LoadSpring™

LAING O'ROURKE

CASE STUDY

Building Bridges With Design Automation Using LoadSpring Managed Hosting™

About Laing O'Rourke

Laing O'Rourke is an international engineering and construction company delivering complex infrastructure and building projects across the UK, Middle East, and Australia. Known for its focus on engineering innovation and modern methods of construction, the company is advancing product-based approaches that bring design, manufacturing, and delivery closer together.

Its modular bridges initiative is one example. Using a configurable kit-of-parts approach, Laing O'Rourke is capturing engineering knowledge in a repeatable digital process that helps teams quickly develop viable bridge solutions and show customers what is possible using its modular products.

The Challenge: Scaling Design Automation

As Laing O'Rourke developed its modular bridge configuration capability, there was a requirement to ensure that capability was **accessible, secure, and scalable.**

With multiple technologies working together, Laing O'Rourke needed continuity across the environment, in a way that was compatible with the security, compliance, data residency, access, and performance requirements of the wider business.



Laing O'Rourke Modular Shell Abutment System

> ***"The risk with individual vendor deployments is siloed engagement," said Musa Chunge, Design Automation & Configuration Lead at Laing O'Rourke. "You do not necessarily get continuity across the whole system. Having an entity to do that connecting for you, and to carry the weight of that, was really helpful."***

The Solution: A Managed Environment For Innovation And Scale

LoadSpring Managed Hosting™ provided Laing O'Rourke with a secure, managed cloud environment to host and connect the applications, data, servers and virtual machines required to support the bridges initiative. The **LoadSpring Platform™** gives users access to powerful computing capability without relying on dedicated local hardware, while supporting the security, compliance and data residency requirements of the business.

For Laing O'Rourke, LoadSpring enabled a managed space where specialist technologies could work together, users could access the capability from different locations, and the innovation team could continue to develop the initiative without placing additional operational demands on internal IT.



M25 Junction 10 Improvement
Surrey, United Kingdom

Creating A Safe Space For Innovation

By putting the bridges capability into a managed cloud environment, Laing O'Rourke created what Chunge described as a **"safe space" for innovation**, where the team could develop the solution in a secure way, without disrupting core operations.

> ***"Putting bridges on LoadSpring created a safe space for innovation that demands less of our IT operations teams while giving us more freedom to configure, explore, and move faster," said Chunge.***

A Partnership Model, Not A Siloed Deployment

The initiative depends on more than one organisation or technology. Laing O'Rourke brings the engineering knowledge, product strategy, and business ambition. Specialist software partners bring deep application expertise. LoadSpring provides the managed cloud environment and operational support needed to connect the moving parts into a working ecosystem.

That partnership model is important because the capability extends across multiple layers—from product data and specialist applications to workflows, processes and customer-facing outputs. Managing each technology separately could leave Laing O'Rourke responsible for maintaining the connections between them. Instead, LoadSpring works alongside Laing O'Rourke and its specialist partners to provide greater continuity across the environment as the capability evolves.

Improving Collaboration And Access

With the managed environment in place, Laing O'Rourke can make its bridge configuration environment accessible to users in different locations. This supports collaboration between internal teams and customer users, while maintaining controlled access and agreed expectations.

The team is already training early customer users to work within the environment and generate their own outputs, demonstrating how the model can support greater collaboration as it scales.



HS2 Enabling Works
United Kingdom

Business Value Delivered So Far

Although the initiative is still developing, Laing O'Rourke is already seeing value in several important areas.

The managed cloud environment has:

- Reduced the operational burden on internal IT teams
- Improved agility for innovation work
- Created a responsive support model
- Provided an easier pathway to scale
- Controlled access and permissions
- User experience that can extend to new use cases

Dr Asif Sharif, Managing Director, EMEA at LoadSpring, sees the partnership as central to the managed service model.

> ***"Our role is to provide the managed foundation behind that innovation—bringing the technology environment together and taking on the operational complexity so Laing O'Rourke and its partners can focus on what they do best," said Sharif.***

The Results

Laing O'Rourke's modular bridges initiative demonstrates the business potential of combining product-based construction with design automation. By turning engineering knowledge into a configurable, repeatable process, the team has been able to respond to bridge opportunities significantly faster while improving efficiency and sustainability.

- **Bridges configured in days rather than months,** dramatically accelerating the traditional optioneering process and creating the ability to respond to more project demands.
- **£5–6 million to £50 million in annual revenue potential**, reflecting the opportunity to scale bridge delivery through a faster, repeatable model
- **Demonstrated step changes in productivity with examples of 60%+ improvements in build productivity**, achieved by faster, safer construction with smaller teams and less disruption to local communities.

LoadSpring Managed Hosting helps to provide the foundation needed to make that model accessible, support more users and continue scaling the approach.

Supporting A Wider Innovation Agenda

The modular bridge programme is also significant because it has become an exemplar for wider change. Laing O'Rourke is exploring how repeatable product-based thinking can help the construction industry move away from highly bespoke, project-by-project delivery and towards more scalable, knowledge-led ways of working.

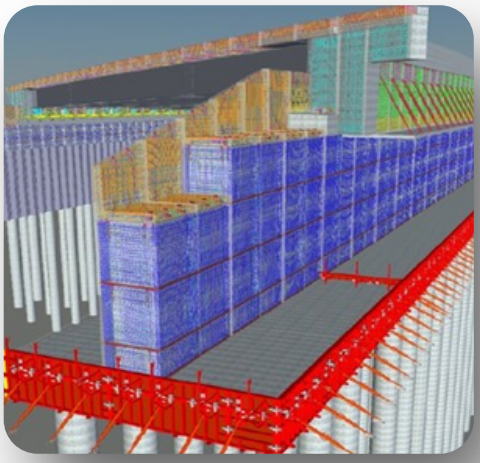
By capturing engineering knowledge earlier, applying it through configurable systems, and connecting design more closely to manufacturing and delivery, the business sees an opportunity to improve consistency, certainty, productivity, and workforce sustainability.

> ***"Bridges have become the exemplar for us of what we can do with this kind of technology and product-based thinking," said Chunge. "The opportunity is to shift effort away from repetitive tasks and into higher-order areas of work."***

Future Opportunity

Laing O'Rourke is looking at how the principles demonstrated through bridges can be extended to other sectors and use cases across the business. This includes creating new business models for innovation investment, making captured knowledge reusable, and improving the way teams use technology to deliver more work without increasing pressure on people.

For Laing O'Rourke, that ability to scale has broader implications. As new markets emerge and the volume of work grows, **repeatable approaches and automation can help the business pursue new opportunities while creating a more sustainable way for its people to deliver them.**



Laing O'Rourke Modular Bridge Model

> ***"It is fundamental because it helps us pursue emerging markets and do the volume of work ahead of us more sustainably," said Chunge. "By doing things differently, we are creating a healthier way to approach more work and give people better, more valuable jobs."***

Conclusion

This initiative demonstrates how managed cloud infrastructure can support innovation, enabling specialist technologies, people, partners and knowledge to work together more effectively, and creating an environment where an innovative idea can develop into a scalable business capability.

Give Your Next Innovation the Right Environment.

Bring your applications, data, and specialist partners together with LoadSpring Managed Hosting, so your team can focus on developing new capabilities while we manage the technology behind them. **Talk to Our Team**

About LoadSpring

For over 25 years, LoadSpring Solutions has been at the forefront of transforming capital-intensive projects worldwide, supporting over $1 trillion in project value and serving more than 100,000 users across 5,000 organizations. As the industry's most trusted digital transformation partner, LoadSpring leverages its deep expertise in cloud technology, data modernization, and AI-powered analytics to deliver customized solutions, drive measurable results, and maximize ROI for the world's most complex capital projects.

ABOUT LAING O'ROURKE

Laing O'Rourke is an international engineering and construction company delivering major infrastructure and building projects. With £5.0 billion in managed revenue and a £17.2 billion order book, the company combines engineering expertise, digital technology, advanced manufacturing and modern methods of construction to deliver greater certainty for its clients. For more information visit Laing O'Rourke.

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