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Harnessing the genius of digital in utilities

How you can work with both S/4HANA and LEONARDO to achieve digital transformation and compete in a complex utilities sector

Introduction

Leonardo da Vinci is known as both an artist and a technological visionary. His interests were amazingly broad, and one of them was how to harness the forces of nature to generate power.

The global utilities industry faces multiple challenges: managing pressure on revenues while dealing with the increasing demands of consumers who are both technologically conscious and empowered. Of course, there are ever more stringent regulatory demands that span sustainability, the need to boost energy from renewables, as well as strategic security concerns across power grids.

Utilities need to do more for less. Electricity consumption is falling across the EU and the USA, and there's a rise in new entrants across all energy markets. New challengers have been emboldened and facilitated by emerging technologies. It's not much easer to set up in competition with the traditional players. That has had an affect not only on prices, but on consumer perception of established suppliers. Switching between suppliers is becoming much more prevalent. The genie is out the bottle: switching won't stop happening anytime soon.

Consumers are also getting used to new ways to interact with their supplier via digital technologies: smart meters, smart home apps, and even their smart phones. Customer engagement has been digitalized. That, in turn, means that customer service is a key concern for utilities. Bad service – especially when it comes to fixing supply problems – can create an immediate social media storm that undermines both the reputation of the utility concerned, and its share price.

So, customers need to be engaged digitally. At the same time the complex and widespread assets of a utility company must be managed expertly. Not only to ensure that capital expenditure is balanced with operational expenditure, but also to yield as much value from their optimal usage. Predictive maintenance is important; it protects supply (which also helps regulatory compliance) and ensures that consumers don't experience outages. IoT, AI, and machine learning are swiftly becoming useful tools to achieve all of these things. They can also contribute to the need to deliver financial optimization. And another key issue is grid management, especially as more and more supply comes from renewable sources. How can you make your grid smart and robust as well as flexible?

Digital can enable utilities to be positive. They can

engage with customers more deeply, and leverage their entire networks and scale in ways that were just not possible before. So, what are the roles of S/4HANA and LEONARDO in achieving those goals? One sounds very technical and the other creative. The first helps you deliver Robust IT in a simple and highly manageable and transparent way. The other delivers Fast IT to deliver agile innovation and creativity. The point of this Guide is to help you understand how they can work together. And enabling them to work together is key to delivering a successful digital transformation for your entire business.

We asked our experts to stay away from the technical aspects of both solutions and to focus on how you, as someone keen to enable digital across your organization to achieve specific business outcomes, should approach the deployment of both solutions, with optimism. Are they mutually exclusive, or can they complement each other? How must you deploy them? Can you do it on your own? If you need help, what kind of help do you need?

Our resident optimists are:

Benedikt Wenzel
Head of SAP Commerce & Analytics,
Fujitsu Germany

Thomas Baus
Manager of Business Unit Architectures,
Fujitsu Germany

Michael Straub
SAP Propositions Manager,
Fujitsu EMEIA

Javier Fernandez
SAP Business Development Director,
Fujitsu Spain

Smart utilities need the right digital tools

The smart utility needs to achieve high levels of planning across its energy network and the ability to gather and analyse data for insights which deliver efficiencies and improvements. A digital core which acts as the foundation for all processes is key. S/4HANA, for instance, can help monitor and ensure quality at every stage of the process, saving human time and freeing people to focus on innovation as well as maintaining the integrity of supply. The ability to defend your business from new entrants or ever more demanding regulations is founded on creative thinking.

Smart utilities need the right digital tools

"All businesses need to be innovative," says Michael Straub. "That's obvious. But, creativity can only thrive in a well-run enterprise which gets the basics right, and that's what SAP has traditionally been able to deliver."

Utilities must stay ahead of the digital curve. S/4HANA and LEONARDO are key elements in achieving that goal. The guidance in this Insight Guide will help you understand how you can apply their digital benefits to your operations, and ensure that you can achieve a truly connected utility by accelerating your digital transformation.

Javier Fernandez agrees, but sees problems in selling that vision to some organizations: "I guess, we have to remember that the change to S/4HANA has been seen, by many, as disruptive. It's something that SAP customers feel that they are going to have to do, eventually. I try and steer the conversation to speeding up the thinking process to a more holistic view. Many are considering their options, but not very deeply or fast as yet. And some aren't even considering it at all!"

"That holistic view you mentioned is the point," says Michael. "You could argue that S/4HANA, if it's thought about as an individual solution, forces people to take a narrow view of what it can do. It's an element in digital transformation, but isn't

the entire solution. The launch of LEONARDO changes all that. Suddenly, the picture is complete." Michael smiles, then adds, "It's as if the Mona Lisa finally got her enigmatic smile."

"Good image," says Benedikt, "LEONARDO adds all the exciting things to the SAP portfolio. The kind of things that customers expect from digital transformation. AI, machine learning, the Internet of Things, Big Data Analytics. The kind of things that can not only transform a business internally, but make a big difference to ways of working, business models, new product development, customer engagement and so on. The things that drive revenue and brand growth."

Thomas Baus argues for a pragmatic approach to the subject, he is suspicious of the hype around digital transformation: "We've heard a lot about its potential and less about how you actually – as an organization – get the knowledge and insights you need out of all the databases. And how you ensure that business processes and workflows can be digitalized so that they're totally responsive and agile. The customers I talk to transform the

efficiency of their back office processes, and they also want to improve the usability of their SAP applications. Now that's a big responsibility for SAP.

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Michael Straub

All four experts agree that we're on the threshold of a new era. In fact, it's the kind of threshold that leading thinkers, Erik Brynjolfsson and Andrew McAfee, believe is taking us into what they call, 'The Second Machine Age.' Computers and other digital advances are [boosting] our ability to use our brains to understand and shape our environments"[1].

They argue that digital tools are augmenting our mental powers in the same way that steam power multiplied the power of human muscle back at the dawn of the First Industrial Revolution. "Mental power is as important for progress and development– for mastering our physical and intellectual environment to get things done – as physical power. So, a vast and unprecedented boost to mental power should be a great boost to humanity, just as the earlier boosts to physical power so clearly was."[2] Steam was replaced by electricity which is now yielding to intelligence.

"That's exactly the point," says Michael, "Digital transformation is about supporting the mental power of the people in your organization to innovate and then have access to the tools to do it fast. LEONARDO enables you to do that – especially with its 'accelerators' which can get an idea out there very quickly to see if it works and has traction within a marketplace."

Benedikt agrees; "The new functionality of both S/4HANA and LEONARDO is impressive. The fact that you can have real-time control and analysis as well

as forging the framework for harnessing the latest digital techniques and create design thinking methodologies is very valuable."

Javier adds; "But, we have to remember that adopting both S/4HANA and LEONARDO can seem like a big, disruptive change. The experience we've all had out there proves that very clearly. Change is always disruptive and that makes people nervous – when you transform the way they work. But it's a great opportunity. That's how we need to see it – as a business opportunity.

And the opportunity is the fact that S/4HANA offers the ability to simplify user experience, architecture and processes within a utility. Those elements need to be simplified because if you don't do it, your competitors will. As we've mentioned, the days of almost monopolistic utility operations are gone. The increase in competition – driven by both government and market demand as well as digitalization – means that consumers have more choice than ever before. The pressure to find new sources of energy, especially from renewables, and achieve stringent sustainability targets, has fragmented the sector and could actually increase complexity. And complexity is bad for any business, big or small.

[1] Erick Brynjolfsson & Andrew McAfee: The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies 2014 – Norton.

[2] IBID

Smart utilities: Digital energy at the core of your business

S/4HANA's focus on enabling you to run a simple, operationally sound, business is vital. It, for instance, helps you engage with customers better by ensuring that agents in contact centres, the primary nexus of engagement with consumers, have all the information they need to resolve a caller's issues and send out the right kind of help from a field agent in timely and efficient way.

S/4HANA delivers that operational excellence not just over the phone, but over any communications channel, and any device. Field agents and workers have the right resources and information to get work done quickly and right first time. That protects supply, reduces complains due to outages, and enables resources to be utilized to their full potential.

Smart utilities: Digital energy at the core of your business

The utilities sector is on the verge of a revolution, and it's one that will be driven by digital technologies. The need for innovation and creativity across the sector has never been more urgent. As we've stressed already, competition, regulation, security and sustainability are driving change at a very fast pace. It's vital that every utility business works to keep ahead of the digital curve to survive.

"We're not here to praise or critique S/4HANA," says Thomas, "It's a reality. As a business, you can either embrace it or resist it. I believe it should be embraced because it does make the potential of Big Data and digital transformation more real, and more urgent."

"It's a very simple equation," says Michael, "S/4HANA can run your business. LEONARDO enables it to innovate."

"I guess it's all about looking at what your enterprise is for," says Benedikt. "It does not exist just to carry out functions, it exists to move forward, create new opportunities, and respond to what customers want and need. You have to be able to do both in parallel. But the best enterprises are able to link the two, so they support each other. SAP has created the means by which you can do it. It's a strategic opportunity in my opinion."

"The fact that you can take what were separate databases and make them talk to each other, means that you can be in a better position to unlock the knowledge that's in the data," says Michael. "But S/4HANA means you have to change the way you work. The most important change is that you have to involve the users from the very beginning. You can't just deploy and then tell them, 'Here you go, get on with it.' It has to be a cross-functional process that involves everyone."

"And the same is true with LEONARDO," adds Benedikt, "But it's important to trust the machines; to trust that they will deliver more efficiency as well as high quality – not just in process functions, but in real world decision making. I think there is a lack of trust, and that is slowing down adoption of S/4HANA mostly... and maybe the release of LEONARDO is just too much for some people to understand all at once."

"We see customers hesitating to update to S/4HANA, that's true," says Michael. "But, I tell them that LEONARDO changes the picture. It completes the picture, like I said before. So, this is an opportunity to create a more rounded, detailed roadmap. You have both robust and fast IT catered for."

"They worry about the need for developers to create the API's," interjects Javier, "That makes them wary about moving forward."

"We can bring in the developers," says Michael. "I don't think many enterprises will be doing all of this alone. We are in an era where the ecosystem is what supports the enterprise, and Fujitsu has the people and the systems to support not only the creation of a sound roadmap, but to implement it step-by-step too."

"Perhaps we're still focusing on the benefits of S/4HANA and LEONARDO too much," cautions Javier, "We're not SAP salesmen!" Everyone laughs. "Definitely not," says Thomas, "But we have to enable our customers to unlock the strategic benefits that they represent."

"Benefits that won't be unlocked if the solutions are siloed," cautions Benedikt. "Siloes slow you down. If you see the entire SAP offering as one thing – a combined solution that can enable you to achieve ALL your objectives, then you will be in good shape to deliver digital transformation."

Trust your machines and they will enable your people

The point is to make the most of Artificial Intelligence, machine learning, IoT, data analytics and robotics. It also could mean leveraging the emerging power of the Blockchain, not just to help organize the business, but also ensure secure transactions across functions as well as partners.

SAP's LEONARDO brings those technologies together so that you can put them to creative use in a simply and straight forward way. And it also makes full use of the cloud to yield benefits in terms of simplicity and cost reduction. You can set up and manage your smart grid, oversee a wide range of assets, connect buildings and real estate, and oversee regulatory compliance as well as risk mitigation.

Trust your machines and they will enable your people

"So, let's be clear about what the risks and challenges are," says Thomas. "Start with the challenge every organization has to face: the migration to S/4HANA. Migration always comes with risk. But you can't reduce risk by doing nothing. Our PAC research showed that there's a lot of thinking going on, a lot of weighing of objectives against one another, and not a lot of action."

Benedikt is clear about why that's happening; "I don't think that's because of a fear of change – I think it's about trust. People don't trust the machines yet. And that lack of trust comes because there's not enough know-how within organizations. That's what exactly half of the respondents to the PAC survey said. The risk is falling behind because you don't know what to do. You need to face the fact that this is about challenging the existing state of your IT infrastructure, and it's about having to go through a migration process, in which systems have to be consolidated so that good integration is achieved. But you're doing it on a proven platform."

Javier is eager to add a point: "Cost is an issue. Let's not forget that. The research shows that big majorities want to reduce the complexities and costs associated with SAP´s systems, but less than 20% think that S/4HANA will deliver that. For me, that result is based on the fact that they don't really see the benefits that it'll bring yet. This is where we can help them to build their vision."

"The survey was conducted before LEONARDO was launched," points out Michael. "And its announcement changed the game. Now, there's a more rounded offering. What needs to happen is more communication about what LEONARDO offers. It might seem a little abstract at first, but it's actually very down-to-earth. Like I've said, it adds the 'fast' to the 'robust.'

So, what is it? SAP itself has called it 'the biggest move since HANA'. That means it's a very significant addition to the portfolio. It is, in fact, a collection of SAP technologies which are built on top of its open Platform-as-a-Service offering, SAP Cloud Platform. At SAP's 2017 Sapphire event in Orlando, Florida, Dr. Hasso Plattner, the chairman of the company's supervisory board, called LEONARDO a 'bounding box' which sits around 'a set of objects… a set of tools to build a system which then, with machine learning algorithms, finds insights which we can attach to transactions with an SAP environment.'

"What that means is that the HANA offering is broadened," says Michael. "Now, you can add all kinds of possibilities to your business, from AI and machine learning to IoT. Perhaps the idea of a 'box of tools' is a little too abstract. I prefer to look at it as an ordered tool-set that delivers a full-innovation product."

"So, it's important to think about innovation with LEONARDO, and robust core functions that underpin that innovation with S/4HANA," says Javier.

"That's exactly right," agrees Michael. "That means you should not worry about siloes within the organization. See it as ONE solution."

"And trust the machines." Benedikt warms to his theme: "By that I mean, look at the old way you do something, and investigate how you can do it better and also free your people to be more skilled and more engaged with customers. A financial sector company I worked with was hesitant to use AI to make decisions on loans. But, when they tested the new AI system, and saw that machines could learn to make even better decisions than humans, they changed the way they worked. That enabled the people to deal with more complex cases and take their time to make good decisions, whilst the algorithms catered for the routine loan decisions. Everyone benefited: the

bank, the employees and the customers who got quicker decisions."

"OK, we can address both those things. I think, the risks associated with migration projects are well known, they need to be explicitly dealt with. Security is, of course, one of those risks," says Michael. "The risk of not migrating is the point for me," says Javier. "The fact that you can consolidate your data means that you can implement a range of projects, for instance in The Internet of Things arena. That's fast becoming a huge deal. That can be run through S/4HANA, so the risk is not implementation itself but poor, or non-existent implementation."

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Creating the modern utility through innovation and intelligence

Utility companies need to optimize operations so that they can focus on creating innovative business models which allows them to compete by transforming their business environment. Grid modernization is vital: LEONARDO helps you engineer it. You then can benefit by combining business with operational data to achieve the operational excellence founded on the core abilities of S/4HANA.

Creating the modern utility through innovation and intelligence

"The big picture is, this is a change process, so we need to talk about what we really need to change," says Benedikt, "This isn't like moving from Office to Office 365, this is much more fundamental than that. You need to differentiate your enterprise from the core outward."
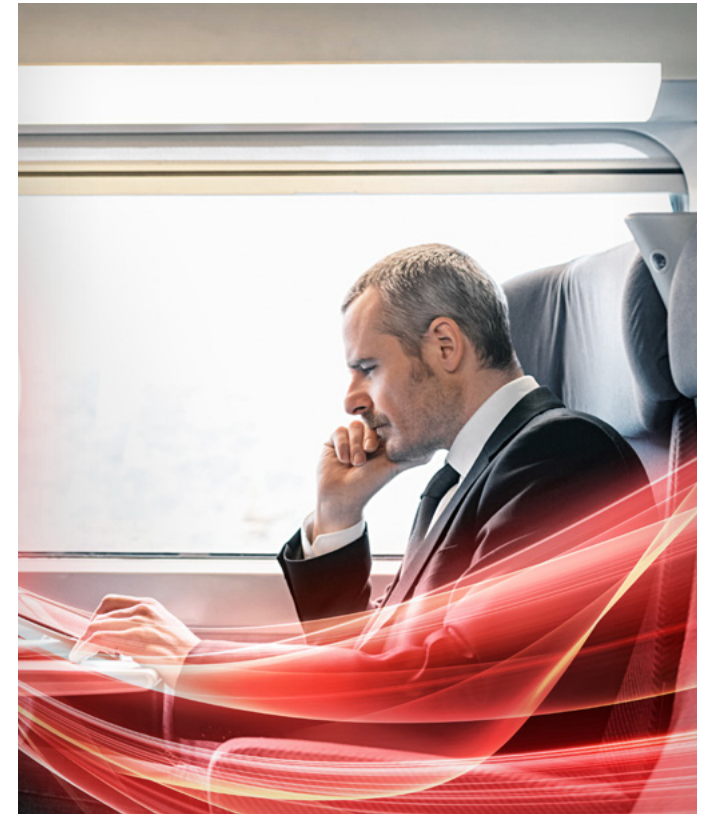
"OK, what we're saying is: This is a complete digital transformation project," says Michael, "This isn't just about S/4HANA and LEONARDO. This is about really thinking about how you can make the most of digitalization."

"Yes, now you say it that way, you're right," says Thomas. Javier adds, "Some customers have been skeptical about S/4HANA since it was announced. They think it's just another thing they're going to have to pay for. But what I try to do with customers is to talk about how it's a big opportunity to power their digital transformation. LEONARDO helps that argument because now you have a broader set of tools to innovate. The board is already asking for new tools and new ways of working; IT must be able to respond with greater agility. To do that they need to greatly reduce complexity, and integrate everything from data to transactions to workflows. S/4HANA together with LEONARDO are the engines and the platforms that can do that."

"It's a journey," says Benedikt. "One of the basic success factors in any change process is the fact that a customer has a vision – a clear goal for the future of their processes and their entire IT landscape over the next five years or so. By aligning projects with that big idea – the big picture – then everyone can go in the same direction and know why they're heading that way."

"But this is a collection of projects, not a single assignment, right?" asks Michael.

"That's right, it's a broad vision that needs to be communicated with everyone involved so they understand how S/4HANA can help them and how LEONARDO can enrich their work," says Benedikt. "Again, it comes down to trust in the machines. The point is, don't sell SAP, sell the idea that you can deploy S/4HANA and LEONARDO to take digitalization beyond the technology to changing how you work and generating new ideas about products and services and everything else. That's the big picture: the vibrant future of your organization."

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An opportunity for 'organizational inspiration'?

Innovation comes from insights, and those insights are buried in the data. LEONARDO is designed to help you gather data from a wide range of sources and achieve single point of wisdom. You can then use the knowledge you've gained to act in both regulated and deregulated markets to not only manage services more efficiently but also to innovate and delight consumers.

An opportunity for 'organizational inspiration'?

"A new age or era... are we in danger of sounding too esoteric, and confusing customers?" Javier says.

"No, I think they need to understand that they are entering a new age whether they like it or not," replies Michael.

"What we have to talk about are 'great ideas' rather than technology," says Benedikt, "That's what inspires people. It also enables the IT people to be more involved in the business imperatives and the outcomes, not just in provisioning technology."

"OK, then let me be inspirational," says Javier, "I believe that this is the first time in history that technology actually frees people to do more. It's no longer a constraint. What SAP have done is to free up their platform so that it opens up possibilities without the need for technological complexity."

"Now, that does sound inspirational!" says Michael.

"What I hear a lot within organizations is the need for the business to truly focus on what it needs to do to compete and innovate," continues Javier, "But what actually happens is that they get bogged down by technological complexity. Things never run as smoothly as the hype suggests it will. But with S/4HANA and LEONARDO we can free up those functions and desires and achieve economies of scale and levels of automation that help those at the cutting edge... do more, and be inspired to create. Perhaps 'freedom' is a better word than 'inspiration.'"

"Let's not get carried away with words – but your point is a good one," Michael says. "What I think we're saying is that customers should not be anxious about these new SAP offerings, they should be excited. They need to have the confidence to approach the transformation – and they can get that by working with us – but they need to just embrace S/4HANA and LEONARDO. Don't see the problems, see the opportunities."

"And you can do it your way," says Benedikt. "You don't have to be pushed into the cloud if you don't want to go there. What I'm saying is that, when I discuss the future with customers I point out that they can choose where to run their functions and innovations. We work with them to work out what new innovations they really need. We don't innovate for the sake of it, we have to identify the features that will make a difference – yield value quickly – and then decide if they should develop it themselves or buy it in, and when to customize a product and when not to. That takes us back to planning that roadmap, its fundamental."

SAP encourages customers to move to the cloud, but there is no one-size-fits-all solution. Benedikt's point is that an enterprise might prefer to run some functions on premise rather than in the cloud. Special, core functions that need to be ring-fenced and protected. That's perfectly possible and Fujitsu can recommend which areas to keep in-house and which to migrate. It's part of the co-creation approach.

"The point is to be agile. That's a cliché but it's true," says Michael. Javier adds, "We have the expertise to help you configure S/4HANA and LEONARDO the way you want and need it. We can create specific adjustments to suit your individual needs. We can adapt the code, even the way the user-interface looks and works. The point is to make it a perfect fit for your business."

"Your business has to run… and keep running," says Thomas, "And it has to innovate. Our job, at Fujitsu, is to help do that. Each and every day."

"My big message is stay in control," says Benedikt. "SAP will roll out new features, but you don't have to accept them all. They won't achieve innovation on their own – it's how you use them that counts, or whether you use them at all. No matter how great a release is, it's how you make it work for you that makes the difference. Which is why we believe customers need to work with us, of course."

"Which is what XpressWay is all about," says Javier. "We developed our own methodology so that customers get a clear roadmap of what needs to be done, what needs to change, and how and when they'll get the best from SAP's solutions."

"XpressWay, together with MetaARC, are key to activating the potential of the new platform," says Thomas, "It helps to analyze processes and generate the intelligence needed to get the new processes right and ensure the migration goes smoothly. You know, what reassures customers is that they're working with someone who knows how to get everything right… from the servers to the business processes. Someone who can translate from the business functions to the IT functions to ensure that the best outcome is achieved for that specific organization."

"It's also about making the most of the technology's potential," says Javier. "It's like most people only use around five percent of the functions of Excel, Ok? I know that sounds trivial, but it's true. We will ensure that you get the most out of SAP, and ensure that everyone can understand what it can do – from the IT people to the financial people to creatives and sales people."

Power your digital transformation

At Fujitsu we have the experience and knowledge you
need to make the most of the opportunity that S/4HANA
and LEONARDO represent.

Power your digital transformation

"This is the first time in history that a technology is not a constraint," says Javier.

"Not just one technology but many technologies," says Michael. "The point is to make them mutual, so they complement each other and work to achieve the business outcomes you've identified."

"It is not about the technology but what you can realize with it, which makes it really unique. I stick by my claim - there are few examples in history where that's happened!" says Javier.

"It's a strategic opportunity and it needs to be approached as one," says Thomas.

"The point is to make the most of it," says Benedikt, "Now."

At Fujitsu we have been working with SAP from the beginning. We have the experience and knowledge you need to make the most of the opportunity that S/4HANA and LEONARDO represent. We can do that technically and strategically. We help you migrate, deploy and exploit. We also help you see the big picture from the point of view of desired business outcomes.

Talk to us about how we can help you

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