



Mobile Forms: Driving Digital Transformation In Construction

Process is taking over construction. Increasing building regulations, health and safety, just-in-time inventory, complex supply chains and increasingly demanding clients all push for more and more information. This pressure is both a problem and an opportunity for the industry.

The problem is capturing and managing all that information efficiently and accurately, often in difficult working environments. The opportunity is creating transparency and urgency, where clients and contractors can see how a given project is going at any time.

The last thing you want is more and more paper to track, manage and key-in and thankfully we now have the technology to avoid it. Now that workers all carry mobile phones and tablets are getting cheaper all the time, mobile technology offers the ability for digital transformation within construction. Mobile apps can improve worker productivity, improve safety, reduce errors and rework, and transform access to vital information. But how can I get a construction app that meets my needs? Would it work on a construction site and would it offer enough value, and what would IT say?

All very good questions, and there are good answers for all of them. Let's look at them in order.

How do I get the mobile app for the job?

We've all seen the apps that delivery drivers use when we sign for a parcel. Pragmatic, process driven and connected, the app ensures that the right package reaches the right address while keeping both the sender and receiver informed. This is the kind of app you need for construction, but shortage of skills and limited IT budgets make it difficult to produce.

You can start with off-the-shelf apps that replace standard construction forms or serve a single purpose such as fire safety inspection, but they are limited. No developers required, but not mapped to your process, not connected to your company data sources, and not validating the information as it is captured.

You could find a mobile development agency to build a custom app, but that can be expensive, and you'll have to teach them about construction. And once they've built it for you, you'll need to keep paying them to update it as your needs change.

How about you build it yourself, or have someone on your team build it? Just as cordless drill/drivers transformed joinery, new tools are revolutionizing how you build apps. This is a busy new market, with a surprising number of offerings vying for your attention. I'm going to look at one in particular, Alpha TransForm, to explain how it can deliver and deliver again for you.



Unlike its competitors, Alpha TransForm has form, coming from a company that's been in the tools business for a long time. Alpha TransForm has depth, allowing you to gradually make your app more and more powerful. Finally, Alpha TransForm has width, being part of a family of tools that work together to create powerful solutions. Just like your favourite screwdriver, Alpha TransForm will become your go-to tool for making apps you never thought possible.

Can you list the data fields you need to capture and the type of data — name, number, date, photo, bar code — that should be recorded for each field? That's all you need to make your first app. Alpha TransForm will take that list and literally make a working app from it. Alpha TransForm even looks after the complex process of deploying the app to your smartphone, so you can try it out immediately — even take it out on site and give it a test drive.

Will it work on site?

All too often we find ourselves working in places with unreliable cell phone signals and no WiFi, meaning you can't connect to the internet. Most apps need to be online with a constant internet connection, which limits where and when they can be used. This is not the case with apps built using Alpha TransForm as it automatically produces apps that work offline.

There are two aspects to working offline. One is being able to remember the data that is entered into the form at the construction site and save it to the network later when the phone or tablet is back online. The second aspect is providing information necessary to complete the form, such as looking up the fitting details of an appliance from its barcode or tagging building plans with photos, live and direct from the app while offline. This second type of functionality is critical to modern construction apps. Many mobile form apps let you scan barcodes, but that's only useful if the app can access the database that tells you to which piece of equipment the barcode relates.

Alpha TransForm lets you store massive amounts of data right on your smartphone — so you aren't stuck if you must work offline. You can have the equipment barcode data, inspection videos, inventory, building regulations, and fitting instructions you need right on



your smartphone and ready to go. Not only does all your data become available, even underground, but it's superfast too, not waiting for the network. And it saves on your data charges.

Will IT accept my app?

IT staff are notorious for not accepting anything they didn't make themselves, and for good reason: they're tasked with protecting the company's data and systems of record. Any new app or solution must pass muster with security-conscious IT staff, as well as being able to grow with the company and scale from the smallest to the biggest jobs.

Alpha TransForm was built to meet IT needs based on years of experience. From that initial process of building a construction form suited to a total beginner, it offers capabilities all the way up to the development power needed by a professional IT developer. Alpha TransForm offers a built-in programming language called the TransForm Programming Language (TPL) to allow developers to take the app to the next level. Alpha TransForm even stores the data in an IT-friendly format called JSON. Kind of like a stillage for data, it makes it easy to deliver your information any way IT needs it.

All this may not mean much to you but will give your IT manager confidence that apps built using Alpha TransForm do not have arbitrary limits or restrictions that concern corporate IT, and will be able to support more advanced capabilities such as role-based security and integration into complex workflows.

Will it be worth it?

Whichever route you take, building a new app is going to take time and money. How do you know if it is worth it before you make the investment? The business case for mobile construction apps is strong: you'll save money on back-office data entry, improve job site productivity, as well as enhancing your health and safety compliance.

For a start, an app eliminates all the costs associated with paper: printing, scanning, filing, and above all, deciphering scribbles. Since an app can check that the information entered is valid, it reduces the need to go back and check with the person who filled in the form – data is correct at point of capture.

But apps offer much more value than that. They are natural expeditors – making everything immediate without the need to pass through multiple people and steps first. When a small task is finished the contractor can raise an invoice as they walk out the door at the press of a button, or if they need another tradesman on site or want to initiate an inspection, they can issue an immediate work order. Should they need additional material, they can order it up with a tap.

Apps can also augment the team. With Alpha TransForm you can embed knowledge and rules into each app. It's like having a supervisor or an expert



on hand all the time to alert workers to problems, suggest resolutions and ensure that the job is completed properly. That means less rework and fewer items on the punch list, and that translates directly to bottom line improvements. Beyond savings, mobile apps can deliver new, exciting digital value. Miller Construction workers use a mobile app to log task completion and this is made available to their clients who can see progress. Contractors offering this level of transparency gain the trust of their customers and build a huge competitive advantage. This is digital transformation at its most powerful, closing the loop between worker and client in real time.



So how do I get started?

Easy, download a free trial of Alpha TransForm today at

<https://www.alphasoftware.com/try-transform>

and have your first app running before dinner.

Author: Richard M. Marshall, Founder, Concept Gap

Richard M. Marshall has over 30 years of experience in software innovation. Before founding Concept Gap, Richard was a Gartner analyst covering mobile app design and development, where he championed the emergence of key enterprise mobile app technologies. As an entrepreneur, Richard recognized the importance of the mobile app in 2004 and created a company, Rapid Mobile, that delivered cross-device, highly-usable apps long before they became mainstream. Richard's career has encompassed everything from coding to corporate governance, and he has worked in all phases of product development from initial concept through implementation and on to sales, product management and marketing. Richard holds a PhD in Computer Science from the University of Edinburgh.

Concept Gap: Helping business make the correct technology choices

Most company boards have external legal and financial advisors, yet have no equivalent when it comes to critical technical questions. The point where technology is a mere enabler is long past, and boards are increasingly faced with complex decisions on technology direction. Whether it is making the most of AI, blockchain or moving to the cloud, Concept Gap provides the independent, expert advice you need. www.ConceptGap.com

Alpha Software Corporation

Alpha Software Corporation accelerates digital innovation and eliminates the bottleneck traditionally associated with developing business apps by enabling line of business users and IT developers to work in parallel to quickly create apps that increase productivity and deliver business value. The Alpha platform is the only unified mobile and web app development and deployment platform with distinct "no-code" and "low-code" components. Using the no-code product, business users and developers can take full advantage of all the capabilities of the smartphone to turn any form into a mobile app in minutes, and power users can add advanced app functionality with the built-in programming language. IT developers can use the low-code environment to develop complex web or mobile business apps from scratch, integrate data with existing systems of record and workflows, and add additional security or authentication requirements to protect corporate data.

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