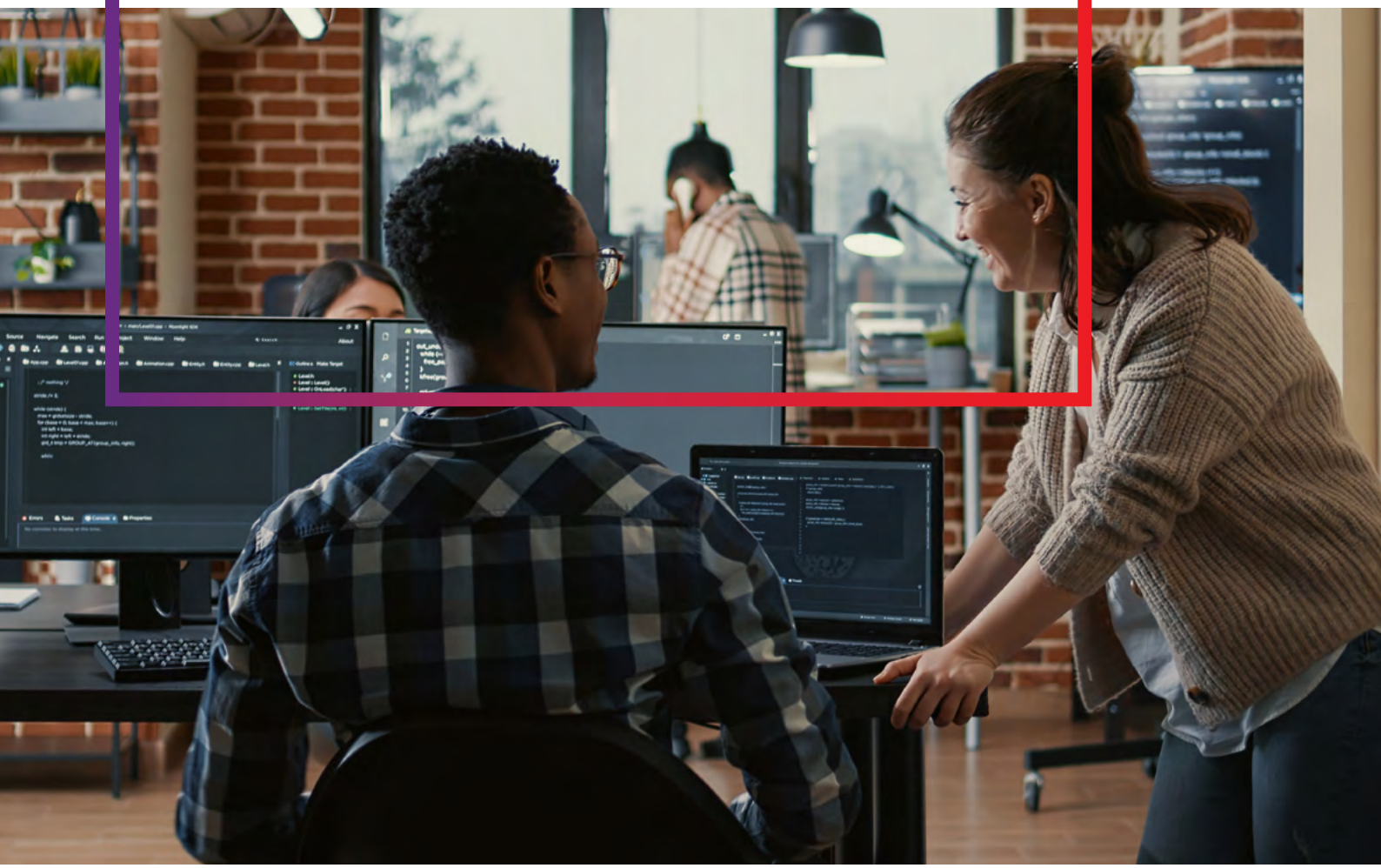
The practical guide to custom software development planning



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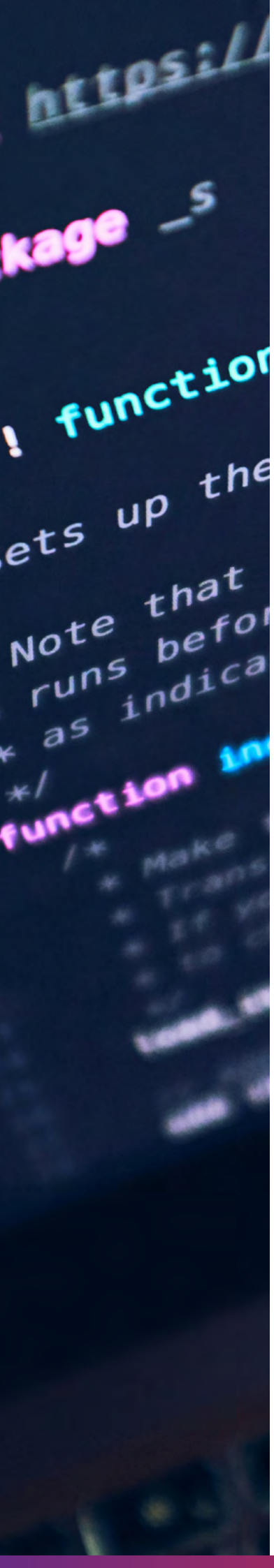


Introduction

Custom software has the power to transform how businesses operate, differentiate in the market, and create scalable advantages. Yet too often, initiatives run over budget, underdeliver, or become stuck in endless iteration cycles.

The goal of this guide is to help technical leaders avoid those traps.

Inside, you'll find some of the guidance, frameworks, checklists, and insights we use when advising CIOs, CTOs Head of or VPs of Engineering, and product teams across the globe. Whether you're building something new or redeveloping an underperforming solution, this guide is designed to give you a compilation of tools that help sharpen your thinking – from deciding whether to build or buy, to choosing the team model that's right for you – you'll find a useful resource to support and challenge your thinking.

Who this guide is for:

- CTOs, CIOs, and Heads of Engineering
- Technical Product Owners, and decision-makers evaluating a custom software build

With so much information available, it can be challenging to decipher what's most relevant to you. NashTech experts have assembled this guide to help you confidently navigate key questions and decisions, including:

Why custom software?

Planning for success

What to watch out for

Let's dive in!

Why custom software?

As a leader, you face constant pressure to innovate, improve efficiency, and deliver maximum value from your technology assets. While off-the-shelf software can, and should, be used in many instances to meet your needs, it can fall short when it comes to handling the complexities and ambitions of differentiation in modern businesses.

You may be weighing up whether a custom solution is worth the time and investment, or if your objectives can be met with commercially available solutions. The answer typically depends on how critical technology is to your strategy.

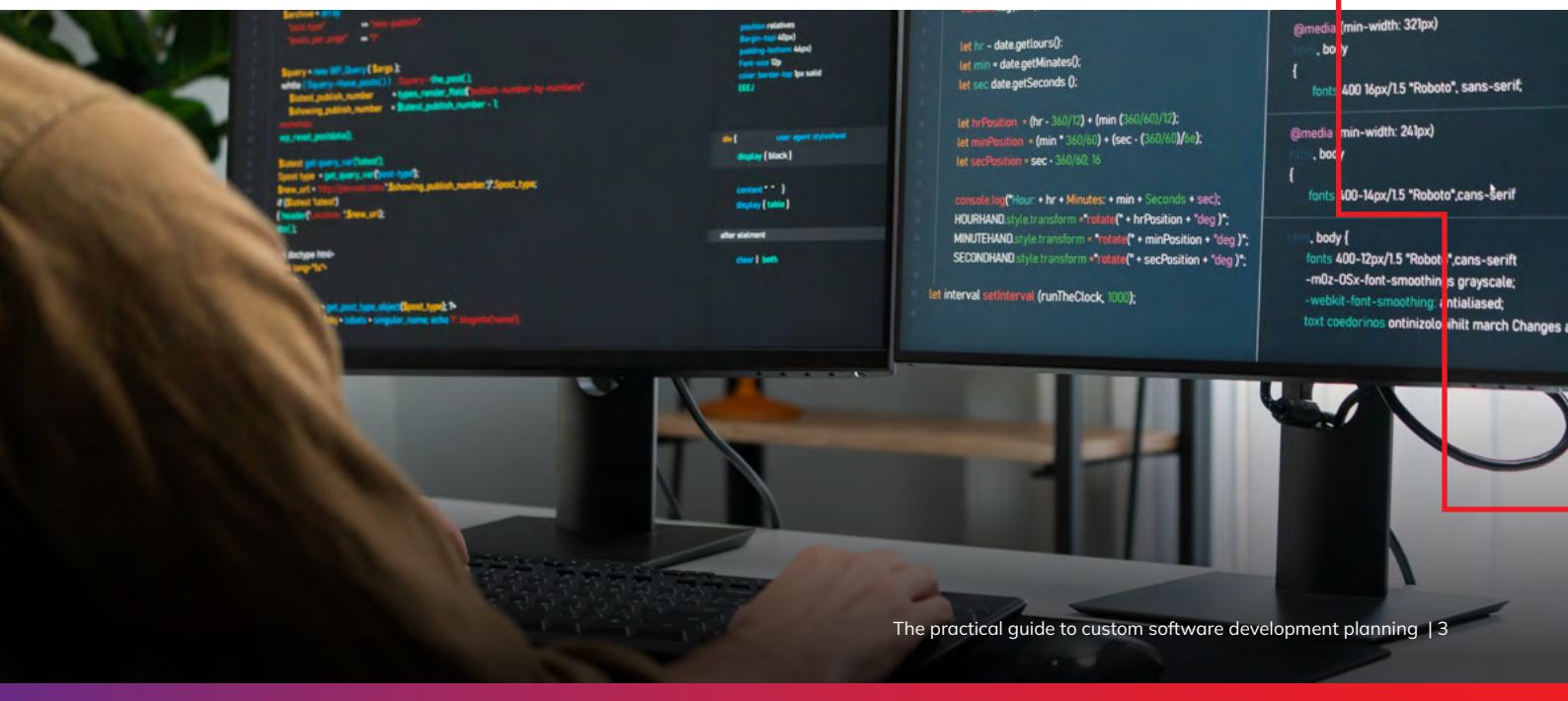
Understanding where custom software fits into your technology roadmap is the first step towards building a foundation that supports growth, resilience, and long-term competitive advantage.

Custom software is not just a fallback when packaged solutions fall short. Megatrends such as hyper-personalisation, AI, and data-driven decision-making are reshaping industries. Businesses that rely solely on off-the-shelf products risk missing critical opportunities to innovate and stand out.

Done well, custom software empowers you to:

- Build solutions precisely aligned with your goals.
- Integrate seamlessly with existing systems.
- Generate new sources of revenue.
- Transform technology from a cost centre into a driver of growth.

If you'd like to explore this further, we've published an article on how custom software can drive revenue and growth.



When to choose off-the-shelf vs. custom software

While custom software solutions can deliver significant long-term value, there are situations where off-the-shelf software remains the most practical choice.

Off-the-shelf software can be ideal when:

- Your requirements are standard across your industry (e.g., systems of record, basic CRM platforms).
- Your business requirements are well understood and fit within the product roadmap of an off the shelf solution.
- You have existing skills in your IT and operational teams that could support an off the shelf package.
- It's important for you to implement a product that is a known quantity i.e. reliability, scalability and functionality.

Custom software is often worth the investment when:

- Your business model relies on differentiated customer experiences.
- You need a solution that is designed to meet your exact business requirements and workflows.
- You need a solution that can evolve with your business, adding features and capacity as needed.
- You need a solution that offers unique capabilities that competitors using commercial off the shelf software (COTS) may not have.
- You need a solution that integrates seamlessly with existing systems.
- You need a solution where you have full ownership over features, updates, and data.

Many organisations adopt a hybrid approach: using off-the-shelf products for non-differentiating processes whilst investing strategically in custom software where it drives unique value.

Custom software or COTS? Key considerations for your decision

Before deciding whether to build or buy, reflect on the following questions:

What are you trying to achieve?	Do you need to differentiate?	Are product roadmaps available?	What resources are available?	How critical is scalability and adaptability?
Clearly define your goals and success criteria.	Identify whether your processes, products, or services require market differentiation.	Think about whether your current product roadmaps will likely meet your future requirements.	Consider the budget, timelines, and the expertise you have access to.	Determine whether your needs are likely to evolve beyond what off-the-shelf software can support.

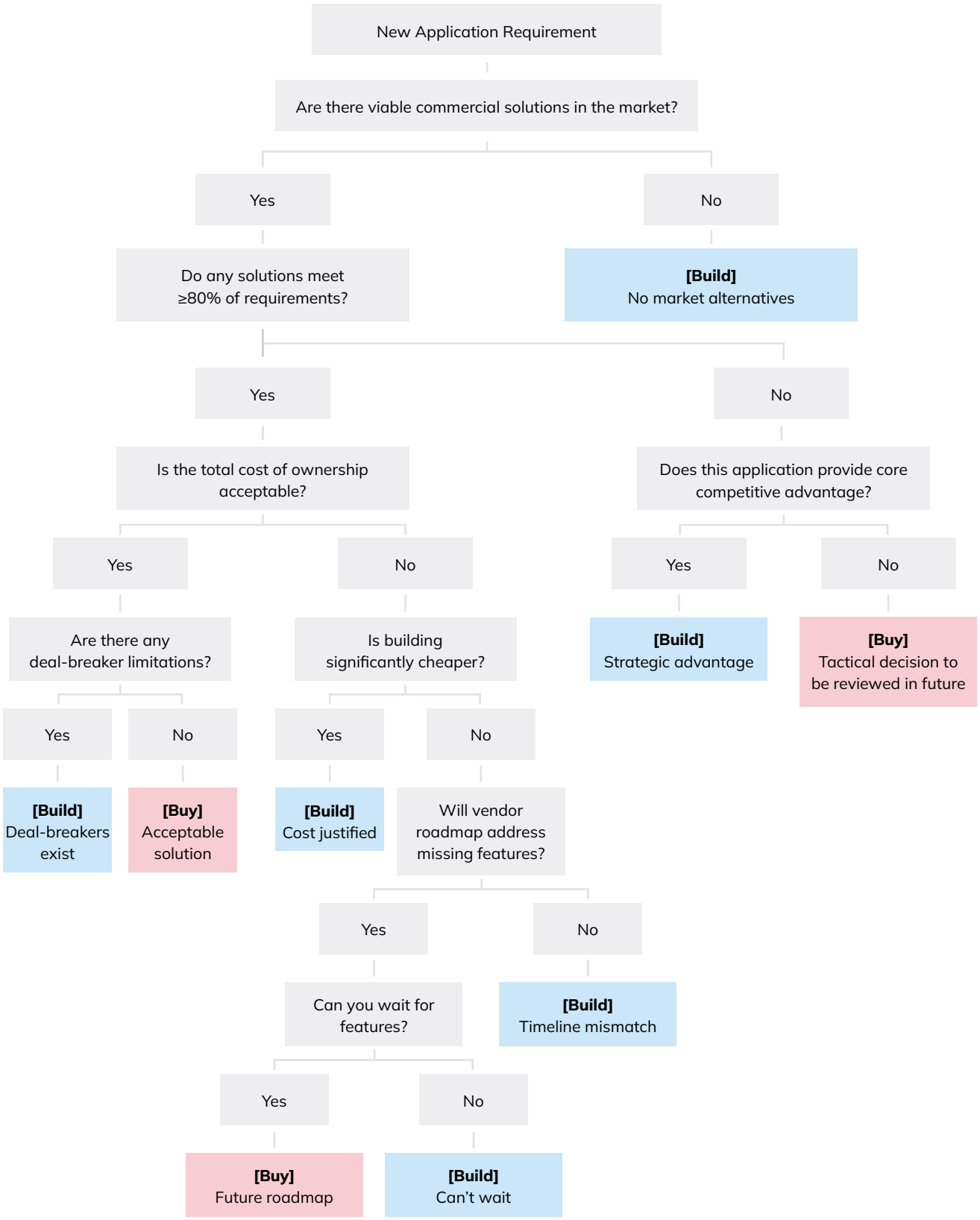
In many cases, **up to 80%** of requirements can be fulfilled with commercial of the shelf software, but the remaining **20%**, such as a distinctive mobile app or platform, may be where custom development creates the most value.

When it becomes clear that off-the-shelf products can't help you achieve your objectives, building a custom solution is often the right choice.

If you'd like to explore the build vs. buy debate in more depth, see our detailed article here.

Resource: An example ‘build or buy’ decision tree

Let’s imagine that you or your organisation has identified a need for a new solution. Having a decision making process is an important principle in which to base and guide your thinking. Below is an example build or buy decision tree resource that shows the steps you might take during the decision making process. Use an example build or buy decision tree resource to help decide whether you should build a solution or buy one.



Decision checkpoints

Market Analysis

- Available Solutions: Research existing products thoroughly
- Feature Gap: Quantify what percentage of requirements are met
- Vendor Stability: Assess long-term viability of suppliers

Cost Evaluation

- TCO Comparison: Licence + implementation + ongoing vs build costs
- Hidden Costs: Integration, training, support, upgrades
- Break-even Point: When does build become cheaper?

Strategic Assessment

- Competitive Advantage: Does this application differentiate your business?
- Core vs Context: Is this central to your value proposition?
- IP Value: Would owning the technology provide future benefits?

Technical Constraints

- Deal-breakers: Security, compliance, performance, integration limits
- Customisation Needs: Can the solution be configured adequately?
- Architecture Fit: Does it integrate with existing systems?

Timeline Factors

- Urgency: How quickly do you need this capability?
- Vendor Roadmap: Will missing features be delivered when needed?
- Implementation Speed: Buy typically faster than build

Common Deal-breakers for "Buy"

- Inadequate security controls
- Cannot meet regulatory compliance
- Poor API/integration capabilities
- Vendor lock-in concerns
- Unacceptable data residency
- Performance limitations
- Inflexible licensing model
- No source code escrow

When to Override "Buy" Preference

Build Instead When:

- No viable market solutions exist
- Application provides significant competitive advantage
- Deal-breaker limitations cannot be resolved
- Building is substantially cheaper long-term
- Strategic IP ownership is valuable

Stay with Buy When:

- Solution meets 80%+ of requirements
- Total cost of ownership is reasonable
- No critical deal-breakers present
- Vendor roadmap addresses gaps within acceptable timeframe
- Focus should remain on core business capabilities

Planning for success: Who develops what?

If you have decided to build custom software, one of the most important decisions you will make when embarking on a custom software initiative is how to structure your software development team. The right model can impact everything from speed and cost to quality and long-term sustainability. Whether you utilise in-house resources, rely on an external partner, or blended sourcing model, each option has distinct advantages and trade-offs.

Below, are three common team models to help you decide which structure best aligns with your organisation's goals, resources, and appetite for control. Team model options:

In-house development team	Onshore or nearshore partner	Offshore partner
In-house development teams can often offer: ▪ a good cultural fit, and ▪ greater alignment with your organisation's values and processes. When your developers sit alongside product owners and business stakeholders, it can be easier to iterate quickly and maintain institutional knowledge over time. This can be a positive but requires mature governance and change control processes. However, building and retaining a high-performing internal team often requires significant time and investment. Recruiting skilled talent can be slow and costly, particularly in competitive markets, where retention issues can play havoc with project plans and timelines. Scaling capacity up or down to meet project demands is rarely straightforward in-house.	**Onshore or nearshore development partners combine many of the benefits of working closely with internal teams, such as:** ▪ shared time zones, ▪ ease of communication, and ▪ familiarity with local regulations. Onshore partners offer the added flexibility of an external provider and can bring proven delivery processes and domain expertise without the overhead of hiring. The main drawback is that onshore partners typically command premium rates, which can limit the scope of what's achievable within budget constraints, especially for larger or longer-term initiatives.	**Offshore development partners can often provide:** ▪ access to a vast, diverse talent pool, ▪ the ability to rapidly scale teams without compromising on quality, ▪ often, higher levels of technical expertise at more competitive costs. Mature offshore firms have refined processes to bridge time zone and cultural differences, allowing for accelerated delivery, optimised budgets, and focusing in-house resources on strategic priorities. When properly managed with clear governance, communication frameworks, and accountability, offshore partnerships can combine the strengths of the other models while offering a more sustainable path to innovation and growth.

In many instances, a hybrid model that builds in local and offshore talent can often provide the most effective outcomes.

Resource: Model match

To help determine which operating model is best suited for your custom software project or initiative, ask yourself the following questions:

1. Internal readiness and capability

- Do we have internal product and engineering leadership?
- Do we have a product owner?
- Can we support the software after launch?
- Will this initiative distract from other business-critical work if kept in-house?
- Does the business have a lack of DevOps or CI/CD planning?
- Do we have the tools and infrastructure to support external contributors?
- Is our environment ready for secure, efficient collaboration with a partner team?

2. Strategic needs and technical considerations

- Do we want strategic input (e.g. architecture, roadmap) or pure delivery?
- Do we need deep domain expertise or specific technical specialists?
- Could a partner bring experience we don't have in-house (e.g. AI, legacy integration, cloud-native)?
- Is the stack future-proofed and well-supported?
- Can it scale with anticipated use (e.g. traffic/load)?

3. Team model and flexibility

- Can we invest time in team building and onboarding?
- How comfortable are we managing remote or distributed teams?
- Do we have enough flexibility in our team to deliver against our deadlines?
- How variable is our development demand?
- Will we need to scale teams up or down frequently?

4. Control, risk and delivery preference

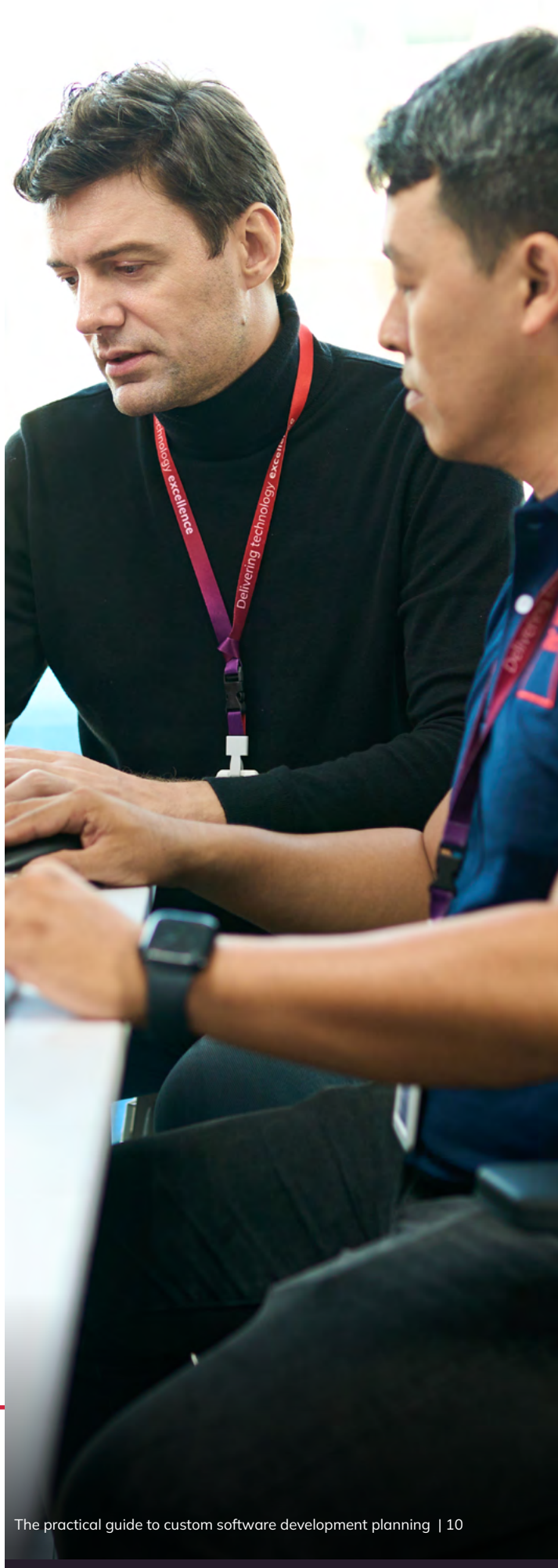
- What level of control do we need over the day-to-day work?
- Do we want full autonomy, or are we happy to delegate delivery responsibility to a trusted partner?
- What is our tolerance for risk?
- Do we need guaranteed delivery outcomes, or are we comfortable with more flexible arrangements?

Once you've reflected on these questions, you'll have a clearer view of the delivery model that best fits your project's scope, your team's capabilities, and your strategic goals. Whether that means keeping development fully in-house, partnering with an external team, or blending both. Use your answers as a checkpoint to guide conversations with potential partners and align internal stakeholders around a model that sets your project up for long-term success.

Selecting the right technology partner

If you have identified that developing custom software via a partner best fits your requirements you then need to consider how you will access the appropriate expertise.

Choosing the right custom software development partner is one of the most important decisions you will make in the context of the initiative. The right provider can help you deliver real business value faster, with lower risk, and with a clearer path to ongoing success. The wrong one can create hidden costs, technical debt, and frustration.



Resource: RFP question kit

Here are some of the key RFP questions you should consider asking any prospective partner to evaluate their experience, culture, and technical competence:

Approach and methodology

- How do you approach technical discovery and requirements gathering?
- How do you validate assumptions about users and business goals before development begins?

Experience and fit

- What experience do you have in our industry or with similar types of projects?
- What percentage of your projects are delivered on time and within budget?

Team and collaboration

- How is your delivery team structured (project management, development, QA, UX)?
- What tools do you use for collaboration, progress tracking, and reporting?

Post-launch support

- What does your support and maintenance offering include after the product goes live?
- How do you handle enhancements, issue resolution, and ongoing optimisation?

Governance and communication

- How do you handle change requests and scope adjustments?
- How often will we receive status updates and working software demos?

Technical capabilities

- What is your preferred technology stack and why do you recommend it for this project?
- How do you ensure code quality, scalability, and security throughout development?
- Can you share examples of code or architectures from previous engagements (with sensitive details redacted)?

Resource: Partner evaluation checklist

If you've shortlisted potential partners for your custom software initiative, this checklist will help you evaluate which one has the right mindset, practices, and delivery maturity to align with your business goals and drive success.

Ask yourself, can the partner support:

A clearly defined problem and user persona

Your partner should help you clarify who the software is for, the problem it solves, and how success will be measured.

A collaborative tech and product team

Look for partners who embed product thinking into development and value close collaboration with your stakeholders.

Transparent estimates (including risks and assumptions)

Strong teams provide clear estimates, with documented assumptions and risk mitigation plans.

A reusable, well-documented codebase

Expect clean, modular code and comprehensive documentation that enables smooth handover and future development.

A post-launch roadmap and support plan

Great partners don't just deliver and disappear. They provide clear plans for support, maintenance, and product evolution.

Selecting the right partner is about more than cost or speed. It's about finding a team who will work alongside you to develop custom solutions that drive lasting business impact. Take the time to ask the right questions, look for evidence of technical excellence and collaborative culture, and ensure you share a clear understanding of what success looks like.

Planning your custom software journey

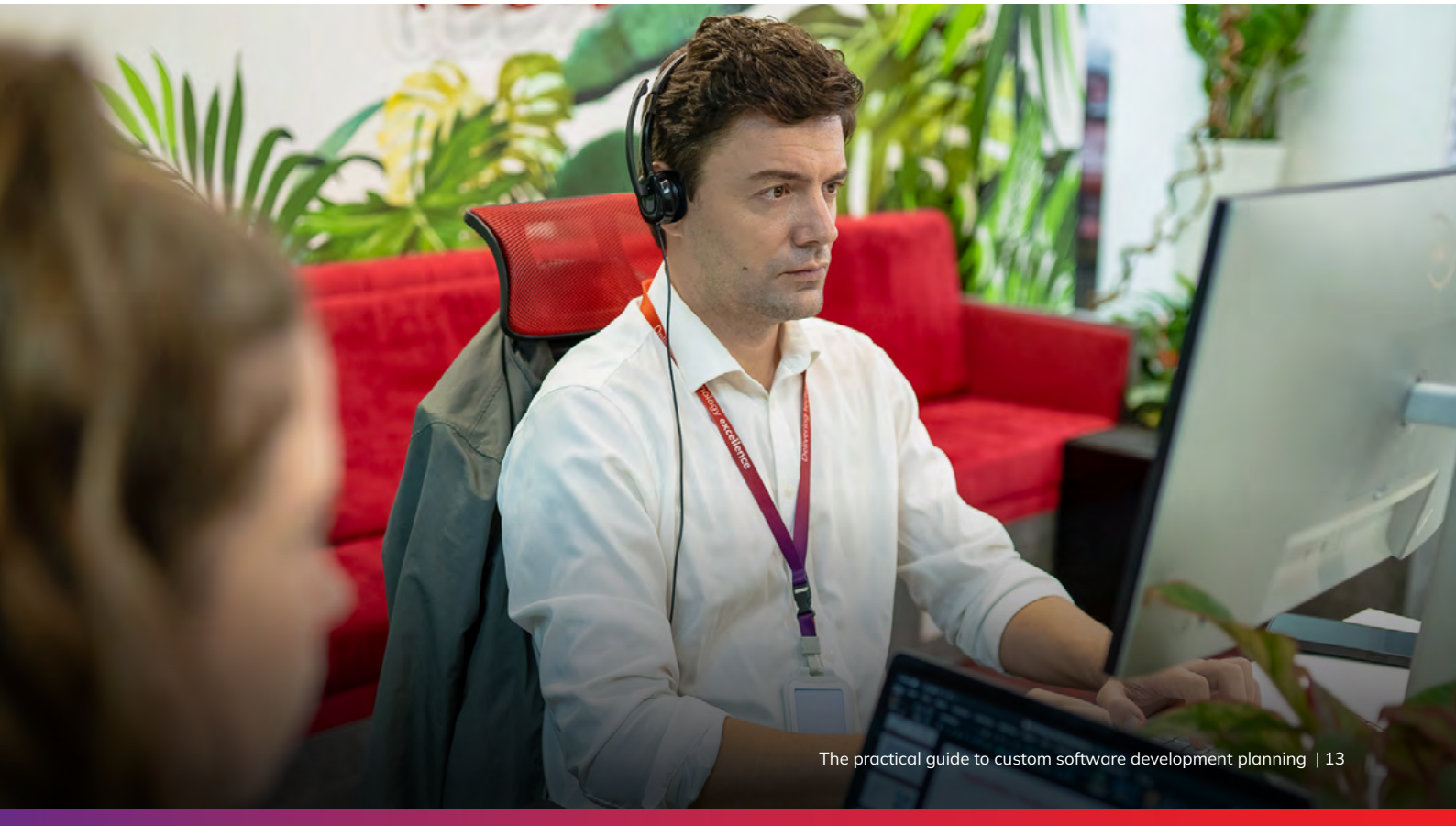
Developing custom software is a process. From clarifying what success looks like to designing, launching, and continuously improving your product, each stage has critical dependencies that impact time, cost, and quality.

This section of the guide walks you through the end-to-end process of planning and delivering a successful custom software initiative. You'll see how clear governance, disciplined scope management, and proactive budgeting can help you avoid the common pitfalls that derail projects.

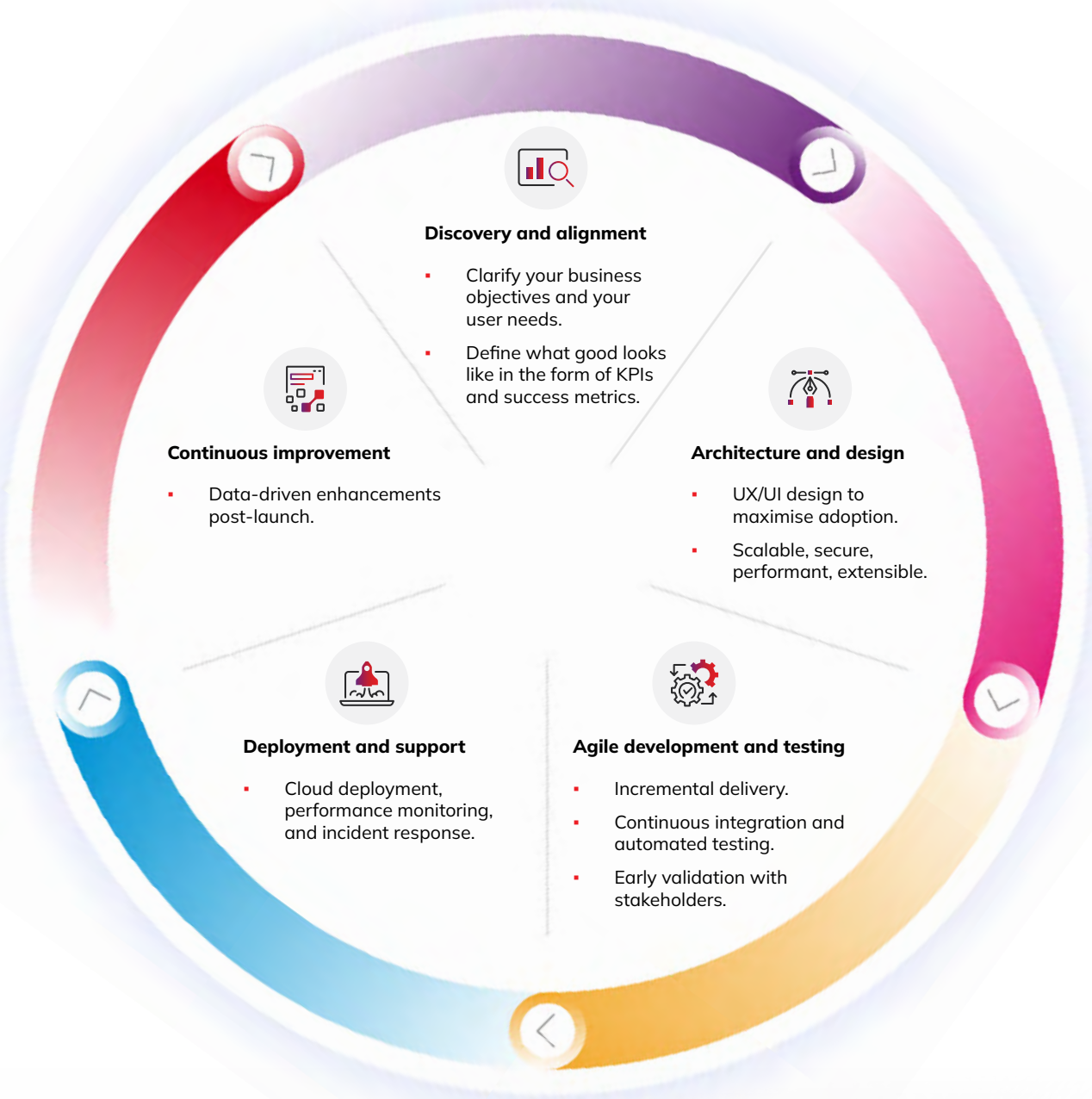
Below, you'll find:

- **A visual lifecycle of each project phase**
- **Best practices to improve speed, adoption, and quality**
- **Governance tips to keep teams aligned**
- **Insights on budgeting realistically for long-term success**

Whether you're building an internal platform or a customer-facing product, use this framework to structure your approach and give your project the best chance to deliver meaningful results.

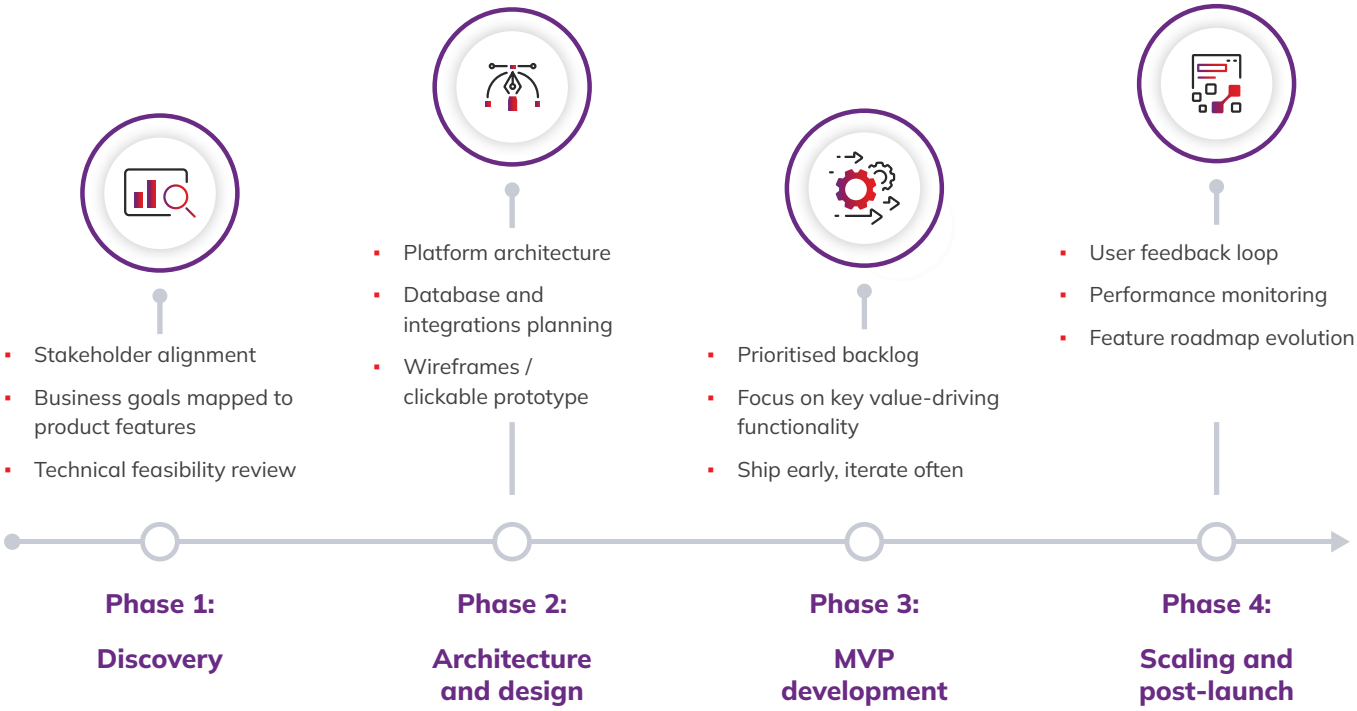


Resource: End to end process



Resource: Governance and scope playbook

Successful custom software initiatives don't happen by accident. They rely on clear governance, disciplined scope management, and a structured approach that guides teams from discovery through scaling. This resource outlines the essential phases, best practices, and common pitfalls to watch for at each stage of your project. Whether you're planning your first build or refining an existing process, use this guide as your roadmap to deliver with confidence, avoid hidden costs, and create long-term value.



Governance tips:

- Assign a single, empowered product owner
- Weekly steering committee for projects >3 months
- Use Scrum or Kanban with appropriate ceremonies supported by the correct behaviours and culture
- Require documentation from external vendors

Common pitfall:

Watch out for "scope creep." Avoid by protecting MVP scope, keeping a backlog of phase-two items, and aligning teams around clear KPIs.

Budgeting smarter: Avoiding hidden costs

A common pitfall in custom builds is underestimating the true cost. It's not just about development; it's about ongoing investment. Want to read more? Check out our article: How much does custom software development cost? Here's a summary:

Components of Total Cost of Ownership (TCO):

- Initial development (internal or external)
- Architecture planning and DevOps setup
- Product management / design / QA
- Business change management and training
- Integration with legacy or third-party systems
- Ongoing support and maintenance
- Hosting and infrastructure costs
- Security compliance and testing
- Future upgrades and scalability

Tips:

- Budget for 30–50% of initial build cost annually for enhancements plus maintenance
- Avoid fixed-scope pricing for complex projects — it rarely holds
- Use MVP planning to focus budget on highest-value functionality

Pro tip

Create a parallel "cost of doing nothing" column, including, what's the impact if you delay, stick with legacy, or adopt off-the-shelf and outgrow it?

Why leading enterprises choose NashTech

If you have a requirement that commercial off-the-shelf software (COTS) packages cannot meet, we will provide a solution. Our custom software development services can create business value faster for you in three key areas:

- Differentiated solutions or digital products that open new revenue streams and ensure your business stands out from the competition.
- Unique user experiences for enhanced user satisfaction and increased customer loyalty.
- Optimised operations through automating core business processes that are unique to you and improving efficiency and effectiveness.

At NashTech, we understand that selecting the right technology partner is about more than cost; it's about confidence, quality, and shared commitment to success.

For over 25 years, NashTech has helped global enterprises design, build, and run high-impact technology solutions. As a UK-headquartered business with deep delivery capability in Vietnam, India, and Costa Rica, we bring together the best of both worlds: proven offshore scale with the standards, transparency, and accountability you expect.

Global expertise with local accountability

- **25+ years of experience** delivering complex software and technology solutions worldwide.
- **End-to-end partnerships** from strategy and design to development and long-term support, with a dedicated team of engineers supported by an onshore engagement manager and account manager.
- **1,000+ successful projects** across industries including financial services, retail, insurance, and logistics.

Uncompromising quality and security

- Our teams are obsessed with quality and trained to deliver not just speed but repeatable quality you can trust.
- Our Quality Management System is **ISO 9001:2015 certified**.
- **CMMi Level 3** process maturity ensures disciplined, efficient delivery.
- **ISO 27001 certified** information security and robust governance protect your data and IP.

Exceptional talent and culture

- 80% of our professionals are graduates from Vietnam's **top six engineering universities**.
- 2 out of 5 of Vietnam's '**Microsoft Most Valuable Professionals**' are part of our team.
- Continuous learning culture via our **DevCafe**, English proficiency programs, and ongoing technical training keeps our skills sharp.
- A strong emphasis on clear, proactive communication means you'll always feel connected and understood.

Seamless collaboration across time zones

- With deep delivery capabilities in Vietnam, India and Costa Rica, as well as teams across the globe, you gain **flexible, scalable capacity** wherever you need it.
- Our clients tell us collaboration feels effortless, thanks to our investment in English training, cultural alignment, and clear working rhythms.
- Whether you prefer regular on-site visits or a more hands-off relationship, we integrate smoothly into your way of working.

Cost-effectiveness without compromise

- Our global delivery model offers **a balance of competitive rates and world-class engineering standards**.
- We help you achieve cost savings while still investing in quality, security, and long-term sustainability.

Proven results

"What NashTech delivers is of high value and high quality. The speed, efficiency, and innovation from their teams have surpassed anything we've seen before, even compared to UK-based teams. We now have complete confidence in their ability to drive our business forward."

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