

## Chapter 22

# Using the Building Blocks: Evolution of a Portal Suite

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### **ABSTRACT**

*This article is a case study that explores the use of the Building Blocks portal design framework over a series of enterprise portal projects spanning several years. This article describes the business contexts that shaped each portal as it was designed, showing the use and reuse of design and development elements based on the Building Blocks. This article discusses the changes and adaptations that shaped the elements of the Building Blocks design framework over time.*

### **A BRIEF WORKING HISTORY OF THE BUILDING BLOCKS**

The Building Blocks began life as an internal tool used by technical and user experience architects at my services firm to lower development costs and speed design work. Over a span of ~36 months, its use expanded rapidly, and the blocks become a shared framework for the design and integration of almost a dozen different enterprise portals created for a long-term client.

In retrospect, the portal suite went through four stages of evolution and growth.

The first portal to be built was a business intelligence application meant to test the value of a dashboard style experience for small groups of executives. Even at this early stage, the vision was to create a collection of interlinked portals that aggregated functionality and content from within the enterprise, with the first dashboard acting as prototype.

Based on the success of the first dashboard, the client commissioned many new types of portals -- including role-based, enterprise productivity, and geographically focused -- for different busi-

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ness and operating units. This stage corresponds roughly, or metaphorically to the rapid speciation [<http://en.wikipedia.org/wiki/Speciation>] that occurs when an ecological niche is opens, or is unoccupied.

Following rapid expansion, efforts shifted to consolidating and integrating technical architectures and user experiences across the different portals in the suite in order to keep pace with waves of organizational changes reshaping the client's business.

In the fourth stage, the emphasis was on stability and efficiency, making the portal suite cost-effective for the client to govern without our direct involvement.

We built numerous portal-based enterprise applications, running the gamut from finance and collaboration to geographic information visualization during this time. Rather than survey these by type (another case study), it is easier to understand the different roles the building blocks played throughout all four stages of the suite's evolution by following the history of one of the larger portals, which I will call the U.S. Portal.

## **THE USA DASHBOARD: PATIENT ZERO**

Like many inventions, the Building Blocks were born as the most expedient solution to a pressing problem, when I joined a struggling design effort for an overdue new portal. The design of what I'll refer to as the USADashboard (for confidentiality) was supposed to be a quick and easy 'tweaking' of its predecessor, the prototype Global Executive Dashboard. Since the audiences for the two portals were very different, however, nearly every aspect of the existing Executive Dashboard from content, structure and information design, to security model and data update schedule required revisiting.

Our team needed a way to quickly accommodate many new assets into an existing portal structure, define and iterate multiple content

placement options, abstract repeated elements for code reuse, coordinate the interaction design of a rapidly growing library of functionality, and resolve a collection of information design challenges. We also had to create a system that could allow for unforeseeable future changes and expansions without disrupting the user experience.

To meet these ambitious goals, we needed a new design language for the portal environment. This new language needed to be internally consistent, flexible, and simple enough for clients to understand.

Relying on lessons learned from the design of the prototype dashboard, the Building Blocks simplified and standardized the components and relationships that could be used to build a portal. The first version of the Building Blocks included only three Containers, the Tile, Tile Group, and Page; three Connectors; the Control Bar, the Crosswalk Connector, and the Section Connector; and an initial set of Convenience Functionality. At the time, we did not identify the Blocks as a framework, or even label the different kinds of blocks as Containers or Connectors.

The most immediate benefit of introducing the Building Blocks into the design effort was to help the clients move beyond an all-or-nothing style of decision making that relied on large numbers expensive, hard to create, full-color mockups of interfaces populated by live data.

The small set of standardized elements and relationships made effective comparison of multiple lightweight design concepts possible. Clients were able to focus on identifying the content needed (for their internal clients, the actual end users of the new US Portal), while our team addressed questions of structure, interaction, and technology. After extensive but substantially faster iteration of design concepts, we launched the first version of the US Portal. Figure 1 shows an early production version of the home page.

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