

INSIGHT

Smart Airports: A DIGITAL OPPORTUNITY

Gaming enthusiast expands Waldeck's digital capability

Continued growth as Waldeck make plans for the future



Smart Airports: A Digital Opportunity

Air freight traffic volumes continue to surge and are forecast to triple over the next 20 years. As a result, the aviation industry must face the risk of capacity issues, and subsequently investment in infrastructure must gain pace to meet ever increasing demand, ensure safety and security, maximise efficiency and deliver added value for users and operators.

Many aviation facilities are outdated and in need of major renovations or expansions, requiring investment in terminals, runways, hangars and storage facilities to cope with heightened volumes.

To successfully deliver efficient aviation infrastructure, a number of key factors must be addressed, this includes:

AN INFORMED APPROACH TO SAFETY AND SECURITY

Security concerns are being addressed in the context of a desire for greater efficiency in passenger traffic flow, prompting airports to rethink how they lay out checkpoints and process passengers.

Typically airports focus on the safe transit and efficient management of the check-in to check-out processes, throughout the past 25 years airports have been designed to become 'agile' and have an adaptable design to suit a changing environment, applying simple and effective safety measures hinged around unconnected, isolated technologies and process driven social application.

Through the development of the Internet of Things (IoT) and sensor based technologies, airports have the opportunity to become securely connected and to accurately monitor and invigilate the transit of passengers or cargo throughout the whole facility. This enables strict process and procedure through automated systems which when aligned with human interaction ensures an informed approach to safety and security.

GROWING PRESSURE TO REDUCE COSTS AND IMPROVE OPERATIONAL EFFICIENCY

Increased demand for air travel means more passengers who require more amenities, more terminal space, larger waiting areas and wider corridors. Aligned with this, heightened requirement

for additional cargo storage and shipment creates the need for efficient logistics throughout the facility.

Airports 3.0 or 'Smart Airports' regularly exploit and combine emerging smart technologies and matured processes to deliver continuous efficiencies throughout a passenger or cargo's transit. This process is very similar to the way a human brain operates and is often referred to as a 'digital grid'.

ADDED VALUE

A change in trends means airports are seeing a shift in user requirements, the industry realises the added value of adopting Airports 3.0 processes to meet users transforming demands.

Waldeck realise the importance of this digital shift, offering smart airport solutions that target many customer segments, including passengers, retail and hospitality tenants, and logistics companies. An extended approach to user experience adds benefit to the end-to-end experience of all users and operators.

OUR APPROACH

Although the term 'Building Information Modelling' (BIM) has been recognised in the construction industry for over 10 years, many industries are now starting to see tangible evidence that the operation of complex facilities through use of operational digital models or 'Digital Twins' can offer significant whole life savings and reduced safety case.

The Airports 3.0 model aligns with international BIM mandates, allowing our clients to not only construct a facility efficiently, but for the information to be utilised beyond the construction programme for operational uses such as preventative maintenance, refurbishment or Operations and Maintenance (O&M).

BENEFITS

Through early stakeholder engagement and collaboration, Waldeck develop tangible solutions and digital efficiencies that future-proof long term gains for clients by delivering reduced Operational Expenditure (OPEX) that maximizes cost and operational certainty for the maintenance of built assets.



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Why is UK start-up ‘Improbable’ raising massive funding is important to us?

Improbable, a UK start-up that builds complex tech underpinning virtual reality worlds, has just raised a huge funding round in the real world.

‘Improbable’ recently announced it had closed a £390million Series B financing round led by Softbank, a Japanese conglomerate.

Herman Narula and Rob Whitehead launched Improbable in 2012, as a platform allowing companies to run complex simulations quickly and economically. The potential market is both diverse and significant.

Herman Narula shared in a recent article with Forbes: “Improbable is the logical next step of what we can do with machine learning and data analysis. Today it’s possible to look at patterns in the past, but if you want to ask about the future, whether it’s an economic policy, or building a road, or making any intervention into a system, you need to recreate systems in their entirety. We go from analysing data to recreating behaviour. Our simulation helps you understand how systems operate.”

Waldeck’s Digital Twin Solutions for heavy infrastructure and the construction of assets, is very much aligned to meet Improbable’s aspirations, but better still by setting up the smart data right from the strategic outset, into design and building of the physical assets, Waldeck have also developed retrospective data capture and analysis solutions too.

Recently, Waldeck have further expanded their in-house R&D team to support the firm in developing its machine learning capabilities. Craig Norman, Waldeck’s new Software Developer who will be responsible for the ground-up design of Waldeck’s software solutions to ensure we meet client’s exact requirements, rather than accepting out of the box solutions along with their many constraints and limitations.

Craig shared “As someone who has also worked in the gaming industry, I agree with Herman Narula’s vision; where games are heading to, is going to be significant for society and on a massive scale, with participatory worlds where people are having new experiences. We will soon see a seismic shift in how we interact with one another, how we experience the world, how we do business and how we learn.”

“It is a very exciting time to be joining Waldeck and like Improbable with their funders, to see the recognition Waldeck have gained from the UK government who are funding some of their R&D activities in these emerging, positively disruptive technologies and ways of working underlines how important these subject matters are to the future. I don’t see anyone else in the sector doing anything like what they have been doing already but importantly for me, it’s more about what they are aiming to do next with their smart digital twin and machine learning work.”



Continued growth as Waldeck make plans for the future

Waldeck has continued with year on year growth since the company was founded back in 1995.

As a result of our continued evolution, and involvement in major projects across the UK, our plans for the future are reflected in:

OUR INVESTMENT MADE ACROSS THE DIGITAL WORLD

In terms of Digital Twin Solutions, Building Information Modelling (BIM), Research and Development (R&D), hardware, software, people and training, Waldeck have remained ahead of the market for several years now; enabling us to deliver the best solutions for clients, whilst offering a stimulating and rewarding work environment for staff.

Paul Waldeck, Founder and Director, said: "With our progression and investment in R&D, we have been recognised for a number of national awards, with most recently being shortlisted for three categories in the New Civil Engineer TechFest awards, for our recently launched innovation, Digital Twin Solutions."

OUR COMMITMENT TO GRADUATE TRAINING

Following the success of our 2016 graduate intake, Waldeck are currently searching for our second cohort of top graduates to embark on the intensive 12-week training programme, with interviews taking place in July 2017.

Veronica Ruby, Associate Director, shared: "The 2016 Graduate Scheme was a real success with all six graduates completing the scheme and securing full time positions across our network of offices. I am enthusiastic that the 2017 scheme will see the same success, with a pool of fresh talent from graduates across Europe."

OUR ON-GOING RECRUITMENT PROGRAMME

As a business that is committed to encouraging professional and career development we are always looking for talented people to join the team.

Head of Resourcing, Debre Newbery said: "As we continue to work with blue-chip clients, on high profile projects that seek the highest level of strategy, process, procedure and multi-disciplinary design, we are constantly pushing our recruitment and resourcing to source the best of the best across the industry."

Paul Waldeck added "I am proud of our continued progression, and I'd like to thank our staff for their hard-work and dedication, which has seen us continue to present year on year growth and investment in R&D and I look forward to progressing our digital capabilities further."

THINK PIECE: Waldeck explore the use of drones in the construction industry





Drones are a thing of today and are very much part of the digital revolution the industry is experiencing and are beginning to play a significant role in the construction industry

Drones are a thing of today and very much part of the digital revolution the industry is experiencing. They are beginning to play an important role in the construction industry, with their ability to survey and monitor sites, whilst creating substantial cost-savings for clients'; redefining how we operate.

Unmanned Aerial Vehicles (UAVs) can map out the bigger picture from above to significantly improve safety and efficiency on a project, drones are leading the way to making sure construction projects are delivered efficiently and effectively across a projects lifecycle.

For the construction industry, drones offer many uses and benefits, which bring together traditional methods of surveying, Waldeck discuss what they believe to be the top five most important uses of drones in the industry:

SURVEYING

Machinery, expensive surveying tools and human resource are now a thing of the past, drones are now able to get the job done in a vastly reduced period of time, producing the same digital data which can be integrated seamlessly into 3D authoring and design processes, whilst saving money and valuable resources in the process.

Although digital is taking the construction industry forward, there will always be a place for traditional surveying methods, but having said that, embracing the latest drone technology, allows large and sometimes inaccessible site areas to be covered, keeping the project on schedule by speeding up the inspection and capture process.

INSPECTING STRUCTURES

Traditional structure inspections can be expensive and time consuming, but now with the ability to deploy drones to digitally capture the external condition of structures in high resolution imagery, clients can be part of the process without actually being there.

With time-saving being a huge priority for construction companies, utilising drones makes a real difference, providing evidence for time reductions on a project.

DATA CAPTURE AND ANALYSIS

A significant part of drone surveying is the data that is captured and how this can be leveraged by the project team and their clients.

Drones can capture data on-site to progressively collate, analyse and validate site construction which can be used to compare against the 3D design model, allowing measurement of compliance throughout the assets lifecycle, including:

- Design phase
- Construction phase
- Commissioning phase
- Operations and maintenance phase
- Decommissioning and demolition phase

This is achieved through the use of advanced digital technologies, such as; 3D Point Cloud, photogrammetry and Geographic Information Systems (GIS), drones outputs which can be displayed in real-time and also through offline sync.

HEALTH & SAFETY Surveying

In construction, meeting health and safety requirements are a top priority on site. Deploying drone based technology, a site can be captured

and monitored from a birds eye view, facilitating close surveillance and reaching those inaccessible areas, helping companies to ensure work is being carried out in compliance with health and safety regulations.

Site monitoring

In the situation of a dangerous site, for example; a nuclear power plant, drones can be used to survey an area, which prevents endangering human health in any way.

Drones can be used for consistent aerial site monitoring, ensuring the site is operating at the highest standard possible and maintaining a safe working environment.

Having the complete picture of the worksite and project progress at every stage is fundamental to running an efficient construction operation. Drone technology enables the efficient identification of site based issues, allowing resolution of issues to be determined before it can impact wider project activities, effectively DE risking the construction phase.

SHOWCASING ON SITE PROGRESS

An added perspective for our clients who simply don't have the time to visit site over and over again to view the progress of their project, drones are an innovative way to show clients on-site progress of a project, in a time frame and environment that works for them.

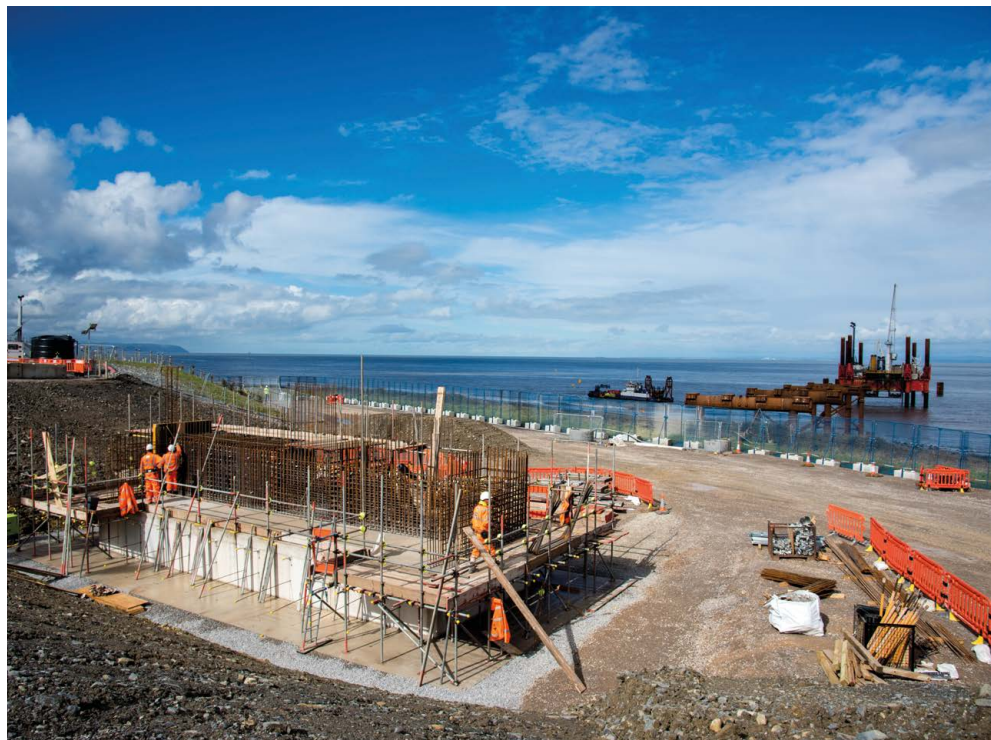
CONCLUSION

With this, Waldeck believe that drones are pivotal to the future of the construction industry. As part of our digital offering to clients', we will continue to evolve our UAV surveying capability, creating added value, cost savings and time efficiencies for existing and prospective client projects.



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We have been involved in the project for over four years now, and it's great to see the site taking shape.



Significant progress on site at Hinkley Point C



Contracts for The Hinkley Point C project were signed by the UK Government, EDF Energy and CGN back in September last year and since then work on the project has continued at pace.

Some three million cubic metres of earth have already been moved - more than 50% of the total that will eventually be excavated.

Paul Waldeck, Founder and Director at Waldeck, said: “We have been involved in the project for over four years now, as one of EDF Energy’s four framework engineering firms and we are delighted to see the significant progress being made by the team on site.

“The team currently working on the project have provided a valuable contribution, including embedded services within the client team such as strategic Building Information Modelling (BIM), civil and structural engineering, temporary works co-ordination, CDM advice and pre-construction planning.”

As the project continues to take shape, site progress, which involves a large number of other supply chain partners, includes:

- **Start of construction of a 500m temporary jetty on the Bristol Channel allowing 80% of the aggregate to be brought in by sea rather than by road**
- **Construction of a store for 57,000 tonnes of aggregate. Work will soon begin on the conveyor systems to carry the aggregate around the site**
- **Construction of the first two tower cranes. The larger of the two cranes is 40 metres high with a 60m jib and has a lifting capacity of 16 tonnes. More than 50 tower cranes will be on site once building work reaches its peak**
- **Work to build on-site accommodation buildings for more than 500 workers started in January**
- **Progress is being made on the sea wall which will provide a barrier between the power station and the coastline**
- **A spray batching plant has been built to produce a finer quality of concrete, which will be sprayed to secure slopes at the site**

As we continue to work with EDF Energy, our client team continues to grow, recently welcoming Nikolais Georgopoulou who was previously based at our Newark office and joined Waldeck as part of our Graduate Training Scheme and will now be embedded into our Client’s Digital Team as a Graduate Civil Engineer.

Project Example: Digital Dilapidation Survey

PROJECT BACKGROUND

Our client who are global leaders in logistics services have a commitment to providing high quality supply chain solutions, and owing to this, Waldeck were contracted to provide a digital dilapidation survey at one of their Warehouse and Distribution Sites.

The objective of this project was to digitally capture the condition of the existing warehouse on site, in order to address any maintenance requirements, establish the utilisation of each building and discover the potential to improve space efficiency.

The survey included the assessment of the external and internal structure of five existing buildings, totalling approximately 450,000sqft in area, as well as the external site layout.

CHALLENGES

The biggest challenge of the project was working on a live distribution site with hundreds of staff and moving vehicles, whilst ensuring there was little or no disruptions to the operations on-site. This was overcome by using the latest digital technology to capture the information required.

Waldeck's team of Digital Capture Specialists deployed a terrestrial digital camera through an Unmanned Aerial Vehicle (UAV) and an experienced Structural Engineer completed a traditional site inspection, whilst cataloging defects against photographs.

The UAV was able to digitally capture the entire external site from an altitude of 50m ensuring no disruption to vehicle movements. Inside the warehouse buildings, a terrestrial camera was used to capture 360 degree panoramas at key locations to provide a detailed visual record of each warehouse. Each 360 degree panorama took just 4 minutes to capture, and with the equipment easily mounted to a tripod, the Digital Capture team were able to quickly work around each building and ensure each key location was not in the path of any vehicles or staff movements, resulting in minimal disruptions to operations.

RESULTS

During the post-capture processing, any moving vehicles/ personnel were removed to ensure clean and high quality panoramas. The panoramas were then used to create a virtual tour of each building, with the ability to move around the space by using hot spots to jump between panoramas. As well as producing a traditional interactive defect report, within each panorama of the tours, defects were tagged at their precise location allowing the client to easily locate the issue. Included in the tag was a description of the defect as well as a close up photograph to ensure the client could clearly see the issue, even if obscured by objects within the panorama. Each tour also contained floor plans of the buildings showing the location of each panorama to further aid the client in navigating the tours and navigating through buildings.

Images captured via the UAV were processed by our Digital Capture team to produce a single high quality orthomosaic of the entire site. By utilising the latest UAV technology Waldeck were able to produce an orthomosaic with a ground sample distance (GSD) of 2.3cm/pixel. After processing, the orthomosaic was incorporated into each tour, allowing external site defects noted by the Structural Engineer to be incorporated as well as internal building defects.

BENEFITS

The development of our terrestrial Digital Capture and UAV solution allowed Waldeck to minimise disruption to a very busy site, creating a comprehensive digital dilapidation survey.

Waldeck provided the client with an immersive tour of their entire facility allowing the exact location of defects to be clearly identified within a contextual environment, along with the production of an overall description of the condition of the site.

This was delivered in a time and cost effective way, mitigating risk whilst on a live site, and ensuring minimum disruption to on-going operations.



Waldeck create digital detailed design for striking architectural ceilings at Farringdon Elizabeth line station

Striking new architectural ceilings, digitally designed by Waldeck, have now been installed at the new Elizabeth line station at Farringdon in London.

Waldeck were given the conceptual designs for the roof and were tasked with creating the detailed digital design.

The bespoke architectural pre-cast concrete ceiling, consisted of over 100 diamond-shaped concrete segments, which were pieced together on site to create a dramatic lattice roof.

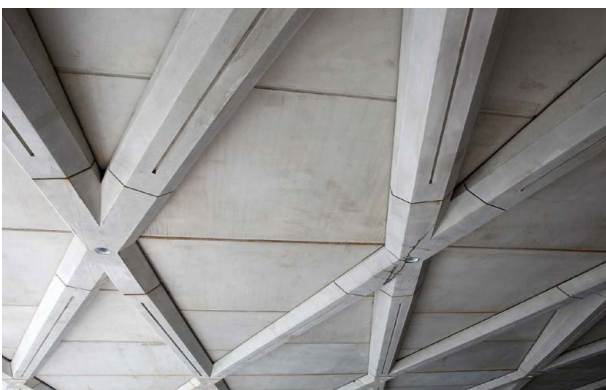
Crossrail has now completed the construction of the 25 metre ceiling, which weighs over 360 tonnes and is suspended above to create a memorable cathedral-like entrance which has been inspired by the historic Hatton Garden jewellery quarter located opposite the station.

Alison Doubell, Director at Waldeck, said: “Waldeck were involved from the very beginning of the project, progressing design works and working collaboratively with the rest of the design team, in order to finalise design details.

“Working in a digital 3D environment was essential to the success of this project, allowing the team to design the ceiling to meet the architects’ exact requirements and coordinate seamlessly with the steel frame from which the pre-cast beams are suspended.

Alison continued: “Using precast for this project allowed for faster installation and improved buildability, producing a high quality finish to the end result.”

When it opens in December 2018 the Elizabeth line will carry over 200 million passengers per year, adding 10% capacity to central London’s rail network. It will link London’s key employment, leisure and business districts – Heathrow, West End, the City and Canary Wharf, and encourage regeneration all the way across the capital.



Waldeck win refurbishment project on New York Bakery site

Waldeck have been contracted to deliver digital design consultancy services on a refurbishment project for international food manufacturer, The New York Bakery Company, who are now owned and run by Grupo Bimbo.

Working with London and Midlands-based contractors, Shaylor Group, the refurbishment of the Yorkshire based facility consists of:

- New associate entrance at ground floor level
- New male and female associate changing, WC and shower facilities
- New ground floor changing to production transition area with boot change and clean facilities
- New second floor associate rest room facility

Waldeck will provide market-leading architectural and structural engineering services for the project.

Andrew Dent, Director at Waldeck, said: “We have worked in close collaboration with New York Bakery and Shaylor Group and are delighted to be part of this project and look forward to continuing our working partnership further.”

Andrew went on to discuss the teams’ services: “Works will include the preparation of digital construction drawings, including plan layouts and ceiling plans, along with the production of digital structural drawings and specifications for the new mezzanine.”

Shaylor Group Director Adrian Adams commented “It is always enjoyable working with like-minded teams in an environment of positive engagement. Shaylor Group and Waldeck share a collaborative approach which will ensure delivery of a truly outstanding project for New York Bakery.”

The New York Bakery Company was started by a baker, who had a passion for food and wanted to share the great taste of a true New York bagel, he started the New York Bakery Company in the 1990’s in Rotherham.

Our female engineers promote a career in the industry on International Women in Engineering Day



Waldeck celebrated International Women in Engineering Day (INWED) which took place on Friday 23rd June.

This national, and now international, awareness day focuses attention on the amazing careers in engineering and technical roles for women, and allows us to celebrate the achievements of our outstanding women engineers across the globe.

Engineering continues to be a male dominated profession despite real prospects for women and with only 9% of women taking up careers in engineering, we spoke to some of our female engineers to discuss their experiences and what the industry can do to create a more diverse working environment.

THE FEMALE ENGINEERS INCLUDE:

Veronica Ruby

Associate Director and Lead BIM Consultant (VR)

Sakina Elbadawi

Graduate Structural Engineer (SE)

Rachel Shaw

Senior Electrical and Lighting Design Engineer (RS)

Paulina Makowska

Assistant Civil Engineer (PM)

TELL ME ABOUT YOUR JOB ROLE

VR: I lead the development of the BIM Strategy and its delivery across all Waldeck offices, working in collaboration with key stakeholders across the business supporting the implementation of the strategy, company standards, workflows and procedures. I am also directly responsible for the Research & Development (R&D) activities across the business, including the innovative use of technologies and their advanced development.

I also lead the Waldeck Strategic Training/Requirements across the business, developing new training techniques within the business to ensure we have a developmental training schedule which meets the business objectives.

SE: As a Graduate Structural Engineer, I have been involved in the design of the construction elements, steel, concrete and masonry for a diverse range of projects from residential to commercial, across many different sectors.

RS: I'm a Senior Electrical Engineer responsible for the electrical services design of a number of residential and commercial buildings. My role is client facing and I work hard to build up good relationships with the projects clients, the design teams and the construction teams to ensure I can carry out my duties well. I carry out site visits / surveys, attend meetings, prepare drawings, models, calculations, specifications and reports for the various design/construction stages of a project and for various electrical services.

PM: As a Civil Engineer, my job role is to design and calculate structures that meet the needs of our clients. I am involved in working on the projects from conception, through design process, to construction and beyond. My job involves working on projects across Waldeck's key sectors such as Buildings and Development, Logistics and Transportation and Manufacturing and Technology.

WHY DID YOU CHOOSE AN ENGINEERING CAREER PATH?

VR: Leaving school, I was never 100% clear with what I wanted to do. I always had an interest in design and took Product Design as a subject in Sixth Form, enjoying the evolution of creating something from concept to making the final piece.

Not having the desire to continue my education into University after leaving Sixth Form I was looking for work which had career prospects and most importantly I found of interest. I applied to Waldeck to become a trainee draughtswoman and have since developed my career at the company over the past 15 years, undertaking a variety of roles and building on my design skills.

RS: I worked in the administration team of a building services consultancy after leaving school which was the first experience I'd had within the construction industry. I quickly realised that a career as an electrical engineer was the path I wanted to take.

PM: I always loved the idea of helping to solve some of the world's problems like providing clean drinking water and always had in my mind the consideration of the environment.

I chose to be an engineer, because the job has got a significant impact on creating economic growth and it makes the world a more sustainable place.

WHAT ARE YOUR CAREER HIGHLIGHTS SO FAR?

VR: Obtaining an MSc degree in Building Information Modelling Management at Middlesex University, which was funded by Waldeck and was the UK's first work-based Masters with a BIM focus.

SE: My career highlights are being given the opportunity to be involved in providing technically brilliant and safe solutions to engineering problems, whilst learning and evolving into an all rounded engineer.

RS: I am currently studying for an MSc degree in Light and Lighting, funded by Waldeck, which is a significant part of my career so far and will continue to provide me with career satisfaction and further development.

WHAT DO YOU THINK THE INDUSTRY COULD DO TO PROMOTE A MORE DIVERSE WORKING ENVIRONMENT?

VR: As women working in the engineering industry, it's up to us to promote engineering as an attractive career to pupils in schools and colleges, hopefully giving young women the information they

need to imagine themselves having a career in the industry.

SE: It would be great to involve young women in engineering workshops in school and apprentices and generally portraying engineering as an attractive career path for women.

RS: I think that an 'engineer' role isn't a career that many people will see and know about unless a family member is involved in construction. More information on careers in engineering should be made easily available to bridge this gap
PM: Being an extremely male-dominated industry, it would be great to hear more success stories of women engineers, encouraging and promoting that engineering isn't just for men.

WHERE DO YOU SEE YOURSELF IN THE NEXT FIVE YEARS?

VR: Continuing to further my expertise in and around the digital environment, creating innovative modelling solutions that deliver significant benefits, not only at the design and construction stage but through the lifetime of the built asset.

RS: I'm currently completing my MSc in Light and Lighting which will help towards me achieving Chartered status. My aim is to be a full member of the Chartered Institute of Building Services and receive Chartered Engineer status with the Engineering Council.

WHAT ADVICE CAN YOU OFFER TO WOMEN WHO WOULD LIKE TO PURSUE A CAREER IN ENGINEERING?

VR: Don't be discouraged by a male dominated industry. Engineering is a diverse area to work in and with technology changing the way the industry operates it is an exciting time to be a part of the industry.

Furthermore and from my own personal experience, I have been given the support I needed to develop and flourish and thus progress within the industry and the company.

RS: My advice is more to women who are currently pursuing a career in engineering, we need to create more female role models in engineering, who are ambassadors for the industry. I feel there's a lack of these and I think that if there were more present, young women are more likely to consider a career path in this industry.

Paul Waldeck, Founder and Director, said: "At Waldeck we encourage a diverse working environment, with over 20% of our workforce being female, working across many different roles, including directors, engineers, technicians and support services.

"I think International Women in Engineering Day is a great way to support the industry in promoting a more diverse working environment showcasing an attractive career path for young women.

"For me, I believe engineering is one of the most diverse, exciting and challenging industries to work in, as 'digital' engineers we are always looking for new ways of doing things and developing creative solutions to modern day problems and in turn creating a better way of living for us all."



INTERNATIONAL WOMEN
In ENGINEERING DAY

23 June 2017

Gaming enthusiast expands Waldeck's digital capability

Software Developer, Craig Norman will be developing bespoke software solutions to further enhance Waldeck's in-house digital offering.

Craig, who joined Waldeck's Innovative Digital Technology Team in May, has provided the team with cross industry disruptive perspectives to enable next level development of software solutions utilised to enhance BIM deliverables, further adding to Waldeck's reputation of innovation and our deployment of cutting edge technologies.

After completing a National Diploma in IT for Software Practitioners, Craig then went on to completing a BSc in Computer Games Production to further broaden his knowledge.

Craig Norman, Software Developer, said: "The games industry is the front runner in pushing forward technology across all sectors. Adopting these technologies requires the kind of forward thinking I wanted to be involved in, so I decided when I was in my late teens that the hobby I'd been a part of since I can remember, should also become a part of my career.

"Starting my career in the gaming industry as a tester straight from University gave me a keen eye for problem identification and solving. Since starting at Waldeck, I quickly became immersed in software development. I have been able to apply my knowledge and enthusiasm and have worked closely with the R&D team to create a number of opportunities for the company to begin producing its first Waldeck application suite."

Mark Greatrix, Associate Director, who also heads up our Innovative Digital Technology Team, said: "Craig is a real asset to our team, and with his experience in the gaming industry, it is interesting to see a cross over from the virtual gaming world to real-life construction projects through our cutting-edge BIM models.

"A key advantage of having Craig within the team is that as we strive for innovative solutions to meet clients exacting demands, we are not constrained by out of the box and off the shelf solutions. This has proven to be of huge benefit to our clients when specifying deliverables and interfaces with their existing I.T. landscape."

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... since starting at Waldeck, I have been able to apply my knowledge and enthusiasm, working closely with the R&D team to create a number of opportunities for the company to begin producing its first Waldeck application suite.

Waldeck welcome new Finance Director

Experienced Finance Director, Peter Williams, has joined the Waldeck team, based at our Head Office, to assist the company with its next phase of growth.

Peter, who is a qualified Chartered Accountant brings to Waldeck over 20 years' first class experience in industry, specialising in leading finance functions and delivering high growth for both private companies and PLC's.

With his strong entrepreneurial drive and people skills, Peter has led and developed teams to success, whilst building productive relationships with colleagues, investors, banks, professional advisers and other stakeholders. Peter has been involved with Merger & Acquisition and also has taken a previous company to AIM listing.

Paul Waldeck, Founder and Director, said: "Peter joins Waldeck at a time of significant growth for the business and at a time when the company has recently secured a number of significant programs of work in the heavy infrastructure markets."

Peter Williams, Finance Director, said: "I am delighted to join Waldeck at such a significant time for the company and I am excited to take on a new challenge, helping to take the company to the next level."



New Operations Director joins the Waldeck team

Civil Engineer, Steve Hall joined our multi-disciplinary team in Newark in June, taking on the role as Operations Director.

With over 30 years' experience working in the construction industry, Steve has spent his career working within engineering design offices of public and private sector, consultancy and contractor organisations.

Starting his career as a trainee engineer for Lincolnshire County Council, over the years Steve has seen himself work his way up with different organisations, progressing to Design Manager then up to Operations Director and Managing Director.

Steve Hall, Operations Director, said: "Despite my increasing management responsibilities, I remain very much a hands-on engineer."

Over the years', Steve has had the opportunity to work on a number of exciting projects, including the

2012 Olympics and the new American Embassy in London and has more recently managed a multi-disciplinary design team for the new Transport Hub in Lincoln.

Paul Waldeck, Founder and Director, said: "Steve is a highly experienced engineer and he will be real asset to the Waldeck team. His experience spans across project management, highway and drainage design and delivery, constructions logistics and strategic and operational management, across many sectors.

"We are driving forward a digital change and it is my pleasure to welcome Steve to the team at such a significant time."

Steve added: "I am delighted to have been given the opportunity to join Waldeck at such a significant time of growth, the company are leading the way in driving forward digital based solutions in the construction industry, and I am excited to be a part of this revolution."

Young star reinforces Waldeck's reputation as world-class business

Young star, Sophie Harwood, based in the company's Head Office in Sleaford, has picked up 'Young Health and Safety Champion of the Year' at the 2017 British Safety Council International Safety Awards, reinforcing Waldeck's position as a world-class business.

Hosting the event for the Council's 60th Anniversary was Sports Broadcaster, Gabby Logan, who presented Sophie with her award on the evening of the 5th May at the Grosvenor House Hotel in London.

Paul Waldeck, Founder and Director at Waldeck said: "As we continue to work with world-class clients who demand the highest of standards across health and safety, security and quality, it is great to see our position as top of class, reinforced and recognised through this international award.

"Sophie is an example of our values and through her proactive approach and commitment to health and safety, she has implemented new and innovative initiatives across the business which have seen her win this international award."

Sophie Harwood, UAV Specialist and Junior BIM Technician, said: "As a young girl from a small village just outside Sleaford, I feel extremely lucky to have had such an amazing opportunity, to not only work for Waldeck on a number of exciting projects, working with top clients such as EDF, but also being recognised internationally as the 'Young Health and Safety Champion of the Year' for 2017, I am absolutely speechless."

Sophie, who has been with Waldeck since 2014 when she joined as part of our Academy intake, showed a keen interest in health and safety from the get go, and is now the Healthy and Safety (H&S) representative within the Sleaford office, but also an ambassador for the rest of the company.

These awards were introduced to recognise individuals who, through their passion, commitment and dedication, have helped make a difference by keeping their colleagues and others healthy and safe.



New Civil Engineer

TechFest.

Awards

FESTIVAL OF INNOVATION AND TECHNOLOGY 2017

FINALIST

Waldeck shortlisted for New Civil Engineer TechFest Awards

Waldeck are pleased to announce that we have been shortlisted for the New Civil Engineer TechFest Awards under three categories.

Shortlisted for 'Designer of the Year', 'Research Team of the Year' and 'Innovation of the Year: Digitalisation', Waldeck will attend the awards ceremony on 14th September 2017 at Hilton Bankside, London where the winners will be announced.

Paul Waldeck, Founder and Director, said: "Waldeck are delighted to have been shortlisted for the New Civil Engineer TechFest awards, which showcase the best technology-led innovations that are driving civil engineering forward.

"We have invested a lot into R&D over several years now and as a company we are continually working collaboratively to find better and more efficient ways of doing things and being shortlisted for these three award categories just emphasises the hard-work the team put in to drive forward our new ways of working."

DESIGNER OF THE YEAR

It is an exciting time for Waldeck and our client base has continued to grow to include more major blue-chip companies, through the successful delivery of some of the most iconic and nationally important capital projects undertaken in recent years

Solutions', which combines our experience as market leaders in the field of Building Information Modelling (BIM) and digital strategy, with the continued technology advances in the industry.

RESEARCH TEAM OF THE YEAR

Through our investment in Research and Development (R&D), we have recently launched an integrated approach to enhance the lifecycle of construction projects, called 'Digital Twin Solutions', which combines our experience as market leaders in the field of Building Information Modelling (BIM) and digital strategy, with the continued technology advances in the industry.

INNOVATION OF THE YEAR: DIGITALISATION

Our 'Live' Construction Surveillance to BIM solution, which enables the digital comparison of a live asset during construction against the client's 3D design model, has been shortlisted for this award category. This solution uses a blend of specialist hardware and software, such as enhanced aerial drones, photogrammetry and laser scanning.

The awards are set to showcase 2017's leaders in innovation and technology.

Waldeck awarded highest four-star rating for Achilles RISQS

Waldeck continue as a pre-qualified supplier under Achilles' Railway Industry Supplier Qualification Scheme (RISQS) following an audit through which the company received a four-star rating.

The four-star rating is the highest achievable rating for the work categories under the scheme and demonstrates our commitment to improving our management systems.

The audit process reviews the company's business management procedures in several areas, including:

- Quality
- Environment
- Health
- Sustainability and Corporate Social Responsibility (CSR)
- Safety
- Carbon Management

The audit service is the GB rail industry audit programme that pre-qualifies suppliers to work in the industry, which enables suppliers to demonstrate compliance against industry wide requirements.

Warren Monks, Head of SHEQ, said: "Following the implementation of our Health and Safety First committee and the execution of new initiatives throughout the business, we are delighted to receive the 4 star rating for the Achilles RISQS audit.

"Our successful RISQS audit allowed us to demonstrate our capability in order to meet regulatory and rail industry requirements and will continue to open up new and exciting opportunities for the company."



Sheffield engineer awarded Masters' qualification

Luke Mitchell based in our Sheffield has successfully completed his Masters' degree in Building Services Engineering gaining an overall distinction.

The course, developed by Leeds Beckett University was spread over two years distant learning and included the following modules:

- Project Management
- Building Energy Management Systems (BEMS)
- Building Information Modelling (BIM)
- Sustainable Buildings
- Sustainable Systems Design
- Engineering Portfolio Development

As part of the course, Luke completed a 15,000 word research project, questioned 'Can an Optimised Systematic Work-flow of a Calibrated Energy Model Reduce a Non-Domestic Building's Energy Performance Gap?', which has been nominated for the Leeds Beckett University President's Award.

Andy Inkson, Sheffield Business Unit Director, said: "I would like to congratulate Luke for completing his Masters, he is a real asset to not only the team in Sheffield but the Waldeck team as a whole and I am delighted to see he has been rewarded for his efforts."

Luke Mitchell, Mechanical Engineer and Project BIM Manager, said: "During my degree I learnt a variety of new skills and methods that will improve my day to day role, and the solutions I am able to provide to clients.

"I am thrilled to have finished my Masters' degree and start putting what I have learnt into practice in a working environment."



Paul Waldeck to deliver keynote speech at UK- China Digital Construction Workshop

Through ongoing collaboration with the University of Huddersfield, Paul Waldeck has been invited to deliver a keynote speech at the UK - China Digital Construction Workshop.

Paul will deliver an hour-long presentation on Smart Information Management (SIM), which will focus on the company's vision and its strategy-based digital capability.

The workshop has been developed in collaboration with Tsinghua University, China, and the theme is the integration of data, information and knowledge in the lifecycle of a building or infrastructure facility.

With digital set to be the future of the construction industry, the workshop will focus on the demonstration of the capabilities of various digital technologies to enable sophisticated and integrated design, improvement of construction productivity and safety in both countries.

TOPICS OF INTEREST INCLUDE, BUT NOT LIMITED TO:

- Advanced Building Information Modelling (BIM)
- Virtual Reality (VR) and Mixed Reality (MR)
- Data Sensing

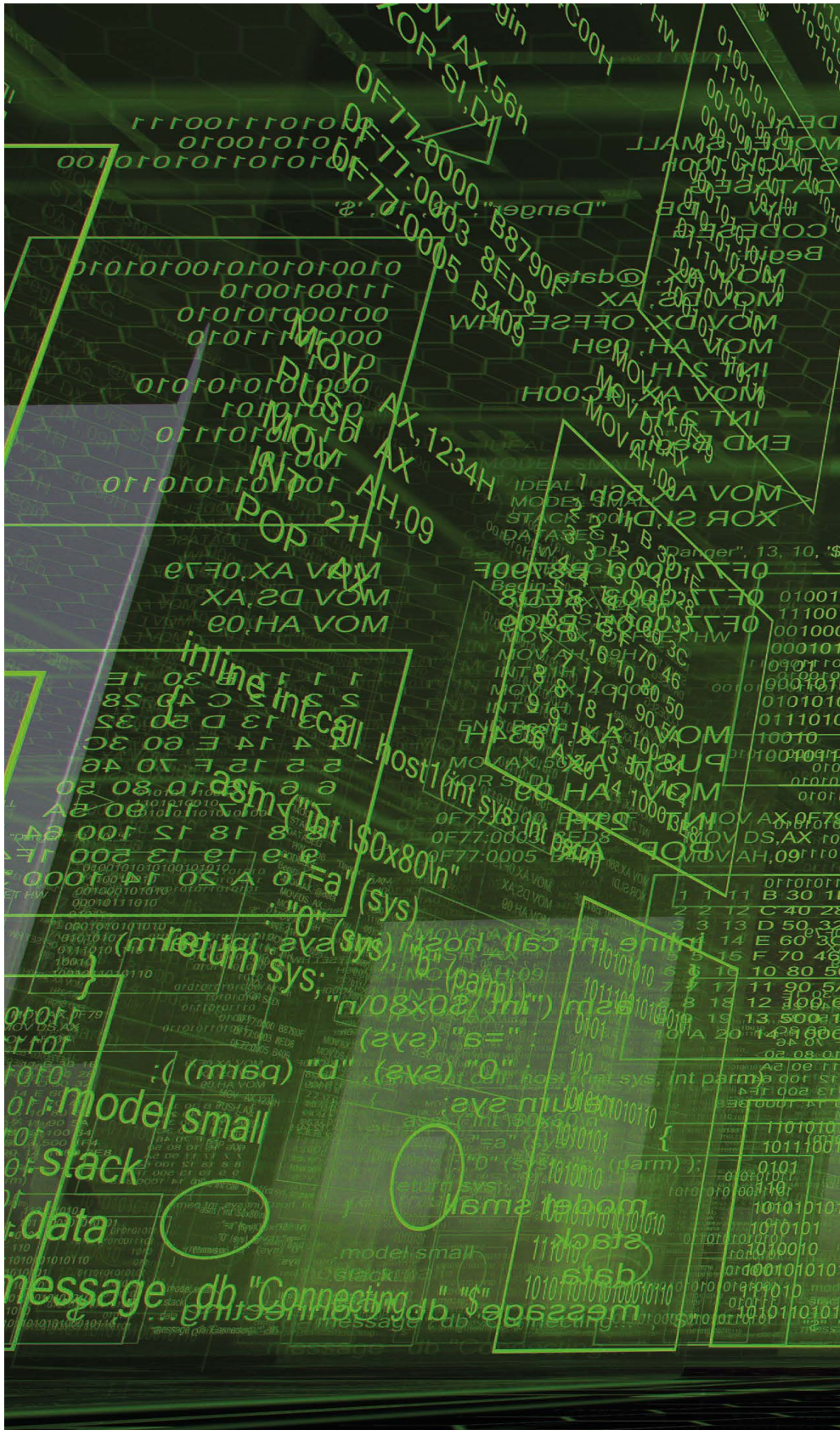
Paul Waldeck, Founder and Director at Waldeck Consulting, said: "I am honoured to have been given this invaluable opportunity, where I am able to share our knowledge and experience in the world of digital, but also hear insights from international experts as well."

"We have been working closely with the University of Huddersfield for some time now, developing digital based solutions for our clients, and this opportunity will look to establish further collaboration, not only with the University of Huddersfield, but also look to develop relationships between the two countries, exploring the challenges, both in research and in industrial practices."

Other keynotes include; Li Yuegui, China State Construction, Professor Zhiliang Ma, Tsinghua University, Professor Nash Dawood, Teeside University.

The workshop will be spread over two days, 17 – 18 July and will take place at the University of Huddersfield.





GENERAL ENQUIRIES

Contact: Charlotte Watson
enquiries@waldeckconsulting.com
Telephone: 08450 990285

DIGITAL TWIN SOLUTIONS ENQUIRIES

Contact: Paul Waldeck
paul.waldeck@waldeckconsulting.com
Telephone: 08450 990285

SALES ENQUIRIES / PR & MEDIA

Contact: Hannah Wharton
hannah.wharton@waldeckconsulting.com
Telephone: 01529 298055

CAREER OPPORTUNITIES

Contact: Becky Hicks
becky.hicks@waldeckconsulting.com
Telephone: 08450 990285

www.waldeckconsulting.com