Network transformation

The foundation for digital business

Part 3:
The five universal steps for network transformation

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About

Orange Business Services

Orange Business Services is a network-native digital services company and the global enterprise division of the Orange Group. It connects, protects and innovates for enterprises around the world to support sustainable business growth. Leveraging its connectivity and system integration expertise throughout the digital value chain, Orange Business Services is well placed to support global businesses in areas such as software-defined networks, multi-cloud services, Data and AI, smart mobility services, and cybersecurity. It securely accompanies enterprises across every stage of the data lifecycle end-to-end, from collection, transport, storage and processing to analysis and sharing.

With companies thriving on innovation, Orange Business Services places its customers at the heart of an open collaborative ecosystem. This includes its 27,000 employees, the assets and expertise of the Orange Group, its technology and business partners, and a pool of finely selected start-ups. More than 3,000 multinational enterprises, as well as two million professionals, companies and local communities in France, put their trust in Orange Business Services.

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Best practices for network transformation

Network transformation must serve the overall digital business transformation first and foremost, while taking care to prevent disruption as much as possible to the business.

In order to successfully transform the network, just like erecting a building, the ground must first be surveyed and prepared. These base level steps are nearly universal, regardless of the specific business.

The universal steps for network transformation

One

Culture

Education and Buy-in

Two

Audit

A complete survey of software, hardware, and networks

Three

Placement

Every software and hardware system, in-house or managed/cloud

Four

Safety and security

Ensuring that disaster recovery and business continuity (DR/BC) practices are up to date and working as a hedge against transformation-induced disruption

Five

Project prioritization

With emphasis on the greater digital transformation needs first, then the network prioritization.

Culture

The first universal step has been discussed in a previous section of this paper, regarding culture and buy-in. There must be 100% management buy-in for the digital transformation of the company as well as the network transformation. Employees need to be educated, encouraged, and have every step explained to them. This needs to be done for all employees across the company; transformation does not work if the teams are not pulling towards the same goal. In IT, where the stability of only incremental change is valued more than corporate goals, this means changing long-held and cherished practices. *Transformation will fail without buy-in by IT staff.*

Audit

The next universal step that must happen to implement network transformation is mundane but crucial. A complete network audit needs to be completed. This includes campus, data center, and every branch location. This should include standard information like physical location, make, model, and software revision for all hardware. It should also include a full listing of every external connection to the network, including all connectivity, such as MPLS and broadband connections in full detail including provider. IT departments tend to believe that they have an up-to-date inventory, but the reality is that the only way to be sure is to conduct a thorough audit. This inventory is best led internally by IT, but executed by an outside contractor or service provider. Outsiders will make no assumptions. A similar inventory of servers, storage and software should also be carried out, as the transformation plans for these infrastructure components need to be tightly coupled with the network transformation. Savvy IT will get everything inventoried at once by an external contractor because a complete picture of IT software, hardware, and services is necessary.

Placement

The third universal step is one of the harder ones. Every service IT provides to the business needs to be evaluated, with the guiding principle being improved experience for the end customer. Also, the evaluation needs to ask which functions are core to the business and should be kept in house. Functions that are in house can often be customized and changed quickly as business conditions change. A good example here is email. IT may maintain email services for the whole company. Is that a good use of IT time and resources? In most organizations moving email services to a SaaS provider like Google or Microsoft is going to make a great deal of sense. Many of the traditional IT services that have largely been commoditized can be turned over to a managed service provider. The service can be monitored and supervised by IT, but those outsourced functions will require many fewer resources, freeing up personnel for projects that are more impactful to the business. Companies should not spend time gathering requirements on systems that will be outsourced or retired before the network transformation is complete.

Safety and security

The fourth universal step every company must do before launching in on a large project like network transformation is to ensure that backup and business/disaster recovery plans are not only up to date, but *thoroughly tested*. Backups that have not been successfully tested and restored are not acceptable. While the chances that a network transformation will cause a major unplanned outage are small, this possibility cannot be discounted with the business on the line. Smart businesses should hope for the best and plan for the worst.

Project prioritization

The final universal step is to evaluate business prioritization, risk, costs, and speed to completion. Network transformation should start in areas that the evaluation has determined the highest priority. Much of the business digital transformation requires the advanced connectivity and security provided by a transformed network.

In or out?

Enterprises undertaking network transformation are advised to engage a managed service provider (MSP) to help with the transformation. Managed service providers bring in expertise, operational experience and, most importantly, engineering and project management experience. Network transformation at scale needs steady project management. An outside service organization can bring in day to day project planning and management while freeing up staff to handle the larger questions around the transformation and liaise with business units. The MSP can also handle the physical tasks of installing equipment, software, and connectivity, including installations at branch environments.

Another key benefit of bringing in external help is the integration of network management with existing systems. This can include legacy networking segments which are not being transformed due to upcoming systems replacement, or elements such as ticketing and change management systems. It can also include integration with systems such as manufacturing control, which are likely older but still viable. Modern networking environments are replete with APIs to enable integration. MSPs can provide the code work necessary to complete the integration of these environments. Long-term they can provide informational dashboards, a second round of deeper integration, changes, and other programming services around the network.

Some companies will try and handle the task of network transformation themselves. It is not a question of ability to finish the task. It is a question of speed, cost, and stress on staff. An MSP will be able to insulate an enterprise from potential technology dead-ends, as it is the MSP's issue to select and administer the base technology. The transformational philosophy of flexibility and customer-first means that getting experienced and available expert help is the right choice.

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Measuring success

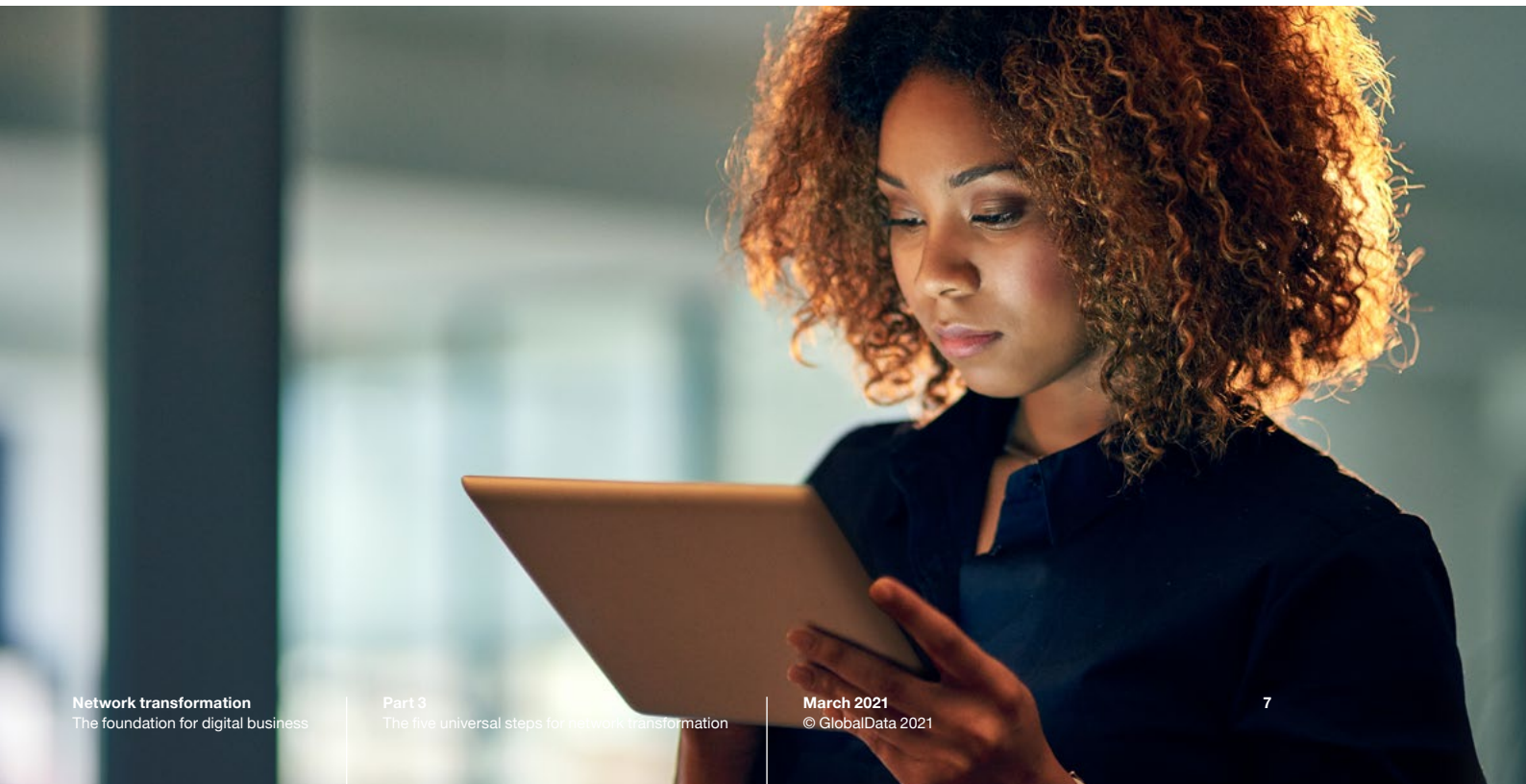
Most companies use key performance indicators (KPIs) to measure success. KPIs should be split between business KPIs and IT KPIs. Business-specific KPIs should include application responsiveness, success rates for self-provisioning/help, connectivity success (remote and local), average time to implement business-requested change, and business network dashboard use. Additional KPIs about number of level 1 user problems that are network-related can also be used, but the business KPIs should be primarily around benefits to the business from network transformation.

Another useful way to understand the effects of the transformed network on the business is to conduct customer satisfaction surveys with line-of-business users. Most KPIs are designed to be hard, measurable statistics, and surveys are by their very nature subjective. But understanding the average user's impressions of the changes will make a huge difference, especially as the network transformation spreads across the company. User surveys should be anonymous, so no one feels compelled to provide positive answers to avoid scrutiny or retaliation. The questions should include both simple multiple-choice 'closed' questions as well as a long-form 'open' section where customers can optionally relay anecdotes and issues that they are seeing which may not be documented.

These surveys should be conducted regularly early in the project and later done at least twice a year. Customer service is the top priority, even to the internal customer.

On the IT side, all the of the normal KPIs IT is used to seeing come into play, and should be measured on a 'before and after' basis. New metrics should also be taken, such as how much time is being spent on routine activities. The automation and AI integrations of the transformed network should have those hours trending down, with the goal of having less than 20% of the day spent on those activities. Another metric should be time to completion for network changes, time to completion for setting up the networking for new branch sites, time to completion for responding to and fixing level 1, level 2, and level 3 problems. Network transformation is about reliability, speed, and operational efficiency, which all lead to better service to the business and ultimately the customer.

Network transformation is the foundation of digital transformation. In a very real sense the transformation of the network is where the necessary changes to IT start as well. How IT does business, how IT employees view their jobs, and how they work with the business is at the heart of real network transformation.



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What sets us apart?

Our technical prowess as a network operator, coupled with our agility as an integrator of digital solutions

- Operator: building and operating complex infrastructures
- Integrator: designing and managing end-to-end digital solutions

27,000+ expert staff in B2B operations: we put their specialist skill sets to work for you

- 3000+ multinational clients
- 6,000+ IT experts including Data and Artificial Intelligence, IoT, cloud and cyberdefense experts
- Customer service teams and CyberSOCs located around the world to provide 24/7 support to all of our customers

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