UK CONSTRUCTION™
ONLINE

CONSTRUCTION SOFTWARE

Construction Industry Accounts and You

MORE and more, construction specific software is transforming the way in which we as an industry operate. The construction sector, so often derided over a perceived lack of innovation, is redefining best practice through software implementation, and this is especially true of accountancy - the innermost workings of any business. Today, once complex matters - such as job costing and accurate invoicing - are easier to manage than ever before.

For the uninitiated, job costing is the process by which the expenses incurred during a project are tallied up against the revenue generated by that project. For those organisations that rely on a relatively low-volume of high-value projects - building contractors, subcontractors and architects, to name a few - job costing is a necessity. It enables businesses to accurately predict their profitability well in advance of a projects conclusion - providing the system in place has been implemented correctly, that is.

Here, accountancy software is proving the differentiator. New technology is enabling businesses to monitor a multitude of factors and analyse the data collated to better inform the decision making process. Moreover, job cost reports are providing organisations with a fuller picture of their financial performance, while also helping to ensure that all contracts are invoiced properly, to the appropriate client and at the appropriate time.

Carl Purbrick, Managing Director for CLiP IT Solution's Construction Industry Accounts (CIA software), explains: "We have found that most of our users are more interested in day-to-day job costing than their accounts. It's the jobs that make or lose money and that's where they need up-to-date, reliable information. Having this trustworthy, current data enables companies to identify and address issues in an ongoing and timely manner, rather than when it's too late to do anything about it at the end of the job."

The prospect of introducing new technology into established process can be intimidating however, and rightfully so. Poor implementation can have the reverse effect - negatively impacting financial performance. As such, the choice of software is absolutely critical.

Carl continues: "Implementation, training and ongoing customer support are key to any new software roll-out. We pride ourselves on the ease of implementation our customers report. When we launched in 2002, my mission was to produce a tool that met the construction market's needs, backed up by unrivalled customer support; and from the feedback we regularly receive, that is what we continue to deliver - a simple to use system and first-class support."

CLiP IT Solution's CIA software is a rarity; in that it caters specifically to the construction industry rather than attempting a cumbersome 'one size fits all' approach. This emphasis allows clients within the sector to manage costs effectively without the need for finicky add-on packages or superfluous spreadsheets. Instead, industry essentials such as CIS, applications, retentions and job costing can easily be accommodated by way of an intuitive user-friendly interface.

Of particular interest to contractors is the Construction Industry Scheme (CIS) - a HM Revenue & Customs (HMRC) initiative which deducts tax directly from any payments made to subcontractors. These deductions contribute to the subcontractor's tax and National Insurance payments.

Crucially, all contractors must register for the scheme and those who fall behind may face substantial penalties. All the more reason to entrust this administrative burden to a tailored software solution.

Carl is again on-hand to explain: "CIA is able to verify your subcontractors and accurately calculate their deductions with a minimum of fuss. HMRC returns can be scheduled and monthly subcontractor statements produced, making CIS compliance a mere formality."

Applications for payment and retention accounting are key considerations also, with CIA providing an agile solution for dealing with stage payments to main contractors.

The benefits of an industry specific accountancy software are readily apparent, and those businesses that choose not to invest risk missing out. The pivotal role software plays in good business practice can no longer be ignored. Carl concludes: "Normally, you'd expect to pay more for a tailored solution than something you can pick off the shelf. Whether handmade tools vs. a DIY store bargain or gourmet burgers vs. a fast food chain; we associate higher costs with higher quality but, with certain specialised products, these assumptions are not always true.

"Some might think, 'Surely a mass produced accountancy software will be more cost effective than something tailored to my industry?' Think again! Purchasing a construction specific accounting package can save you both time and money. In fact, the only comment our clients tend to make is that they wish they'd

WHAT OUR CUSTOMERS THINK OF CIA AND CLiP IT'S SUPPORT TEAM

"We were attracted to the Software because the issues particular to our industry were clearly understood by CLiP IT, and it was not just a standard package with a construction add-on."

Robore Cuts Limited

"If any company within the construction industry was looking for financial software we would definitely recommend CIA for the smooth running and straight forward system this package gives."

Mannings Harlequin Ltd

"I would go as far as to say that it is probably the best single investment I have ever made on behalf of the company, it really is that good!"

Goodwin Tanks

"Any change in legislation is dealt with in a professional manner and changes in software are always user friendly. The whole package allows us to run our business efficiently and with confidence."

Sibley Bros LLP

"The installation and transfer of data from our old system was straight forward and we find the CLiP IT Software user friendly."

Perry & Son Ltd

"The at a glance reports are easy to access and read, payroll is easy to use and links in with HMRC so there is no need to leave the programme to go online to file the RTI."

Heritage Cornwall

"The system is constantly updated and any problems are sorted very quickly. CLiP IT Solutions have always seemed to move with their clients' needs, and deliver friendly and helpful support…"

Rosemead Developments Limited

"No problem is too BIG or too small, and more importantly you are spoken to calmly and professionally and not treated like a computer programmer who should know everything!!"

George Bros (Builders) Ltd

"…have revolutionised our Back Office systems, allowing us to improve the quality and speed of management information.

…Even with this growth we have not needed to employ any more office staff, due to the increased efficiency with the new systems."

Barnet Window Company Ltd

"It's as if CIA (Construction Industry Accounts) has been written by someone sat in my chair. I can't believe how easy it is to use."

Lloyd Clough & Sons Ltd

Find out more about what our customers have to say at:
www.clipitsolutions.co.uk/construction-accounting-software-reviews

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CONSTRUCTION SPECIFIC ACCOUNTING PACKAGES CAN SAVE YOU BOTH TIME AND MONEY

HOW?

- Construction specific packages are ready to go, out of the box (or after the download as is often the case).

- No need for hidden costs and add-ons for meeting CIS requirements, verifying subcontractors, managing and keeping track of applications and retention.

- Job costing solutions are fit for purpose to easily understand where your profit and risk is coming from.

- And, possibly even more importantly, the support staff are used to working with the construction industry so they understand your accounting needs and can even help keep you up to date with the latest HMRC legislation and information.

CONSTRUCTION SPECIFIC ACCOUNTING SOFTWARE

Costs – the same or less

Product – fit for purpose without costly add-ons or tailoring

Functionality – has everything you need in one simple package

Speed – Ready to go straight out of the box

Training and support – helped by people who understand your industry and your needs

GENERIC ACCOUNTING SOFTWARE

My accountant uses it for all their other clients

I know roughly what my jobs are costing me

Change is scary

I'd kind of miss the ongoing struggle to get it to work how I need (ok, maybe we made this one up)!

Get a perfect fit with your accounting software by picking the right tool for the job!
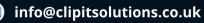
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A Digitally Built Britain:
The many 'applications' of construction software

SOFTWARE is currently revolutionising not only the way in which buildings are conceived and built but also how they are operated and maintained. The lofty concept of Building Information Modelling (BIM), first endorsed by central government in May 2011, has brought about renewed interest in 3D modelling software and the possibilities it affords collaborative thinking throughout the construction process.

BIM is but one avenue however, and companies across the supply chain are now beginning to consider how the right software might revolutionise their business. Just Housing Group (JHG), an East London-based housing and support services company, is one such organisation.

Working in partnership with the Derbyshire-based social landlord Futures Housing Group, JHG has implemented an extensive procurement system which has allowed the social housing provider to make substantial efficiency savings, curtail unnecessary spend, and avoid potential pitfalls in the Group's contract management programme.

The software management system integrates a full contracts register with supplier performance management and contract compliance monitoring - effectively handling the delivery of multiple contracts across a housing portfolio some 8,000 properties strong, while simultaneously creating opportunities for increased efficiency.

The results are undeniable. In recent months, Futures Housing Group has been hailed as a beacon for contract management delivery, having secured 'Contract Management Initiative of the Year' at the Government Opportunities (GO) Excellence in Public Procurement Awards and an ACA Annual Award for Innovation in Partnering.

John Thornhill, Procurement and Contracts Manager for Futures Housing Group, said: "We needed an uncomplicated system that would appeal to service users yet provide a robust platform of recording and monitoring contracts that leaves service users able to get on with their day jobs.

"In the background, the JHG system keeps an eye on progress providing timely contractor surveys and assessments. It drives our procurement programme allowing my team to provide budget holders ample time to help us prepare for re-tender."

Ian Hippach, Partner at Just Housing Group and Head of the Group's Systems and Technology Division added: "We are delighted to have implemented a system that has transformed the way in which Futures Housing Group works with its contractors and as such has led the housing association to now be seen as an innovative and progressive leader in the supply chain."

Elsewhere, Essential Living - a developer and operator of private rental homes in the UK - has employed similar methods to better manage its own portfolio, which includes a pipeline of 5,000 households across London and the South East.

Sophisticated new procurement software has enabled Essential Living to track project spend against budget for greater control over cost and expenditure. The entire purchase to pay workflow cycle has been bolstered by a flexible web portal for invoice approval by authorised personnel, while a range of comprehensive reports offer an instant view of all business operations.

Intelligent software is, of course, a natural fit for asset management. As such, Highways England has piloted an innovative new asset tool, RedBite, to better monitor the condition of

highway infrastructure, such as street lighting and drainage.

The trial forms part of Highways England's £88.4M A160 Port of Immingham improvement programme, intended to upgrade access to one of the UK's busiest ports.

Using RedBite, contractors are now able to 'tag' Highways England owned assets. Once tagged, data can be transmitted to a secure webpage where all information relating to that asset can be accessed.

This information is, in turn, providing Highways England with a fuller picture of their assets as Highways England's Project Manager, Ben Ridgeon, explains: "Managing and tagging assets using intelligent software has many benefits, not only in recording the location of that equipment but, more crucially, in monitoring that asset in the future.

"With such heavy usage on our assets, wear and tear is inevitable. By using a system where we can record and maintain a large amount of data on a range of different equipment, we can improve accuracy on the condition of those assets."

Online innovation is also

rationalising business process. Much has been made of cloud computing, for instance - an approach which employs a network of remote servers hosted on the internet to store, manage, and process data, rather than using a local server or a personal computer.

Research indicates that 90% of all UK businesses are now using at least one cloud based service. For the construction industry, this could lead to efficiency improvements, greater flexibility throughout the supply chain and truly collaborative working.

Pete Watson, CEO of Atlas Cloud - a UK firm of 3D virtualisation specialists - adds: "Cloud based software allows the site worker, the home worker, the worker on the move, and the worker at the international office to connect to a virtual workspace from everywhere. It's a strategic fit with the very nature of the work of the construction industry, where collaboration and communication are key.

"IT was once a central overhead for construction companies. But embracing cloud connectivity could allow firms to save money, working on cost-per-user basis, dependant on the number of people working on a project."

Historically, the construction

industry has been slow to embrace innovation, but these examples underscore the impact of construction software on business performance and process. When implemented correctly, the right software can revolutionise the way in which companies do business and, in a highly competitive landscape, this may prove to be the deciding factor.

Conversely, if the software chosen is a poor fit for the business or implemented incorrectly, the results can be disastrous. Considerable investment is therefore critical - both financially and in terms of time, training and manpower.

Such costs can easily spiral out of control however. Companies are therefore urged to exercise caution when implementing new systems. What are your requirements? What alternatives are there? Is the software being used to its fullest or is it an unnecessary drain on resources?

April 2016's BIM Level 2 mandate marked a recent milestone in the construction industry's cultural shift towards digital integration. Increasingly, software is proving the differentiator, and those businesses that opt not to invest risk being left behind.

UK BIM Alliance Assemble

BIM has been called many things from a digital game changer to a cynical rebrand of old concepts for the purposes of marketing, and almost everything in between; but not often business-as-usual. This is the challenge the UK BIM Alliance (UKBIMA) have set themselves, to make Level 2 BIM business as usual by 2020 for everyone, rather than just the leading edge. This is bold, and will need the BIM equivalent of The Avengers to make it work. The great news is, this is exactly the approach which is set to be announced at October's ICE BIM event. With the 'BIM4s' and the BIM Regions combining their crowdsourced BIM knowledge with influential institutions like RICS and buildingSMART, this is shaping up to be an exciting group with enough clout to really engender change. As for who gets to be Ironman; John Eynon is a likely candidate to fill the role for the group, adding UK BIM Alliance Events Officer to his other titles. He addresses his open malcontent on the shortcomings of construction with an admirably bullish approach to forcing change. The ever engaging Dr Anne Kemp and the rest of the UKBIMA leadership team will no doubt waste little time on completing the Marvel analogy as they are going to be busier than ever with the challenge they've taken on.

The need for the UK BIM Alliance is clear. The BIM Task Group have lit the fuse for Level 2 by developing the B555 Roadmap suite of documents and keeping up the required momentum to get us to the 2016 mandate without the BIM wagon losing a wheel along the way. However, the group was never intended to drive Level 2 forever, the industry was always expected to take the reins and let the task group move onto setting the agenda for what comes afterward, Level 3 and beyond. The UK BIM Alliance is the industry taking the reins, which is something that was hard to imagine happening a few years ago. Since 2011 there have been a lot of people who have had to swallow a bit of humble pie, we all know someone who said BIM would never happen. In 2016 that opinion gets harder to find every day, as the conversation shifts from what BIM could do, to what BIM is doing.

The creation of a building or an infrastructure project is one of the most challenging pieces of teamwork to be found anywhere, with multiple teams brought together in a transient manner to collaborate, yet still make an individual profit. From architects to pipe fitters, we all have to eat. So the challenge of making BIM Level 2 business-as-usual is not just working with teams within companies big and small but addressing issues at the project level, framework level, and national level. The challenge is no longer about the definition of Level 2 BIM, it's about getting our complex team structures to adopt and benefit from the new digital processes, without losing money in the flux. We can't afford to lose good businesses from our industry, so the changes have to come smoothly, which is a key challenge for our new alliance.

Fortunately, there has been plenty of research into the development of teams so the alliance doesn't need to experiment with this aspect of their work. The 1965 Tuckman model of forming- storming- norming-performing is a useful way to look at the challenge. The alliance has picked up the challenge at the point where the 'forming' stage is complete and the 'storming' stage is far enough along that those involved can handle the transition to 'norming', whilst building new teams and expanding to a size capable of delivering on the manifesto. Taking the UK construction industry through a journey of accepting BIM processes to a point where they reach a 'performing' mentality is why the alliance must succeed. If we don't transition to Level 2 being the normal way things are done then we may see our progress to a digital construction industry stall in the tumultuous 'storming' stage, which will see the industry fall short of the Construction 2025 targets, and the prolonged period of change would apply strain to the industry.

The UK BIM Alliance have set out their manifesto ahead of their official launch, and like all good manifestos, it's short and most importantly honest. It's likely to be tweaked before the launch so if you haven't seen it yet it's probably worth waiting for the October event for the final version, but there is an open flavour to everything that has been released by the group so far and this is typified by their invitation to 'Join with us!'. And we should. It looks like they are building a great team but without our support, a fantastic opportunity for change may be squandered at a time where the UK construction industry is a great position to set an example to the world and really benefit from being leaders in digital construction. Let's get behind them and make a difference.

By John Adams, Head of BIM Services, BIM Strategy Ltd

Are Data Centres Causing a Global Water Crisis?

THE number of commercial buildings requiring the facility of a dedicated data centre is only going to increase as the world relies more heavily on technology, and in particular the Internet of Things, to carry out tasks. The need for these dedicated areas brings with it additional pressures on the construction industry and those responsible for considering the associated environmental impact. This article seeks to explain some of those impacts, the way they are measured and the methods employed to reduce them.

While the most significant impact is energy consumption, we cannot ignore the carbon cost of data. We may think of emails etc. as being carbon free, but that is far from the case; when you contemplate the amount of energy used and subsequent CO2 emissions in operating even a small data centre, you will see why this issue needs to be addressed. And what better level to address it from than that which oversees the construction of data centres?

The metrics that have been introduced to the data centre industry to measure their energy efficiency are Power Usage Effectiveness (PUE), Data Centre Infrastructure Efficiency (DCIE), Carbon Usage Effectiveness (CUE), and Water Usage Effectiveness (WUE). These metrics were developed by The Green Grid Association, a non-profit, open industry consortium of end users, policy makers, technology providers, facility architects, and utility companies working to improve the resource efficiency of information technology and data centres throughout the world.

The Green Grid White Papers explain fully how the figures are calculated but this is a summary for PUE:

PUE is defined as the ratio of total facilities energy to IT equipment energy, as shown below,

$$PUE = \frac{Total\ Facility\ Energy}{IT\ Equipment\ Energy}$$

Total facility energy is defined as the energy dedicated solely to the data centre (e.g., the energy measured at the utility meter of a dedicated data centre facility or at the meter for a data centre or data room in a mixed use facility).

The IT equipment energy is defined as the energy consumed by equipment that is used to manage, process, store, or route data within the compute space. It is important to understand the components for the energy in these measurements, which can be described as follows:

- IT equipment energy includes the energy associated with all of the IT equipment (e.g., compute, storage, and network equipment) along with supplemental equipment (e.g., KVM switches, monitors, and workstations/laptops used to monitor or otherwise control the data centre).

- Total facility energy includes all IT equipment energy as described in the bullet above plus everything that supports the IT equipment using energy, such as:

  o Power delivery components, including UPS systems, switchgear, generators, power distribution units (PDUs), batteries, and distribution losses external to the IT equipment.

  o Cooling system components, such as chillers, cooling towers, pumps, computer room air handling units (CRAHs), computer room air conditioning units (CRACs), and direct expansion air handler (DX) units.

  o Other miscellaneous component loads, such as data centre lighting.

The PUE can be used as a quick way to compare energy allocation in a data centre. If a PUE is determined to be 2, this suggests that demand is two times greater than the energy necessary to power the actual IT equipment. A PUE can range from 1.0 to infinity; with a PUE value of 1.0 representative of 100% efficiency and indicating all power is being used by IT equipment only.

Research presented to the EU suggests an average PUE of 1.78 and an average data centre size of 1,900KW energy use and 1.59GWh electricity per year. In response to what the EU has called 'a concerning trend' in projected rising data centre electricity consumption, the EU has launched a Best Practice Code of Conduct for data centres. The aim of the code of conduct is to encourage data centre owners and operators to voluntarily sign up to have the energy efficiency of their operations measured, and agree to an action plan and an annual progress report.

Water Usage Effectiveness (WUE) is calculated by the following equation:

$$WUE = \frac{Annual\ Water\ Usage}{IT\ Equipment\ Energy}$$

The units of WUE are therefore litres/kilowatt-hour. Further details of how to calculate and review WUE are available from The Green Grid's white paper.

The annual water use includes all water used in the operations of or for the data centre and include:

- Humidification.

- Water consumed for cooling the data centre or data centre associated power-generating equipment (including cooling tower evaporation, blowdown, and drift).

- Water used in the production of energy.

In an age when we recognise the need to use our planet's water supplies carefully it seems quite absurd that an average mid-size data centre can use the same amount of water, on an annual basis, as three average-size hospitals.

The big names in technology, including Microsoft, Google and Apple, are determined to lead the way in finding sustainable solutions.

Microsoft's Project Natick

Still in its infancy, Project Natick seeks to create a sustainable data centre which leverages locally produced green energy, providing customers with additional options to meet their own sustainability requirements, by exploring the potential of deploying subsea data centres around the world. Half of the world's population lives within 200km of the ocean so placing data centres offshore increases the proximity of the data centre to the population dramatically reducing latency (how long it takes data to travel between its source and destination) and providing better responsiveness. Natick data centres are made from recycled material which in turn is recycled at the end of life of the datacentre. It is planned that they will be zero emission, highly reliable and consume no water for cooling or other purposes.

Google

Google's data centres use 50% less energy than the average facility and are among the most efficient in the world. They are designed to make optimum use of their surroundings and minimise their environmental impact; a 'free cooling' process using natural resources e.g. cold outside air, water evaporation or thermal reservoirs removes the need for mechanical chillers and saves energy. Continuing the theme of reducing the use of water, Google seeks to ensure its new data centres are self-sufficient when it comes to water supply; for instance, a data centre in Belgium was built next to an industrial canal, and in Douglas County, Georgia the company uses sewer water to cool its facility.

Apple

Apple's data centre needs are smaller than Google's and Amazon's but it is among the industry leaders when it comes to sustainability; 93% of Apple's global operations run on sustainable energy and 100% green power is used in its US operations. A 2015 Greenpeace scorecard graded Apple as the only tech company with a 100% Clean Energy Index.

Written by the Technical Team at Lubron UK Water Technology

The Innovation Economy: UK businesses invest £133Bn in intangible assets

A new report, commissioned by the Intellectual Property Office (IPO), has revealed that the UK is spending larger amounts on innovation, know-how and ideas - so called 'intangible assets' - rather than traditional 'bricks and mortar' investment.

Research indicates that intangible investment, which includes expenditure on R&D, software development and product design, reached £133Bn in 2014 - 9% higher than straightforward spending on such tangibles as property, machinery, and IT infrastructure.

It's an intriguing trend - one that speaks volumes of the UK's shifting priorities. Since the turn of the century intangible investment has increased by an astounding £45Bn, further highlighting Great Britain's role in the global 'knowledge economy'. And while investment in tangible assets has risen by 38% - from £87.9Bn to £121Bn - over the same period, intangibles continue to outstrip more orthodox methods of spending at a quite considerable rate.

Why is this? Historically, British businesses have often been accused of underinvestment. Indeed, in recent past, former Chancellor of the Exchequer George Osborne claimed that the UK doesn't "train enough or build enough or invest

enough". The IPO's findings seem to fly in the face of conventional thinking however, indicating that businesses are perhaps more progressive than in previous years.

The report also underscores the significance of both the manufacturing and financial industries to the UK's burgeoning innovation economy. Bafflingly, these two sectors account for just 20% of total hours worked but are responsible for 58% of all intangible investment.

Also of interest, in 2014 more than half of intangible investments (53%) were protected by Intellectual Property Rights (IPRs) - a 3% increase from 2011. Of those assets:

  • 25% were protected by copyright.
  • 11% were protected by trademarks.
  • 11% were protected by design rights.
  • 6% were protected by patents.

The Government previously identified innovation as a crucial ingredient in the UK's drive towards economic growth up and down the country, and IP rights are playing a greater role than ever before.

Baroness Neville-Rolfe, Minister of State for Energy and Intellectual Property, said:

"The UK has an impressive track record when it comes to innovation and creativity. Investment in intangible assets like research and patents helps businesses grow - which is why the UK has a strong system in place to protect their IP rights, and encourage further investment.

"Our intellectual property regime has helped create an environment in which innovators and creators can prosper knowing full well that their hard work will be rewarded and rigorously protected."

Tony Rollins, President of the Chartered Institute of Patent Attorneys, added: "Investment in the protection of intellectual property is a vital driver of economic growth: it helps to maximise profits which fund further research and development into new ideas.

"CIPA is proud of its excellent relationship with Government and innovative business. The IP system encourages investment and research thanks to high quality practices, insightful policy-making and excellent work such as this report."

To read the report in full, please visit:
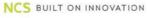www.gov.uk/government/publications/uk-intangible-investment-and-growth

COMMUNITY

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