



Cross-Platform Functionality Powers Mobile Productivity

Intel and SAP are using HTML5 to efficiently bring the benefits of SAP Business ByDesign* apps to multiple platforms



Ensuring App Availability on Platforms Unlocks Productivity

Mobility is not a luxury, it is a key component of employee productivity in the modern workplace. For example, SAP research indicates that employee productivity is 40 percent higher in organizations where mobile access is provided to employees across all levels.¹ But mobile computing only unlocks employee productivity if employees can use those mobile apps where and when they need to.

Making apps available for as many devices as possible lets employees use apps on their favored platforms. But porting apps from one mobile operating system to another can be costly and time consuming. This can lead to mobile applications costing too much to develop and maintain—and a subsequent lack of availability of apps on key platforms.

A better way to get apps on more platforms would be to develop apps on a code base that can be used by many different platforms—not just across a variety of mobile devices, but also on PCs and laptops. SAP pursued this strategy with its SAP Project Cockpit* app for SAP Business ByDesign*: SAP used HTML5 as a platform to build apps so they can be easily and quickly ported across platforms. In the case of SAP Project Cockpit, SAP was able to reduce the time required to port SAP Project Cockpit from Apple iOS* to Windows 8.1* operating systems from weeks down to days.²

SAP Business ByDesign and SAP Project Cockpit

SAP Business ByDesign is the unified, cloud-based business-management software solution from SAP for mid-size businesses and subsidiaries of large corporations. Modules within SAP Business ByDesign handle end-to-end business processes, including financials, human resources, sales, procurement, customer service, and supply chain.

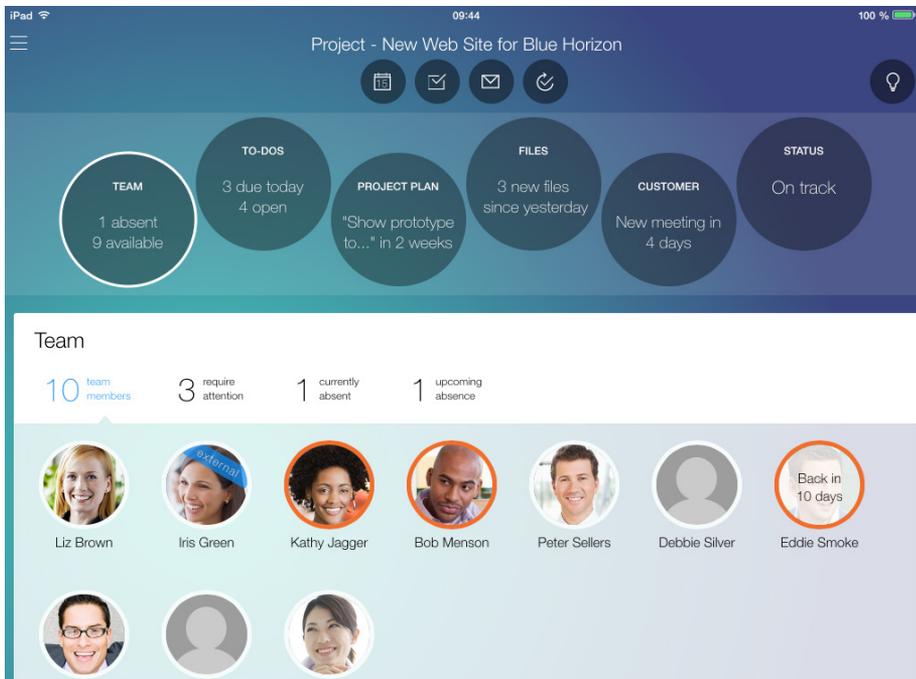


Figure 1. SAP Project Cockpit* running on an Apple iPad*

SAP Project Cockpit is a next-generation project-management mobile app for project leaders with the goal to facilitate processes. The app provides a quick way to interact with the project team and gives project leaders access to important data on the projects handled in SAP Business ByDesign. The app helps users remain abreast on the overall status of projects, and it helps users address any potential problems and data inaccuracies. This includes checking the progress and financial overview of a project, in addition to setting the project status and entering comments. The app provides mobile system-based support for decisions and facilitates interactions with the project team at any time and from everywhere.

Intel and SAP Are Working Together Closely to Enrich Employee Productivity on Mobile Devices

Intel and SAP have worked together since 2005 to deliver better

performance for SAP applications running on Intel® architecture. This deep collaboration extends across a variety of business segments, including mobile, with innovations that continue to influence Intel® processors.

Cross-platform portability is one way of enhancing mobile productivity, which is why both Intel and SAP see it as so important. When users can work on the devices they prefer—and from wherever work or life might take them—productivity soars.

App availability is one part of the equation, and capable mobile platforms are another part. Intel processors make new devices possible—devices that blur the line between mobile devices and desktops, like the Microsoft Surface Pro 3*. The Microsoft Surface Pro 3 brings the power and application compatibility of a desktop to a mobile form factor. But it also allows employees to use mobile apps on the same platform, further boosting potential productivity.

HTML5: Rich Apps for More than Just Browsers

In order to “code once” and reuse applications on different platforms with minimal changes, it is essential to develop applications in a language that different devices and operating systems can all use. HTML5 can provide a tool to help developers do just this, which is why both Intel and SAP have HTML5 software development kits (SDKs).

What Is HTML5?

HTML5 is the successor to HTML 4, the markup language standard that has been the mainstay of web development and content consumption since 1997. But HTML5 is much more than a standard for web content. It introduces elements that reflect how modern websites are used; notably, it includes multimedia features like the ability to play audio and video content.

HTML5 functionality also extends in ways that are not traditionally associated with web content. New APIs for functionality like geolocation, drag and drop, and local storage make it possible for HTML5 to provide the functionality that is required to build apps.

Because HTML5 was designed with Internet browsers in mind, it was built to work well on many different operating systems and to look good on a variety of screen sizes (from phones to desktops). Its new, multimedia elements and APIs enable it to support much of the functionality necessary for apps to run.

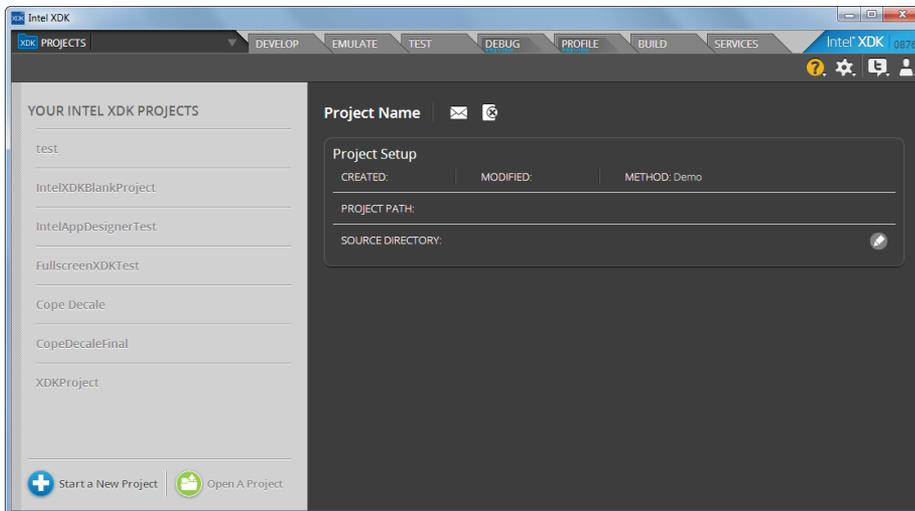


Figure 2. Intel® XDK homepage

SAP and Intel SDKs for HTML5

The SAP HTML5 SDK, SAPUI5, is a client-side HTML5 rendering library with a rich set of controls. SAPUI5 provides a lightweight programming model for desktop and mobile applications that include client-side features. SAPUI5 is a JavaScript* UI control library that can be used in combination with other available JavaScript libraries. Developers can develop apps by using SAPUI5 in integrated development environments, like Eclipse*.

Intel provides a number of tools to help developers code, debug, test, and build both HTML5 web apps and hybrid HTML5 apps (web apps that don't require a browser to run, but rather run directly on a mobile device). One of these tools is Intel® XDK, a comprehensive, cross-platform development environment for building hybrid HTML5 apps, and it runs on Linux*, Windows*, and Apple OS X* operating systems.

The Crosswalk Project: Bridging Different Versions of Android* for HTML5 Apps

Even writing apps in cross-platform language like HTML5 cannot ensure consistent functionality across devices that run an operating system like Android*, which has many different versions running on consumer devices at the same time. The functionality of hybrid Android apps written in HTML5 can be highly dependent on the capabilities of the Android WebView class, which can vary significantly between versions of the Android operating system. To help address this, Intel sponsors the Crosswalk Project, an open-source web runtime designed to help Android developers avoid device fragmentation and improve the performance of HTML, CSS, and JavaScript on devices running Android 4.0 or later. Rather than having to develop to the lowest-common-denominator of Android 4.x versions, developers can use the Crosswalk Project to build hybrid HTML5 apps to a standard, high set of capabilities.

Porting Mobile Apps in Days, Not Weeks

SAP Project Cockpit is an example of how SAP Business ByDesign partners can quickly develop apps for a variety of platforms and how users can get personalized, integrated mobile apps. The results for SAP have been so impressive that SAP is building all future SAP Business ByDesign apps in HTML5. Prior to developing SAP Project Cockpit in HTML5, porting apps between operating systems would have taken a team of developers weeks to accomplish. With its foundation on HTML5, SAP ported SAP Project Cockpit from running on Apple iOS to Windows 8.1 in just 10 developer days.

These 10 developer days also included ramp-up time for the SAP engineers. SAP has also completed a pilot project porting SAP Project Cockpit to Android with a similar low level of effort and SAP expects future porting project to take even less time.

Learn More about HTML5 Development with Intel and SAP

Developing SAP Business ByDesign apps in HTML5 enables SAP to build apps once and port them to new platforms with minimal engineering, time, and cost. HTML5 provides a powerful, ubiquitously used language for app development, which is why both Intel and SAP are strong supporters of the language. Better app-development practices, like developing apps in languages that can cross platforms, holds enormous promise for helping employees be productive wherever they work and on whatever device they choose.

Learn more about Intel next-generation business collaboration technologies here: <http://intel.com/businesscollaboration>

To learn more about Intel XDK and to get the latest build, visit: <http://xdk.intel.com>

To learn more about SAPUI5 and download the SDK, visit: <http://scn.sap.com/community/developer-center/front-end>



¹ SAP. "Technology and Innovation – Enterprise Mobility." 2013. <http://go.sap.com/docs/download/2013/05/b40429ee-0d7c-0010-82c7-eda71af511fa.pdf>.

² SAP internal measurement, January 2015. Apple iPad* specifications: Apple iPad mini 2*, running iOS 8*. Microsoft Surface Pro 3* specifications: Intel® Core™ i5-4300U processor at 1.90 GHz running Windows 8.1*. Intel does not control or audit third-party benchmark data or the web sites referenced in this document. You should visit the referenced web site and confirm whether referenced data are accurate.

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