



Fulton Hogan

Build it and they will come

Apps and large engineering firms, together. Who'd have thought? Leading civil contractor Fulton Hogan launches smart apps to modernise business.



Introduction

Traditional enterprise systems don't bend easily to new types of work. That's why companies look elsewhere for solutions to new problems. Smart apps are the answer and, critically, they function in a safe, enterprise-connected way. Fulton Hogan has made speedy progress with the Salesforce1 customer platform. Twenty-three apps later, they're still going strong.



Products used by Fulton Hogan

› [Salesforce1 Platform](#)

Do more, with less

IT managers are asked to do more, with less. Rapid app development platforms make it possible. Today's workers expect mobile tools and roaming access to corporate networks as they go about their business. Similarly, customers (and sometimes even suppliers) expect communication and reporting on their terms. Organisations must squeeze everything from their systems to meet these changing demands. The trouble is, enterprise systems used by big firms are sometimes slow and expensive to change. So people fashion their own systems and workflow, which spawns spreadsheets, emails, and other documents that float around company networks, like leaves in a swimming pool. It's not pretty and creates extra work.

Leading civil contracting firm Fulton Hogan has hundreds of jobs on the go across Australasia. Their engineers, technicians, project managers and subcontractors work on roads, buildings, airports, bridges, and wastewater treatment plants – critical infrastructure that keeps cities and countries moving. This kind of work puts their employees

and subcontractors in many locations, and sometimes hundreds of kilometres from the office. It's a headache for workers because they're often dislocated from core systems. And there's a heap of information they must capture onsite to report job progress and health and safety.

Large contractors are brimming with detail people. We see them on the job – they're the people wearing hardhats and high-vis vests, clutching clipboards and oversized sheets of paper, pacing dusty roadsides, and darting in and out of project huts. These people are good at processing information and sticklers for getting things right. However, their jobs are made tougher when core enterprise systems are out of reach. Time is wasted when they have to lug paperwork back to the office and key it into corporate systems. With so many projects on the go, each with their own workflow and reporting, niche systems and spreadsheets grow like field mushrooms. Fulton Hogan's New Zealand business, alone, retains more than one million spreadsheets. That's an awful lot of paper shuffling and process reinvention, and very little collaboration.

But these challenges aren't unique to Fulton Hogan. Large companies everywhere must extend systems to frontline workers and give them tools to stay productive. Sometimes it's a battle, because IT managers must justify investment in additional systems and support for so-called tactical business activities that aren't managed by core systems. Cost-benefit ratios don't stack up, so it's back to making do.

Look up, reach out

Four years ago, Chris Nugent, Fulton Hogan's service delivery manager in Australia, worked in a team that was tinkering with cloud-based application development. His brief was to establish an application development platform to accelerate the release of new IT solutions. The right platform would pave the way for a continuous programme of modernisation.



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Nugent and the team, together with development partner Davanti Consulting, got down to work with Salesforce. In two weeks they built working models, and from that point it's been full steam ahead.

Business-wide adoption of mobile technology put pressure on Fulton Hogan's IT to extend corporate systems to mobile workers, said Nugent. "Customers were using mobile apps to review designs and project plans on site," said Nugent. "More contracts specified mobile-ready workers, and we didn't want to be left behind. So we set about extending tools to our people."

One of many examples involves the work of site supervisors, who at the day's end create job reports that record people, plant, visitors, incidents, weather, and progress. Fulton Hogan generates thousands of job reports every week. A double-sided A3 sheet of paper did the job. Supervisors completed the supersized form and, when they could, returned it to head office. The process wasn't slick. Some reports took days to surface, fading memories skewed figures, and details that already existed in the company's ERP system had to be added. The process was complicated and obscured current views of project progress.

Today, the same task is completed with an iPad app, called Daily Job Report (DJR) – Fulton Hogan's first native iOS app. On the spot, supervisors tap in timesheets, materials, and plant items – bobcats, trucks and the like – which are drawn from payroll and asset management systems. There's no need to deliver job sheets to the office, because the app syncs with head office systems. A quick look in Salesforce shows both completed and incomplete job reports. Nothing is missed, and a quick reminder keeps

everything up to date.

"We had so many spreadsheets and small problems to solve," said Nugent. "They're hard to solve with ERP, which in some cases is a slow and expensive development platform. My experience with Salesforce shows that we can build apps quickly and cheaply compared to other systems – at least twice as fast and at half the cost. We turn around complex projects in weeks rather than months."

Chris Strydom, the company's New Zealand-based senior systems analyst, drove the development of DJR – an app that he said shows how Fulton Hogan's IT is adapting to the needs of the modern workplace.

"Salesforce and iOS provide a great work-from-anywhere solution. We're able to develop and deploy apps much faster than traditional client-server type models. DJR took us about two months to develop, but some of our smaller apps were built within a few days."

Specialist software applications – who needs 'em

Case management is a big deal for civil contracting firms, who must satisfy safety and environmental standards, and other state and federal government regulations, to qualify for government-funded projects. The process is audited, and proof is everything – if it wasn't recorded, it didn't happen.

When an accident happens – perhaps someone performing highway maintenance is injured by machinery – it must be reported and assessed within specific timeframes. A site manager records all the details, including remedial

action, and then the incident is immediately escalated to regional-level and national-level management.

Fulton Hogan used a specialist application to manage the process, but it was tough work, because integrating new incident processes required substantial redevelopment. It was costly and complicated. Reporting didn't cut the mustard, either. So Fulton Hogan turned to Salesforce and built a custom app to do the job.

"The old system was sold to us as the answer to all our problems," said Nugent. "But it wasn't responsive to the way we worked. And every report had a price tag. The Salesforce1 Platform lets you adapt and structure data to new workflow. The drag-and-drop report form builder is excellent – you can report on anything built into your apps. Ease of reporting can't be over-sold."

Fulton Hogan launched Chatter to further promote its safety culture. Chatter ensures that the most senior people in Fulton Hogan are aware of new incidents. They can step in when they're needed and pose additional questions to ensure incidents are managed quickly and transparently.

"We're building institutional knowledge and learning from what's happened," said Nugent. "Chatter is a visible way to show leadership. Just the other day our chief operating officer used Chatter to ask why someone wasn't wearing a seatbelt and what actions would be taken to enforce compliance."



Another app, called Management Safety Actions, satisfies a requirement specified by the Federal Safety Commissioner that asks Fulton Hogan's senior managers to actively demonstrate safety leadership onsite. One-hundred-and-fifty senior managers use the app to report risks, upload associated photos, and instigate follow-up action. The information used to be managed in emails and spreadsheets, so few people saw the state of play, and preparing for audits created extra work. The new app was built in two days, and within two hours of release, 10 managers had uploaded inspection reports. So far 2,600 inspections have been uploaded, and reporting goes to board level and satisfies government audits.

Project tracking – there's an app for that too

A record of completed jobs sounds simple enough, but there are plenty of project firms that struggle to conjure quick views of their full project history. Fulton Hogan built an app to do the job. And it's since been extended to log and manage new project opportunities and bids.

Competing for new work consumes many hours and distracts attention from chargeable work. But there's no escaping the process, and it's incumbent on bidders to chase work that they've got a very good chance of winning. A new process has tightened Fulton Hogan's bid process and brought new focus to go no-go decisions and future workload. New opportunities are recorded in the system and their progress is tracked through the bid cycle. Contributors add new intelligence, including potential partners and competitors, and assess possible project teams and financials. The process provides a clearer picture of the company's chance of success. Consequently, Fulton Hogan can see potential work and what that means for resourcing and finances.

Lightening the compliance load

Simon Dowsett is the National IMS manager at Fulton Hogan's Australian construction operation. His focus is developing systems that streamline reporting and compliance processes on

construction projects. Showing rather than telling is crucial, he said. "We're moving away from traditional procedures and wordy documents," said Dowsett. "It's better to show people what to do rather than ask them to read War and Peace. This is where Salesforce comes in. We might be good with ERP and Excel and registers, but that technology doesn't track down to users."

Dowsett was instrumental in the development of an app called Mobile Plant Management, which streamlines a site safety process that is dense with compliance protocols.

Contractors must ensure that all plant – including subcontractor machinery – operating on a project site is maintained to safe standards. The process required project managers to call subcontractors and request certificates of registration, insurance details, and other paperwork to validate the safety and function of their equipment – cranes, diggers, and pile drivers. A flurry of email and faxes did the job. Printouts were kept in a folder onsite. The process was repeated for every new job. Words were spoken. "Look, mate, I gave this stuff to you on the last job," subcontractors muttered. "Yeah, but this is a new job, and I don't have access to those job files....". Site managers were also obliged to inspect all machinery operating onsite and record hazards and signs of disrepair – things like leaking oil, broken reversing lights, and worn safety gear. It required an awful lot of squinting at Excel. Now, Fulton Hogan's Mobile Plant Management app takes care of the lot.

When new plant items are required for projects, Fulton Hogan issues an RFI, which alerts subcontractors to a public page, where they're able to upload certificates and insurance details. Subcontractors who have previously worked on Fulton Hogan projects are able to view their paperwork online and simply confirm that all the details are current. Alerts tell subcontractors when certificates and maintenance are due for renewal, which helps their compliance programmes.

Site supervisors are also using the app to manage plant and machinery inspections. When a machine is deemed fit, details are entered into the iPad app and a QR code is printed and stuck to the machine. Anyone who scans the code is taken to a webpage, which confirms current registration and safety.

"We always collected this information," said Dowsett. "But now it can be interrogated. And once we have the information, we can use it multiple times. Previously it has hard to tell if everything was complete, or if something was missing. Now we can see it all, which is sometimes uncomfortable, because we now know what we don't know."

What does the boss say?

The writer of this case study asked interview subjects about top-level company feedback and their likely responses if COOs were to put them on the spot.

"That's a good question," said Nugent. "I'd say that we've done all this work much cheaper than if we'd done it using ERP. It's work we had to do. We work in a hazardous industry and mistakes can have grave consequences. The apps we've developed have improved our standards of safety. We're able to analyse what's happened and identify trends, and we better manage compliance work and help senior managers to lead by example."

Nugent also highlighted the advantages of app development speed and the single platform on which their apps 'float'.

Engineering projects generate a mountain of paper and compliance work. Enterprise systems crunch the details, but they rarely equip workers with clever tools. Apps are proving to be the smartest way for organisations to extend their systems to mobile workers who, it seems, expect to have everything they need at their fingertips.



About Fulton Hogan

Challenge

- A diverse business like Fulton Hogan manages hundreds, if not thousands, of unique processes
- Many of these processes exist outside enterprise systems, which complicates reporting and creates additional work to satisfy compliance standards
- Fulton Hogan couldn't afford not to know what it didn't know. It had to see how its safety systems and compliance data stacked up

Solution

- Fulton Hogan and development partner Davanti Consulting chose cloud-based application development platform Salesforce1
- Salesforce 'build it now' workshops created working models and concept proofs
- Salesforce1 Platform is Fulton Hogan's main app development platform (outside Oracle). The company so far has built and launched 23 apps

Results

- Fulton Hogan maintains higher standards of safety. They're able to analyse what happened, identify trends, better manage compliance work, and help senior managers to lead by example
- Apps have brought new order to corporate reporting and minimised multiple versions of the same information
- As tablets and smart phones take hold in the workplace, Fulton Hogan uses a common development platform from which it can launch apps that extend its corporate systems to thousands of employees

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