UNION SQUARE

Control, Collaborate, Construct
Why information must be managed

Contents & Contributors

Introduction
Richard Vincent, pg 3

Adapting to Changes in UK Construction: what role can technology play?
Paul Bogle, pg 6

Solving the Information Management Conundrum
Stuart Bell, pg 8-9

Interview with Malcolm Clarke
The Contractor View, pg 10

Bridging the Divide
Nigel Ostime, pg 11-12

Interview with David Hills
An Architect's Perspective, pg 13-14

The Winner Takes It All
Stuart Wilks and David-John Gibbs, pg 15-16

Interview with James Eastwood
The IT Director's Opinion, pg 17-18

Contents

Aims of this publication

Union Square is a strategic information platform that is flexible, easy to use and delivers clear operational benefits across work winning, project delivery and business support processes. 40,000 construction industry professionals across 370+ organisations in the UK and internationally use our technology daily. We are a collective of industry experienced and IT professionals, expert in supporting businesses manage information better.

Read this document to learn more about working in the new digital age, and the positive impact integrated working can have on your client relations, your business operations and the attitude of your people towards knowledge sharing and personal productivity gain.

Introduction

In a rising market where competition is tough and margins tight, what practical steps can you take to enhance productivity and protect your business from risk? Can technology and systems investments help you?

The construction industry today is constantly changing, driven by ever more demanding customers, evolving work patterns and changing legislation. The drive to do more with less is greater in the current economic cycle than ever before. But this is not a trend, this is 'business as usual', and organisations across the construction sector ignore it at their peril. As a trusted Information Management partner to some of the most successful global Architects, Contractors, Engineers and Consultants, where does Union Square fit in an age where working smarter has become a necessity, not simply a "nice to have"?

We are different because we have a continuous dialogue with our clients, constantly striving to anticipate their needs and deliver outstanding software that enables them to be internally more efficient yet externally more responsive. For our clients Union Square becomes a way of life, a way of working that is engrained in their business, making them more joined-up, leaner and ready to face the competitive challenges that lay ahead.

We are privately owned and run by a focused, hands-on team. So we listen hard to our clients, working in partnership with them to steer a path through the myriad of new technology that often promises more than it can deliver. Mobile working, collaboration and BIM are the latest hot topics and Union Square are already delivering effective and pragmatic solutions based on what the market really needs, not just what an IT specialist has dreamt up.

Working with Union Square gives you the opportunity to join a group including hundreds of other businesses just like yours, working together to create solutions that drive real and measurable business benefit.

We hope you enjoy this publication and the practical insight, commentary and advice it delivers as you start your journey towards efficient, effective and joined-up working.

Richard Vincent
Managing Director

UNION SQUARE

Meet the Team

Meet some of the team at Union Square that support clients on their journey of transformation from information chaos to joined up, integrated working.

Stuart Bell
Commercial

"Information management can be a dry subject, and one that doesn't often feature high on the agenda at director meetings, until a major problem occurs! Running a business reactively is tough and we want to address this. We help organisations to document their current ways of working and develop a business case. We highlight the hard and soft costs for investment and contrast this with the principal areas of payback/value return. Working with a sponsoring director and key operational managers, our aim is to provide clear presentations and proposals that address specific business objectives. We work closely with our clients until project go-live, before transitioning them to our support and client development teams."

Gavin O'Neill
Client Development

At Union Square, we form long term partnerships with our clients which naturally means we must evolve and adapt to their changing needs over time. Through regular review and client contact we understand their business needs and strategic objectives, and ensure that they are in a position to benefit from the latest functionality Union Square has to offer. Our client user base provide invaluable guidance to influence our product direction and are always willing to share experiences with their peers either informally or via our User Group Conference, Development Conference (DevCon) or the Best Practice sessions we run throughout the year.

Jacqui Blakemore
Project Delivery

Union Square's application focuses on sharing knowledge and information throughout an organisation, which will impact on each person within the business. Managing this level of change can seem daunting and that is where Union Square's Project Management and Consultancy Services are here to help. We work with key individuals within your organisation to develop an implementation plan that fits with your available resource and the culture of your organisation. Our team can provide advice on creating a communication plan to use throughout your implementation, to keep everyone informed. We can also assist in creating a training program to support your roll out and make the best use of the tools available. Our key objective is to work in partnership with you to ensure that your organisation sees benefits and improvements from a system designed to support your business processes and make your peoples' working lives more interesting and productive.

![Union Square logo](UNION SQUARE)

Catherine Hamlin
Training

We develop engaging training that is sustainable, timely and overcomes geographical and time boundaries for Union Square clients worldwide. Users have the opportunity to access training and support via different mediums depending on their circumstances and ability. We coach Union Square clients in the development of their own Training Plans in order to help them achieve a training model they can sustain in house.

Steve Allen
Support

Through a combination of skilled technical people and structured support procedures, we ensure that there is always a suitably qualified person available to deal with user issues. Our support team responds to end user problems, technical and installation support requests, and consultancy and planning requirements. Key to our effectiveness is the team's ability to understand the requirements of our users and to comprehend their business needs and processes. Steve Allen heads up the Support team. He has contributed to the whole product lifecycle from design and development, through to consultancy and implementation of support and aftercare services.

Philip Shaw
Product Management

At Union Square we develop leading software solutions to streamline everyday design and project management tasks, such as drawing control, project communications and collaborative working. These solutions combine high levels of functionality with speed and ease of use.

Experienced in consulting on major construction projects, we have in-depth knowledge of all aspects of the construction process from inception to facilities management.

Adapting to Changes in UK Construction: what role can technology play?

Paul Bogle is Head of Policy and Research at the National Federation of Builders. He represents members and the construction industry on government and industry working groups. Paul manages stakeholder relationships and lobbies the government and regulators.

Union Square is an affiliate partner to the NFB and has supported a number of member meetings on a variety of subjects, including document and email management, collaboration and Building Information Modelling (BIM).

The construction industry is vast. In fact, it is more like a group of interconnected industries which, collectively, contribute around £90 billion, or about 7%, of GDP in the UK.

Many people looking into the industry carry an image of a slow moving industry where much of the work is manual. To those working in the industry, nothing could be further from the truth. The breadth of the industry means that some will move more quickly than others, but the pace of change is fast, wherever you happen to be. The industry also offers a wide variety of rewarding careers which can challenge the creative, the technical and the scientific as well as the practical. As we approach the end of 2014, the industry is increasing output by about 5% on an annual basis. The good news is that this growth is being spread across the construction industry and is not being largely confined to private housebuilding as it has been since the April 2013 introduction of Help to Buy. Despite this growth, there are some challenges that are near universal.

Costs

According to a survey of NFB members for Q3 2014, 11% reported falling margins because contracts were won when costs were lower, but those same contracts must be delivered when costs have escalated, affecting their profit margin. This is all part of a balancing act. There is a shortage of materials and labour, so in order to complete projects, companies pay a premium to secure materials and labour. They are now completing work, but at a higher cost than was originally estimated – a cost that cannot be passed on to the client, so margins suffer. New work is being priced to take these costs into account, but is not priced so high that companies become uncompetitive. We do not expect to see companies reaping the benefits of new pricing until well into 2015. Getting the balance right is a long game and it is partly for this reason that the NFB warns its members to be at least as vigilant about cash flow during a recovery as they were during the downturn.

Winning work

The process of winning work is constantly being discussed, particularly in relation to the pre-qualification process. There are usually as many suggestions about how to save time and money as there are people participating in the discussion. The government is aiming to transpose the updated European procurement regulations before the general election in May 2015 and there is an effort to increase SME access to opportunities in the public sector. There are three developments that will help to solve some key problems:

1. There will be a requirement that 30-day payment terms are passed down the supply chain through a standard contract clause. There will be a complementary requirement to report on the late payment of invoices.

2. All public sector contracts will be made available on the relaunched Contracts Finder website which will also include details of contract awards. Having a centralised system will solve the problem of companies not being aware of opportunities or having to subscribe to multiple platforms.

3. Pre-qualification forms for contracts below the EU threshold will be abolished and a standardised form will be used for other contracts. The most recent NFB procurement survey found that some companies were spending the equivalent of one month each year completing pre-qualification forms. Each form is different, despite essentially asking the same questions.

Technological change

In order to save time and money for both clients and the companies bidding, it is no surprise that technology is being harnessed. A lot of the physical building we do remains largely unchanged, but technology is changing what happens before and after we build. It is easy to imagine a not-too-distant future when the entire procurement process is managed electronically. Building information modelling is common throughout the supply chain, allowing us to create and manage virtual structures before they become part of our landscape. Electronic invoicing using a standard system will simplify payment, particularly across borders.

> "Technology is a facilitator, so instead, think in terms of opportunities, efficiencies and a more competitive way of doing what is core to your business."

With this increased reliance on technology comes a need to manage not just data, but knowledge and details of projects and relationships. As counter intuitive as it sounds, when considering technology and technological change, we need to put the thought of computer software and hardware to one side. Technology is a facilitator, so instead, think in terms of opportunities, efficiencies and a more competitive way of doing what is core to your business. Making your technology decisions later in the process will ensure you consider your business and the focus on the problems you are trying to solve, and it will also increase your chances of making the right technology choices.

www.builders.org.uk

Technology Adoption Maturity Cycle Changing Attitudes

In a world where more people own a mobile phone than a toothbrush[1] (a slightly scary thought!), we highlight some key statistics that reflect the attitudes and position of industry technology adoption and use.

68% of respondents agree that business-at-the-speed-of-paper will be unacceptable in just a few years' time[2]

2011   2014

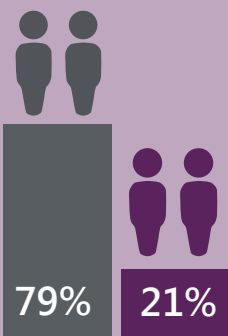Overall paper consumption is decreasing in 44% of organisations compared to 35% three years ago[2]

People on average spend 2-3 hours a day on email related activities, consuming 20-30% of their business day[3]

9%

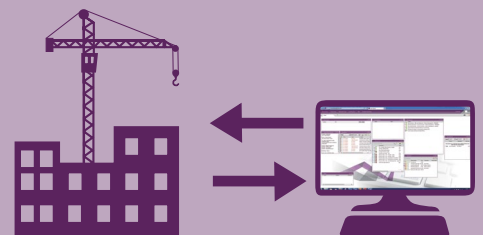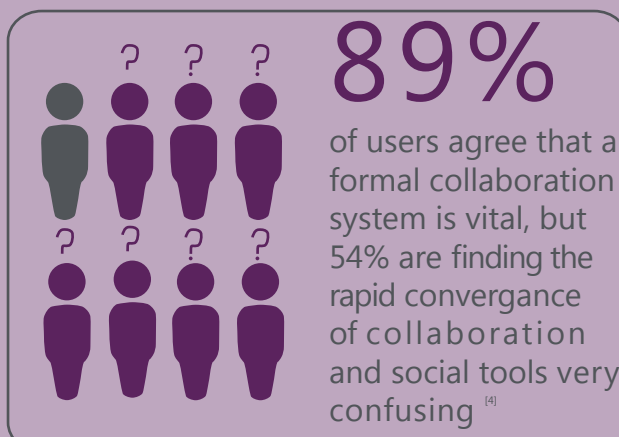Only 9% of organisations have a single enterprise-wide collaboration capability[6]

50   50

50% of companies consider their organisation has shortfalls in tech support for internal collaboration[4]

Only 51% of construction firms track the movement of project information

49% don't even know how [7]

75%

believe sharing documents is the most important way to improve collaboration[4]

67% of people use personal devices at work, regardless of the office's official BYOD policy [8]

79%   21%

79% of mobile workers indicate a desire to interact with on-premise workflows, but only 21% are able to do so[4]

89%

of users agree that a formal collaboration system is vital, but 54% are finding the rapid convergance of collaboration and social tools very confusing [4]

77% of BIM users agree that BIM increases the coordination of construction documents[5]

[1]Mobile Marketing Association of Asia, 2010   [2]Paper wars 2014 - Update from the battlefield, aiim, 2014   [3]The Three Approaches to reducing Email Overload, Dr Michael Einstein, Mesmo, 2014
[4]Content Collaboration and processing in a Cloud and Mobile World, aiim, 2014   [5]NBS BIM Report, pages 20-21, 2014   [6]Get more from On-Premise ECM, aiim, 2014
[7]Mcgraw Hill Construction 2013 research   [8]CBS News, 2013

Solving the Information Management Conundrum

A lack of knowledge and understanding of how business systems support positive change has held back UK construction from investing for many years. Are attitudes starting to change?

Stuart Bell
Commercial Lead - UK

UNION SQUARE

The world in which we live is speeding up, and the change in the way that our industry operates since the turn of the millennia has been significant. Technology has been a major contributor to this change. The past 30 years of systems working has seen us move from mainframe to midi, fax to email, PC to tablet, on-premise to cloud and 2D drawings to digital model files. This article challenges whether our industry has successfully adapted to this change, or is suffering in silence under the burden of email and a growing plethora of file formats and application types? Furthermore, it asks the question 'how can you capitalise on emerging technologies for competitive gain?'

The construction office of the early 1980's was considerably different to that of 2014. Work winning and project delivery processes were manual and very paper-centric. Operational staff were supported by secretaries, typists, librarians, mail room assistants and document controllers. Sending something in the post meant that you had more time to think about your response. Carbon-copy triplicate pads and hard copy filing archives were commonplace. Major building and infrastructure projects got built. Invoices got paid. The industry prospered. We all drove brown Ford Cortina's and went to the pub at lunch!

As technology became more affordable, and computerisation extended from the 'back-office' finance functions to project teams and the front office operations, processes inevitably started to change. Manual take-off was replaced by digitisers, orders and site instructions were transmitted by fax rather than snail mail, and hard copy/wet ink reports were replaced by early spreadsheets (VisiCalc, Lotus 1-2-3 and Excel). Individual departmental heads started to invest in systems to deliver efficiencies to their specific bit of the company operation. We started to do more with fewer people. In reality, this was the start of the troubled situation that we now find ourselves in today: this was the start of the fragmentation of information.

"The daily deluge of emails and attachments is flooding through Outlook into our organisations and on to our networks, with very little control other than quality manuals and self-imposed disciplines"

As a project centric industry, these early issues went largely unnoticed. Projects were estimated, won, delivered - departmental functions handed-off information to the next stage (in lever arch files and paper archive boxes). Due to the high costs of electronic storage, information was archived onto floppy disks, CD's and more recently DVD's. This seemed a sensible evolution of process.

Through the 1990's into the millennia there was a clear shift in business systems usage - 'systems of record' changed to 'systems of engagement'[1]. The advent of the internet gave rise to an environment through which we could promote, collaborate and share information better. The reliance on email grew and escalated further with the introduction of the smartphone into the workplace. This should have marked a positive advancement in the way we work, right?

Well, yes and no. On the upside, early adopters and technology advocates could increase their personal bandwidth for working and do more with their available time. On the downside, email and mobile phones, file sharing sites and extranets have all served to vastly increase the amount of information we are expected to manage day-to-day. They have introduced 'leak points' to our businesses and served to create a personal dilemma to staff (your knowledge workers) who aren't sure how and where to store and file business and project information. The immediacy of email has stolen thinking time from our lives which often means we are rushed to take decisions.

The DNA of systems use in our industry is characterised by a reliance on Microsoft applications; notably applications like Outlook, Word and Excel. In the background, we have developed an expertise for spawning yellow folder structures in Windows Explorer

[1] 2011 AIIM - Systems of Engagement and The Future of Enterprise IT:A Sea Change in Enterprise IT

to mirror our legacy hard copy filing structures. The daily deluge of emails and attachments is flooding through Outlook into our organisations and on to our networks, with very little control other than quality manuals and self-imposed disciplines. Or should I say ill disciplines?

If UK Construction Plc were to hold up a mirror to itself, it would see individuals in organisations suffering in silence. It would see people left to contend with poor systems and inventing their own ways of coping with the increasing volume of emails, documents, drawings and correspondence. They would be breaching company security policy at the same time. It would still see the 'brontosaurus effect' holding back junior and middle management from making intelligent choices in their businesses systems and technical infrastructure. Peering under the carpet of individual organisations, it would see terabytes of files poured into digital landfill and individual users wasting valuable time searching for key client and project data/documentation. It would see waste, frustration and missed opportunity.

So what could your business do to arrest this downward spiral?

Your business could start by looking at the business processes for planning, winning, doing and reviewing project work. It could see how many systems transcend these simple processes across departments, and how effective information is created, stored, reused and recycled. Count how many times a single project code/name is typed into your many systems, spreadsheets and support documents. You could interview key staff and obtain their feedback on how well their systems support them in their daily duties, where they feel the process bottlenecks are, and the implications of these. You could look at key project and management information used to support valuable decisions – are the correct versions accessible and available when and where needed? Whether in the office, on-site, or on the move.

Armed with these facts, you could then start to imagine the opportunities and business potential if you could truly capitalise on the wealth of information and knowledge created through day to day office and site based activities. What would the efficiency gains be if you could log into one environment and, with confidence, intuitively search for any piece of information related to your enquiries, projects, clients and supply chain communications? How painless would it be to access one version of the truth? How well would your external ISO auditors and PI insurers react if you could clearly evidence a robust and bulletproof audit trail in all of your document processes?

Take 3 simple, everyday examples:

1. Track the full trail of an RFI from its origin, with all of its responses (related emails and attachments) logged in one place.

2. Log a snag on a site mobile device and benefit from seamless integration in your back-office management systems, enabling the expediting and full defect resolution to be managed online to completion.

3. At the press of a button, generate a full drawing register on-site, safe in the knowledge it is referencing the very latest design deliverable information (drawings, specifications, model data etc). Then download the latest design information to your tablet and view it offline.

Where does Union Square come in?

For the past 15 years, Union Square has been supporting the industry be more organised in the way it creates, receives, searches, archives and manages information. Through our enterprise portal technology we provide a clear and intuitive framework for managing structured and unstructured data. A system that is secure, robust and is configured to reflect the way that your people need to work with data, drawings, documents, images and emails when winning and delivering project work.

> "For the past 15 years, Union Square has been supporting the industry be more organised in the way it creates, receives, searches, archives and manages information."

Put simply, we deliver and support a business system that makes you more joined up in the way that you operate. We provide an alternate to Windows Explorer and network shares, a replacement to the many spreadsheets and database applications that are currently gluing-up your business processes. Our document management environment is delivered with an intuitive yet sophisticated search engine, to ensure you find what you are searching for, fast.

This system is delivered through a browser, is mostly installed in your office but can be hosted in the Cloud. It offers secure extranet collaboration for simple file sharing or more complex approval and workflow led project working. It enables people on site to log into head-office systems in an uncompromised way. If offline and on-the-move, it enables your people to work from mobile and tablet technology to streamline site based data capture and collation. In short – it joins you up and allows you all to sing from the same hymn sheet.

Whether you are a tier 1 national or smaller regional contractor/subcontractor, a signature architect or more commercial design house, an engineer, project manager or consultant – Union Square is scalable and can be configured to fit the way you work today, and how you expect to work in the new age of digital construction.

"Integration of the tender enquiry and
project management workflows is key"

1. What were the key information management issues that Baxall faced prior to engaging with Union Square?
We were desperately looking for a solution that would help us get away from dealing with yellow folders, a database that was constantly out of date and a mass of emails. Our ability to process enquiries and progress projects at the quality and rate required was being hampered by systems that we had implemented a decade earlier.

2. How were the issues brought to your attention? Was there a collective noise from the business that made you sit up and take notice?
Personally, I didn't feel that I had a problem as I was reasonably well organised. The problem the business had was that we weren't able to find information at all easily. The only way that we could manage it was that every email had to be printed by the suppliers and put in hardcopy files. Then we had the situation where if emails came to the site manager and he didn't notice that the quantity surveyor hadn't been copied in, it would sit in his inbox or in another folder somewhere else, which meant that you'd never be able to track it, would miss the issue, and then never be able to find it in the future. That was a major problem that we were faced with whenever you had a claim, or someone had an argument about whether they had received appropriate information. It was almost impossible to locate the relevant information that was needed at any given time. The drive was coming from surveyors, contract managers and any of us that were trying to run projects effectively.

3. Do you recall there being one particular tipping point that pushed you to take action? You mentioned the word claim which always makes people shudder...
It was a business issue over a claim. We had a situation where a site manager was receiving instructions from the architect, and the architect wasn't copying in anybody else on his correspondence. The site manager was acting on those instructions and we didn't pick up that it was causing delays until it was too late. It resulted in a claim and us making a huge loss on a project. As is often the case, the claim process started several months afterwards, and I recall that it was really difficult for us to find information retrospectively when needed.

4. How did you justify the business case for investment and recommendation to proceed with Union Square?
We looked at it purely on the cost. We had an outside consultant looking after staff and we felt that we could reduce his input by having a better system in place. We recognised that the cost at the time for the number of licenses we were looking at was the equivalent of someone having a car allowance on a monthly basis. For the cost of one company car, we were getting a system that in effect was saving us potentially hundreds of thousands of pounds. From a financial point of view the business case became a necessity, rather than a 'nice to have'. That was speaking from that time but if you were to ask me now what benefit it has had to date, we have been through a recession, we have reduced the number of people that we had and we have subsequently increased our turnover. Because we're more efficient in the way we operate, I haven't got as much support staff and our existing staff is doing more for less. When I compare us with other companies that we know well, who haven't got similar systems, I can see that we're streaks ahead.

5. In terms of your day-to-day use of Union Square, which one part of the system couldn't you do without?
I could easily say all of it! But what I would say is that it's the integration of the project enquiry and project management that creates a link with everything, from document management to contacts. That central hub for putting an enquiry on and being able link it to a project and having everything else related to the project filtering through to one location. Clicking on a contact, for example, you can easily see what projects they're associated with and what actions they have. It's that easy access from anywhere in the system to another part of it that you would really miss if it were taken out.

6. Appreciating that ROI's are easy to construct but difficult to prove, which are the areas that Baxall feel they are getting the most payback from?
Ease of access to information which saves considerable time, money and frustration.

7. What are the next challenges at Baxall that Union Square might support?
BIM and creating a common data environment for our clients. We're seeing enormous benefits of BIM and collaboration.

Baxall Construction are participating in the Union Square early adopter programme for our new Extranet solution - a common data environment that sits apart from, but alongside the main system. It allows Baxall to successfully manage the 2D, 3D model and supporting information and workflow on BIM delivered projects with clients, supply chain partners and consultants.

www.baxallconstruction.co.uk

Bridging the Divide

The dynamics between contractors and architects is changing. Is this for the better, and can both sides embrace this change?

Nigel Ostime, principal of whiteroom architecture and chair of the RIBA Client Liaison Group, sets out recent findings on what contractor clients look for in their architects; the case for improving collaboration in the Project Team and how technology can support a dialogue between designers and contractors.

According to the RIBA Business Benchmarking survey 2012-13, contractors provide over a fifth of UK architects' workload. Also, over half of all private contracts and two fifths of public contracts are design and build. Set these statistics alongside the aims of the Government Construction Strategy to reduce the cost of construction projects by up to 20% by 2015 (from 2011) and it is clear that consultants and constructors need to work more collaboratively. This can be achieved through a better understanding of each other's needs and through increased use of technology and BIM processes. Indeed, amongst a range of proposals, the government strategy includes integration of the supply team and the phased roll-out of BIM, resulting in a requirement for fully-collaborative 3D BIM ('Level 2') on all centrally-procured construction contracts by 2016.

What clients want

The RIBA set up a Client Liaison Group at the start of 2014 with the aim of finding out more about clients' views and needs and feeding that back to its members. The group includes Paul Morrell OBE, the Government's former Chief Construction Adviser and Stephen Hodder MBE, (RIBA President).

Recognising its importance, contractor-led procurement was the first area to be reviewed, with a roundtable discussion including senior representatives from the likes of Skanska, Willmott Dixon, Bouygues, Laing O'Rourke and Carillion. This was followed up by filmed 1-2-1 interviews (which can be found in the members' area of the RIBA website: www.architecture. com). Other sectors researched so far include house building, retrofit, local authorities and schools, with more to follow.

The aim has been to understand clients' perception of the architectural profession and where they consider architects bring the most value, and ultimately to identify factors the profession can bring to their 'offer' that will better equip them to provide the service being expected.

The contractors were asked questions such as:

• Where can architects add greatest value?
• Where does responsibility for design quality sit?
• What roles do you see your architects performing?

Perhaps unsurprisingly the discussions confirmed the traditional divide between the two parties. Architects are still characterised as poor design managers who concentrate on design at the expense of buildability, risk and commercial viability. Unfortunate as this stereotype is, it does still persist. At the same time though, architects are valued by contractors for their creative skills.

The key advice from the contractors was to listen to them to make sure their key priorities are understood and to deliver value; to collaborate fully with the project team and proactively facilitate optimum design

"Over half of all private contracts and two fifths of public contracts are design and build."

solutions and to immerse themselves in issues of buildability, risk, and commercial viability. They also wanted their designers to repossess the design management role saving contractor clients the cost of hiring design managers and to acknowledge the cultural shift needed to work as equal partners in contractor clients' project teams.

The change in the respective roles of architect and contractor over the last couple of decades has meant that both have needed to adapt, albeit in different ways. Gone are the days when contractors were reliant on architects to bring project opportunities. Architects have greater commercial freedom than they once had but their position in the project team has become something more akin to being "part of the supply chain" as one major contractor put it – somewhat provocatively! There may be some truth in this for D&B procurement but regardless, the whole team must row in the same direction if the challenging efficiency targets set by the government are to be met.

So how can architects respond to the challenges?

Architects are respected for their unique creativity and problem-solving skills and their designs are important in allowing contractors to differentiate themselves in a tough market. However, those skills do not extend far or often enough beyond technical and aesthetic issues. Contractors want architects to extend their abilities to designing to a budget, identifying cost savings, improving efficiency, smoothing the

flow of production information, and improving buildability. Contractor clients' key commercial drivers - buildability, programme, risk management, cost-efficiency, and ease of maintenance - are more sensitive than ever to delivery inefficiencies, putting a considerable strain on the viability of projects if things go wrong. Architects who not only listen, but understand what those key commercial drivers are and then proactively respond to them by working smarter to optimize designs, are highly valued by contractors.

Developments in the design-build project environment, allied to the increasing sophistication of construction projects, have changed the dynamics of project team relationships. Other members of the team add as much value to the project in the eyes of contractors, dissolving traditional hierarchies of leadership. As a result, design quality is viewed as a shared responsibility, with contractors as the ultimate custodian. Nonetheless, contractors want architects to lead the design process. Architects who not only acknowledge but actively embrace this flat structure and exploit its team-building benefits are much sought after for long-term relationships. As first among equals, architects are encouraged to lead the design in the context of their critical project drivers.

Contractors acknowledge that architects are both creative designers and strong on detail design but do not very often find these qualities together in the same practice. Also, despite wishing it were otherwise, they acknowledge that architects are not contractually incentivised to pay close attention to the project through to practical completion and beyond. Contractors appoint design managers at considerable expense to fill this gap, as well as to coordinate design across the project team. The opportunity is threefold. First, to make themselves more attractive to contractors, architects can reassess their commercial offer to see where it could be stronger. Second, their contract negotiations should emphasize the project delivery phase. Third, the money contractors currently spend on their own design managers could instead be diverted into the architect's fee - provided the

management skill exists in-house. The technical complexity and sophistication of contemporary construction makes it difficult for architects, even those in large multi-disciplinary firms, to control all the design. Regulatory compliance alone is difficult, to say nothing of the challenges of innovative practice in a BIM world. Architects who communicate openly and welcome interdisciplinary collaboration with supply chains, not only avoid costly errors but add extraordinary extra value that respects contractors' key drivers.
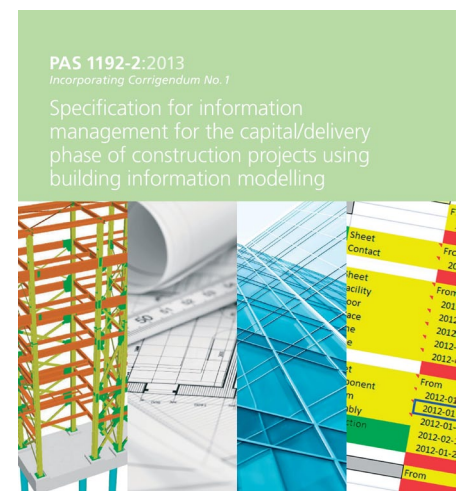
Collaboration

Of all the challenges raised, 'collaboration' is a design philosophy that many project teams already embrace. It is at the core of all BIM processes and is facilitated by documents like PAS1192-2 (for construction stage activities) and PAS 1192-3 (for facilities management). PAS1192-2 is a freely available specification (go to http://shop.bsigroup.com/en/forms/PASs/PAS-1192-2) for information management for the capital/delivery phase of construction projects using BIM. The purpose of the PAS is to support the objective of achieving BIM maturity level 2 by specifying requirements for this level, setting set out the framework for collaborative working on BIM-enabled projects and providing specific guidance for the information management requirements associated with projects delivered using BIM. It describes the shared use of individually authored models in a Common Data Environment (CDE), being a single source of information for any given project, used to collect, manage and disseminate all relevant approved

"Of all the challenges raised, 'collaboration' is a design philosophy that many project teams already embrace. It is at the core of all BIM processes and is facilitated by documents like PAS1192-2"

project documents for multi-disciplinary teams.

It describes the shared use of individually authored models in a Common Data Environment (CDE), being a single source of information for any given project, used to collect, manage and disseminate all relevant approved project documents for multi-disciplinary teams.

PAS 1192-3 offers guidance on the use and maintenance of the asset information model (AIM) to support the planned preventative maintenance programme and the portfolio management activity for the life of the asset.

PAS 1192-2:2013
Incorporating Corrigendum No.1

Specification for information management for the capital/delivery phase of construction projects using building information modelling

bsi.

Clients are less interested in the efficiencies that working in 3D with parametric components can drive in the design process, than the greater predictability of 'Project Outcomes' agreed in the briefing stage, and managing and mining the data contained in and flowing from the BIM model (especially with regard to energy use and building efficiency). But these aims can only be achieved through the increased use of technology, which as such has a marked place in supporting better working relations between clients, contractors and designers.

Technology can support a dialogue between the design team and the contractor, and businesses that embrace digital technology - and knowledge management tools in particular - will be in a stronger position to capitalise on that.

1. Who are RH Partnership?

We're an architectural practice of 75 people, with offices in Cambridge and Brighton, and we're celebrating our 40th birthday this year!

2. What is your role in the practice?

I've been here for nearly 21 years, and I'm one of 10 co-owner directors on the board. I've got responsibility for finance and IT, but I'm also a qualified architect and run projects with fee paying clients, using CAD software and Sketchup etc from time to time.

3. What percentage of your work comes from main contractors today?

In the year to date, it's been 27% by fee value.

a. How has this changed over the decade?

It's been around that level and occasionally a little bit higher for around 5 years, but if you go back 10 years ago it was only 5% then and that was accounted for by just one project. So although we were working closely with contractors we were tending to stay on the client side as their agent, rather than serving the contractor directly. But over the last 10 years, apart from the percentage, what's changed is the range of procurement routes. Our earliest engagements directly by contractors were usually where the client dictated a novation route: the client found and appointed us, but then after the design was completed they would hand it all over, including us, to the contractor to develop the detailed design and build it. But since then we've quite often been selected by contractors as the first port of call, either because they're doing a full design and build delivery project for the client or, in some cases, to help them only do the detailed design on a scheme that's had a concept designed by another architectural practice.

b. What does the forward trend look like?

I think there will be a further steady increase in the percentage of work that's directly for contractors, though not totally taking over, steered by some of the more institutional clients we have who are increasingly defaulting to a develop and construct route, with or without novation, and even full design and build. University of Cambridge is a very strong client of ours and has been for more than 20 years and with their last 3 major projects, rather than letting to designers first and then pulling in a contractor, they've actually gone straight to contractors from the get go. Then it's up to the contractors to pull together a design team as part of their offering to bid for the job.

4. What are the main issues architects face when working with main contractors?

I think the most direct one commercially is contractors' practice of what they would call 'better buying'. In the old days where we'd have completely designed out a job, and it was handed over to a contractor to build it, better buying would have meant tendering to subcontractors and trying to find the lowest price for the defined work. But when you move into contractors having a design responsibility, through their directly employed designers and architects, that can mean switching between products like the windows or the cladding. The problem with that is that involves us doing extra work, redesigning bits of it or the detailed design. This can be quite a significant cost to us, even though ultimately it's in the contractor and client's interests for saving money. So we need to be very sharp in defining our scope of work on a fee basis, otherwise we can get badly burned and spend a lot more fee than we're getting. We're now marketing ourselves to contractors as well as to conventional clients, because more work is coming through them.

5. In your opinion, how could the contractor community and architect profession work better together?

The headline really is that we're working together very well already. There's a great increase in the maturity of the relationship because it's become so common, but what we do need to do is be really clear on the level of service required and make sure our fees are at a sustainable level. It's just about clarity and straightforwardness. But certainly the new procurement routes where we're more closely tied to contractors have diffused a lot of the traditional tensions that can exist between architects and contractors. In the traditional old world where the architect was not only lead designer but had the contract administration role there was always an inherent conflict of interest. There were a lot of disputes around late information where the architect as contract administrator was inevitably under subconscious, if not deliberate, pressure to be hard on the contractor to save their own skin. These new routes definitely cut through that kind of issue which is why I think the relationship can work quite well.

6. Is BIM having an impact on your practice and the way you work with contractors?

Yes. As a topic in itself BIM has had a huge impact on us and we committed several years ago to moving to be as fully BIM operational as we can. On our historical conservation side BIM is probably still overkill and inappropriate technology, but for the great majority of our bread and butter work BIM is relevant. We're currently using Autodesk Revit on more than 70% of our output and, of that, the majority of the work would class as BIM level 1 and some of the major projects in that set are BIM level 2, which is increasing. That has had an economic impact on us as we've had to invest in software and training and we've had to accept a significant loss of productivity as staff get used to new software and changes in workflow and process that go with a BIM based project compared to traditional CAD. BIM has had a huge impact for contractors as well. What matters for them is establishing BIM's scope and the detail, so who's doing what, who's taking ownership of the model, and to what level of detail. It's quite important for the contractor if they're leading the project to be BIM savvy as very often our clients, even the ones like universities that you think would be more expert, get BIM briefs produced by a project management consultant which tend to be really woolly and full of masses of standard text, without spotting that they're supposed to define the content. So it can be very vague and the onus is on a good contractor in consultation with us to simply cut through that and say, "you've sent all these documents, but just for clarity, this is what we're actually offering for x price". We can help contractors in discussing that, although the bigger ones have got their own teams and are getting pretty sharp on BIM.

7. You are a user of Union Square yourself, what 3 key advantages has the system brought to the practice?

- Having everything in one place and not having to maintain separate records which duplicate entry of project organisation or people records. Before Union Square, we'd have typically re-entered a project code and name manually, several hundred times across a range of lists and forms etc, whereas now we just enter it once, at the beginning, and then it just magically appears on everything in minutes; project directories, certificates, invoices, etc.

- It has hugely improved the availability of knowledge about how we're operating and performing. As we're in a relentlessly competitive market it's not getting any easier, so it helps that directors can now interrogate live data on their projects in just a few seconds.

- Thirdly, it is the open and extensible nature of Union Square which, for instance, can support a wide range of financial reporting processes and preferences - for us it meant we could continue to use styles of reporting and charting that the Board were already familiar with, and not upset the apple cart unnecessarily. It would be pretty hard to say that something we had a genuine need for couldn't be achieved through Union Square one way or another in terms of reporting, compared to products that have a closed and more limited feature set where you're dependent on their own specific development of things which only they choose to add to the product.

www.rhpartnership.co.uk

rhp

The Winner Takes It All

When it comes to disputes, being able to access information is critical. Document management systems can help mitigate risks and protect your long-term business interests.

David-John Gibbs

Stuart Wilks

Construction consulting is Hill International's core business. Global market leaders in both project management and construction dispute resolution; they approach construction projects with an in-depth knowledge of the process and difficulties encountered in construction. Hill's solutions are designed to avoid and manage challenges and problems. In the UK, Hill's project management and dispute resolution services have included projects as diverse as Wembley Stadium, the Channel Tunnel Rail Link, as well as power, housing, hotel and highways projects. For more information see www.hillintl.com

HILL
Hill International

As consultants, Hill International work on projects of varying size and scale around the world, from kitchens in London to power stations in Finland. We're often appointed late in a project to help manage documents and examine records in resolution of disputes or managing projects.

Back in 1999 such work involved sitting in a dark and dusty room looking through lever arch files trying to find project records to support our analysis. These days the growth in email and electronic transmissions has led to a significant increase in information, both electronic and paper. Although more information can be useful, in many ways it can aggravate the challenge of identifying suitable project records.

Keith Pickavance, in his work *'Delay & Disruption in Construction Contracts'* notes it's "not uncommon for a large project to produce initially, say, four million pages of documents... of which in turn only 5,000 are critical". A 2010 CIOB survey found only 53% of respondents had experience of managing records in a structured electronic format.

The effects of this for recovering useful documents to support claims or manage projects are obvious. The financial costs of resulting legal battles are significant.

These statistics are also consistent with our work. A recent dispute required the careful examination of c.80,000 emails, all of which needed to be searched, taken from a raw format and placed into a database. In the USA, the case of William A Gross -v- American Manufacturers Mutual saw project managers struggling to identify project emails. The court said this, "left the Court in the uncomfortable position of having to craft a keyword search methodology for the parties,

without adequate information". Another reported case saw unrecoverable costs of £1.8m resulting from poor information disclosure.

When going to court or any form of dispute or resolution process, the key is to prove cause and effect. The phrase commonly used is, "he who asserts must prove". It's important to have objective evidence that can identify the cause of delay, disruption, loss or expense.

In such scenarios, you must prove:

1. Existence of a compensable event (this will require you to read the contract)

2. Loss and expense suffered (if no loss or delay exists there can be no compensation or extension)

"Another reported case saw unrecoverable costs of £1.8m resulting from poor information disclosure"

Hill International provided support on the Channel Tunnel Rail Link and St Pancras Chambers
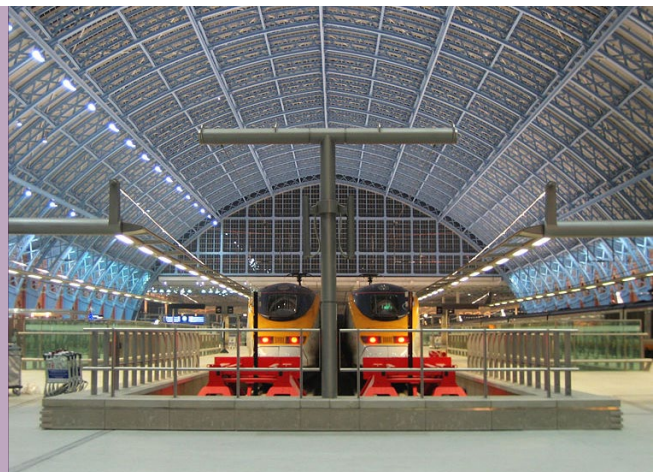
3. Causal link (the event must directly cause the loss)

To aid this, good project records and their careful management can be crucial to the result. If appropriate records exist, albeit in an unstructured format, the cost of searching them can be high. Solicitors and consultants will often spend lengthy periods searching and classifying documents, with hourly rates from £150-£800. If only unstructured records exist, more time is needed to assess these documents and the cost is higher.

This can result in colossal litigation costs. For example, the legal costs alone for a dispute on Wembley were over £10m for the winning party. By going to court and winning they still lost over £2m.

In the worst case a 'global claim' may be presented. Records must still support a global claim; however, a global claim normally occurs when project records are inadequate or unmanaged. Under this approach records are 'rolled up' to show the overall impact on the project. This approach is not favoured by the courts as it does not show causal link or identify the individual event that has caused the loss.

To try to avoid such situations, structured records should be:

1. Broken down into standardised groups

2. Easy to identify

3. Easy to retrieve

"DMS's are not just for BIM they can help to coordinate project documentation."

In the UK, the Government is trying to improve the efficiency of the construction industry which will hopefully minimise the likelihood and severity of disputes. To achieve this, the Government has actively encouraged better information and process management through the Government Construction Strategy and Construction 2025. One of the strategy objectives aimed to bring about this positive change is Building Information Modelling (BIM).

BIM, in its simplest form, is the process of sharing information throughout the lifecycle of a built asset. The UK Government has mandated a minimum of "Level 2" BIM on all centrally procured projects by 2016. At the heart of "Level 2" is a 3D model, created using "smart objects". Each smart object contains information, such as the object's properties, and can be linked to other forms of documentation to create multiple dimensions. This could include the construction programme (4D), cost data (5D) and facilities management information (6D); however these are not compulsory under the 2016 mandate.

Within a "Level 2" environment each project team member creates their individual "information model" and these can be brought together to create a "federated model". With all the linked and embedded information, a mass of data can exist in a "Level 2" environment. This requires management and specifications such as PAS 1192-2:2013 (capital/delivery phase) and PAS1192-3:2014 (operational phase) have been

published to support this. Both of these documents show the need for a Common Data Environment (CDE), which is defined as a "single source of information for any given project, used to collect, manage and disseminate all relevant approved project documents for multidisciplinary teams in a managed process." This can be enhanced using a Document Management System (DMS).
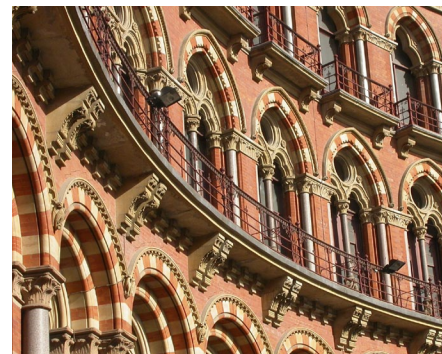
DMS's are not just for BIM, they can help coordinate project documentation. By having instant structured access to different file types, such as emails, that link automatically to their source and project in a searchable indexed database, valuable time and effort can be saved. From our experience in construction disputes it is hard to put information retrospectively into a DMS to make it useful. Instead, sophisticated litigation software exists to help manage documents previously created. Therefore, the best use of a DMS happens if it is carried out through the life of a project.

If used correctly, a DMS allows more effective data management for pro-active project control or retrospective analysis to assist with knowledge management or dispute resolution. Nevertheless, few disputes we've dealt with have involved a properly managed DMS, which may be testament to the successful use of such a tool.

"Email is the biggest Achilles heel for us and probably most businesses."

1. Who are Renew Holdings PLC?

Renew Holdings are a holding company – delivering engineering to the UK infrastructure. We provide integrated multi-disciplinary engineering services through our independently branded businesses, maintaining and developing UK infrastructure in the UK, environmental and infrastructure markets.

2. What is your role in the group and how do you support subsidiary companies?

I'm the group IT Director. We provide IT to all of the holding businesses centrally. We're a central service to a distributed delivery model. The Renew businesses are all over the country and they all have quite a high level of IT service requirements. So having a centralised IT in one place and just working off a helpdesk doesn't practically work for us. A lot of our businesses, AMCO being one of them, have a number of sites that we need to set up/commission and de-commission.

3. Who are AMCO and what do AMCO do?

Renew acquired AMCO in February 2011. There are two arms to AMCO; AMCO Rail are involved in all types of work in terms of the rail infrastructure from small maintenance through to larger projects, and there's AMCO Engineering who are involved in a number of different business streams – with energy and environmental infrastructure being the main areas.

4. Reflecting specifically on Union Square deployment, why did AMCO need to invest in Union Square?

When Renew bought AMCO, we inherited Union Square. The software was already on our radar and we identified that it could be an asset to the business.

The principal reason why AMCO needed to utilise the system was the ability it offers to collaborate; data can be shared and it offers document management and version control. In terms of how we deal with email and attachments it's one of the main reasons now why we are investing, along with archiving, back-ups and the use of workflow.

Email is the biggest Achilles heel for us and probably most businesses. Most of the third party tools that deal with managing email are effectively archiving tools. They're not really designed to get mail into some sort of business management system, which is key. Having a method by which we can start to integrate data that's centred around email into our business management system is important. Using a DMS means that we use a lot fewer emails, and as we start to open up to third parties this a key area for us moving forward. In terms of what Union Square is doing in the collaboration area going forward, the ability for us to be able to talk to third parties outside our organisation and to reduce the amount of documentation that we send out as an email attachment is absolutely key.

5. What key advice would you give when planning an implementation?

• Establishing a delivery team, a dedicated resource, is fundamental to the process as the right people need to be brought together to make it happen. Obvious though it sounds, it is key to have an individual who understands IT and the actual business as a whole, and who is able to get buy-in from senior people at the outset.

- It's important to have a good interface between the deliverers (ie Union Square system), and the actual business's needs and requirements. Focusing on the business needs is essential and the right resources have to be put in place.
- Training people to use the system is also key. Once the end users start to understand how a document management system actually works, then you start to encourage them to come away from the comfort zone of a file structure that they're used to. Getting them to understand how their day to day role must interact with the system is crucial.
- Policing the implementation is also necessary. Somebody needs to monitor its use so they can identify individuals who aren't using the system, who aren't publishing their emails into the system for instance. You need to keep the flow post-implementation and make sure people don't revert to their old ways.
- Bespoke Programming. In any software implementation you have to make sure the application is fully supported by the original provider. The beauty of Union Square in some respects is that if you can do a fair amount of bespoke programming within the system, but still remain true to the actual product itself so it's fully supported. Remaining fully within the support parameters of the provider is absolutely key.

6. What are the current technology challenges and opportunities that Renew are addressing?

The big issue is mobile applications, the process of entering and integrating a number of mobile applications into the business system. With snagging you can run it quite easily, but if you've got a remote workforce you can end up having as many as 6 or 7 disparate systems that aren't linked into your business system. This can cause issues in accurately managing your data and reporting. That will become more of a problem with the ease in which mobile apps are now available to individuals using their mobile phones, tablets or ipads etc. There are a number of clever businesses out there making quick hits. You've got to work out how you're going to address that.

With Union Square, we have the ability to start to look to integrate all of our remote applications into our core business management system. Potentially this will eliminate having a disparate number of systems, and provide a more integrated environment moving forward.

7. Looking forward, what do you foresee as the next big technology trend that will positively impact the industry?

4G, without a doubt. The 4G rollout is actually putting a different slant on how we look at remote applications. The big issue obviously is when we talk about remote applications, we tend to talk about offline apps. We have 'near time reporting' currently but with 4G we can potentially move towards 'real time reporting', which means you can start to use applications where you have got full connectivity, wherever you are. That is going to be the big difference and will enable the industry to do much more.

Union Square and AMCO are working closely together on a number of active initiatives, including mobile working and site to head-office information flows. The latency and cost of processing paper forms is significant and underpins the business case for investment.

www.renewholdings.plc.uk

renew

Union Square
Helping you make a difference

Since 2000, Union Square has supported over 40,000 licensed users in over 370 organisations to be more joined up in the way they manage information. Our contractor and sub-contractor clients include many leading tier 1 and 2 companies like VolkerWessels, Balfour Beatty and Severfield, through to strong SME regional construction brands. All these companies are led by innovators that are benefitting from the efficiencies of working with an integrated system across their work-winning, project delivery and business support functions.

Union Square is an integrated information management system, based around common industry processes. It is built on a powerful corporate database, and stores all information associated with the life cycle of your projects. From the first point of contact with a new client, to the eventual hand over and archiving of a project, Union Square supports your staff in all their day-to-day activities.

We think the core functionality in the Standard system is really important for any construction organisation. This is centred on process improvements in the management of your data, documents, drawings, emails and images. However, we also offer a number of specialist modules that can be bolted on to provide additional features as required. Whether it be managing requests for information, rating the performance of sub-contractors or running a targeted marketing campaign (as well as much more), it can all be incorporated into this one central system.

As a company focused 100% on the built environment, Union Square continues to review and develop the system to ensure it matches the changing demands of today's construction industry.

Key benefits

- Cost savings
- Improved efficiency
- Increased visibility
- Better consistency
- Smarter relationship management

How are clients supported?

At Union Square we invest a lot of time in perfecting our implementation process. With a dedicated project manager, fronting a team of technicians, trainers and system consultants, we have gained an unrivalled reputation for delivering projects on time and to budget.

Once up and running on the Union Square system, clients are fully supported by our problem-solving Support team on the helpdesk, who are just a phone call away. They also benefit from our continual investment in R&D with regular access to system upgrades.

It's important to know that you will be part of an active client community, contributing to product development initiatives and interest groups. Our client development function coordinates these sessions and holds regular one-on-one reviews to ensure the system is being utilised to its maximum potential.

How to Eat the Elephant!

5 key steps to consider to make your systems implementation project a success.

1 Take Stock

Understand where your business is at currently. What systems are actively being used for email management, document filing, marketing and contact management, drawing control, file sharing, project administration, HR, finance etc. How reliant are you still on paper in the office or for controlling site based operations?

Where are the key bottlenecks in your inter-departmental processes? How do your people feel about systems in use? How frustrated are they about admin chores and conforming to quality management processes?

Is your internet connectivity and the speed of your network good? Can you access information from head office when on-site or working from home? Do you use mobile or tablet technology? Is the use of this technology controlled?

At this stage, if your audit revealed information chaos and digital anarchy it may seem a huge and daunting task! Union Square can support this process (as required) by offering audit reviews and business discovery workshops.

2 Clear Goals

Consider your long term strategic plan, and shorter term operational objectives. Set objectives that are clear, concise and measurable, For example, in the next 3 months;

- Create a single database for the whole company to capture and reference business contacts, and organisational information
- Create a single workflow to capture data, emails, drawings and documentation across the entire enquiry to project lifecycle
- Deliver a standard filing structure across the business and operations that is consistent and re-enforces company quality management standards
- Deliver a single method for all staff to file emails and their attachments in a methodology that supports project sharing and easy retrieval
- Maintain a set of company standard templates that are version managed, controlled and accessible by operational staff when and where required

4 Lead by example

You are starting this process to move your business to a better place, to future proof your organisation in this new world of collaboration, mobile and digital working. This project is therefore strategic and should be owned by the business rather than IT. It should have board level sponsorship and your steering group should have key operational and regional representation. People you ask to support the process should see this as a valued and positive contribution to the direction you want to take the company in.

Change can be hard if you let it! As a business owner or director, you should be invested in the discussions and debates (without necessarily immersing yourself in the technical detail). Lead from the front, show a high level of advocacy for the positive benefits of change and your business will follow.

3 Clear brief

Capture your requirements in a brief that mirrors the objectives laid out in step 2. It should be aligned to your internal business case for investment. The brief should be concise and clearly detail your needs by operational area, departmental function etc, integration expectations, data migration (where required from existing systems), training needs, and ongoing support requirements.

Complete your due diligence on potential suppliers. Look at the ownership and financial stability of the business - will the business be around to support you in 3, 5, 7 years' time? Ensure you ask for 5-10 client references for clients in your sector who have implemented the system that you are looking to purchase.

If this step seems onerous, rest assured that Union Square can support this as well by providing a sample 'brief' template to use as a starting point for your review.

5 Go for it

Is there ever a good time to start a project like this? Project work is what we do and if we let it, it will dominate our short-term thinking and prevent us from ever starting to 'eat the elephant'. It genuinely isn't as difficult as you think, you can do it one mouthful at a time! Starting an initiative like this needs to be planned into your business schedule. To be successful, it needs to be budgeted for, resourced and well communicated.

As a proactive business you will develop a business case that ensures your best people are linked to the implementation project. You will plan for your steering group to continue beyond the duration of the project, looking at changing work patterns and new technologies. You will recognise the importance of digital information management and will incorporate formal responsibilities into your staff job roles.

Do the above and you will be well on the way to reaping the rewards of integrated working. Good luck!

"It was estimated that processing paper documents was costing the business between £300,000 and £400,000 each year."

Robert Stearne, Lakesmere

"The initial response from users has been great and despite our initial fears about adoption they have picked up use of the system very quickly, thanks to its intuitive interface and the clear training that was provided by Union Square."

Nick Goodson, BDB Design & Build

"Union Square ensures that employees are completely aware of our customers' needs and can make decisions based on reliable, up-to-date information".

Chris Barlow, Hochtief (UK) Construction

"Union Square won out due to its sophisticated document management system and the extensible development platform."

Melanie Nurse, VolkerWessels UK

UNION SQUARE
FOR CONSTRUCTION

"Since implementing Union Square we've gained ISO accreditation and won a number of industry awards which we feel the system has been instrumental in securing."

Claire Ball, Grimshaw

"With Union Square, we have a software partner that provides specialist systems for the construction industry and who understands the way that architects and engineers work."

Tim Partington, Chapman Taylor LLP

"If Union Square can save every member of staff 3 minutes a day, which is easily justified alone just by the improvements in document searching, then the new system will have paid for itself within the first year."

David Hills, RH Partnership

"Within the first five minutes is became clear that the system could deliver not just a CRM system, but everything else we need in terms of practice management."

Matthew Clare, Trident Building Consultancy

UNION SQUARE
FOR AEC PROFESSIONALS

There are a number of ways we can introduce you to the system in more detail, all of which you can request from our website:

- **Book a consultation** - we'll show you the system and talk you through the key benefits either online or at your offices.

- **Attend an event** - book a place at one of the many seminars we run throughout the year and learn more about the challenges facing your industry and how they can be addressed.

- **Request a callback** - we'll give you a ring to discuss your requirements in more detail and decide the best course of action for your business.

Contact us:

UK - Head Office
Telephone   +44 (0)115 985 0055
Website   www.unionsquaresoftware.com
Email   enquiries@unionsquaresoftware.com

Australia:
+61 2800 47470
www.unionsquaresoftware.com.au

Canada:
+1 778 800 9961
www.unionsquaresoftware.com

View our client videos   Read our case studies