data should be collected for measuring the KPIs.

Having specific KPIs will allow them to assess, analyze, and track the operational processes, as well as evaluate success in relation to the goals and objectives of the transformation initiative.

5- Acquire the right tools

A digital transformation initiative will stimulate change in every process in the telecom service value chain: planning, construction and operations; customer acquisition and retention; service fulfillment and delivery; billing and settlement; and service analysis / optimization. Having tools to automate and measure the efforts for designers, managers, staff, consumers, and physical assets will unlock enormous value and change the telecommunication services landscape forever. Every telco will need tools to help optimize their capabilities, leveraging new technologies across artificial intelligence (AI), machine learning and edge computing, but some tools will make more sense than others. Previously defined KPIs will help them assess which tools will allow them to capture the information needed, in line with the company's needs.

6- Digital Connectivity

The cloud will be the solution with better security than most on-site solution systems, and the benefits are tremendous. Telcos are developing or moving their workloads to the cloud, in an effort to migrate everything over the next few years. This digitization of data will enable them to deliver competitive advantages in an ever-more competitive landscape. Networking their physical and logical assets with their business processes and customer experience, and ensuring that all operational and customer data can be captured, is one of the essential capabilities for real-time analytics

CONCLUSION

Visualizing the roadmap for Telcos will help define:

- What steps need to be taken to create immediate value;
- Where and when to invest time and resources; and most importantly
- How to advance to the next stages of the enterprise's evolution

About K&A:

Khatib & Alami is an international multidisciplinary consultancy comprised of architects, engineers, planners, project managers, technologists and other specialists. With around 7,000 experts in more than 30 international offices, we have vast experience of delivering complex projects which make a positive and sustainable contribution to our communities.

We work across a broad spectrum of sectors and disciplines, including: architecture and urban planning; transportation and urban mobility; water & environment;

energy; program management; and digital services. In other words, our people are involved in enhancing infrastructure, creating new buildings, developing neighborhoods, protecting the environment, and reshaping entire cities.

We guide and support clients through the adoption of new technologies and integrated smart solutions which drive improvements across their projects and operations, including quality, productivity, risk and sustainability.

About the author:

Dr Houssam al Masri has more than 30 years' technical and management experience working with multidisciplinary teams on broadband communication networks and smart city infrastructure.

As a senior project manager at Khatib & Alami, Dr Al Masri's current responsibilities include leading the smart city design of a major development project in the Kingdom of Saudi Arabia. In his previous positions in the MENA region's telecommunications industry, Dr Al Masri played an instrumental role in managing major telecommunication projects related to smart cities and solutions, smart buildings and smart homes, fiber-to-homes and broadband access. He has led multiple project roll-outs related to both the public and private sectors.

Dr Al Masri earned a PhD in Computer engineering from MIT. He is serving as a Chairman of the Smart City Opt. and App Committee for the FiberConnect Council MENA since 2019. He is a member of ESRI GIS community professionals, the IEEE IT society, and the Green Buildings Association.

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