

You're listening to Consultants' Roundtable, a special edition podcast brought to you by HP Services. Today's episode, hosted by Dana Gardner, focuses on IT Consolidation; strategies to apply and manage IT more efficiently.

Dana Gardner: Hi, this is Dana Gardner, principal analyst at Interarbor Solutions, and you're listening to a sponsored BriefingsDirect podcast. Today, a discussion about IT Consolidation, taking a distributed, geographically dispersed set of datacenters or application infrastructures and bringing them into a more rational approach -- to get more for less, in less places, with less labor and less total cost. The goal is to eventually take this consolidation effort to a strategic level and move to a full-service infrastructure and allocate IT resources efficiently and with more flexibility.

We are joined today by two executives from Hewlett-Packard's Consulting and Integration Group: Ewald Comhaire, director of the global practice for Infrastructure Services, as well as Peg Ofstead, worldwide solution lead for HP IT Shared Services and IT Consolidation Services. Welcome to the show, Ewald and Peg.

Ewald Comhaire: Thank you.

Gardner: Let's address the rationales for IT Consolidation. Does this vary from site to site, from enterprise to enterprise? Is this a highly individualized approach? How do we implement IT Consolidation? Are there some uber trends driving this? Let's start with you, Peg.

Peg Ofstead: The desire to consolidate differs from company to company. Our best practice is to first clearly discuss the objectives of the organization. Cost has been a driver for many years. There are other issues that drive people to consolidation. For example, some people run out of space in their datacenters; others have issues with power or cooling that cause them to replace their technologies.

For others, it's a case of simplifying; they just have too many data centers, too many different kinds of technologies, too many redundant applications. They want to simplify their environment. Ewald, do you have some other thoughts?

Comhaire: Yes, there is definitely the cost element, and doing more with less is important to every customer. We have been doing this for 10 years. We see customers with more balance between these cost elements as well as improving the quality of the services they deliver and how fast can they turn around the request from the business.

Reducing risk by reducing issues with security, or improving business continuity and availability of the solution is a large objective we see across the industry. Each customer is unique, but we see these drivers most of the time.

Gardner: Obviously economics and cost issues are big drivers for this, but it wouldn't be possible without a certain level of technology innovation and capability. You need to be able to consolidate by managing the complexity of the hardware and the networks. Can you give us some history of IT Consolidation and explain what it is technically that is allowing this to be accomplished now?

Comhaire: I'll be happy to start. When we look back 10 years ago, most of it was driven by the capabilities of the infrastructure. As you consolidate you need better processes, you need to manage consolidated infrastructure, and that adds complexity. Do your tools, your systems, your software, your operating system have the capability to really consolidate on a technological level?

Fewer customers are worried about whether the technology can do it. Other factors are now driving the need for consolidation. Customers are looking at a functional level, consolidating not around the technology, but around functions being offered to the business, using that as a central element, with the technology following the service.

We have seen an evolution of what customers take as a primary centerpiece for consolidation. It has moved off technology and more to a functional type of consolidation. Peg, anything you would like to add?

Ofstead: Also, people are consolidating datacenters because telecommunications is so much cheaper and better now. In the past, they couldn't because of latency and

other issues. On the technology side, especially in the Microsoft Windows environment, the virtualization technology now allows people to be more aggressive in that space.

Gardner: The network is now able to support this consolidated effort. This also has to do with the shift that the Web has brought in terms of centralized applications and browser-based interfaces. Over the last 10 years there has been a significant shift to Web-type applications. Portal applications with browser interfaces have also been an accelerant to this move to IT Consolidation. Do you agree with that?

Comhaire: Absolutely. Where it has really helped is with datacenter consolidation. Because of the lightweight graphical user interface (GUI) that these Web-based applications provide, you no longer need to have all the servers -- or at least part of your application architecture -- located close to the end users.

With the latencies and improvement in networking, you can now do what HP, for example, is doing with its own datacenters: co-locate them in one location of the world and still have good response time for all their users. It would be much more difficult if you have a complex client/server architecture, and the need to move a large amount of data to different parts of the application. It would be very tough to do, and this definitely helps.

We also have "lights-out" management where management capabilities are done remotely, 24x7, in different parts of the world. There are countries in Eastern Europe, the Middle East, China, and India where you have some capable resources that can do remote management, but you would not typically put your datacenters in those physical locations. Datacenter consolidation enables you to utilize the capabilities in remote management areas when your datacenter could be in a place like the HP datacenter in Houston, Texas. Consolidation has helped with this management significantly.

Gardner: Your expertise, your people, can be in one location -- but the physical plant can be in another. You can look for a lower cost of real estate, energy, and safety, when the plant is away from high-risk areas. These all play into the IT decision making about IT consolidation?

Comhaire: Absolutely.

Ofstead: That is exactly what we're seeing.

Gardner: Now that we have discussed how the Web has changed the nature of applications, and the technology from the network perspective has given us the freedom to decide location -- do we see anything on the horizon that will change this even more? Are there other factors that make the decision-process around consolidation change again? Are there convergence or virtualization issues?

Ofstead: We can assume technology will continue to improve. Look at the cost of storage today, for example. People forget it's not just about technology.

One of the key factors to keep in mind when you're consolidating is the human factor. We discussed being very clear in your objectives. It is important that your stakeholders buy-in on your objectives, and that includes your line-of-business partners. There could be issues like the line-of-business may own the datacenters, or may own the servers that you're trying to consolidate. Their buy-in is crucial to your ability to successfully consolidate.

There is also a buy-in of your IT staff, many of whom can be impacted during consolidation. If you are eliminating legacy technologies, it may mean they need to be re-skilled, or if you are closing datacenters, it may mean a larger impact to their jobs. It is very important to consider the human factors and the governance issues related to consolidation that go beyond technology.

Gardner: Obviously this is not a trivial, fly-by-the-seat-of-your-pants decision process. We have issues around ownership and a culture of control and the cost of real estate in terms of applications, and around how to rationalize data itself within a data structure. How do companies begin to approach this "hairball" of interrelated dependencies and complexities once they have begun to take IT Consolidation seriously?

Ofstead: Ten years ago, we were seeing the consolidation of UNIX servers. The largest companies we worked with were telcos, and they often had hundreds or thousands of UNIX servers and were consolidating those. Companies in all industries have been basically doing server consolidation and storage consolidation for many years now.

In the past few years, they have tackled the harder things. Rationalizing the application and information portfolios is much harder work. We saw very little of that five years ago, but it is more prevalent today. We are seeing more datacenter consolidation and relocation of datacenters as people consider issues like Sarbanes-Oxley, which especially impacts the financial institutions.

Gardner: We have also seen waves of consolidation at higher business levels between mergers and acquisitions, particularly in telecom and a number of other industries. I think that would also bring into play massive infrastructure redundancy that needs to be addressed.

Ofstead: Absolutely. Companies that have already gone through a consolidation acquire a firm and suddenly they have twice as many datacenters as they need. They have an overlapping application portfolio, so this is an ongoing process for many firms.

Gardner: Ewald, can you give us a rundown of the methodological decision process? Large enterprises, regardless of their situation, are facing this complex proposition. What needs to be considered? How do you approach this from a professional services perspective?

Comhaire: The first thing we do is start with the strategy and analysis phase. In this phase, we conduct a workshop to clearly define the business goals with the customer. We bring in our 10 years of consolidation experience. We help customers to think broadly, not just in terms of servers, but about the number of workplaces they have, whether we can do workplace or remote office consolidations, their networks, and their higher-end services like data warehouses.

We provide a pretty broad view. We help to pin down the customer on key matrices around the success of the project. What is in scope, what is not in scope, and how this IT consolidation aligns with the business. We work with the IT parts as well as making a link with the business, and use it as a starting point for the project.

We then do a rapid opportunity analysis for the domains that are good candidates. We are looking for a good return on investment (ROI) for the customer on a high level without doing a detailed analysis.

We then do an inventory and discovery. Many customers have an idea of what they have, but not enough to do a real ROI or total cost of ownership (TCO) calculation. We provide some agentless discovery tools that show the workloads as well as the assets there -- how well the equipment is utilized, what workloads are compatible or can be consolidated with other workloads, and how many databases are there -- so we understand by function what is used today and what are some of the possible economies of scale. This is typically done in the first phase.

Gardner: It sounds like you need to step back and look at what you actually have, and then what you want to have, functionally, going forward, and then to try to reconcile the two.

Comhaire: Yes, that is important because these projects typically take quite some time, and a consolidation project is never done. We are always looking at the next thing we can improve on. At some point you need to have closure on a certain part of the project.

Phase two is the architect and validate phase. Then you can think about a high-level architecture for the desired date. We now know the objective of the customer, we know the "as is" state through the discovery, and we can now do a high-level design for the desired state.

At the same time we are validating the ROI model. If there are cost-reduction objectives, and the customer wants to have those in hard numbers, we can do a full ROI analysis and be confident that we can get the ROI that the customer was expecting. That's pretty much our second phase in the consolidation methodology.

Gardner: I have to assume that we're starting to tinker with some mission-critical applications and there is some concern about the continuity and risk of disruption. On one hand the company would ask, "Are we going to have downtime? Are we going to have interruptions? Will this be seamless to our end users, both inside our organization and our customers outside?" How do you address the issue of confidence? How do you guarantee this is not going to be a disruptive activity?

Comhaire: Great question. Our third phase is the detail design and planning phase. Here we do the real planning of the implementation and all these things are addressed in the detailed level design. For example, if we have a datacenter relocation, what methodology are we using to move to data consolidation?

These design criteria have an impact on the downtime for the business, and this is where all the expertise comes in around migration of data and applications. We also make sure that the target environment -- as it's being designed to handle multiple coherence and co-located workloads -- is bringing the availability up and not down, which is an inherent risk of consolidation.

We have to write a business continuity design so that the desired state has much more tolerance against disasters than the existing state. We know in phase number three that there is a positive business case. We are then allowed to go to a level of detail that is very much implementation-oriented.

In the second phase, we typically want to do the minimal design to guarantee that the project will have a good ROI, so we don't go down to this level of detail. But in the third phase we do to make sure we get the trust and the minimum interruption for the business through the right choice of design methodology.

Gardner: Peg, on this notion of risk reduction, do you feel confident enough in doing this many times that you can almost, and perhaps actually, guarantee continuity? Do you go in and say, "As part of our contract we have our own agreement of certain levels of service," and do you go to the bank with that and say, "We're going to make sure your businesses continue?"

Ofstead: Absolutely. That is part of what we do with consolidations because we are working with mission-critical workloads. In every region, we've worked with clients that have been in those situations.

Comhaire: We also have a very strong mission-critical support that's been highly rated by Gartner year after year. That is really a true differentiator for us in those large consolidation projects because we can give the customer the assurance that we can manage their consolidated workloads at the levels of availability required.

Gardner: This is an issue where failure is not an option.

Comhaire: Exactly.

Gardner: Also on this notion of business continuity, companies are dealing with a separate area of risk: Where to locate for disaster scenarios -- whether they're weather-related, disruptions from energy problems, or perhaps even war and terrorism issues. It seems that companies need to take that into consideration as well now.

When they think about IT Consolidation, are they also thinking about the ability to maintain business continuity, regardless of external threats?

Ofstead: Absolutely.

Comhaire: Absolutely. Yes, Peg.

Ofstead: When we do datacenter consolidation, even if the company had a wonderful business continuity plan and could execute it well, you essentially break that when you change the datacenter. You have to start over and state the business continuity plan. That is very important. We're seeing some institutions, especially financial ones, moving the datacenters to safer locations because of Sarbanes-Oxley implications.

Comhaire: It sometimes does trigger some finer discussions with the customer, because most would expect that with a consolidation, including cost reduction, that

they can also get the whole business continuity and disaster recoverability free of charge as part of the consolidation project.

Sometimes we have to stress that this is really an added functionality. While the pure consolidation project will return a significant amount of savings, there may have to be some investments kicked in as well to address the business continuity element.

Gardner: Perhaps when you embark on this journey -- to kill two birds with one stone -- you look at your ROI/TCO issues from a consolidation perspective, but also look very carefully to your business continuity issues in terms of safety, reliability, and disaster-prevention or -recoveries?

Comhaire: Yes, if you look at eight out of 10 of our success stories, and you look at the advantages that the customers cited after HP helped them implement the consolidation project, almost everywhere you will find better performance, better availability, and better disaster recovery -- meaning that in eight out of 10 projects it is addressed effectively with the customers.

Gardner: We've mentioned regulatory issues a few times, particularly Sarbanes-Oxley in the United States. Help me understand the implications here. How does a regulatory imperative affect the decision making, and even perhaps spur on these IT consolidation activities?

Ofstead: Sarbanes-Oxley has some regulations that specify the availability requirements for financial institutions, and how quickly they must recover certain transactions. That happens when they are audited. That is why the financial institutions are looking for more secure datacenters and more robust disaster-recovery capabilities. Europe is in a similar situation with the Basel II regulations.

Gardner: Anything to add to that, Ewald?

Comhaire: We have software that helps customers meet regulations like compliance with standards, specifically on the IT side. We have tools in the HP OpenView portfolio with respect to software distribution. We can control exactly what needs to be running on servers and desktops.

There are some interesting offerings that we have on that phase, but they are second to the main objectives of a consolidation project. We have not seen many projects that are driven by regulations. It is typically an element of a consolidation project, rather than the main driver for it.

Gardner: We have looked at the business case and rationale for doing this, and at the history of why the technologies and network resources allow this to happen. We've looked at some of the tangential implications around people, process, and business recovery regulation.

Let's talk about the payoffs. We have seen some publicized information around HP's own multi-year approach to consolidation and significant reduction of total costs. Do you have any metrics or case studies or anecdotes that will give people a sense of the magnitude of the shift to benefits here?

Ofstead: Obviously the payoff is going to depend on how diverse your IT environment is to start with. If you had multiple acquisitions, as HP has, there are more payoffs because there is more to clean up. Large companies that have not yet consolidated their servers can probably get a 25 percent to 40 percent TCO savings around those server farms and their storage.

You get real savings in the applications phase. Far beyond TCO savings, you get business benefits. For example, HP is going to a single data warehouse, consolidating over 700 data marts. The business benefit of having a single source of data and consistent information about our customers and our orders is that we have huge ramifications that go way beyond just IT savings for a corporation.

Comhaire: Also, the cost model that we use is a simple one. It can be well understood by the customers as well as HP.

We use four primary dimensions. One is cost and what we can do on cost saving and cost avoidance. Avoidance is an increasingly important element. The second is the quality of service. Did we improve the quality of the services that were delivered to the business? That has some business value as well. The third, are we able to do

things faster, turn around the request of the business in a faster way, deploy things faster, put changes into place faster.

The final one is have we reduced, in general, the risk position of the customer, whether it's against security, or intrusion at the level of compliancy, or at the level of continuous operation and disaster recoverability. We're putting value on whether we reduced the risk with the customer.

There are some great anecdotes. We have had some large-scale consolidations where, obviously, we go application-by-application and then find that these applications need to be recompiled, that the customer has lost the source code. This was a risk that the customer did not realize before they did the consolidation project.

Now we realize there are some applications where we are at risk because we no longer have the source code, and we were able to reverse and re-engineer that, and get back to a solid code base so they can move forward. We now better understand the risk, we measured it, and we are also able to handle some of the implications of that so that is no longer an issue. It's an anecdote, but it happens more than you would think.

A customer has said they had 500 servers when they did the whole analysis. It turns out they had close to 1000, and they were surprised there was such a big difference between what they believed they had and what they really had. So the whole ROI model was actually changed overnight based on that discovery.

Gardner: I suppose that this process does unearth these various cans of worms, but in doing so, you've got a much more coordinated, managed, professional inventoried approach to your code and your assets. You can move forward with a strategic approach to IT rather than a piecemeal or ad hoc approach.

Comhaire: That is often underestimated as a benefit. It is difficult to say in a customer discussion that as part of the consolidation exercise we will clean up some of these legacy things that you may not realize have built up over the years. It is difficult to say up front, but often when customers look back, that is a major achievement in the project.

The nice benefit of it is they now have a good handle on their assets, the workload they have, the issues that were uncovered and are now clearly on the table and have been resolved. They have a much better foundation to build on for the future.

Gardner: Perhaps this is a difficult and cathartic process, but with recurring dividends over time. I suppose that IT Consolidation will now impact such trends as virtualization and service oriented architecture (SOA), where it will make tremendous economic sense to have a full-service infrastructure approach.

If you're going to consolidate, you're going to want this infrastructure to support legacy, distributed Web, and a variety of different types of application sets, depending on your vertical industry. Is it too much of a pie-in-the-sky notion that we can have a single -- or at least a significantly reduced -- number of infrastructure approaches to support a variety of business processes, business activities, and applications?

These days with the impact of virtualization, with increased use of open standards, with increased use of open source, are we finally at a point where we won't have monolithic approaches to a variety of applications, but perhaps more of a horizontal, rationalized infrastructure to support more and more types of business activities?

Ofstead: Certainly consolidation is the opportunity for folks to move to a real strategic platform view. While they're cutting costs, they have the opportunity to really move to new technologies and virtualization. For example, we're seeing a lot of people using Linux. One of the great things about that is not only are you able to clean up your environment, but you are actually able to move it forward to new strategies. Ewald?

Comhaire: Absolutely, Peg. The simplification of the environment is one of our key objectives, and typically we do that by standardizing on less different types of equipment. We also do that by bringing virtualization, which allows us to better share the same equipment between multiple workloads so we don't need as many assets, which again is a simplification element -- but also significant to cost reduction.

We also simplify things like the IT management processes and tools, and we have a significant set of services around IT optimization and IT service management that can help simplify the environment. All these technologies like virtualization, automation, and optimized service deployment are significant enablers for consolidation.

Gardner: So we're not just talking about consolidation in terms of physical consolidation, a location, and numbers of services -- we're talking about a consolidated datacenter approach that functionally consolidates IT?

Comhaire: Absolutely. That's how we've evolved the thinking on consolidation, and it is also why today we call it "IT" consolidation, not just "server" consolidation. We have evolved over time to a more holistic approach of people, process, and technology. As Peg was saying before, we are significantly looking at the roles of the people.

We're looking at the processes that are being executed to see if they can be simplified, streamlined, and organized according to industry standards or best practices. Finally, we do the technology part of consolidation exercise, we look at standardization and virtualization of the infrastructure components, and make those work together with less things like configurations of applications. All of these are standardized and provide the value back to the business.

Gardner: This strikes me as not just a high economic impact, but as absolutely necessary ingredients as companies move toward total IT transformation. Because the payoff is a 25 percent to 40 percent reduction in total cost, you set yourself up for an agile multipurpose platform, and are reactive both to your legacy as well as to new types of application approaches, such as SOA.

This is really not an option. If your competitors are going about this and you are not, you will be at a significant disadvantage.

Ofstead: Absolutely. That is why so many companies are moving aggressively toward consolidation. Certainly after emerging acquisitions such as the one HP has had. The

more we can do to clean up our applications and make ourselves more cost competitive, the better we will do.

Gardner: Great. Well, thanks very much. I think we'll need to wrap it up now.

We have been talking about IT Consolidation, its strategic, economic, and future-proofing imperatives. Joining us for this sponsored BriefingsDirect podcast has been Ewald Comhaire, the director of the Global Practice for Infrastructure Services at HP, and Peg Ofstead, worldwide solution lead for HP's IT Shared Services and IT Consolidation Services.

Thanks very much for joining us today. I think this has been an eye-opening discussion for me, and I hope for our listeners, too.

Ofstead: Thanks, Dana.

Comhaire: Thanks.

This has been Consultants' Roundtable, a special edition podcast brought to you by HP Services. Thanks to Dana Gardner of Interarbor Solutions for conducting the interview and supplying the podcast. For HP Services, this is Fred Bals

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