



COMPANY

WYG

LOCATION

Across the UK and the developing world

SOFTWARE

Autodesk® AutoCAD®
 Autodesk® Civil 3D®
 Autodesk® Ecotect®
 Autodesk® Flow Design
 Autodesk® Revit® Structure
 Autodesk® Revit® Architecture
 Autodesk® Revit® MEP
 Autodesk® 3ds Max®
 Autodesk® Infracore® 360
 Autodesk® Infrastructure Design Suite
 Autodesk® Navisworks® Manage
 Autodesk® Showcase®
 Autodesk® Sketchbook® Designer
 Autodesk® Vehicle Tracking

“Implementing BIM and digital workflows has allowed us to stay competitive and it allows us to offer the best service to clients. We’re now able to win more tenders and offer a better, more engaging service that our clients want. We wouldn’t be winning the work we’re winning now if we hadn’t embraced BIM and technology in this way.”

– **Johnathan Munkley**
 BIM Director
 WYG

Harnessing technology to be competitive

WYG is embracing BIM to win industry awards and beat the competition



The winning proposal for Build New York Live produced from a blank sheet of paper to this in 48 hours. © WYG

Introduction

A global programme, project management and technical consultancy, WYG manages a range of multidisciplinary projects from over 20 offices across the UK. The company works in industries spanning Defence and Justice, Energy and Water, Environment, Mining and Metals, Transport, Social Development and Infrastructure, and Urban and Commercial Development.

Outside the UK, WYG is a leader in international development, exporting knowledge and networks to undertake ambitious projects that make an impact on infrastructure, socio-economic growth, and the environment.

The challenge

Since 2006 WYG has been committed to implementing digital technology, BIM and more recently BIM level 2 processes throughout the entire group, in order both to comply with the UK BIM mandate and to empower the business to operate more efficiently and make better-informed decisions.

WYG has spent a significant amount of time mapping data flows between the various disciplines and workstreams within those disciplines. For example, what type of a data does a Quantity Surveyor receive, what do they do to it, and how do they present that data to the industry? This has allowed the business to understand where inefficiencies exist within staff’s daily workflows. This process has also allowed WYG to select the right tools for the right people and understand how they interact with one another.

Collaboration is the key to the future and ongoing success of the business so the introduction of a standard set of tools spanning the entire business will allow teams to work together efficiently and effectively. The mapping process mentioned previously allowed WYG to demonstrate how data can flow between the various technologies that the business employs. The intention was to show how disciplines can work more closely together, removing historical data barriers and culture, which can be a common problem for a business growing through acquisitions.

AutoCAD® and CAD workflows have played a part in WYG since 1988. The company then introduced Autodesk® Revit® in 2006. Therefore its standards, templates and workflow were based around Autodesk products. While the industry is moving towards an Industry Foundation Class (IFC) based open data workflow, Autodesk products will still form the backbone of WYG’s IT infrastructure with IFC forming a method for collaboration and a key handover deliverable.

Investing in the right design tools

WYG has used AutoCAD since 1998 but the company decided to introduce Revit within its engineering discipline in 2006 as it was seen as the best way to produce drawings efficiently. The data driven use of Revit is now standard across WYG’s design teams with the use of Autodesk® workflows using tools such as Infracore 360 becoming more commonplace. While initially the business met some resistance when it introduced new tools, WYG trains up particular individuals in each office to



Using Autodesk's industry leading products help set us apart from the competition which enables us to recruit and retain the best talent in the industry.

champion the new product and help their teams get to grips with and get the most from these new tools.

As a business working on projects during early conceptual phases that can have vast sites WYG recently purchased Infracore 360 which the firm is implementing as an optioneering tool across various disciplines within the business. It allows the design teams to visually understand the impact of projects at city scale level. The tool also enables WYG staff to utilise open source GIS and mapping data to help clients build and understand the bigger picture and successfully communicate with stakeholders. The company's design teams are now looking at sites with the use of Infracore 360 models being a key workflow. They are moving away from more traditional practises. This is a completely different method of thinking but "our clients love the ability to present conceptual building options and infrastructure level projects using iPads", says Henry Fenby Taylor – BIM Implementation Manager, Major projects, WYG.

While they have had to factor in downtime for training teams up on the new tools, WYG understands that it is vital that its employees understand what can be achieved with this technology.

"We are recently seeing a shift in that BIM is being compartmentalised as the data management process on projects and there's a whole new world of the technology enabled built environment that is inspiring our staff to work in new ways", Johnathan Munkley, Director of BIM, WYG, comments.

Reaping the benefits of BIM

Using Autodesk products to build a compliant IT infrastructure and implement BIM level 2 processes has allowed all of WYG's disciplines to operate on the leading edge of technology and process within the built environment. The BIM leadership team within the UK is working closely with clients such as the Ministry of Justice, Defence infrastructure Organisation and Public Health England to establish BIM level 2 and technology driven projects that will bring savings and drive the construction 2025 objectives.

Johnathan Munkley continues: "Implementing BIM and digital workflows has allowed us to stay competitive and it allows us to offer the best service to clients. We're now able to win more tenders and offer a better, more engaging service that our clients want. We wouldn't be winning the work we're winning now if we hadn't embraced BIM and technology in this way".

Putting the business to the test

To demonstrate the power of collaboration using the latest technology, WYG entered a team into Build New York Live; a 48 hour virtual design competition. The intention was to show how data can flow between different systems and the

benefits that brings to WYG stakeholders. 16 different disciplines of around 45 WYG staff took part in the competition. Each team was tasked with responding to a design brief for a site in New York. After 48 hours each team had to deliver a complete coordinate building and facility management package. They had to complete a working construction package and consider the maintenance and redevelopment of the proposal using Autodesk products, allowing the data to flow between the team members located across various WYG sites within the UK using the new rolled out virtualised desktops system significantly increased the teams ability to collaborate across the various WYG UK sites.

Having access to the right tools allowed WYG to collaborate like never before and the team went on to win a top award in the competition!

Henry Fenby Taylor who is now leading the deployment of Infracore 360 within WYG, after the team used it to help win at Build New York Live, stated.

"Using Infracore 360 at the planning stage enhances our engagement with stakeholders which enhances the communication of our design process leading to a better response from planning authorities.

Deploying Infracore 360 across our organisation has a number of benefits:

We are better able to engage with stakeholders who aren't built environment professionals such as during public engagement for planning. By using an Infracore model local people can readily identify where the development is with regard to local landmarks and they can very clearly understand the visual impact that the development will have.

What I love most has to be bringing together different consultants who traditionally have difficulties collaborating digitally and integrating their work seamlessly. Landscape architecture land forming when combined with Revit buildings provides the two disciplines with a much clearer understanding of the design implications of their co-consultants."



Contextualising design options at the planning stage using open data and Infracore 360 enhances engagement with stakeholders. © WYG

"We've only recently started using Infracore but using it to help us win at the Build New York Live event really allowed us to find its place in the company. Now all of our teams from civil engineers to environmental experts see its value."

– **Johnathan Munkley**
BIM Director
WYG

Looking to the future

Working with Autodesk has allowed WYG to create workflows for exchanging across various disciplines, depending on the solutions it has historically employed. For example how does a high level master planning report turn into an Infracore model, then how does that turn into individual Revit development models for planning applications on individual sites?

These workflows allow for more accurate project assessments and understanding and this gives teams the opportunity to demonstrate more clearly to the client what is possible during the very early conceptual stages. It also sets the scene for the project to be technology and data driven from the start. Combining this with BIM level 2 is a very powerful solution to clients wishing to maximise the return on their investment and deliver projects in the shortest possible time.

WYG plans to continue its focus on its BIM level 2 implementation learning from the various early adopter projects it has worked on. It is encouraging teams from across the business to use BIM level 2 and the technology enabled built environment to allow WYG to keep adapting in an ever changing market.