Super-apps: Mobile Application Platform-Gateway to New Global Monetization Opportunities

Frank Della Rosa
Research Vice President,
SaaS, Business Platforms, and
Industry Cloud, IDC

Alan Webber
Program Vice President,
Digital Platform Ecosystems, IDC

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Section 1. Situation Overview

Over the last decade, the notable success of massively scalable mobile application platforms like Wexin in China, Rappi in Latin America, and Grab in Southeast Asia have captured the attention of global multinationals seeking to capitalize on evolving demographics and possible global expansion opportunities.

For over a decade, the digital landscape in China has been marked by the success of super-apps. Tencent's Weixin ecosystem is an all-in-one mobile application platform consolidating all the applications a user needs to accomplish daily activities in China. Users access the needed information in one place, from messaging and social media to shopping, entertainment, travel and banking, eliminating the need to download multiple applications to flood consumers' mobile screens. There are several reasons why super-apps have been so successful, especially in some Asian countries. These reasons include:

- Low adoption of traditional payment systems. Unlike other parts of the world, credit and debit cards have never become widely adopted and many still prefer to carry cash.
- Consumers in some areas interacted primarily on smartphones instead of computers, and the corresponding infrastructure was less robust. The result was that consumers' phones were incapable of downloading and simultaneously managing dozens of applications

- Super-apps are the gateway to a single integrated ecosystem with transaction capacity and last-mile coverage. In China, some of Weixin's early successes can be attributed to a focus on driving innovation and allowing a wider and convenient access to digital payments.
- In China, local ecosystems strengthened digital businesses, whereas innovation in single sign-on and identity management addressed data privacy concerns.
- In some markets, Google and Amazon were hugely popular before the introduction of smartphones.

Super-apps are a relatively recent phenomenon in mobile applications, characterized by platforms that offer a wide range of services in a single app, all with consistent user experience. Specifically, a super-app is defined as:

A single application, accessible by mobile device or web browser that offers multiple diversified services for daily use that are traditionally provided by separate applications, including messaging, fintech services, digital commerce, transportation, food services, and entertainment, often operating within an ecosystem comprising third-party services.

The most successful super apps are the ones where you have to click the least amount of times to get to the desired point you want.

The super-app changes the paradigm for application development by enabling a low-cost, highly efficient platform for companies to accelerate innovation. Unlike mobile apps in App Store and Playstore, a super-app offers an efficient platform for developers and businesses to create mini-apps. This ecosystem enables deeper integration of services, enhancing cross-sell opportunities and supplier collaboration. The integration streamlines the user experience and significantly enhances the experience, making it an intriguing prospect for businesses and consumers. Integrating these services in a single mobile app platform allows users to accomplish tasks without switching between different application experiences. Super-apps have democratized access to the latest innovation by providing universal access to applications that improve the daily lives of all generations. The seamless user experience and ultra-simple navigation allow even novice users to perform daily tasks like paying bills, booking reservations, accessing healthcare information, ordering food, and much more.

For mobile application developers, the super-app enables rapid cycles of innovation. For example, Weixin offers an open platform that allows any developer to quickly and inexpensively build an application that can become an integral part of a larger and dynamic super-app ecosystem in China. Developers working for a multi-national enterprise can rapidly advance a new application from concept to MVP in several days instead of several months. This allows for more experimentation and, ultimately, value-driven innovation.

Example of the Value of a Super-App: Abu Dhabi Government Services TAMM

A government entity case focuses on a global hub open to public in Abu Dhabi. The vision is to create an organized, convenient, effortless, and accessible digital ecosystem powered by more than 30 sectors. Abu Dhabi Government combines a super-app and micro-apps in an open ecosystem TAMM with accessibility and inclusivity, allowing people within Abu Dhabi to access everyday vital services across Healthcare, Housing, Education, Citizenship, Residency and much more. The objective was to provide a platform for third-party development and publication of micro-apps. The team originally developed more than 700 applications. Updates on the Apple App Store could take several months. After implementing the super-app platform, they only needed to update a single application, reducing the waiting time to just days, making iteration easier, and lowering labor costs.

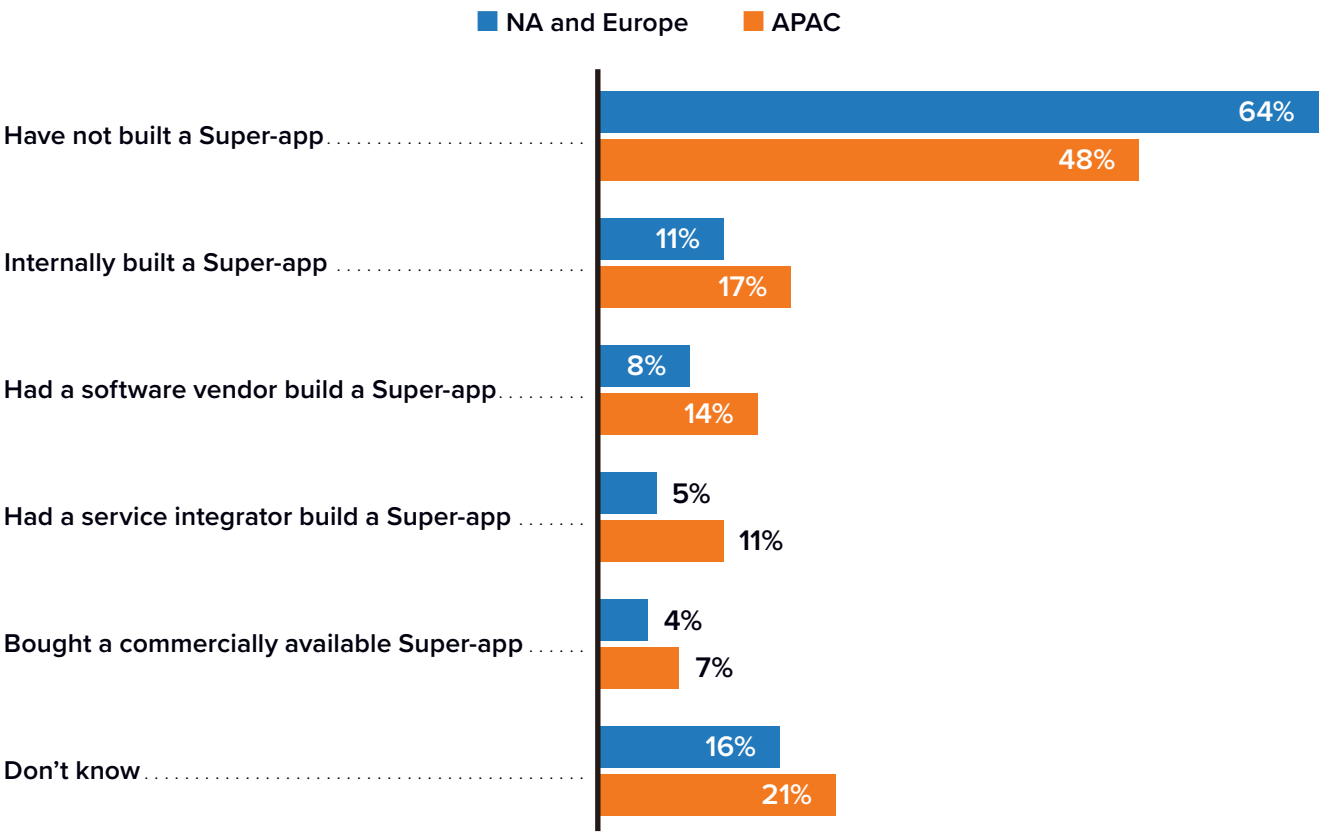
An essential feature of super-apps is the seamless user experience. Applications offer the same interface, frequently with consistent design elements and navigation, providing a more convenient and intuitive experience. Super-apps may tailor services to local preferences and market conditions. Localization can include offering regional features and partnerships with local businesses, support for local currencies, and compliance with regulatory requirements.

Much interest in super-apps focuses on becoming the next Weixin . In China, Weixin support daily activities, from payments to ridesharing, retail digital commerce, and groceries. Figure 1 compares the use of super-apps across the global markets.

FIGURE 1

The Global Use of Super-apps

Q. Do you or your organization have a super-app?



Source: IDC SaaSPath Global Research 2023; n=954

Within a messaging app like Weixin in China, users access mini-apps to perform tasks such as booking reservations, ordering food, hailing a ride, making payments, or playing games. These apps are designed to be fast-loading and easy to use, providing a streamlined path to new features and services inside the context of a super-app. Some of the essential characteristics include:

- Focused functionality
- Personalization
- Monetization opportunities
- Ecosystem development
- Cross-platform

Section 2. In This White Paper

This IDC white paper posits that the super-app model will address many current mobile application platform challenges, creating new monetization opportunities for global multinational businesses. It explores the rapidly changing landscape in developed markets, adoption disparities among different regions, and the growing consumer demand for more personalized and contextualized digital experiences. The paper describes the key features that define a super-app, the opportunities and challenges, and several case studies for illustration.

Section 2.1 A Disparate Adoption Landscape

Outside of APAC, 40% to 50% of transactions in this region still happen on the web or the desktop. Consumers have become accustomed to specialized, best-in-class applications that address specific tasks versus all-in-one platforms. Because of the wide availability of choices, most users have become used to multiple applications to address different needs.

Today, many technology powerhouses started before the widespread adoption of smartphones, offering web-based services on PCs. Companies, including Amazon and Google, developed mobile apps later, offering limited functionality in the early days. In contrast, Asian consumers whose first experience with the internet was on mobile devices, which were designed as super-app ecosystems from the onset.

Some technology leaders and consumers are concerned with app overload and scenarios where the app has too many services, causing it to be slow and confusing to use. In the early days, Meta decided to spin off Messenger as a separate app from Facebook's mobile app. At Google, some engineers believe that larger apps like Google Maps are nearing infrastructure limitations, causing developers to become reluctant to expand the functionality of those apps.

Our data suggests that some developed markets are lagging behind in the Super-app evolution. So, they must start using it. Now, most of them have left Uber on their mobile phone. We don't push our clients to immediately start using it. When we talk about so many functions in an app, the client is taken aback.

Global Technology Procurement Director, NA

Differences in regulatory environments, economic structures, market conditions, and consumer preferences caused significant impediments to super-app success on the global stage. However, companies are creating lighter-weight versions of super-apps akin to Uber, where the app provides all of the necessary functionality to fulfill consumer needs related to the app's core function.

Section 2.2 The Transformative Impact of Super-apps

Because the super-app functions as the primary engagement channel, it combines multiple services, called mini-apps, into a fully integrated mobile app platform. It is a centralized place where users perform every activity they need to. The super-app starts with a single indispensable service that encourages daily user frequency to attract large numbers of buyers and sellers so that each new service can access a large existing audience. Other characteristics include high development velocity and efficiency, superior end-user experience, and accelerated data growth. The super-app can promote original content through enhanced marketing recommendation tools and traffic support programs.

FIGURE 2

Super-app Value Proposition

Source: IDC, 2024

Section 2.3 Aren't Super-apps Just Another Platform?

As commonly thought of, no. When most people hear the word platform, they usually think about technology platforms like Microsoft, Apple, Google, and AWS. A super-app is a very specific type of mobile platform that features an application with multiple functions in a unified user experience. While a typical application is more aligned with SaaS, a super-app is probably closer to platform-as-a-service (PaaS). Super-apps are unlike traditional development and engagement platforms. Super-apps are super-charged, multi-environment platforms that include an IDE and SDK for developers, an operations management platform for development info approval, application and SDK management, and base library management, a comprehensive toolkit that includes release management, security scanning, API management, and operations analytics and monitoring. A fully integrated mini-app marketplace includes end-to-end business integration and program templates. The super-app technical program platform includes the following capabilities:

- **QAPM:** monitors mini-program exceptions, unexpected quits, WebView analytics, trend analysis, and detailed exception reports
- **Data Insight:** provides comprehensive metrics, version activity, and user overview to aid in product, operational, and promotional decisions
- **Mini-app Operation Platform:** manages enterprise and personnel enrollments, inquiries, audits, program listing reviews, and black/whitelist management, along with operational data analysis
- **Open Development Platform:** facilitates merchant operations within the mini-app program, offering registration, enterprise permission, role management, member management, program publishing, and development management.

The comprehensive feature set provides flexible deployments for white-labeled solutions, an open ecosystem to empower partners, rich templates covering a wide range of use cases, end-to-end security, and fully containerized mini-apps, all running on the public cloud.

Section 2.4 Mini-apps: Meeting Demand for the Next-Generation Digital Innovation Ecosystem

Offering multiple services within a consolidated user experience boosts engagement and creates strong network effects while reducing switching costs.

Mini-apps are lightweight applications that can run independently or inside another app as a lighter version containing most core functions. Within the Weixin super-app, Beike works with developers to provide new apartment transaction services in China and Ziru provides access to apartment services like cleaning, maintenance, security, parking, storage, and express delivery. Think of the super-app as the equivalent of Apple's App Store. Mini-apps serve as the on-ramp for new ecosystem services. They do not need to be downloaded or upgraded separately; these lightweight programs typically leverage a common financial transaction platform. Offering multiple services within a consolidated user experience boosts engagement and creates strong network effects while reducing switching costs. Consumption and usage insights help the super-app team decide on new services to add to the ecosystem. These new services exist within the platform, presenting new growth opportunities. This approach increases developer productivity and generally provides a faster time to market.

Section 2.5 Data and The Impact of Generative AI

Generative AI is poised to play a significant role in the design and value proposition of super-apps. Most businesses are accelerating its use in the areas of analytics and personalization. One challenge with legacy businesses is that many super-app microservices are siloed. If you were to go to a place today and need a ride, airport transfer, or car rental, you need to do them one by one. And if one fails, the permutation gives you more trouble. Most have different tech stacks, and building a combined checkout function takes significant work. Generative AI cannot solve many of these issues today. Soon, generative AI can be applied to the following use cases:

- Dynamic UI to address demand for customization and address user preferences
- AI-driven recommendations to leverage usage patterns
- Automation using chatbots and virtual assistants to enhance engagement

- Personalized content in the form of marketing materials, news and information updates
- Predictive analytics to identify peak time for app users for resource allocation

The super-app mobile application platform (MAP) architecture addresses the performance challenges of managing and using many discrete services, each requiring a unique sign-on, security function, and data repository. This new approach would reduce friction, complexity and risks.

Section 3. Success Factors for Super-apps

A different strategy is needed when the use case context is different. Owning a payment layer is not always necessary, but it is nice to have. In markets where robust payment systems exist, like Apple Pay and Google Pay, mobile payments are a commodity and not a differentiator.

The first step for companies wanting to build a super-app is to identify a core service that attracts daily usage to create stickiness and attract a large and engaged audience on which to build a robust ecosystem for builders and users. Super-apps are designed to offer a range of services on a single platform. Essential features may include:

- **Multi-functionality:** Super-apps integrate various services, such as messaging, payments, digital commerce, and transportation, within a seamless user experience.
- **Unified interface:** a consistent user-friendly interface enables users to navigate easily between services.
- **Interoperability:** Super-apps provide extensive APIs to enable third-party services and developers to build on the platform.
- **Secure and scalable infrastructure:** super-apps must provide robust security measures to protect user privacy. This includes encryption, identity and access management, and compliance with regional and industry standards and regulations. The infrastructure must handle a large volume of interactions and transactions with compromising performance.

- **Lifestyle and/or essential services:** The key is convenience for users. Examples include an integrated digital wallet, ability to book travel, pay utilities and grocery in farmer's market.
- **Loyalty programs:** offering rewards and discounts to loyal users strengthen retention

Section 4. Super-app Case Examples

Case: North America Provider of HR Software and Services

Workforce Manager Mobile App Platform provides customers with time and attendance, personal time off, office resource scheduling, payroll, and compliance. Powered by GenAI, the app is fully integrated into the human capital management system of record. The application addressed the employee's questions on anything related to HR.

The company had previously invested in infrastructure, cybersecurity, and networking. The organization's challenges included many applications and platforms distributed across the enterprise. The company consolidated its data onto a single third-party cloud platform to address this. Information security was a top priority, as the company employs stringent information security guidelines. The core of the super-app leverages the company's intelligence platform featuring AI and machine learning, and natural language processing (NLP). The company integrates the super-app with local technology to address different regional requirements, including reliance on different platforms.

Demand for the super-app has been strong because it creates a stronger connection between the company and its employees.

As a result of the super-app, the company experienced measurable improvements in error reduction and efficiency, with queries answered in minutes.

Case: North America Multi-National Retail Pharmacy

The company launched its mobile application in 2015 and has since transformed it from a single-function application into a "one-stop shop" super-app, providing customers seamless access to health and wellness services, pharmacy services, retail shopping, virtual consultations, and insurance information. The company engaged its cloud service provider partner to develop the super-app and continues expanding its partner ecosystem to enhance the user experience with expanded healthcare-related services. Improving personalization continues to be a priority as the company pursues the following outcomes:

- Enhanced user engagement by meeting customer's health and wellness needs
- Make personalization more data-driven: each mini-app collects specific data related to its services that can be used to improve the experience
- Streamline and optimize the delivery of services thereby reducing complexity and potential performance issues associated with running multiple services within a single app
- Rapid iteration and frequent updates based on a deeper understanding of user pain points

The super-app delivers significantly improved personalized retail recommendations that are better aligned with customer preferences.

As a result, it has experienced a measurable improvement in its net promoter score, and engagement rates have doubled since 2015.

Section 5. Challenges/Opportunities

Building a super-app presents technical and organizational challenges. Integrating various mini-apps into the platform is challenging because each has its functionality requirements and dependencies, often leading to different service and management security requirements. Securely managing massive amounts of sensitive customer data is paramount while ensuring compliance with regional and industry regulations, which require robust security protocols that can escalate costs. Other challenges include:

- Consumers are accustomed to using separate applications to access different services
- Maintaining a consistent, high-quality user experience: each mini-app must function well on its own while also seamlessly integrating with other services within the super-app
- Overwhelming users with too many options, complicating navigation and useability
- Adding mini-apps without cluttering the user interface
- Scalability to handle high traffic volumes as the super-app attracts more users and costs increase
- Allocating resources to maintain and update multiple mini-apps simultaneously

While the adoption of super-apps has languished, consumer interest is increasing. As a result, companies such as Uber, Bolt, and PayPal are pursuing super-app strategies. The transition to digital banking also creates more opportunities for super-apps by allowing more personalized experiences. Additional opportunities for super-apps success include:

- Changing demographics favor a more mobile-centric user experience
- Leaders in banking and payments view super-apps as an opportunity to access new markets, capture new audiences, and create new revenue streams
- Growing demand for convenience and seamless user experiences, which favors the super-app model of multiple services in one place
- Multi-national enterprises across industries are exploring opportunities for building super-apps to bring efficiency and superior mobile experiences for customers and employees

Section 6. Conclusion

Global businesses can capitalize on the super-app model by catering to local needs and preferences rather than trying to replicate the all-encompassing current models. Companies must navigate complex regulatory environments, including data protection and financial services. The following considerations will help guide a super-app strategy and approach:

- Leverage and expand core services by building on existing mobile platforms for a more comprehensive solution strategy
- Identify and eliminate points of user friction
- Embed payment services to create a seamless transaction experience
- Explicitly address privacy concerns by providing robust data protection measures
- Concentrate on integrating closely related services
- Prioritize ecosystem partnerships between service providers that create more integrated super-app experiences
- Engage with a mobile application platform provider with the technology, experience, and track record to launch a super-app. This will improve efficiency, allow the business to focus on its core services, and reduce the time to market

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IDC Research, Inc.
140 Kendrick Street, Building B, Needham, MA 02494, USA
T +1 508 872 8200

@idc | @idc | idc.com