Delivering telecommunications services in local markets:
A case study outlining implementation challenges

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ABSTRACT

In numerous industries, the competitive landscape significantly evolved in the last few decades. From local organizations serving local customers with a portfolio of products and services adapted and dedicated to the specificities of each local market, firms modified their organization structure to better follow their customers internationally and to take advantage of the many growth opportunities that globalization offered worldwide.

To better serve their international customers, and to build competitive advantage, firms have been seeking new ways of improving the attractiveness of their offerings. It is often with this goal in mind that firms are using outsourcing, ideally resulting in reduced cost and improved flexibility.

This document, organized as a case study, synthesizes and discusses the challenges that a telecommunications service provider was facing while simultaneously outsourcing some of its service delivery activities and implementing a solution for a large customer in a country in which this customer had a massive presence, and in which it only had limited operations.

The case study provides a broad understanding of the two actors, their environment, needs and constraints. It explains the extent to which the contract signed by both parties deviated from the provider’s definition of standard products and services, details the modifications that were required on its delivery processes, and introduces the various teams that were involved. Finally, it presents several external initiatives that had a significant impact on this implementation, including an outsourcing initiative.

Following this case study, a chapter discusses the impact that this implementation and that these external initiatives had on the provider’s organization. It also provides recommendations that could be used by other providers in order to better deal in similar circumstances.

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1. INTRODUCTION

1.1 GENERAL DISCUSSION AND INSIGHTS FROM AVAILABLE RESEARCH

In numerous industries, the competitive landscape significantly evolved in the last few decades. From local organizations serving local customers with a portfolio of products and services adapted and dedicated to the specificities of each local market, firms modified their organization structure to better follow their customers internationally and to take advantage of the many growth opportunities that globalization offered worldwide.

To better serve their international customers, and to build competitive advantage, firms have been seeking ways to improve the attractiveness of their offerings. In many industries building a sustainable competitive advantage can be achieved by either reducing marginal cost, increasing production capacity, innovating more than competitors or building true distribution partnerships with customers.

Reducing cost was the first driver of outsourcing. In the last decades, companies used to outsource with the goal of obtaining significant cost reductions (Barrar & Gervais, 2006)\(^1\). Activities that were considered as not strategic were the first to be considered as potentially outsourced. Such cost reductions would be achieved by outsourcing to lower cost economies, such as Eastern Europe countries, India or China where economies could be made on labor cost. Among the fields in which this first level of outsourcing took place, Information technology was one the first for which outsourcing was adopted and then commonly generalized.

Firms also used outsourcing in order to gain flexibility, and in particularly workforce flexibility. Outsourcers have the advantage of being much more focused on optimizing their recruiting and training processes, their core competencies, in order to quickly adapt their workforce to the requests of their customers. In this context, outsourcing is an advantageous approach to adapt to new market trends, especially when volumes of business tend to increase. As a consequence, expanding outsourced businesses should be easier and quicker than expanding in-house ones.

However, outsourcing is often a short-term answer to a long-term problem (Barrar and Gervais, 2006)\(^2\). The decision to outsource is in most cases not taken in regard to a strategy that would aim at building a competitive advantage. In many cases the decision to outsource is taken to fix short terms problems – such

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as labor cost. As long-term strategy is neglected, the outputs of the outsourcing initiative are questionable. On the short-term, cost-cutting objectives can be achieved and the firm’s workforce can become more flexible, but there is no evidence that this trend could continue on a longer term. Basing the decision to outsource on the sole cost reduction goal can result in large operations difficulties and drop of quality of service on the long term. The situation can even get worse in cases where cost pressure from the outsourced to the outsourcer increases (Lacity and Willcocks, 1996)\(^3\)

In addition to these negative long-term effects, short-term cost reduction approaches can have significant impact on employee commitment, productivity and quality of service. Numerous studies have described the difficulties that organizations faced during and right after outsourcing some activities.

Thus, outsourcing non-core activities can be considered as a strategy likely to provide only arguable and limited economic benefit. In the case where a firm would go further, and would pursue a “core outsourcing” strategy, which consists in outsourcing a core competency, the outcome could be much better. The firm could potentially develop a competitive advantage (Gilley and Rasheed, 2000)\(^4\). This success being conditioned to an outsourcing perimeter carefully selected and an implementation properly performed.

Contrary to non-core outsourcing, core outsourcing is much newer. Firms tended not to outsource their core competencies, as relying on a third party for such strategic activity seemed risky (Bettis, Bradley and Hamel, 1992)\(^5\). Today, outsourcing core competencies is becoming more common, as many firms are outsourcing their research and development capabilities, product design, innovation, etc.

Years of research and of practice of outsourcing have generated an extensive literature. Firms that are considering outsourcing some of their competencies can rely on numerous resources, providing guidelines, advices and best practices. These cover both outsourcing preparation and implementation. Despite this available literature, the problem that is discussed in this document does not find easy answers. How to make sure that the core outsourcing initiative launched by a firm could reach its objective of

---


building a true competitive advantage? How to avoid the possible negative outputs that cost-cutting outsourcing initiatives often meet? In particular, how to avoid a possible paralysis of the entire system by decreasing the flexibility of the organization when the objective is the opposite?

1.2 SCOPE AND ORGANIZATION OF THE DOCUMENT

In the early part of the 2000s, Koios, a worldwide leader in employment services, signed an exclusive contract with Triton, a global telecommunications network provider, for the provision of a global managed data network.

On the provider side, as global supplier of the contract, it was viewed as an extraordinary opportunity for growth into new service and geographic areas, as the contract covered thousands of locations in dozens of countries.

Triton, as contract provider, initiated a transformation program that aimed at migrating all Koios sites onto its managed solution.

This document, organized as a case study, synthesizes and discusses the challenges that Triton was facing while simultaneously outsourcing some of its service delivery activities and implementing its solution in a country in which its customer had a massive presence, and in which it only had limited operations.

The next chapter, Case Study, provides the reader with a broad understanding of the two actors, their environment, needs and constraints. It describes both companies, provides an overview of the contract and presents the most critical delivery processes used on the provider side. It also focuses on detailing the various teams that will be involved in the implementation. It explains the extent to which the contract deviates from the provider’s definition of standard products and services, and details the modifications that will be required on the delivery processes. It also presents external initiatives that may potentially have an impact on the delivery of the project.

The third chapter, Analysis and Recommendations, discusses the impact that each of the identified challenges would individually have on the provider’s organization as well as their combined impact. It also provides recommendations that could be used by any provider in order to better deal with similar situations.
1.3 **Research Method**

The data that helped building the following case study was mostly gathered through an interview process. Various professionals from the telecommunications industry were interviewed between December 2009 and March 2010. As per detailed below, most of them were employees of Triton, involved in the Koios project. Others worked at Triton on support functions, such as finance or human resources employees, for customers or third parties.

The type of profiles interviewed at Triton included:

- From the sales department: sales directors and managers, key account managers, pre-sales engineers, bid managers, and contract managers.
- From the marketing department: marketing regional manager, product development representatives, product managers, and service design representatives.
- From the operations department: regional head of operations, regional head of business planning, regional head of service delivery, head of project management; program manager, project managers, order managers, order processors, head of order entry, head of center of excellence, head of service assurance, and customer service manager.
- From other departments: finance associate, risk manager, lawyer, recruiting and sourcing representative.

The questions asked during the interviews depended largely on the role and seniority level of the interviewees. However, most interviews had a two-fold objective. They aimed at better understanding the value chain with a particular emphasis on the implementation processes, identifying sources of flexibility or rigidity in these processes, and describing the types of interactions that the different teams or entities had during the Koios project.

On the customer side, network engineers, service manager, purchasing manager, and end-users were interviewed. They were either employed by Koios or by other customers of Triton. During the interviews, the questions asked mainly covered their experience of the service Triton provided to them, their understanding of the specificity of some of their needs, and their perception of Triton’s capacity to adapt its implementation processes to these needs.
Finally, account managers from third parties involved in the Koios project were interviewed. They were asked to describe their usual interactions with Triton as well as to detail the challenges they faced while building new and dedicated processes to help Triton deliver the Koios project.

Most of the data gathered in these interviews was used to populate the Case Study chapter. For example, detailed descriptions of various delivery processes were built during interviews with front line operations and service delivery employees. The data gathered from the interviews made with the most senior managers as well as with customers could not used as directly. Instead, it served as insights for the Analysis and Recommendations chapter.
2. CASE STUDY

2.1 INTRODUCTION

In the early 2000s Koios signed an exclusive contract with Triton, a global telecommunications network provider for the provision of a global managed data network. This contract, a 5-year deal that was valued over $50m, was the first business relationship between the two organizations.

On the provider side, as global supplier of the contract, Triton viewed the contract as an extraordinary opportunity for growth into new service areas. The initial provider offer covered 3200 Koios locations in more than 60 countries. Triton initiated a transformation program that aimed at migrating all Koios sites to the Telco managed solution. At contract signature, both Koios and Triton agreed that a standard design would be deployed to all sites.

This chapter discusses both actors and then details the implementation issues that arose when Triton was rolling out this standard design on the Koios sites in a Western Europe country in which Koios had a massive presence whereas Triton only had limited operations.

2.2 THE CUSTOMER: KOIOS

2.2.1 Origins and Company Profile

Founded in the 1950s, Koios is a worldwide leader in employment services. Koios creates and delivers services that enable their customers to recruit more easily and quickly than if they were doing it themselves.

Koios offers permanent, temporary and contract recruitment; employee assessment and selection; training; outplacement; outsourcing and consulting services. The value it delivers to its hundreds of thousands clients consists in increasing their productivity through improved quality, efficiency and cost-reduction across their total workforce.

Koios operates thousands offices in multiple countries and generated more than $20 billion in revenue in 2008.

2.2.2 Strategy In Competitive Local Markets

Koios operates in both a global and multiple local markets. On the global side, Koios provides long-term placement service offers through its corporate web site. On the local side, Koios provides both interim and long-term job offers to candidates. Firms willing to benefit from recruitment services usually send job descriptions to one of the thousands of local offices via e-mail, fax or by meeting with a local Koios
representative. Prospective candidates usually consult, on a weekly basis, the list of available offers at a local office.

In most developed countries in which it has a significant presence, Koios operates in a very competitive environment. New entrants have adopted similar business models and it is not uncommon to observe competitors installed literally next door to the Koios offices.

Prospective candidates are used to consulting job offer listings provided by the various job placement offices of a given area with very little consideration for the brand. In this business, candidates are generally not loyal to a brand and will therefore consider the best available opportunity they will find in any of the job offer listings they have access to.

Koios is therefore facing a two-fold challenge to build and keep its strategic advantage.

- Koios needs to publish the latest job offers as soon as they are entered in its system, if possible before competitors.

- Koios needs to decrease the time a candidate has to spend inside its local office: By decreasing the time an Koios representative is spending running queries on the job offer database to find a match between the candidate profile and a job description (skills, job location, availability, etc.), the overall time spent within the office (wait time and time with the Koios representative) will decrease and candidates will consider that Koios is more efficient than its competitors and may choose to go to a Koios office first, before going to a competitor.

2.2.3 Telecommunications Requirements

At the core of Koios’ business strategy, is a reliance on state of the art information technology tools. Shorter database queries and ease of use are instrumental in Koios success. This is why Koios local offices rely on an elaborate set of tools that require high performance and reliability levels.

Within a given country, most Koios systems use client/server infrastructures. As a consequence of this type of architecture and of the performance and reliability levels needed, Koios puts strong demands on the telecommunications network that will connect its different offices to the data centers in which its applications servers are located.
At the time of the contract, Koios had developed a brand new set of tools adding many new features and drastically improving the IT performance of each individual local office. In order to support the increase of traffic that this major upgrade would generate between local offices and the data centers, Koios had identified the need to have a new, modern, high performing and secure telecommunications network since its current telecommunications services were not able to deliver the expected level of service.

Some of the most critical requirements for the new Koios network included:

- Increased Bandwidth: local offices will require larger and guaranteed levels of bandwidth (generally around 2 Mbps).

- Enhanced scalability: Koios should be able to easily increase or decrease the bandwidth required for a local office with no impact on the rest of the network.

- Enabled Quality of Service features:
  - Traffic prioritization: Koios is willing to prioritize database queries over other applications such as e-mail, Internet access, etc.
  - A multimedia or real-time class of service is required as some of the new applications are sensitive to extended roundtrip delay or jitter.

- Redundancy: Koios business should not be impacted should an outage happen in the new network.

- Extended availability: Koios will require the network to be available on a 24/7 basis and will ensure the telecommunications network provider will commit to a stringent Service Level Agreement (SLA).

- Security: Koios is storing personal data of hundreds of thousands of candidates and cannot afford data leaks. Integrity of the network and of Koios data transmitted over it should not be at risk at any time.

Koios also had other requirements, which were not directly linked to the network itself or its underlying technology, including:
- Local service management and supervision: Service support should be available in the local language.

- Global IP addressing plan: Should be managed by the telecommunications network provider. Before the new contract, each country was operating its own network, isolated from the other networks. To avoid routing issues, Koios requested the future provider to handle its full addressing plan.

- Rollout constraints: each country should be migrated to the new network within the 6-month period following contract signature.

2.3 CONTRACT DESCRIPTION

Koios and Triton signed an exclusive contract in 2004, setting up a five-year deal. During these five years, Triton would be the exclusive telecommunications network provider for Koios in most countries in which Koios is operating its business. Triton would thus provision a global managed data network for Koios.

This contract was based on a global master agreement, defining the general terms that would rule the relationship between both parties during the contract duration. On top of this master agreement, each Koios country subsidiary would sign a country-specific agreement with the local Triton subsidiary. These local agreements would define the detailed terms of the relationship between the two parties in a given market. They would also specify detailed service descriptions, pricing schedules, levels of service and project governance.

The following parts describe the details of the agreement that the Koios and Triton local subsidiaries signed.

2.3.1 Service Description

To provide a solution that will meet the needs of the branches located in the Western Europe country we are focusing on, Triton designed a simple, replicable and scalable solution that would be rolled out on all the Koios local sites.

This solution consisted in connecting each site to the country headquarters in which most of the corporate applications servers were located. Triton would use the Multi Label Packet Switching (MPLS) technology in order to allow such interactions.
By using the MPLS technology, each local site would be connected to a cloud network, dedicated for Koios, in which all sites can communicate together and benefit from the advantages of the MPLS technology.

The following table provides the size and the MPLS coverage of Koios’ main competitors in the MPLS market.

<table>
<thead>
<tr>
<th>Provider</th>
<th>MPLS Countries</th>
<th>Reporting Country</th>
<th>Market Capitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT&amp;T</td>
<td>163</td>
<td>US</td>
<td>$149 billion</td>
</tr>
<tr>
<td>BT Global Services</td>
<td>65</td>
<td>UK</td>
<td>$8.67 billion</td>
</tr>
<tr>
<td>Cable &amp; Wireless</td>
<td>34</td>
<td>UK</td>
<td>$6.87 billion</td>
</tr>
<tr>
<td>Global Crossing</td>
<td>45</td>
<td>Bermuda</td>
<td>$605 million</td>
</tr>
<tr>
<td>NTT Communications</td>
<td>21</td>
<td>Japan</td>
<td>$60.2 billion</td>
</tr>
<tr>
<td>Orange Business Services</td>
<td>197</td>
<td>France</td>
<td>$59.23 billion</td>
</tr>
<tr>
<td>Sprint</td>
<td>34</td>
<td>US</td>
<td>$10.2 billion</td>
</tr>
<tr>
<td>T-Systems</td>
<td>47</td>
<td>Germany</td>
<td>$53.9 billion</td>
</tr>
<tr>
<td>Verizon Business</td>
<td>155</td>
<td>US</td>
<td>$85.78 billion</td>
</tr>
</tbody>
</table>

Table 1: Footprint and market capitalization of the major MPLS providers


Thanks to their numerous advantages (improved scalability, manageability, reliability, performance and security, etc.), MPLS networks experienced dramatic growth in the last decade. They progressively replaced most of the legacy technologies used until then for corporate networks.

At a network level, the solution designed by Triton would also use the capabilities of the MPLS networks to provide differentiated quality of service levels. This would allow Koios to prioritize the applications it judges as business critical.

At a site level, Triton would install a CPE that would aggregate the traffic that needs to enter or exit the site to transit on the MPLS network. This device would analyze the type of traffic exiting the site and allocate the corresponding level of service.

The media to be used to connect the site CPE to the MPLS network would be, where available, based on a Digital Subscriber Line (DSL) technology. Even though DSL solutions are usually less reliable, their

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6 MPLS Countries: number of countries in which the provider operates at least one MPLS Point of Presence
7 Market Capitalization: market capitalization of the parent company as of March 31st, 2009, in US dollar or equivalent.
performance has improved significantly in the last few years. Today they propose a very serious alternative to traditional leased lines, showing levels of reliability and better performance levels. Their main advantage is to be a lower cost access solution (DSL lines can cost up to four times less than leased lines).

2.3.2 Installation Schedule and Project Governance

Koios and Triton agreed to roll out the new MPLS network at a very quick pace. The local agreement included a target level of 100 sites to be installed each week, taking into account the previously detailed time constraints Koios had for the rollout.

In order to achieve such an ambitious installation schedule, both parties were to set up mirrored project management teams. The local agreement described these organizations, stating the roles and responsibilities of each of the members of the project management teams. Communication channels were also described in the local agreements.

2.3.3 Levels of Service

The local agreement defines several target levels of service, SLAs, as well as financial penalties in case the actual level of service would not meet the expected level.

Most of these agreed levels of service are widely used in the industry. They are summarized in the following table. Values for threshold are industry standards.

<table>
<thead>
<tr>
<th>SLA indicators</th>
<th>Measure</th>
<th>Threshold for penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network availability</td>
<td>Time during which service is not available for the whole network</td>
<td>2 hours per month, 6 hours per year</td>
</tr>
<tr>
<td>Site availability</td>
<td>Time during which service is not available for a single site</td>
<td>6 hours per month, 12 hours per year</td>
</tr>
<tr>
<td>Time to restore service</td>
<td>Time needed by the provider to restore the service following an incident</td>
<td>4 hours</td>
</tr>
<tr>
<td>Proactive detection of incident</td>
<td>Percentage of incident proactively detected by the provider</td>
<td>80%</td>
</tr>
<tr>
<td>Performance indicators</td>
<td>Transit time (round trip delay)</td>
<td>100 ms</td>
</tr>
<tr>
<td></td>
<td>Packet delivery ratio</td>
<td>99.95%</td>
</tr>
<tr>
<td></td>
<td>Jitter (for high priority traffic only)</td>
<td>10 ms</td>
</tr>
</tbody>
</table>

Table 2: Standard Service Level Agreement

In addition to these standard indicators, several other indicators, highly customized for Koios, are included in the local agreement. Most of these are linked to the installation schedule and the defined project governance. Triton would be financially penalized in the case that it could not install more than 90% of its weekly installation target. In the case of the project governance not being followed, in particular for communication channels, Triton would also be penalized.
2.4 The Supplier: Triton

2.4.1 Company Description

Triton is a global telecommunications network provider that operates in more than 60 countries.

As incumbent operator in a developed country, in which it used to only operate traditional voice services, it has evolved into a complex telecommunications organization that provides a wide variety of products and services, from traditional voice to cutting-edge high definition video conferencing.

Triton has steadily grown in the last decade, generating 2008 revenue of over $30 billion. Its international operations have more than balanced the declining revenue from incumbent activities.

Thanks to the significant market deregulations that occurred in the countries of the European Union and a growth strategy based on acquisitions, Triton was able to increase its footprint in Europe, where it mainly serves public sector organizations and multinationals.

Despite many opportunistic acquisitions followed by successful implementations, this acquisition policy had had poor outcomes in some Western Europe countries. As a result, Triton still had limited operations in these countries and was struggling to gain market shares in very competitive markets.

2.4.2 Service Delivery Organization overview

Triton delivers telecommunications services to its customers through a complex organization and set of processes. The next paragraphs provide an overview of its main delivery principles.

In many cases, Triton's customers are centralizing the needs of their local subsidiaries and are willing to order them as a bulk and to manage them centrally. This meets several of their needs:

- It allows headquarters to control what is ordered for each local subsidiary.
- It increases their bargaining power by increasing the volume to order.
- It simplifies project management on the customer side.
- It allows the definition of standard architectures and products that will be used throughout their organization.

These reasons can help explain why delivering international services means that very often, the country in which a customer orders a service is not the country in which this service will be delivered.
To adapt to such customer needs, Triton has put in place an organization that has capabilities in both the ordering country and the delivering country.

In particular, Triton has organized its delivery organization in a three-part model.

- The Ordering country part, or Buying Edge (BE) entity regroups the sales, delivery and operations teams that will be dealing with customer headquarters. They are usually based in the same country as the customer.

- The Delivering country part, or Supplying Edge (SE) entity regroups the sales, delivery and operations teams that will be dealing with the local subsidiaries of the customer as well as with local providers. They are based in the country where the service will be delivered to the local customers.

- The Global part (Global), regroups all the functions that are managed and performed centrally by Triton. Such functions usually include core network design, capacity planning, product design, marketing and a number of other support functions that do not need to be rooted close to customers.

Customer orders are thus provided by the BE entity, delivered by the SE entity with the support of the Global entity.

Within Triton, each country has resources staffed for each of the BE and SE roles in order to be able to order services for its local customers in another country and to locally deliver services for other countries’ customers.

Several of the roles belonging to these three parts are described in the next section.

### 2.4.3 Roles and Responsibilities

Among Triton’s service delivery organization, some populations had a particularly critical role in implementing the Koios project. These actors were in charge of performing most of the tasks defined by the service delivery processes (cf. 2.4.4 Services Delivery Processes), were significantly impacted by the modifications required to these processes (cf. 2.5.2 Required Modifications to the Delivery Processes), and were concerned by both the outsourcing initiative (cf. 2.5.3 Outsourcing Initiatives) and the systems migration (cf. 2.5.4 Migration to New Systems and Tools).
This is why it is important to understand their exact roles. For each of these populations, the following list provides a description of their roles, major responsibilities and locations.

**BE Project Manager**

- **Responsibility:** The Project Manager is accountable for the whole project and ultimately for customer satisfaction and the project’s financial performance.

- **Roles:**
  - To pilot the delivery project as a whole.
  - To coordinate Triton’s service delivery teams.
  - To ensure all contracted service level agreements are respected (and in particular delivery lead times).
  - To manage communication with the customer (at a management level).
  - To manage project risk.
  - To monitor project financial margin and contribution.

- **Location:** The Project Manager is based in the country where the service will be delivered.

**BE Order Manager; SE Order Manager**

- **Responsibility:** Reporting to the Project Manager, Order Managers are accountable for the whole delivery process for a given group of orders.

- **Roles:**
  - To gather orders from Account Manager and create order forms.
  - To manage communication with customer (at an order or project level).
  - To react to any dysfunction in the delivery process and take reactive measures.
  - To track Order Processors performance.
  - To frequently provide updates to the Project Manager.

- **Location:**
  - The SE Order Manager is based in the country in which the service will be delivered.
  - The BE Order Manager is based in the country in which the service is ordered.
SE Order Processor & Global Order Processor

- Responsibilities: The SE Order Processor is accountable for all local provisioning tasks and the Global Order Processor is accountable for local customer communication and on-site interventions.

- Roles:
  - To update provisioning systems throughout the life of the order.
  - To perform the ordering of required services to local suppliers.
  - To follow-up with local suppliers to ensure outsourced activities are properly and timely delivered or performed.
  - To track orders, ensuring processes are followed.
  - To initiate escalations and follow-up in case of any delay or issue.
  - To manage provisioning and shipment of customer site equipment.
  - To schedule interventions and coordinate the Global Configuration Team.
  - To frequently update Order Managers.

- Location:
  - The Supplier Order Processor is based in the country in which the service will be delivered.
  - The Global Order Processor is a global resource dedicated to the delivering country’s operations, based in Eastern Europe.

SE Order Entry Team

- Responsibility: the Order Entry team is accountable for entering order data in Triton’s systems, ensuring provided data is correct and processes are respected.

- Roles:
  - To perform order entry in systems
  - To follow order status until orders are ready for processing.
  - To monitor progress and regularly update Order Managers.

- Location: The Order Entry Team is mixed: 50% local and 50% global (resources based in Eastern Europe but dedicated to delivering country’s operations).
Global Configuration Team

- Responsibility: the Global Configuration Team is accountable for configuring on-site equipment and ensuring configuration principles and policies are properly respected at any given stage of the delivery.

- Roles:
  - To prepare configurations for all on-site equipment.
  - To perform on-site installation and full service tests.
  - To activate service upon Order Processor request.
  - To follow security guidelines and configuration best practices.

- Location: The Global Configuration Team is a global resource not dedicated to any specific country, based in a low cost economy.

2.4.4 Services Delivery Processes

2.4.4.1 Introduction and Conventions

The following graph shows the major steps involving customer-facing activities through which MLPS services orders over DSL access lines are delivered.

![Graph: MPLS over xDSL delivery process overview]

Each of these steps are detailed in the next paragraphs, but it is important to note that non-customer facing processes, such as network resources allocation, transmission path building or central network configuration, are not described.

The following table explains the conventions used in the process charts that are used to detail each process.
<table>
<thead>
<tr>
<th>Items</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule site intervention</td>
<td>Task to be performed by Triton</td>
</tr>
<tr>
<td>Resolve site issues</td>
<td>Task to be performed by the Customer</td>
</tr>
<tr>
<td>BE OM</td>
<td>Task owner</td>
</tr>
<tr>
<td>CPE provisioned</td>
<td>Need to wait until task is complete</td>
</tr>
<tr>
<td>Internal cabling needed</td>
<td>Task output</td>
</tr>
<tr>
<td>Handover complete</td>
<td>Process global output</td>
</tr>
</tbody>
</table>

Table 3: Convention for standard process charts

2.4.4.2 Order Acceptance & System Entry

The following chart provides an overview of the process in which a customer order is first validated in the country in which the service is due to be installed then at a global level. It is important to note that it is at this stage that postal and geographic addresses, site phone numbers, and on-site customer contact details are checked and validated.

Significant delays are not unusual at this stage. Customers often do not provide correct site information and contact details. Getting accurate information is critical for Triton. In order to provision access lines for the correct locations as well as to quickly liaise with site contacts for the next steps, the supplier has to ensure it has all the required information. In those cases where Triton personal are not be able to check the provided information, orders would are rejected and sent back to the account manager in charge of the customer.
Figure 2: Standard Order Acceptance & System Entry process chart

This process involves various entities within the Triton delivery organization:

- Both BE and SE Order Managers.
- The SE Order Entry Team, in charge of entering details of the order in the different provisioning systems. The SE Order Entry Team is a semi-global team that serves multiple countries and services throughout Triton.
- The Account Manager, in charge of providing accurate ordering information and, in case of issue, in charge of working with the customer on the integrity of its data.

It is also important to note that the ‘Clean order in system’ state officially triggers the service level agreement linked with service installation lead-time.
2.4.4.3 DSL Access Delivery

The DSL Access Delivery chart provides an overview of the different stages in which Triton operates to provision DSL accesses through third party vendors. Like most global telecommunications providers, Triton does not operate its own access network outside of its country of origin. The relationship between Triton and the third party supplier that will provide the access line is entirely managed by the SE Order Processor.

![Diagram](image)

Figure 3: Standard DSL Access Delivery process chart

Depending on the vendors, this relationship will be more or less virtualized due to the use of extranet services. However, given the fact that each vendor has its own order templates and its own set of tools to provision and follow-up the different stages of installation of its services, SE Order Processors tend to specialize and work with no more than one or two vendors each.

While DSL services are considered to be inexpensive solutions, they often require intensive follow-ups. Vendors tend to be late on updating their tools and SE Order Processors have to manually inquire about the status of multiple orders on a daily basis. As a consequence, following-up is very time-consuming and
its efficiency greatly depends on the SE Order Processor’s experience and relationship with key employees of the vendor.

Internal cabling is another crucial aspect of this process. Customers are sometimes using the full capacity of their phone lines (there are not enough copper pairs available to provide the DSL service) or may have local installations that simply require the incumbent operator to create new phone lines. These elements are usually checked at the time of ordering the DSL service but issues do arise often since the systems that a third party can check are not very reliable.

Given all the possible issues that may occur, this process is the most risky in terms of potential delay for an operator like Triton and the role of the SE Order Processor is all the more important to guarantee the respect of contracted lead-times.

2.4.4.4 CPE Delivery
The CPE Delivery process is much more elaborate than the DSL Access one. It involves both the SE Order Processor and the Global Configuration Team. The Global Configuration Team initiates the process by building a standard hardware configuration, directly linked to the needs expressed by the type of service ordered (router model, memory size, interface cards, etc.).

Depending on the type of service the customer will need, the CPE design might require a different set-up in terms of hardware and/or of software. In this case the process is different but its principles remain the same.

Once the configuration is complete, the Global Configuration Team will automatically order the designated CPE. A SE Order Processor will then check the order and confirm it to the equipment manufacturer. Once the device is delivered by the manufacturer, the Global Configuration Team will test it and load a base configuration. This configuration, very different from the full one that will be used to deliver the service to the customer, is designed to enable simple connectivity tests and remote debugging features once installed on customer site. This process ends with the shipment of the CPE to the customer site.

This process does not require advanced configuration knowledge from the Global Configuration Team since the base configuration is only a temporary one. As long as the device that will be installed on site can be remotely controlled there should be no impact for the customer.
2.4.4.5 CPE Installation & Tests

This process is among the most critical. It involves scheduling operations on the customer site, and it is instrumental that it goes smoothly in order not to disrupt the customer’s business.

The intervention is scheduled and led by a Global Order Processor, who will be responsible for the proper dispatching of a technician (SE Field Operations) and will make sure a member of the Global Configuration Team is available during a two-hour time window.

The SE Field Operations technician will start by physically installing the CPE and connecting it to the DSL access line. This technician will also provide any support the Global Configuration Team will need while making tests. In case of failure during the tests, the Global Order Processor has the responsibility to launch an escalation within Triton and to open trouble tickets at the DSL supplier if needed.

During this CPE Installation & Tests process, the Global Configuration Team should have enough expertise to debug most issues without the need to refer the case to his management. This last point is
critical since Global Configuration Team members are shared resources within the Triton organization and are simultaneously involved in five to ten different installations.

Once the full CPE configuration loaded and all required tests completed, the service is nearly ready to be used but will remain deactivated until the Service Activation & Handover step.

2.4.4.6 Service Activation & Handover

The Service Activation & Handover process is the very last step before Triton declares the service “up & running”, and starts billing the customer.
It is the responsibility of the BE Order Manager to liaise with the customer to inform them that the service activation can be scheduled. Once a timeframe is agreed, the BE Order Manager will coordinate a conference call with the customer during which a Global Configuration Team member will activate the service on the customer port of the CPE.

Triton usually performs no additional testing at this stage. However, the BE Order Manager may decide to escalate any issues that may arise or require trouble tickets to be opened and resolved.

2.5 IMPLEMENTATION CHALLENGES
The following sections detail the main implementation challenges faced by Triton in order to deliver the Koios project as previously detailed.

2.5.1 Non-Standard Aspects of the Koios Project
2.5.1.1 Definition and non-standards tiers
The non-standard products or services a telecommunications network provider provides to its client to better meet its needs can have multiple causes: modified product features, customized tools or processes
(for network roll-out, maintenance, information channels, support notifications or service level agreements).

Triton defines five non-standard levels that correspond to the importance of the impacts that delivering and maintaining the non-standard products and services will have on its organization. These impacts can vary upon the revenue generated by the product or service (often linked to the size of the customer network), the extent to which features have to be modified, or standard products or services have to be extended over new geographies.

Triton has a strict hierarchy of non-standard products and services, broken down into the five tiers summarized here.

- **Non-standard tier 1**: a single product/service that deviates from the standard product pricing.

- **Non-standard tier 2**: a single product/service that deviates slightly from the standard product offering for delivery in a single country. Significant deviations on the Network are considered non-standard tier 3.

- **Non-standard tier 3**: multiple products/services that deviate from the standard product offering in terms of either pricing or service. These can be quite complex but will not include the management of people or assets owned by customer or third party - apart from access circuits or Customer Premise Equipment.

- **Non-standard tier 4**: bespoke components - i.e., custom networks, outsourcing and managed services - and any offer involving the management of people or assets owned by customer or third party.

- **Non-standard tier 5**: large transformational bids (above $50M in revenue), which are typically large ICT/Outsourcing type opportunities. These bids could have a potential affect on the Telco’s share price and hence require special attention and Telco managerial input. Tier 4 and Tier 5 are handled in the same way from a process and systems perspective.

The following table provides a more detailed list of the criteria used by Triton to identify the appropriate non-standard tier.
<table>
<thead>
<tr>
<th>Tier Type</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-standard tier 1</td>
<td>Price discount</td>
</tr>
<tr>
<td>Non-standard tier 2</td>
<td>Slight deviation from standard offering in terms of:</td>
</tr>
<tr>
<td></td>
<td>• Volume of product required above deployment forecasts</td>
</tr>
<tr>
<td></td>
<td>• Delivery timescales less than in standard quotes</td>
</tr>
<tr>
<td></td>
<td>• Non-standard Service Level Agreements required</td>
</tr>
<tr>
<td></td>
<td>• Location not included in product catalogue</td>
</tr>
<tr>
<td></td>
<td>Single country delivery</td>
</tr>
<tr>
<td>Non-standard tier 3</td>
<td>Significant deviation from standard offering in terms of:</td>
</tr>
<tr>
<td></td>
<td>• Volume of product required above deployment forecasts</td>
</tr>
<tr>
<td></td>
<td>• Delivery timescales less than in standard quotes</td>
</tr>
<tr>
<td></td>
<td>• Non-standard Service Level Agreements required</td>
</tr>
<tr>
<td></td>
<td>• Location not included in product catalogue</td>
</tr>
<tr>
<td></td>
<td>Modifications required to delivery systems or processes in terms of:</td>
</tr>
<tr>
<td></td>
<td>• Non-standard CPE or CPE configuration</td>
</tr>
<tr>
<td></td>
<td>• Access from non-approved supplier</td>
</tr>
<tr>
<td></td>
<td>• Non-standard Reporting</td>
</tr>
<tr>
<td></td>
<td>Multi country delivery</td>
</tr>
<tr>
<td></td>
<td>Dedicated person required to oversee end to end delivery</td>
</tr>
<tr>
<td>Non-standard tier 4</td>
<td>Third party equipment or service supply</td>
</tr>
<tr>
<td></td>
<td>Customized billing</td>
</tr>
<tr>
<td></td>
<td>Bespoke network monitoring</td>
</tr>
<tr>
<td></td>
<td>Asset transfer / ownership</td>
</tr>
<tr>
<td>Non-standard tier 5</td>
<td>Global Sourcing</td>
</tr>
<tr>
<td></td>
<td>High risk implementation</td>
</tr>
<tr>
<td></td>
<td>Outsourcing of customers existing services</td>
</tr>
<tr>
<td></td>
<td>Requirements in application development, systems design, integration</td>
</tr>
<tr>
<td></td>
<td>People Transfer</td>
</tr>
<tr>
<td></td>
<td>Due Diligence and transition management</td>
</tr>
<tr>
<td></td>
<td>Contract novations</td>
</tr>
<tr>
<td></td>
<td>Management Consulting</td>
</tr>
</tbody>
</table>

Table 4: Triton’s Criteria for non-standard tiers

2.5.1.2 Industry Trend Towards Non-Standard Products

In the last decade, telecommunication providers have significantly broadened their products and services portfolio. From the basic offers of pure bandwidth services – on top of telephony services – they have developed many additional products and services. Technology breakthroughs and evolving customer needs have transformed their offerings to encompass a much larger scope. Hence, typical telecommunication providers will today offer a wide range of products and services.

The below table provides an overview of the scope of their portfolio.
Table 5: Portfolio overview of the main telecommunications service providers

<table>
<thead>
<tr>
<th>Category of service</th>
<th>Typical offers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network services</td>
<td>LAN management, MPLS services, VPN services, broadband supply, satellite links, applications performance management</td>
</tr>
<tr>
<td>Mobility services</td>
<td>mobility management, fixed mobile convergence, secured remote access, mobile e-mail, field force managed services, flexible working services</td>
</tr>
<tr>
<td>IT Services</td>
<td>IT Professional services, Datacentre services, hosting, storage, telehousing, virtualization</td>
</tr>
<tr>
<td>Customer Relationship Management</td>
<td>Contact centers (hosted or premises managed), professional services,</td>
</tr>
<tr>
<td>Security</td>
<td>Network security, authorization / authentication solutions, event monitoring and correlation services, identity management, intrusion detection, Internet security</td>
</tr>
<tr>
<td>Business Continuity</td>
<td>Audit services, integrated business continuity solutions, professional services, crisis management role-play</td>
</tr>
<tr>
<td>Professional Services</td>
<td>Risk and compliance management, IT consulting services, Management Consulting, Governance services</td>
</tr>
<tr>
<td>Industry-specific</td>
<td>Applications management, content delivery, Financial markets services, logistics solutions, wholesale services for other telecommunication providers</td>
</tr>
<tr>
<td>Unified communications</td>
<td>Audio, video and web conferencing, business voice services, IP Telephony solutions</td>
</tr>
</tbody>
</table>

This large scope extension is also triggered by the fact that customers are becoming more and more international, as such telecommunications providers have to deliver their services globally.

2.5.1.3 Non-Standard Level of the Koios Project
The Koios project was considered as non-standard in many aspects. Most of them fell in the non-standard tier 3 as detailed in the table below.
<table>
<thead>
<tr>
<th><strong>Non-standard tier 3 criteria</strong></th>
<th><strong>Required vs standard level</strong></th>
<th><strong>Standard/non-standard</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Roll-out pace</td>
<td>20 vs 1 site per day</td>
<td>Non-standard</td>
</tr>
<tr>
<td>Delivery lead time</td>
<td>10% shorter vs Standard MPLS over DSL lead time</td>
<td>Non-standard</td>
</tr>
<tr>
<td>Service Level Agreements</td>
<td>Customized vs standard</td>
<td>Slightly non-standard</td>
</tr>
<tr>
<td>Sites location</td>
<td>Multiple sites in uncovered industrial zones vs all in sites product catalogue</td>
<td>Non-standard</td>
</tr>
<tr>
<td>Modifications to delivery systems</td>
<td>No modification required</td>
<td>Standard</td>
</tr>
<tr>
<td>Modifications to delivery processes</td>
<td>Extended modifications required (cf. next paragraph)</td>
<td>Non-standard</td>
</tr>
<tr>
<td>Multi country delivery</td>
<td>Single country delivery (France implementation only)</td>
<td>Standard</td>
</tr>
<tr>
<td>Dedicated person required to oversee end to end delivery</td>
<td>Full time project director vs part time project manager</td>
<td>Non-standard</td>
</tr>
</tbody>
</table>

Table 6: Non-standard level of the Koios project

While Triton was used to delivering non-standard tier 3 products and services to many of its customers, the massive volume of site installations, and the extent of the modifications required on its delivery processes by the Koios contract were seen as much more challenging than for any non-standard tier 3 products or services before. Both issues are detailed in the next paragraphs.

### 2.5.2 Required Modifications to the Delivery Processes

#### 2.5.2.1 Order Acceptance & Systems Entry

The Koios contract required this process to be significantly modified. As described in the flow chart below, the major modifications included:

- The account manager will select the sites to be ordered on a given week among the sites inventory, then will inform the customer of which sites shall be ordered.

- There will be no validation of the order on the Triton side. The customer will perform this validation, and is responsible to provide Triton with confirmed site details and local contacts.

- Any issue that might arise will first be checked by the project management entity dedicated to the Koios project (Project Cell), and then will be sent to either the customer or the BE Order Manager in charge depending on the nature of the issue.
2.5.2.2 DSL Access Delivery
The Koios contract required the on-site supplier intervention (to install DSL lines and/or modem) to be scheduled by Triton and notified in advance to Koios.
2.5.2.3 CPE Pre-Delivery

Although the following flowchart looks similar to the CPE Delivery process one, the Koios contract required a very significant change from the standard process.

Not only was communication to be centralized - as for the other provisioning steps - but the most significant modification was that CPEs could not be shipped to customer sites. Koios offices are usually very small and Koios headquarters considered that a box containing a CPE would be too big to be stored in a closet. It would have to remain in the office until the CPE would be installed, and it would be very visible to candidates until then. Offices need to remain professional and thus CPEs had to be carried onto the site only at time of installation.
2.5.2.4 CPE Installation & Tests
Following the modifications required to the CPE delivery process, the CPE installation process had to be modified accordingly. The Field Operations would arrive on the Koios premises with the CPE, instead of finding it already delivered to the site.

On the communications side, the Project Cell would perform the schedule of the on-site installation and notify Koios in advance. Another important aspect was that Koios required on-site installations to last a maximum of one hour. Installation operations usually disturb the business of Koios offices given the small space available. Koios was willing to limit the impact of any preparatory on-site intervention on offices' daily business, and this 1-hour timeframe was a reasonable compromise.
2.5.2.5 Service Activation & Handover

As detailed below, the Koisos contract also required significant modifications to the Service Activation & Handover process.

- Communication would have to be managed by the Triton Project Cell instead of the BE Order Manager in charge of the order. Service activation was scheduled with the agreement of the Koisos global management and notified to the Koisos site contact by Koisos representatives and not by Triton.

- Customer tests would also be performed by the local contact. They would involve simple queries on remote databases, Internet access, file transfers, email sending and receiving and several other Koisos customized applications. In the case of a failure, a Global Configuration Team member would be available to provide any required support.
• The Service Activation & Handover process was limited to a 1.5-hour time window for the same reason as for the CPE Installation & Test process. This was particularly significant for Triton since the time needed for completing customer tests may vary from one site to another. In cases where the 1.5-hour timeframe would not be met, service would be deactivated and another intervention would be scheduled, outside of business hours to avoid service disruption.

![Modified Service Acceptance & Handover process chart](image)

Figure 11: Modified Service Acceptance & Handover process chart

2.5.3 Outsourcing Initiatives

2.5.3.1 Outsourcing as a Competitive Advantage

As a provider of global solutions to its customers, Triton is always looking for opportunities to build and retain competitive advantages. It is with this goal in mind that Triton identified that a more flexible, adaptable, skilled and structured workforce would be an asset for the firm.
Prior to signing the Koios contract, Triton launched a company-wide outsourcing program aiming at improving its service delivery, while providing the firm with economic benefits, generated both by significant cost reductions, as well as economies of scale.

This program consisted of sourcing some non-customer facing, repetitive tasks, in lower cost economies. It created several centers of expertise in which knowledge and know-how associated with the outsourced activities would be concentrated.

By completing this program Triton aimed to reduce its costs by reducing its headcount in developed countries. Concentrating knowledge and know-how in a few key locations would ensure knowledge was global and easily available to the different countries in which Triton operated. Managing the whole delivery process in countries where Triton only has limited operations is both complex and costly. Very often, the in-country organizations in such markets have poor understanding of the Triton processes and systems. Results generally show significant lower levels of quality of service and customer satisfaction than in Triton’s larger markets.

Economies of scale and improved efficiency should also be achieved. The center of expertise model would provide better tools for accelerated processes and systems learning, quickened understanding and application of changes in the delivery processes.

On top of these benefits, Triton would rely on more global, flexible and adaptable resources. By standardizing more and more processes, resources allocated to a specific country would be able to be dispatched to other projects, under very short notice, with very little need to adapt to a new delivery environment.

These various aspects were at the core of Triton’s outsourcing strategy. Relying on such centers of expertise would support Triton in better meeting the needs of its current and future international customers.

2.5.3.2 Outsourcing Implementation Plan
Triton was willing to follow an aggressive schedule in order to limit the transition period as much as possible.
Prior to announcing the outsourcing initiative to its employees, Triton built partnerships with a number of actors in the selected countries and signed long-term contracts with major outsourcing actors.

The implementation plan consisted of the seven consecutive steps that are detailed in the following table. It aimed reduce the current SE Order Entry Team headcount by 100% and the current SE Order Processors by 80% in the course of 26 weeks.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1: Data collection</td>
<td>Current order entry data is collected and generic process description performed</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Phase 2: Analysis of country specifics</td>
<td>Description of process gaps (manual processes or supplier relationships held in local languages, deviations from standard processes, etc.)</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Phase 3: Training build</td>
<td>Build of training packages for country specifics (process gaps from phase 2, cultural aspects, existing customers, suppliers, local regulations, etc.)</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Phase 4: Training performed</td>
<td>New Global resources follow training on standard processes, tools and systems as well as on country specifics</td>
<td>12 weeks</td>
</tr>
<tr>
<td>Phase 5: Parallel trial</td>
<td>New resources perform fake activities on real data Actual activities are still performed by SE teams</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Phase 6: Transition</td>
<td>Progressive transition from SE teams to new Global resources</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Phase 7: Go-live</td>
<td>Transition completed, SE teams dismantled</td>
<td></td>
</tr>
</tbody>
</table>

Table 7: Triton’s outsourcing implementation plan

Each country had a similar implementation plan. However, all countries would not have similar schedules for the transition and go-live phases. Countries with the least complex specifics would be implemented first. As it turned out, the delivering country of the Koios project would be among the last to transition.
2.5.4 Migration to New Systems and Tools

Triton aims to use cutting edge tools and systems. In most of the countries in which it operates, Triton is progressively switching from using legacy systems and tools that were designed and implemented only locally to standardized solutions, globally designed and implemented.

The benefit for Triton will be improved flexibility of its workforce and more reliable and manageable IT environment. Employees trained on the global systems and tools can more easily be dispatched to another country. Training for legacy, country specific systems and tools will no longer be necessary.

The migration from legacy country systems to group wide solutions was an ongoing process in various countries and scheduled to happen in the Koios delivering country at the same time as the outsourcing initiative. It was decided that only global teams would be trained on the new systems and tools. Teams that were to be dismantled as a result of the outsourcing initiative would not benefit from such training.

2.5.5 Lack of Alignment in Job Descriptions and Turnover

The roles and responsibilities of project managers, order managers and order processors, as previously detailed, are defined by the Human Resources organization, at the group level. The content of the associated job descriptions reflects a global understanding of operations, and this does not always take into account potential deviations due to some country specific issues.

In the Koios delivering country, the actual tasks performed by Order Managers and Project Managers were not properly aligned with their job description. This was mainly due to a lack of training and to an extensive use of short-term temporary resources to staff the Order Processor positions. The productivity of the in-country Order Processors was thus lower than average in the group and well below management expectations. As headcount was fixed, based on activity forecasts, no additional Order Processors could be hired. Order Managers had to constantly support the Order Processors in their work. Such support was very time consuming, and their job shifted progressively from mini-project management to the less interesting role of Order Processors.

As a first consequence, motivation among Order Managers was low and the turnover rate in their population increased significantly. As a second consequence, Order Managers had to get more support from Project Managers to handle the mini-project management that they had less time to do. A similar dynamic applied here, as Project Managers saw their job partially shifting to the Order Manager role. Motivation among the Project Manager population dropped and many of them tended to quit to join competitors.
2.6 CHAPTER SUMMARY

This chapter, organized as a case study, started by describing a customer, Koios, a supplier, Triton and the service that they agreed on by contract. The first parts focused on detailing the specificities of the customer needs and the implied modifications to the provider’s delivery processes.

This chapter also put an emphasis on the central role of some particular populations among Triton’s service delivery organization by describing their roles and responsibilities.

Finally, this chapter ends by describing some of the challenges that Triton was facing while implementing the Koios project. In addition to having to deal with a large non-standard project, these populations in charge of its delivery were concerned by initiatives and projects that may disturb their activities (an outsourcing initiative and a migration of systems and tools), and were experiencing an increasing turnover.

The next chapter will focus on analyzing these challenges, assessing their individual and combined impacts on Triton’s organization. Finally it will provide suppliers such as Triton with recommendations that should complement the best practices available in the literature.
3. ANALYSIS & RECOMMENDATIONS

3.1 INTRODUCTION

This chapter focuses on analyzing the challenges described in the previous parts and provides recommendations that Triton could follow to be better prepared when facing similar situations or challenges.

This chapter begins with a discussion on the impacts that the modifications to the service delivery processes had on the delivery teams. The direct impacts, which were mostly understood by Triton, are described as well as the indirect impacts, which were largely neglected. It then provides an analysis of the impact that the very large volume of orders had on the service delivery organization and of the challenges it raised on the workload of various teams. Finally, it details the problems raised by the outsourcing analysis, and in particular, those raised by coupling the outsourcing initiative with the systems migration project.

In each part, the recommendations provided in this chapter are based both on the insight obtained in various interviews and on the outcome of the analysis of the challenges Triton faced.

3.2 IMPACT OF MODIFICATIONS TO THE DELIVERY PROCESS

3.2.1 Direct Impact of Each Modified Process

The modifications required to the standard delivery processes would have a significant impact on various aspects of Triton’s organization. For each of the delivery processes previously detailed, an assessment of the likely impact is provided.

- Order Acceptance & System Entry: The ‘Clean Order’ status would not exist anymore. Systems would have to be bypassed and more importantly, standard processes that have been implemented, accepted and followed by the Triton Service Delivery teams would be modified. To ensure this would go smoothly and not disturb the rest of its business, Triton will have to communicate this change very clearly and indicate the limited perimeter to which it would apply.

- DSL Access Delivery: Notifying Koios in advance of the schedule of the on-site supplier intervention was a significant requirement for Triton. DSL providers usually inform their wholesale customers only once their service is delivered and running on their customer premises. Triton would have to develop a very close relationship with its DSL suppliers. At the time of this case, Triton was considering using the DSL services of several DSL providers, including some
with which no prior business had been made. The effort required by this modification would need to be multiplied by the number of DSL providers involved in the Koios project.

- **CPE Delivery:** This constraint required by the Koios project was significant for Triton, which would now have to modify its logistics organization in order to store CPEs in the regional Field Operations sites. As Field Operations tend to be third parties, Triton would be forced to amend its contracts on a case-by-case basis to enable such storage on third party locations.

- **CPE Installation & Tests:** The 1-hour timeframe required for installing the CPE and running the tests on the customer locations was difficult for Triton. In particular, it required the Global Configuration Team member in charge of the operation to be dedicated to this installation instead of sharing time between various installations.

- **Service Activation & Handover:** The impact on Triton’s service delivery organization would, once again, be significant. Not only would Order Managers have to fulfill the new process but also the Global Configuration Team would have to deal with customer testing. Providing assistance to end-users in order to ensure customized applications are running smoothly requires additional skills and is risky. Issues that may arise on the site’s local network – outside of Triton’s perimeter of responsibility – may lead to complex situations. In particular, in the case of sites with old and obsolete local network infrastructure this could represent a very time consuming activity.

### 3.2.2 Indirect or Global Impacts

Modifying the delivery processes would not only impact local delivery teams (SE or BE teams) but also global entities. Implementing the necessary changes to adapt the processes would require coordinated actions with global teams and would be smoothly performed if properly planned and organized. The challenges presented below were much more challenging for Triton than initially forecasted.

- **Cost Control issues:** Costs associated with these changes (addition of resources, outsourcing of new services, etc.) have to be controlled and limited to a reasonable and forecasted level to ensure the project profitability can be achieved. Given the extent of the modifications required by the contract, it is very likely that cost control would be a real challenge for Triton.

- **Disruption of business as usual:** Triton would have to make it very clear to its service delivery employees that the perimeter of the modified processes was strictly limited to the Koios project.
This would prevent any confusion between standard and modified processes for other customer projects.

- **Buy-in of Global teams:** Various global teams, and in particular the Global Configuration team, would be significantly impacted. Getting their buy-in first then supporting them would be instrumental. Even though Koios was a strategic customer for the delivering country, the forecasted revenue was not as significant at the group level and, global, non customer-facing entities could resist a change driven by the needs of a relatively small customer. Convincing the management of these global teams to dedicate additional resources to the Koios project would be challenging, as their productivity (measured in number of installations, number of service activations per day, etc.) would be threatened by the additional and non standard work required by the scope of the Koios contract.

### 3.2.3 Recommendations

#### 3.2.3.1 Adding Flexibility in the Delivery Processes

A key recommendation would be to add flexibility in the delivery process when required by customers. In order to do so, Triton should run an audit of the delivery processes to identify the most rigid and painful for either customers or delivery teams during implementation. Ideally this audit should be run on the whole delivery processes but as a first step, a quick survey among the service delivery employees could provide interesting insights into the areas that may be targeted as a priority. Once key rigid processes are identified, a few alternatives for each should be designed. For each, different scenarios would be developed, such as an “expedite process” to gain time, a “customer involved process” when additional interactions with customer representatives are required or a “customer free process”, as required for Koios site validation, when customers require not to be contacted. Each of these alternative processes should be documented, tested and available for future use.

A quick win would have been to consider the processes modified for the Koios project as already tested alternatives to standard processes, and to allow them to be more broadly used within the organization. In the case of Triton, once the Koios project completed, this solution was forgotten. Most of the employees that worked on the Koios project left the company as a result of the outsourcing initiative and the knowledge that was acquired by the delivery teams, by designing and using these customized processes, was lost. Triton could build on such experiences to better understand the needs of its customers and better meet their needs by delivering its services in a more customized fashion.
3.2.3.2 Anticipating Processes Modifications

Triton would benefit from involving service delivery representatives in the bidding and contracting processes. Providing sales teams with feedback from the operations side would bring significant value, especially for products and services that are considered non-standard. In the case of the Koios project, only limited attention was given to the non-standard aspects of the project, as technologies and products defined in the solution design were considered obviously standard elements.

This would reduce the extent to which contract requirements would be unrealistic, and lead to large implementation issues. It would also allow the service delivery teams to better understand the impact that the required changes may have on their organization and allow them to anticipate some preparatory actions (e.g., addendums to third party contracts, development of new partnership, etc.).

3.3 IMPACT OF THE UNUSUAL VOLUME OF ORDERS

It is important to note that Triton had always had limited operations in the delivering country of the Koios project. Most of its customers are international companies that own several sites per country and consequently, Triton’s deployment activities remained limited. The graphs provided below show the impact that the volume of the Koios project would have on its current and forecasted business.

3.3.1 Impact on Order Entry Activities

In the delivering country, Triton’s customers are currently ordering between 35 and 60 new sites every week. This amount is supposed to increase slowly, independently from the Koios project.
The SE Order Entry Team based both locally and in Eastern Europe is specially trained and staffed to order services that respect the specifics of the local market (dedicated suppliers, special regulations and customer habits). The Koios project would triple their workload during the three months in which orders would have to be entered in the different systems. The order entry team would have to handle this workload by both working extra hours and recruiting and training temporary members either from Triton’s organization or from outside.

### 3.3.2 Impact on On-Going Orders

The volume of orders that is usually processed in the delivering country of the Koios project remains relatively constant, at around 400. The different teams (Order Managers, SE Order Processors, Global Configuration Team) are staffed in order to be able to manage the workload generated by these 400 on-going orders. They can usually handle more – since additional resources from global teams can be made quickly available. Triton assesses that its service delivery organizations can currently handle up to 600 simultaneous on-going orders. As shown in the next chart, the workload forecast for both Triton’s business as usual and the Koios project is well above this threshold.
As a consequence, Triton would have to recruit and train a significant number of additional resources for a limited period of 20 weeks. To do this, Triton faced two major challenges:

- The usual learning period for a service delivery professional varies between three and six months. Triton would only have three months to recruit and train temporary resources.
- Triton should ensure its business as usual would not be impacted by the Koios project. Delivering its services with high quality was critical to its current and future reputation.

### 3.3.3 Recommendations

#### 3.3.3.1 Improving Workload Forecasts

As previously explained, increasing the involvement of service delivery teams in the selling process would be instrumental in dealing successfully with large volume projects. It would allow Triton to build its workload forecasts earlier. As a consequence training and recruiting could be anticipated so that teams would be properly staffed and fully trained when a peak of activity was to be absorbed.

#### 3.3.3.2 Retaining Skilled Resources

Even though it seems in contradiction with the outsourcing initiative, Triton should investigate opportunities to retain a part of the additional resources that need to be recruited and trained. Keeping a
pool of skilled resources that would provide local support to global teams on an on-demand mode could be an asset for Triton. Keeping in-house flexible and knowledgeable resources would support the delivery teams in dealing with sales teams to build more precise workload forecasts, improving delivery processes, interacting with local customers, etc.

3.4 CHALLENGES RAISED BY THE OUTSOURCING INITIATIVE

3.4.1 Immediate Impact on the Delivery Teams

Depending on their role, resources within the delivery organization would be impacted very differently. The below list summarizes the extent of the impact for each category.

- **SE Order Entry Team**
  - Headcount Reduction: 100%
  - Activity fully outsourced.

- **SE Order Processors**
  - Headcount Reduction: 80%
  - Activity nearly outsourced.
  - The most senior SE Order Processors would temporarily remain to deal with legacy technologies, country specifics and to be designed strategic partnerships with suppliers.
  - The role of SE Order Processor would progressively disappear thanks to future standardization projects.

- **Order Managers**
  - No direct impact.
  - Massive indirect impact.
  - New communication processes and working habits with the new Order Processors would have to be built. Triton’s Countries organizations assessed that Order Managers would have a 25 to 100% increase in workload, at constant perimeter, for three to six months. This workload would be generated by the fact that all new resources would be trained but would only have limited experience when taking over the roles of Order Processors.

- **Project Managers**
  - No direct impact.
  - Significant indirect impact.
Project Managers would have to deal with overloaded Order Managers and will have to support them by performing tasks that are not within their role. In order to fulfill the lead times they are committed to, they would have no alternative to significantly deviate from their role.

3.4.2 Indirect Impact and Potential Consequences

If the benefits of this outsourcing initiative are obvious, the risks and challenges Triton will face are substantial. The following list provides a summary of the most significant ones.

- Current and future customer implementations might be delayed or even jeopardized if the transition does not go smoothly, causing a risk on revenue.

- Distracted attitude at corporate level: Triton as an organization involved in a large transformation project will concentrate a large part of its efforts internally. It could therefore lose focus on its customers and markets, leading to potential misunderstandings of industry trends, and evolving customer needs. This could ultimately result in missed business opportunities and loss of existing business to competition.

- Engagement of directly impacted employees: In most Western Europe countries, Triton would have to announce contract terminations weeks if not months before the transition begins. Impacted resources would likely lose focus and motivation, resulting in low quality work. Some employees might leave as they find another position even before their contracts are terminated. This could result in serious operational difficulties until the transition phase is complete.

- Engagement of indirectly impacted employees: As their workload increases dramatically during a period of time difficult to forecast, Order Managers are likely to deliver lower quality work with the risk of not meeting the service level agreements contracted with customers. Project Managers, having to go beyond their roles, are not likely to appreciate performing tasks usually done by Order Managers. On top of this additional workload, the non-intellectual aspect of these extra tasks will clearly raise motivation issues from them as well. Turnover may increase as the best people could leave for competitors offering them a job more in line with their expectations.

- Media coverage: In Western Europe, populations poorly perceive outsourcing a service business to lower cost economies. Media coverage could put Triton’s image and reputation at risk.
• Future quality of service: The new Global resource, being geographically far from the customers they serve might miss some of the key unsaid and undocumented needs that were served by the former SE teams, leading to a loss in added valued perceived by the customers.

3.4.3 Coupling Outsourcing and Systems Migration

As previously detailed, the project aimed at migrating legacy country systems and tools to a global solution, on which only the teams identified to take over the newly outsourced activities would be trained, brings an additional level of complexity.

The decision to not organize any training on this new solution for the current in-country teams has a direct consequence. It links the outsourcing initiative and the systems migration project. Their successes are now intertwined. The failure of one of the initiatives would lead to the failure of the other one. Whereas the decision to not train in-country teams on the new solution may make economic sense, it prevents the organization from relying on them in case the outsourcing initiative experiences delays. Similarly, the global outsourced teams would have no training on legacy systems and tools, preventing Triton from temporarily relying on them when still using legacy systems and tools.

The risk associated with the coupling of both projects was not identified in the initial risk assessments. It is clear that Triton ran serious due diligences for each of these projects, analyzing risks at both organization and country levels. However, these studies were done in stand-alone modes, as interactions between projects were not considered. This might be explained by the fact that the teams leading the two projects (an IT sub-organization of Triton for the systems and tools migrations and a Human Resource task force for the outsourcing initiative) were not aware of the other project at the time of scheduling their initial implementation plans. The decision to train or not to train in-country teams was taken later, at a mid-management level, with little risk re-assessment. This had severe consequences for Triton. Many customer orders were delayed, due both to the lack of experience of the new global team and to unforeseen implementation issues of the new global solution. The on-going order backlog increased dramatically, preventing Triton from meeting its commitments in terms of delivery delays.

To fix the numerous issues that arose, emergency training sessions for in-country teams were performed. The parallel trial and transition phases (phases 5 and 6 of the outsourcing initiative) were extended from a total of 8 weeks to more than 5 months. As a consequence, Triton had to deal with significant unexpected cost (financial penalties to many customers because of commitment violation, non-forecasted salaries of in-country teams and additional training costs). This cost prevented Triton from reaching the profitability targets of its outsourcing initiative and damaged its image.
3.4.4 Recommendations

3.4.4.1 Considering Outsourcing as an Operational Asset

Despite the way the Outsourcing initiative was managed by Triton, it was clear, at the time of implementing that this huge transformation was more than simply a pure cost saving initiative, and instead it was supposed to help create an asset on which the organization would build to develop a competitive advantage. The flexible workforce provided by the future Centers of Excellence was still to be proven. It is likely that it would be obtain at a later stage, but at the time of the Koios project, it only had a negative impact on Triton’s business and quality of service.

Triton should consider this initiative as a new way of making business and in particular, a new way of delivering its services. Triton should not deny the fact that the markets in which it delivers its products and services have significant differences. Not only the customers are different but also the way delivery is to be performed is different.

Telecommunications services and products, even when they seem standard, should always be considered as customized solutions. The rules that can apply for consumer goods or electronics products cannot fully apply in this context. Neglecting this aspect will often result in inefficient partnerships, unsatisfied customers, frustrated employees and non-profitable contracts.

In today’s global economy, outsourcing some activities is an economic necessity. In Triton’s case, as previously detailed, a limited team of very knowledgeable resources, highly flexible should remain local. This team would be formed by the local “champions” and would perfectly complement the more standardized tasks performed by the outsourced teams. Finding this ideal balance between in-house and outsourced activities is the challenge that Triton will be facing as the technologies, markets and customers evolve.

3.4.4.2 Managing Risk Globally

The issues caused by the lack of risk assessment of coupling projects could be identified and avoided if risk was managed more globally. Triton should rely on more robust cross-organization risk management practices. This could be achieved by either putting in place a new risk management system or by improving the existing one.

Sponsorship from top management should be visible to all stakeholders. Anyone should consider risk management as a support and not as an administrative burden. In the case of the Koios project, the
outsourcing initiative and the systems migration, it was clear that most stakeholders were only considering risk management as another administrative task.

3.4.4.3 Aligning Positions to Job Descriptions
Order Managers and Project Manager urgently need their actual job to be in line with what they can expect from it. As previously detailed, the current situation prevents them from being engaged and the resulting lack of motivation leads them to leave the company.

Triton should launch a broad project that would clarify what are the tasks that should and should not be performed by each category of employees. A transition period will obviously be required, to avoid disturbing the current activity, and some addition recruiting might as well be needed.

Some populations will also require training to develop some of the skills that are required for their job. Surprisingly, most Order Managers are missing some key skills required by their job description. In particular, many of them cannot micro manage small projects. In order to make savings on salaries, Triton often hired people whose skills were slightly below expectations.

3.5 Chapter Summary
This chapter provided a detailed analysis of the challenges that Triton faced while implementing the Koios project.

First, this chapter described the impact of the modifications to the service delivery processes on the various teams involved in the project implementation. To better deal with similar projects in the future, Triton should add more flexibility in its delivery processes and should work on better anticipating the workload of these teams.

This chapter also analyzed the impact of the large volume of orders that the Koios project generated. This analysis was followed by two main recommendations. Triton should improve its forecasting tools to better handle peaks of activity and should try to retain skilled resources locally to ensure more efficient implementations.

Finally, this chapter outlined the impact of simultaneous initiatives and projects. Coupling an outsourcing initiative with a large systems migration had a significant impact that Triton underestimated. To achieve better outcomes, Triton should consider outsourcing as an operational asset, manage risk more globally across the organization, and better align positions to associated job descriptions.
4. CONCLUSION

By completing the Koios project, Triton was aiming to be considered the new domestic provider in the Koios delivering country. For most of the actors of the industry, this target was not reached.

In retrospect, the efforts made by Triton’s teams were ineffective. Most of the knowledge learned by the organization vanished. Teams were dismantled, employees laid-off. It is not clear if the little experience that still remains in the organization, following this project, could be a solid basis on which Triton could build.

The knowledge, expertise and methodology that Triton could have acquired from this experience should have help develop its credibility in this local market.

Triton faced several major challenges: It had to deliver its services in a very unusual manner. Adapting its delivery processes to meet the needs of its customer required tremendous efforts from teams that were feeling threatened by the outsourcing initiative. The resulting drop in motivation and the fact that many employees were lacking key skills contributed to a poor handling of the situation. On top of that, the exceptional volume of orders that these teams had to deal with in a very short period of time created an unmanageable situation.

Triton lost control when an additional level of complexity appeared. The handover of some delivery activities to the outsourcing teams in conjunction with a mismanaged migration of systems and tools led to paralysis of the delivery organization.

Several recommendations were identified in this document that could help telecommunications providers prevent such crisis from happening. In particular, the most significant lessons learned from this case study include: Adding flexibility to delivery processes, anticipating needs and constraints in modifying these processes, better managing risk, and using outsourcing to create value as opposed to cost reduction vehicles.