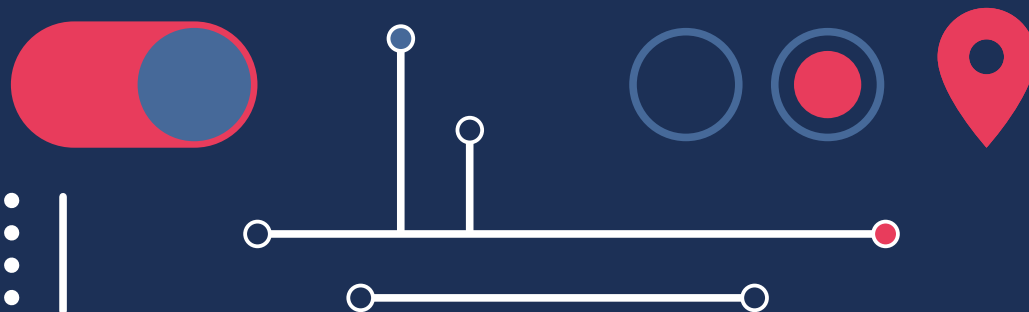
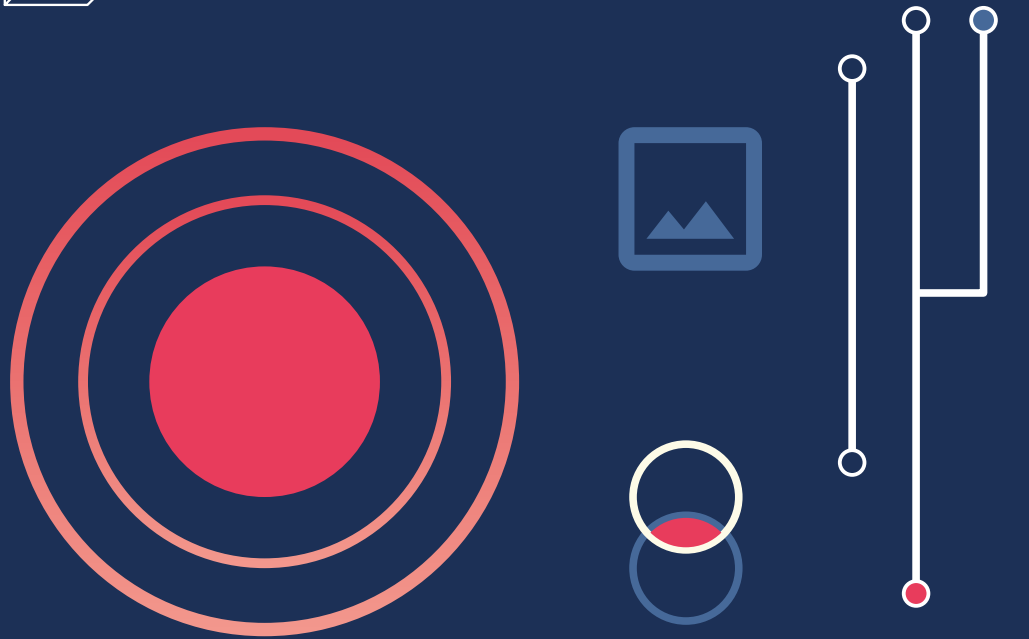


# What's Your Problem?

Mashbo's 2019 guide to harnessing the transformational power of technology for your organisation.



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## **“We need to do something with [INSERT NEWEST, SHINIEST TECH HERE]...”**

That’s the most common brief we hear from clients and prospects nowadays. A request to do something, *anything* with the latest, headline-grabbing technology - from artificial intelligence (AI) and machine learning, to virtual and augmented reality (VR and AR).

Our response?

### **“What’s your problem?”**

No, we’re not being passive aggressive about the flimsy brief. We genuinely want to know - what is the organisational issue that you are trying to solve?

You see, in a world of connected living and technology that evolves rapidly, almost on a daily basis, it’s never been more important to avoid getting caught up in the hype and jumping on the bandwagon.

When looking at what technology can do for your business, you shouldn’t be starting from what type of technology to use.

You should be starting with the problem. From that, with the knowledge of the business or sector from your team and the expertise and guidance of software development consultants like the team at Mashbo, you can work out how to respond. Identify the most impactful and cost-effective tech solution.

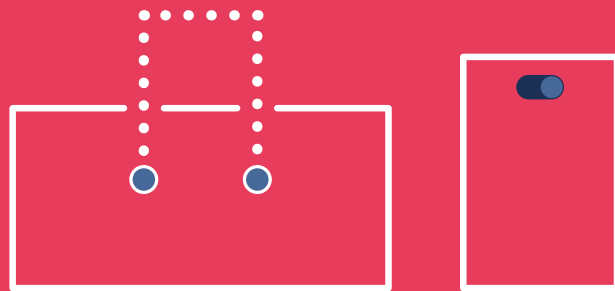
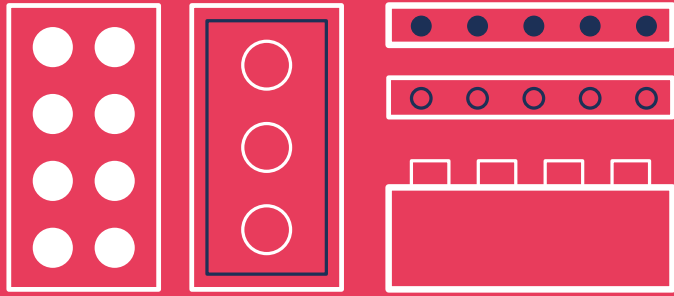
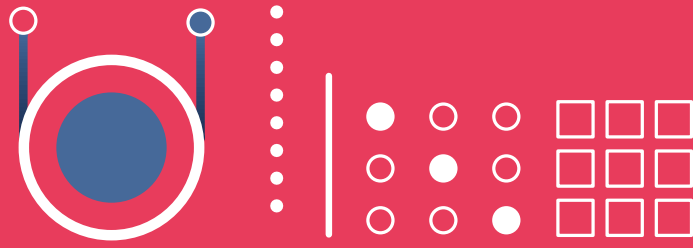
The ultimate solution may not be the exciting new technology your CEO requested, sorry to disappoint you. In fact, it might be something far more established and, well, boring. But it will be the right solution.

Harnessing the right tech at the right time is an art. It requires thinking and planning, so you make the correct decision from the start. It involves internal stakeholders, with their wealth of expertise and brand knowledge, coming together with external technology experts who are trained to spot the opportunities and issues that you can’t see.

Our solutions might not give you the vanity headlines, or the ‘we-used-it-first’ kudos. But they will deliver transformative results, delivering a long-term impact, improving efficiency, capability, profitability and productivity.

So, we’ll ask you again.

### **“What’s your problem?”**



# Four organisational issues and how to tackle them with tech



# Process Automation and Rule-Based Systems



AI or artificial intelligence is undoubtedly a buzzword at present and much exploration into this technology and its benefits is taking place.

However, the more exciting iterations of AI, such as driverless cars and robot chefs, and the sci-fi led dramatisation of its horrifying potential (robot uprising), are a far stretch from where the technology is most useful to organisations right now.

While businesses probably don't need a robot chef to solve pressing business issues, most could probably benefit from streamlining their day-to-day processes, in particular around administrative tasks. For this, AI offers process automation and rule-based systems.

Process automation is a general technology term used to describe any process automated through the use of computers or computer software. Automated processes require minimal human intervention, if any at all, and are generally delivered faster and more accurately than the human equivalent of the task.

Rule-based systems are often used in artificial intelligence applications to store, manipulate and interpret information in a useful way. In software development, these systems can be used to create software that will provide an answer to a problem in place of a human expert.

As unsexy as they sound, process automation and rule-based systems are the most useful broad implementations of AI that we have right now. They have potential for every sector, in businesses of every size, from automated administrative software and automated audit software that takes over laborious tasks such as documentation generation, freeing up time for more profitable work, to reducing the risk of human error in decision creating rule-based systems.

## Benefits

- Reduction of time spent on administrative tasks, such as data entry and analysis, documentation generation, managing payments and reporting, freeing up staff to undertake more profitable activities
- Increased efficiency and productivity, leading to faster or more significant business growth
- Increased profits and more jobs created through business growth
- Improved staff morale due to better working hours and the facilitation of flexible working through the use of cloud-based systems
- Better working environment as staff are able to focus more on interesting, creative or specialist tasks due to reduced admin tasks
- Reduction in human errors, so less time needed to rectify these
- Event-based system architectures mean that when an error does occur in an automated process it is rapidly identified and can be fixed with minimal human intervention

## AI & Automation in Action

National law firm, Weightmans, worked with the University of Liverpool Computer Science department to [create a system capable of legal reasoning](#), to improve and advance its client experience.

The team at Mashbo has also completely automated the administrative processes of a busy student lettings agency, reducing the time spent on tenancy generation and contract signing for all of their properties from three weeks to under an hour, through our [PropertyCloud](#) platform. The business has also had to recruit more staff to meet the demands of its rapidly growing portfolio.

We also worked with the employees of a [national employment law firm](#) to given them more time to provide excellent client care and work on new business development, by creating a custom online management system that streamlined time-consuming business processes.



# Modular Development



Modular design is a step away from restrictive templates that have left so many organisations with websites enhanced by extensive numbers of plugins and hacked-together code, creating an unstable foundation that will ultimately always reach a point of limitation, when you'll be forced to start again.

Even the godfather of the website theme, Wordpress, has acknowledged this with its recent [Gutenberg](#) Update, the rebuilding of its editing system that allows for media rich pages and posts and brings flexibility of design and build through blocks.

Modular development is possible through Wordpress or bespoke systems, like the one we developed recently for a client with multiple brands and digital properties to manage and develop.

Rather than being restricted to a set template library or having to commission a whole suite of bespoke templates to meet every requirement of your business, it breaks down your overall designs into small components or 'blocks' that can be built and arranged in any order to create exactly the page you need. This can be delivered within a small selection of templates, within which these content modules can be added.

Through a scoping session or workshop, you can map out every type of content that you might need and these can be created, for continued use. What's more, as your business develops and the content landscape changes, this suite can be enhanced by simply having a new 'block' built, rather than a new template or even site.

It's a future-proof approach that gives you bespoke control over layouts, reducing the time needed for changes and development costs.

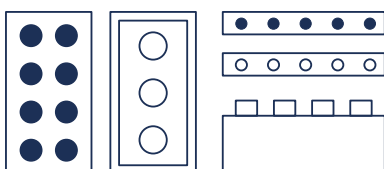
## Benefits

- Flexibility allows businesses to be more reactive to changes as it is easy to update and also create a more unique identity than using static templates
- Saves money and time long-term on bespoke template development
- Simple changes that would previously have needed to be made by a developer can now be actioned by internal staff members trained on using CMS
- Reduces number of templates required, simplifying and streamlining website management

## Modular Development in Action

We created a bespoke modular content platform for the [Centre for Alternative Technology \(CAT\)](#) to streamline and bring consistency to its digital brand, as well as allowing flexibility for future design changes, business growth and acquisitions. Our solution also made it easier for internal staff members to update and add new content.

Our modular solution for global "white label" life and health insurance provider, [iptiQ](#), utilised the new Wordpress editor Gutenberg, to create a block-based flexible content platform from which the business could easily roll out new sites, using internal resource, as it expands into new territories.



# Progressive Web Applications



If your organisation is planning a new website or complex rebuild of an existing one and a native app, then we need to talk about Progressive Web Applications (PWAs).

PWA's are the modern, future proof way to develop complex websites. They are web-based applications that load in the same way that a normal website does, but offer functionality that is usually offered in native apps, such as working offline, push notifications and device hardware access.

They look and behave just like native apps, meaning they harness the power of that user experience, but they also offer the flexibility of the web.

To create a PWA, your website needs to be built in a particular manner, from scratch. This is something that will be a little more expensive than just a regular website build, but is far more cost effective than paying for the development of a website and a separate native app. What's more, it brings maintenance of web and app code all under one umbrella.

Apple and Google will soon allow PWAs to be uploaded into the respective App Stores alongside native apps (clearly highlighting the difference to the end user, for transparency) - a sure indication that PWAs being more than a fad, but a future-proof solution.

A word of warning though. PWAs cannot be retrofitted, which is why scoping and planning your project is so essential.

## Benefits

- Flexibility and functionality uncompromised due to platform restraints
- Single codebase to maintain
- No app store review process (no fees)
- Looks and feels like a native app to general users
- Faster load times than traditional websites
- Offline mode that allows people to use the site without requiring an internet connection, having content sync back once a connection is available
- Mitigates the need for an expensive native app build at a later date
- Desktop users also benefit from the app like features with quicker load times, offline access, notifications etc all being possible too

## PWAs in action

Companies like Twitter and Ali Baba have converted their websites to be PWAs and experienced significant gains, as highlighted in the real-world case studies below.

**Pinterest rebuilt their mobile site as a PWA and core engagements increased by 60%. They also saw a 44% increase in user-generated ad revenue, while time spent on the site increased by 40%**

**Grand Velas Riviera Maya resort increased its Black Friday conversion rate by 53%, due to its progressive web app's speed and notifications**

**Tinder cut load times from 11.91 seconds to 4.69 seconds with their new PWA. The PWA is 90% smaller than Tinder's native Android app. User engagement is up across the board on the PWA**

**By building a PWA, Garbarino increased their conversion rate by 27%, returning visitors by 13%, page views by 35% and decreased their bounce rate by 9%**



## UX to CX Shift



Some buzzwords are worth using and Customer Experience or 'CX' is one of them. It's the natural progression from User Experience (UX) and if an organisation manages to create the best possible CX for its digital and tech properties, the commercial impact can be significant.

CX is more personal than UX, considering the user visiting a site or app as an individual. It's not just about the design and how they flow around it, it's about how they interact with it and meeting their needs, not just yours.

A good example of this is the 'old school' practice of designing a site architecture that keeps the user on your website or in your app for as long as possible. This used to involve clicking through pages to get to the user's intended destination.

In CX, design helps the customer to get to what/where they need as quickly as possible, even if that means they then leave the site. As a result CX incorporates how you engage your customer after they have left the site, through notifications and emails.

Truly cutting edge CX also accounts for the mental health impact of technology and challenges businesses to consider what they could be doing better for their customer. This can be facilitated by using extensions that improve search functionality, segmenting content into types in search and streamlining swathes of content to reduce scrolling time, again helping customers to achieve their purpose for visiting the site as efficiently as possible.



## Benefits

- Brands that improve CX increase profits 10% - 15% and lower costs 15% - 20%, especially in Telecoms, Banking, Energy and Insurance (McKinsey Insights)
- If CX is excellent, 86% of customers are likely to repurchase - six times more likely than those with poor CX (Temkin Group)
- More human experiences are more memorable and will encourage return visits
- By speaking to customers/stakeholders about your offer you can inform design to better meet their needs

## CX Design in action

[Chasing the Stigma's](#) national mental health support app, the [Hub of Hope](#), was designed by Mashbo with CX in mind. Based on focus groups with target users and input from mental health specialists, the bright colours and minimal design, combined with the easy-to-use interface was focused on making the web app accessible to visitors who may be feeling distressed, as well as presenting a clear, simple way to access immediate help via the Samaritans, through the 'Talk Now' button. The app has, to date, signposted more than 28,000 people to life changing and even life-saving help.

CX can even be applied to internal applications, as we did for global accountancy firm, [BDO](#). In this project the CX considerations were to ensure a member of BDO staff can easily ask the correct questions for a potential or current client who would like to locate their business in a new territory. This streamlines the process, avoiding the client being passed around to find the information it needs, and ensures the BDO staff member reassures the client of its expertise, even if the staff member is not particularly familiar with the territory in question.



# About Mashbo



We build things people use

[Mashbo](#) is a UK-based software development consultancy that uses automation to create digital solutions that transform organisations. We use technology to solve complex challenges and transform the efficiency, capability and profitability of global organisations, improving the lives of their employees and customers.

Our products include custom CRM systems, automated administrative software, automated audit software, cloud-based web applications, progressive web applications and online management systems, to name just a few.

Mashbo was founded in 2011 by Managing Director, Gavin Sherratt, Technical Director, Steve Todd and Creative Director, Liam Potter. Clients include Liverpool FC, Everton FC and Everton in the Community, BDO, Manx Telecom, Nugent, Swiss Re and Danone.

As well as our core business we also bring our professional community together to share knowledge and best practice through our community brand [Creative Kitchen](#).

We play a key role in the business community of our hometown, Liverpool, championing the city on a national and international platform and facilitating global working opportunities. We do this through our MD Gavin's seat on the board of the Liverpool BID Company and Mashbo's role as strategic digital and technology partner to the Liverpool Chamber of Commerce, as well as by creating working links with Tech Nation UK, Twitter and Google.

# Our Values



We pride ourselves on “keeping it Mashbo” - adhering to six core values in everything we do, with our primary aim being to change everything we touch for the better and deliver positive impact to people, organisations and communities.

**We strive to always:**

- 1 Make a positive difference** - Change everything you touch for the better and deliver positive impact to people, organisations and communities
- 2 Push the boundaries** - Never stop exploring, playing and pushing the boundaries of our technical ability. Tech doesn't stop, so neither should we
- 3 Be go-givers** - Pursue and embrace opportunities to help others and encourage education, collaboration and knowledge sharing for the greater good
- 4 Have self-belief** - Take on any challenge with the knowledge that you have the skills, support and capability to succeed and deliver. Know your worth and respect the worth of others
- 5 Say it as it is** - Ditch the small print and be honest. Build relationships on a strong foundation of trust and transparency
- 6 Keep it Mashbo** - Commit yourself to doing the right thing, in the best way possible, in everything that you do

## Our Work



We build custom solutions that resolve our clients' biggest organisational headaches and deliver on defined objectives. Our consultancy, design and development services include:

- Software and web apps
- Mobile apps and Progressive Web Applications (PWAs)
- Web Design
- Consultancy services
- Virtual Reality (VR) content distribution
- Research and development

## Awards & Accolades



Big Chip Leadership Award 2017



Liverpool & Sefton Chamber of  
Commerce Technology & Digital  
Award 2018



Creativepool Top 100 Digital  
Influencers 2017



BIMA Best Website and App with  
Conscience 2018



Charity Times Best Use of  
Technology 2018



BusinessCloud North West Tech  
251 List 2019

# Meet Our Founders



## Gavin Sherratt

### Managing Director

Gavin is the pioneering and entrepreneurial heart of Mashbo. With 21 years' experience working at the forefront of technology in senior level creative and technical roles he is no stranger to working with global brands and big multinational clients. He drives our team to push the boundaries of new and emerging technologies and build innovative, transformational products and solutions with the power to revolutionise whole industries. The proud recipient of the Big Chip Leadership Award in 2017 and a name check in Forbes magazine in 2015, Gavin works closely with clients and investment business partners to develop their business strategy, identify challenges and commercial opportunities and advise how they can invest in digital to future proof their enterprises and organisations. He is also committed to the development our industry locally and nationally, founding [Creative Kitchen](#) to encourage knowledge sharing between agencies, businesses and freelancers in the creative and digital sector, as well as sitting on the board for the Liverpool BID Company.

 @iamchaz\_

 gsherratt@mashbo.com



## Liam Potter

### Creative Director

A technically minded creative who has 18 years' experience working with cutting edge web technology, Liam combines his passion and excellence in design with technical skill in front-end development. He leads our design team in its mission to create tech that provides solutions, looks great and that people will actually use. An expert in UX and UI, Liam also has a remarkable ability to put himself in the position of the target audience, challenge briefs and work with clients to ask questions that get right to the heart of their business need. Through tenacious research and unsurpassed understanding of cutting-edge technologies, he is able to create and implement industry-leading solutions that resolve clients' most pressing business issues in innovative ways that have not been seen before. Demonstrating both his aptitude for creating revolutionary solutions and his commitment to using tech for good is Liam's pro bono project the [Hub of Hope](#). The web-based app has already signposted more than 28,000 people to vital mental health support since its launch in July 2017.

 @evo1

 lpotter@mashbo.com



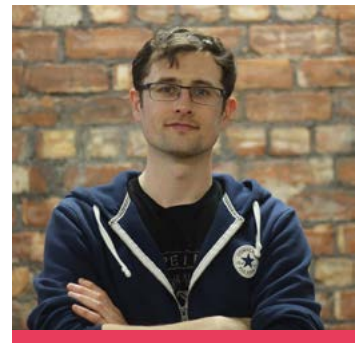
## Steve Todd

### Technical Director

An experienced project manager and natural digital problem solver, Steve is an expert in an extensive range of computer languages, frameworks and tools. He uses this expertise to push the boundaries of our technical ability, leading projects for global companies, SMEs and social enterprises, future proofing their businesses through automation and AI, as well as delivering business-transforming solutions for whole industries. A great communicator, Steve is also responsible for building client relationships, ensuring our projects deliver the best solutions on time and in budget. Committed to the future of the industry, Steve mentors students in the Computer Science Department at Liverpool University. He was also recently shortlisted in the Insider Young IT Professional Award 2019.

 @stetodd

 stodd@mashbo.com



# Next Steps



Ready to tell us what your problem is? Or perhaps we can help you identify where technology could transform your business?

Contact Mashbo:



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Find out more at [www.mashbo.com](http://www.mashbo.com)

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