MuleSoft

WHITEPAPER

Digital transformation blueprint

Making integration your competitive advantage

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Section 1: Change is the only constant in today's business environment

> "Transcending these milestones requires overcoming both technological and cultural challenges. It also requires enterprises to recognize the shift to the technology team as the catalyst for business."

In today's competitive landscape, businesses need to make decisions quickly in order to respond to rapidly changing customer preferences and nimble competitors; whether it's a new business strategy, a new business process, or a new market offering, businesses are competing on speed and agility.

The overwhelming majority of today's business and technology team leaders understand digital transformation is necessary to maintain leverage amid constantly changing customer preferences. They also have a clear picture of their desired end state — exemplified by leaders like Amazon, which launches more than 70 new services and features every year at their annual AWS re:Invent conference, Google, which has set the golden standard for productization and unveils hundreds of announcements at Google I/O each year, and Microsoft, which has revolutionized the enterprise cloud industry with its core business model and end-to-end hybrid technologies. Digital enterprises are producing thousands of patents every year. However, only a small minority have a clear understanding of the path they need to lead the market.

Many businesses have honed in on the right goals, such as building a digital platform strategy and API lifecycle management, for example. However, executing on this

imperative has stumped even the most experienced executive leaders. CIOs most often stumble at two milestones in the digital transformation journey.

The first milestone is aligning their organization behind a common set of outcomes. The second is building and implementing their roadmap to generate lasting business impact.

Transcending these milestones requires overcoming both technological and cultural challenges. It also requires enterprises to recognize the shift to the technology team as the catalyst for business opportunities, not simply the trusted operator responsible for keeping the lights on.

In our work with more than 1,600 enterprises, we've witnessed the struggle between business goals and technology team execution. The overwhelming majority of organizations name digital transformation as a top priority, but they are unclear on the path to get there.

Section 2: Understanding digital transformation

Customer expectations are constantly evolving, and your business, application, and technology infrastructure must be built to reflect that. This requires agility, flexibility, and constant innovation.

Consider the evolution of Netflix. A business that mailed DVDs to consumers evolved into company that streams entertainment for a monthly subscription and further transformed into a business that, today, creates its own content. Netflix didn't offer a better selection of films than its competitor, Blockbuster. Nor did it offer more physical locations. Instead, Netflix focused on innovation that continually redefines the way customers experience entertainment. With a laser-focus on this goal, they have maintained their competitive advantage with factory optimization that drives speed and adaptability. In 2010, Blockbuster filed for bankruptcy, no longer able to compete with Netflix's business and technological agility. Netflix's speed and quality engine cornered the market and formed a barrier to entry for new and existing competitors.

This is a well-known case of a business that has made digital transformation a way of life. Amazon and Google are other good examples. Each of these businesses embrace the two key foundational principles of digital transformation that apply to every enterprise. First, they keep a laser-focus on continually improving the way customers experience their offerings and built their technology to reflect customer needs. Second, they are built and organized for rapid execution in order to deliver improvements first-to-market.

As Netflix, Amazon, and Google have demonstrated, agility and speed are everything in today's digital age. The ability to quickly

connect new information from applications, data, and devices and operationalize it across the entire enterprise is key to achieving both.

2.1 Speed of integration is a key factor in digital transformation

The rapid growth of software as a service (SaaS) applications and increasing the number of integration endpoints has created an urgent need to expose information internally and externally through digital channels. In fact, the average business transaction now crosses 35 disparate systems. Digital transformation comes not from the implementation of any single technology, but from an architecture that is built for constant innovation, enabling companies to bring multiple technologies together again and again to create a compelling and consistent customer experience — quickly. An organization's ability to drive integration in an agile and responsive way has a direct impact on its ability to drive digital transformation in an agile and responsive way.

Successful businesses have a foundation that allows them to quickly integrate new technologies such as cloud, the internet of things, artificial intelligence, and big data across the entire enterprise. From there, they are able to adapt and deliver quickly to stay ahead of customer expectations. For example, enterprises who have worked with MuleSoft to develop an integration capability now deliver integrations 64% faster and lower their cost to maintain integrations by 63%. They also benefit from increased agility, with improvements in measures such as time-to-market, IT throughput, change success rate, and lower OpEx as percentage of revenue.

An integration capability is key to enabling an enterprise to constantly innovate and rapidly scale. It ties directly to improvements in business key performance indicators (KPIs) such as technology team operational expense, variance from forecasts of business results, time to market, project success,

employee morale, and turnover. It also increases key IT performance indicators including rate of reuse, variance from forecast of technology results, higher degrees of visibility into IT and business results, higher rates of standards and regulatory compliance, "tech debt," staff onboarding time, and development factory metrics like test coverage, mean time to resolution, defect escape rate, mean time between failures, change success rate, resiliency, and throughput.

So how do you get there? Beyond the ability to integrate the systems they have today, organizations are looking for ways to help them speed up the development of new integrations and maintain them as the applications around them change. This requires a fabric of connectivity across the enterprise, a concept we explain in the next section.

2.2 Welcome to the application network

With the massive number of applications, data, and devices that need to be connected in the modern enterprise, and the incredible amount of time and resources that companies spend trying to tie everything together, an application network provides the agility, flexibility, and speed that businesses in today's environment urgently need. New applications can be plugged into the application network as easily as you plug in a printer.

At the heart of modern integration is a network of application programming interfaces (APIs). APIs are the messengers that allow software to talk to software. APIs are the building blocks that allow your systems, data, and devices to communicate with one another. While binary API adoption predicts a 10.3% increase in a enterprise's market value, building APIs doesn't automatically transform an organization.

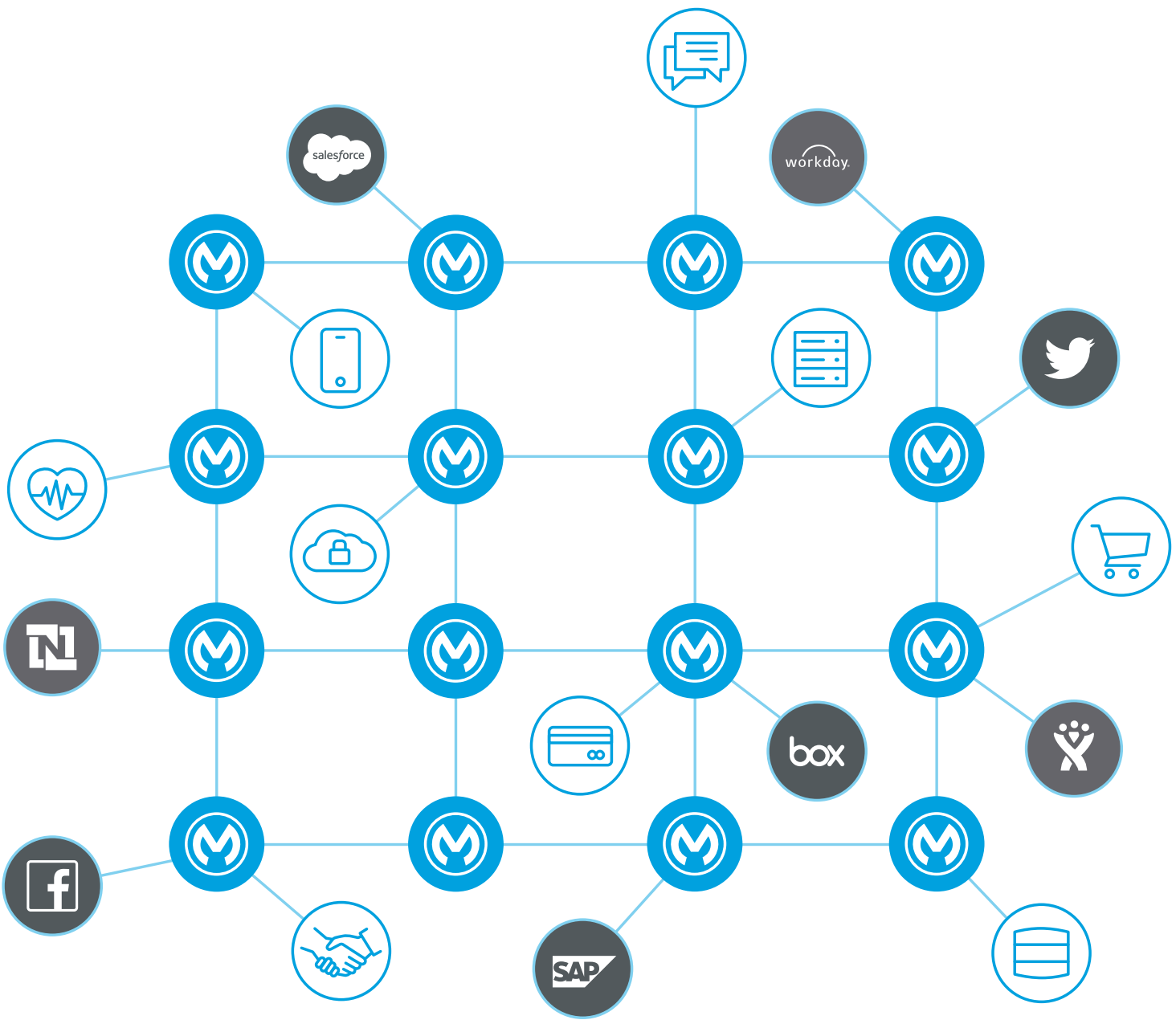


Figure 1: The application network

The problem for enterprises is that they are sitting on a pile of building blocks. True business transformation requires a platform that enables productized composition, an operating model that is ingrained in software development life cycle (SDLC), and a community that is constantly innovating to extend the value of your network. This is where the application network comes in. The application network provides an infrastructure for information exchange and then allows applications to be "plugged" into the network. Unlike point-to-point approaches to unlocking data in the enterprise, the application network is designed for an era where many people within and outside of an enterprise will be able to access parts of the network using consumption models that are familiar to their way of working. This modular, easily pluggable

infrastructure enables the digital platform by making it easy to create, change, and monetize new capabilities.

Application networks change the speed of innovation at enterprises by connecting data, applications, and devices in a standardized way using APIs. The next time you need access to data you don't create another point-to-point connection. Instead, you create an API to access and connect it. And you do this for every new project, each time adding a new node to the network. Consumers, like your employees and partners, can also discover and use the assets on the network to build new products, services, and processes. The network then manages the communication, security, and tracking of your data. It's this self-service and reuse that drives agility and enables innovation at speed.

It's important to note that an application network is secure by design. Data running through the network can be tracked end-to-end, monitored, and analyzed. Its layered governance model tracks data consumption at every node, providing the visibility you get across your IT infrastructure to diagnose problems and solve them quickly to see load patterns. Finally, application networks are built for change: they are recomposable, so they bend not break. It empowers organizations to develop applications that are compatible with both their existing architecture and infrastructure as well as their future state.

2.3 Digital maturity is a way of life

Building an application network is an evolution. The more mature an application network, the more impact it has on a business. An application network can be as simple as two applications connected by APIs that enable two systems to share information. This would be reflective of a very early or nascent application network. Every new node added to the network will increase the value of the network because the

data and capabilities of that node are discoverable and consumable by others inside and outside network.

Strategic digital transformation depends upon a mature application network and level of integration. For example, many businesses want to drive new revenue streams with an API strategy. But because these businesses categorize APIs as an "IT infrastructure" they don't pull the necessary levers to loop in their product management, go-to-market, sales, or marketing functions. Doing so requires an organization to institute two overarching API commandments: treat APIs as products and encapsulate applications in APIs.

The first commandment: Treat APIs as products

Successful organizations think about these APIs as products. Once an API has been designed, the initial versions should be tested with developers in a number of different channels. To support this and to encourage adoption and reuse, developer portals need be deployed for easy API discovery and documentation. As these APIs mature, tracking API consumption metrics provides important data on the usage of APIs, which help drive API innovation.

The second commandment: Encapsulate applications in APIs

To build and scale application networks at speed, successful organizations take the integration logic out of applications. Then, they take the code out of it completely — providing developers with a cohesive set of building blocks, in this case applications, in which the logic is apparent and easily reusable. When each of the business apps in the company's repository fit together — even when created separately — companies are able to deliver goods and services as fast as their digitally-born competitors do.

A mature application network doesn't merely expose systems — it is an interface for information exchange that allows developers to discover and reuse assets to create new applications and services. This includes assets both within the enterprise and in the broader ecosystem. It also requires an enterprise-wide integration platform. For example, MuleSoft provides a single cloud-native platform to efficiently integrate both SaaS and on-premises applications. Digital transformation also requires a mature strategy, organization and governance, software development life cycle, discoverability and self-service, operations, and community, which we will outline in detail in the next section.

Section 3: Mapping your digital transformation journey

> "At the core is the idea that people should design for themselves their own houses, streets, and communities. This idea comes simply from the observation that most of the wonderful places of the world were not made by architects but by the people."
>
> Christopher Alexander et al., A Pattern Language

As organizations map their digital transformation journey, they should first look to the patterns that have been formed as a result of natural customer behavior. This path often represents the shortest or most easily navigated route between an origin and destination and, when observed and analyzed correctly, can be the key to guiding their successful evolution in the digital world.

Through our work with more than 1,600 enterprises, we've observed patterns in the way businesses tend to follow along their digital transformation journey. These concepts apply to organizations across all industries. We have tested and validated our methods with customers and created the digital transformation blueprint below to share learnings from their best practices.

Businesses with strong digital transformation strategies and clear goals tend to be most effective in aligning their organizations to perform. While this may sound intuitive, we've seen many organizations dive head-on into design and implementation without first agreeing on the broader vision for the company or aligning to leadership priorities. More often

than not, these initiatives end up blocked by executives or stalled due to lack of adoption.

Each of these characteristics are important in relation to one another. This is where the digital transformation blueprint comes in, mapping the maturity of an organization's characteristics to provide a holistic view of digital competitiveness and actionable path forward.

3.1 Your digital transformation blueprint

Though there is no one-size-fits-all path to digital transformation, there is a set of standard characteristics that effectively all sophisticated enterprises share and common relationships among those characteristics. With MuleSoft's digital transformation blueprint, an enterprise can easily assess its digital competitiveness and identify the path forward.

The digital transformation blueprint has been instrumental in helping our most successful customers establish and advance their application network maturity and integration capabilities. The blueprint encompasses six key elements:

1. Strategy
2. Organization and governance
3. Software development life cycle (SDLC)
4. Discoverability and self-service
5. Operations
6. Community and evangelism

Let's take a closer look at the core elements of digital transformation. It's important to note that these elements are listed top to bottom by order of operations, not by priority, in the digital transformation blueprint.

	1. Basic	2. Siloed	3. Collaborative	4. Continuously improving	5. Way of life
Strategy	• No technology team and business partnership; no API strategy • Reactive, siloed integration approach • Non-existent application network	• Limited technology team and business partnership with some KPIs; fragmented API/ integration approach • Default integration approach is a few APIs tightly coupled with custom code • Isolated application network	• Mostly aligned technology team and business partnership with measured KPIs and converging API/integration strategies • Intentional "APIs as products" approach emerges as integration strategy • Emergent breadth and depth of application network	• Aligned technology team and business partnership with a shared API strategy and roadmap • New projects and plans treat "APIs as products" as de facto integration approach • Tangible and measured application network breadth and depth	• Aligned technology team and business partnership with an API strategy and roadmap with shared KPIs that are refreshed regularly • Intentional, API-led integration is the default approach for all projects • Ubiquitous application network breadth and depth that is tied directly to business outcomes in an API economy
Organization and governance	• No executive sponsorship for integration discipline • No recognition or incentives for reuse • No governance or visibility into applications and data	• Initial executive sponsor for integration discipline • Informal recognition for reuse with no incentives • Sporadic governance offering ad hoc visibility into applications and data	• Growing executive sponsorship for integration discipline • Initial incentive program for reuse • Limited governance offering limited visibility across network of applications and data	• Broad executive sponsorship for API-led adoption • Formalized incentive program aligned with established enterprise reuse goals • Governing mechanism offering emerging visibility into application network, including security and compliance	• Executive mandate on API-led adoption as a requirement for transformation • Enterprise-wide incentive program for API-led and reuse • Governing mechanism leverages application network visibility to enable built-in security, compliance, and efficiency
Software development life cycle (SDLC)	• No architecture: monolithic applications • No standard SDLC methodology • Manual testing to minimal QA	• Traditional architecture: business architecture separate from technical architecture • Documented SDLC (waterfall and agile/waterfall hybrid) • Basic QA automation and inconsistent reporting on functional quality	• Evolving architecture: business architecture begins to align with technical architecture • Agile is default; exceptions for bi-modal IT • Automated testing and reporting with coverage standards inclusive of NFRs	• Modern architecture: aligned business and technical architectures grounded in published principles and guidelines • Scaled agile SDLC • Automated multifaceted testing and reporting	• Modern API-led architecture tailored to support connectivity across the enterprise • Scaled, agile SDLC; increasing reusable asset production and consumption • Automated, multifaceted testing and reporting engrained in the SDLC with complete CI/CD
Discoverability and self-service	• Few to no APIs to discover • No self-service • Culture resists reuse with "not invented here" mindset	• APIs and integrations are discoverable within isolated repositories • Basic self-service that requires meetings, handoffs, and approvals • Culture desires reuse but lacks processes to normalize	• Few APIs and integrations are discoverable within a central repository • Emerging self-service to discover and use assets • Culture promotes reuse in pockets	• Growing number of discoverable APIs and integrations with a central or syndicated repository • Intuitive self-service extending to partners and customers • Culture promotes reuse with new projects looking to leverage existing assets	• All APIs and integrations are easily discoverable across the enterprise through cross-domain, tagged API repositories • Intuitive, guided self-service with asset recommendations for employees, partners, and customers • Culture biased toward reuse so majority of new project integration work leverages existing assets
Operations	• Legacy and ad hoc infrastructure • Manual, reactive troubleshooting • Monitoring and reporting capabilities require significant manual effort	• Line of business-specific infrastructure • Basic troubleshooting tools • Minimal monitoring and alerting requiring some manual effort	• Centralized infrastructure • Limited, semi-automated troubleshooting tools • Basic operational KPIs with basic monitoring, alerting, and logging tools	• Service-based infrastructure leverages DevOps practices and culture • Centralized collection of automated troubleshooting tools • Established operational KPIs with advanced monitoring, alerting, and logging tools	• Infrastructure is coherent to both architecture and business needs with ubiquitous DevOps culture • Integrated, specialized, and constantly innovating suite of troubleshooting tools • Dynamic operational KPIs through published multifaceted dashboards
Community and evangelism	• No evidence of community through activities or artifacts • No standardized onboarding, enablement, or training • No communications or awareness of platform success	• Ad hoc and infrequent community participation • Basic onboarding processes and initial enablement framework • Ad hoc, effort-intensive communications and limited awareness of platform success	• Intermittent community activities featuring APIs and integrations supported by in-platform content and features • Standardized enablement program including onboarding and training • Formalized cross-team communications with growing awareness of platform success	• Regular internal community activities featuring APIs and integrations including business outcomes • Federated enablement programs with a roadmap for continued enhancement • Streamlined communications with broader enterprise-level awareness of platform success	• Vibrant internal and external community powering the application network effect • Enterprise-wide enablement programs result in widespread experimentation-based innovation • Platform successes are broadly and habitually communicated and celebrated; ubiquitous awareness of platform success

Table 1: The digital transformation blueprint

3.2 Strategy

How does your enterprise think about, model, and develop a strategy that links API and integration capabilities with business transformation outcomes and technology?

In today's digital world, platform businesses — businesses that create value by facilitating exchanges between people, data, and devices — haven't just disrupted traditional business models, they have shifted the power of the market from the hands of suppliers to consumers. They do so by tapping into the exponential value of the network effect — a phenomenon in which a product or service increases in value with each user

it adds — to ensure the work they are doing today provides exponential return in the future.

An organization's success is now determined by the digital platform it uses to support its business and the business model that its platform enables, according to Accenture. This requires a tight strategic alignment between business and IT leaders, who should function as partners in determining a shared set of KPIs that measure API consumption patterns as they relate to business outcomes, such as which APIs drive adoption and which APIs generate the highest conversions. When measured consistently, digital businesses are able to glean strategic business insights from these KPIs — such as predictability of transaction patterns and new expansion opportunities — much faster than traditional businesses have been able to in the past.

With an aligned business and technology team strategy in place, the next critical element is a normalized, intentional API-led approach to integration. This approach emerges once the practice of managing APIs as products — core business assets instead of technology team projects — becomes the default approach for all projects.

The third critical element of a mature digital organization is an application network with ubiquitous breadth and depth. Tying the application network strategy directly to business outcomes allows the organization to tap into the network effect to drive business value. Each API added to the application network adds exponential value to the business. As the application network extends across the business, the business as a whole benefits from the outcomes.

3.3 Organization and governance

How does your enterprise organize and govern people, process, and technology to evolve along your digital transformation journey?

Digital transformation is not only driven by the adoption of new technologies; it requires a forward-thinking organizational approach. Instead of connecting one application to another and burying that connection, digital transformation requires organizations to treat each API as an application — one that is built, managed, and exposed for future use. This concept of productized APIs, or API-led connectivity, is key to fast and agile delivery in the market.

Many leaders have found an executive mandate — one that recognizes and attributes digital transformation to API-led adoption — to be an important aspect of successfully aligning their organizations with an API-led approach. The golden standard is the Bezos Mandate of 2002 that fueled the transformation of Amazon from an online bookstore to one of the world's most successful internet companies.

According to Conway's law, systems reflect the communication structures of your organization. If your organization's infrastructure is rigid or siloed, the products you create likely will be as well. In the beginning stages of their digital transformation journey, enterprises are often organized into teams that can take on projects. In the modern world, these teams need to shift their focus from short-term project delivery to long-term product delivery; products that have interdependent value from other segments of the enterprise. Similarly, enterprises need to shift their approach from one of building and managing products to one of cultivating platforms.

Enterprise management teams often struggle to govern their organization as traditional models are breaking down due to the significant differences in speed. Teams can make prototype experiences at unheard of rates, but can't integrate them with legacy data sources and enterprise systems that monetize the value created, As barriers to entry fall across industry, newer competitors are taking advantage of larger enterprises who can no longer keep up in the digital world. The very thing that enabled large enterprises to scale business models (a large

and robust physical infrastructures combined with enterprise software that is tightly coupled to custom processes) has become the anchor holding these enterprises in place and inhibiting their ability to transform.

When facing these two seemingly disconnected concerns (a shift from product to platform and the large infrastructure investments that have now shifted from "barriers to competitors" to "barriers to competing"), enterprises must now make the conscious and intentional choice to drive visibility and interoperability into legacy systems and application infrastructure. Once unlocked, these foundational systems can provide two distinct solutions to these existential problems:

1. The necessary real-time transparency of dynamic operational KPIs through published multifaceted dashboards. Cultivating a platform of products and experiences requires a more comprehensive view into the ecosystem where value is created and consumed.
2. The newly paved on-ramp to the enterprise application network. Enterprises must, if they hope to compete, create a new operating model where spinning up new products, experiences and value streams is no longer weighed down by the cost and time to integrate with isolated, non-uniform systems with inflexible processes

Lack of visibility into the applications and data across the organization can also create a blind spot in the organization's data privacy and security enforcement. Additionally, old funding models that do not invest in the value of API-led and emergent reuse can cause organizations to leave valuable business opportunities on the table. Effectively leveraging APIs requires a distributed emergent governance to provide visibility across the enterprise and enable efficient API design and development, enforce compliance and security protocols, and ensure incentives align to high-value business opportunities by rewarding API-led adoption and emergent reuse. The beauty of

an application network is that as organizations adopt API-led best practices and proliferate reuse, the network itself evolves into an effective yet decentralized governance mechanism which doesn't sacrifice agility and empowerment.

Mature application networks automatically provide visibility across the organization, which can be leveraged to enable built-in security, compliance, and efficiency. It also allows leaders to continually assess their portfolio of application and data and focus their attention on the areas of high reward. Once organizations align incentive structures with business outcomes, they see their people, processes, and technology fall into place.

3.4 Software development life cycle (SDLC)

How does your enterprise approach and develop architectural and design activities for business and technical domains?

Deploying an API-first approach requires a flexible, scalable, and modern architecture that fosters innovation. Trying to implement an API-first approach on a monolithic or traditional enterprise architecture will be a slow and costly process that ultimately won't move the needle on your business productivity or competitive stance in the market. True transformation requires an API-led architecture that is tailored to support reuse and connectivity across the organization.

The same is true for your approach to development — if you attempt to build APIs using waterfall methods you'll be quickly outpaced by more agile competitors. Executing on your API strategy requires agile, iterative software development life cycles (SDLC) on a large scale, such as Scaled Agile Framework (SAFE) and Scrum of Scrums.

Mature organizations that have mastered digital transformation have done so with a modern architecture that features a core integration platform. Their technology teams deploy an application-development model, which includes automated multifaceted testing and reporting ingrained in their SDLC, with

completely continuous integration and continuous delivery that allows the organization to quickly test and launch new features and applications. These successful organizations tightly couple SDLC metrics with project funding to measure and prioritize projects with the highest business impact.

3.5 Discoverability and self-service

How does your enterprise approach, develop, and deploy software applications and components?

When developers are able to quickly and easily find and consume APIs and integrations from projects across the enterprise, it makes businesses faster and more productive as a whole. Consider this: with each API a developer creates atop a system or process, significant time and effort are saved in the next integration project that requires that system or process. When created within an application network that multiple developers have access to, that API can be reused by multiple developers on multiple projects spanning the entire enterprise. And when problems arise, or vulnerabilities are surfaced, they need only be addressed in one place. With each reuse, the value of this API multiples, resulting in a significant decrease in operational expenses as a percentage of revenue for the company.

"When developers are able to quickly and easily find and consume APIs and integrations from projects across the enterprise, it makes businesses faster and more productive as a whole."

Unfortunately, many enterprises have traditionally found resistance to collaboration and reuse among their developer community. This resistance, termed NIH or "not invented here," often stems from a sense of wariness or distrust of the value of

others' creations. This resulted from years of building assets only within projects versus as products that are tested, documented, and operated so they last, so they're easy to service, and, consequently, so others can use them via self-service. Moreover, there were few, if any, resources to show how to create reusable APIs and integrations, and promote and reward their reuse. Finally, without means of controlling who ends up accessing their APIs, reuse was actually an anti-pattern, because unfettered access implied unlimited responsibility and liability in the future. Developers then found it more straightforward and safer to figure out new integration projects from scratch, on their own, every time, and at fixed costs — rather than investing their creativity in adding new value.

As your application network matures, the ease of discovering APIs and integrations within your organization will increase, facilitated through the use of cross-domain API repositories with tagging. When coupled with guided self-service — promoted through recommended APIs and integrations — developers organically lean into collaboration and reuse. Additionally, teams benefit from the intuitive ability to self-serve for specific needs. The most sophisticated digital organizations have a culture that biases toward reuse as developers who are starting new projects find the majority of the hard lifting already complete.

3.6 Operations

How does your enterprise approach and manage technology operations for its applications and components?

Transformation requires businesses to have an infrastructure that is coherent to the needs of both the architecture and the business, with DevOps ingrained in the culture. At peak maturity, application networks are in a state of constant innovation, producing a steady flow of integrated and specialized tools in their troubleshooting suite. Observability

replaces monitoring, alerting, and logging. The network delivers self-healing features, fixes, and updates frequently and in close alignment with business objectives.

When organizations reach a dynamic operational state, they have the distributed systems and observability in place so that any operator can access and address issues across the enterprise through published, multifaceted dashboards. Any team member provisioned with access can log in anywhere in the network and get a view of the system's needs that is tailored to that member's expertise. For example, when an infrastructure operator opens the dashboard, he or she will automatically be looking at a view of the system that highlights applicable infrastructure issues that need to be addressed. Developers, architects, and DevOps teams have granular visibility across various runtimes, APIs, integrations, and other services, ultimately reducing mean time to resolution, increasing uptime, and improving data-driven business and technical intelligence across the business.

3.7 Community and evangelism

How does your enterprise engage top talent to foster innovation?

For many traditional enterprises, digital transformation requires a drastic shift in both mindset behavior from one that shies away from change to one that embraces risk. However, doing so is mandatory in order to attract and retain top-performing talent. Successful digital businesses like Apple have created a vibrant internal and external developer community that fosters creativity and has become one of the most sought-after technical hubs for top talent.

When an organization builds a community that truly rallies behind their application network they benefit from increased productivity, lower rates of project failure, and the sharing of ideas that lead to new innovations. Organizations can facilitate

this exchange by engaging the community in activities like workshops and hackathons.

Additionally, as organizations mature in their digital transformation journey, the on-ramp to application network becomes completely automated. Training plans and content such as API reference, articles, and sample code, which traditionally required manual updates, are automatically updated with refreshed assets that are regularly contributed by community members. At the height of maturity, digital organizations find broad and habitual communications — including developer programs and forums — as well as celebrations of platform successes built into their culture.

Section 4: Enterprise implications and recommendations

For many enterprises, the journey to digital transformation is hazy. In today's digital world, the sheer number of options and speed of change is overwhelming — which is why it is so easy for businesses to veer off course or hit roadblocks along the way. The steps below help enterprises take the lead on technology-enabled business transformation and focus on delivering emerging technologies that support business strategy.

4.1 Establish a baseline of your digital transformation maturity

The first step in the digital transformation journey is to assess the digital maturity of your application network and integration capabilities. Establishing a baseline will allow you to understanding critical areas of opportunity and provide a benchmark to measure success along the way. The digital transformation blueprint lays out the assessment process, which can be repeated as necessary to track improvements and clarify traceable correlations in business and technology results.

4.2 Develop and execute a program

Multifaceted capability development inside of an enterprise that is focused on business outcomes requires perseverance and strategic insight. Initiative and program planning processes are often based on a "fit for purpose" model where teams and leaders are recognized and rewarded for meeting specific delivery goals that center around dates, scope, and quality. Without a new structure or mechanism that aligns short term delivery with long term capability improvements, teams often

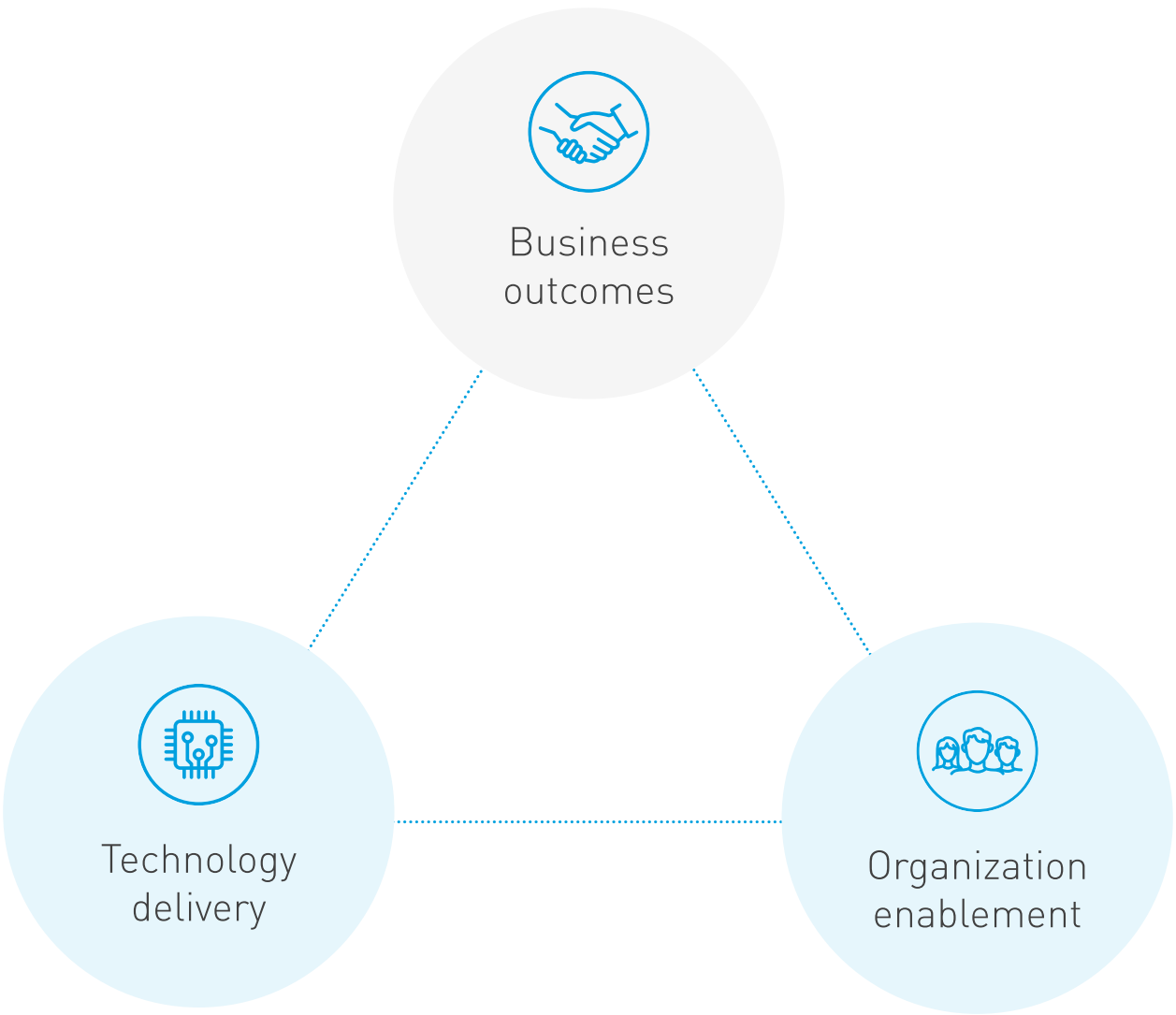
follow plans that ritualistically build new siloes or contribute to those that already exist. Transformational initiatives require a program that embraces new models and rituals designed to help autonomous teams adapt to new expectations on delivering software designed for reuse.

4.3 Get the incentives right

Existing corporate reward systems often incentivize behaviors that align with the status quo. Creating opportunities to recognize and reward individuals, leaders, and teams is often necessary to help employees and managers understand that the enterprise values efforts that put enterprise goals ahead of individual goals. Once organizations put the right incentive structure in place to reward actions that contribute to transformation, such as API-led integration and reuse, the people, process, and technology will fall into place. Skewing towards a multifaceted approach with varying techniques — such as attachment to compensation incentives, formalized socialization, and compelling communications that target key audiences — will gain top down executive support and bottoms up commitment.

Section 5: MuleSoft: Your partner in digital transformation

Digital transformation is a journey. Full transformation requires a mindset shift in your organization's people, process, and technology. The digital transformation blueprint was developed based on customer insights and research to provide you with a benchmark and recommendations for how to move forward. MuleSoft's technology, business outcomes, and organizational enablement will enable you to build transformation into the root of the company to truly transform it from the ground up.



5.1 Outcome-based delivery

MuleSoft's Outcomes-Based Delivery (OBD) methodology is used by over 1,600 customers. MuleSoft has proven that enterprises who focus on developing a highly responsive

integration capability will reap significant gains in their ability to practice and demonstrate agility, relative to competitors who do not. The approach is focused on three pillars: business outcomes, organizational enablement, and technology delivery. All three are required for a customer to succeed. Our methodology includes step-by-step guides within each of the three pillars for customers to use to drive their success.

	Plan for success	Establish the foundation	Build to scale	Measure impact
Business outcomes	Agree on business outcomes and KPIs	Monitor and manage	Refresh the business plan	Measure business outcomes
	Develop the overall success plan			
Technology delivery	Define Anypoint Platform vision and roadmap	Deploy Anypoint Platform	Refine and scale Anypoint Platform	Measure Anypoint Platform KPIs
	Design Anypoint Platform architecture and implementation plan			
	Prioritize IT projects and quick wins	Define reference architecture	Onboard additional project teams	Measure project KPIs
	Staff and onboard the project teams	Launch initial projects and quick wins	Launch additional projects	
Org enablement	Assess integration capabilities	Build and publish foundational assets	Drive consumption	Measure C4E KPIs
	Establish the C4E operating model	Evangelize		
	Onboard MuleSoft	Staff, train, and launch team	Monitor Anypoint Platform	Measure support KPIs
	Determine the internal support operating model	Publish support guidance and self-serve materials		
	Agree on initial roles	Develop the broader training plan	Update training plan	Conduct skills assessment
	Train the initial team(s)	Launch experiential learning opportunities		

Table 2: MuleSoft's Outcomes-Based Delivery (OBD) methodology is focused on three pillars: business outcomes, organizational enablement, and technology delivery.

5.2 MuleSoft Catalyst

To achieve business transformation, technology alone is not enough – the right operating model, organizational structure, and approach to execution are also critical. MuleSoft Catalyst™ is a set of packaged offerings, including best practices, assets, services, training, and customer success programs, for companies that want to unleash the full power of API-led connectivity. It offers support for core business processes, including onboarding, scheduling, and a single view of customers across systems. Access architecture best practices, drawn from our insights working with industry leaders, to promote self-service and reuse in your organization. Catalyst also provides prebuilt API designs and implementations to unlock core business data across your enterprise.

Catalyst mobilize

Develop a clear integration strategy and identify the value of an API-led approach

Catalyst scale

Scale innovation by incrementally building an enterprise platform of pluggable assets for reuse across your enterprise

Catalyst launch

Establish a foundation to drive immediate value from Anypoint Platform through organizational enablement and deployment

Catalyst optimize

Measure impact and effectiveness of your people, process, and technology to optimize and achieve business outcomes

Figure 2: MuleSoft Catalyst offers best practices, assets, services, training, and customer success programs.

5.3 Center for Enablement

Behind every successful transformation is a small faction of bar raisers, change agents, and cultural ambassadors driving radical change for technology teams. These are the people who wake up every morning and ask, “how can I transform IT into a delivery agent?” At MuleSoft, we work with companies to establish a Center for Enablement (C4E) — a small cross-functional team to align technology and business strategy. A C4E then enables teams across the enterprise to design and build productized APIs in a decentralized way. This promotes reuse through an API ecosystem which improves efficiency and accelerates innovation. With a C4E, our customers realize and maintain increased productivity, decreased time to market for new products, and report consistently higher quality of deliverables and greater enterprise security.

About MuleSoft

MuleSoft, a Salesforce company

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™ empowers over 1,600 organizations in approximately 60 countries to build application networks. By unlocking data across the enterprise with application networks, organizations can easily deliver new revenue channels, increase operational efficiency, and create differentiated customer experiences.

For more information, visit **mulesoft.com**