

Managing the things you can't control

Why today's leaders must stop looking for total control and instead strike the right balance to develop and adapt to opportunities



Table of contents

Foreword	3
Poor communication leads to major project disasters	4
Low transparency leads to low productivity	6
Managing the things you can't control	8
A new way of thinking	10
Testimonial	12

Foreword



Dear Colleagues,

Despite vast advances in technology, materials and equipment, major projects continue to fail on a massive scale; with time and cost blowouts, misreporting, and even corruption allegations.

It's clear that managing complex projects, whether in infrastructure or professional services, requires more flexibility and adaptability than the traditional, manual methods of Gantt charts and spreadsheets can provide.

However, many companies, large and small, are still persevering with methods that hamper their ability to adapt to opportunities and challenges.

After many years as a financial analyst and management consultant for a range of ASX 200 and Fortune 500 companies, as well as major government departments, I have observed what drives true competitive advantage?

My passion and focus revolves around using innovative and disruptive technologies to improve organisations' internal processes and returns.

It's my firm belief that in today's diverse work environment, collaboration and transparency are essential to optimise performance and efficiency.

A system that provides adaptive solutions to complex problems can bridge the gap between on-the-job effort and project value. Organisations can then improvise to change and start maximising opportunities in an unpredictable marketplace.

There are many things that influence the success or failure of a project that are beyond the control of project managers and even senior leaders in an organisation. The key is to find the right balance of control; enough control so the system isn't chaotic, but enough freedom to be creative.

This whitepaper explores how project managers and senior leaders can use technology to find that balance, improve communication, and thereby strengthen project viability.

Mark Heath
Managing Director
UniPhi

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Poor communication leads to major project disasters

One of the most high-profile construction fiascos of the past few years – Wembley Stadium in the United Kingdom – involved Australian company Multiplex running almost a year behind schedule and leading to losses in excess of £150 million.

Originally, Multiplex blamed the rising cost of steel and arguments with sub-contractors for its situation. However in 2005, the Australian contractor admitted it didn't actually know how bad the situation was.

Five years later, the company settled a \$110 million class action stemming from allegations that it failed to keep investors informed about losses linked to Wembley.

There are a number of reasons projects fail, but poor communication within and between teams is often a major contributor. This can come from leaders' and managers' siloed approach, which leads to a distinct lack of transparency, particularly around costs and time.

Silos are present when certain sectors in an organisation are unwilling or unable to share information with others in the same company. This type of mentality reduces efficiency and morale, and may contribute to a project's demise.

Former Davis Langdon Australia and New Zealand Managing Director, Mark Beattie, says transparency in an organisation is critical to project success.

Davis Langdon Australia and New Zealand – now part of AECOM – provides consulting services across the infrastructure, property and construction sectors.

The company has worked on iconic and challenging projects in Australia and New Zealand, including delivering cost and project management services for the Hardened and Networked Army Defence Precinct in South Australia, infrastructure services for the Port Botany expansion in New South Wales, and project and cost management services for the Hutt Hospital in New Zealand.

Beattie says disparate systems come with an inherent corporate risk. "They contain errors that aren't seen by other users or other parts of the organisation". He says, for many years, his company's approach to project management was detached. "Every project manager had their own spreadsheets and a silo of information."

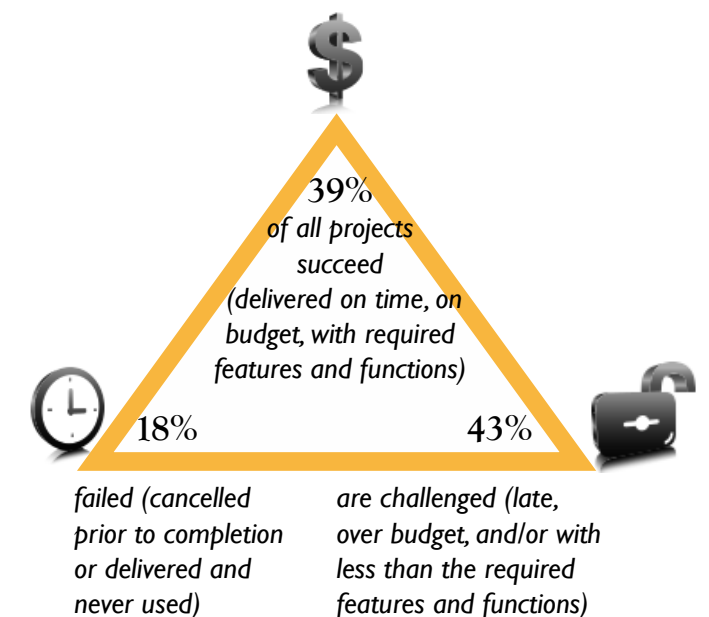
"There was a real lack of corporate view, regional, and/or business unit view."

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Fundamentally, project managers are individuals who have their own plans and systems. The challenge is for organisations to join those together and make the reporting and cost processes clear across an organisation instead of holding onto their silos.
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Very few large projects perform well to the project management triple constraints of cost, time and scope. In contrast to small projects, which have more than a 70 per cent chance of success, a large project has virtually no chance of coming in on time, on budget, and within scope, which is The Standish Group definition of a successful project.

The Standish Group, CHAOS Manifesto, 2013

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Transparency enables sustained and viable growth. Without that you've got a series of fiefdoms that may be operating effectively, but probably aren't.
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Low transparency leads to low productivity

Inefficient management of construction resources results in low productivity. For project managers to achieve the income expected from any construction project, it is important to have a handle on the factors that contribute to its productivity, like labour, equipment and cash flow. Shannon Construction is a New South Wales-based civil-works construction company.

General Manager, Colin Beehag, says keeping large projects on track is a major problem in his industry. “Unfortunately one of the biggest problems in the industry is that they under quote on the estimate and then try to make it up in other ways. Finishing the job is one thing – whether it comes in on time and on budget all comes back to the project manager’s competency.”

Shannon Construction spent decades managing projects through manual files and spreadsheets.

“Each project manager had their own manual file and we followed them up with just a spreadsheet. That was never going to be significant or accurate enough to handle large value or long-term projects,” Beehag says.

This meant the organisation had a complete lack of transparency from a central management point, productivity was low, and a lot of time was being wasted waiting for status reports.

“You need to be able to see what’s going on with your contract management and your cost at all times, but

we had no idea where our jobs were up to, and it was an arduous task because our business is located in two different states.

“Often, we didn’t find out that things were running off the rails until they’d already departed the rails and everything was a big mess.”

Technology has been identified as a key way to address productivity in the construction industry and Beehag agrees that innovative solutions to project management are necessary for growth.

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Too many organisations lump a project onto a project manager and say, ‘we need \$500,000 out of this’.

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The Australian construction industry is a serial productivity underperformer. Were it to be more productive, even by just 1 percentage point, the national benefits would be \$1.2 billion across Australia.

PwC Productivity Scorecard, 2013

The Queensland Flood Road Recovery, led by Sinclair Knight Merz (now Jacobs Engineering Group) is an example of UniPhi’s software enabling a huge logistical and administrative project with multiple high-profile stakeholders.

The engineering firm was tasked with managing more than \$800 million of road restoration in three of the most remote regions of Australia.

It was a logistically difficult project that spanned a vast area across state and federal government jurisdictions. Traditional project management methods included triplicate hardcopies of documents and centralised reporting, with a working document – an Excel spreadsheet – that was months behind.

The remote locations of the recovery project meant communication needed to be seamless.

UniPhi’s web-based portfolio management software was implemented as an electronic collaboration method, replacing traditional paper-based systems. This led to improved procedures that saved time, resources and money.

Managing the things you can't control

In addition to the reporting and cash flow issues that influence a project's success and productivity, complex projects often involve things beyond our control. Author of *Leading Complex Projects*, Dr Kaye Remington says a key issue with managing complex projects is that project managers don't realise they're complex until it's too late.

"It becomes a major blind spot. Project managers don't lobby for the right resources or get the right support. They think, 'I've done this before, of course I can cope'. Then things happen that are absolutely out of left field and they compound to become something out of control."

She says project managers predominantly rely upon

prior knowledge to anticipate the future, but complex projects require more.

"Project managers need to understand what complexity means and why it's different from a challenging project."

Remington says strong senior leadership teams are vital to ensure complex projects are successful.

"Senior leaders face a number of challenges on a daily basis. One is integrating the vast amount of information that is available to them. The other is managing very powerful stakeholders. For example, a project that has a strong public profile is going to have stakeholders with very strong vested interests in how it turns out."

Remington says really good leaders spend time developing critical teams who are encouraged to give fearless feedback.

"As projects become more complex, leaders habitually narrow their focus, so there has to be some way to mitigate this, and that's through the team."

The secret to managing complex projects, with elements that are beyond our control, is to analyse the project early – find out what the complexity is, where it's coming from, and connect the dots.

"There are some key things; understand the landscape and understand your stakeholders. Connecting information is critical. If we don't connect the issues as they arise, it can cause the project to implode," Remington says. One way to thoroughly analyse a project is to use the PESTLE approach. This concept is a tool for companies to track the environment in which they are planning to launch a new project.

PESTLE stands for Political, Economic, Social, Technological, Legal and Environmental factors. It allows leaders to view the situation from many different angles and involves answering questions like: what

is the political situation and how can it affect the industry; what are the prevalent economic factors; what legislation regulates the industry and/or can there be any change in the legislation. These environmental factors are what project managers and senior leaders can't control, but need to be aware of.

"When issues in these areas line up within a short time frame, they often compound in non-linear ways, and you're suddenly on a runaway train," Remington says.

Say your project is designing and implementing the construction of a city. In the middle of that major project, stakeholders change or there are major environmental issues, and suddenly what you thought you were doing is no longer appropriate. What the project morphs into might be quite different from what was originally conceived.

Dr Kaye Remington, University of Technology Sydney

"You need to have the knowledge in real-time in order to adapt the project before it's too late."

In 2014, UniPhi was recognised as an ABA100 Winner of the Australian Business Award for Innovation. The award acknowledged the success of the global roll-out of UniPhi's enterprise portfolio and project management software product at AECOM – a fortune 500 global provider of architecture, design, engineering, and construction services.

AECOM was particularly interested in benchmarking cost estimates. Cost plans were generally created in a cumbersome client application installed on the desktop of the cost manager's computer.

UniPhi's adaptive platform allowed AECOM to consolidate cost plans from thousands of projects to achieve benchmark pricing; arming its consultants with critical cost information at a moment's notice.

The Global Unite project at AECOM required UniPhi's portfolio and project management platforms to be adopted in 120 offices across five continents.

A new way of thinking

A little ant is walking on the sandy soil looking for food. The food is meant for feeding the brood which is taken care of by other ants in the colony. Different ants have different tasks in the colony, and the ant we are following is going out of the nest every day in the search for food.

The amazing aspect of ant colonies is that such a complex organisational structure exists that is not controlled by the queen or a small group of bureaucratic ants. There is also no plan or to-do lists ants are following – the complexity of the ant colony is emerging out of the local interactions of ants.

The ant we observe is following a trail of pheromones, this is the way ants communicate with each other: “follow my trail to find food”.

The trail will evaporate at a certain speed, and will therefore only be of limited use. But when the trail is enhanced by the successful use of others, a highway of ants may emerge. On such a communication highway, we see one lane of ants heading toward the food, and the other lane of ants bringing food back to the nest.

Complex adaptive systems are made up of many autonomous, interconnected parts that behave as a unified whole – learning from experience and adjusting, not just reacting, to changes in the environment.”

UniPhi Managing Director, Mark Heath, says the key ingredient to having the right level of control in a system, with enough freedom to develop as a complex adaptive one, is transparency of information; and technology is the driver that can provide this.

“Project management software must enhance and automate processes to drive true value for businesses. UniPhi software has been developed to automatically gather information from various sources at various sites. It consolidates, integrates and aggregates information into various views, showing people what they need to see.

“The knock-on effect is great, timely transparency,” Heath says.

Davis Langdon’s Mark Beattie found a huge difference in the organisation once they adopted the UniPhi enterprise management technology.

“There was a dynamic flow of information coming firstly to our project managers, up the chain, and then to me,” he says.

“Traction became even more positive as the results were being seen. We could see on a daily basis where our work was going and whether we were receiving an income from it.”

Beehag from Shannon Construction agrees that implementing the system has seen the organisation realise greater potential. “We are absolutely, 100 per cent better off than we were using our old system. Now we get live data – we’re not waiting on reports. It actually shows a distinct issue if we’ve got one in relation to estimate and actual cost. For example, why is there such a large profit on this particular job – how did we achieve that?”

According to Beehag, implementing a central project management system helped the organisation to address productivity issues.

“Each member of the project team contributes to the overall status of the project, which means the status can be seen in real time, without the need to manually compile a report that is out of date and incorrect due to the time it takes to produce.

“The best thing about UniPhi is that it allows you to refine and define what you’ve got very quickly and easily. It gives us a lot of information straight away and, more importantly, that information is in the system if we need to access it again. Our purchasing people, our estimators and project managers are all able to draw down on that information,” Beehag explains.

Heath says systems that have functions designed to integrate business activity and encourage people to communicate within them can provide powerful insights into how management’s direction, values and strategy, are perceived across the broader organisation.

“Too many projects and portfolios drift into darkness, but the right technology can keep the spotlight focused on the important things,” Heath concludes.



Testimonial

The AECOM Verification Services department is responsible for verifying works on major infrastructure projects throughout their design and construction phases.

“On a daily basis our independent review teams deal with large amounts of email to and from external stakeholders including D&C Contractors and government agencies. We have been using UniPhi’s “Save as Issue” feature for a number of years now, and we have found that it saves us an incredible amount of time. Our project teams save all project related emails into the UniPhi system at the click of a button indexing them on the way in. These emails are then available to be viewed by all project team members and all related correspondence is traceable, captured and classified as necessary.

This simple feature has reduced our reliance on individual email accounts such that we no longer need to search through multiple personal inboxes, sent items, deleted items etc. Instead we go straight into UniPhi and find out exactly what is happening within each project and activity subset.”

Judi Gardiner, AECOM Project Services Manager

