ZOHO Creator
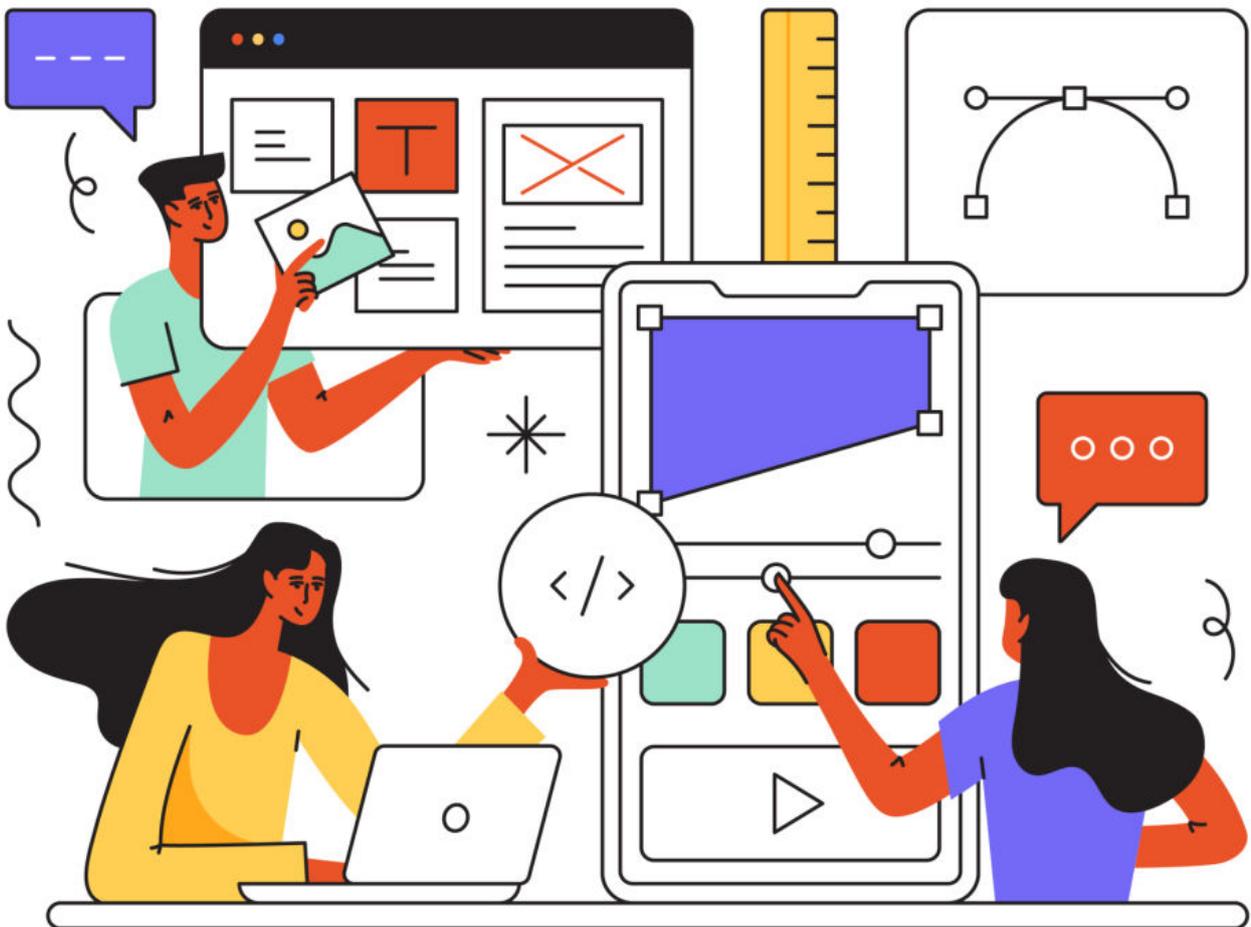
Contemporary application development

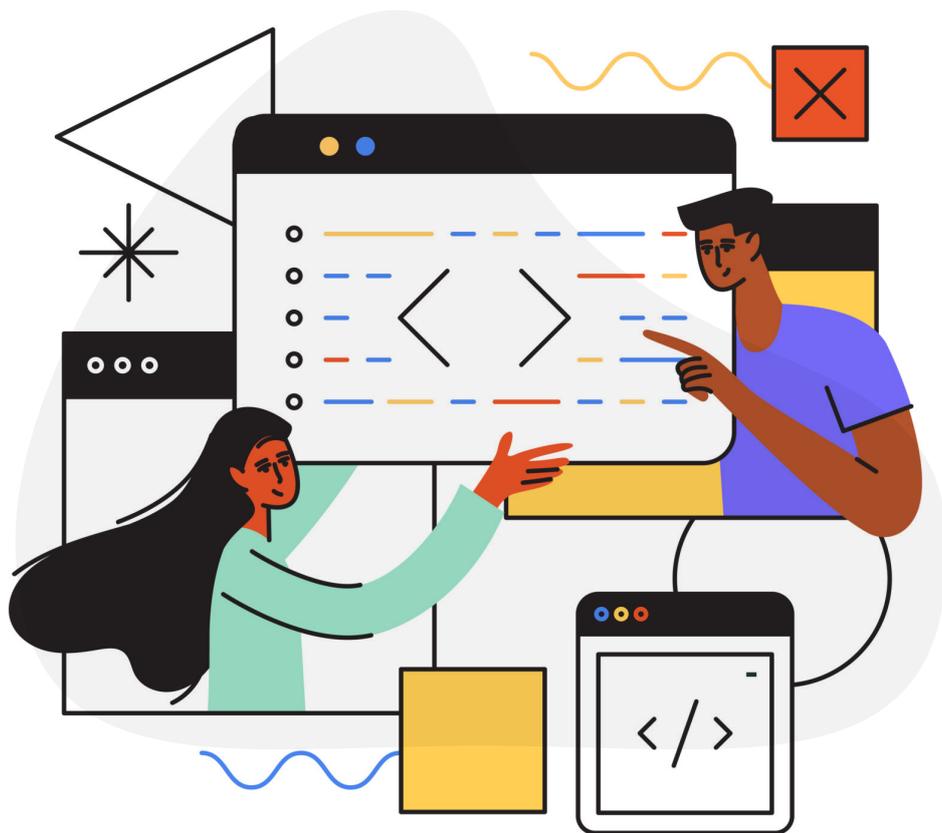## Everything you need to know

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Introduction to
application development

We live in the "age of the app." Productivity, fitness, food, entertainment—you name it and there's an app for it. Apps today also need to be engineered for a variety of platforms, from the web to iOS and Android devices.

> **Application development is the process of transforming an app from its ideation stage to deployment on a device.**

Thankfully, advancements in the app development ecosystem have turned a once hard process into a walk in the park.

Traditional
application development

Traditional app development involves hiring professional programmers to write code and build apps. While it's a tried-and-true method, it's increasingly costly and difficult to find experienced engineers to create bespoke applications. There are several different types of traditional app development, although this is far from an exhaustive list:

Custom application development:
Developers can build and ship applications in any programming language, framework, and software engineering practice they desire.

Mobile application development:
Developing apps for the mobile ecosystem of the iOS and Android platforms.

Enterprise application development:
Enterprise resource planning software (ERP software) dominates this landscape. This software is highly capable, provides a vast array of features, and is suited out-of-the-box for huge organizations.
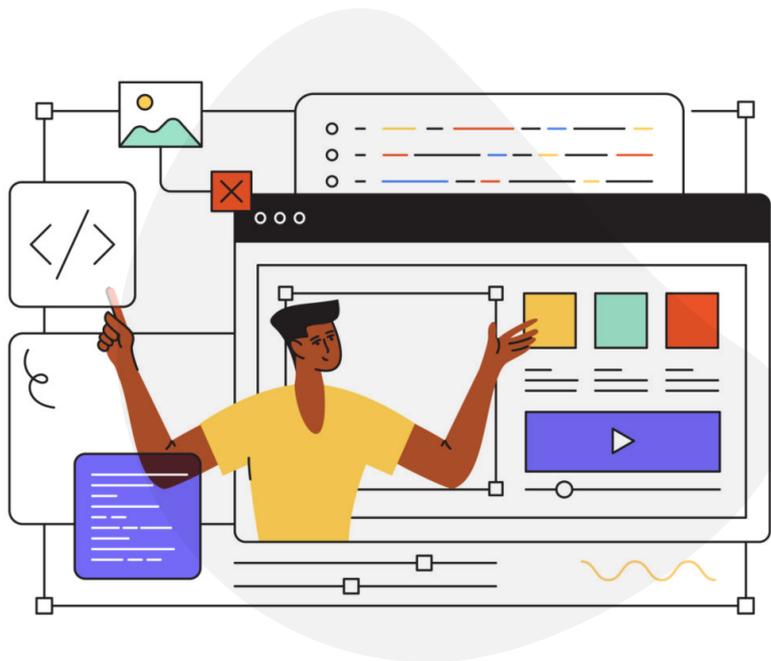
Web application development:
Developing and deploying apps for and on the web.

Low-Code
application development

Low-code application development (LCAD) platforms offer a visual development environment and supplement it with logical scripting to architect applications with ease. While it can be utilized by professional coders to create powerful applications, it allows even inexperienced business users to build functional apps.

The visual development capabilities of low-code involves dragging and dropping aspects of the user interface and front-end logic, and in some LCAD platforms (such as Zoho Creator) code blocks can even be dragged and dropped using a specialized IDE. Scripting can also be utilized to accomplish complex tasks, such as application logic, with ease.

LCAD platforms accelerate application development to such an extent that applications can be engineered 10x faster on these platforms than when built using conventional application development approaches.

The worldwide low-code development technologies market is projected to total $13.8 billion in 2021, an increase of 22.6% from 2020, according to the latest forecast by Gartner. These application development platforms are poised to take the world of application development by storm in the coming years.

Choosing
traditional or Low-code app development

When choosing between these two options, there are a few things to consider:

Speed to market

You should be able to ship apps to market at top speed. Shorter development cycles equal lower development costs that can take user feedback into account to quickly create a tested, secure product with better quality.

Maximum return on investment

You should get bang for your buck. What's the purpose of investing money into app development if you can't make a feasible ROI from it? Your choice should guarantee a maximum return from minimum investment.

Stakeholder satisfaction

All stakeholders should be as satisfied as possible when the app is finished. The client, the developers, and the line-of-business users should feel that their requirements are met with the chosen app development platform. This is because each stakeholder will have their own expectations of the platform. The client will expect that all of their requirements are translated into reality. The developers will expect their code to be free from bugs and their apps to be secure, scalable, and efficient. Line-of-business users will expect minimal dependence on already-overworked IT teams if they have changing requirements that require implementation. Each of these stakeholders' expectations need to be met.

Let's take a look at the breakdown of the various application development methods and their pros and cons:

Feature	Custom application development	Mobile application development	Enterprise application development	Web application development	Low-Code application development
Technical expertise required	High	High	Very High	High	Low
Cost	High	High	Very High	High	Low
Speed to market	Long	Long	Very Long	Medium	Extremely fast
Application portability	Code separately	Platform lock - out	None	Only for the Web	Portable to mobile and web
Line - of - business - user friendly	No	No	Moderate	No	Very
Learning curve	Steep	High	Very High	Medium	Low

After looking at the pros and cons of each aspect of traditional and low-code development, it seems clear that LCADs offer more benefits at a lower cost, in terms of both time and money.

Getting started with a low-code
application development platform

Most low-code platforms are hosted on the cloud—they reside on a server, accessed by a web browser. They don't require you to install additional software on your devices, except in the case of a few platforms. To start, you just need an account.

You'll also usually pay a subscription cost for using the platform, with pricing dependent upon the number of users, the number of apps you're going to create, and several other specifics. The pricing documentation for the LCAD platform should clearly describe the pricing structure on its website.

Once you sign up for a subscription, you can start building apps. The steps in getting started with an LCAD platform are:

i) Create an app

ii) Implement your app logic

iii) Test

iv) Deploy

i) Create an app

App creation on low-code platforms is easy. The front end can be built using a drag-and-drop interface, making it easy to add front-end elements to the canvas and start developing aesthetic interfaces. These are known as dashboard and page builders, and they offer a WYSIWYG (what you see is what you get) interface for building the front ends of your apps.

ii) Implement your app logic

If you want to implement complex logic, such as calculating the total price of an order, you can implement it using the scripting language of your LCAD platform. Zoho's LCAD platform, Zoho Creator, for example, provides an easy-to-learn and easy-to-use scripting language called Deluge.

Deluge is a 5th generation programming language which simplifies the scripting of complex logic. You can easily automate emails, configure notifications, implement complex workflows, and execute complicated functions using Deluge.

What's more, Zoho Creator offers a unique drag-and-drop code snippet IDE, which lets you drag and drop code blocks to implement app logic. It's features like these which make LCAD platforms stand out from other types of app development in the industry.

iii) Test

Once your application is ready, you can test it out. Unlike other types of app development, where there's a need for separate testing teams, in the case of low-code platforms, developers can easily test out the apps themselves based on the rapid feedback loop of LCAD platforms. Features such as "lifecycle management" (which offer holistic version history management) make testing far easier for developers on LCAD platforms.

iv) Deploy

Now comes the most sought-after feature of LCAD platforms—the deploy stage. Unlike other types of app development, where deployment is a complicated process, LCAD platforms offer one-click deployment to the web, iOS, and Android. This speeds up the entire process of application development, enhancing the efficiency of the app development team.

Harnessing the capabilities of
an LCAD platform

One amazing thing about LCAD platforms is that they come with a slew of capabilities out of the box. These capabilities can be harnessed to improve the software development process:

i) Built-in security

ii) Auto-scalability

iii) Quality assurance

iv) Automatic updates

v) App portability

Let's explore each of them in detail:

i) Built-in security

Unlike conventional app development approaches, where the apps built need separate programming to ensure their security, low-code platforms have security built in. They provide features such as encryption at rest, a guarantee against 0-day attacks, and other security assurances. This is because the providers of the LCAD platform take measures to ensure the security of the apps built on their platforms.

ii) Auto-scalability

One issue with apps developed via conventional platforms is that they don't scale. As your business grows, your apps need to have the capability to address the widening bandwidth of an ever-increasing user base. This is where apps developed on LCAD platforms come to the rescue. The LCAD platform takes care of scaling, which means your apps scale automatically with your user base.

iii) Quality assurance

Software quality assurance is an expensive process that prolongs the development life cycle of apps. LCAD platforms meticulously test for defects, helping assure the quality of the apps developed on them. This nullifies the need for a separate quality assurance phase of development when engineering apps on LCAD platforms.

iv) Automatic updates

Apps developed using other development platforms need to be regularly patched to keep them up to date. In the case of LCAD, it's the platform itself that gets updated, rather than the apps. This ensures that apps built on these platforms stay technically up to date. This also means that app developers don't need to constantly update their apps, as the LCAD platform provider does this themselves.

v) App portability

In the case of conventional and other app development approaches, apps developed for one platform, say the web, have to be ported to work for other platforms, like Android and iOS. However, most LCAD platforms provide easy deployment to all platforms. On an LCAD platform like Zoho Creator, which provides a one-click deploy feature to the web, iOS, and Android, app portability is a cakewalk.

Success
stories

Let's look at some companies who have successfully transformed their operations by leveraging a low-code application development platform like Zoho Creator.

La Chachara

La Chachara is a Mexican ecommerce company. It ships and sells products to customers all over Mexico. Initially it conducted its operations on manual ledgers, and then transitioned unsuccessfully to online spreadsheets. Microsoft Access was also implemented to no avail. Oscar Isaias Garcia, founder of La Chachara, then stumbled upon Zoho Creator. With its short learning curve, he was quickly able to build apps to run his business. Its affordability was another major selling point, and now they've reaped a 10x improvement in revenue and productivity.

> *Before using Zoho Creator, our monthly earnings were $10,000. Now our productivity has increased tenfold, and these days we're up to $100,000 a month! We recently managed to reach our first annual $1M in sales, and reached a total sales figure of 50M pesos, which equates to about $2.6M. This is something we are very proud of.*
>
> **Oscar Isaias Garcia**
> Founder of La Chachara

Air Rail

Air Rail, based out of Madrid, Spain, is a company specializing in airport, railway, port, and industrial machinery. They're a leader in airport aircraft assistance equipment and railway maneuvering machines.

Initially, they were conducting their operations over emails, spreadsheets, and phone calls. This was cumbersome, and resulted in confusion, operational glitches, and delays. While evaluating multiple platform as a service (PaaS) alternatives, Cesar Viteri, Air Rail's CIO, found Zoho Creator. He created a working prototype for Air Rail in six hours, and that was the beginning of their Zoho Creator success journey.

> *Since using Zoho Creator, our rental fleet has grown from 180 machines at the beginning of 2015 to 1,600 now, and we also maintain 1,400 machines owned by our clients. We operated in just 3 airports in Spain, and now we have a presence in more than 30 airports in 5 European countries. We managed our fleet in 2015 with 2 after-sales managers, and now we employ 6, which means we've scaled very efficiently*
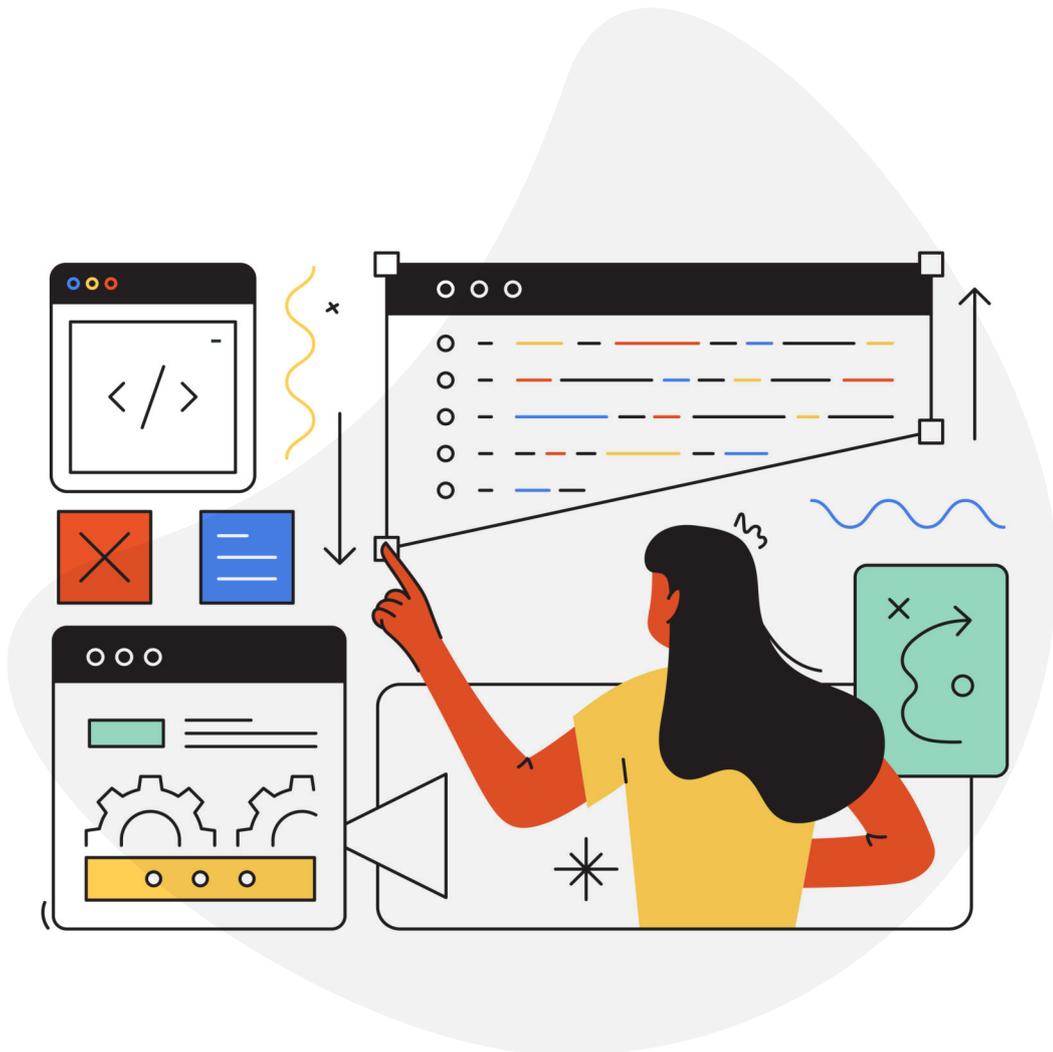>
> **Cesar Viteri**
> CIO, Air Rail

Low code:

The answer to your app-building needs

Low-code platforms are capable, affordable, secure, scalable, and easy to use. They're the solution to many of the issues afflicting contemporary conventional software development approaches.

The right LCAD platform in the hands of a skilled developer can easily deliver highly effective, efficient, and capable apps to solve any organization's business problems quickly.

ZOHO Creator

www.zoho.com/creator

We'd love to talk! Reach out to us:
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