



PLANNING FOR NETWORK TRANSFORMATION

Best Practices For Success



NETWORK TRANSFORMATION

Network operators have always needed to update their networks. However, the pace and scale of change are now increasing as operators face major technology shifts such as moving from copper to fiber, replacing traditional switched telephony with voice over IP (VoIP), deploying DOCSIS 3.1, and preparing for software-defined networking (SDN). In this era of large-scale network transformation, operators need a clear plan which addresses questions such as:

- *What impact on cash flow will the decommissioning of legacy networks have, and what is the appropriate payback period?*
- *What is the risk that churn will increase and revenue will decrease in a decommission or migration effort?*
- *Is it really worth migrating “every single customer” off legacy equipment, both switch and transport, to decommission the assets?*
- *What is our strategy for the old legacy network and all the associated support systems?*

Every operator is faced with these questions and more. Each situation is as unique as the operator’s network and customer base. The best way for operators to answer these questions is to have the best industry information available and make decisions based on realities versus myths. The article will explore some of the major issues operators face and provide insights and experience for a “best practices” approach to network transformation.



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Based on an article by Ron Angner (PhD)

All communications infrastructure has a life span, and restructuring and migrating networks are an essential component of network operations. This “network transformation” – changes that include decommissioning and customer migration – is a complex process that has many phases and touches many departments in the network operator, not just those in “networks”. It is an exacting, time-consuming and expensive undertaking. It often takes staff away from their regular, revenue-generating jobs.

Measuring success of a long-term strategic undertaking such as this can be a challenge. So what are the true measures of success of a network transformation? Is it OPEX, power, and real estate savings associated with turning down an old legacy network? Churn reduction or revenue growth? Increases in customer satisfaction? The answer is that all of these are important and must be addressed as operators develop their network transformation plan.

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START WITH A BUSINESS CASE

One of the common problems we encounter is that network transformation has started without a business case. The business case is a critical first step in the decommissioning process. It forces discipline in the approach and provides an overall view of the program. The business case will help determine which assets should be decommissioned and in what timeframe. It should take into account not only the cost savings associated with removing assets from the network but also include the revenue and customer impacts.

Cost savings are relatively straightforward and include reductions associated with network (maintenance), technical sites (property, facilities, power and cooling), and personnel (operations).

NETWORK TRANSFORMATION COST SAVINGS



Network
(maintenance)



Technical sites
(property, facilities,
power and cooling)



Personnel
(operations)

Revenue impacts are more complex to assess. Operators should start by identifying the network assets within the scope of the program: access circuits, transmission and switching equipment, and supporting systems. The services and customers which are dependent on those assets can then be understood. The next step is typically an analysis of the profitability of the impacted services and strategic considerations of their product lifecycle phase. For example, at what point will T1/E1 circuits (multi-channel carrier lines) no longer be supported? Is dedicated trunking going to be supported in the future? Having a clear product strategy is critical.

Finally, operators must consider the customer impacts. How much revenue will be lost to churn during decommissioning? What are the opportunities for revenue upsell as new service offerings become available in the transformed network? What are the costs of updating or modifying their CPE (customer premises equipment)? For top customers, the impact that migrating their service to a new platform has on day-to-day operations should be considered and a tailored migration plan developed as discussed below.

A well-structured business case will examine all the elements above to determine which network elements to decommission, in which order, and over what timeframe.



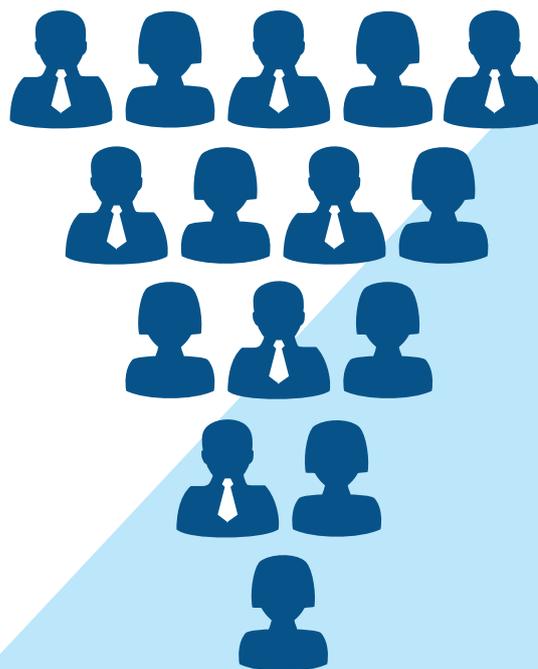
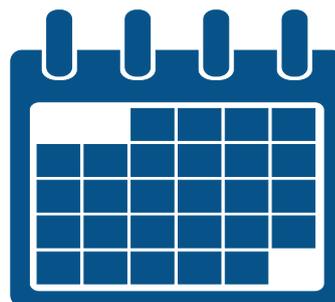
APPROACH NETWORK TRANSFORMATION AS A FULL-TIME JOB

One issue with potentially demoralizing consequences is adding the transformation workload onto existing staff and expecting them to pick it up alongside their existing responsibilities. Transformation is complicated. It requires detailed planning, network design, and customer hand-holding – all of which leads to a full-time job. Experience shows the staff members cannot effectively support a decommissioning program while continuing to do their day job.

To be successful, a ring-fenced team is required to handle the operational tasks in a large-scale transformation programme. There are simply too many moving parts to have the core team distracted by other work pressures. A dozen internal departments are typically involved in transformation activities, and resources from all business units must be assigned. Some departments such as legal, regulatory, and PR may not require full-time resources, but all will require dedicated resources.

TYPICAL TEAM SIZE

A typical team would require more than 15 full-time workers to decommission a dozen switches and associated customers and trunks over an 18 to 24-month period.



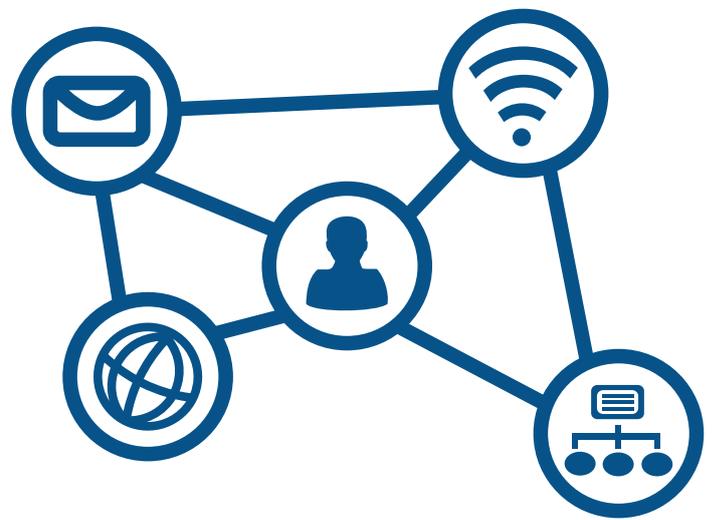
*What size team do you need?
The team size will vary depending on the number of network elements being transformed as well as the number and complexity of customers and circuits that are being migrated.*



CONSIDER CHURN MITIGATION, REVENUE RETENTION AND CUSTOMER SATISFACTION

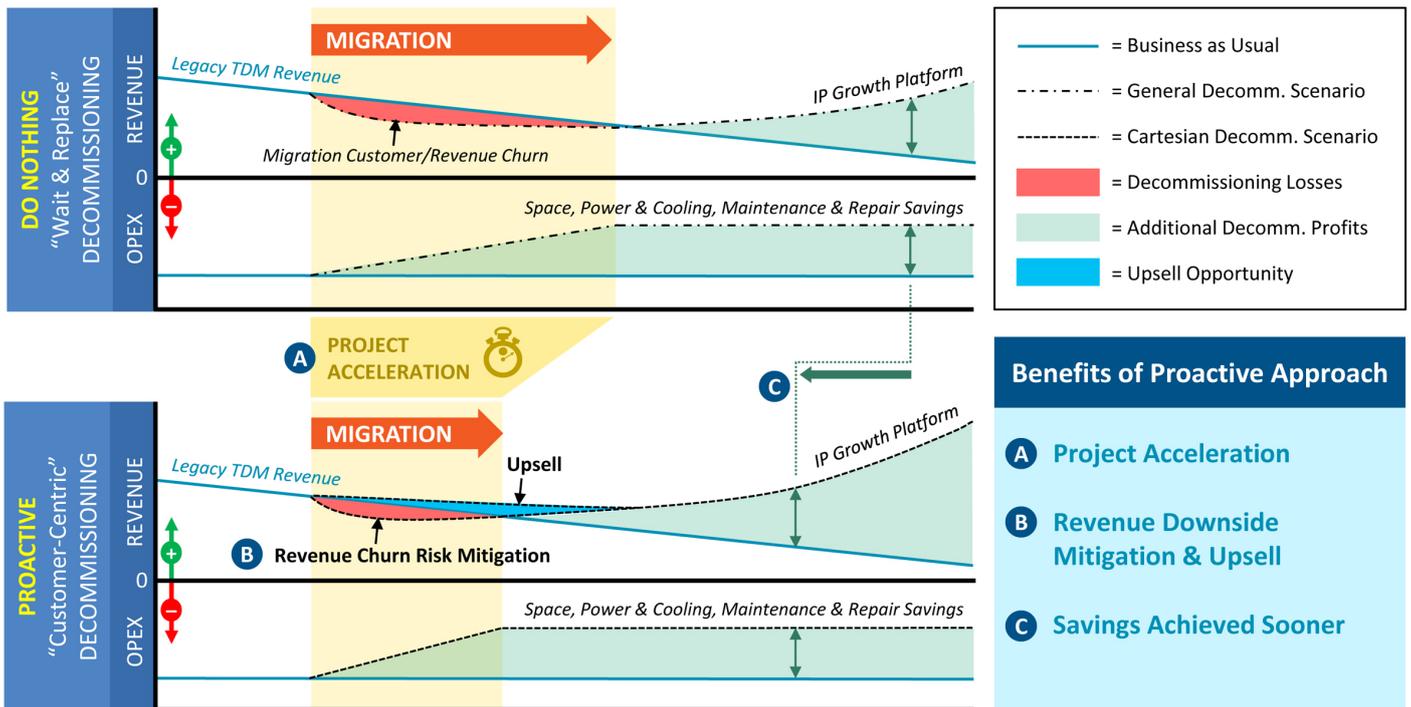
Within a network operator’s organization there will always be advocates of a “do nothing” approach in which the customers continue to be served by the legacy infrastructure. A common misconception is that this passive wait-and-see approach is best: “we will just wait 8 years and the revenue and customers will attrite away and then we will remove the assets.” Based on our experience, taking a proactive approach to network decommissioning will not only *reduce churn* over time because customers are being offered new and improved services but also has the potential to *increase revenue* by *upselling* services that are not available on the current platform.

This is achievable when an integrated approach, driven by marketing and sales, is developed and implemented to focus on customer satisfaction: an approach should minimize the impact on customers and communicates with them openly and regularly regarding the network transformation and the advantages it brings *to them*. In our experience, a transformation purely driven by cost savings and legacy equipment replacement is typically far less successful than the customer-driven approach.



A customer-centric approach can halve migration-related churn and significantly increase revenue depending on the customer and service mix. Increasing the speed of transformation brings faster OPEX savings and revenue uplift than the traditional asset-driven approach.

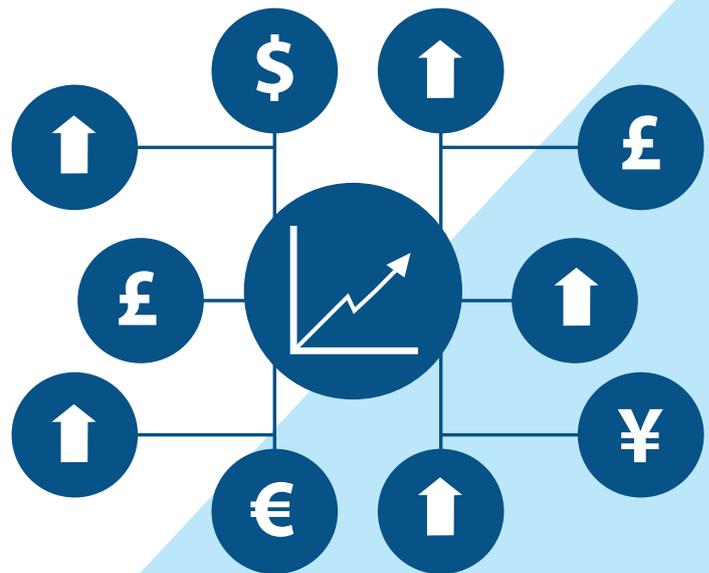
BENEFITS OF THE PROACTIVE APPROACH TO NETWORK DECOMMISSIONING



The above graphic shows how a proactive approach to network decommissioning achieves superior results. The graphic shows the revenue and cost profiles of the wait-and-see approach (above) versus the proactive approach (below).

The first observation is that taking a proactive approach accelerates the migration program (A). Proactively moving customers onto the new infrastructure reduces the time spent managing the migration and enables a focused approach to be taken to the program as a whole. As customers are being proactively targeted, the operator will already have a migration path identified and is able to provide appropriate communications to guide customers through the migration. Effective communication reduces the risk of churn and provides new touch points for the operator to upsell services enabled by the new infrastructure (B). Finally, by completing the migration in a shorter timeframe the legacy infrastructure can be decommissioned sooner. This enables

OPEX cost savings to be brought forward through reductions for space, power, cooling, maintenance, and repair (C).





DESIGNATE A FOCUSED MANAGEMENT TEAM

A management team focused and rewarded on the success of the network transformation program is key to the success of the program. Many operators create a Migration Control Center (MCC) or Migration Operation Center (MOC) specifically to manage the end-to-end transformation: from business case approval to engineering and construction through to customer migration and asset removal.

The MCC is the nerve center of the transformation program – for both business and operations. It keeps the rest of the business informed on progress and ensures that everyone has access to the information they need. These units are established by the chief executives and typically report directly to them.

MIGRATION CONTROL CENTER RESPONSIBILITIES

1. **Detailed Planning**
2. **Business Case Approval**
3. **Managing Project Execution**
4. **Internal Communications**
5. **Reporting and Dashboarding**

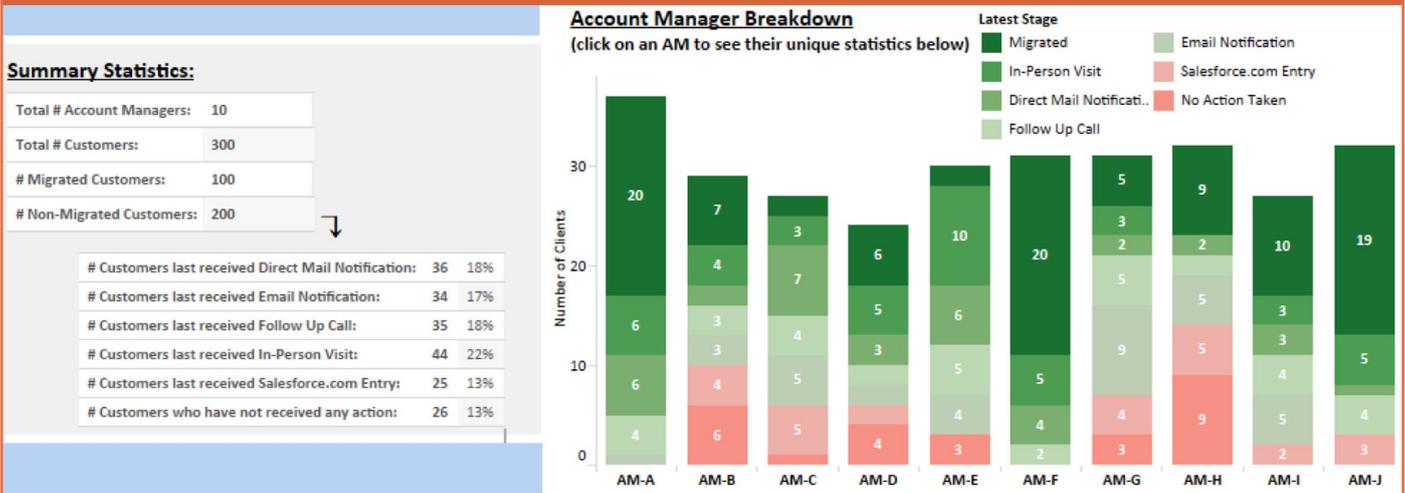
One of the key responsibilities of the MCC is developing and managing the budget. The MCC is also charged with ensuring that the program is resourced appropriately with dedicated personnel and support from across the organization. Key internal interfaces for the MCC will include:

- ▲ **Engineering & Construction**
- ▲ **Finance**
- ▲ **IT**
- ▲ **Legal & Regulatory**
- ▲ **Marketing & Public Relations**
- ▲ **Network Operations**
- ▲ **Real Estate**
- ▲ **Revenue Assurance**
- ▲ **Sales**

A focused management team operating in a migration center environment is one of the most critical factors in executing a transformation plan on time, within budget, and with the highest quality. This focus can reduce execution time by around 25%.

DASHBOARDS FOR MEASURING BUSINESS METRICS FOR DECOMMISSIONING PROJECTS

Account Manager Evaluation Dashboard



Tracking and reporting on the migration program progress are critical to the understanding of performance trends and being able to quickly respond and react to potential warning signs. Making key statistics available to the team ensures that everyone has a consistent view of how the program is progressing. Sharing this information more broadly can go a long way to managing internal stakeholders' concerns.

Dashboards for business metrics would include items such as costs, revenue, churn and ARPU segmented by customer and product. For sales, metrics can relate to account executive performance in securing migration agreements, renewals and upsells. Network dashboards measuring intervals for planning and construction,

provisioning, and installs will highlight potential bottlenecks. Data of reworks and revisits can help assure quality, and so on.

In essence, the business and operational dashboards provide detailed information that allows executives to manage the program to the metrics established in the business case and course correct where necessary.



ENSURE THAT CUSTOMER MIGRATION IS A WELL-PLANNED AND WELL-ORCHESTRATED PROCESS

Customer migration is the most critical step for a successful network transformation. If customer migration is done correctly – with a meticulous or “white glove” approach- objectives such as minimizing churn and maximizing revenue retention can be readily accomplished. If not done properly, a network transformation activity can easily have significant business impact.

Effective customer migration starts with an understanding of which customers are connected to each switch, and which services each customer has on those switches. Rationalizing the information held in billing, provisioning and network systems is a vital first step. Once cleansed and audited, this information can then be used to develop customer migration plans. Residential and SMB (small and medium business) customers will often have similar sets of services: a handful of generic migration plans typically address 90% of these customers with the remaining 10% needing special treatment. Enterprise customers present a completely different challenge. Because of their size and complexity, no two of them are the same. In these instances, a migration plan for *each* customer may have to be developed.

Effective communication with customers throughout the program is essential. When communicating with customers, inform them that transformation will happen, why it is being done and, most importantly, *how it will benefit them*. If not communicated properly, customers may perceive that the transition is purely about cost savings for the operator, creating negative sentiment and threatening the business objectives for churn and revenue retention. For the top 20% of customers, one-on-one “white glove” handling is the key to success. Communication to this group should be personal and frequent and should support them through the entire transition – from initial awareness to service selection, re-contracting, migration and testing.

A “white glove” approach has resulted in our clients reducing churn due to migration by about 50%, gaining higher levels of customer satisfaction and increasing revenue by around 3% for enterprise and over 20% for residential customers.



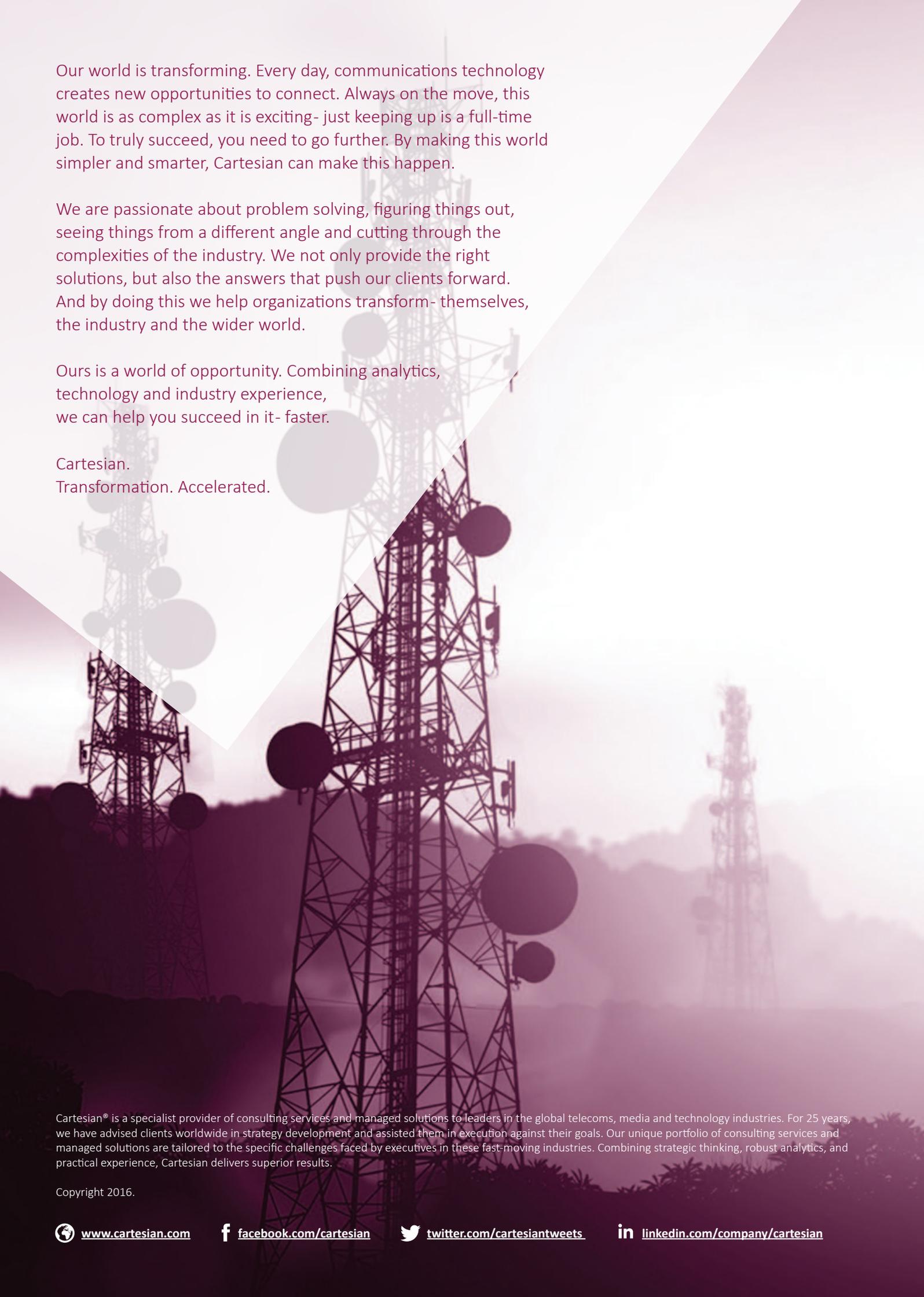
IN CONCLUSION

Network transformations are amongst the most complex programs that network operators undertake. Success requires a solid business case from the start, underpinned by detailed planning of activities and staffing. The business case should include not only direct costs but also churn mitigation, revenue retention, and customer satisfaction. Key resources should be ring-fenced with the entire program overseen by a focused management team; a wide number of departments need to participate and diverse skill sets are needed. Operating out of a Migration Control Center will enable the management team to manage the complexity of the program and ensure that everyone is kept informed of progress. Customer migration must be well-planned and well-orchestrated: it is the most critical aspect to get right as it impacts ongoing revenues and the potential for upsell.

PLANNING OR IN THE MIDDLE OF A NETWORK TRANSFORMATION PROJECT?

In most cases, operators do not have staff readily available to focus on a network transition/decommissioning program. Obtaining external support and leadership with the skills and hands-on experience in planning and executing a network transformation can be invaluable.

Experienced leadership and a properly resourced team are the foundations for success. With the right approach, a transformation program will deliver business benefits that stretch beyond simple cost savings.



Our world is transforming. Every day, communications technology creates new opportunities to connect. Always on the move, this world is as complex as it is exciting- just keeping up is a full-time job. To truly succeed, you need to go further. By making this world simpler and smarter, Cartesian can make this happen.

We are passionate about problem solving, figuring things out, seeing things from a different angle and cutting through the complexities of the industry. We not only provide the right solutions, but also the answers that push our clients forward. And by doing this we help organizations transform- themselves, the industry and the wider world.

Ours is a world of opportunity. Combining analytics, technology and industry experience, we can help you succeed in it- faster.

Cartesian.
Transformation. Accelerated.

Cartesian® is a specialist provider of consulting services and managed solutions to leaders in the global telecoms, media and technology industries. For 25 years, we have advised clients worldwide in strategy development and assisted them in execution against their goals. Our unique portfolio of consulting services and managed solutions are tailored to the specific challenges faced by executives in these fast-moving industries. Combining strategic thinking, robust analytics, and practical experience, Cartesian delivers superior results.

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