



Interimconsult

Our Purpose

**Why We Do
What We Do
and How**

AI and Innovation

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Paul is the founder of Interimconsult, a management consultancy focussed on complex programme delivery, supply chain innovation, and artificial intelligence applications. He has held CEO, Managing Director and Board roles in SMEs and large organisations in different sectors. A regular speaker at events, he is a member of the Institute of Directors Expert Advisory Group on Science, Innovation and Technology.



INTERIMCONSULT

Launched in 2019, Interimconsult is a purpose-led consultancy that takes on complex challenges and always seeks to make a positive difference beyond what it delivers to customers.

Want to know more about Interimconsult?

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'We define innovation as turning ideas into sustainable value so ideas, no matter how great, are not enough.'

Why do you do what you do?

The industry needs to change the way it goes about getting stuff done.

The UK needs an affordable, punctual, inclusive, and low-carbon rail network that meets the needs of passenger and freight customers and helps create economic growth. This will help make a difference to people's lives. It means people can get to their place of work or study, provide care and support to those in need, all at an affordable price. The right type of investment in the railway also creates an opportunity for a green and resilient integrated transport system for generations to come.

However we're a long way from achieving that goal – but here at Interimconsult want to change the situation. It's easy for the industry to accept the way things are done and carry on as-is, but that won't change people's lives for the better. The passenger and freight customer experience must improve, and industry-wide productivity must increase, or the industry will not deliver what the UK needs. Large and complex programmes must be delivered on time and within budget, and investment needs to be targeted to deliver benefits for customers and communities.

With global investment and innovations in other markets already providing customers with new transport choices to match their new travel patterns, there is a significant existential threat to the affordability and ongoing viability of the railways. We're very close to a tipping point that could lead to a slow and irreversible decline. We want to make sure that doesn't happen.

Do you think the industry can change?

Yes. It's people that get stuff done and there are a lot of great people in the industry who want the same thing – a great customer experience, safe, affordable, and inclusive travel, and a stronger and green economy. People getting stuff done makes these things happen.

This isn't blind optimism. It's based on industry experience and an understanding of how innovation creates value, how behaviours and mindsets can change, and how tipping points can be triggered across a whole industry, leading to irreversible

and positive change that sticks. If you look outside the sector and at wider society, you can see that sometimes it's the small things that matter. You don't always know what might lead to a tipping point in the future, but you can get a sense as to whether you're nudging things in the right direction and getting closer to making positive change stick.

There are so many examples in rail of purpose-driven innovations in technology and processes, where everyone puts their shoulder to the wheel and pushes in the same direction to deliver exceptional results. We need to make this way of working contagious. And asking "why" we do things creates a shared purpose. People can see that their own and everyone else's contributions matter because you're working towards a common goal. It can deliver outstanding results on complex projects, in organisations, and across industries. I believe our real challenge is creating that sense of shared purpose across the industry.

For example, if we can nudge the industry towards tipping points that transform the delivery of complex infrastructure projects, maybe we could save billions of pounds. I believe this is both possible and essential. The industry should get things done early, under budget, at the same time as delivering better outcomes. But more people need to believe it's possible and not accept a norm of delays and cost overruns.

As Henry Ford said – "If you think you can do a thing or think you can't do a thing, you're right."

Our work for the Rail Supply Group on industry costs showed supplier spend in the financial year 2021/22 was £15.8 billion. Of this, £10.5 billion was spent on enhancements and renewals. But the 'why' for this expenditure is not just to enhance or renew the railway for its own sake. The real 'why' is about providing a great customer experience and safe journeys at an affordable price for the diverse range of communities and businesses that use the railway.

Thinking this way is proven to help deliver better outcomes and will also help meet the industry's productivity challenge.

Interimconsult has a clear purpose – we want to make innovation happen - because we know that innovation, the process of turning ideas into sustainable value, helps take the industry and society forward. We're only small, but we can nudge things in the right direction and maybe, just maybe, create tipping points that change the industry for the better.

Tell us about Interimconsult.

We are not a typical consultancy. Our ideal scenario is stepping in to work with a client to take on a complex challenge associated with programme delivery, supply chain innovation, or deployment of AI, then stepping away knowing they are in a better place. Ideally, we like them to internalise the capability to standalone without the

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need for more of the same consultancy. This seems counter-intuitive, but we don't want clients to become dependent on us for what we would describe as business-as-usual. That's just body-shopping and when it comes to core business it is nearly always better value for the client to appoint a capable employee.

Consultant's insights are often limited, recommendations rarely implemented, and change rarely sticks. That's not how we do things – we want to make a difference. We are clear that clients must get value from consultants, not just pay for their time. One of the reasons we enjoy what we do is it usually involves breaking new ground and doing novel work to change the way the industry and our clients go about their business.

We've worked on assignments such as enabling the delivery of the industry and government commitments in the rail industry's Rail Sector Deal, supply chain innovation, increasing work pipeline visibility, industry cost analysis, productivity improvement, introduction of new technologies into live operational environments, and the application of AI in decision support systems. This seems like a diverse range of activities, but the reality is common themes run throughout, such as understanding how the rail industry and businesses work, whole system thinking, innovation, and situation analysis.

When a client comes to you with a particular problem, what's your process for coming up with a solution, and how closely do you work with clients throughout the projects?

We know from experience that unique problems demand unique solutions, but the fundamentals are often the same. So we start by actively listening to our clients to understand their situation. Once the situation and definition of client success is clear, we have the tools and frameworks

available to identify why a solution is needed, what options exist, what action needs taking, and when it should be done. This approach delivers results.

Working closely with clients and taking this whole-system view means looking at the combination of people, process, technology, and culture because when it comes to complex or complicated challenges, focussing on only one or two of these factors will usually lead to failure.

A whole-system approach takes context into account and has helped our clients address their most complex challenges such as reducing complex programme delivery costs and accelerating delivery, successfully introducing new products and services into operational environments in the rail market and increasing the return on investment from research and development.

We look at problems from a systems perspective – you can't solve difficult and complex problems without deep client engagement and taking a disjointed or siloed approach. Combined with our experience in the rail sector, this means we bring new insights into organisations to help them understand how to get stuff done, and the importance of why it matters when it comes to looking at their own, their customers', or the industry's, most difficult challenges.

We build teams of people that step back and understand what matters most in any given situation. We take time to think slowly with our clients about what really matters and then, once the thinking is done, get things done fast.

Thinking through plans and options in advance of action can be done at little cost yet deliver enormous savings. For example, the reality of complex infrastructure projects in the UK and around the world is they will almost certainly be very late, cost more, and fail to realise the promised benefits. Then, even when things are going wrong, opportunities and innovations that could improve an ongoing project are overlooked or ignored.

Our approach of thinking slowly about options, plans, design, and delivery, when costs are the lowest, then acting fast to get the job done in the most efficient way, helps avoid these all-too-common expensive failures.

Is there a problem with supply chain innovation?

Unfortunately the answer is yes. Our own research into innovation by technology SMEs receiving government grants busts some myths about making innovation happen. It shows the return on investment from grants is very low. We looked at publicly available data from Companies House and innovation grant funding over a period of four years for a selection of 45 SMEs and startups that received funding in 2018/19, not just companies in rail, but other sectors. Only a handful showed any real success in terms of increasing company

value, creating jobs, and securing future investment.

There was a total investment of circa £40 million across the 45 companies. Accounting for the matched funding from the SMEs, the total investment could have been as high as £60-80 million. The results showed a negative return on investment of between 0.25 and 0.35. And this does not include any measure for lost opportunity cost – this sum of money could have been spent doing different things.

This suggests a systemic issue – but at the same time creates a huge opportunity for SMEs to improve their results by looking beyond the development of proof of concepts, minimum viable products, and customer pilots funded by grants.

We define innovation as turning ideas into sustainable value so ideas, no matter how great, are not enough. Businesses need solutions that increase sales, profitability, employee engagement, and corporate social responsibility outcomes. One part of the solution is ensuring a core set of innovation enablers are in place to foster successful exploitation – not least those associated with marketing innovation, innovation management, supply chain collaboration, and options for commercialisation.

The good news is we can help put these enablers in place and make them stick. And the cost of establishing the enablers is very low compared to research and development costs, but the enablers make a huge difference when it comes to transforming the return on investment for both SMEs and grant funding bodies.

What would you say will be the most exciting technology in the industry and why?

The ubiquitous availability of artificial intelligence applications is changing society, and this effect will ripple through every industry around the globe. It is inevitable and rail will be no exception. The impact of the powerful combination of increased computer processing power, learning algorithms, and huge data sets means established business models will be disrupted. In the same way online retailers have changed the make-up of the local high street, and video streaming has changed the entertainment industry, artificial intelligence has the potential to transform the customer experience, reduce industry operating costs, and supercharge productivity on high-value enhancement and renewal programmes.

What are the here-and-now opportunities for AI in rail?

AI is already being applied in many standalone rail systems that rely on image recognition, forecasting, classification, and prediction. But there are clear opportunities to combine data and AI algorithms to take on more complex challenges. ►

For example, AI systems are good at dealing with complex non-linear problems. So bringing together and analysing operational data about train performance, the headway time between services, and infrastructure performance, could increase service punctuality and avoid disruptive and high-cost infrastructure enhancements. To improve the customer experience, similar pattern recognition, forecasting, and adaptive AI algorithms could be extended to real-time automated replanning by traffic management systems. Target outcomes could be defined that simultaneously improve punctuality and reduce carbon emissions.

Given recent advances in large language models and generative AI such as ChatGPT, I must comment on the impact of AI on consultancy. As clients' understanding of how to use AI increases, outsourcing generic knowledge-based tasks to AI systems rather than people will disrupt the consulting industry. In the next few years, AI systems will probably be able to provide better value, higher quality, and faster services than many consultants. The consultants' challenge will be to focus on higher value-adding activities where an understanding of specific context is needed that genuinely requires human, not artificial, intelligence. The upside is

this shift in capability could transform the industry, whether it be megaproject delivery, productivity, or service quality.

Where do you think the industry, regarding the adoption of AI, will be in the next 10-15 years?

When it comes to the pace of change and AI regulation, I worry the industry may be left behind. Prediction, forecasting, robotics, and pattern recognition applications generate an enormous number of use-cases in the rail industry, but the pace of innovation is too slow.

The industry is still struggling to deploy what are established solutions in other sectors – condition-based maintenance being a real example.

Whilst some progress has been made, there are still too many people visually inspecting assets to assess what this means for maintenance by going on site at defined intervals and examining records, often not in a digital format. The track access increases worker safety risk and disrupts the customer experience and the end-to-end process costs more than it should.


But this need not be the case. Condition based maintenance has long been applied for safety applications in the aerospace industry,

so it can be done. Already established AI innovations can enable and accelerate change if the industry can find a way of increasing the pace of their adoption and deployment. It should be possible to deploy and upgrade new products and solutions using proven technology in the rail industry over periods of months, not years.

What can we look forward to?

The resistance to change created by the mix of people, process, technology, and culture can be removed. But this involves a change in mindset across all parts of the industry. People make great things happen, whether it be commercial space travel, zero-carbon power generation, or delivering complex projects early and within budget.

I am an optimist, and I believe the steps the industry will take in future really will change things for the better. The industry can develop a new mindset focussed on the customers experience, increasing affordability, communities, and reducing climate change.

By focussing on what matters most, we will help change the industry to get stuff done. Improving the delivery of complex projects, supply chain innovation and the deployment of AI will help. 



Interimconsult

Turning Ideas Into Sustainable Value

Programme Consultancy

Innovation Enablement

Rail Market Analysis

Artificial Intelligence

Organisational Learning

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