Low Code No code (LCNC)

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What is it?

Low-code/no-code (LCNC) is accelerating application development and allowing users and developers to focus on the unsolved specifics of each problem. LCNC is not a new concept and we have seen many forms of it through the years such as [Microsoft excel VBA](#) [Wordpress](#) and the [Jira workflow engine](#).

As the name suggests Low-code/no-code development seeks to shift the traditional language-based programming to a more intuitive, structured interfaces, workflows, logic and data to make it easier and faster to create applications. These mechanisms might include drag and drop blocks, plugins, themes, connected and "if this then that" capabilities

The delineation between low code and not code is blurry at best. Both use the same interface and the low code allows some custom code capabilities.
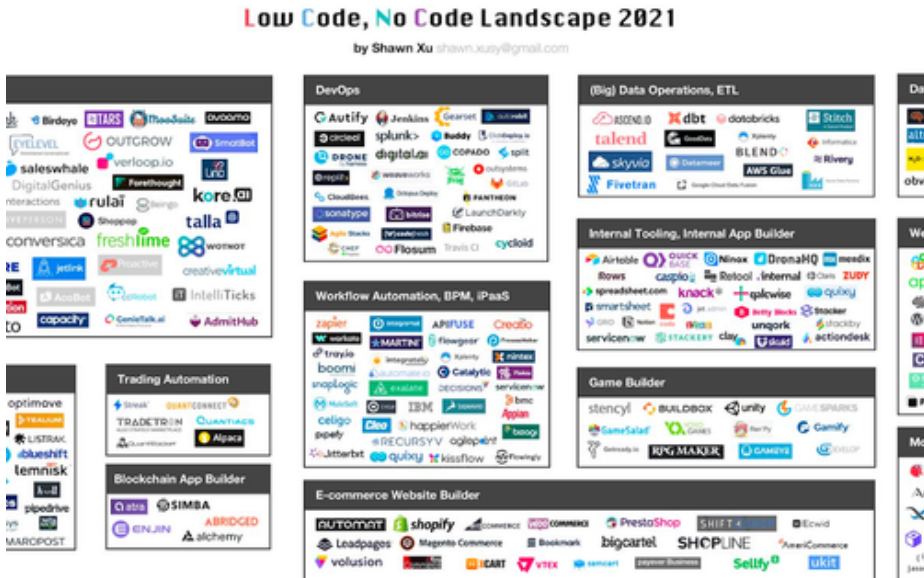
Who is this for?

Everyone can leverage LCNC platforms to aid in their own specific path
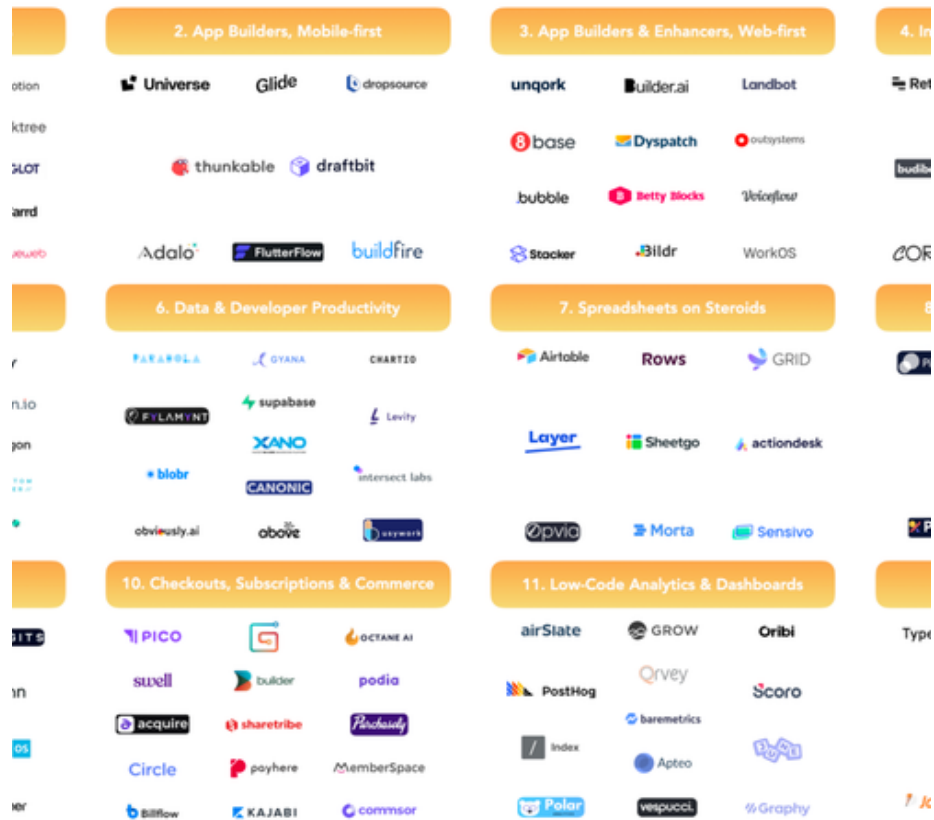
- **Professional developers** – allow them to focus more on the "secret sauce"
- **Digital citizens** – allows anyone within the organization to start building data-driven applications quickly without development background and minimal IT backend support
- **Entrepreneurs** – Allows them to wrangle multiple 3rd party API and platforms and build fully functional application without coding

The LCNC players

It is difficult to mention all as new players join all the time in multiple domains:. We havefrom the big tech giants (such as [Microsoft power App](#) and [amazon honeycode](#)) to high-design website creators (such as [Webflow](#)), consumer app platforms (such as [Bubble.io](#)) to enterprise app tools (such as [Outsystems](#)).

Low Code, No Code Landscape 2021
by Shawn Xu shawn.xusy@gmail.com

[KEVIN XU has a great article](#) explaining the use cases and landscape and [Pietro Invernizzi talks](#) about the different domains and examples (primarily focused on entrepreneurs and less for the enterprise user)

What is the Potential Intersection With Tax?

For Vertex, leveraging such tools can aid in quicker development TTM and/or decrease in operational/development cost. This potentially enables (potential) new players easier and accelerated access to market.

Emerging Tech focus

As mentioned, there are many NCLC domains such as Integrations & workflow automation, application development, Front-end & ecommerce.

A relevant domain is the Enteprise Low Code Application Platform (ELCAP) (previously known as Enterprise High-Productivity Application Platforms-as-a-Service" or HPaPaaS)

Figure 1: Magic Quadrant for Enterprise Low-Code Application Platforms

Source: Gartner (August 2021)

lution Comparison for Low-Code plication Platforms

ssessment Criterion	Mendix	Microsoft F Apps	OutSystem	Salesforce
atform Governance and perations				
plication Promotion Workflow	L	L	M	N
plication and Platform Metrics	L	L	L	L
eveloper Toolchain	H	L	H	L
ckup and Restore	L	M	H	M
plication Operations	L	L	M	N
evOps Automation	H	H	M	H
ndbox Environments	H	H	H	H
onnector Security Controls	L	H	L	L
st Data Management	N	L	N	L
ompliance and Certifications	L	H	L	H
plication Development and chitecture				
osting Model	H	L	H	L
posing Applications as APIs	H	M	H	L
tensibility	M	M	M	M
plication Portability	M	N	N	N
fline Capabilities	H	M	H	M
uality Assurance and Test tomation	H	H	H	H
ork Planning and Management	L	N	H	N
Design and Frameworks	M	L	M	L
orkflow Automation	N	H	H	M
onnector Framework	H	H	H	L
ent-Driven Capabilities	M	L	M	L
plication Release Management	L	M	H	L
ernationalization and Localization	H	M	H	M
ser Personas				
lministrator	L	H	M	M
ofessional Developer	L	L	H	H

H = High   **M** = Medium   **L** = Low   **N** = None

There is a great Gartner comparison writeup that goes into detail and much more in our Teams channel. However, the major difference between the previously mentioned LCNC platforms to the ELCAP is the full stack enterprise framework surrounding the LCNC development. Such as backup, restore, versioning, security, offline capability, administration and much more.

Mendix, Outsystems and Salesforce are the leading potential vendors

- **Mendix**, acquired by Siemens in Aug 2018 for $700M, offers a low-code, cloud-native platform to "design, build, integrate, test, deploy and manage enterprise apps at scale." In addition to its **AI-assisted visual development environment for multi-channel apps** (web, mobile, conversational, AR/VR), Mendix emphasizes **business-IT collaboration**, **governance/control** across the application development process, and **flexible deployment**. Mendix has strategic alliances with SAP, IBM and Pivotal, and also supports Siemen's Xcelerator.

- **Outsystems** offers an **intuitive low-code visual development platform to create full-stack cross-platform apps with an emphasis on speed of development**. The open, standards-based platform includes features such as single-click deployment, automatic refactoring, and offline data synchronization. Outsystems recently launched an enhanced partner program with certification paths, industry and use case templates, and licensing programs to help partners such as Deloitte and KPMG bring new offerings to market.

- **Salesforce** has its own **low-code/no-code platform called Lightning,** which can create applications from spreadsheets,

build [workflow-based applications](#), and develop custom apps that draw from other Salesforce products. Salesforce also rolled out new AI-powered [no-code data integration](#) and [workflow automation](#) features for its [Mulesoft](#) Anypoint Platform in Nov 2019.

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