

Build Digital Experiences That Transform Your Business.

By Corey Hamilton

Do your websites and applications give you an edge over your competitors? Are employees more productive because of the solutions you've put in place? Can you easily replace digital services if you find a new one that offers more value? Does your marketing team make changes to your websites without using up development resources?

If you've answered 'no' to any of these questions, then it may be time to modernize the technology stack that powers your websites and applications.



1 The need to modernize.

Regardless of which business you're in, the leaders in your industry likely have one thing in common—they've built online experiences that pushed their business ahead of others in the industry. This has proven true in obvious cases such as Netflix and Amazon but also in many less obvious industries like:

1. Higher education where universities that introduced online applications and long-distance learning have seen huge enrollment increases in recent years,
2. Financial services where online banking has become the preferred (and sometimes only) option for many customers,
3. Restaurants where online ordering lets customers place orders from their home and then collect their meals when they arrive without waiting in lines.

If your business isn't finding new ways to appeal to customers while also optimizing your internal operations, it's likely one of your competitors is. Unfortunately, many businesses struggle to introduce new digital experiences because of the technologies they've implemented in the past. Legacy infrastructure and software that requires ongoing maintenance just to keep it running saps technical resources that could be building your next platform. Similarly, all-in-one solutions that lock you into using a single vendor's features prevent you from leveraging new solutions that would benefit your business.

Of course, replacing these systems is often expensive and a potentially risky endeavor. To free yourself from this situation, you need an architecture that lets you start small and evolve your applications over time. This is one of the key benefits of microservice-based applications.



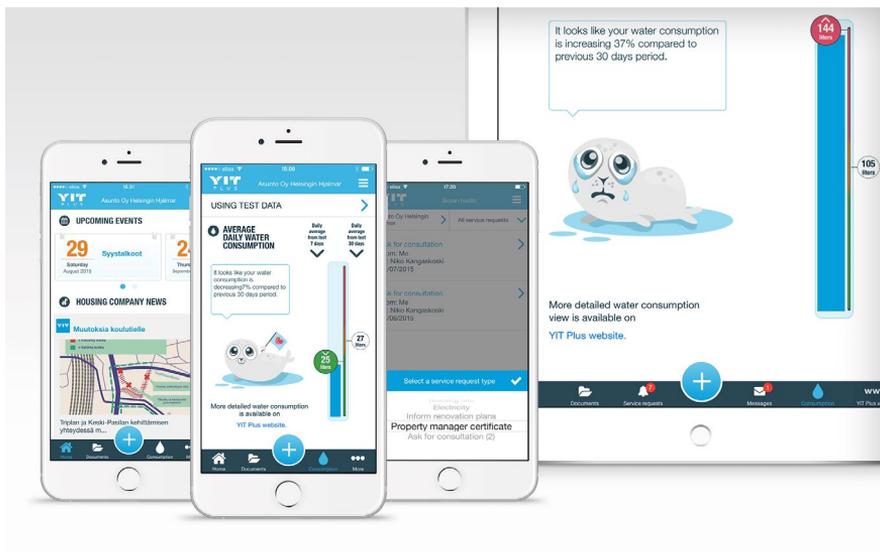
2 Start small and expand on your terms.

Cloud platforms, such as AWS and Microsoft Azure, have taught developers and enterprise architects that agility is not only possible in large-scale platforms, but that it's tremendously powerful. Unlike the monolithic solutions of the past, these platforms and the practices they promote let companies build and deploy the first version of new applications using minimal infrastructure and resources and then expand over time as demand dictates.

These first versions may include only the most basic features that add value for your business, but the long-term potential is huge. Over time, you can introduce new functionality or integrate with additional services as your business needs evolve and new solutions are identified. If your needs change or the business outgrows one of the services, it can easily be swapped out by a new service that's a better fit at that time.

3 Use the right tool for the job.

During his keynote speech at the 2020 re:Invent conference, AWS CEO Andy Jassy explained that trying to use a single solution to perform each function of an application is like playing 18 holes of golf with only one or two clubs. Golfers use a full set of clubs so they can select the best one for each shot they take throughout the course. When you choose a microservice-based architecture for your applications, you can use this same mentality for each function you need to fulfill.



The YIT customer portal gives housing residents omnichannel access to content and services pulled from a variety of independent sources.

This was the approach taken by YIT, the largest construction firm in Finland, when building a customer portal to engage with residents living in their housing facilities throughout Europe. Their microservice-based architecture let them rapidly develop, test, and deploy new functionality using a broad ecosystem of services to fulfill the various requirements of their portal. Kentico Kontent is one of these services. It integrates into their tech stack through a secure API, delivering content to residents based on their specific housing location and expressed interests. Other content is fed into this same experience, with offers from local service providers as well as some corporate information that's pulled in from the company's legacy content repository.

YIT plans to continue expanding this portal's capabilities with additional services and more personalized content in the future. By adopting a best-of-breed approach on top of a modern architecture, they're free to test out new services and deploy new features at their own pace.

4 Build blazing fast apps.

If your customers are like most consumers in today's always-on, digitally connected world, they expect an excellent experience every time they interact with your business online. The performance of your customer-facing applications is one key to ensuring a high-quality experience. Of course, performance impacts more than just customer experience as well, with page load speeds continuing to play a key role in SEO strategies to ensure your business is near the top of the list of search results for potential new customers. For these reasons, many businesses now serve up static web pages to ensure maximum performance.

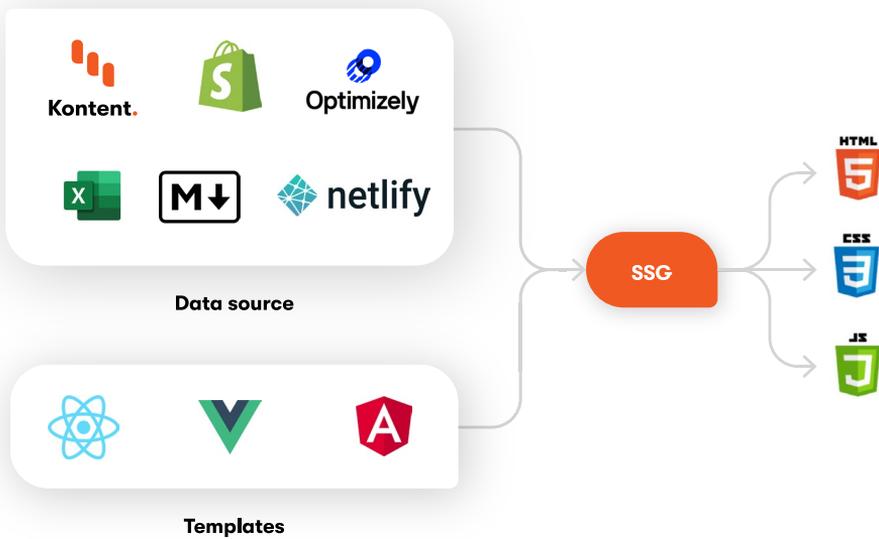
To some, static web pages may seem like an antiquated approach, with memories of the hard-coded HTML files that made up many websites back around 2001. However, today's static sites utilize modern client-side techniques (combined with JavaScript and APIs) to produce dynamic experiences while also offering blazing fast performance. The increasing popularity of this approach has led to a new group of services called Static Site Generators (SSGs).

When combined with a content management system, Static Site Generators (such as Gatsby or Next.js) retrieve content through an API during the site build process and generate HTML that gets saved into static files whenever content is created or updated. These static files then get served to site visitors (usually through a CDN) when they request a page. This configuration isolates back-end services from the visitor experience so that any server-side delays or downtime goes unnoticed by customers.

Of course, developers have the freedom to customize how these pages are built to meet any business requirements. Intralox, one of the world's leading producers of conveyor belts, wanted the performance benefits of an SSG but also needed to offer multilingual

versions of their website. To accomplish this, they combined the Kentico Kontent headless CMS with the Gatsby static site generator. The integration was facilitated by an existing open-source plug-in that combines these services to produce static web pages. The Intralox team decided to expand this plug-in, adding multilingual support to produce nine localized variants for each page of their site. These translated pages are served from their CDN to ensure fast page loads and prevent server failures from taking down the website.

Since launching their new site, the Intralox team has enjoyed noticeably faster page loads while also benefitting from improved search engine rankings.



Static Site Generators isolate back-end services from the customer experience.

5 Think beyond standard presentation.

While static sites offer great performance with the potential for dynamic experiences, some companies have taken dynamic experiences to a new level by tailoring the customer experience based on external data.

This is exactly what the digital agency UserCentric did when tasked with creating an online job placement service for medical professionals throughout Victoria, Australia. The new service needed to identify qualified job candidates and aid in their recruitment for 348 different types of jobs spread across 142 hospitals and health facilities. Application processes varied significantly from one job to the next, requiring the system to guide each candidate through the necessary steps for each specific opening, including background checks, professional references, and limitations around how many openings a candidate could apply for.

Basic Physicians Training BPT1/BPT2 (2019/2020)
REGISTRATION OPEN | CLOSES - 15 JULY 2019

Registrations are now open. Please ensure that you give sufficient time to gather and upload all documents, and add in your referees, prior to the closing date.

PROGRESS	DUE DATE	STATUS
Enter eligibility details	COMPLETED 14 JUNE 2019	Edit ✓
Add preferences	COMPLETED 26 JUNE 2019	Edit ✓
Nominate referees	PENDING 26 JUNE 2019	HP KT JM SH Pending ⚠
Upload your CV	COMPLETED 26 JUNE 2019	Edit ✓
Submit registration	COMPLETED 26 JUNE 2019	Complete ✓

✓ Registration
Registration received on Friday 14th, September

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The online application process is driven by configuration settings in the CMS content model.



UserCentric devised a “Configuration-as-a-Service” solution on top of the Kentico Kontent headless CMS. They leveraged the CMS content model to manage job descriptions as well as configuration variables that drive the experience for each job candidate. As candidates advance through the application process, these variables determine which information is displayed and which steps the candidate must complete. This approach has replaced many of the manual steps hospital administrators previously had to do themselves, accelerating the recruitment process by 50% for each job. Perhaps most importantly, the citizens of Victoria, Australia, can now rest easy knowing their state’s health system will be fully staffed and ready to serve patients for the foreseeable future.

6 Continuous Evolution.

Ultimately, how your digital services evolve is dependent on the challenges and opportunities facing your business. However, the combination of microservices, modern development frameworks, and API-based services make it possible to create pretty much any experience for your customers.

As you get started, keep in mind that customer expectations and digital touchpoints will continue to evolve, and today's "modern" technologies and practices will one day become obsolete themselves. To ensure your business doesn't get left behind, your technology stack and processes will need to continue evolving as well. By adopting an iterative mindset with technologies that promote flexibility and agility, you'll be prepared to create engaging customer experiences today as well as in the future.

Are you ready to build modern applications?

Talk to the Kentico Kontent team to get started!

GET STARTED

