

# HYBRID MOBILE APPLICATION DEVELOPMENT IN APPZILLON MADP

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**Abstract:** In today's world there are more mobile users than desktop/laptop users. As mobile devices are integral part of today's life, it's safe to say that mobile apps have substantial effects in our daily life. Digital platform has soon become an integral part of every enterprise's DNA. Legacy systems are slowly transforming into efficient digital solutions and early adaptors stand to gain a lot in the digital race. So as building a good quality mobile app is important, you need a trusted and secured mobile application development platform to go with. Several factors come into the pictures while developing a mobile app; such as investment, time to market, better UI experience, availability of resources, and easy access to the development platform as major ones. There have been debates over native mobile apps vs. hybrid mobile apps, then again choosing a hybrid MADP seem to be more reasonable and profitable than a native MADP when you consider above reasons. Appzillon, the flagship product of I-exceed technology solution private limited, is a hybrid MADP, where you can build Omni-channel apps for smartphones, tablets, feature phones, desktops and laptops. Appzillon provides Microapp/Microservice architecture and low code visual design approach where developers code less and develop more functionalities in less time with less dependencies.

**Index Terms – Hybrid MADP (Mobile application development platform), Low Code, Microapp architecture, Omni-channel solution.**

## I. INTRODUCTION

Appzillon Development Platform is a unified app development environment to build omni-channel apps for smartphones, tablets, feature phones, desktops and laptops. It supports all leading mobile operating systems viz., Android and iOS as well as all leading browsers viz., Internet Explorer, Google Chrome, Mozilla Firefox, Apple Safari and Opera. Appzillon also supports Social Media channels. Its robust and state-of-the-art architecture facilitates a unified channel strategy. Appzillon Development Platform includes a world-class development environment that is built on open technologies and enables rapid development of end-to-end apps. The intuitive nature of the platform abstracts the technical complexities of app development from developers. Appzillon comprises a host of innovations that includes template based development approach and ability to build apps automatically using enterprise services that help in building and deploying cross-channel apps in the shortest possible time.

Appzillon offers the following business benefits to enterprises

1. Build apps that is simple to use, aesthetically pleasing and targeted towards high adoption & usage
2. Build apps that are functionally complete & market relevant
3. Provide uniform user experience across channels and allow users to opt for a device of their choice
4. Zero compromise on enterprise security
5. Mobilize the workforce with enterprise apps, leveraging existing internal systems & integration architecture
6. Identify & handle on-ground challenges associated with newer development models and infrastructure requirements
7. Future-proof mobility strategy to handle platform independence, upgrades & migrations
8. Minimize new skillset requirements and associated trainings.

## II. EXISTING SYSTEM

In the world of mobile app development, there are basically two types of apps.

- Native Apps
- Hybrid Apps

A lot has changed since we started building apps for mobile devices like iPhone 4s and Samsung galaxy with 4.5-inch screen. For an instance, developers didn't have to worry about responsive design, form factors and progressive design much as providers had single or similar resolution devices. Multiple providers have come with different types of devices with a range of resolutions now; Apple, itself has a range of devices like 4s, 5s, 6, 7 ... etc. Native MADPs do provide features to accommodate the latest technology stack but as building a native app is expensive both in financially and technically, providers came up with a solution alternative to native app, called hybrid app. Basically, your minus out all the X factors that's there in native app development as discussed above. Hybrid app development has become more business and developer friendly. Let's talk a little more about these two.

**Native App:**

An app is called native app when it's developed and built using a native MADP. Now in market there are two major OS providers viz., Apple and Google. Apple provided OS is known as iOS and Google provided OS is known as Android. To build an app for Apple OS or iOS, a developer has to use its native MADP called XCODE, similarly for android, Android Studio, to build android apps.

**XCODE and Android Studio Dependencies:**

1. Platform dependency: XCODE can't be used in any other OS except Mac OS. So a developer needs to have a mac machine to develop a native iOS app. Irrelevant to say, Macbooks or iMacs are not pocket friendly. So an expensive setup is required to start the app development. Unlike XCODE, android studio doesn't have many dependencies on platform. Google allows its MADP to be installed in all major Oss viz., Windows, Linux and Unix based OS.
2. Language Expertise: As mentioned, a native developer needs to have expertise in Objective C or Swift to build an iOS app, java to build an android app.

**Hybrid App:**

An app is called hybrid when it's developed using a set of common technologies supported by both Apple and Google. A developer can build an app for both the platform without having above dependencies.

Technologies used for Hybrid app development:

1. HTML5
2. JavaScript or JavaScript based framework
3. Css 3 or SASS

**Need of a MADP in Hybrid App development:**

Though a developer doesn't need a MADP to write code because you can literally write HTML, JavaScript and Css using notepad or any text editor, a MADP is needed to facilitate below features.

1. Build and deployment
2. Access device level APIs
3. Enable security
4. Source code management
5. App simulation in the absence of a physical device.
6. Connecting to core services seamlessly.

So we need a MADP to facilitate above features even though we are developing a hybrid app. Currently in market through several third party providers do come up with some solutions but none provides a single platform where you can facilitate the above features. Outside Appzillon you have to combine two to three solution together to facilitate the same. I.e.,

1. Visual studio (code editor)
2. Corodova (To access device level)
3. Xcode and Android Studio (To build executable)

**III. PROPOSED SYSTEM**

Appzillon is I-Exceed's Omni-Channel flagship platform. It's built on top of open technologies and facilitates rapid development in an agile, secure and scalable way. Appzillon Digital Experience Platform has featured amongst the best platforms as part of Gartner Magic Quadrant Reports and Forrester Wave Reports. Appzillon uses future ready architecture that's fully optimized to run in multiple channels with high performance levels.



**Fig:** devices compatibility

## Key Features



**Fig:** key features

### Rich User Experience:

Appzillon allows you to develop visually engaging apps with wide range of compressive widgets, charts and animations. It allows developers to develop screen easily through drag and drop enabled screen editor and style editor.

### Automated App Development

Appzillon follows a unique automated development approach in which you can develop an app by following 3 simple and steps

1. Appzillon provides a unique feature to import service definition associated with enterprise services and automatically generate screens.
2. Appzillon provides a unique drag and drop enabled screen designer through which a developer can enhance the screen design further as per the requirement.
3. Once the design is completed, Appzillon provides its script editor to write business logic and script level validations and complete the development. Business logic implementation also can be extended to JAVA layer through Appzillon Extensibility framework if required.

Once development is completed, you can build Omni-channel apps using a simple click.

### Net Result:

Appzillon helps to reduce app development cycle time by as much as 60-70%. This means your app reaches the market sooner, while the overall cost of development and design is reduced.

### Enterprise Grade Security:

Appzillon generates apps that follows multi-layer app design and incorporate in-depth security in each layer.



Fig: security features

**Multi-Tier Architecture:**

Appzillon generates apps that follow the industry best practices. They are based on a robust multi-tier architecture as shown below

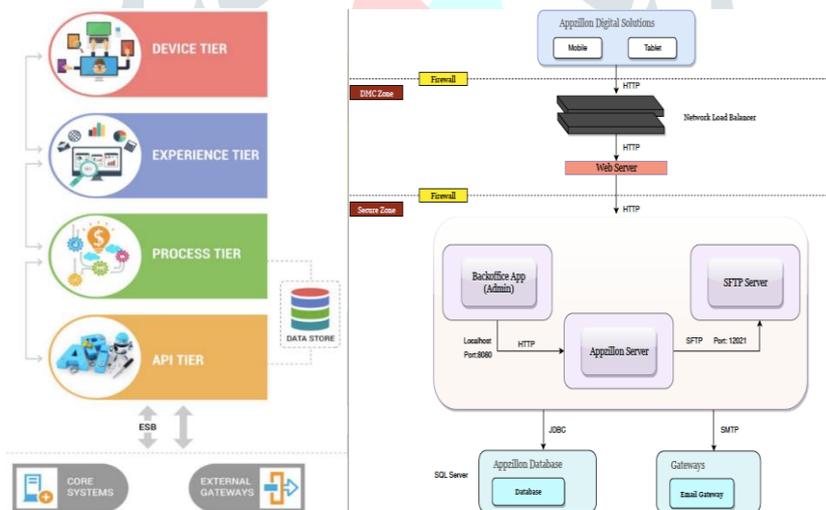
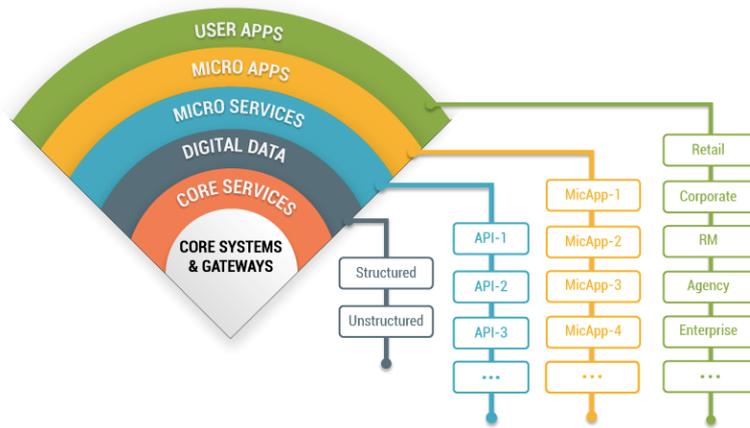


Fig: multi-tier architecture

**Microapp Architecture:**

Appzillon offers a unique way of building an app using Microapp architecture. Microapp architecture allows enterprises to move away from developing usual monolithic apps and to develop them as modular and high flexible apps.



**Fig:** microapp architecture

The high level process followed in the micro-app architecture is outlined below

1. Design each function as a standalone micro-app. The micro-app can be deployed on a standalone basis and its functionality can be verified completely.
2. Release the micro apps to the enterprise level repository and make them available to multiple end user apps.
3. Create the end user app in a modular manner by assembling micro-apps rather than creating them as monolithic projects.
4. Add new features to the end user app by seamlessly adding the relevant micro-apps without impacting the existing functionality.
5. Customize the existing app by modifying the impacted micro-apps alone.
6. Minimize the overall development and testing effort as changes are localized.

## VI. CONCLUSION

Appzillon is a future ready Omni-channel hybrid MADP, which not only provides developers a better environment to work with by enabling latest multi-layer architecture and futuristic frameworks but also enables enterprises to move to a digital space and delivers world-class apps in minimal time with lesser investment. No doubt it even puts up a good challenge to native MADPs and in hybrid space it's second to none.

## REFERENCES

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