Peak: Construct Zero
Business Champions – Questions response

1. Why is making progress on Net Zero important to your business?

Peak is one of Europe's fastest growing technology companies, and we work with some of the world's biggest brands across retail, manufacturing and CPG. We have carved out a niche in construction supply chain, and help both merchants and manufacturers to drive improved business performance. We have a mission to change the way the world works by democratising Decision Intelligence and AI for every business and by building a great company that everyone loves being a part of. It's equally important for us to put Decision Intelligence into the hands of every business, but equally to create a great culture.

For our customers, we want to enable them to grow and compete where they otherwise wouldn't, to create jobs and prosperity. We want them to become more sustainable and deliver a fairer future, where the best technology is available for all and not just the preserve of a select few.

For Peak employees, we are looking to create an environment of innovation and entrepreneurial spirit, where our team drives the business to succeed and feels empowered to make a direct and meaningful contribution to our success on a daily basis. An environment where, most importantly, we enjoy the work that we do.

Peak's has a very young and forward-thinking team, and whilst we continually aim to be great and not just good, we also acknowledge that we have much wider responsibilities. The work that we do for our customers can be truly transformational, however, we would be letting ourselves down if it was solely used for commercial gain. The brilliant technology that we have created can also be used to deliver significant environmental benefits – and we need to make sure that they realise this and act upon it.

Overall, Net Zero is hugely important to us – it will have the biggest impact on our team in years to come, and it's embedded in our culture.

2. Which of the 9 priorities are more relevant to your business and clients and why?

While Peak offers an array of AI-driven solutions for our customers, there are three key use case areas that fit in with the priority list. These are...

Priority area 1) Maximising use of Modern Methods of Construction and improved onsite logistics, reducing waste and transport to sites

Peak has developed proprietary vehicle routing technology called Beatroute. It combines best-in-class routing with predictive capabilities, allowing any company that is operating a fleet to better understand customer demand and project progress. We then augment our algorithms with external data such as weather, as well layering in numerous unique business constraints, to ensure that vehicles are more productive and travel fewer miles. It essentially means that our customers can do more with less, and reduce carbon emissions from their fleets.

Peak has delivered this solution for Mick George, who are a leading supplier of aggregates to the construction industry, and complete around 2000 jobs each day. Within three months Beatroute has created substantial efficiency gains, including an 8% reduction on miles travelled per job and an increase of 23% capacity.

We have recently presented the solution to CRH, who are one of the world's largest suppliers of concrete and aggregates. We entered into their Sustainable Innovation Forum and finished 4th out of 180 companies. As a result, we will shortly commence a proof of concept which reduces the numbers of vehicles and miles travelled across their whole fleet.

"Logistics is a big one for us. A big piece of legislation that we have to react to, and one that is a key challenge, is the rise of low emission zones; buildings are in cities, low emission zones are in cities, and we have huge trucks that need to deliver our components and materials,"
"This would be a huge cost to us, so we're going to have to completely redesign a lot of our logistics models to meet these new kinds of legislation that are currently coming through. We could do that through the traditional construction and building materials method of 'trial and error and see how it goes,' but I don't think we'll be here much longer if we do it that way! We're going to have to find some innovative approach to help us do that, and I feel that this environment [AI and machine learning] is the ideal solution for it." **– Richard Frost, Head of Sustainability, Innovation and Risk, CRH**

In addition to the above, Peak also works with leading aluminium manufacturer Aludium. They supply rolled aluminium to the construction industry and operate across five manufacturing plants in Spain and France. A key challenge for them is trying to forecast demand as accurately as possible in order to optimise their operations and reduce excess inventory and associated costs. Due to long sales cycles, and also a six month lead time in ordering slabs of aluminium alloy for their suppliers, it's a difficult balancing act.

Peak has built an intelligent solution which uses AI-driven demand forecasting and informs both production scheduling and sourcing optimisation. The result is that Aludium now know what grade and size of aluminium to make and when. They also know exactly what levels of alloy they should be ordering from their suppliers. In addition to this, Peak also recommends where they can use waste materials created during the manufacturing process, and recycle this to make lower grade rolls of aluminium. Over a full year, **Peak has reduced total transportation costs by 8% and has reduced 400 metric tonnes of waste.**

Priority area 2) Enhancing the energy performance of new and existing buildings through higher operational energy efficiency standards and better building energy performance monitoring.

Peak works with two of the UK's leading real estate companies, Workspace and Bruntwood. They both provide office environments to businesses, from SMEs to large enterprises. Initially, Peak's engagement involved helping these companies to assess inbound sales leads and prioritise those with the highest and quickest propensity to convert; therefore enabling them to drive higher occupancy rates and maintain a higher share value.

During the pandemic, however, with everyone working from home, the need for these types of recommendations became redundant. We therefore worked with both companies to explore different ways of applying AI within their businesses. This includes a focus upon asset utilisation and energy consumption across their tenant base, aiming to identify how different sized companies using different office spaces were being affected by their utilisation. The analysis so far looks at patterns between higher growth companies and is aiming to see if we can introduce IOT technology to reduce energy usage when it is not required.

Priority area 3) Support development of innovative low carbon materials (prioritising concrete and steel), as well as advancing low carbon solutions for manufacturing production processes and distribution.

Peak works with one of the world's largest sealants and adhesives manufacturers and is engaged with numerous projects which will improve production throughput and stock availability. We also have a separate R&D focused project which uses machine learning to explore how combining materials with specific properties will influence the quality, profitability and sustainability of the end product; mainly bags of cement.

We are unable to divulge much more information about this due to competitive restraints within our contracts with the customer. We believe that we have the potential to create innovative new manufacturing methods that can become patentable and need to protect the IP which is being developed. What I can say is that our customer's team of young R&D chemists are working alongside Peak's leading R&D data scientist, Dr Darian Raad PhD. Within three months, they have built a model that can predict with 80% accuracy, and our customer feels it has the potential to change the way they manufacture on a global scale.

3. What are doing to make progress against the relevant priorities (of the 9) in the short and long-term? (Could include targets or milestones)

As a service provider, rather than being a merchant or manufacturer ourselves, our answer is slightly different to this question. For us, the key is to deploy these solutions for our customers and demonstrate the significant uplift that we are creating. It then allows us to repeat the solution for more and more businesses and help them achieve the same benefits. We are also committed to delivering continuous improvement on any algorithm or solution that we develop, so that we drive constant innovation and uplift in results.

For Peak, our responsibility is to raise awareness of the importance of the work we are doing, why sustainability is important and how AI can have a huge impact upon it. This means we put a lot of effort into marketing and prospect engagement to create relevant content. Take a look at the below to see some examples of our sustainability-focused content:

https://peak.ai/hub/blog/ai-in-construction-masters-of-ai-review/

https://peak.ai/hub/blogs/?series=113

4. How have you helped your supply chain understand what is required against the 9 priorities?

As a technology business, Peak's supply chain is relatively lean. However, we do rely largely on cloud infrastructure to host our platform and our customers' data. To do this, Peak partners with the world's leading cloud provider, Amazon Web Service (AWS).

AWS has a long-term commitment to using 100% renewable energy and aims to achieve this by 2025. When companies move to the AWS Cloud from on-premises infrastructure, they typically reduce carbon emissions by 88% because their data centres can offer environmental economies of scale.

5. As a business leader what do you think the biggest challenge is and how are you working to overcome it?

For Peak, the biggest challenge for us is that our customers are mainly revenue and profit-driven. Although sustainability targets are increasingly being mentioned and form part of our customers' strategic objectives, it is still very much an afterthought.

At Peak, we continually question our customers to understand the key metrics that they use as business, and everyone is geared towards improving. Most people can quickly tell you what their OTIF targets are or what their ROCE targets, for example – but when you ask about reducing carbon emissions, there are rarely any metrics in place.

We feel that this needs to change quickly, and that a universal set of metrics should be put in place for the industry. Firstly, to help them understand where they currently are and where they need to get to, plus also how to address any problem areas. Secondly, so that individuals can take ownership of these areas and see how their contribution has a direct impact against these targets.

At Peak, we are now working with some customers to help them realise what the carbon savings we generate actually mean. Our data science team have set up a specialist workgroup to address this, and the diagram below shows the initial efficiency gain that we have delivered for a leading CPG manufacturer. While we have reduced their number of journeys by over 200k miles per annum, we are trying harder to illustrate the environmental impact that this has.

As well as the above, Peak is working with AWS to extend our 21 day challenge series. So far these have been small projects where we have taken data from prospective customers and shown them how we can use AWS technology to solve problems around forecasting and personalisation in just 21 days. Our next phase will be a 21 day sustainability challenge, and focus upon CO2 reduction benefits.

6. In your view, what is the one innovation or change that is going to have the biggest impact on carbon or progress in our industry?

Very simply, building materials manufacturers and merchants operate in a very fragmented world, where data is siloed and decisions are made based upon experience and intuition. This results in lots of sub-optimal performance across the value chain and the entire industry, which encourages waste. If construction and its supply chain were able to collaborate more effectively and share data, it would have a huge impact in reducing this.

7. What do your peers and wider employees within your company think about the businesses' approach to Net Zero?

It's something that we're all bought into, and is an integral part of Peak's culture. We have a responsibility to leave the world in a better state than we found it, and that is something that the team takes very seriously. A number of key initiatives have now been set up to make sure that we get our own house in order. The first major step has been the commencement to achieve B-Corp certification. This will ensure that we are measuring our own environmental and social impact and that it is placed at the top of our strategy, alongside other company growth targets. It means that, for the first time, we are having to understand our own carbon emissions and continually monitor them. The CSR team have created the following plan...

2021 plan

These are (roughly speaking) listed in priority order.

	Q2	**Q3**	**Q4**	**2022**
Environmental Standards	Start subgroups to coordinate how to start capturing metrics - Bruntwood partner - Indian landlords partner - AWS partner	Enter first metrics into B-Corp questions Create environmental policy Create environmental	Continue reporting impact Define targets for 2022 and beyond Company has a written policy	*Facilities are designed to facilitate use of public transportation, biking, or cleaner burning vehicles (e.g. electric chargers)*

	- Finance team - People team Start measuring metrics - carbon emissions - energy - water - waste Start to measure reductions in carbon emissions from our customer solutions - CO2 saved/offset by product/service (metric tons) - Metric tons of waste saved from landfill or incineration	standards for - our offices/IT - our supplier processes Start energy conservation or efficiency measures for the majority of our corporate facilities - Equipment: Energy Star appliances, automatic sleep modes, after-hour timers, etc. - Lighting: natural light, CF bulbs, occupancy sensors, daylight dimmers, task lighting, etc. - HVAC: programmable thermostat, timers, occupancy sensors, shade sun-exposed walls, double-paned windows, etc. Employees are encouraged to use virtual meeting technology to reduce in person meetings	limiting corporate travel Employees are subsidized/incentivized for use of public transportation, carpooling, or biking to work Championing local supplier for sourcing	Water conservation methods implemented through our
Giving back	Choose the charities/good	Track volunteer time in CSR		

	causes that we support	days		
Our offices		Being recycling activists as move back in offices Start implementing green initiatives in offices Create and send out travel survey for travel methods to offices	Track green initiatives to reduce energy, water, waste consumption in office e.g. disposable cups eliminated Analysis on travel survey. Create a sustainable travel plan which increases 'smart' travel modes & reduces carbon emissions.	
Our Technology		Ensure laptops, batteries are disposed of according to new policy Track PCs sent for re-use or recycling	Best practices in DS and Engineering to reduce carbon emissions from cloud servers	
Our Supply process		Track local sourcing of all procured		
Education		General guidance for - employees - managers - purchasing		

8. How are the younger generation within your business engaged in this?

Peak is a very young and forward-thinking company and operates with a flat hierarchy. The majority of our 180-strong team are millennials, and we trust them to independently come up with ideas that are then put forward and can be universally accepted. We have a dedicated CSR team and also a diversity and inclusion team – and anyone is able and encouraged to volunteer and join these steering groups so that they can put ideas forward. Peak prides itself on its unique culture (see supporting brochure) and that means including all members of the company, irrelevant of age or position.

9. What more could your business be doing against the 9 priorities

I think this is difficult to answer as we aren't a manufacturer or merchant. However, I do believe that we could be developing more AI solutions that are specifically aimed to reduce carbon emissions. I have an idea to launch a specialist division within Peak which will only focus on environmentally beneficial projects, called SustAInable.

10. A Youth Voice COP climate is being organised in Milan to bring together young people globally- what would be your key issue to raise?

Construction supply chain is generally led by an older male audience who have developed successful ways of working spanning decades. These individuals are very good at hitting financial targets, but are not necessarily fully motivated to drive sustainability. What can be done to change this and introduce fresh thinking and innovation?

11. What do you do in your daily life/job that makes a difference?

I have taken personal responsibility to engage our customers more about the sustainable benefits that AI can deliver, and the long term impacts that it will have. This includes creating my own events, sponsoring recent BMF events and also entering us into the Business Champions forum in a bid to raise awareness and ensure that sustainability in the sector is taken more seriously.