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SAP BTP COMPONENTS:

DIGITAL TRANSFORMATION WITH SAP BUILD

by Aryan Tomar

As we continue our discussion on the SAP BTP and the use of the technology for Digital Transformation Projects, the next few articles in this series will dive deeper into certain components, functionality, features, and business cases. In the following article, Aryan Tomar introduces a look into SAP Build, one of SAP's newer tools that has not yet been widely adopted.

— *Warren Norris, Managing Partner*
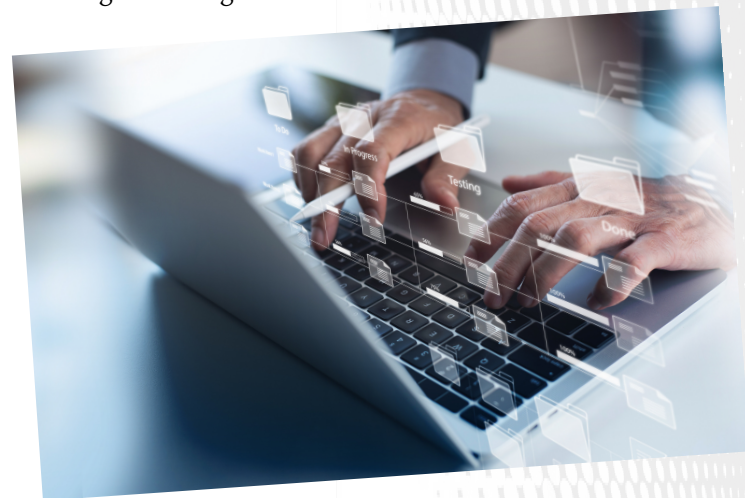
SAP Build: What is it?

SAP Build is a comprehensible BTP application development tool which enables users to swiftly and effectively test and build their applications. It comprises multiple tools like SAP Build Apps, SAP Build Process Automation, and SAP Build Work Zone, all of which help facilitate the development of custom applications and manage the business processes with minimal coding required – "low-code". SAP Build comes with the connection of other BTP tools as well, such as SAP Integration Suite, which allows for the use of pre-existing APIs instead of having to write new code for each need and, as a result, shortens the process.

SAP Build: Components

SAP Build has three main components for maximum optimization of app development and efficiency. SAP Build Apps, which is the low-code/no-code development environment for creating applications, SAP Build Process Automation, which automates workflows and business processes, and the SAP Build Work Zone, which provides personalized digital workplace experiences.

SAP Build App Features:

- A drag-and-drop interface for designing applications enables quick and easy development, even for those without advanced coding knowledge.
- Pre-built templates and UI components empower the user to quickly create user interfaces while having something to build off of and without starting from scratch.
- Data integration with SAP systems and non-SAP systems allows businesses to have integration of other areas of their ecosystem. For example, a developer is able to integrate S/4HANA and a non-SAP plant maintenance system into a single SAP Build application.
- Tools to develop mobile and web applications without deep coding knowledge.

SAP Build Process Automation Features:

- SAP Build process automation enables businesses to manage workflows and automate repetitive tasks – RPA (Robotic Process Automation).
- Process automation incorporates integration between SAP systems like S/4HANA and SuccessFactors.
- AI-based tools embed intelligent document processing.
- Pre-configured workflows and bots accommodate for rapid deployment of features.

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SAP Build Work Zone Features:

- Integration with SAP Fiori apps and third-party tools ensures applications created using Build have a consistent, intuitive, and responsive user interface (UX) across different platforms.
- Collaboration features like discussion boards and activity streams enhance productivity between a user and team by sharing updates in real time.
- Each role given to the developer or user by the administrator tailors access to business content and processes, ensuring access to relevant apps, content, and processes while maintaining security and convenience of development.
- Admins can create business sites and portals for employees and customers. For employees, the internal portals could include training materials, policy updates, or self-service tools like leave requests or expense submissions. For customers, organizations can build sites to provide product information, support services, and even integration with e-commerce.
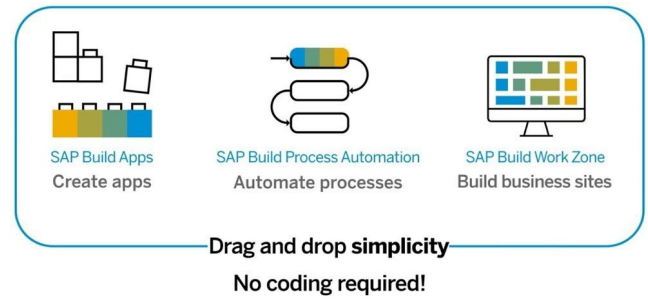
Additional Features:

- The integration of SAP Build with SAP BTP gives it connections to SAP's database, analytics, and machine learning capabilities.
- Collaboration tools between the user and developer encourage input from both sides (user and developer) in case uses such as the user sending feedback about occurrences like bugs or other development-related questions.
- Build has access to enterprise grade security, access control, and compliance features.
- Build comes with analytical features that allow you to track the application and evaluate the performance.

Types of Developers on SAP Build:

Citizen Developer: Using Build's drag-and-drop interface and pre-built templates, individuals without prior coding or software development knowledge can leverage SAP Build's low-code/no-code features to create simple applications, workflows, and features, as well as improve processes. Due to Build's user-friendly control panel, which holds the UI controls, pre-built components, and logic elements, citizen developers can easily develop their application or system without having previous knowledge of coding or software development.

Professional Developer: Developers with extensive coding experience focus on developing APIs. By thoroughly understanding the problem and requirements before coding, they aim to write clean, readable, and reusable code. Professional developers not only emphasize the usage of their application or feature, but also take data usage and security into consideration while in the process of developing an application.

Use Cases of SAP Build:

Due to Build being a low-code/no-code platform, it is an easy drag and drop way to develop an application. SAP Build's features automate much of the development process making it a very quick, but still reliable way to develop an application. With SAP Build comes the option to build both web and mobile applications. A developer can seamlessly connect the back-end data, whether it is on-premise or on the cloud, and display that data on a phone in many forms such as purchase orders, production orders, sales orders, etc.

Pros of using SAP Build:

- Allows a user to easily build applications despite having limited coding knowledge or experience.
- Comes with pre-made API's which are connected to other pillars of SAP like S/4HANA.
- Establishes a central platform that developers can work together on and develop, eliminating possible confusion and ensuring effective collaboration.
- Complies with major data protection regulations, such as GDPR (General Data Protection Regulation), ensuring that sensitive business data is handled securely.
- Provides real-time insights into system health and usage, enabling users to make data-driven decisions, implement updates, and respond effectively to application feedback.

- Reduces the time required to design and launch applications through pre-built templates, workflows, and components, increasing productivity.

Cons of using SAP Build:

- Due to Build being a low-code/no-code development software platform, it has limited flexibility and customization capabilities compared to those of coded applications.
- Although Build does not require users to have advanced coding knowledge or experience, for the developers with a lack of knowledge of the SAP ecosystem, it will be quite confusing on how to correctly implement different SAP API's.
- The cost of SAP Build can be expensive and difficult to manage, especially for small to mid-sized businesses or organizations.

App development on SAP Build vs SAP Fiori:

SAP Fiori is a UX framework for the delivery of role-based, intuitive interfaces to SAP applications. The approach builds on SAPUI5, which provides a harmonized and responsive design across devices, better serving business users' needs. Fiori applications are integrated with SAP systems like S/4HANA and offer seamless and personalized workflows through the SAP Fiori Launchpad.

When developing an application, weighing out the different options about what tool would be most optimal to use is a crucial part of the developmental process. The following chart compares the developmental process and benefits of both SAP Fiori and SAP Build to get a more general perspective about why Build might be preferred over other SAP application development tools.

	SAP Build	SAP Fiori
Development	Focuses on low-code/no-code development, enabling business users to create applications with minimal coding through drag-and-drop tools.	Utilizes UI5 (SAPUI5), which is a JavaScript-based framework for building custom SAP applications and requires knowledge in JavaScript, HTML5, and CSS.
Customization	Better suited for straightforward workflows or extensions of existing SAP functionalities. It has limited customization possibilities due to its low-code/no-code style.	Applications can be changed and developed to meet complex business needs or unique processes.
Integration	Integrates with SAP systems, but with pre-built connectors and APIs that simplify integration for non-technical users. The integration with SAP systems enhances development speed and efficiency.	Deeply integrates with SAP systems such as S/4HANA, SAP Business Technology Platform, and SAP Gateway, but it does not come with pre-built connectors or templates making the development process longer and needing coding experience.