

The seven dimensions of scale

How to plan for technology infrastructure growth





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Scalability is an important consideration when purchasing or building technology infrastructure for a business. Foundational systems that can't scale become crippling, resulting in lost momentum, expensive replatforming and an opportunity for competitors to leapfrog ahead.

Consumers expect websites, apps and platforms to be functional – always. “The smallest slip – whether a simple glitch or an overrun server – can frustrate consumers enough to send them immediately to your competitors, and can even cause irreparable reputational harm over time,” Chris Gerbig, co-founder, president and COO of the fast-growing online retailer Pink Lily.¹

So why do so many companies run into scalability issues? It's not that they failed to plan for scale; it's because planning is more complex than just asking “will it scale?”

We all know what it means to scale, right? But, when we take a closer look, it becomes clear that scaling encompasses a lot of different types of growth. At its most basic, scale refers to administrative, functional and load scalability – if a system or process easily support more users, additional features or functionality, and spikes or rapid growth in usage.

Businesses that want to grow faster need more than basic scalability. They need scalability that supports increased complexity and sophistication, integration with new technology, greater security and legal requirements, globalization and accelerated speed to market.

Read on to learn about the seven dimensions of scale that business leaders should consider when choosing a content platform or other key piece of technology infrastructure.



¹Total Retail, “Your Growth Checklist: 5 Dimensions of Scalability.”



INCREASING VOLUME: CUSTOMER GROWTH, USAGE SPIKES AND MASSIVE DATA STORAGE

One of the most common concerns with digital products is load scalability. Scaling for volume means choosing platforms that can handle more customers, traffic, API calls, images, content, payments, etc. – even when it's unexpected. Businesses need to ensure that the resources they invest in acquiring customers and increasing use won't be undermined by a site or app that crashes.

Well-established brands, including Macy's, J. Crew and Walmart, have all suffered embarrassing site crashes and slowdowns on Black Friday.

Retail aggregator LovetheSales.com estimated losses ranging from \$775,000 for J.Crew² to \$9 million for Walmart.³

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Usage spikes are not just a retail concern. Peak commute times, holiday traffic and construction can spike demand for ride share apps and customer support portals in the transportation industry. Sports and entertainment apps need to serve record numbers of fans during events like the Super Bowl. Performance issues in any of these cases can hurt customer loyalty and damage a business's reputation.

The importance of load scalability also impacts day-to-day use, as growing businesses add more data, content, projects and workflows to their systems. Slowdowns and bottlenecks can be a sign of scalability issues. Small issues such as reports that time out, processes that slow the system down and manual workarounds can all become big problems as a business scales.

Whether it's a usage spike or faster than projected growth, choosing infrastructure that can handle increased volume enables your business to maximize that opportunity. Many enterprise-ready platforms offer pay-as-you-go pricing. This enables customers to start small on a platform that can confidently scale up when needed.

EXPANDING IN NUMBER OF PRODUCTS, APPLICATIONS, SITES, CHANNELS, ETC.

Legacy CMSes have failed to provide horizontal scalability. They often fail to connect well with other systems, often limiting growth in flexibility and diverse capabilities. Instead of scaling one platform to manage content for different products and channels, many businesses find themselves adding more and more CMSes to serve different channels and products. Multiple CMSes create content silos, redundant work and slower development cycles as developers get tied up in CMS maintenance and content workflows.

²Business Insider, “J.Crew's website is crashing as customers try to shop Black Friday deals, and experts say it could have cost the company over \$700,000 in sales”

³Retail Touch Points, “Site Outages Plague Walmart, J.Crew, Lowe's, Best Buy, Office Depot During Black Friday Weekend”



Adding more platforms that serve the same function or customizing a platform to the point that it is bulky and breaks makes it extremely difficult to scale. The ideal platform should enable teams to become more efficient as they create more sites, projects and products using the same tools. For example, Contentful's content infrastructure organizes content into reusable components that can be used to quickly launch content on new channels or to spin up new sites. See how [Red Bull Music Academy](#) spins up sites for hundreds of live events and music launches in a third of the time with Contentful.

The ability to use one platform for multiple use cases is only part of the equation. "Many software platforms can support a single use case across multiple business units, or multiple use cases in a single business unit. This is not [the] same

thing as deploying a platform that can solve diverse business problems across the spectrum, around the world. Technologies that can scale to the largest enterprises also have to address a diversity of business lines, sometimes even competing with one another internally," explains Tony Byrne, founder of The Real Story Group.⁴

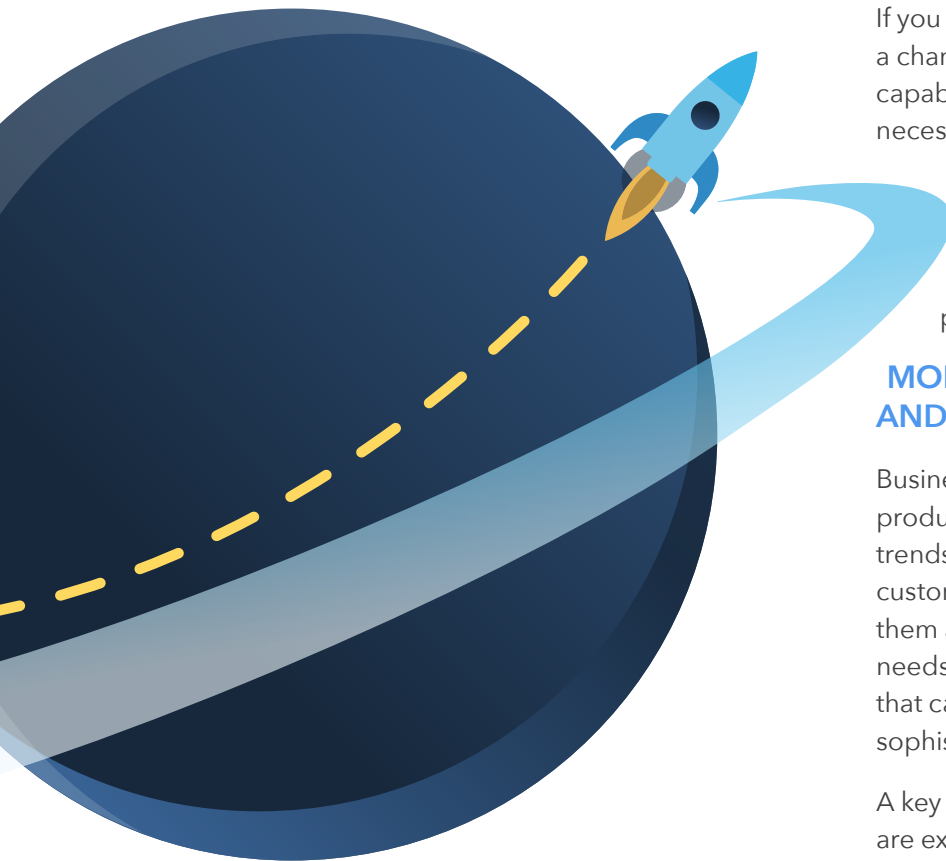
Contentful addresses this challenge by offering multiple features that customers can use to organize their projects, products, teams and channels. These include roles and permissions that can be managed at the user or team level, and spaces that are like digital rooms for your content. Some customers use a single space for everything, while others use one space per channel, team or product. Some larger customers organize a master space for content and separate spaces for each experience (web, mobile, onsite, etc.).

If you seek to grow your product offering, a channel-agnostic content platform that is capable of powering diverse products is a necessity. Choose a platform to fit your business, rather than adjusting your business around a rigid platform. This empowers you to create more efficient development workflows, and ultimately to ship new products and experiences faster.

MORE SOPHISTICATED PRODUCTS AND INTEGRATIONS

Businesses are constantly improving their products based on customer insights, market trends and better technology. The goal is to wow customers with something new that delights them and solves their problems or meets their needs. To do that, they need to create solutions that can scale vertically and support more sophisticated products and complex use cases.

A key part of this is choosing platforms that are extensible so that new technology can be integrated seamlessly. Monolithic suites and



⁴Real Story Group, "Challenge of Scale within the Enterprise - Part 1"



platforms that only work well with preferred vendors limit an organization's options when it comes to choosing the best tools for the job. What's more, they can be slow to adopt new technologies.

Speed-oriented organizations are turning to an approach that empowers them to pick and choose the tools they want in their tech stack. This allows them to differentiate themselves in the market with unique capabilities and integrations and move faster to adopt new technologies.

Look for solutions that remove limits and empower teams to integrate with new technology. "Leveraging a technology-agnostic platform that can scale with an organization's needs and offers the flexibility to integrate with other industry specific applications helps to divert the risk of vendor lock-in and offers greater versatility," writes David Roe in CMS Wire.⁵

Contentful is API-first, cloud-based and language agnostic. It [integrates with more than 300 applications](#), including [Optimizely](#), Tealium, Segment, Atlassian, New Relic, and Adobe Audience Manager. It's also a founding member of the [Digital Experience Stack Alliance](#), to seamlessly integrate best-in-class services in a modern technology stack. Our customer support and developer resources help our customers explore new possibilities and bring their visions to launch faster.

REACHING GLOBAL MARKETS

Businesses of all sizes can access global markets through digital channels, but successfully scaling into new markets involves more than just translating content into different languages. Platforms that promise geographic scalability need to address numerous challenges, including distributed teams, localization, currency, legal and regulatory requirements, download speed and reliability.

Speaking your customer's language goes beyond translating copy; it requires localization – using colloquial expressions, referencing local events and avoiding words that might be offensive in different cultures. This requires a combination of translation tools, content management and processes to govern how content is created, edited and delivered.

Keeping localization strategy consistent with ecommerce offerings is a common challenge for global enterprises. [Clover](#) needed to localize their knowledge base in coordination with their ecommerce capabilities. Before making the switch to a localization-friendly content layer, they had issues where they were serving support content encouraging a direct purchase of a product that wasn't available in all countries.

Legal and regulatory requirements are also a critical consideration for global businesses that must respond to changes quickly. Byrne uses GDPR as a high profile example of the impact changing regulations can have on businesses.

"Leveraging a...platform that can scale with an organization's needs and offers the flexibility to integrate with other industry specific applications helps to divert the risk of vendor lock-in and offers greater versatility"

- David Roe, CMS Wire

⁵CMS Wire, "Tips for Managing Digital Transformation Strategies"



He warns “if your digital systems can’t flex, the enterprise can suffer enormous frustration – and expense.”⁶

To scale globally, you need to think locally. Choose a platform that supports global customers with localization features, integrated translation tools, content delivery networks that are fast and reliable across the globe, and granular permissions and roles that empower distributed teams to collaborate without sacrificing consistency and quality.

INCREASING THE NUMBER OF USERS AND TEAMS ON A PLATFORM

Administrative scale is a sometimes overlooked function of growth. But it can cause huge headaches when platforms lack features to help organize, operationalize and govern users. As an organization grows, team structures, processes and workflows evolve and become more complex.

It’s not a matter of just adding more seats to a platform. Businesses need the ability to organize and reorganize how users interact, and to streamline workflows and to adjust permissions as roles change.

Byrne cites access control and entitlements as a common challenge of scale. “Scalability here means being able to connect to multiple different identity stores (the inevitable result of mergers & acquisitions, if nothing else), as well as support complex group and role structures for authorization in every facet of the software.”

It’s not enough to just buy a platform – a million features are a great thing to have, but implementation support is just as important. Does your chosen platform have the in-house expertise on how to help the people and processes scale? Administrative scale isn’t a one-size-fits-all solution. Every organization is different and its organizational structure, workflows and processes will change over time. Intercom, a leader in the business

communication software space, saw the value in buying a product with guaranteed support: “The Contentful support team would respond in just hours – it seems like Contentful really cares about unblocking engineering teams which is really refreshing compared to other partners.”

Contentful’s granular permissions and roles can be updated at the individual or team level, making it easier to adjust access as teams change. All workflows and the editorial app are customizable. For example, [The British Museum](#) customized the editorial app to meet the needs and preferences of each curation team. Other customers organize teams into different spaces, giving each a level of independence while keeping content unified within one platform. Platforms that offer many flexible options for organizing people and workflows can better accommodate the way your business works as it scales.

ACCELERATE DEVELOPMENT SPEED AND SPEED TO MARKET

Success in scalability results in accelerated development speed. Companies that scale effectively ship more products – faster. When they upgraded their content infrastructure, [TUI Nordic](#) was able to launch customer touchpoints five times faster. [ARD](#) went from no releases in a year to one developer release per day, and one beta release per week. “In one to two years, I actually want 50 to 60 releases per day in production,” says Malte Blumberg, chief technology officer for ARD online.

It’s not enough for a platform to just work well at your current pace. It has to be able to support an accelerated pace as your business grows.

It’s also important to consider how well the content layer fits into existing software development pipelines and supports best practices, including iterative development, agile workflows and continuous deployment. The platform should be able to adapt to how teams currently work and provide features and support

⁶Real Story Group, “Challenge of Scale within the Enterprise - Part 1”



that empower them to accelerate development speed. The platform is the catalyst that provides the tools development teams need to work faster.

IS THE INFRASTRUCTURE SECURE AND UNBREAKABLE?

Nothing kills the excitement of a fast-growing product like a security breach or major outage. Sure, there may be a lot of buzz around fast iterations and failing forward, but most companies still need to balance agility with reliability, especially when it comes to security concerns that could damage their reputation.

This is particularly true of high profile companies. "Large enterprises want to be agile like everyone else, but their stakes in the game typically have them seeking something more reliable than 'public beta.' And of course, higher profile also means more likelihood of lawsuits, especially in litigation-happy North America," explains Byrne.

Choosing platforms that have enterprise-level security and business continuity measures in place helps minimize risks as you scale. Platform providers should be transparent about their approach to security and ready to share details about how they ensure that security measures keep pace with new threats and best practices. Keep in mind that plug-ins and third-party tools carry their own security risks, which must be

considered when considering platforms with limited integration partners.

Business leaders should also consider how platform infrastructure will scale to meet future needs, including different customer preferences and compliance requirements. Visit the Contentful website to learn more about our [security](#) and business continuity practices.

FUTURE-PROOF YOUR BUSINESS

While it's impossible to predict the future, choosing platforms that address these seven dimensions of scale can help future-proof your business. Platforms that are extensible, adapt to different workflows and are constantly evolving and offering new features are more likely to meet current and future needs.

A future-proof platform should have case studies that inspire you to think bigger and get excited about the possibilities. If businesses want to start small with a single project, they can, but there should always be room for growth in any direction after the proof of concept phase. Don't let your chosen platform be a growth inhibitor.

Contentful provides features that help everyone work faster. The editorial app empowers editors to create edit and publish content without waiting for developers. Developers can stay focused focus on building and shipping faster, with support from Contentful's customer success professionals, solutions architects and extensive [developer documentation](#). Contentful offers a wealth of resources, with powerful APIs and working demos help prototype with ease and build sophisticated apps faster than ever before.

