

Ingenuity Review Twenty twenty-two







Contents

Inspiration	03
Reflecting on our purpose	04
PA in numbers	10
Clients: Creating value for clients	12
People: Celebrating LifeAtPA	50
About PA	58

Inspiration

We believe in the power of ingenuity to build a positive human future. This is our purpose.

We're making it happen, one leap at a time. As we get set to mark our 80th year, our 2022 Ingenuity Review reflects on how, inspired by our purpose, our people made significant contributions to our clients, our team, and the communities in which we live and work.

Reflecting on our purpose

Sharing our Ingenuity Review is always very special. It's a moment for all of us to consider how it feels to be part of this very special team. PA is an important company, doing important work. And 2022 was another year of great accomplishments. Superb results for our clients. A stronger, closer team for each other. And a truly impactful contribution to the communities in which we live and work. *⇒*





Value for clients in every act

Our strategy is clear. We work with clients to accelerate new growth ideas, from concept, through design, development, and to commercial success. And we revitalise organisations, building the leadership, culture, systems, and processes to make innovation a reality.

Partnering with passionate, forward-thinking leaders, we're in pursuit of the most important issues facing the world: putting consumers at the heart of every decision, creating healthier lives, building future-focused organisations, designing businesses for better, keeping people safe, and creating a more sustainable planet. We believe these issues offer tremendous opportunities for our clients.

Working with PA, you'll find strategists, innovators, designers, consultants, digital experts, scientists, engineers, and technologists. With deep sector expertise, and years of experience leading organisations, tackling the toughest of industry challenges. We're the only company to deliver end-to-end innovation, not just talk about it, but really do it.

In 2022, the launch of our Alliances, Platforms, and Products strategy — with offers like PulPac, a sustainable replacement for plastic — further enhances our end-to-end innovation offer.

Our clients say working with us just feels different. We're nimble, expert, multidisciplinary, and collaborative; coming together with clients in perfect combinations, creating value that endures.

Many minds, meaningful work

We often talk about ingenuity as a mindset. At PA, we're privileged to see it in action every day.

Throughout the year, we welcomed more than 1,300 new colleagues, grew our partner team by more than 50 new partners, and promoted over 800 people. We also welcomed two new teams: Design Partners, an outstanding product design and innovation agency in Europe. And The Cambridge Group, a leading strategy consulting business in the US. Both teams are a real win for our clients: further strengthening how we accelerate end-to-end innovation in areas including design and business growth.

Our employee inclusion and diversity networks have gone from strength-to-strength. We added a new focus on neurodiversity, and bolstered our support to working families.

And we celebrated our people's talents, with a record year for promotions, as well as our Purpose Awards for those who went above and beyond in support of our clients or team.

We'll never lose focus on building an environment full of autonomy and empowerment — where people can find the projects and experiences that build vibrant and exciting careers and bring their best selves to work. →





Creating opportunity in our communities

Our teams' skills and experience deliver value for our clients — and also enrich people's lives and careers in the communities where we live and work.

Take our PA in the Community programme as an example. Joining forces to 'inspire people, particularly those facing disadvantage, to be the innovators and leaders of tomorrow', our people gave more than 10,000 hours of their skills and expertise in a wide range of educational, learning, coaching, and mentoring initiatives.

Last year, we launched The PA Foundation, whose mission aligns to our PA in the Community programme. With a commitment to distribute £10 million in five years, we're furthering the impact our people are already making.

Over the course of the year, we gave over £1.2 million to charities and non-profit organisations doing amazing things in the places we live and work.

Thank you to everyone who has contributed to The PA Foundation — your support is invaluable.

Tackling the climate imperative

Climate change. It's such an urgent issue — every one of us has a role to play in addressing it. At PA, we're working every day to accelerate our clients' responses to climate change to create a more sustainable world.

From designing more sustainable products and packaging, through to supply chain innovation, and enabling the energy transition, our depth of innovation experience delivers impact that is bringing more industries closer to net zero.

Our responsibilities also extend to how we operate. And so, within PA, we've set science-based targets to ensure our environmental practices contribute to limiting the global temperature rise to 1.5C, and that we reach net zero by 2040.

We're better together

In 2022, we generated fee income of £785 million, growing our business by 14 percent. We also celebrated the first anniversary of our relationship with Jacobs, which is already presenting exciting opportunities to combine our respective strengths, offering clients expertise unmatched in the market.

As we prepare to celebrate our 80th year, our purpose remains as core to who we are today as it was at the very beginning. Looking forward, we'll continue to evolve our business: for our clients, our people, and our communities. As we do, one thing's for sure: we'll never lose our focus on building a positive human future.

To our clients, thank you for your trust. And to our people, thank you for everything you do.





Message from John Alexander Chair



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I'm immensely proud of how our teams have come together to resolve complex issues and deliver ingenious thinking that helps organisations to adapt and thrive. In an unpredictable world, PA is the innovation partner today's senior leaders can rely on.

PA in numbers

£785m	14%	96%
fee income in 2022	growth in fee income year-on-year	growth in fee income over five years
4,000+	260	99%
experts on our team	partners	of our clients would recommend us

07	21	>£1.2m
sectors we work across	global locations	distributed by The PA Foundation
07	815	10,000+
employee inclusion & diversity networks	people promoted	volunteer hours our people spent in our communities

Clients

Creating value for clients

Our end-to-end innovation offer drives value for clients in challenging times. Clients want a partner who can create opportunity from complexity. They also recognise that capitalising on those opportunities requires fundamentally new approaches that can only be achieved by bringing together diverse teams of experts, blending unique skills and experiences to deliver truly ingenious work.

SPOTLIGHT

Tracey Countryman Global Head of Markets





At PA, we see six global shifts, offering new and exciting opportunities for our clients.

Since I joined PA, I've been continually inspired by the deep knowledge and expertise of our people, their passion for making a positive impact in the world, and how they help our clients do the same. Our world is being transformed by global shifts — and these are opening up exciting new opportunities for us.

Empowered consumers have more choice and access to information than ever before. Healthier humans are living longer, and an emphasis on wellness is driving demand for new personal and at home health technologies. Future organisations must be innovative, responsive, agile, and forward-thinking while balancing market and shareholder demands for operating more leanly and efficiently.

Business for better requires authentic purpose-driven approaches that go beyond a company's mission statement. Creating safer societies — be they physical or virtual — will remain a constant.

And of course, there's the need — more urgent than ever — for us all to tackle the challenges we are placing on our planet's climate to individually and collectively contribute towards a more sustainable world.

Our capacity to combine our deep technical expertise, with our ability to look forward and understand how these shifts will impact societies and consumers in the future, makes us the partner of choice to deliver the momentum for today and the confidence to build a better tomorrow.



Empowered consumers >

The customer has always been at the centre of commercial success — from the Silk Road to Silicon Valley. What has changed is the power that connected, informed, choice-conscious customers now wield.

Consumer-centric design is vital to creating products that integrate seamlessly with users' lives. This was central to video game controller manufacturer Backbone's vision to create the ultimate mobile gaming device in a fast-growth market. Our expertise in new product design, consumer lifestyle, and hardware design, helped Backbone achieve industry-defining product status inside of a year.

When it comes to empowered consumers, innovation is crucial to establishing and maintaining a competitive edge. Gjensidige, Norway's leading insurance provider, needed to meet the demand for digital, customer-centric services. Our team entirely transformed its operating model to speed the organisation's ability to deliver better services. It's organisations like Gjensidige that we identified in our research report *The Breakthrough Brigade* — these are organisations who have mastered the approach to breakthrough innovation, and offered practical steps for how brands can better lean into innovation agendas. →



Backbone

Designing the #1 best-selling mobile game controller for iPhones

Maneet Khaira, CEO of Backbone, a platform powering game streaming and core gaming on mobile devices, envisioned creating a new device for gaming on mobile. He reached out to our team, who have designed more than 500 products and 100 brands and subbrands in gaming, helping to generate more than \$60 billion in revenues for our clients. One such product, Microsoft's Xbox 360, is one of the most successful gaming products of all time.

We partnered with Backbone to create an ergonomic, flexible mobile gaming controller that can be adjusted to fit phones of varying sizes. We provided new product design, user experience, and hardware design and development to support the start-up's inaugural product launch, Backbone One.

We designed and developed the portable mobile game controller for iPhones in a year. Our work helped Backbone One become the number one best seller on Amazon in the cell phone gaming controllers category in less than a year.

Backbone One has received favourable media coverage in publications such as *TechCrunch*, *TechRadar*, and *The Verge*. The controller is now bundled with Xbox Game Pass Ultimate and the Xbox Cloud Gaming game streaming service.



Gjensidige

Delivering innovative customer-centric digital services

Consumers in the insurance space are more empowered than ever, and there is a growing demand for services that are digital and customer-centric. The instant, personalised and seamless experience of ordering a taxi via an app, having groceries delivered direct to your door, or even booking a holiday, has defined a new era of customer experience.

And with competition increasing, Gjensidige, Norway's leading insurance provider, needed to meet this growing demand in an ingenious way. By revamping its entire operating model, Gjensidige aimed to reduce costs and redirect the savings towards investing in customer-centric, innovative solutions.

Gjensidige needed to bring on a technology partner to guide the strategy of its digital transformation. Building on our existing partnership, Gjensidige knew of our team's capabilities and expertise in sourcing, delivery, cost-optimisation, change management and digital transformation.

With the technology partner's lead, Gjensidige was able to identify and pilot initiatives that

harnessed AI. These initiatives were put to work in creating new front-end services for customers. Our team then helped design a more cost-efficient delivery model and aligned ways of working across countries to enable Gjensidige customers to enjoy quicker and smoother journeys.

Together with Gjensidige, we built a new global delivery model on a scale previously unseen in the Nordic insurance space.

The annual cost savings enabled by this new model will be channelled into innovative new services that are enabled by technology.

INSIGHT

The Breakthrough Brigade Unlocking growth through innovation

Against a backdrop of increased economic uncertainty, urgent sustainability imperatives, and rapidly evolving competitors, innovation is imperative. To turn opportunities into growth, organisations need to shift from incremental to breakthrough innovation. This means moving beyond gradual improvements to totally reimagine products, services, and modes of delivery.

Our research identifies two cohorts of organisations: the incrementalists that struggle to cultivate and commercialise innovative ideas; and the outlier organisations that successfully generate, commercialise, and scale innovation that drives significant future growth.

It's this second group, the Breakthrough Brigade, who consistently reap the benefits of revenue-generating new ideas. And where leaders ensure that the best and boldest ideas benefit the balance sheet.

Five key actions enable the Breakthrough Brigade to achieve and, importantly, sustain breakthrough innovation:

- Dare to be a breakthrough growth leader
- · Invest in experimentation
- Ready your rebels
- Build an innovation engine
- · Nail the idea, scale the idea.

With breakthrough innovation, organisations can move further, faster.



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Through breakthrough innovation, organisations can generate and scale ideas that meet the needs of empowered consumers and create new value.

www.paconsulting.com/ the-breakthrough-brigade



Healthier humans →

Health underpins our personal and collective experience — for us, our families, and across society. The way we receive care, and the way outcomes are delivered, is evolving at speed, with convergence between humans and technology offering exciting new possibilities.

New public and private collaborations are delivering vital outcomes. For instance, we teamed up with the UK Government's Vaccine Taskforce to deliver a range of projects that enabled the launch of one of the first and fastest vaccine rollouts in the world.

And then there's the move from a business-to-business, to a business-to-consumer model for many monitoring treatments and medicines — where the patient and their family is the consumer. This reflects the shift, accelerated by the pandemic, towards more personalised care and medicines, and greater autonomy for patients.

Take, for example, our work designing a revolutionary way for people suffering arrhythmia to monitor their heartbeat with Viscero. The benefits of personalised care and treatment include improved quality of care and an overall better patient experience.

Yet the success of these new care approaches hinges in part on collaboration across industry and with the public sector.

Our research on the healthcare changes brought about by the pandemic, revealed the extent to which the public sector is able to respond to major shocks like COVID-19, and the opportunities for public-private collaboration. →



UK Vaccine Taskforce

Steering a world-leading programme to secure COVID-19 vaccines in record time

In spring 2020, as a deadly coronavirus began to race around the globe, the UK Government established its Vaccine Taskforce (VTF). Its mission — to drive development and manufacture of life-saving vaccines and make them available to the public as quickly as possible. No one knew if anyone would develop a safe and effective vaccine, but if they did, the speed of rollout would be critical to saving lives. The pressure to take decisions at pace while retaining control of billions in public funding was intense. But the biggest pressure was to deliver.

We were an integral part of the team from the start, bringing to the mission deep expertise in complex programme delivery, business cases and life sciences, and experience of working across government.

Over more than 18 months, we collaborated with the VTF to deliver a range of projects that enabled the launch of one of the first and fastest vaccine rollouts in the world. We applied commercial and business case expertise to enable the VTF to agree contracts for 400 million doses of seven vaccines within

six months of setting up. Within seven months of regulatory approval, over 80 percent of UK adults had received at least one dose. And by the end of August 2021, the programme was estimated to have saved over 100,000 lives and prevented over 143,000 hospital admissions in England alone.

We continue to be part of an extraordinary national effort that has saved tens of thousands of lives to date and will save many more in years to come.







Viscero

Designing the future of wearables

An arrhythmia is an abnormal heartbeat that can lead to blood clots, stroke, heart failure, and other heart-related complications. There are limited options available to doctors assessing patients. The most common is a Holter monitor, but these systems are restrictive to wear, and typically only offer a 24- or 48-hour recording window. Longer-term solutions are intrusive and require the patient to be placed under anesthetic to get them inserted.

Our solution is Viscero, a revolutionary approach to ECG monitoring — keeping our hearts healthy. Sensory technology is integrated seamlessly into a simple vest, capturing and communicating diagnostic

quality data effortlessly. In order to get to this point, the team needed to address and overcome a series of challenges.

Dry electrodes are positioned away from the chest to more peripheral locations, while maintaining consistent compression points. Ingeniously, the brain of Viscero is the size of a matchbox and fits easily into a small pocket on the T-shirt; you can take it out to recharge, or put the T-shirt in the washing machine without any trouble. This pod also has an onboard accelerometer and gyroscope. Data is combined with any recorded heart signals to provide the clinician with a fuller picture of the circumstances surrounding an event.

This is significantly different from consumer devices that also record ECG signals.

These only provide limited recording fidelity and intermittent monitoring, whereas Viscero can continually monitor people's hearts for weeks or even months.

Viscero has been named in FastCompany's World Changing Ideas 2022, and has been awarded the prestigious Red Dot Award, iF Design Award, and Good Design Chicago Award. Patients can now run for the bus, hug their children, and unwind on the sofa, without giving Viscero a second thought.

INSIGHT

Responsive government index A renewed public sector imperative

In the past few years, civil service departments and teams have demonstrated their ability to respond to significant changes quickly and imaginatively, be it shifting citizen demands, national and international political shifts, or wider societal and technological disruption.

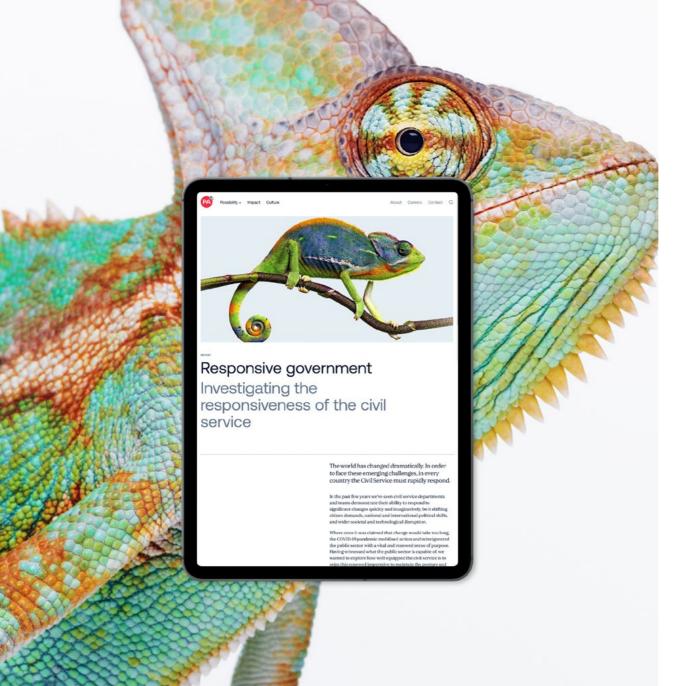
The COVID-19 pandemic mobilised action and reinvigorated the public sector with a renewed sense of purpose. Having witnessed what the public sector was capable of, we explored how well equipped the civil service was to maintain the posture and pace of delivery.

Working with Global Government Forum, we spoke with 867 civil servants across nine countries (the UK, Norway, Sweden, Denmark, Netherlands, the US, Canada, New Zealand, and Australia) to explore their perceived adaptability, and identify best practice.

Our research sets the baseline for how the civil service is positioned to adapt in a world where truly responsive governments are best positioned to succeed. For example, we found:

- 72 percent of respondents agreed that their organisation excelled at learning and responding rapidly to meet evolving citizen and end-user needs
- 46 percent of UK civil servants agreed they had the ability to hire new talent to support change.

Purpose-led, adaptive, and collaborative governments will make public services — and society — better for all.



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Responsive civil services are critical to supporting healthier societies.

www.paconsulting.com/ responsive-government



Future organisations →

Imagine a world where aware, alert, inclusive teams can respond to customer needs and competitor moves at pace. This is a world of organisational agility and of resilience that enables growth. Digital transformation, including data analytics and AI, is at the crux of today's future-focused agendas. From modernisation through to radical change, digitalisation is now essential to deliver agility, productivity, and commercial growth.

In partnership with Schiphol Airport in the Netherlands, we unlocked new income streams in a tough economic climate. With our expertise in bespoke digital products, the team at Schiphol could fast-track strategies for its most commercial-ready solutions.

In a disrupted market, Pret A Manger wanted to accelerate plans to take its business online. With our expertise in data, customer loyalty, and innovation, the brand rapidly deployed offers and experiences that melded physical and digital environments, scaled these through technology, and generated data that helped it to better understand its customers.

The future resilience of the transport sector was the focus of our *Transport* — *Together* research, which amid the combined challenges of changing customer habits, economic uncertainty, and longer term sustainability and net-zero goals, defined four specific areas of focus for transport leaders. →



Schiphol Airport

Unlocking new revenue through digital transformation

As part of its ongoing digital transformation, Amsterdam's Schiphol Airport, one of Europe's busiest, has developed a wide range of bespoke digital solutions — many with potential as commercial products at other airports and wider markets. With the pandemic hitting the aviation industry hard, finding new revenue streams was important for Schiphol. Our team worked with the airport to identify operational challenges and then investigated the most promising digital solutions, applying our proven framework for commercialisation to unlock value from the best opportunities.

Together with Schiphol, we set up the organisation that will run the process and guide the first projects through the new innovation pipeline. With expertise in transport, innovation and commercialisation, our team delivered pragmatic support grounded in deep business understanding. Based on our recommendations, Schiphol built a commercialisation operation from scratch, with five high-potential projects already in development in less than a year.

The first of these — an AI-driven solution to optimise plane turnaround times — is already being tested for scalability outside of Schiphol.

Over the next five years, solutions like this are anticipated to generate vital post-pandemic revenues for the airport.

Digital transformation at Schiphol is key to its future sustainability in a sector that faces huge challenges around reducing environmental impact, improving the passenger experience, and running a large operational workforce efficiently. Digital transformation is also a rich new source of value. With a clear plan for commercialisation, Schiphol is now brilliantly placed to unlock that value and generate vital new revenues.



Pret A Manger

Accelerating a new digital customer experience in a disrupted market

Building customer loyalty and growing revenue in a world in which customer habits and expectations are quickly evolving present challenges — and opportunities — for companies like Pret A Manger.

The joint team delivered a complete digital transformation, including collaborating on the design and iterative launch of Pret's new digital customer experience and underpinning platforms to support the company's digital initiatives and innovations. We did this amidst the backdrop of the COVID-19 lockdown, which forced the closure of Pret's UK stores overnight.

Together, we defined the vision for a new digital customer experience. This included mapping the target experience and defined tools, skills, and digital capabilities needed to bring the vision to life before leveraging platform-as-a-service offerings from Google Cloud Platform to rapidly launch a pilot.

We worked with Pret to accelerate the launch of its new coffee subscription service. Our digital and consumer experts collaborated with the company to roll the service out to 370 UK stores in weeks. Some nine months later, we were able to roll out coffee subscriptions in the US and France, and iteratively launch

new features to drive customer acquisition and retention. Alongside this, the joint team designed and built Pret's first customer loyalty programme.

Our support helped Pret adapt rapidly to the challenges of a hugely disrupted market. As a long-term strategic digital partner, we have supported them in rapidly innovating across their physical and digital customer experiences. Together, Pret and our team have developed and launched digital experiences in a transformed retail landscape.

INSIGHT

Transport — together From island to ecosystem

The transport sector has contended with seismic shifts, including economic uncertainty, short-term liquidity issues, shifting customer habits, long-term sustainability, and the levelling up agenda. On top of this, the pandemic heralded a new era of uncertainty by fundamentally changing working measures, hygiene requirements, and transport usage patterns.

Our report draws on multiple data sources to uncover that collaboration across transport organisations is the key to solving recent roadblocks, and to building sector resilience. Transport leaders can focus on four actionable areas to ensure financial resilience, and deliver on sustainability and net zero commitments:

- · Win back customer confidence
- Differentiate and succeed on sustainability
- Deliver a fair economic recovery and levelling up
- Ensure long-term financial viability.

To secure their own future and achieve key sustainability objectives, transport leaders need to break away from single-mode thinking and embrace the ecosystem.



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To overcome shared challenges, transportation needs cross-sector collaboration.

www.paconsulting.com/ transport-together



Business for better >

In a world where what organisations stand for matters as much as what they do, the power of a purpose that drives their 'why' as well as their 'what' is increasingly important. Today's most successful and inspiring leaders look beyond performance metrics, and are as focused on their people and their role in society as they are on conventional business outcomes.

Business for better calls for authenticity — not just saying your organisation is purposedriven — but acting in a way that builds trust, channels optimism, and leads with hope and humility. In the case of the Danish Diabetes Association, which campaigns for more than one-quarter million people in Denmark affected by diabetes, they wanted to ensure they were maximising the impact of their work. By creating a strategy that kept those living with diabetes at the centre of every decision, the association remained

laser-focused on its purpose, delivering to the population it was tasked to serve.

Business for better also embodies purpose-focused leadership, which the team at The Warehouse Group (TWG) displayed. We partnered with TWG's leadership to reimagine the company's role in setting a new vision to make sustainable living easy and affordable for all.

The role of the leader in driving business for better was reinforced by our research report, *A New Way to Lead: Positively Different Leadership.* Here we identified four key behaviours that will be critical for leaders over the next five years, including the need to lead with authentic purpose. Our research also revealed that the most forward-thinking leaders pursue business for good, inspire their teams, and find creative solutions at unprecedented pace. \rightarrow



The Danish Diabetes Association

Bringing strategy to life to make life better for people with diabetes

To be effective, organisations must put the people they serve at the centre of operations.

This was one of the challenges for Diabetesforeningen (the Danish Diabetes Association), Denmark's leading diabetes Association. They wanted to harness the efforts of the whole organisation to deliver their strategy which has patients at its heart. The strategy is built around four main ambitions: to raise the profile of diabetes, be a leading partner in preventing diabetes, make an active contribution to research, and attract support for the organisation from

the public. Our experts in strategy execution, operating models, and change management, worked with the association to bring a fresh perspective to their challenge. Our deep sector knowledge in life sciences meant we understood relevant trends and were familiar with many organisations with whom the association collaborates, to support diabetes research and development.

To get started, we ran a survey across the organisation to find out how things were working. Sharing our findings with the senior team sparked new ideas and agreement

on practical changes that would allow the association to deliver their strategy more effectively. We recommended ways to boost collaboration between departments and new approaches for measuring and reporting on progress. And we advised the senior team on leading a shift in culture. The association is in a better position than ever to improve life for people with diabetes and their families.



The Warehouse Group

Making sustainable living easy and affordable for all

The Warehouse Group (TWG) is New Zealand's largest general merchandise retail group, with \$3.4 billion in revenue and 12,000 team members. It sells affordable goods in apparel, grocery, homewares, electronics, stationery, and outdoors. Its purpose is to help Kiwis live better every day. The group has been carbon neutral since 2019 across its own operations. And its leadership was ready to set a new challenge: transforming the company to make sustainable living easy and affordable for all. Working together with TWG, our sustainability experts gave

the group the confidence to set bold new ambitions and targets.

Our team worked through all functions of the organisation to identify the gap between TWG's existing capabilities, current sustainability performance, and its future ambitions. That gap analysis informed a resources investment strategy, which was instrumental in defining the skills TWG required to rethink its end-to-end value chain, suppliers' engagement, and untapped customer opportunities.

In just five weeks, our team put TWG on the road to realising its ambition for sustainable living. TWG now has the confidence, capabilities, and roadmap to deliver on its new ambitions. It also has the skills to map the feasibility of different routes to sustainability, as well as potential new business models. The changes that are underway at TWG have positioned it as the leading global retailer in the field of affordable sustainable living.

INSIGHT

A new way to lead Positively different leadership

In the last few years, leaders across all industry sectors have demonstrated incredible adaptability and resilience. This new and better way to lead, will power business and society's collective revival into the future, strengthening organisations and the teams operating within them.

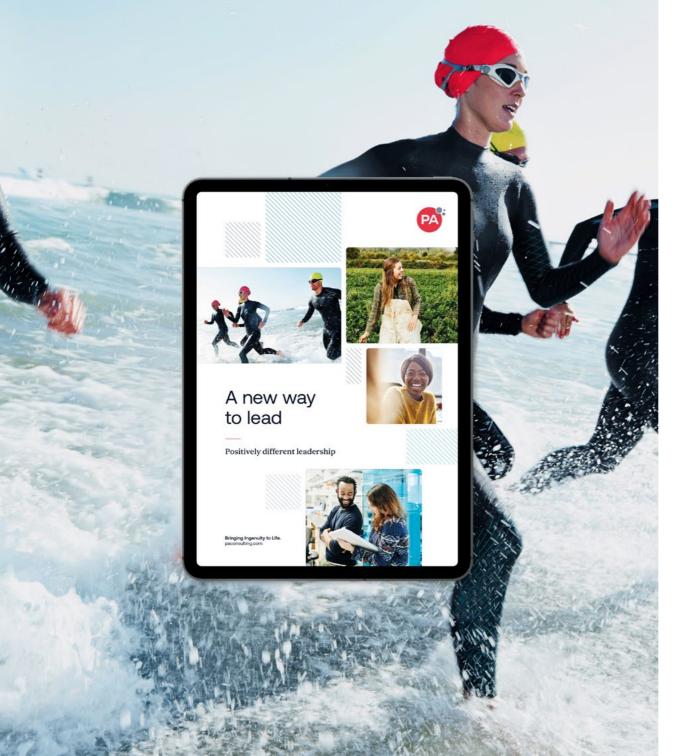
We spoke to over 300 business leaders across the US, UK, and Europe to explore the tangible benefits of bold, brave leadership, and confirmed that there are concrete ways of leading that make a material difference to the health and happiness of an organisation and wider society.

Based on our findings, four behaviours are critical to successful leadership over the next five years: nurture human optimism, empower teams to innovate, build evolving organisations, and seek inspiration in surprising places.

These leadership behaviours are linked to five focus areas:

- 1 Work in the growth zone: think beyond the comfort zone and move beyond silos
- 2 Cultivate kindness: allow people to try new things and work at their best
- 3 Catalyse your internal disruptors: embrace and include new thinking, at all levels
- 4 Make authenticity everything: showing up as yourself gives others permission to do the same
- 5 Create and embrace liminal spaces: find the in-between places.

Leaders are critical actors in building resilient, innovative teams, and they can do this most effectively by embracing a new way to lead.



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Leaders build innovative and resilient teams by embracing a new way to lead.

www.paconsulting.com/ a-new-way-to-lead



Safer societies >

Be it our homes and families, the technologies we use, or wider geo-political uncertainty, security is the foundation of our individual and collective success. Facing the future with confidence calls for an adaptable response to fast-evolving threats across the security ecosystem.

For organisations to gain an operational edge, they need to be every bit as adaptable and innovative as the threats they face. Our team worked with the Defence Science and Technology Laboratory, a specialist division of the UK Ministry of Defence (MOD), to apply quantum technologies to the process of human decision-making, enabling quicker, more informed decisions in a complex military environment.

Balancing human-led and automated work is key to improving decision-making and enhancing safety. At Sellafield, Europe's largest nuclear site, a deep knowledge of data science, and regulation enabled us to create AI-based models that cut the time for engineers to act on critical issues by 90 percent.

In times of uncertainty, the role of regulators as a stabilising influence on businesses and markets is paramount. This was the focus of our latest *Rethinking regulators* research, which revealed that as geopolitical, environmental, and economic risks come to the fore, consumers feel less protected. Our report outlines three steps to help regulators 'reset' to better protect consumers and businesses, and to encourage economic growth. →



Defence Science & Technology Laboratory

Making better, faster decisions with more human impact through today's quantum computing technologies

Fast and accurate decision-making is crucial to ensuring the best use of resources within defence and security, and ultimately, keeping people safe. And while humans are an essential part of the decision-making process, scenarios are becoming increasingly complex for humans alone in a fast-paced world.

The UK's Defence Science and Technology Laboratory (Dstl), has a mission to advance UK capability through the development and application of novel or innovative science and technology. Our team has been working with Dstl and the wider Ministry of Defence (MOD) for many years on a range of new technologies to build understanding of its operational challenges.

Our prior experience in operational analysis, the mathematics of decision-making, applied physics, and quantum computing techniques has allowed us to identify the opportunity for a new approach to using machines to support human decision-making. The solutions we proposed were rooted in a hybrid of classical and quantum computing techniques transferred from our experts in the financial sector and applied to defence-related challenges.

Funded through the MOD's Defence and Security Accelerator (DASA) — the government organisation that finds and funds exploitable innovation for a safer future — together we created prototype tools to help make better decisions, faster while keeping the essential elements of human decision-making. Future evolutions of these tools are expected to play a key role in improving many decision-making processes across the MOD, lowering risk, optimising resources and, ultimately, keeping people safer. This work also helps position the UK at the forefront of practical quantum algorithm development.



Sellafield Ltd

Harnessing AI to improve safety

Engineers at the Sellafield nuclear site have to check legislation and regulations for changes that could mean they have to update their own documents, and associated processes, which govern how they operate. Sellafield's licence to operate depends on its processes keeping up with laws and regulations. The processes of checking for changes and working out how much they matter to Sellafield can take up to two weeks per document. We worked with Sellafield's engineers to build an AI application that cuts this time to minutes.

Combining natural language processing and machine learning, the application automates checks for changes to laws and regulations, a time-consuming and specialised job.

It also highlights links between the legal and regulatory documents and Sellafield's own, flagging the most relevant ones and prioritising them. This means engineers can spend more time on the most important work: deciding how to update their own documents. The work has cut the amount of legal and

regulatory text engineers have to read by 90 percent and made the team 20 percent more efficient.

As well as saving time and boosting efficiency, the application has created a clear audit trail of changes in legislation and regulations, and how they affect Sellafield. This makes it easier to develop new engineers and reduces the risk of experienced engineers not transferring knowledge before they leave.

INSIGHT

Rethinking regulators Staying ahead in a volatile world

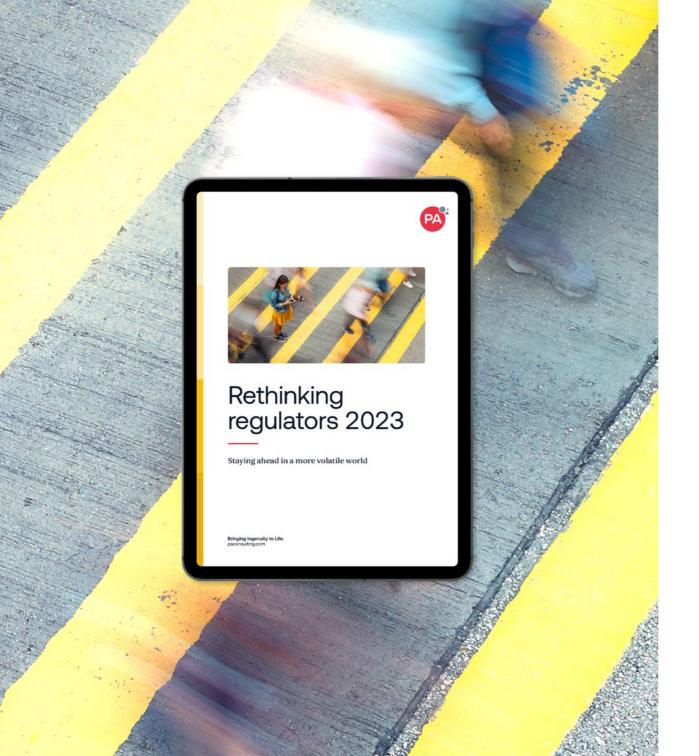
Regulators exist to protect people from harm and promote effective markets.
Recent geopolitical, economic, societal, and environmental challenges have complicated what is already a deeply complex task.
However, volatility also opens the door to new opportunities, whether it's ideas, technologies, or business models.

We combined our experience of working with approximately 40 regulators with a quantitative survey of 2,000 citizens and over 500 people in regulated businesses to understand the regulatory landscape and its stakeholders. Our research explored how regulators can produce the right regulation at the right times and streamline the delivery of effective policy.

We found that, despite a turbulent global backdrop, regulators are viewed as a force for good and a guiding light through choppy waters. Our report outlines three steps to help regulators 'reset', enabling them to better protect consumers and businesses, and to encourage economic growth:

- · Re-examine your remit and priorities
- Walk in your stakeholders' shoes
- Adopt platform thinking.

Forward-thinking regulators are already showing that it's possible to develop regulation and policy in new and smarter ways.



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Regulators have a duty to innovate, while protecting businesses, markets, and consumers.

www.paconsulting.com/ rethinking-regulators



Sustainable world >

As 2030 — a major milestone in the journey towards a net zero world — approaches, the need for organisations to cut their carbon emissions and contribute to limiting the global temperature rise to 1.5°C, is increasingly acute. From tackling worldwide plastics use to capitalising on renewable energy classes, the necessitated response from us all creates opportunities for organisations to both better themselves, as well as help deliver better outcomes.

Securing a prominent project to bring clean energy to US shores was a long-held ambition for offshore wind development company, US Wind. In seamlessly pooling expertise in analytics, regulation, and energy policy, we enabled US Wind to punch above its weight and prepare a winning bid to deliver offshore wind for the state of Maryland against tough competition.

In an effort to reduce single-use plastics, we've partnered with Swedish company PulPac. Together, we're seeking to transform the packaging industry with an innovation production method that turns generic pulp from cellulose into packaging, with multiple use cases including replacing plastics in medicine packaging and drinking bottles.

In the retail market, energy supply can be a contentious issue, where pressures including affordability, evolving regulation, and ensuring a competitive market, collide to produce a market in a state of flux. We partnered with *Utility Week* to identify what immediate action can be taken to enable the energy retail market to deliver for customers while meeting net zero goals. →



US Wind

Developing a winning bid to deliver offshore wind power

Investing in the development of renewable energy sources continues to increase in importance, with leading countries committing to reducing their impact on the environment and guaranteeing energy security. This is why ocean waters around the United States are hot property as offshore wind becomes the nation's next major energy source.

There are over 10 offshore wind projects in the pipeline between now and 2026, with multiple developers vying for a slice of seabed and the opportunity to deploy capital into wind farms.

US Wind is one such player in the nascent American offshore wind market. With a lease secured to develop 80,000 acres of seabed, it needed an expert partner to support its bid submission. This meant defending the bid in front of regulators at an acceptable cost to state ratepayers who would foot the bill.

US Wind needed an expert advisor to analyse the rules and regulations that impact the cost of energy and benchmark against potential competitor bid prices. Our team brought the right blend of expertise across market rules, regulations and potential future outcomes to ensure the project could be delivered. Through our deep understanding, we enabled US Wind to secure the project against more experienced European competitors.

US Wind is now in a position to deploy \$3.4 billion of capital into a project that will create 1,300 jobs in the state of Maryland and propel its status as a significant player in the US offshore wind industry.



PulPac

Creating an alternative to single use plastic packaging in everyday consumer items

PulPac, a Swedish R&D and IP company, is seeking to transform the packaging industry with an innovative production method that can replace single use plastic at cost parity. The patented approach uses less energy and water than similar methods, making it cost effective. And the material — generic pulp from cellulose — is a renewable resource.

With expertise in end-to-end innovation and sustainability, and a legacy of accelerating new product and packaging concepts to market, we've partnered with PulPac to become their development and scale up partner for global

brands. We're helping them develop their products while leveraging our relationships as an advisor to the world's largest consumer and packaged goods brands, to grow their market share. Our work to date has included enhancement of their technology, IP development, advising on product design, and building market demand for their products.

One example is the opportunity to cut back on the more than 100,000 tonnes of plastic medicine packaging every year. In 2022, we launched a Blister Pack Collective to use PulPac's technology to provide a recyclable and sustainable fiber alternative with minimal use of plastic to traditional non-recyclable PVC (Polyvinyl Chloride) blister packs.

And, looking to 2023, we're planning to launch the Bottle Collective, to create an alternative to single-use and commodity plastic bottles, which would be applicable to multiple products and categories. Our mechanical engineering, design, automation, and material sciences teams are developing functioning prototypes. And we're looking to welcome leading brand partners into the Collective.

INSIGHT

Energy reset

Creating sustainable business and prices

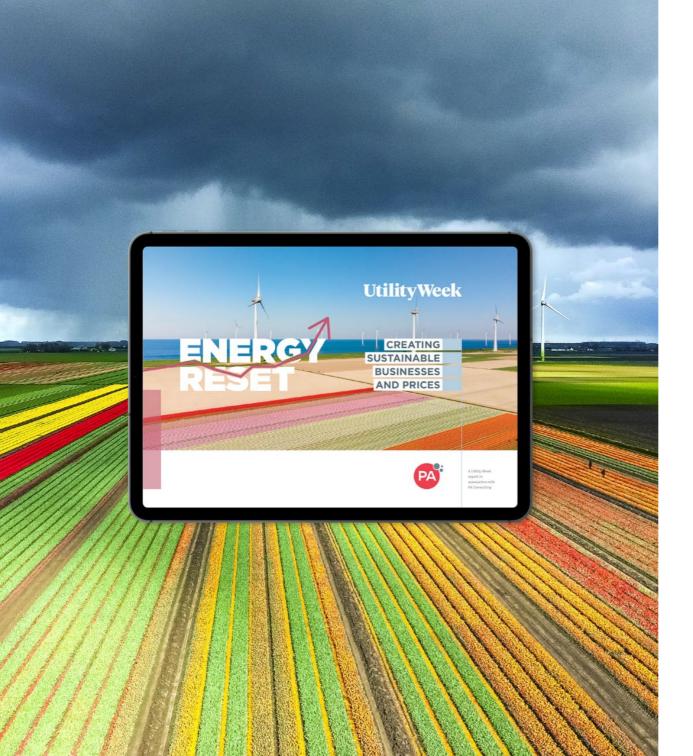
In recent years, energy retailers — both new and established — have had to examine the fundamentals of their brand, customer service, and technologies which have redefined customer choice for the better. However, multiple business failures in the energy retail sector have demanded a hard look at the causes and potential solutions, namely the need for wide-reaching market reform.

In partnership with Utility Week, we examined the UK energy market, identifying key reforms that will enable the energy retail market to deliver for customers while meeting net zero goals. Drawing on the insights of over 20 PA energy and utilities experts and leaders from energy retail, the energy regulator in

Great Britain, and consumer and trade bodies, our report explores five key themes:

- 1 Affordability act before it's too late
- 2 Regulating for fairness
- 3 What does competition look like in the future?
- 4 Wholesale market reform sending all the right signals
- 5 Security of supply moving beyond targets.

Immediate action can be taken to ease affordability pressures, and evolve regulation and wholesale markets, ultimately ensuring a healthy and competitive energy retail market.



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Through reform, energy industry stakeholders can alleviate economic uncertainty.

www.paconsulting.com/ energy-reset

People

Celebrating LifeAtPA

Our people are our inspiration. Every day, our multidisciplinary teams bring collective knowledge and insights that enable our clients to solve the world's most complex challenges.

We are as committed to making PA a great place to work as we are to delivering great outcomes for our clients. It's why we've created a culture that's collaborative, diverse, inclusive, and rewarding, where our people feel valued and motivated to do their best. \Rightarrow

SPOTLIGHT

Helen Mullings Chief People Officer





For me, nurturing a high performing team has been the highest priority. That starts with ensuring we have a diversity of perspectives and a blend of expertise. And extends to creating an outstanding workplace culture.

Why do I love working at PA? Cliché as it sounds — especially coming from a Chief People Officer — it's, you guessed it, our people. I know, everyone says that. Yet look at just who is part of this incredible organisation and it'll soon be evident that our people really are unique. They care deeply for our clients, for one another, and for our communities.

I want to tell you a bit about our team: there's the scientist who is revolutionising cell and gene therapy; the clean energy expert who is passionate about ensuring their clients understand how to make use of the latest disruptive technologies; and the UX specialist who is passionate about creating stunning digital customer experiences on the web for recognisable brands.

For me, nurturing a high performing team, while building an organisation where people thrive, are my highest priorities.

That starts with ensuring we have a diversity of perspectives and a blend of expertise. Bringing together people from many walks of life enables our teams to grow through collective knowledge, and to provide our clients with an innovation offering that's end-to-end. Forging a high performing team also extends to creating an outstanding workplace culture; one that's inclusive, prizes wellbeing, recognises individual and team achievements, develops people to be their best, and allows everyone to bring their best self to work.

I'm lucky. I have one of the greatest seats in the house. It's been hugely rewarding to witness our people excelling in their roles and making a positive impact. To our people, thank you for helping make this an incredible place to work. And to our clients, we're committed to continuing to give you the very best expertise for the task at hand. Together, we're bringing ingenuity to life.



Growing our team of ingenious people

Our people are our greatest asset, and more talented people are recognising PA as a great place to build their career. In 2022, we welcomed over 1,300 new colleagues and over 50 new partners.

We scaled our teams in areas including renewable energy, digital transformation, and sustainable consumer goods, and further enhanced our expertise in disciplines such as growth strategy, science, engineering, and design.

In fact, design is a cornerstone that sets PA apart in the industry. In welcoming Design Partners to the family, we've yet again strengthened our global design capacity with award-winning capabilities in product design, innovation, and customer experience.

In the US, our team at The Cambridge Group provides us with added expertise to serve clients in the consumer retail and healthcare sectors. Their proven experience in growth strategy, market activation, and pricing aligns perfectly with our end-to-end positioning. It also provides us a new office base in Chicago — a major market hub, with more opportunities to deliver innovation and growth for our clients.

With these new teams, we're delivering unique skills at scale, increasing our presence in key client markets, and providing our people the chance to work alongside colleagues with incredible backgrounds and expertise.



Supporting our people to bring their best selves to work

Providing a working culture that's genuinely inclusive and diverse is so important to us. We know that when you bring together people with different perspectives, backgrounds, and expertise, ingenuity can flourish. That's why we're committed to creating an ever more inclusive and diverse place to work, where everyone feels supported and can thrive.

It starts with our recruitment practices that prioritise identifying diverse talent and extends to our employee network groups, which continue to celebrate, educate, and raise awareness on diversity topics. Our RISE (Racial Inclusion & Social Equity), Mental Health & Wellbeing, PRIDE, Women's, and Military Networks have each delivered impactful and inspirational campaigns for our people. These include the Lend an Ear campaign to promote honest conversations about mental health and wellbeing and a partner panel event hosted through our

RISE Network to support the launch of mentoring sessions across our offices.

The physical and emotional wellbeing of our people is paramount. Throughout the year we helped people look after their mental, physical, financial, social, and career-related wellbeing. For example, regular #LifeAtPA events, organised by our champions and networks, gave our people the opportunity to learn and grow, with events focused on topics such as men's mental health, financial wellbeing, and menopause, as well as through talks from inspirational guest speakers, including former women's professional football player, Alex Scott, on career progression.

We were thrilled to see our Women in Tech team win the 'Best Employer Network' category at the Women in Tech Employer Awards 2022, for their work to proactively build an inclusive community, provide learning and development experiences, and drive opportunities for women in Science, Technology, Engineering and Maths (STEM) careers.

In 2022, we introduced our Working Families, Neurodiversity and PA Jewish communities, to better support and represent our diverse workforce.

We're committed to ensuring equity of opportunity, regardless of gender. We have galvanised our efforts to improve gender parity at PA, including the representation of women at partner level and in other senior roles. Underpinning this is an Inclusion & Diversity aligned recruitment strategy supporting diverse representation across our organisation and at all career levels.





Recognising our team's achievements

Our purpose guides how we make decisions, work with our clients, and make LifeAtPA ever better. Our people are a continuous reflection of this, inspiring our clients — and each other — to think in bold, new ways, and re-imagine what's possible.

Our Purpose Awards — now in their second year — celebrate the different ways we tackle the world's toughest challenges and seize its greatest opportunities.

Winners included our team who partnered with Affinity Water, a UK provider of drinking water, to help it tackle excess water leakage, with the team devising a unique pressure testing technology to detect and prevent

leakages of up to 20 million litres. In Denmark, Line Fryd Hofmansen helped reduce a supermarket retailer's environmental impact with a global plastics packaging strategy. And we recognised Margaret Ekpo for establishing a mentoring programme that has seen more than 200 young people matched with PA mentors. For her efforts, Margaret Ekpo was also awarded the 'Mentor of the Year' at the UK Social Mobility Awards.

Beyond Purpose Awards, our teams earnt critical acclaim for our exceptional design work, receiving high-profile awards at the Industrial Designers Society of America (IDSA) Awards, including a Special Achievement recognising our work creating

industry-leading products for Nike, Microsoft, Logitech, and more. We were also honoured in Fast Company's 2022 World Changing Ideas Awards for two sustainability-led client projects, including applying our digital analytics and business intelligence expertise to help start-up, Green Boom, take its patented solution for reducing and cleaning up oil spills to market, as well as our collaboration with Cambridge University Hospitals NHS Foundation Trust leading the creation and delivery of a roadmap to put an end to plastic waste.

Supporting our communities

Our desire to build a positive human future extends to the communities in which we live and work.

Through our PA in the Community volunteering programme, our people gave over 10,000 hours of their time and expertise. The programme develops and inspires people, particularly those facing disadvantage, to be the innovators and leaders of tomorrow — through education and skills training, direct mentoring, and with opportunities to apply their ingenuity to solve the world's biggest challenges.

During the year, our Springboard work experience programme in the UK and US gave students from diverse backgrounds the opportunity to develop valuable skills. We also challenged students to identify ingenious ways to accelerate the energy transition through our renowned Raspberry Pi competition, and trained women in digital skills to address the gender imbalance in technology careers through our Women in Tech network. At the same time, we strengthened our long-term connection to the military through coaching people transitioning out of careers in the armed forces.

With the UK's Royal National Institute for Deaf People (RNID), we provided strategic advice on improving access and outcomes for people with hearing loss. And in Norway, we worked with CARE Norway — a development and emergency aid organisation that fights for the rights of disadvantaged women — to demonstrate how artificial intelligence can support their work to reduce gender bias.

Always seeking to scale our impact, last year we established The PA Foundation, whose mission aligns with our communities focus. The PA Foundation will distribute £10 million through 2026. In its first year, it distributed more than £1.2 million to 20 charity partners located in the places we live and work. These charities are addressing concerns we're passionate about, like educational access, STEM, and social mobility.

Yet more than just financial support, The PA Foundation provided a platform for our people to get behind the work of the charities it supports. Highlights of the year included delivering training to help refugees to restart their careers in the US with Upwardly Global, to helping students navigate career options with Making the Leap in the UK.





Being a responsible business

We take pride in our innovative work to accelerate our clients' response to climate change, including developing and scaling green technologies, driving sustainable supply chains, designing sustainable packaging, and much more. And in our own commitment as a company to halting the devastating effects of climate change.

In the past year, we submitted our targets for how we'll help limit global warming to 1.5°C to the Science Based Target initiative and shared details on our commitment to achieving net zero as a business by 2040. We also continued to make progress towards reducing our direct emissions. We're introducing energy

enhancing improvements to our Global Innovation and Technology Centre, our only PA-owned building, which is home to office, laboratory, studio, and manufacturing test spaces. We also unveiled a new programme to make owning or leasing an electric vehicle significantly more attractive to our people.

We understand the power of collaboration and take seriously the unique position we're in to spread our knowledge on climate response as wide as possible. Through our partnership with the World Economic Forum Global Freshwater Challenge, we're supporting a burgeoning community of 'aquaprenuers' to fund and grow innovations that can clean

and treat polluted water in water-stressed countries. As the United Nations Global Compact's disruptive technology partner, we're co-developing a comprehensive learning programme to educate and inspire the Compact's global membership on how to employ innovation and technology to speed progress towards the Sustainable Development Goals. And in the media, we've shared our expertise on topics ranging from greener ways to access water, to the need for boards to ensure that the role of Chief Sustainability Officer (CSO) sits at the core of their business strategy.



About PA

We believe in the power of ingenuity to build a positive human future.

As strategies, technologies, and innovation collide, we create opportunity from complexity.

Our diverse teams of experts combine innovative thinking and breakthrough technologies to progress further, faster. Our clients adapt and transform, and together we achieve enduring results.

We are over 4,000 strategists, innovators, designers, consultants, digital experts, scientists, engineers, and technologists. And we have deep expertise in consumer and manufacturing, defence and security, energy and utilities, financial services, government and public services, health and life sciences, and transport.

Our teams operate globally from offices across the UK, Ireland, US, Nordics, and Netherlands.

Discover more at <u>paconsulting.com</u> and connect with PA on <u>LinkedIn</u> and <u>Twitter</u>.

PA. Bringing Ingenuity to Life.



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