

IT - THE RIGHT DIRECTION

**Interview with
JOHN GOLDRING
MANAGING DIRECTOR
RJM INTERNATIONAL**



In a series of interviews with KFA Connect, company directors talk about the issues which need to be addressed to align IT with their business strategy and operations.

The interviews will be brought together as a report to be published by DECISION magazine and then as a digital book.

"IMPOSSIBLE" IS HOW John Goldring describes what life without IT would be like. "We just couldn't do what we do without IT," adds the managing director of RJM International, supplier of products and services that enable utility supply companies, power generators and industrial combustion plants to operate more efficiently and reduce their emissions.

"All our work is IT-based, whether communications with customers, the technical drawings that we produce using CAD software or the combustion modelling work that we do using our bespoke design tool," he explains. "IT is the mechanism that helps us deliver service to the level which is expected today by our global, blue-chip customers.

"Advances in IT actively enhance the company's ability to deliver its work: so for example, increased computational power has enabled us to undertake massively complex – and faster – simulations that enable us to arrive at the exact, unique solution for every power plant that we're working on.

"One of our key USPs is that we use IT not just to design the physical plant but also for detailed analysis and accurate

measurement of all aspects of a plant's current performance."

"This entails analysing very complex combustion data – involving things such as air velocity and size of flame – using sophisticated software and supercomputers that we have built ourselves. We then harness computational fluid dynamic analysis (CFD) and other modelling techniques to validate the solutions off-line, in the virtual world, before we actually make the physical changes at the plant to deliver the performance improvements required."

Goldring says that such analysis, in advance of anything being actually constructed, means a plant's performance can be accurately predicted. "We could otherwise be at the site for weeks, getting the settings right for air, fuel and instrumentation," he says.

"For example, one big electric turbine had been shut down for three months after major physical changes and we were able to bring it back up to full operation in one day. That's pretty amazing, to be honest. And we have done that on more than one occasion. It means huge savings for the customer."

And, on a somewhat micro level by comparison, IT brings flexibility, indeed expediency. Such as the time RJM carried out a survey on a boiler in China remotely rather than in situ. A worker at the site simply walked around the installation and filmed it with his smart phone. "We wouldn't recommend not doing a survey in person," says Goldring, "but it did give us the ability to assess a particular situation quickly."

In addition, ever-tightening environmental legislation means that RJM International have to be able to harness IT to cope with customer demand. Increasingly, as well as that challenge, Goldring says plants are now trying to reduce their carbon emissions by moving away from coal to biomass fuels or 'new generation' lower carbon fuels such as energy pellets. But many of them were built from the sixties and they just weren't designed to meet today's pollutant emissions targets. "Even with modern plants which are supposed to have been designed to meet them, there are often problems in running to tighter regulations because there just isn't the operational experience," Goldring explains.

The company recently won a high-profile, world-first project to convert a coal

plant in Wales to run on energy pellets made from non-recyclable waste. And such projects, says Goldring, involve recurring issues that competitors have been unable to resolve. "With our investment in our IT resource, we can tackle the most complex emissions and combustion challenges, often with spectacular results." Such as? "For a client in Hong Kong, who found the heat value they produced at their 1980s-built plant was lower than the original design had envisaged, we were able to get the plant back to the original output," he reveals.

The nature of the work means there is an "intense" exchange of information with customers that involves very large file sizes. That calls for ever faster processors and more storage, and the business has recently migrated to a cloud-based solution that allows staff to access shared files from anywhere, on any device, and stay in secure 24/7 contact with each other and with customers.

"Our focus is to utilise IT so we are able to operate as efficiently as possible, and this means internally as well as externally," says Goldring. "With team members working all over the world, whether at customer sites or

our offices in Europe, Singapore and the USA or via agents in Hong Kong, India and Indonesia, our systems have to give everyone immediate access to the same data that they would have if they were sitting in our head office in the UK."

Ensuring that the HQ data connection was suitable for a cloud-based architecture – and that it was secure – was initially a major hurdle, he says. And as part of the move to the cloud, the business provided staff with Microsoft Surface laptops – equipped with the latest Windows software – which surpass the power of their erstwhile desktop machines.

"We see IT as an intrinsic part of a plan to expand our already global operations," explains Goldring, "but keeping up with fast-changing computer technology is difficult so we work with specialist IT companies to evaluate new options."

"Fundamentally it's people that enable the business to do what it does," he says. "And IT is the tool that people harness to make it happen and help us achieve our objectives. We have allocated one person to liaise with IT providers and we take advice from them and make decisions on new software on the basis of whether it will help us operate more effectively."

Headcount at RJM International increased by a third to around thirty-five in 2018, partly as a response to the industry's need for more expertise in green energy technologies. The biggest hurdle in this context is training, says Goldring.

"We employ a diverse range of professionals, from undergraduates to Fellows of professional institutes and with such a diverse age range, they have widely different backgrounds in terms of IT training and knowledge.

"Add to that the fact that we are using only a fraction of the capability of the software we have already, and it means that training requirements – so we are utilising IT to get the most from it – is a big hurdle. And we do need to do more in this area in order to keep up with the speed of change."

One of the issues with IT generally is the 'always on' mindset, he says. "People expect answers quickly, and the biggest bottleneck is humans, not necessarily the systems. But companies have to try to respect people's downtime outside work; you can't expect them to react to business matters all of the time as a matter of course, just because technology makes them accessible

because they have their phones on all the time.

“People are already switched on, looking at a screen, most of their waking hours, especially as social media has now permeated the workplace. Who knows how much influence all of that has on stress levels?”



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