The digital imperative for rapid application development

A guide to using low-code to empower New Zealand organisations to be more agile and efficient

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An Optimation eBook

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Introduction - the need to rethink your approach to a digital future

With Covid-19 continuing to accelerate the move to digital transformation, businesses need to be open to taking more digital risks and adjusting to new customer behaviours and preferences.

"Development platform vendors are expanding their value proposition beyond mobile apps and web development to meet user and industry demands," **says Jason Wong, Research Vice President at Gartner.** "The result is the emergence of multi-experience development platforms, which are used in developing chat, voice, augmented reality (AR) and wearable experiences in support of the digital business."

Traditional coding is a largely manual and inflexible process with long lead times. Quickly spinning up a mobile application to address a new business requirement or updating an existing system for faster response time is not attainable with manual coding.

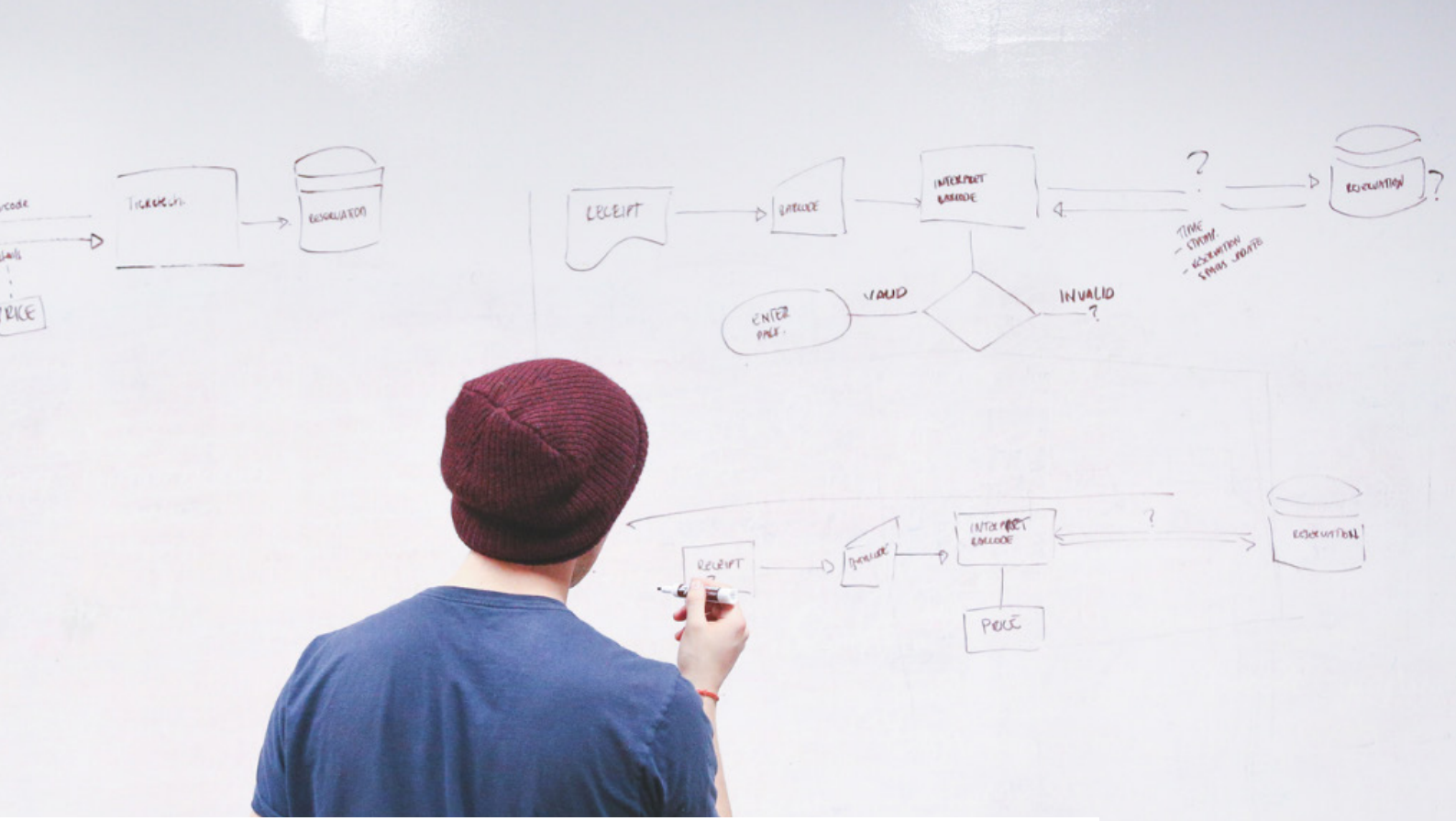
We understand that your business is not 'off-the-shelf' – everyone has individual needs – so hand-crafting an app using low-code development platforms is more effective – it's the fast, modern solution.

As a large, complex organisation based in New Zealand - in the public or private sectors - your senior operational and IT managers should be considering low-code solutions as a means of rapidly delivering software solutions to help them meet the challenges of an increasingly digital marketplace. Businesses, government agencies and enterprise-level organisations are seeking to streamline workflows and automate processes wherever possible, especially since encountering the Covid-19 era.

A **recent report** that surveyed 100+ IT managers suggests a sudden shift of priorities to digital transformation, with over 58% expecting to increase technology budgets. Even with the economic turbulence and spending slowdown, 73% of IT leaders expect to accelerate or maintain their digital initiatives.

According to **McKinsey Digital**, the crisis will only continue to speed up digital transformation efforts. Even before Covid-19 hit, 92% of companies thought their business models would need to change given digitisation.

Low-code offers a way forward for the business agility you need now, especially since industry analysts are predicting that demand for mobile apps will grow significantly in the coming months. Developers can build applications with a simple drag-and-drop visual interface, one-click deployment, and simple connectivity to legacy and cloud systems. It supercharges your application development so you can respond to digital urgency and changes in business direction.



Barriers to innovation

There's a reason that low-code application development has gained significant momentum in recent years: the pressures surrounding digital transformation along with a lack of top talent. There's a global shortage of top software developers, in addition to the never-ending requirement for software solutions that can be delivered swiftly and more frequently.

Enterprises with large IT organisations, well-established business processes, and embedded systems are challenged by rapid change that can impact growth, revenue, and market share. This places them at a disadvantage against newer, more nimble competitors.

Challenges faced by these organisations include:

- **Growing customer expectations -** in a recent **Accenture report**, just over half of respondents said they have become more impatient and want the buying process to be fast with minimal effort. 88% of these consumers use at least one digital channel when researching a product or service, and 40% want even more digital interactions than companies are providing.
- **Shrinking development cycles -** increased competitive pressure from nimble start-ups, disruptive technologies, and novel business models means organisations must innovate quickly to remain competitive. Taking months to develop a hand-coded application while using traditional processes risks making the final results outmoded at launch. Additionally, traditional hand-crafted apps can be difficult to update with new functionality that users demand.
- **Rigid application development processes -** many IT organisations still rely on 'waterfall' application development that requires predicting what future users will need or want — a stab in the dark at best — leaving business users crossing their fingers that IT understands the vision and has the tools to achieve it.
- **Security and data governance -** data security remains top of mind for consumers. No organisation or government agency wants to deal with data breaches, but they do occur. In 2019 alone, there were several that compromised New Zealand citizens, including privacy breaches, leaked details, and private details being shared online.
- **Heavy investment in legacy infrastructure and applications -** often, digital transformation means "out with the old and in with the new." But what about your previous investment in infrastructure and applications? Your organisation needs a way to unlock additional value from existing enterprise resource planning (ERP), customer relationship management (CRM), and other core systems without complex customisation that makes technology upgrades even more difficult.
- **Vendor lock-in -** if your organisation chooses to buy vs. build, be sure you're ready to be married to your vendor for a long time. It raises the question: How future-proof will your applications be?

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Eight ways to inject agility into your development process

Low-code turns typical development on its head. Instead of focussing on building an application one line of hand-crafted code after another, your IT team is empowered to focus on the big picture: the business value of the application itself. Let's look at how.

1: Rapid development cycles

Developers work with a straightforward drag-and-drop visual interface that breaks down business processes. Logic and data turn into modules that can be combined and connected as needed while all the coding happens in the background. Development times fall from months to weeks. This intuitive visual development bridges the chasm between traditional software development processes and modern DevOps, dramatically increasing IT collaboration. The result? Faster time to market and significantly shortened iterative update cycles.

2: Connectivity with existing systems

A best-in-class low-code platform will provide connectors to any data source or application, including your legacy infrastructure and enterprise backbone, which can result in huge reductions in capital expenditure. It permits integration with industry-standard protocols, API implementation, and third-party business tools like SAP and Salesforce.

3: Security assurance

Human error or oversights during coding can result in security vulnerabilities that put valuable IP and private customer data at risk. The right low-code platform has security processes and built-in audit trails that exceed the strict requirements for public and private sector security, regardless of the hosting solution.

4: Iterative development processes

Low-code can work with code that your IT team has already developed, so your earlier investments don't go to waste. Advanced platform architecture takes advantage of microservices and containers that offer the flexibility to start small — and scale up and across — without impacting performance or forcing compromises on governance and transparency.

5: Lower IT costs

When your IT team spends less time on coding basic functionality, they can focus on building applications that differentiate your brand and solve your organisation's strategic problems. Meanwhile, a visual management layer makes the logic understandable in both business and technical terms, speeding collaboration and saving time and resources.

6: No product or vendor lock-in

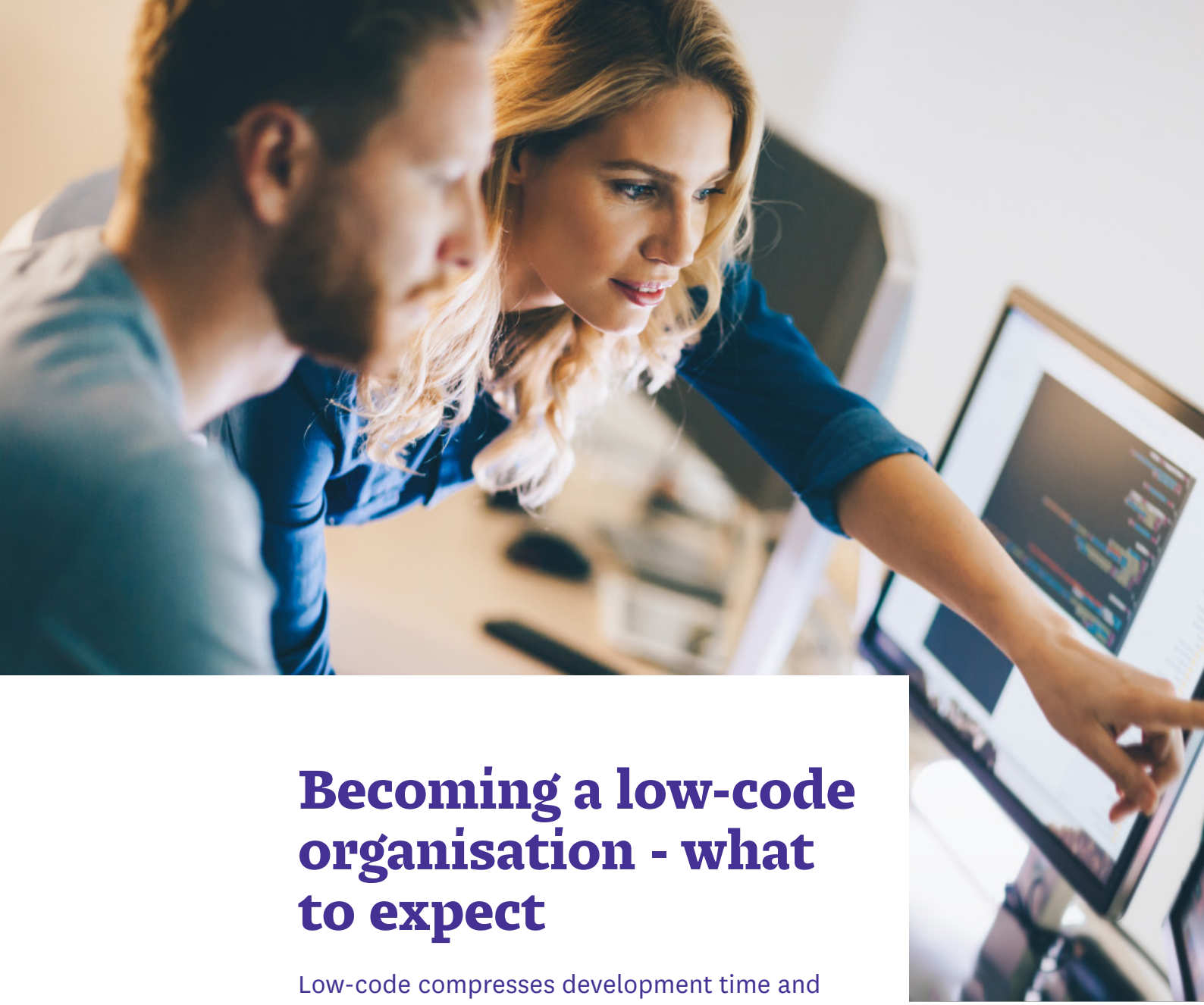
Best-in-class low-code platforms create native code, which means they don't require a proprietary runtime engine to run applications. You can take your applications wherever you need them.

7: Future-proofed

Rapid application development is only the tip of the iceberg. A best-in-class, low-code platform allows changes, upgrades, and additional features efficiently, without adding complexity that can slow your applications and disappoint users. Low-code development platforms reduce the accrual of 'technical debt' by abstracting the development process from the point of code creation, decomposing application architectures into business-meaningful and easily maintained components.

8: Better CX and customer satisfaction

Applications built with low-code can work on a variety of devices, from desktop, to mobile, to wearables and deliver consistently impressive user experiences — regardless of platform or channel — for brilliant overall customer experiences (CX). Professional and citizen developers can design from scratch, customise a pre-built design template, or import an existing design, all without compromising performance or functionality.



Becoming a low-code organisation - what to expect

Low-code compresses development time and speeds time to value, so your organisation must learn how to keep up. While these changes will certainly impact your IT team and its processes, it also requires a broader cultural realignment across the organisation. Mark DeArmon, Head of Adoption and Transformation at OutSystems, put it this way in a **recent blog post**:

"A low-code platform introduces disruption to existing organisational 'muscle memory' — a process and set of behaviours that reflect development being the longest step in the application delivery timeline."

Here are five considerations to keep in mind when deploying a low-code development solution:

1: A willingness to act

What if your organisation spots a new market opportunity, uncovers an inefficient internal process, or needs to improve internal or external collaboration? It should be prepared to launch an application to address those needs as quickly as possible. This changes the way your organisation approaches and prioritises solutions: with a faster and less costly development cycle, you can add more to the product roadmap. You might even consider making your customer 'radar' more predictive with social listening, app usage analytics, and other tools to gauge customer preferences.

2: Embrace iterative, continuous software delivery

Low-code's visual interface makes it easy for business users to collaborate in the development process and test-drive applications without relying on prototypes. A low-code application development platform can significantly improve iterative feedback and testing by the business during a build by validating targeted features before releasing them for initial user feedback. When you use microservices and containers, you can launch a polished app quickly and add new functionality over time while accurately measuring the app's impact and return on investment (ROI).

3: Double-down on IT governance

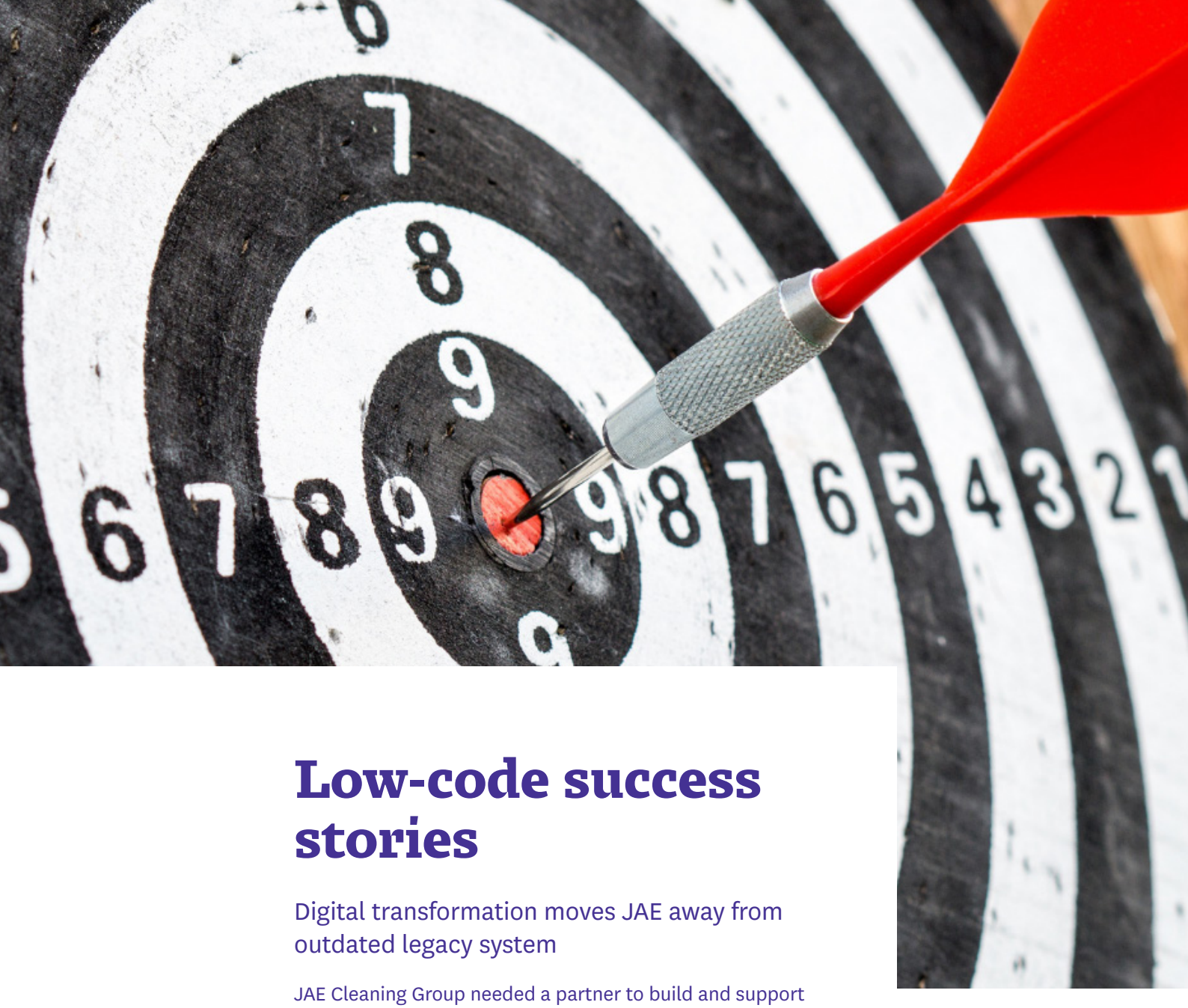
While low-code empowers business users and citizen developers with greater collaboration, indiscriminate access can lead to chaos. Multi-team development initiatives require constant communication and open, but controlled, access to systems and resources. The best low-code solutions provide agile, continuous integration and development without sacrificing visibility or control.

4: Manage the change for your people

Rapid development, deployment, and iterative improvements reflect a cultural shift that cannot be understated. The more thoughtfully you manage the 'people' side of these changes, the better the outcome. Help team members make successful personal transitions to adopt and support change.

5: Educate your leaders and get buy-in

Last but far from least, your organisation needs the endorsement from leadership to embrace change and increase agility. In the next chapter, we bring you some of our success stories you can share with your executives to help you make the case.



Low-code success stories

Digital transformation moves JAE away from outdated legacy system

JAE Cleaning Group needed a partner to build and support their new booking system. They'd been using a legacy system for 25 years, and it had become inefficient. They recognised the potential to significantly improve their business with the implementation of a new booking system, and that's where we came in.

With our low-code platform partner **OutSystems**, we were able to:

- Create an intuitive user interface
- Ensure scalability and security
- Improve access, integration, speed and scale by moving to the cloud
- Enable integration of third parties such as Xero
- Increase effectiveness and efficiency by being agile and nimble
- Enable efficient usage in mobile devices

- Build data analytics and insights
- Build a better feedback mechanism for customers

JAE's investment in this digital transformation demonstrates to their customers and franchisees their commitment to be the market leader while increasing competitive advantage.

From problem to prototype in four days: how Optimation reframed the challenge of contactless compliance

In response to Covid-19, organisations that needed to check compliance with regulations, e.g. hygiene standards, health and safety requirements, fire safety regulations, were facing difficult logistical challenges. One of them asked us to develop an application that could help ensure compliance with health and safety regulations in workspaces with many people. They needed a solution to help:

- perform site inspections based on a given set of criteria
- adhere to social distancing guidelines and hygienic practices
- confirm that the site met the necessary health and safety obligations

We employed **OutSystems' low-code/no-code approach** to agile solution creation, allowing us to visually develop an entire application, and easily integrate it with existing systems. In just four days, we were able to ideate, design and configure a virtual site inspection and workflow demonstration solution that could meet the challenges of contactless registration, virtual site inspection, tracking and compliance.

Read the success story here.

Conclusion - the digital imperative for speed

Making the move to low-code means you can deliver mission critical applications faster - in days or weeks, not months and years.

Low-code solutions will help you to lower your total cost of ownership as they are highly cost-effective. Applications can be delivered swiftly and are supported and changed with minimal (and non-IT) resources. Not only that, but low-code solutions are constantly innovating; they are a highly agile development approach ideal for enterprise-level corporate businesses and government agencies focussed on providing an enhanced digital experience to their stakeholders.

Book a free demo with the Optimation team to find out how you can use future-proof low-code technology to achieve better business outcomes.