




Engineering the Experience

Digital Product Development

Businesses today operate in an uncertain environment. Customer expectations are changing and the ever-evolving technology landscape is giving rise to new types of competition.



Product innovation is at a point of inflection. As customers are using digital to change the way they interact, businesses are busy looking for ways to leverage digital to develop them. The digital ecosystem that supports the needs of modern business cannot be bought off the shelf, it must be bespoke and it is different every time, over time.

Engineering the Experience - introducing our Digital Product Development service

We are uniquely experienced in combining the disciplines needed into an end-to-end process, delivering digital products that achieve business outcomes, minimising risk of failure and waste and getting the best out of enabling technologies, such as Cloud and Open Source.

6point6's Engineering the Experience is aimed at organisations who recognise that in order to better meet their own customers' needs and find points of differentiation in their marketplace, they need to develop and build their own digital products.

Increasingly we see organisations where digital product development is a priority, but new products are not fully operational and production ready. We build digital products, make them production ready - and then transfer and integrate those fully operational products into your organisation.

Turning your digital aspirations into reality

Every company is now a software company – every aspect of a modern business organisation, in every sector, is digitally-driven. Product development in the digital age sits at the intersection of marketing and technology and requires a different skill set to bring digital products to life. Many legacy companies struggle to marry the disciplines successfully, to prevent technology silos from dominating the digital process without sufficient focus on the consumer and industry environment.

Our Engineering the Experience is for organisations who want to reduce the risks and costs of creating bespoke digital products and services that will meet their organisation's needs.

Projects vs. Products:

Projects used to be how IT was delivered, but digital products are not the exclusive domain of IT. Digital products have an initial build, and a life cycle, just like a physical, tangible product. They are expensive and risky to develop, built to be long lasting and adaptable for refining and improvement, driven by real data and research.

Bridging the skills gap:

Technologists and DevOps in-house may lack the range of disciplines and knowledge required for successful digital product development. Building digital products is also time consuming and requires full commitment to the process and your teams may not be fully engaged to work in the flexible, cross-disciplinary style required to achieve results, quickly.

Reducing failure rates:

Digital transformation is expensive and risky. Most digital products fail and digital product failure is harder to predict, because traditional metrics, such as time, cost and scope have become more fluid.

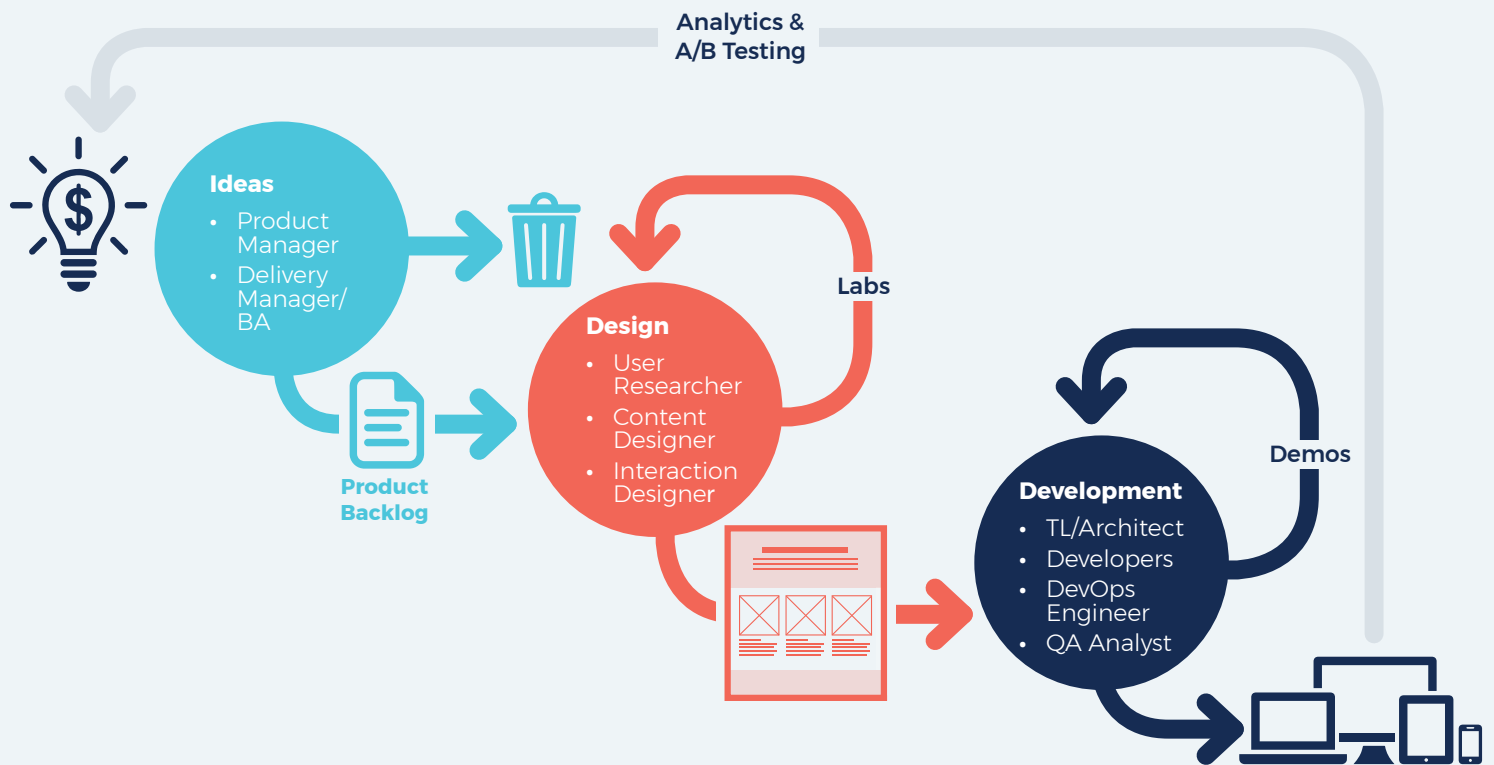
Bespoke vs off-the-shelf:

Data-driven decision making has become vital to every organisation. In the drive for differentiation, digital tools and software products are becoming increasingly complex. Trying to shoehorn this amount of complexity into an off-the-shelf Enterprise Resource Planning (ERP) package will not work and bespoke build is inevitable, as is the need for ongoing change and refinement.



Developing Digital Products

We offer an end-to-end framework, using the skills and knowledge of our Digital Product Development team to take your brief from ideas to launch.



Agile Product Management

We help you set out the product vision and strategy and prioritise the work to get there in a product roadmap. This takes into account:

- The views and aspirations of your stakeholders
- The outputs of user research we undertake, to test their validity
- Feedback given by actual users, once an early version of the product is live and producing data

The Product Manager will oversee every aspect of the product, managing the budget, set out the release schedule and the go-to-market strategy. They also maintain oversight of the three c's: reducing costs, increasing competitiveness and ensuring compliance:

- **Cost:** focusing on value creation
- **Competitiveness:** focussing on speed of analysis, improved customer insight and data-driven performance
- **Compliance:** being aware of the changing regulatory landscape

Service Design

We will help you design digital products that focus on your end users and add value. This process calls on the skills of different disciplines, including:

- **User Research:** understand user groups using ethnographic research and personas, conduct face-to-face research sessions as if the digital product were a physical one (like an iPhone or a Playstation) and convert these wants into a catalogue of user needs.
- **Visual, UX and Interaction Design:** apply design to digital channels considering everything from fonts, graphics, colour scheme as well as user experience, site navigation and interaction, menus, buttons and even information architecture.
- **Content Design:** design content layouts that focus on what users need to know in a format that is easy to understand and explore, rather than what the business wants to say.
- Getting delivery right is important to us and the delivery manager role ensures the team is functioning effectively, using agile methods and principles. They lead the multidisciplinary team to realise the Product Manager's vision and helping to support agile culture in your wider business, through coaching, mentoring and change management. Additionally they will provide an essential layer of governance including progress and budget reporting, hiring and stakeholder management.

Software Engineering Excellence

Our skilled software engineers will write, test and release high-quality software that follows best practice, delivers on acceptance criteria and is scalable and secure, within the required timeframe. Our engineering teams bring a range of skills in different technologies that allow us to tailor the most appropriate solutions. Working closely with your team, we structure our software engineering to fit the needs of the organisation. We deploy our proprietary methodologies and frameworks to accelerate work package delivery, which includes 6point6's Software Factory, a proprietary framework that produces a consistent approach to fully automated Continuous Delivery at scale that adapts to multiple teams and a diverse range of technologies.

DevOps

The delivery manager will bring together both software development and operation teams to improve collaboration and productivity.

We empower development teams with the tools and methodologies needed to create successful cross-functional modes of working whilst still meeting operational requirements and governance, from build through to deployment and beyond.

This cross-functional mode requires multiple tools or a "DevOps toolchain" to create a fully automated and delivery focused work stream. We provide a modular toolchain that has the ability to adapt with business needs and ensure DevOps as a methodology is able to scale throughout an organisation, delivering maximum value.

Analytics

Our analytics team embed sensors, beacons and other tools, to stream real-time data that provides insight into how digital products perform in the real world and how they can be improved and optimised, based on evidence derived from actual user behaviour.

Plugging into our digital product development resources gives you the ability to differentiate yourself from your competitors, to enable and empower your employees, to connect with your partners and to provide data-driven insight to your stakeholders. Our service includes assurance and security as standard and we work with your in-house team to bring them along on the journey.

Engineering the Experience

Typical Digital Product Development scenarios

Over time we have developed and refined digital product development scenarios from our in-depth work on a large number of digital products. These scenarios enable us to accelerate the strategy, design and engineering process.

6point6 most common digital product development scenarios:

1. User facing, responsive, multi and omni-channel, internet-based digital products.
2. Business process automation including complex, transactional user journey.
3. Headless bespoke back-ends that provide a single-view-of function for key data or processes (for example, Customers, Content, Products, Prices, Assets).
4. Digital workplace digital products that are employee-facing allowing secure offline and remote working.

Our 6point6 skills and knowledge base

We have teams of analysts, designers and engineers with hands-on experience of Digital Product Development in organisations across every sector. We deploy small teams with the right mix of skills and experience to solve your specific migration project in its entirety.

Known as Pods, our Digital Product Development teams give you ready-made, modular delivery capability focused on the real-world challenges that you will face when migrating to the cloud.

Benefits of Pods

1. Collaborative and supportive

We aim to minimise impact on your team's day-to-day role, handing over control in manageable increments and working collaboratively to ensure your staff are brought on the cultural journey and to gain the skills required to sustainably change the operating model.

2. Autonomy and value for money

Our Pods are mission directed. By adopting common frameworks and methods, we gain consistency in ways of working that leverage the architecture and programme delivery teams.

3. Scaling

Our outcome-focused Pods can be scaled: in the early life of product development, our delivery managers focus on optimising the balance between number of workloads and number of team members per Pod. This continuous monitoring and balancing leads to better insight and certainty regarding delivery dates and predictable progress.

Where have we done this before?

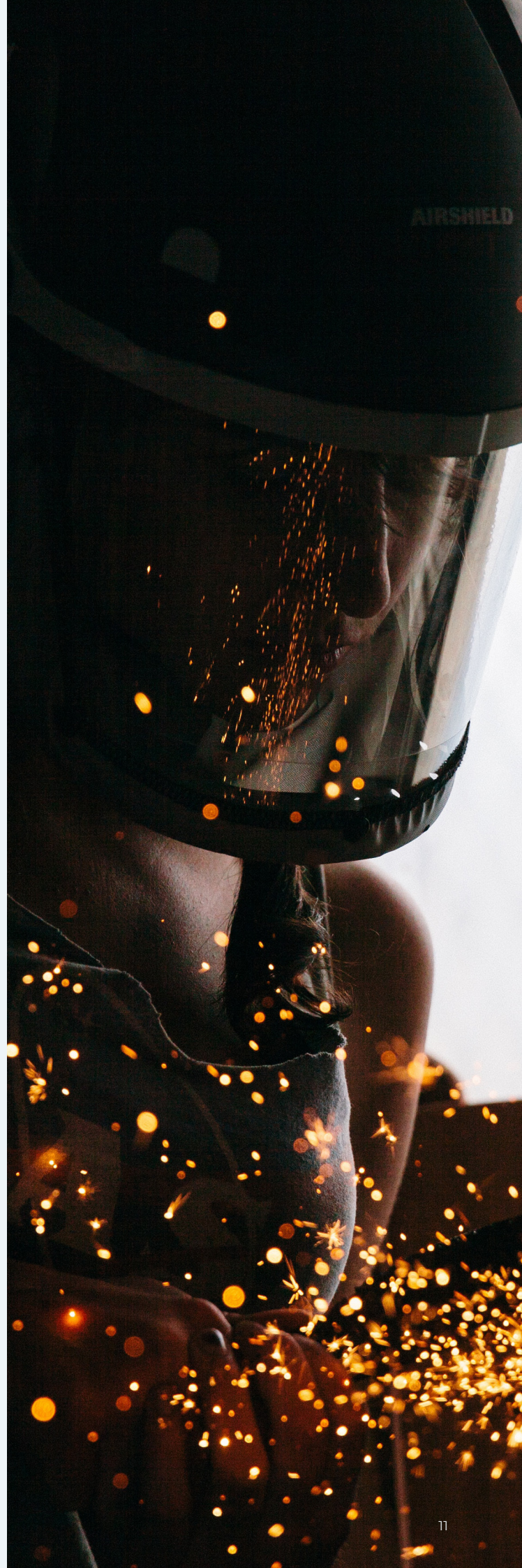
The Telegraph Media Group (TMG)

6point6 helped TMG with strategic and technical leadership for implementation of the company's digital subscriptions strategy by content management migration and creation of a core API platform.

TMG's main aim was to re-platform its CMS to facilitate increased production of high quality content to stimulate advertising and subscription revenue. In addition, the new platform was to be an enabler for the rapid development of new and innovative digital products and services, such as the TMG Travel, Apple News and Facebook Instant Articles.

6point6 contributed in a number of ways:

- Establishing predictable development team velocity by leveraging agile at scale
- Enabling delivery of quality combined with speed by creating a reliable, performant and trusted Continuous Integration and Delivery framework
- Providing specialist expertise to overcome significant and potentially destabilising performance challenges
- Providing strategic and technical leadership of the TMG Travel strategic ecommerce initiative
- Creating new technologies to distribute TMG's content to the emerging 3rd Party News Platform sector, notably Apple, Google and Facebook
- Enabling the future of TMG's digital subscriptions strategy



Our Thoughts

Digital Product Development cycle

In recent years bespoke software development has changed significantly. Different disciplines have come of age and converged around the need to quickly and continuously deliver features that give users what they want. User Research starts by reaching outward to users (not the owners) of the product, empathising with them. After all, 'wanting' is an emotion, tapping into that is the way to engage people and draw them in. User Experience Design distills research and converts it into interactions, views, colours, sounds and gestures. Agile software delivery industrialises the flow of new features in the form of live software produced by software developers and DevOps engineers. Once the digital product is live, the focus switches from research to evidence, as user behaviour is tracked and fed back using analytics, ready for the next iteration.

Engineered to change: the importance of automated testing?

The best software developers care as much about testing as the actual writing code. Well tested code means they can sleep at night, not only because they worry less about it breaking, but also because there is no need to wake them up in the night because it hasn't. Instrumenting digital products with automated tests reduces the possibility for defects to interrupt the end user's experience. It also means that developers make changes and immediately detect that nothing unexpected has broken.

Release little and often

A digital product development team must evolve the tools and processes to safely and efficiently introduce change. A healthy digital product (like Spotify or Google Chrome for example) is constantly being added to, tweaked and reshaped. This is a bit like surgery and must be done with no interruption to user experience, even though the idea is to enhance that experience with new features. Every change is a risk - better to embrace it and get good at changing things one small risk at a time, rather than batching them all up into less frequent big risky releases, whilst denying the team the ability to hone and practice and develop muscle memory.

Funding digital products

Bespoke software development is expensive and shouldn't be short changed. Most of the cost of building a digital product is incurred after it goes live, so penny pinching in the initial stages makes little sense. Favour the best engineering over low price and this will pay off in the long term. Also bear in mind that digital products need to work hard to stay relevant and to retain users, so they will need to be constantly tended by a development team to features, fixes and upgrades. A digital product that has lost its ability to change is legacy software. So, the Minimum Viable Product is just that; the continuous change that follows will need to be funded on an ongoing basis. It helps to think in terms of an upfront investment followed by an annualised tax that acknowledges the need for a team that not only runs the product but is also qualified to make meaningful changes to it.

What is a Software Factory?

DevOps has transformed how software applications are built, tested and released in recent years by building bridges between those who create digital products and services and those responsible for running them reliably using automation and in many cases cloud. But in solving one problem, it has created another. In many organisations DevOps had become largely an unregulated cottage industry subject to continuity risk and lacking in discipline and governance.

6point6's Software Factory is a proprietary framework which produces a consistent approach to fully automated Continuous Integration and Continuous Development at scale. It is able to adapt to multiple teams and a diverse range of technologies. It is a pattern-based approach that empowers developers to create their own automation in a consistent way, evolving away from the DevOps 'hero culture'. It is the foundation on which for Data Platforms and Digital Transformation rests.

Technical Debt. What is that?

Financial debt is a good metaphor for what happens to an IT estate over time. Each shortcut, for example to save time or cost, is like taking out a small loan. Loans must be paid back, or they must at least be measured and quantified in order to inform the decision on whether or not to take out more loans. If not, then bankruptcy is inevitable at some point in the future and in IT terms, the risk-laden lead up to this is known as a 'burning Platform'.

The reality is that all repayments that were missed over the years (all the missed upgrades, failures to patch, lack of code refactoring) must now be made in an accelerated time frame and more often than not, resulting in one very painful transaction. In our experience, the demands of regulatory change, disruption from competitors and cyber security breaches are common catalysts for a technical debt crisis.

Where do you see yourself on the digital landscape?

- **Digitally efficient:** simply applying digital to business-as-usual
- **Digitally enabled:** evolving operations, albeit without new business models
- **Digital explorers:** anticipating tech-triggered behaviours, creating new value by building new business models
- **Digitally enhanced:** digital transformation from the outside in





Get in touch

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About 6point6

Integrating digital technology into your business can result in fundamental changes to how you operate and deliver value to your customers. To go digital is to reinvent yourself to the core, opening yourself and your clients to a world of possibilities.

6point6 is a technology consultancy. We bring a wealth of hands-on experience to help businesses, including financial services providers, media houses and government, achieve more with digital. Using cutting edge technology and agile delivery methods, we help you reinvent, transform and secure a brighter digital future.

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