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Emerging Tech: Turnkey Yet Customizable Solutions Are Transforming Communication

By Brian Doherty, Daniel O'Connell, and 2 more - Published 12 September 2022

Pure SaaS solutions are reaching their limits in addressing specific customer needs. Collaboration PaaS product leaders will need to combine their platforms with customizable services and “solutions in a box” to meet those needs and gather requirements for their next generation of products.

Overview

Key Findings

- SaaS solutions typically offer limited customization options. Combining multiple SaaS solutions to fully digitalize collaboration-related business processes often leads to a fragmented experience. However, the alternative — building the top level from scratch using PaaS platforms — is currently prohibitively expensive.
- Providers of off-the-shelf collaboration software and services are frequently unable to discover and support emerging customer needs and use cases.

Recommendations

Product leaders in collaboration PaaS seeking to capitalize on this emerging technology should:

- Enable customers to affordably build vertical-specific applications with SaaS-level user experiences (UXs) by developing solutions in a box for common use cases and providing source code to the end user to allow them to fully customize implementation.
- Discover unmet needs that lead to the next generation of platform features by mining insight from both professional services' as well as customers' use of these solutions in a box.

Strategic Planning Assumption

By 2026, 80% of collaboration PaaS vendors will offer vertical-specific solutions in a box that have a SaaS-quality UX and are also fully customizable, up from 20% today.

Analysis

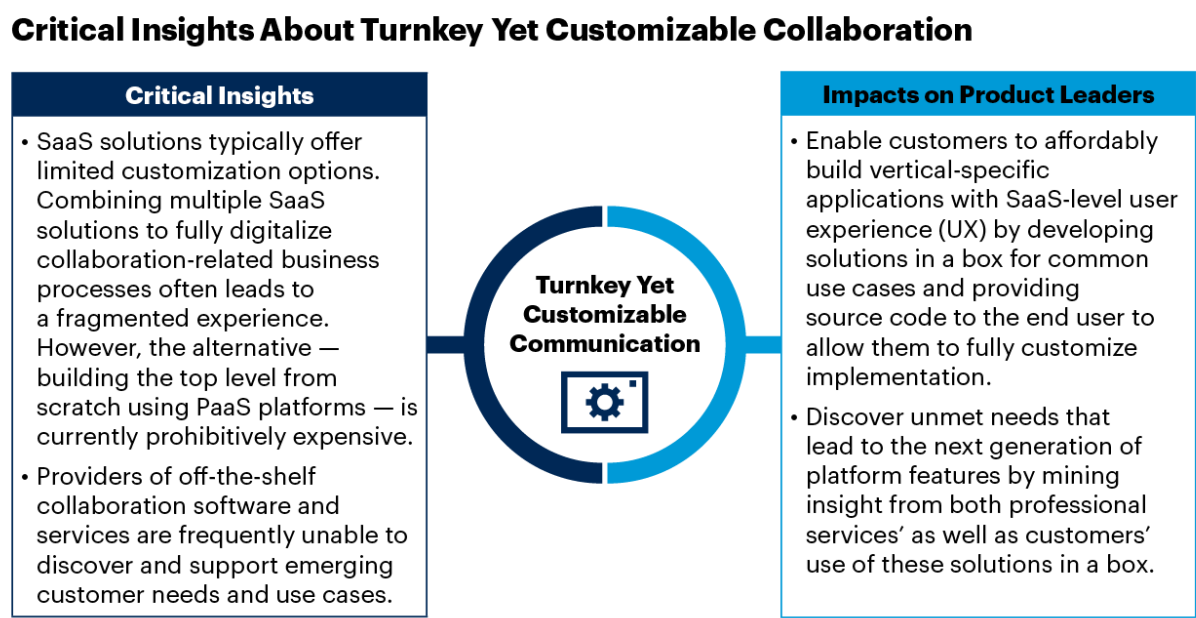
Until recently, organizations with complex communications use cases faced a difficult choice (see Figure 1). They could put together a set of SaaS applications with cursory integrations that include basic data sharing and the ability to launch one application from the other. For example, a retail use case that combines a customer relations management (CRM) solution, a meeting solution and inventory management software. However, such combinations often have poor UX for employees and customers alike. Alternatively, organizations could build a unified UX on top of PaaS solutions by employing large-scale custom development, but this is prohibitively expensive today.

There is now another path that combines the best of both worlds. Several CPaaS and VPaaS (see Note 1 for definition) vendors offer solutions in a box that implement complex scenarios with production quality UX built on top of their platforms. Using the source code and/or customization via a visual builder for these solutions in a box, collaboration PaaS customers can now add integrations and customize the UX to simply incorporate those integrations. Customers can also compose the UX to fit the precise needs of their business and its personas, thereby maximizing the business value of the deployed solution.

Beyond these direct benefits, such a system of solutions in a box benefits the vendor in the long term as well. For example, by tracking records of customer use of solutions in a box,

product leaders can discover emerging new use cases. This will help in prioritizing future solutions in a box and integrations, as well as in discovering new core platform features to add to their roadmaps. Finally, the custom nature of the solution will increase switching costs and make it less likely for the customer to move services to a different PaaS provider in future.

Figure 1: Critical Insights About Turnkey Yet Customizable Collaboration



Source: Gartner
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Gartner

Technology Description

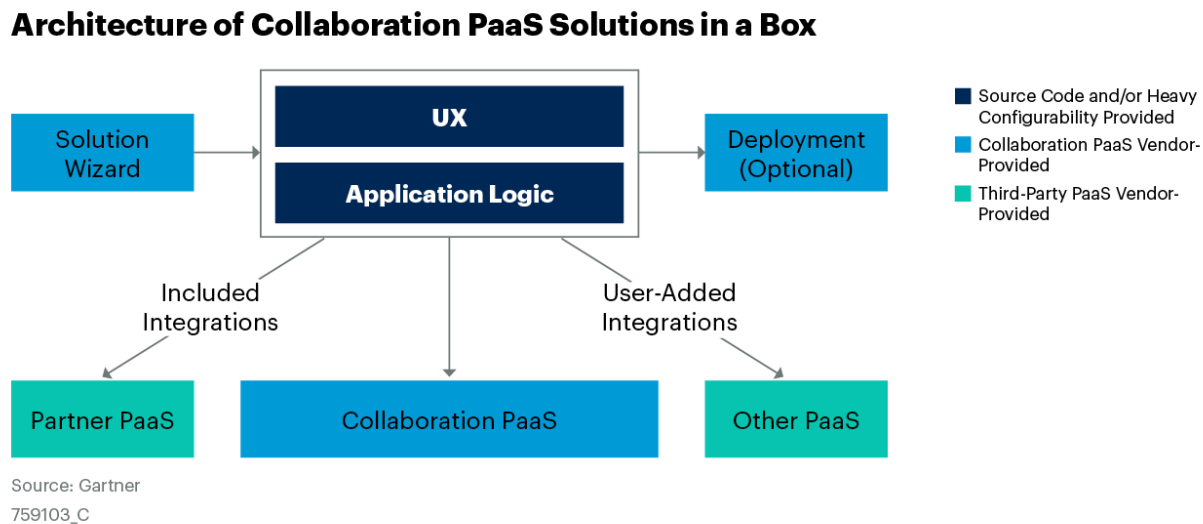
While example code for common use cases has been available from CPaaS vendors since the industry's inception, what differentiates solutions in a box is their focus on specific vertical use cases and their level of completeness and finesse. Each of these is a full-scale implementation of a particular application, with a working UX for all personas that may interface with it. An example is a remote banking application, with UX provided for the client, the banker and possibly the office manager in charge of appointments.

These applications are often bundled with a solution wizard that allows for some personalization, multiple UX options, and selection of options such as third-party integrations to use (see Figure 2). They have either preexisting integrations with third-party applications or

APIs available for integrations. These applications are also generally editable via the vendor’s low/no-code visual builder, allowing citizen developers to add basic customization to the solution. Developers also generally have the ability to fully customize via the source code itself.

In both the visual builder and the code, the vendor can also very clearly mark common customization points, including where to replace mock integrations. (Of course, because the source code can be modified, the vendor needs to clearly define the scope and limits of their support in the licensing and service-level agreements.) Some vendors additionally offer direct deployment options for these applications to simplify operations for the developer.

Figure 2: Architecture of Collaboration PaaS Solutions in a Box



Gartner

In short, these solutions in a box democratize to commercial markets — and even SMB markets — a combination of customization and quality that used to be feasible only for global enterprises with massive development resources. Table 1 shows several examples from prominent vendors.

Table 1: Examples of Collaboration Solutions in a Box

Vendor	Offering	Supported Horizontal(s) and/or Vertical(s)	Description
Microsoft	ACS Sample Builder	Any vertical that could benefit from one-to-one virtual visits (e.g., healthcare, banking and financial services)	Using a wizard that allows the customer to perform basic configuration, the sample builder generates virtual visit applications for the customer, the provider and the office manager. These can be: fully integrated with Microsoft Teams, Microsoft Bookings and Azure to allow for instant deployment; customized with calling, SMS, chat, and rooms using Azure Communication Services; or any of the above can be replaced with a third-party solution.
Pexip	Pexip Virtual Courts	Government	Pexip Virtual Courts is an application for virtual and hybrid court hearings, video arraignments, virtual interactions in corrections systems and policing. It delivers separate, customizable experiences for judges, attorneys/clients and witnesses. APIs are provided to integrate with third-party applications such as case management systems.

Twilio	Frontline	Sales and relationship management	A programmable application built on Twilio's Conversations API that can integrate with any CRM or customer database. This application allows salespeople and other customer-facing personnel to maintain a single conversation with their clients across preferred channels (like SMS, WhatsApp and voice) with both context taken from and conversation history pushed back to the CRM. Channel support, templates, workflows and third-party integrations can be fully customized.
The sample vendors shown above do not comprise or imply an exhaustive list. They are not recommendations but rather starting points for investigation by readers.			

Source: Gartner (September 2022)

Critical Insight: Delivering Solutions in a Box Can Differentiate Collaboration Platform Providers

With the examples mentioned in Table 1 and others now available in the market, the challenge has been set for other collaboration providers. The simple single (and mostly horizontal) use-case templates of the past will no longer suffice.

Collaboration PaaS vendors must build richer solutions — easily tailored by their customers to meet specific needs — or risk losing out to those that do.

To start, product leaders should focus on the verticals in which they are already strong, paying particular attention to areas where they have strong capabilities in product features or integrations instead of pure go-to-market considerations. The same voice of the customer (VoC) and customer advisory board (CAB) sessions that drive platform feature prioritization can be augmented to help with discovery of the shared complex scenarios that call for larger-scale examples. CPaaS providers that offer customers deployment options for the applications they build can mine their source code for ideas, so long as they are careful with legal obligations to the customer and potential intellectual property (IP) concerns.

Once high-level use cases are identified, detailed requirements can come from several sources. Some competing vendors may already have similar templates, which can be examined for “me too” features and deficiencies in functionality, configurability and UX. Existing combinations of SaaS software from different vendors that address similar customer needs can be a source of both requirements and insight into existing customer UX in terms of their pros and cons.¹ When targeting particular verticals, it is important to review needed compliance and certifications for that market. While the solution in a box may not itself be directly certified, since it is not meant to be deployed as-is, it should at least be certifiable.

As the use case is developed, the builder should be developed in parallel. Some of the areas that the customer will want to customize include:

- Branding
- The option to disable functions of the solution, for situations where only part of the use case applies, with built-in adjustment of the UX to compensate

- Horizontal (such as CRM or scheduling tools) or vertical-specific prepackaged integrations
- The choice of supported channels (such as voice, SMS, video, chat, OTT messaging)
- Common initial UX layouts

All of these options should be easy to change so long as the generated solution code has not been edited by the customer beyond interpretation. For product leaders with vendors with visual builder capabilities, it is strongly advised that the generated solution be fully inspectable and editable via the visual builder.

It is also advisable to offer the user deployment options. Vendors that are also cloud infrastructure and platform services (CIPS) providers have an advantage here, both in ease of deployment and the opportunity to capture more of the customer's spend for the application. Other vendors will have to settle for providing options to quickly deploy via commonly used CIPS providers, in the customer's virtual private cloud, or perhaps even in the customer's own data center.

As for service and support of solutions in a box, direct support will have to be limited to questions about and bugs found in the original code and builder, with assistance for adapting the code to a specific use case available on a contract basis via professional services. Collaboration PaaS vendors generally already have a developer community centered around their APIs, and can expect that these solutions will require similar community management in that platform. This will enable developers to trade tips, tricks and sample code snippets to solve common problems.

Near-Term Implications for Product Leaders

To remain competitive in this fast-moving market, product leaders should immediately begin building solutions in a box. The prioritization of which solutions to build should be based on the capabilities of their platforms and the composition of both their customer base and the markets they are eager to enter, such as banking, financial services and insurance (BFSI); healthcare; retail; and professional services. Providers should evaluate vertical-specific growth projections and market opportunities to prioritize development

efforts. They should try to displace not just direct competitors, but also combinations of SaaS offerings that fill similar customer needs (but with an inferior and less customizable experience).

Recommended Actions for the Next Six to 18 Months

- Collect target verticals and use cases for solutions in a box from several sources — applications deployed directly on their platform, VoC/CAB sessions and their broader business strategy — and prioritize accordingly.
- Evaluate industry-specific requirements, including needed compliance and certifications.
- Gather specific requirements for each use case by augmenting the above sources with study of existing products, including both direct CPaaS competitor templates/solutions and adjacent market solutions (such as meeting solutions, contact center as a service [CCaaS], CRM).
- Develop the solution in a box and its builder in parallel by looking for customization and integration points the customer will want to modify, such as branding, turning functions on and off, integrations, UI and layout choices.
- Extend the existing platform developer community to encompass solutions in a box.

Critical Insight: What Customers Build From Such Solutions Will Illuminate the Future of Collaboration

As customers adapt and deploy solutions in a box, they will represent a major new source of market information for the vendors that developed these solutions. Vendors can and should equip these solutions and their configuration wizards with analytics to help determine:

- Adoption rate
- Usage of the solutions by end users — overall, per persona and per customer
- UI clickstreams to evaluate efficacy where applicable and feasible

- Levels and types of platform usage and spend, and how they connect to individual features of the solution
- Popularity and usage volume for particular options, including third-party integrations

For vendors with native deployment options, customer modifications can be directly inspected to discover:

- New options for the solution-in-a-box builder
- Entirely new solutions in a box to be built

Product leaders should carefully structure their legal agreements with customers to allow for such information gathering and to address IP concerns. Of course, solutions-in-a-box offerings will find usage not just among customers but also in vendors' solution-focused paths to market, whether it be their own professional services teams or those of system integrators (SIs) and value-added resellers (VARs). Partnership agreements with SIs and VARs should likewise allow for gathering of this information. Any reuse will have to either be covered directly by IP clauses in agreements, or indirectly via use of an ethical wall to avoid unlicensed IP. Product leaders should also ensure that analytics are gathered in a way that protects privacy of both customers and their users' data, making use of anonymization and aggregation as needed.

Collaboration PaaS vendors with their own professional services and direct solution-led sales organizations can use solutions in a box to become what Gartner calls a "generative provider" (see *Tech Providers 2025: The Generative Future of High-Tech Providers* for more information). These providers use outcome-based engagements to create high-quality relationships with customers, leading to both long-lasting profitable collaboration and the opportunity to co-create differentiation for their customers as well as themselves.

Popularity of options in the solution builder can help determine both what to highlight and where to add more options. Multiple UX options in the solution builder can allow for A/B testing that can inform other UX designs. Tracing pull-through from each solution to

platform features can help product leaders decide which types of related or adjacent solutions will best support broader business strategy and profitability. Sufficiently popular solutions and their options can be considered for integration into the platform offering itself, by generalizing them and providing enough configurability that source code is no longer necessary to use them effectively.

However, the most important contribution from analyzing usage of solutions in a box may be qualitative in nature. Inspecting customer modifications directly can reveal new uses for the underlying platform that product leaders may never otherwise have thought of, leading either to new solutions or even new platform features. Scanning these uses for new third-party integrations can help product leaders discover emerging providers that can be added to the partnership funnel.

Product leaders who master this cycle — from information gathering, to expanded platform features and solutions in a box, to more information gathering — will find themselves with a tighter and faster Observe, Orient, Decide and Act (OODA) loop than they were in before, and than their competitors'. In the end, this will determine which vendors' offerings come to dominate the market, and which find themselves dominated instead.

Near-Term Implications for Product Leaders

Product leaders should instrument solutions in a box with detailed analytics as they build them. These analytics augment their existing platform analytics to decide how to both evolve existing solutions and prioritize new ones. They can also dig manually into customer use of solutions in a box to discover new potential solutions, options, partnerships and platform features.

Recommended Actions for the Next Six to 18 Months

- Add capabilities to your solutions in a box that allow for collection of analytics associated with usage, customization, correlation and customer spend.
- Provide deployment options for direct inspection of customers' customizations.

- Use both quantitative data and qualitative information to help inform priority decisions on new platform features, new solutions in a box and their options, and new third-party integrations and partnerships.

Evidence

1 The seams between integrated SaaS packages are generally a top source of frustration, as expressed by customers during inquiry.

Note 1: Definition of VPaaS

Video platform as a service (VPaaS) is an emerging new market in the collaboration space. Also known as “real-time engagement platforms,” these products provide APIs and software development kits (SDKs) for incorporating over the top (OTT) video and audio into applications and websites. Many of these offerings also provide chat functionality — including rich chat features — and a few provide VR/MR/AR/metaverse support in addition.

As these solutions do not support telephony, they are not considered full CPaaS. They are suitable for embedding collaboration features into applications and websites without having to build large-scale infrastructure. Sample vendors include: 100ms, Agora, LiveSwitch, Pexip, Tencent, and Zoom (specifically their Video SDK rather than their Meeting SDK).

*** Attention: research are originally in English and I have translated it into Chinese by Google Translate as instructed by Peter. In case of any discrepancy between the English version and the Chinese version, the English version shall prevail.*