

# DATA CENTER CONSOLIDATION

FOR THE TELECOM INDUSTRY

WHITE PAPER



# Executive summary

Wave after wave of innovation, acquisitions, mergers and de-mergers in the telecommunications industry during the last fifteen years have left service providers with a complex array of systems and technologies that are expensive to run and difficult to manage. As a result, reducing complexity and driving costs down have become key features of most corporate IT business plans.



Nowhere manifests the results of extensive IT change more clearly than the Data Center and therefore, there is no better place to start with an IT cost reduction program than Data Center Consolidation.

Atos Origin has a comprehensive and well-proven four-stage approach to Data Center Consolidation that delivers the following key benefits through leveraging economies of scale:

- > Reduces Data Center operating costs;
- > Improves business effectiveness through the concentration of Data Center operational best practice, creating centers of excellence;
- > Provides a stable, flexible and well managed Data Center environment that is aligned with the business strategy and ready for future growth and innovation;

The resulting Data Centers are leaner, more flexible and easier to run in addition to being, typically, at least 10 percent more cost-effective to operate even before application, server, storage and network consolidation options have been explored. Return on Capital Investment (ROCI) is typically realized within one year.

However, there are a number of issues that can arise that prevent organizations from realizing the full business benefits of Data Center Consolidation. These include:

- > A technology-led project that is not fully aligned with the business plans. Without solid and continuous benefits tracking activities taking place throughout a Data Center Consolidation program, it is easy for activities to become overly focused on the complexities of the execution and lose sight of the overall business objectives;
- > An absence of the skills and experience required to relocate large numbers of important and sometimes business critical systems;
- > Failure to plan properly. Relocating systems is an immensely complex operation so attention to logistical details can mean the success or ruin of the project;

Atos Origin's four stage program offers a proven and mature approach to Data Center Consolidation that mitigates these risks. Based on our extensive global experience, we have a comprehensive collection of processes, move histories and tools used by our Data Center practitioners, ensuring that every aspect of the project is considered and all issues are addressed.

In our own Data Centers, Atos Origin Managed Operations operates thousands of systems that we have consolidated from numerous client-based locations across Europe and the world. As a systems integrator with strong original equipment manufacturer (OEM) vendor relationships, we ensure objectivity in the choice of systems and technologies employed in the Data Center. This makes certain that the resulting infrastructure meets exactly with your business requirements today and for the future. And through Atos KPMG

The final result is a Data Center environment that is efficient, effectively managed, aligned with the business strategy and ready for future growth and innovation.

Our comprehensive approach draws on the experience of both Atos Origin and Atos KPMG Consulting.



Consulting, we bring skills and extensive experience in the areas of large complex IT program management, process engineering, management consulting and benefits realization.

A wide variety of firms are already taking advantage of the many business benefits that Atos Origin's unique Consolidation solutions offer. These firms include: Akzo Nobel, Brakes Bros, British Coal, DSM, ICI, KPN, Lucent Technologies, Phillips, Uniq and Virgin Mobile.

#### **What is Datacenter Consolidation ?**

Data Center Consolidation is the process of leveraging economies of scale and reducing the number of Data Centers. The number of Data Centers used by an organization should be as low as possible without compromising requirements for capacity, resilience and disaster recovery.

Sometimes, there is enough capacity within the existing Data Centers to consolidate the activities of Data Centers to be discontinued. However, in many cases, existing facilities need to be extended and occasionally, entirely new facilities have to be acquired.

Data Center Consolidation addresses the flexibility and management of an organization's Data Centers by examining all technology, physical, logical and environmental aspects.

#### **What can Data Center Consolidation do for your business?**

Firstly, Data Center Consolidation significantly reduces Data Center operating costs. It can typically recover 10 percent of operating costs.

In many cases, Data Center Consolidation is the start of a wider cost reduction and environment simplification exercise that also considers:

- > Server and Storage Consolidation;
- > Network Cost Reduction;
- > Application and Process Rationalization.

Many telecommunications organizations have large numbers of old servers and storage devices that could be replaced by smaller numbers of newer, high capacity devices that are cheaper to manage. Data Center Consolidation provides a suitable opportunity to restructure wide area networks in a way that is simple and easy to manage in a new Data Center structure and offers the occasion to renegotiate and consolidate contracts with network service providers.

Infrastructure platforms often swell when there has been an accelerated approach to the delivery of applications. Through application and associated business process consolidation Data Center capacity requirements can be significantly reduced. More importantly, business agility can be increased through rapid transfer and deployment of new services between operating companies, resulting in improved top-line revenue growth.

Through the concentration of Data Center operational best practices, Data Center Consolidation considerably improves business effectiveness. The more Data Centers you



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operate, the greater the risk of inconsistent levels of best practice. This is particularly true after mergers and acquisition activity when new Data Centers are often acquired. Greater effectiveness in the Data Centers translates into greater agility in the delivery of systems and services - a key differentiator in the telecommunications industry.

Data Center Consolidation frees up existing office space to accommodate future growth of the business without increasing operational cost for property. It also provides a rare occasion to undertake business continuity planning and disaster recovery processes testing in a relatively safe environment.

The final result is a Data Center environment that is efficient, effectively managed, aligned with the business strategy and ready for future growth and innovation.

### Issues in implementing Data Center Consolidation

Failure to employ rigorous change control precautions can have serious consequences on the success of the project. Typically, every Data Center has in place a change control procedure. This procedure comprises a set of processes that manages how changes are made to the Data Center environment. The Data Center Consolidation program must be fully integrated with all of these change control processes and aware of any "change freeze" periods. For example, Christmas time is often such a period for mobile telecommunications companies, in particular.

A technology-led project that does not ensure correct alignment with business plans may not include critical benefits tracking. Without solid benefits tracking activities, it is too easy for Data Center Consolidation solutions to become overly focused on the complexities of the execution and become misaligned with the overall business objectives.

Atos Origin's Data Center Consolidation practitioners have particular experience in this area. The constant focus of the benefits tracking personnel on recovering real business benefits acts as a strong focusing force on the program team as a whole.

Inadequate planning of the project can also ruin its chances of success, attention to detail is vital. Covering all logistical aspects of the project is especially important. You should look at building access; transport used; effects of geographical borders and so on. Atos Origin has a comprehensive collection of processes and tools used by our Data Center practitioners that cover all these issues.

It is also important to fully engage the equipment vendors used in the Data Center. In a number of cases, these manufacturers have to be informed of the planned move and may need to be involved in the relocation. Atos Origin has strong relationships with all the major vendors and is used to drawing them together to form a single team that is focused on the overall goal.

Likewise, good client business sponsorship for the project is also essential. Best practice is to find an internal sponsor who understands the implications and issues of Data Center Consolidation and the potential benefits it can bring to the business. The internal sponsor should be engaged from the very beginning, as of the mobilization phase. However, to achieve the full benefits of Data Center Consolidation, the entire organization should support the Data Center Consolidation solution; the internal sponsor can help ensure that this happens. Data Center Consolidation affects all systems within the organization making governance a hugely sensitive issue and a potential obstacle to acceptance of the project. The existence of an internal sponsor can again make acceptance a much smoother process.

For minimum disruption of service and systems, Data Center Consolidation should be carried out in the least possible timeframe. By executing Data Center Consolidation in as short a period of time as is sensible, operational risk can be minimized and costs saved. This requires a Data Center Consolidation services partner who has the ability to operate with speed and agility and who is assertive. Atos Origin is such a partner.

As a systems integrator with strong original equipment manufacturer (OEM) vendor relationships, we ensure objectivity in the choice of systems and technologies employed in the Data Center.

### Atos Origin's approach to Data Center Consolidation

Successful Data Center Consolidation takes a process-oriented approach in which the Atos Origin project team joins the client firm at a certain juncture; performs the consolidation and then moves out with minimal business impact.

Atos Origin offers an extremely mature and proven approach to Data Center Consolidation. Based on our vast experience with Data Center Consolidation projects for global firms, we have developed a number of comprehensive processes that help mitigate all potential business risks. We have also created technical move tools and processes used by our Data Center practitioners ensuring that every aspect of the project is considered and addressed. In addition we have created an every evolving library of histories that describe in detail experience with removal of different types of equipment.

Our comprehensive approach draws on the experience of both Atos Origin and KPMG Consulting. In our own Data Centers, Atos Origin Managed Operations operates thousands of systems that we have consolidated from numerous client-based locations across Europe and the world. As such, we already have proven track record of Data Center management, systems operations and systems relocations. From the KPMG Consulting legacy, we bring skills and extensive experience in the areas of large complex IT program management, process engineering, management consulting and benefits realization. We are particularly renowned for our stakeholder management skills and benefits tracking practices –a key part of any Data Center Consolidation solution.

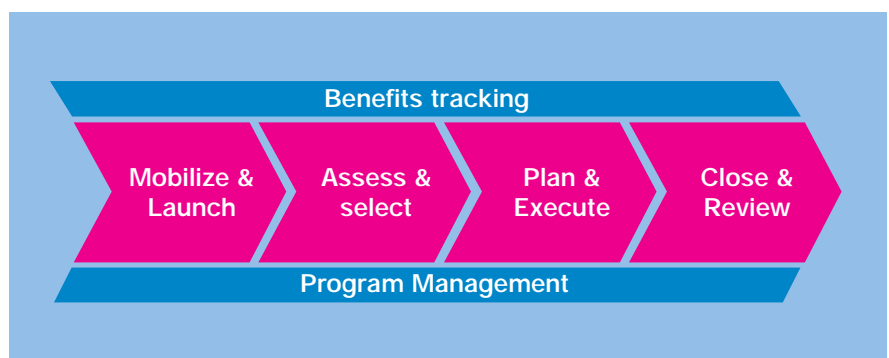
As well as a solid team, Atos Origin also enjoys strong vendor relationships. We do not actually manufacture Data Center equipment; however, we work closely with Compaq HP, EMC, IBM, Microsoft, Sun Microsystems and many others. Through these well managed relationships we provide an objectivity of service, ensuring that the equipment in your Data Center is the best suited to meet your individual requirements.

Atos Origin's Data Center Consolidation solution comprises four consecutive phases:

#### > The Mobilize and Launch Phase

It is vital to create a strong foundation for the Data Center Consolidation program. The Consolidation team is created, the project management office (PMO) set up and all key stakeholders and third party suppliers are engaged. Solid change control and active stakeholder management are essential to Data Center Consolidation success, given the constant flux within the typical Data Center environment in the telecommunications industry. Following this, a project charter is created and the program management plans are drawn up.

For larger programs, developing and starting the team "on-boarding" process is important, especially, as most teams will consist of staff from Atos Origin, client personnel (sometimes from many different countries) and representatives from a number of different third-party suppliers and contractors.



Atos Origin's four stage program offers a proven and mature approach to Data Center Consolidation.



Once a strong foundation is in place, the program can be formally launched to a wider audience within the client organization.

> **The Assess and Select Phase**

During the assessment, the current (or 'as is') status of the Data Center is recorded; examining technology, processes, organizational structures, contracts and costs that exist around all the existing Data Centers. A key aspect of the Atos Origin approach is the categorization of the services being delivered out of the Data Centers in terms of business criticality, as it is vital to determine for how long a system can be off-line for. For some key systems used in the telecommunications industry, zero downtime may well be a requirement.

The assessment of people, processes and procedures allows the identification of the best practice users, whilst assessment of the current costs is conducted such that a baseline for the benefits tracking process can be established.

In addition to the current status of the Data Center, the client's future requirements are also calculated. The PMO gathers information about business strategy, service and delivery strategy, business continuity requirements and the organization's acquisition and merger strategy. It looks too at the number of new systems currently in the delivery pipeline. Based on these factors, an estimation of the future capacity and spatial requirements for the Data Center can be made and planned for.

A Data Center Consolidation strategy is then formed and a number of high-level options for the future Data Center configuration are chosen. For each key option, a high level implementation plan and sufficient costs are produced so that the option selection process can be completed in close partnership with key stakeholders.

At this stage, other options for cost reduction can also be considered. For many organizations, significant benefits could be gained from application/process rationalization, server and storage consolidation or Network Cost Reduction. It often becomes evident that either due to a merger or acquisition or simply by adding new systems over time, the Data Center is operating using a jumble of networks or myriad of old servers that could be replaced by a small number of more modern ones. This might suggest that some technologies should not be relocated at all but sold, with the applications that run on them relocated to new technologies in the new location.

The last part of this phase is the production of a standard business case for the preferred options so that the client can secure the funds necessary for more detailed planning and execution.

> **The Plan and Execute Phase**

Based on the assessed business criticality of each system and device, a plan of execution is developed.

Work packages are identified for the movement of systems with a similar level of business criticalness. There are usually three or four different categories of system availability requirement. By breaking the overall activity down, a specific migration plan can be formed for each work package and 'quick wins' can be identified. Business availability requirements must have the greatest influence on how the move is carried out to gain maximum benefit.

For most telecommunications firms, there are some systems that simply cannot be offline for any significant amount of time. These include some provisioning and mediation systems, billing systems, voucher authorization systems and switches. For these extremely business critical systems, more advanced relocation techniques, such as a 'swing kit' must be used. Here, additional kit is put into operation at the destination site, which runs an exact replica of the system being relocated, including all data. The system will be 'failed over' from the original kit to the swing kit whilst the original is physically relocated. Once the original kit is up and running again in its new location, the system can be 'failed back' and the swing kit recycled for the next move. For many organizations, this is also a great opportunity to test their all-important disaster recovery plans. The execution of a Data Center Consolidation is generally best carried out in the shortest period of time possible to minimize costs and disruption. It is typical that several, location-based work streams will be set up around the target Data Centers, ready to receive systems coming in from other locations. In many cases, Data Centers may have to be extended and in some cases, a new Data Center must be built. Because of the Data Centers Atos Origin own and run in many different countries, we have partnerships with building, facilities and networking sub-contractors that can be engaged for the physical works if the client does not have existing, preferred arrangements.

Full back-out planning is a key feature of the Atos Origin process for Data Center Consolidation. On the rare occasion that a move cannot be fully completed, the existence of a back out plan becomes essential so that 'roll back' can occur. If an eight hour time period has been allowed for a system to be off-line then often, the move must be completed within as little as four hours, to allow time for a full system roll-back, should it be necessary. This is a small fact that is often missed without proper planning by experienced practitioners.

#### **The Close and Review Phase**

Were benefits realized? Were costs recovered? Exactly what benefits were gained and the amount of cost recovered is determined and reported back to the client. Following this, there is a controlled close down of the project teams.

#### **Why Atos Origin?**

Based on our extensive global experience, we have a comprehensive collection of processes and tools used by our Data Center practitioners, ensuring that every aspect of the project is considered and all potential issues are addressed. We also have an ever-evolving library of move histories that encapsulates our practitioners' experience in relocating many different types of system.

A wide variety of firms are already taking advantage of the many business benefits that Atos Origin's unique Consolidation solutions offer. These firms include: Akzo Nobel, Brakes Bros, British Coal, DSM, ICI, KPN, Lucent Technologies, Phillips, Uniq and Virgin Mobile.

For more information visit the company website at [www.atosorigin.com](http://www.atosorigin.com), email: [more-info@atosorigin.com](mailto:more-info@atosorigin.com) or contact:

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We are particularly renowned for our stakeholder management skills and benefits tracking practices – a key part of any Data Center Consolidation solution.

