ISSUE
06
APRIL
2021

MONTHLY
JOURNAL OF
THE CONSTRUCTION
INDUSTRY

Industry Insights

this issue

Construction Advisor

Welcome to the Monthly

Construction Advisor is pleased to welcome you to our monthly newsletter – Industry Insights. Bringing you all of the latest industry news, project announcements and data to help you to plan and build your business.

COVID19 Status:

- All States & Territories are currently open to domestic travel (without quarantine).
- There are no noted community transmission cases.
- Vaccine rollout is currently in Stage 1a/1b focused on front-line and essential workers along with highly vulnerable populations and those over 70 years.
- The AstraZeneca vaccine is no longer recommended for application for those under 50 years old unless they suffer other symptoms/pre-existing conditions.
- Additional Pfizer vaccine doses are on-order but not expected to arrive until late in 2021.

The Tech Issue.

There is no denying that the computer age (1980's-2000) fundamentally changed how we do business. Even more so, the internet age (2000's – now) has transformed the way that we live, work, transact and socialize. Computing loves an acronym and they are hard to avoid – ERP, CRM, SQL, SSI, CMS, SSL, CAD to name a few. But how do you build an IT ecosystem that actually grows and assists your business as opposed to being held hostage by it?

Firstly, let's break-down the current suite of software and technology offerings and where they fit into the construction business environment.

The ERP: Enterprise Resource Planning. Typically, your ERP is the central nervous system of the business. It is where you capture contracts, manage accounts and finance, store customer details and issue invoices. Many industry-specific examples exist but for most larger organisations this is the domain of Oracle and SAP.

The CRM: Customer Relationship Management. These applications and platforms take your base customer fact data (name, address, bank account) and add 'soft' data to assist in managing and tracking sales activity. Usually logging details such as emails, phone calls and meetings, a CRM can also store a customer's favourite football team and manage sales activity such as email campaigns. Sales managers love CRMs because they can track their sales team's activity and minimize IP loss when a salesperson leaves. Sales employees (mostly) hate a CRM because it adds data entry time and they often feel like they are being tracked and rated in a spreadsheet. **Both are correct.**

For construction, **CAD** has been revolutionary. *Computer Aided Design* has for decades now taken the industry from paper-based plans and drawings and allowed interactive and dynamic project development. This has allowed for incredible advances in managing engineering-risks and taking conceptual ideas to real-life developments.

Choosing an 'office' program is usually a default position – Microsoft Office (most recently 365). However, that isn't to say that alternatives don't exist in the market. The most prominent is surprisingly a free 'open-source' offering called *Open Office*. Whilst it may miss some of the 'bells-and-whistles' in the MS product, it includes some very handy additions such as PDF editing and format acceptance across many languages, platforms and variants.

So, if we are starting from scratch or trying to manage an existing IT eco-system, where do we start?

The first step must be to define the structure of your business functions and needs and find solutions that satisfy as many of these as possible. It can be tempting to piece-out individual solutions for each business area but having multiple independent software solutions that cannot 'talk' to each other can be a barrier in the future.

Let's go simple, a construction business needs to:

- Manage its accounts (payable and receivable). This is usually your ERP.
- Facilitate reporting, communication, data management and presentations. This is your office suite – typically either MS Office or Open Office.
- Track sales/tender opportunities. This is usually your CRM.
- Track and manage your project development.
- Track and manage HSEQ compliance and issues.
- Manage and facilitate communications (both internal and external). Enter Zoom, MS Teams etc…
- Provide a digital shopfront/presence. This is your website, CMS (content management system).

Did we miss anything? Probably. The point is that designing your IT platforms and systems should start with defining your business and its fundamental needs.

One of the largest shifts in software over the past decade has been the adoption of Software-As-A-Service (SAAS). Essentially, this is a change from purchasing software as a one-off expense to licensing its use over time. The good news is that this can assist with cashflow (avoiding significant single cash outflows) but adds to the ongoing

overheads in the business. Beware when purchasing SaaS products as many will present their pricing as 'per-month' and then bill an annual amount.

It is very tempting to join the chorus of "isn't there just one program that does it all?" but the reality is that at this point in the internet age there really isn't (at least not well). As the software market matures there will be inevitable consolidation with more single-service providers entering the market however current lofty evaluations are making this a difficult commercial reality.

Thus far we have only talked about software as opposed to hardware. Hardware such as drones have equally revolutionized the industry.

Hardware has evolved at a similar pace to the software sector with devices and tools that were unthinkable just 10 years ago. From big to small, watches now measure and track heartbeats and falls-from-height while machines are now capable of '3D printing' concrete structures and lay bricks without manual intervention.

Just like software, it can be hard to filter the fads from the truly revolutionary developments although some are clearly here to stay.

Hardware technology can broadly be broken into two different camps – tools, machinery and gadgets versus system architecture (e.g. servers and computers).

The first group may be the 'shiny-toy' category because it is more tangible and visible, but this doesn't make the architecture assets any less impactful or important. In the past 5 years, terms such as 'cloud computing' and 'distributed services' have been thrown around, but their actual impact has been quite profound. Many of these products are working to bring big 'enterprise' systems and functionality to a broader audience. By sharing hardware 'as a service' such as cloud computing, more powerful systems are now available to smaller organizations that historically may have been out of reach.

For many, this takes the large capital outlay that used to be required in purchasing local servers, desktop/laptops and networking hardware, replacing it with a lesser ongoing contract/license fee. The sacrifice however is giving up a level of control – not being able to touch and feel an asset means that you are more reliant on communications networks and also third parties to maintain and monitor your services.

Back to the shiny-toys, there is no doubt that technologies such as drones, 3d printers and exoskeletons are exciting and offer a range of uses that will undoubtedly change the way that we work into the future. However as with any 'revolutionary' advancements, beware of the snake-oil salesperson and hype generator.

True evolution in machinery moves slowly – early adopters of bio-fuel and battery-powered heavy machinery have learnt the hard way that real torque requires energy that cannot be easily replicated by non-refined fuels.

Drone technology to this point has been largely a novelty used for marketing and high-level planning. However, the future of drone use will inevitably move into remote-access monitoring, scanning and diagnosis of structural integrity – but this is still some time off.

Irrespective of the advancements in both software and hardware, there remain two key issues that need to be both acknowledged and addressed – security and privacy.

Hardly a surprise, these same two issues plague both our personal use of IT products just as equally as our business use of the same systems.

Security concerns don't just relate to 'hackers' or 'foreign-actors'. The most likely source of your security breach is actually current and/or recently departed staff members. There is a fine balance between system/data access and exposing yourself to data theft and/or malicious data damage. This comes down to human nature – you have to trust your people to do the right thing, but some, unfortunately, will not. The key here is to have redundancy and backup systems to ensure data continuity.

Privacy concerns are equally misunderstood – yes, they often are related to ensuring that data that is collected is secure and cannot be leaked to people who should not have access but it also relates to the perceived privacy of your employees.

A classic example of this is the implementation of a CRM system. This is more often than not, interpreted by a sales team as a method of monitoring and observation – as opposed to a useful sales tool.

'Tech' can be complicated… but it doesn't have to be.

Under COVID-19, how are you coping right now?

During COVID-19, most people will have their normal coping abilities challenged.

Whether you've:

- lost your job
- are isolated due to remote working
- dealing with home-schooling
- working even harder because others have been retrenched …

it's natural to feel annoyed, frustrated, anxious, sad, confused or depressed.

But these normal reactions don't mean you've got a mental health disorder. They just mean you might benefit from having a chat to Someone* (by video) about what's happening and how you're dealing with it - to get some ideas you might not have yet tried and which might make a positive difference to your morale and motivation in the short term.

Someone who knows construction and its challenges, who is qualified in psychology and who has a long track record in coaching to help people grow their potential.

For further information …

contact us on:

ask@constructionadvisor.com.au:

or by phone on:

0456 134 634

Construction Advisor

LEARN MORE

Software Evaluation De-Coded. How to do it right, and how to not do it wrong.

So… Someone in your team has told you that you need a new software package to address x. The best place to start is probably Google, but what do you do next? Running a proper Software Evaluation is more important than you think.

The first issue/question/challenge is in the pre-amble. If 'someone' tells you that you 'need' something… that should be a red-flag. Today, there really is an 'app-for-everything', but that is a lot of apps to do a lot of 'things'.

Probably the most common example is that you 'need' a CRM for your sales team. Do you? Is your sales team actually made up of a small crew that have been together for >5 years and talk every day? They probably don't need a CRM (and you don't either). However if your sales crew is 10+ and turnover happens regularly… it is actually almost a business necessity.

Let's jump the first hurdle… you do need 'this' software. The first step is actually to 'Google-it', most software programs/platforms will have, at some point, been reviewed by a reputable tech/industry publication and benchmarked.

Do not be afraid to reach out to industry peers – even competitors. You may be surprised at how helpful/open others will be with their experiences (although they may be more likely to share bad rather than good experiences).

So at this point, we have established that you need a 'thing', and you have some comparisons to reference but this is hardly the end of the journey. The next big decision is which 'thing' is right for your business.

Unfortunately, many IT solutions (both software and hardware) are implemented in businesses without actually asking the 'business' what it wants/needs. Instead, 'solutions' are decided by what fits-best within the existing IT architecture and perceived need rather than actual need. Ask first.

All that being said, any software evaluation must also consider your current and future IT architecture.

a) Do you host your servers locally or remotely?
b) Do you have internal technical support?
c) Are you aligned to a certain software eco-system (e.g. Apple/Microsoft)?
d) Does this new 'thing' have to integrate with other platforms (such as CRM/BI)?

Once you have ticked off the technical aspects of the implementation, it is important to move onto the implementation. There is a reason that 'change managers' exist – because change can be hard. It is important to bring the team that will use the new software along on the journey. Explain why there is a need for the change, outline the benefits that it will provide to them in how they do their job and achieve their own personal goals. Finally, don't ignore the need for training and process management – don't assume that people with just 'get' how a new platform works.

At this point, we know that we need a 'thing', we know that the technical capability exists and that we have a plan to engage the staff involved but it then comes down to the final question – what is the Return on Investment (ROI)?

Let's be honest, there is the initial purchase of a product (outright or Saas), the training/implementation costs and possibly the migration from an existing/legacy system. Weighing up all these costs against a perceived or planned future benefit is not black and white – there are many intangible factors to consider.

Question 1: is this better than what we have right now?

Questions 2: Will this improve the productivity of my team (or potentially make it worse)?

Question 3: Is what we are purchasing going to be used in 1-2 years? Or is this a temporary stop-gap? How much disruption might this cause in the short term?

Evaluating a new software 'solution' must be taken seriously. The implications of a 'bad' decision can have far reaching implications. Regardless of the pressures you face on what you 'should' have in your IT eco-system, the most important question is "what do your people want/need"? Don't fall into the trap of telling your staff what they need, take the time to ask them and understand what they are needing and whether the solution you choose will meet that need.

The T-1000 of construction – will robots take our jobs?

Robotics and their assumption of jobs is hardly a new phenomenon. The advent of steam-driven machines in the 1760's saw the first 'industrial revolution' leading to the loss of jobs for unskilled manual labour. The current Internet-of-things and AI age are only adding to those age-old fears of technology replacing humans in the workplace.

For the younger generations – the headline is a reference to the original Terminator movie franchise, despite widespread fears, the movie timeline of machines taking over the planet has now well and truly passed... Skynet hasn't taken control.

However, the concepts introduced of 'bionic' beings and artificial intelligence are now more real than they ever have been. So where are we really in the technology space when it relates to construction and should our workforce be concerned that they will lose their jobs to robots?

It stands to reason that this new 'industrial-revolution' will follow many of the same traits as those that have passed before. Manual labour and repetitive tasks will become the first to be replaced. However, it is important to note that this is not the end of the road for time-honoured traditions. History has shown us that many of the roles and labours lost in industrialisation have found new life in specialisation and (due to reduced supply) greater financial rewards for those artisans. In todays market, a slate layer, iron-caster, stone-mason, lead-glass window maker or plaster-casters are highly sought-after artists in their fields.

For the most part, technology so far has sought to assist workers rather than replace them. Revolutionary technology is offering exoskeleton solutions to assist workers to enhance their lifting capabilities and reduce their exposure to back injuries as opposed to replacing the worker themselves.

However, some new technology does offer the replacement of human equivalents.

Incredible advancements in scanning technologies such as LIDAR and compact x-ray robotics have the potential to identify structural defects at a rate far greater than traditional building inspectors.

Also, drones are allowing safe access and monitoring of structures that in past times would have required expensive access equipment to reach those spaces.

Another headline-grabber has been supersized 3D printers that can apparently 'print' a house. To this point, these are largely a 'proof-of-concept' and not a real commercial viability. Whilst the technology exists, it fails in implementation in that it may replace some simple functions (such as framework) but it cannot replace trade services such as electrical wiring/plumbing or fit-out.

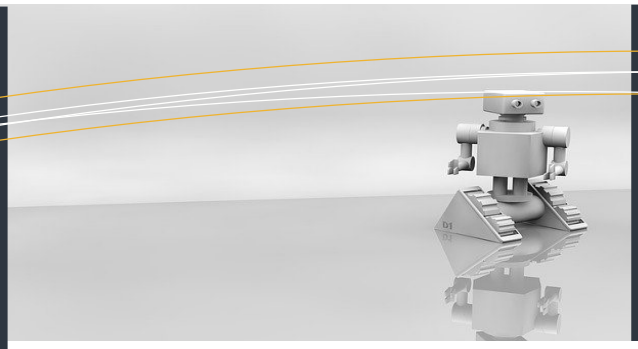
As with many technological advancements, we probably have new game-changing tools and products that are yet to fully be explored in their potential uses and applications. Whilst hardly 'new', virtual reality and augmented reality tools offer a new world of opportunities in how we visualise and explore spaces such as construction sites.

The mining industry has led the charge in adopting new technology but obviously face very different environments to metropolitan building. Take the example of autonomous haul trucks – these are fine on a large, non-public and planned mine site but are less likely to be effective in a city environment where drivers are required by law on public roads.

Other technologies are having a more tangible impact though. Many building sites are now being powered by temporary solar arrays – reducing the requirement for diesel powered generators and their constant refuelling, not to mention a reduced OHS risk in not storing flammable materials. Another solution entering the market has been 'container' batteries. These are batteries built into a shipping container that can power a site for days/weeks and be swapped when required.

So are robots going to take our jobs? Well, eventually yes, but there is a long way to go before that happens. There is still a subtlety and art to good trades-people whether they be painters, plasters, electricians, plumbers or cabinet makers. If a task is simple and repetitive it is likely that automation will take-over sooner rather than later.

In the meantime, embrace the technologies that present themselves that drive productivity and improve health and safety, be wary of those that promise too much, and don't lose sight of the fact that at the end of the day, *people* build things.



Developing positive relationships at work and at home

Almost all kinds of relationships, become strained when either or both parties are subject to the challenges we now face under Covid-19, and current statistics bear this out (1 out of 2 breakdown).

Access to information which helps us understand, diagnose and improve relationship behaviours is critical if we are to create a positive environment, both in the workplace and at home.

Whether with clients, colleagues, a boss, a partner or children, the quality of these relationships will have a profound impact on both your business performance and personal wellbeing.

The Construction Advisor Relationship webinars contain 12 key principles designed to increase your relational competence to help you understand and implement helpful behaviours, and minimise destructive ones.

For further information ...

contact us on:

ask@constructionadvisor.com.au:

or by phone on:

0456 134 634

Construction Advisor

LEARN MORE

Business Intelligence… is there such a thing?

Business Intelligence (BI) has become a groundswell in recent years promising to revolutionize the management of businesses. So is it just a supercharged MS Excel or is there more to it? Literally billions have been thrown at this new class of software with Microsoft and Salesforce taking the charge.

Legend has it that when a Lotus 1-2-3 (the precursor to Excel) was first developed as a university project it was dismissed as pretty basic… true or not, Excel (or its predecessor) have taken over the world.

The new generation of *business intelligence* systems are focused on transforming business data into actionable decisions without relying on computer coding and complex data manipulation.

Leading the pack are: Tableau, MS Power BI, Qlik, Calumo and Sisense. But what is a *Business Intelligence* system and why do I need it?

BI platforms essentially, bring data together, transform it, and produce reports, dashboards and outputs. Sounds like Excel? It kind of is but with a big difference. BI platforms automate processes and calculations that are otherwise done manually in Excel. This means that where you once may have been copy/pasting rows and updating formulae, a BI platform holds these processes and calculations for use across old and new data. They also super-charge information sharing, allowing reports and dashboards to be distributed both internally and externally across an organization.

Perhaps the biggest benefit is the ability to join/blend data from many different sources. We discussed earlier about having an IT ecosystem that spans many different solutions (different apps/platforms). A good BI system is capable of linking to all of these different systems/software (depending on the vendor) and bringing all of that data together in one place for all of your reporting needs.

Consider for a moment that you have an ERP, a different CRM and a different procurement solution. A BI platform can (theoretically) connect to all three and bring their data together to produce integrated reports. This is also true for disparate data sources such as GPS from logistics providers or OHS data.

However, as far as these systems have come, they are not 'plug-and-play' for even mid-tier organisations. An SME may be able to use a platform such as Power BI off-the-shelf on their data but any larger organisation will have to evaluate their data-load and data-risks when looking at a BI solution. For these entities, they will usually require a data-warehouse solution to drive their BI platform. This is basically an intermediate data source, essentially it extracts data from the source (ERP/CRM etc…) and holds it in a database that can then be used for reporting services. What this does is create an individual data space that can be queried and manipulated without impacting on the day-to-day operations of the business.

Choosing a BI solution for your business can be complex – they will require a level of training/familiarisation sessions with staff. They will also require an implementation plan covering security, access levels, distribution and workspace management.

WOLF & BEAR SERVICES

Intelligent Business Through Business Intelligence

Wolf & Bear Services is a specialty provider of data reporting systems and business intelligence systems to the construction and equipment rental industries.