

Chapter 25

The Low-Code Movement: Accelerating Digital Transformation With Low-Code

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ABSTRACT

Low-code is one of many topics that have been brought up to address two perennial problems: the growing shortage of software developers and the methodological gap between business requirements and implementation. With low-code, you give business users and process owners the tools they need to build systems and make process improvements on their own, with minimal technical support. To be successful, digital strategy initiatives today and in the future will need to think of and include tools that empower their business users and help accelerate process automation. This chapter provides a general understanding of low-code platforms, explores the current research on the topic through a bibliometric analysis, and analyses the impact of low-code on digital transformation.

INTRODUCTION

Transformation can mean different things for different companies. Depending on each digital transformation journey, it could simply mean digitization of paper-based documents and processes, or it could mean introducing easy, remote access to on-site resources, or automating customer-facing applications. According to (McKinsey, 2018), 8 out of 10 respondents from different enterprises mentioned that they've undertaken such efforts in the last five years and only less than 30% have succeeded. It is therefore necessary to carefully understand how to approach digital transformation projects and to understand what the building blocks and obstacles of such initiatives are.

In enterprises, information is stored everywhere, from file systems, to emails, to social data, to structured and unstructured information. Employees and customers expect a seamless, integrated experience that leverages all this information. One thing that is very consistent and common across organisations around the world is communication, content, and processes. To enable successful digital transformation, businesses need to manage end-to-end processes, ensuring that communication, content, and processes

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are glued together, which means ensuring a consistent flow of information across all departments. This is possible when there is technology embedded in processes that connects processes and systems, and when the content flowing through all systems is consistently anchored in an appropriate and permanent context, making less and less reliance on human intervention and participation necessary.

A highly favourable approach to digital transformation is the use of *low-code* application development platforms. These platforms now go by different names, the most used ones being *low-code* platform (LCP), *low-code* application platform (LCAP), and *low-code* development platform (LCDP). *Low-code* application development and *low-code* platforms (referred to interchangeably as *low-code* throughout this article) provide a tipping point for organizations to really start taking advantage of digital transformation and process automation in ways that were not available to them before. *Low-code* is a new class of software development environments that has emerged in recent years, prospected as offering a substantial increase in software development productivity and to yield new ways of promoting business IT alignment and user empowerment.

Low-code, as a philosophy and methodology, has its roots in business process management and business automation. It is increasingly becoming a mainstream movement, rooted in a paradigm closely related to the *DevOps* set of practices, which combines software development (Dev) and IT operations (Ops), anchored in the mantra “you build it, you run it”. Equivalently, in terms of business processes, the business users, who are the actual owners of business processes, should be empowered so that they can also control the processes: “you own it, you control it”. By controlling a business process, business users should be able to configure and adapt each step of a business flow, without having to rely on developers or IT staff to do so. *Low-code* attempts to achieve exactly that: to empower the business user to an extent that they can model the business processes (workflows, data flows, parameters, behaviours, event management, etc.) themselves. As an effect, *low-code* helps to embrace digital transformation faster, digitizing and automating workflows and building scalable process-centric applications.

According to (PMI, 2020), 86% of IT decision makers consider the biggest hurdle to digitally transforming their business to be the lack of software developers. Gartner coined the term ‘citizen development’ in 2009, meaning you don’t need to be a professional developer to build applications. *Low-code* platforms are targeting this goal, and mainly address business users. Some *low-code* application development platforms address professional developers too. For professional developers, the benefit of using such a platform is that they manage to get more done in less time, often with better and more reliable results and arguably more consistent results.

Therefore, not all *low-code* platforms are the same. There is a lot of confusion in the market (Forsyth, 2021). In this article, in addition to a general understanding of the different types of *low-code* platforms, a bibliometric analysis is presented, focusing on understanding the current research trends around *low-code*. The analysis leads to the identification of further possible research directions as well as on understanding the impact of *low-code* on digital transformation. Each *low-code* platform has its own characteristics, making it more suitable for certain goals of the digital transformation journey than others. But in essence, *low-code* platforms provide the core technology for organizations undergoing digital transformation, helping them accelerate their transformation cycle, innovate, and adapt faster. Thus *low-code* platforms are essential for every enterprise. If businesses are looking to modernize their operations, if they want to adapt faster to the needs of their customers, *low-code* certainly plays a key role in their journey.

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