

# The Evolving Value of the Portal

How Health Care Providers May  
Benefit from Portals

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# Executive Summary

Portals have evolved from simple systems of record to systems of engagement, reaching different target groups across various delivery channels. Applications range from public facing websites to intranets, extranets and e-commerce to self-service and large integration solutions.

This evolution started with the birth of the Internet some 20 years ago and continues even now. Today, portals act as digital platforms and audience-targeted systems of connection that place customers, employees and partners at the heart of an organization's business.

## The Rise of Platforms

We are in the midst of a long-term and profound shift in the way hospitals interact with their patients. This shift is being driven by the same megatrends that are transforming information technology: cloud, mobility, social and big data. Already, 40% of the worldwide population (80–90% in developed economies) use the Internet; by 2018, 3.7 billion people will be online.

At this moment, almost half of Internet users access the Web using a mobile device; by 2018, nearly three-quarters will. The number of mobile Internet users will more than double from 1.3 billion today to 2.7 billion by 2018.

As patients have become comfortable engaging online, organizations have led the way for digital migration. Hospital managers, staff and IT departments in many health care providers have, and currently are, investing heavily in building platforms that enable a new way of doing business, collaboration and workflows. But how did it all start?

## Origin of Portals: Systems of Record

When the first web portals started to appear, back in the mid- to late-1990s, organizations used them to display information and explore the boundaries of what the Internet could mean for them. Portals were used for elementary knowledge sharing of electronic information to people that could not be reached by email, Telnet or bulletin board systems (BBS).

Around the same time, the first Internet search machines and commercial web crawlers such as DEC's AltaVista and Lycos became popular to retrieve the information that was made available. At this stage, organizations started to look into the possibility of creating an online presence.

By being online (having at least a landing page with information about the organization, such as phone and fax numbers, addresses and sometimes an email address), companies started to attract contacts beyond their traditional reach.

At this time the Web was a one-to-many medium, where a single piece of static information was reaching a large public audience. Throughout that phase, portals largely served as Systems of Record, storing and delivering information to users in an efficient way.

## Modern Portals: Systems of Engagement

Next, a rapid change began to take place. Fueled by the fast adoption of online services, the rise of purely digital enterprises like Google, eBay and Yahoo, and the fast adoption of mobile devices, portals have evolved in two ways.

First, portals and websites became the new storefronts for selling goods, services and ideas to an ever growing audience. In many ways e-commerce, self-publishing and ubiquitous access created new momentum, giving innovative companies unprecedented ways to reach their audiences with targeted messages.

Second, the progression of advertising channels, sophisticated search engines and changing distribution chains heated up competition and shook up traditional markets. Suddenly, established enterprises were threatened, not by existing competitors, but start-ups who fundamentally disrupted their way of doing business.

Companies like Amazon, Uber and AirBnB are prime examples of how new ways of thinking, coupled with the power of the Internet, can result in lucrative business models with much less upfront investment and quicker returns of investment.

Enterprises in established industries have seen this paradigm shift, with many responding and adapting with great success. Retailer Burberry quickly learned and took advantage of the digital revolution, focusing 60% of its marketing budget on digital channels. The result was doubled revenue and tripling of the stock prices between 2007 and 2011.

With this evolution of digital business, the role of the portal changed. In addition to delivering records and information, portals were used as Systems of Engagement, capable of not just reaching a large audience, but also of providing a way to engage the audience and tailor content on a one-to-one communication scale.

Less visible to the public, but certainly as remarkable, was the impact of these changes on the back end of the portal. Organizations cleared obstacles leading to improvements in efficiency that could not be envisioned just 20 years ago.

Currently, hospitals across different health care providers are using portal platform technologies to experience many business benefits including:

## 1. Business Continuity

Through an online presence, or the front end of portal solutions, providers can establish a high level of resilience and improved continuity. Using portals, many hospitals today are thriving and adapting to the ever-changing digital environment by offering a continuity of experiences across digital touchpoints and physical locations for doctors, nurses and patients. For years, health group or Electronic Health Records (EHR) have been digitally stored and copied for backup purposes. Now they are increasingly moving outside the organization into the cloud. Moreover, the knowledge about behavior patterns and service preferences of the patient, employee or partner offer providers the ability to engage with relevance, convenience and much lower investments.

## 2. Increased Efficiency

By connecting what happens on the front end of the portal with the activities that are not seen by the patient (back end), like logistics, order management and human resources, health care providers have made tremendous efficiency gains. For example, through “Book an appointment online, get right in to see your doctor” options at clinics and hospitals, patients schedule more online. Or, for the field of human resources, automated on-boarding processes or employee retention schemes have reduced time and effort for employees.

## 3. Reduced Costs

To facilitate the automation of business processes, both at the front and back end, software is required. Many hospitals and clinics have chosen, and are choosing, open source software (OSS) due to the lower Total Cost of Ownership. OSS is not only key to avoiding the vendor lock-in common among proprietary vendor offerings. Now even proprietary vendors are beginning to realize that having a more open solution stack helps everyone involved, including vendors, organizations and patients. Oracle is one proprietary vendor who has invested in the open source space with its own version of the Linux operating system called Oracle Linux.

## 4. Empowering Hospital Staff

While information sharing was a one-to-many channel in the early days of the portal, over the years this has evolved into a many-to-many, many-to-one or one-to-one channel. The ability to share information and collaborate with hospital staff, departments and patients has given the workforce enormous power to perform at a much higher level.

Social media features, document management and knowledge bases in the form of wikis are common practices. This is only the beginning, though.

## Portals of the Future: Systems of Connection

Now, we are experiencing a paradigm shift when it comes to engaging customers, employees and partners. Portal technology, together with innovative thinking, intentional change management and adoption by example, serves as the basis for how a company will boost productivity.

Organizational productivity can be described as the outcome of an activity divided by the effort put into that activity.

$$Productivity = \frac{Results}{Resource} = Output\ per\ employee$$

To increase overall productivity, an organization needs to either increase output, reduce resources or a combination of both.

$$\frac{Results}{Resources} = \frac{Simplify\ work + Empower\ people}{Eliminate\ work}$$

The following are three ways portals can change the variables in order to increase productivity:

### 1. Work Smarter

Enterprise portals can deliver seamless communication channels, aggregate and consolidate information into dashboards, and shorten process cycles. This means the work carried out by staff will be simpler. The upside of this is that the organization will become more agile and quality will go up.

## 2. Power To Employees

To empower employees, health care providers should place greater focus on collaboration and cooperation. For example, with proper document management and online document editing, doctors and nurses can exercise their creativity and receive peer input, resulting in a stronger sense of belonging.

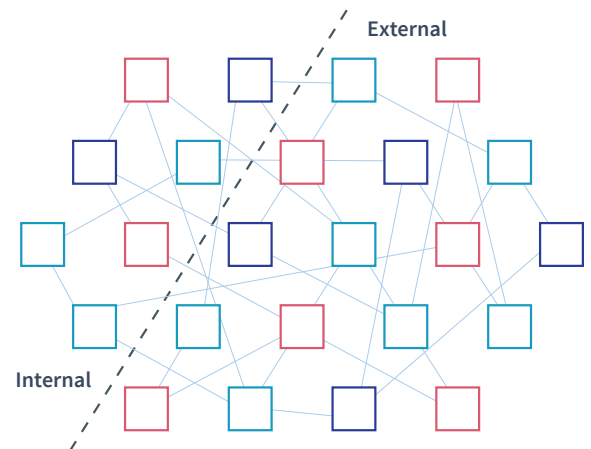
## 3. Eliminate Work

Automating repetitive activities will take workloads away from employees, and therefore reduce operating costs. This can be realized through automating workflows, enabling patients to take control of activities through self-service portals, or simply reducing overlaps or gaps in business processes by using staged publishing for marketing messages across channels.

In these ways, portals can be a foundation to build systems of improved productivity that help employees collaborate effectively, simplify work and reduce inefficiencies.

## Engaging the 360-Degree Ecosystem

Patients, partners and other types of stakeholders — the 360-degree ecosystem of an organization — received information in a passive form in the early days of the Internet. In the years to come, not only will the scope of the 360-degree ecosystem increase by adding new stakeholders, there will be more automated interaction.



Digital service and information deliveries, such as those managed by marketing, are key to creating an engaged ecosystem. Advanced portals provide tools to optimize engagement, such as A/B testing, where two variants of the same message are delivered and the responses to those messages are tracked to see which is most effective. Responsive design is another toolset that makes it possible to create a unified experience across a number of devices, such as laptops, handhelds and, increasingly often, wearable technology. Lastly, to create a completely personalized experience, based on profiling and personal preferences, a customized interface can be created with the help of audience targeting tools.

# Mobile and Cross-Channel Publishing

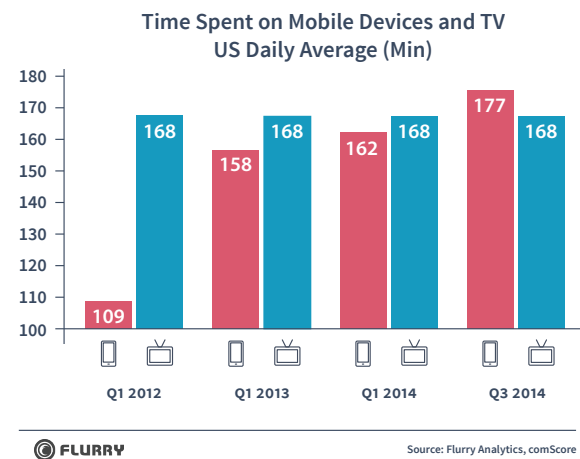
Marketers must be able to reuse and repurpose content effectively and, at the same time, create differentiated experiences for each of these channels. Unfortunately, only about half of organizations feel they do this well today.

At the end of 2014, mobile devices took over the role of primary screen. That is, more time was spent using mobile devices, including phones and tablets, than television or traditional computer monitors. Because of this, responsive web design has been a hot topic during the past couple of years, and making the company's website responsive for visitors on mobile browsers is usually one of the important goals of a major portal refresh.

But responsive design is just a starting point. Companies are investing in a broad array of mobile experiences, including mobile-optimized web (e.g., touch-friendly) and installed app experiences. In addition to mobile, they are investing in social, email, and new and emerging channels. Next-generation web content management systems enable marketers to deliver tailored

experiences for all of these channels using a unified publishing workflow. This ensures that the right content is provided to the right customer at the right time on the right device, and it prevents disjointed experiences that confuse the customer and damage the brand.

Content is at the core of these digital experiences, and the web content management system plays a central role in the delivery of cross-channel experiences. As IDC research shows, more than half say they need to make better use of analytics to optimize content strategy and placement across all of the digital channels they are serving.



## Meeting Health Care Needs Through Modularity and Scalability

Fluctuations in the demand for services, interfaces and integrations have created the need for an elastic model of engagement. The logical choice for achieving this level of flexibility is open source, where many integration points exist already or can be built easily. Portal suppliers with experience and a deep understanding of the commercial and technical challenges are building their solutions based upon standard specifications, such as the Open Services Gateway initiative (OSGi) for Java, which defines frameworks and interfaces for the seamless operation of applications and components.

## Enabling Digitization of Business Processes

With the increase in computer processing power, it has become relatively easy to automate repetitive steps of the business process, from engine assembly to mail sorting. But, with more devices connected to the Internet and more nodes inside the Internet, automation efforts are reaching new levels. Workflow and documentation automation, with complete traceability and archivability, and big data management, including Business Intelligence, can unleash the insights required to proactively create customized experiences. These can be, for example, preloaded medical records delivered through your personalized portal based on your patients' history, or pre-booked time slots at any health care facility based upon visitor behavior and medical information coming from wearable devices.

## Build for the Future

Next level portals will have to be more flexible to answer the demands of the ecosystem, have more possibilities for integration, and easily adjust to new architectures and models. One way to achieve that is to create building blocks around a core, where unified integration rules ensure the seamless flow of information and functionality throughout the web of blocks. Part of these blocks may be delivered with the core box, while others can be purchased through online marketplaces or app stores.

Flows of information will increase both in terms of volume and density, and over time will become more transparent.

# Conclusion

With technological developments in the digital era, the capabilities and functionalities of portals have grown as well.

Today, portal platforms create even more noninvasive user experiences, with aggregated information from data collected from clouds, profiles and connected devices in order to create a fully integrated 360-degree ecosystem.

## Moving Forward

Learn how hospitals and healthcare providers are building portals that have the potential to become much larger digital business platforms.

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