

Winning in the Digital Age

API-led architectures enable
continuous transformation
with SAP S/4HANA

A joint Capgemini and
MuleSoft perspective

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Succeeding in the 21st Century

Leading enterprises are facing unprecedented challenges and opportunities; the 'perfect storm' of technology, demographic and market changes are forcing businesses to re-evaluate their value in the post-millennial reality. The access to new cloud platforms has lowered the barrier to entry for new start-ups from millions to 1000's of euros to launch a service. This, combined with the ubiquity of mobile usage as the primary method of consumption of media and communications, has already dramatically revolutionised industries such as media, news, retail, and CPG, among others, and has not always favoured the incumbent market leaders.

For large, successful organisations, this translates into two strategic trends which are inextricably linked and will happen in parallel: 'digital transformation' and 'refreshing the core.' These potentially have such different dynamics that there is, at best, a tension between them and, at worst, a risk one or both could constrain an organisation's ability to compete in its market because IT has become a nexus of failure rather than a driver of change.

Digital transformation – for this paper we highlight two key drivers. The first is the need to 'digitise' customer interactions and journeys, recognising that customers' expectations are changing. The second is the need to ingest new technologies and platforms into the organisation to allow faster change cycles.

Refreshing the core – many of the core SAP Enterprise solutions that underpin organisations were implemented during the late 1990s and early 2000s. There has been a period of stability in the market to some extent, with the major projects having been delivered and organisations settling into 'business as usual', concentrating more on enhancements rather than wholesale change or transformation. So, while these core solutions were fit

for purpose at the time, business needs have become deeply entwined with digital drivers, while the core systems themselves haven't evolved quickly enough to keep up. Also, given the rapidly closing window of availability surrounding heritage SAP solutions—the SAP Business Suite's road runs out in 2025 unless extended—there are likely to be ERP replacement projects ahead of this deadline as many organisations will not risk having unsupported systems. The fundamental shift in what the SAP S/4HANA has evolved to become means businesses are not faced with a simple technical upgrade, but a potentially complex ERP re-implementation. These programmes must deliver compelling business benefits, going far beyond efficiency savings, to justify the costs that will be involved.

Leading enterprises that have started these initiatives have understood that to realise the business benefits of new transformations, they must enable continual innovation at scale to react to new types of competition and opportunities as they arise now and in the future. This requires more than a software upgrade or even 'going to the cloud' but a new operating model and a culture that brings together the business, IT drivers and talent.

In short, organisations now need to 'design for a permanent state of transition'.

The Challenge

For many organisations, investments in new digital technologies have already started, but they tend to be focussed in the front office or around analytics. However, they are discovering that advanced analytics and high-quality customer engagement solutions may be able to spot opportunities and trends, but their back office and supply chain often cannot adapt quickly enough to take advantage.

Yesterday's best practices and efficiencies are becoming today's constraints; organisations, both business and IT, that cannot adapt to this new reality are at an ever-increasing risk of failure. For example, the supply chain efficiency drivers over the last decade have realised benefits, but it now appears those benefits have come at the expense of flexibility.

A range of new technologies must be implemented, re-implemented, migrated or upgraded as part of a strategic programme. This clearly has the potential to increase complexity in a way we have never seen before. IT needs to support the change and cannot be seen—as is so often the case—as the limiting factor.

Looking at the SAP footprints in existence today, many are large and complex, having grown organically over the last twenty years or so. These solutions are often heavily bespoke and may not reflect how the business is, or needs to be, run today.

SAP's S/4HANA aims to address many of those issues. S/4HANA contains the best practice standards for many common business processes; adopting those allows effort to focus on building the real 'difference makers' for an organisation. With the advanced technical platform that underpins it, an ERP can finally start to move at the pace a digital business needs.

This migration will not be easy, and the business needs to continue to deliver value while the transformation occurs. An API-led architecture acts as both fabric to link disparate

components together, and an insulator, allowing different portions of the landscape to move at different speeds so that value can constantly be delivered along the journey.

This fundamentally leaves us with four main considerations:

- How does one accelerate the business in the face of a legacy IT landscape built up over many years?
- How does one continually deliver value throughout a complex delivery journey?
- How does one minimise day-to-day impacts to the business while this is all happening?
- How does one arrive at a platform that is optimised to cope with continuous change?

The following paper explores how these questions can be addressed from a technology perspective where success is underpinned by a combination of SAP S/4HANA to support the speed of modern business, and an API-led architecture to provide the 'digital fabric' the landscape will need as it continues to evolve.

IT needs to help the business move at a digital speed

S/4HANA as part of a transformation helps to accelerate the business

SAP S/4HANA lifts many of the technical constraints which historically shaped SAP application design and has become the workhorse of the enterprise landscape. It simplifies the application, data and functional architecture which underpins its business functionality, thus enabling the ERP system to operate at the high speed needed to support 24x7 digital operations. This new vision for SAP ERP allows businesses to begin to consolidate siloed capabilities, providing a single, trusted source of truth.

Enabling an accurate, real-time view across the supply chain, manufacturing, planning, inventory, finance and customer engagement is the start. What comes next is the flexibility to change business processes and models to meet market demands as they happen.

Modern ERP projects will potentially be expensive as they seek to replace the work of several decades in a much shorter space of time. Therefore, the decision to migrate to S/4HANA is a major one for any business. Having a strong business case and a demonstrable process to track the benefits as they are delivered is vital.

Implementations can be complex and potentially expensive, so traditional IT justifications for upgrades simply won't create a valid argument to move forward. We suggest that an implementation of S/4HANA will ultimately have to be justified under the umbrella of a wider business transformation. It is likely to be only a single constituent part of the wider programme.

Our experience suggests that there's no single business driver that provides a 'silver bullet' to justify migration to S/4HANA. Instead, a combination of factors, both business and technical, and across the entire scope of the landscape beyond SAP itself, must come together to

supply that justification. The art is to properly identify and articulate those factors in a business case that everyone can get behind.

Also, we believe a purely process-led approach will not work in the new digital world. With many commercial-off-the-shelf (COTS) applications being deliberately acquired because organisations wish to take advantage of pre-delivered content within them—SAP S/4HANA is a great example of this—there is more value in concentrating on delivering 'difference makers' for a business as those capabilities will provide genuine competitive advantage rather than tweaking something that doesn't. Taking a process-led approach across many applications has the risk of delivering complex and bespoke solutions that fail to take advantage of the standards. Capgemini's experience both within the SAP world—and across the many other solutions we deliver—shows us that understanding an organisation's data and how different applications need to generate and use that data increases the chance of reaching a successful outcome in an increasingly hybrid, multi-vendor landscape. We seek to create what is essentially a common language across a landscape which starts with the business and always refers to their needs no matter where on the transformational journey a programme might be.

This data-led approach also enables quick wins to be delivered along the way as different components are decoupled to move at their own speed, rather than at the pace of the slowest delivery. For example, the goal of a supply chain transformation could be to increase flexibility and agility while reducing the cost to meet the needs of modern digital customers, but the return on investment cannot be predicated on a 'big reveal' after 18 months of effort.

We argue that these kinds of steps in a programme are all enabled by a data-led approach underpinned by API-led architectures working in partnership with the core SAP offerings.

Designing for a permanent state of transition delivers continual value with reduced risk

The complexity of these transformational implementations can result in plans which span multiple years, which is a real throw back to the SAP journeys of the 1990s and 2000s. While this may seem a logical way to approach things from a purely IT standpoint, the business will no longer tolerate extended programmes with a 'big reveal' at the end. This puts too much focus, and risk of failure, into a single deployment. It also curtails continual value delivery over the course of an implementation.

Long delivery timelines with no continual value realisation have the potential for trouble. If many months of effort have been expended before reaching User Acceptance Testing, and the business announces there's an issue, this

can destroy a transformation. If we do not learn from these historical mistakes, we are forever doomed to repeat them.

Programmes need to be shaped as smaller steps on a structured journey; this will allow value and capabilities to be delivered in smaller chunks. This decreases the risk of incorrect delivery, reduces the change cycle for the business users and provides more flexibility to respond to shifts in business circumstances across the entire program. The chances for success increases from a technical perspective as well as making the transitions and deployments more achievable for the business.

This is where going beyond traditional waterfall delivery techniques becomes important as there is far more opportunity for continual engagement with the business, keeping 'key design decisions' at front of mind throughout the whole process. The chances for success increases from a technical perspective as well as making the transitions

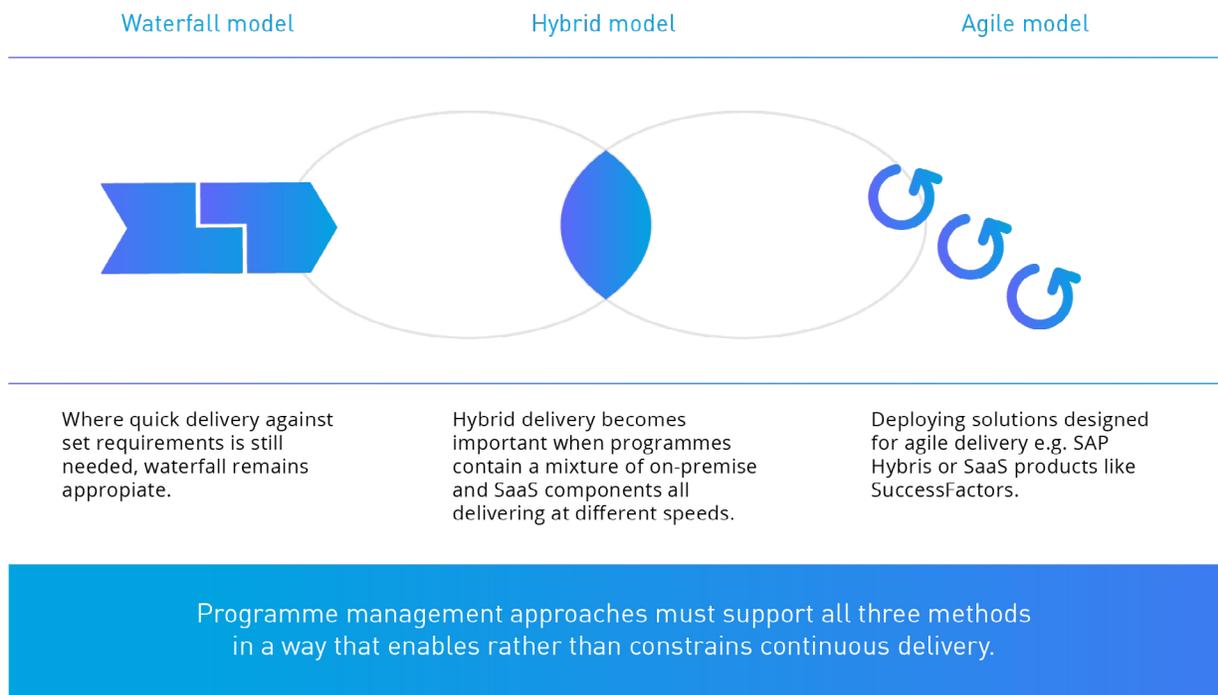


Figure 1: Hybrid delivery models will drive the business transformations underpinned by SAP S/4HANA.

and deployments more achievable for the business. We also believe allowing the business to see and understand new capabilities earlier gives the potential to identify new opportunities for the future. The art is to deliver what is needed without being swamped by, or losing track of, the new requirements coming from an excited business.

That said, the traditional delivery methods don't go away; they are tools to be used in the correct context. We believe the modern transformation programme will have to contain and manage many types of delivery approaches and methods in parallel, potentially covering multiple technologies and even implementation partners. This is what Capgemini is seeing in the new wave of business transformations underpinned by SAP technology, and have been successfully managing this hybrid approach for a number of clients.

We like to think of it as 'continuous transformation': it not only takes the best tools and uses them for the right job, it puts data at the centre of the transformation, allowing us to break down complex, multi-year programmes into manageable steps which deliver value, while also supporting the ability to pivot if business conditions demand it.

This approach learns the lessons of past ERP implementations, while absorbing thinking from agile delivery models to create a truly digital approach to enterprise transformation.

APIs enable 'continuous transformation'

Because the complex transformations we now face will have many transition states, having a strong integration and transition architecture is more important than ever, as the strategy will have to cope with continuous changes across every line of business, be it contextual customer journeys, IoT-driven plant maintenance, machine learning based supply chain optimisation or staff enablement and well-being strategies.

The closely coupled integration landscapes which have developed over the last twenty years will now begin to further constrain the businesses they underpin.

Continuous transformation means that the elements within an organisation's landscape will necessarily evolve at different speeds, so transformation across the business and IT landscape will increasingly happen in parallel, meaning that there must be a way to insulate the stable components while change occurs elsewhere.

Exposing key data as APIs allows other business platforms to take advantage of all available capabilities without interrupting the delivery of the SAP S/4HANA core. This fundamentally underpins the transition states which may deliver value more quickly from other faster-moving components such as Hybris or SaaS offerings like SuccessFactors, thus avoiding an often-seen issue of 'don't touch SAP when upgrading'. The approach also allows the creation of new API-driven set of assets that the whole organisation can use as needed in a safe, secure and well managed manner.

The data-led approach then fundamentally feeds the canonical models needed to drive the API-led architecture itself, which shows the real synergy between the value both Capgemini and MuleSoft can bring to an organisation attempting to transform their business and their SAP estates.

The digital fabric

The digital fabric differs from traditional SAP integration and on-premises SOA strategies, as the S/4HANA value is based on real-time capabilities; the fabric will also be real-time in nature. It must support the consumption and exposure of API's from S/4HANA and other applications or platforms such as Salesforce, Workday, Azure and others.

As discussed above, there will be a need to decouple systems and channels from the underlying landscape during the migration to S/4HANA to support the continuous transition states.

But there is also an opportunity here to create APIs that can be used by other business systems such as digital channels to develop strategic capabilities to be utilised internally as well as across the entire value chain of the enterprise.

Creation of the API fabric therefore isn't just about enabling a transformation journey for other applications, they can in themselves be a route to business value generation. Critically, the goal is to allow this multi-pace, multi-solution agile evolution to occur while maintaining business services. The one thing a transformation cannot do is grind the business to a halt while new content is deployed.

The API value chain shows that this is not simply a technical discussion to be had with the IT team. Though the development of core technical services will be critical to the SAP change cycle, it should not be the only consideration in an organisation's strategy. The fabric should be developed iteratively in such a way that it not only supports continuous transition, but also the development of new digital services too that help the business exploits new opportunities as they find them.

We imagine that by the time the business gets involved, many of the hardest technical questions will have been answered, and they can focus on using the API frameworks to start to monetise the data held within the landscape. This

also shows why Capgemini's data-driven approach to SAP transformation is so important; the data itself has monetary value if viewed in the right way, but properly understanding what you have is needed before you can use it correctly.

For the time being, in all but the most advanced and data-driven organisations, the tactical scenarios will be the reason for taking the first steps up the value chain.

These first steps will be enabled by the development of a loosely coupled, API-led integration architecture which can help provide the insulation needed. This is the digital fabric which needs to be part of a wider programme governance approach which understands how to manage all the moving parts. This includes parallel use of agile and waterfall implementation approaches, deployment of on-premises and SaaS applications, and running business-as-usual operations in tandem with rapid, value delivering releases.

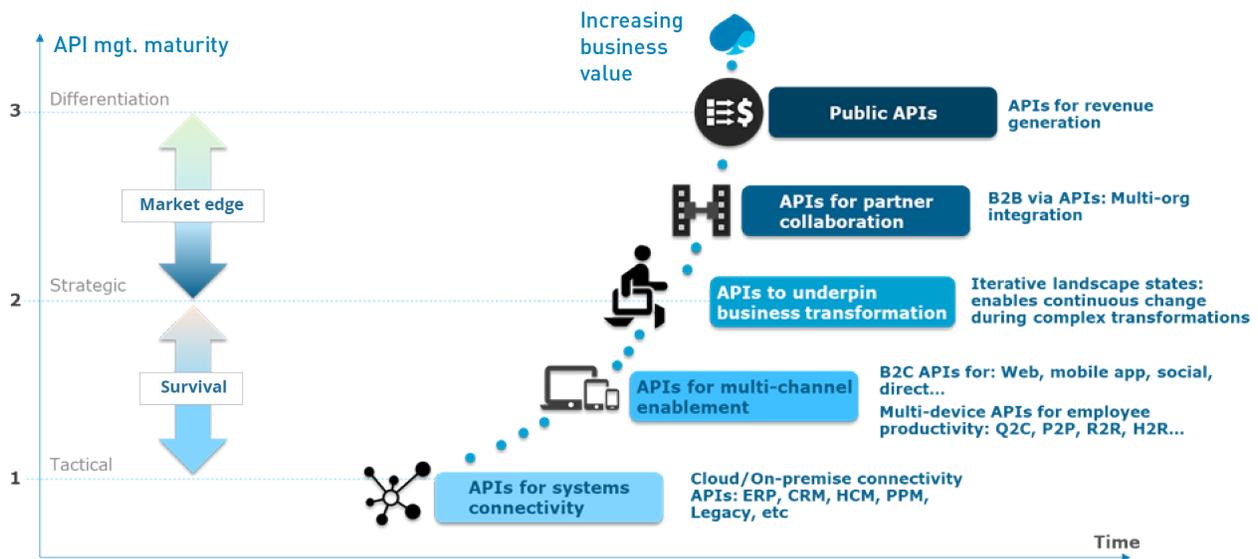


Figure 2: The API value chain.

Clearly this is not the only value driver behind taking this architectural approach, as ultimately APIs can be used to open a business to a wider audience and provide a revenue stream by monetising data; but for some organisations, this will be the most pressing and value-adding argument to adopting this kind of integration approach.

Moving from 'system of record' to 'service of record'

A critical shift in thinking is to move from a 'system of record' to a 'service of record'. This conceptual shift allows flexibility to be a core design and business outcome of the S/4 migration.

The reality is business landscapes will be comprised of a mixture of systems: legacy, current SAP landscapes, new S/4 components and cloud SaaS systems (both SAP and non-SAP). Trends such as 'hyper-specialisation' will see a greater number of applications/services being plugged into the core process. These will be unlikely to replace the core process

but add value to it. A simple example is the increasing use of Robotic Process Automation (RPA) solutions being integrated directly with the core ERP, but this will go further as the fabric becomes more established and more interesting offerings become available.

To support these requirements, a clear and well-structured API strategy that combines proven best practices to support hybrid, multi-modal strategies is needed. MuleSoft is a provider of the leading platform for building application networks, through architectural best practices and a unique operating model for customers, this allows both the business and IT to build, innovate and deliver on their objectives in an agile and well governed approach. This best practice framework is based on a number of engagements ranging from digital leaders such as Spotify to global organisations such as Unilever, which operates large complex business landscapes supporting over 400 brands in 190 countries.

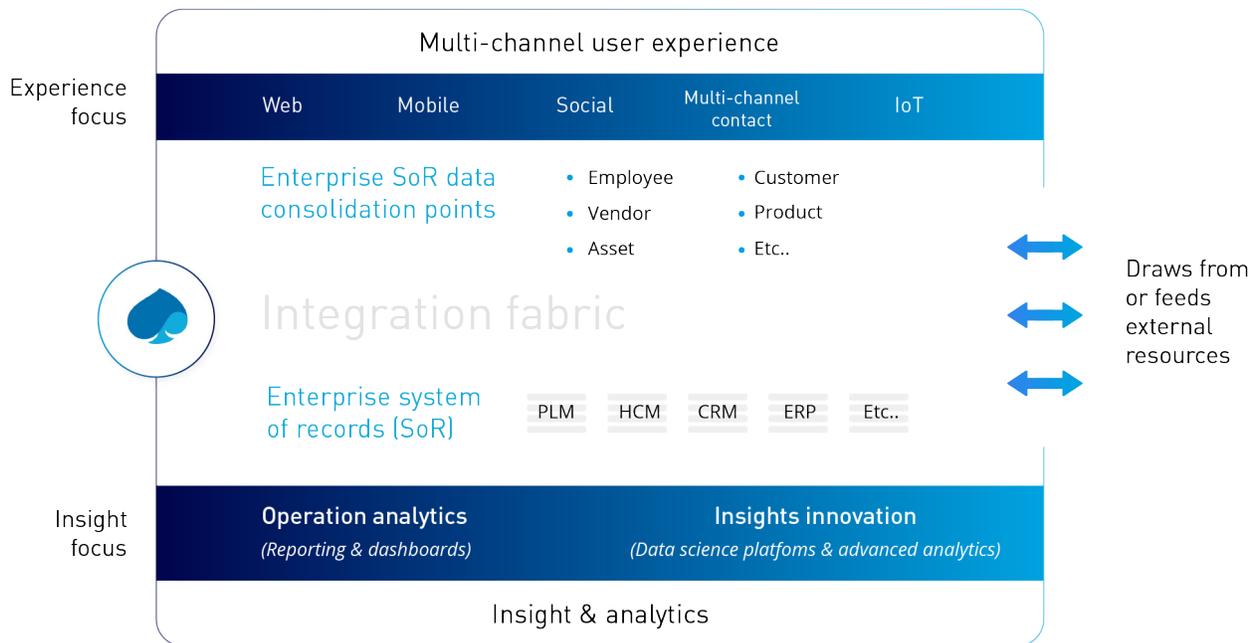


Figure 3: SAP S/4HANA is best enabled within a landscape that supports continuous change.

API-led architectures will underpin the future

API-led connectivity is an approach that defines methods for connecting and exposing digital assets. The approach shifts the way IT operates and promotes decentralised access to data and capabilities while not compromising on governance. This allows the enterprise to support several principles and capabilities that will allow the creation of new services at scale, in a cost-effective and timely manner.

Wherever possible a contract-based interface should be the primary strategy for integration. This should be the key design and development principle.

These design tenets will allow the clear creation of boundary conditions and define the capability of the business landscape so that this competency can grow as needed, be replaced or used in innovative ways, while maintaining security and policies to protect the core systems.

The API-led architecture

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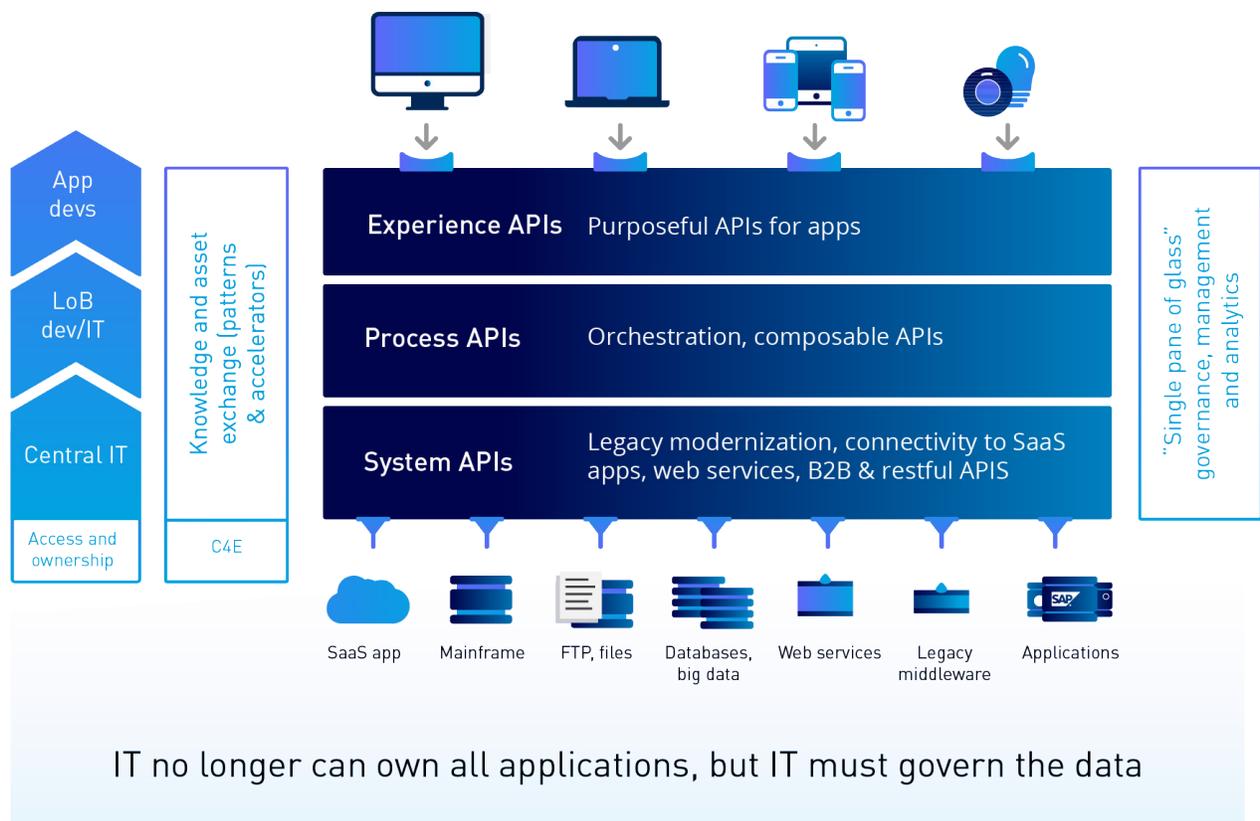


Figure 4: The API-led architecture is the fabric that underpins continuous transformation.

The integration application must be more than just an API; the API can only serve as a presentation layer on top of a set of orchestration and connectivity flows. This orchestration and connectivity is critical; without it, API-to-API connectivity is simply another means of building out point-to-point integration. Large enterprises have complex, interwoven connectivity needs that require multiple API-led connectivity building blocks. In this context, putting in a framework for ordering and structuring these building blocks is crucial. Agility and flexibility can only come from a multi-tier architecture containing three distinct layers that supports the different needs and ownership of the data and processes from the SAP experts at the systems layer, new services teams in the process layer and the digital channels teams at the experience layer.

Making API-led connectivity a reality in the Global 500

Growing competition, adoption of new technologies across lines of business and the explosion of data within the enterprise are putting tremendous pressure on the CIO and IT organisation. IT's role has shifted from being the centralised support function to becoming the strategic business enabler, providing the right tools and infrastructure for innovation to occur more broadly across the organisation. It is critical for businesses to unlock their assets and data to create self-service capabilities that they can consume. An API-led approach makes connectivity a reality by unlocking the value of existing systems with APIs, and innovate rapidly, without losing security or control of critical enterprise data.

According to Gartner, "The bimodal approach to integration is emerging as the strategy that would enable directors of integrations to support the agility, flexibility and rapid integration long coveted by lines of business (LOBs), departments, application teams and power users, while maintaining a certain degree of centralised control and governance."

Creating a digital operating model for continuous transformation

To support a true digital strategy at the heart of the enterprise, we must take a view that encompasses people and process as well as data and technology.

We have already discussed how a modern digital transformation needs to encompass multiple delivery speeds and methods. The subtle shift here is allowing the IT delivery arm to truly become an enabler for the business rather than just an owner of the solution landscape. This domain must balance the twin goals of dependability around certainty of outcome with the agility to deliver at multiple speeds – managing cycle times that can range from days or weeks through to full multi-year transformation programmes.

When looking towards the applications which underpin transformation programmes, a gap can often exist between business strategy and how that translates into the solution design itself. Many organisations operate Enterprise Architecture (EA) functions, who should really own this interlink between IT and the business. They should be the business' champions in the IT world, and vice-versa, but in practice, especially where SAP solutions are concerned, programme teams can tend to do their own thing because they may feel the architects in their 'ivory towers' may not necessarily have day-to-day relevance for what they are trying to achieve. Design authorities, where they exist, become things to be circumvented or only to be consulted where guidance is needed for specific questions or where a technology standard may be needed. This is hardly a good use of these experienced professionals and certainly not one that allows them to fulfil what should be their main role.

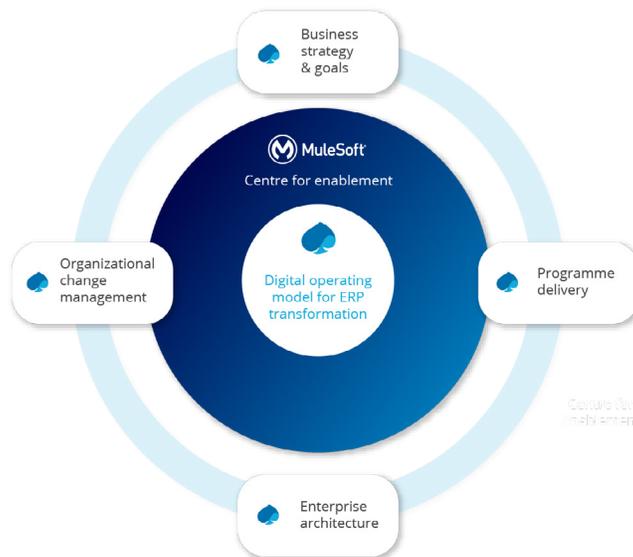


Figure 5: Successful ERP transformation requires seamless integration between these domains.

The new IT operating model

To support this strategy, the IT organisation will also have to adapt to support this incremental delivery approach; traditional IT teams are highly centralised in nature and many large organisations will have a Centre of Excellence (CoE) for integration that owns the definition, design, development and, at times, the operational responsibility for a core integration platform. These teams have come under a great amount of pressure with the shift to hybrid strategies and need to support 'agile' development teams that support a number of different platforms and patterns. In some organisations these centralised IT teams are seen to be a bottleneck for business innovation.

Working with leading enterprises, MuleSoft has developed an IT operating model to support these new strategies. Known as a 'Centre for Enablement' (C4E), it is structured to have different characteristics compared to an existing CoE organisation as illustrated below.

What's the difference between a CoE and a C4E?



	IT as owner (CoE)	IT as enabler (C4E)
Goal	Reliability	Agility
Approach	Waterfall, V-model	Agile, Kanban, Minimum Viable Product
Governance	Continuous, process-based	Plan-driven, approval-based
Cycle time	Long (months, years)	Short (days, weeks)
Sourcing	Enterprise suppliers, long term deals	Enterprise and niche, responsive short term deals
Culture	IT-centric, removed from customers	Business-centric, close to customer, fail fast
Talent	Good at traditional projects	Good at new and uncertain projects

Figure 6: Characteristics of a Centre of Excellence vs Centre for Enablement.

The main principles behind deploying an integration Centre for Enablement (C4E)

The main principle of a C4E is to make it possible for enterprises to achieve two seemingly opposing goals of software design with governance and high delivery speeds. This is often referred to as bimodal or multimodal IT, but also enables the emerging multi-speed IT that acknowledges the reality that different projects require different approaches for creation and delivery.

IT must no longer be perceived as a centralised capability delivering all technology related projects; rather, IT should provide capabilities to the business as a whole. With business self-service, however, comes the risk that the landscape, systems and processes can become once again highly fragmented and difficult to manage. Therefore, there still needs to be 'just enough' governance, security and data access control that protect the enterprise's digital assets.

Against this backdrop, we have identified a number of key overarching outcomes the C4E needs to achieve for the enterprise as a whole:

1. Shifting the role, and culture, of central IT from project delivery to a more agile enabler for the business by creating IT capabilities and assets that can be reused as well as by demonstrating the value of using those capabilities to drive change.
2. Improving the 'time to market' for how quickly the business and IT can respond to threats and opportunities by building capabilities that can be leveraged directly and indirectly by the different lines of business.

3. Establishing a core set of reusable assets that will create the composable enterprise, enabling different delivery capabilities within the business, including developer groups, SIs and ISVs.
4. Structure the right governance, security and architectural principles.

Change management has a wider role to play in modern continuous transformation

This is where an effective Organisational Change Management (OCM) team comes into play as in the world of continuous transformation. Not only do they own the usual elements of a change strategy, such as business impact assessments, communications or training, but in this new world they must begin to help represent the voice of the business within the programme itself.

We believe successful OCM teams will set themselves up to become the guardians of the Key Design Decisions (KDDs) for the solution, working closely with the architects in their mission to link business strategy with the solution design.

In practical terms, we expect to see a 'Digital Design Authority' as comprising the key OCM team as well as the technologists one would normally expect to find there, bridging the gap between strategic business requirements and the nuts and bolts of day-to-day delivery. This is certainly an area we would not have necessarily expected to see change personnel playing a part.

This also enables the data-led approach, as any common lexicon must have at its roots what the business understands particular terms to mean and how they will need to use them across a solutions landscape. Integrating these personnel into a technical C4E to drive an API-led approach to an organisation's architecture is one of the core manifestations of technology seeking to underpin business outcomes.

Another example would see OCM personnel being an integral part of the solution design team itself. For instance, they can help to provide the business focus to take a Requirements Traceability Matrix (RTM) and elevate it from a wish list to a key artefact which drives the evolution of the landscape across multiple transition states.

Keeping the strategy and KDDs at front of mind is also something a change practitioner is potentially better equipped to do than a SAP functional consultant who understands solution capabilities, but may not necessarily be able to deal with a strident workshop attendee who must have it their way. We will see change people start to appear in the solution design workshops that were previously the domain of the solution architects and their functional cousins. Longer term we think this will impact the skills the core functional people will need to have to be successful – solution expertise will no longer be enough, and they will have to have as much a business as a solution lens.

This all poses some interesting questions for delivery organisations whose cost models are predicated on heavy off-shore leverage as well as clients who want a top-notch service but aren't prepared to pay for it. Perhaps now is the time to realise these types of transformations can neither be sold or bought entirely as the commodity projects that we have been increasingly seeing in the SAP space in the last few years.

This will entail looking again at the commercial models, to properly blend commodity and premium services to get to an answer that works for everyone. Unfortunately, cheap is not always cheerful. This very much plays to our earlier comments regarding the importance of being able to quantify the business benefits one gets from a modern transformation programme, given the potential expense involved.

In a world where enterprises are seeking to make the most of the pre-delivered content their COTS (commercial-off-

the-shelf) solutions provide, being able to identify those capabilities which need to be developed versus what should be used out of the box is only part of the puzzle. Making sure every decision made underpins the business's strategic goals is hard at the best of times, let alone in the heat of a BuildPrint® cycle, is not only central to organisations being able to select the best tools for the job, but also ensures they can get the best out of them.

This is especially important with regards to SAP S/4HANA, given the best practice content that can be used and the rich potential to develop new difference makers. Shaping an operating and delivery model that drives standard/best practice where appropriate but does not stifle innovation for the difference makers is therefore of massive importance to the modern digital enterprise.

An operating model that properly integrates change, architecture and delivery is the key to success

An effective operating model for continuous transformation and the delivery of ERP solutions needs to properly integrate the key programme domains, including architecture, change and delivery. This relationship needs to start early and then run continuously across the enterprise. It is unlikely this operating model will be created as a standalone effort, it is more likely to be created to support a transformation programme. The challenge for many organisations will be to take these constructs and deploy them across their businesses to support continuous transformation.

Capgemini and MuleSoft's approaches are deeply complimentary in this regard. We blend the lessons of many years of successful enterprise SAP delivery with the innovations the new technology platforms and delivery methods have brought to the industry. We also believe this model represents how the successful business transformations of the next few years underpinned by SAP S/4HANA will look.

We have the experience to set up these operating models and then embed them in our client's organisations so making continuous transformation a way of life to support the rapidly evolving Digital businesses of the 21st Century.

An example of a digital transformation journey enabled by an API fabric

The following example from one company shows the value of an API-led approach to support the iterative states needed for core transformation. This was focussed on modernising all their critical business systems, as there was no easy, standard or rapid way to get access to core information assets. Data was in old legacy systems and federated across many locations, both in the cloud and on-premises. There was also often no single master for the important data entities such as Customer, Product and Vendor.

To enable this transformation, Capgemini has worked with the client to implement a Digital Integration Platform capable of:

- Publishing APIs for standard, secure and real-time information access
- Adopting microservices for high volume and rapid scale functionality
- Using Connectors for easy access to backend systems
- Hybrid deployment (cloud or on-premises)
- Scaling to up to support well over 1000 instances of various applications

This has allowed the client to begin to unlock information assets previously inaccessible in old legacy systems and make them available and ready for digital solutions. This has not only enabled our client to realise the business benefits as soon as possible, but also any future transitions as the API could be re-routed to a new backend at any time with minimum impact.

Fundamentally, with the data led approach, this is the template we believe modern SAP S/4HANA transformations will need to follow to be successful.

Conclusions

Organisations that must adopt or create digital solutions will fundamentally rely on the data and business processes originating in the back office to make them effective. SAP's new offerings, in particular S/4HANA, have closed the speed gap between back and front office solutions and when combined with technical innovations from MuleSoft, give organisations the tools to create a truly digital enterprise ecosystem.

The value SAP S/4HANA can play in an organisation's digital journey is in providing an important part of the toolset for overcoming many complex challenges by transforming raw data into usable business information. The pre-delivered standard content gives businesses a best practice baseline for commodity process, allowing them to focus on developing the real 'difference makers' that will truly benefit them.

Therefore, in our opinion:

- SAP S/4HANA will increasingly form a cornerstone of these digital journeys as it brings ERP into a place where it can facilitate these initiatives in a meaningful way.
- For customers on older versions of the SAP NetWeaver Business Suite, the current end of general availability of the solution in 2025 means that, unless SAP move the goalposts, planning for the next step in the SAP journey must start now.
- The new SAP S/4HANA implementations of the next five years will not all be simple prospects and will require the lessons of the original projects to be learned.
- These implementations will not be straightforward technology refreshes. There is a clear opportunity to introduce new ways of working and thinking that will support the business strategy, driven by the wish to innovate as well as the need to rapidly react to market shifts. But this clearly has implications for cost and complexity of a programme.
- Therefore, to enable transformation programmes to show progress, they will rely on properly planned and executed

iterative states to continuously deliver value while ensuring the business is not disrupted. Organisations must develop operational delivery models and technical landscapes that can support what will become a state of continual transition.

- A data-led approach will help shape the iterative states and drive the benefits of standardisation while not stifling innovation or development of the 'difference makers' businesses really need to succeed.
- The delivery operating models must include provision for different implementation approaches running in parallel, supporting multi-speed and continuous value delivery.
- All this should be brought together by the Organisational Change tower, properly embedding the voice of the business in the architecture and delivery streams to make sure programmes continue to move in a direction that will bring substantial value to the business.
- An integration fabric underpinned by an API-led architecture enables this iterative journey and in the longer term will deliver value in of itself. This means the wider landscape is shielded from changes relating to individual applications as they evolve or are replaced. In addition, the fabric supports the delivery of new digital services as and when they are needed across the landscape.

Fundamentally, this is a shift in thinking which aims to keep the business fully engaged across the implementation journey while enabling the flexibility to change direction as new challenges and opportunities arise. We believe this will increase confidence in the IT team and improve understanding of the solutions being delivered. As the business gain a better understanding of the solutions they helped to deliver, they become more able to spot how they can use and enhance them to bring greater benefits to their organisations. This in turn will enable the whole organisation to better work together to shape the future solution architecture they need to meet the challenges of running a digital business.

Shaping an organisation's IT and delivery operating model to deal with the new normal of continuous transition is as vital as having the architecture to underpin it. It may be that the model is created in support of a specific transformation programme, but if done correctly, organisations will find themselves equipped with a strategic platform and way of working which will enable their future journey. This ultimate flexibility will let the business achieve success whichever direction they choose to head. In the new reality of continuous change must IT must become an enabler to drive growth, efficiency and innovation at scale.

Capgemini's strategy and implementation excellence across delivery, architecture and organisational change, when combined with MuleSoft's technology innovation underpins this new normal and helps to deliver certainty of outcome in an uncertain world.

Guy Murphy

Client Architect - Strategic Accounts: MuleSoft

E-Mail: Guy.Murphy@MuleSoft.com

Office: +44 203 700 3842 | Mobile: +44 7500 130006

Guy has over 20 years' global experience in the API domain working with some of the world's largest Retail, CPG, Telco and Financial Services firms driving their most innovative initiatives. Guy's core responsibilities at MuleSoft include architecting and advising customers on best strategies and optimum approaches to tackle and accelerate digital transformation to deliver tangible and pragmatic outcomes from a technical and business point of view.

www.mulesoft.com

Tim Fisher

Head of Architecture - Packages

Capgemini UK:

Office: +44 (0) 370 904 5635 | Mobile: +44 (0)7891 155635

Tim has extensive delivery experience across many industry sectors and technologies. He has expertise across the SAP ecosystem relating to Consumer-Packaged Goods, Utilities, Manufacturing, Aerospace & Defence and Government. He currently focusses on advising Capgemini clients to help them evolve their IT estates to meet the challenges of a digital future

www.capgemini.com





About MuleSoft

MuleSoft's mission is to help organizations change and innovate faster by making it easy to connect the world's applications, **data** and **devices**. With its API-led approach to connectivity, MuleSoft's market-leading **Anypoint Platform™** is enabling over 1,000 organizations in approximately 60 countries to build **application networks**.

For more information, visit <https://www.mulesoft.com>

About Capgemini

With more than 190,000 people, Capgemini is present in over 40 countries and celebrates its 50th Anniversary year in 2017. A global leader in consulting, technology and outsourcing services, the Group reported 2016 global revenues of EUR 12.5 billion. Together with its clients, Capgemini creates and delivers business, technology and digital solutions that fit their needs, enabling them to achieve innovation and competitiveness. A deeply multicultural organization, Capgemini has developed its own way of working, the **Collaborative Business Experience™**, and draws on **Rightshore®**, its worldwide delivery model.

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