# Inside Octopus - Kraken and E.ON

**Russ:** [00:00:01] Thanks for downloading Inside Octopus. My name is Russell Goldsmith and for this episode, once again we welcome back our CEO and founder Greg Jackson but joining the two of us online from Essen in Germany is Dr Karsten Wildberger, Chief Operating Officer for Commercial at E.ON. Now for those wondering why we’ve invited someone from another energy supplier onto our podcast, it probably makes sense for me to explain that E.ON is in fact a major licensee of Kraken, the technology platform delivered by Kraken Technologies, which is a subsidiary of Octopus Energy Group. Back in March 2020, E.ON began a huge transformation project with Kraken, migrating their UK residential and SME energy retail businesses onto the platform and so I thought a good place to kick off this episode is for you Karsten to just explain why you chose Kraken Technologies as a partner?”

**Karsten:** [00:00:52] Thanks, Russell. Well, in the UK, E.ON had a massive problem at hand. So, we are a large retailer, not just with E.ON itself, we also acquired Innogy, which was our competitor, and they had a retail business called Npower in the UK. And actually, both retail businesses were struggling big time, Npower in particular. And at the core of our problem was a very poor customer experience because we were running our business based on old technology. So basically, at hand, we had a massive I.T. problem which we didn't know how to solve. Npower was not sustainable as a business. It was loss making a quarter of a billion euros losses at that time per year. So massively loss making. And we had to find a solution to that problem. We were thinking about our own E.ON Platform. But then decided to think out of the box and said, do we find a technology company that could help us? And first we started to look at usually the big guys, the big IT companies, none of them could help us. And of course, we were looking at Octopus and Kraken Technologies from afar, and that's how it started. And what E.ON NEXT is about is actually creating a completely new home for more than 8million customers from scratch based on a best-in-class world class technology. That's what we are building, a new retailer.

**Russ:** [00:02:21] Before we understand what the work that you've done with Kraken, how that's gone through. Why do you think the other technology providers were struggling to help you?

**Karsten:** [00:02:29] Well, I think, you need to be a bit of a maverick to embark on such a journey. And you need to be courageous. I'd say, this is an entrepreneurial task that we wanted to embark on as a large company. And so, this requires an entrepreneurial spirit and I think that's what you often do not find in large organisations, which we did find with Octopus and with Kraken.

**Russ:** [00:02:52] So, just over a year on at the start of May, you've completed the migration of all the Npower customers to E.ON Next, which I understand has been done in record speed. How would you reflect on the partnership so far?

**Karsten:** [00:03:06] It's gone much, much better than I was had ever hoped for, it's second to none, and I think the results demonstrate this, this can only work on a basis of a fabulous partnership. And today we have actually more than 4 million accounts, which is the driver of complexity so meters on the system, almost 2.8 million customers. So also, more than half a million on the E.ON side as well, not just Npower, but we are now filling, kind of creating E.ON Next from both sides, from Npower and from old E.ON. And it's gone really, really well. I think it's based on really good, strong relationships, a very hands-on governance. I think everyone gets their hands dirty, very fast decision making. And it's an atypical project for a corporate that's a success.

**Russ:** [00:03:58] Can you just expand on the magnitude of the success that's been delivered here?

**Karsten:** [00:04:02] Well, this project is really massive and it's something I haven't heard of before, actually, and it's a privilege to be part of it. So, what have we done? In the past, Npower tried to migrate onto a new platform many years ago. It took 11 years and didn't succeed in the end. We've now migrated the whole of Npower onto the Kraken platform within 11 months. And I would say flawlessly at extreme speed, learning, fast, adopting, developing the software further and at the same time building in peril a completely new organisation. And when we started, we rented space in Leicester, we couldn't use the space because of Covid, so we had to hire and train and work with more than 1000 energy specialists today, all done remotely from the home office. And at the same time, we are still operating an old company that is being wound down now. So, we're basically doing everything at once at record speed, in Covid times, and I can't be grateful enough to the people who are doing it and without their capabilities, passion and what they put into it, it would just not be possible. But maybe, Greg, you have something to add here?

**Greg:** [00:05:30] First of all, the backdrop is interesting in that, technology projects of this scale usually go wrong, often very badly. According to McKinsey, two thirds of them go wrong, typically with a cost overrun of 66 percent, a schedule over run of 33 percent, they fail to deliver the benefits by a factor of at least 17 percent. And in fact, I think 17 percent of them threaten the very existence of the company. Right. So, you know, you don't embark on these things lightly. I think then they tend to take a very long time. I mean, I think we said it 11 years, the last time Npower migrated, and this was done in 11 months in a pandemic. But I think this isn't a coincidence. Most technology platforms are designed for business as usual, and migration or transformation is an afterthought. And yet it's the migration that kills you. So, I think when we built Kraken, we always built it with migration in mind and the team here have now run, I think, 15 migrations and it's kind of proven to be a migration machine. Now, that's been exciting. But despite the tag and despite that degree of delivery compared to what one would ordinarily expect, I think the point you were making at the end Karsten about the team is ,we can't make it strongly enough, people have sweated blood to keep this incredible project on schedule and delivering outstanding results for customers. And I think there's a philosophy behind that, because if you're going to do these things, the faster you do them, the safer, as long as they're well designed and conceived, because the world will change less during the process. And I think very often people build these kinds of long buffered timelines. But as we got the buffer, you use the buffer and then the world changes and suddenly your project has to change and the team changes. By doing it so fast, I think we've actually increased the chance of success. But that's only been possible because of the commitment of so many people. I wish I could name them, but it wouldn't be fair because as soon as I name one. I'm thinking of the next and the next and the next. And I know we can't name them all this time, but you know who you are and you're heroes.

**Russ:** [00:07:44] Have you had any response back from your customers as well?

**Karsten:** [00:07:47] Well, we measure it every day in real time. We have Trustpilot online and we look at every single debate and customer rating and it's very, very strong. But, you know, what's most important is our people. And our energy specialists and when they speak about serving the customers, working in this new environment, working on different processes, having the digital tools now to do a better job by the customer, they love it. And I think that's the prerequisite to deliver a superb customer experience. So, our people who serve customers are the ones, in my view, that matter most because they everyday want to do the best job they can. And ultimately then our customers then give us the feedback, which is today, very positive.

**Russ:** [00:08:32] Greg, we talked about Kraken in Episode 2 actually of Inside Octopus when we were joined by your co-founder and CTO, James Eddison, and a couple of the team from Kraken members. But for anyone who hasn't listened to that episode, cand you just give us a quick reminder of why Kraken is so fundamental to the business?

**Greg:** [00:08:48] Yeah, I mean, I think, first of all, it's worth saying Kraken pre-dated Octopus Energy. The concept that we were going to build a platform, a technology platform to help digitise a large global sector came to us before choosing to do it in energy. So, I think we really were a company that set up to build a platform for disruption. And then we chose that the energy sector was the one which I think globally offered the greatest opportunity for improvement through technology. In terms of Kraken itself, the founding team of Octopus, we kind of had built platforms for other companies really dating back to the early 2000s. And what we found was in every sector that hadn't yet been disrupted by technology, most of the companies would say, technology is not going to disrupt our sector because, and they thought they were different. But it always happened. And I think the kind of signs, when you look at a sector that it is right for disruption are, do companies appear to have slow and inefficient processes? Are customers paying more than you'd expect because companies have got big overheads? Is the sector lacking innovation? Is it selling the same stuff? Is it of only engineering new ways of charging customers more rather than ways of changing the products and services that customers can buy? And I think when we looked to the energy sector, it kind of ticked all those boxes. And that said to us that, this sector could dramatically be improved by, a 21st century tech platform and of course, 21st century tech is, it's not about taking the legacy systems that we've all heard of and putting them in the cloud. It's about building something in the cloud from the beginning so that customers, employees, every function within the business can be sitting on the same data. Big data. The machine learning can work alongside people to make the company dramatically more efficient and provide better service for customers and a better experience for employees. And that was what Kraken set out to do.

**Russ:** [00:10:40] What other utility companies that are using the system?

**Greg:** [00:10:44] Well, here in the UK, there's Good Energy as well as E.ON Next. In Australia, there's a couple of companies, Origin, which I think is the largest energy company in Australia, and also a company called Nectr, which is owned by Hanwha, the massive Korean conglomerate. And I think increasingly the idea of Kraken is to be a global platform because, you know, the single biggest thing Kraken can do is help make the fight against climate change faster and cheaper than anyone imagined. And every country faces the same challenges - we've all got to work out how do we electrify our energy system? How do we start using the renewable energy, which is cheap when it's available, but at times when it's not available in ways which are the most cost effecting, how do we move to things like electric vehicles and electric heating? Now there's going to be more change in energy over the next decade than there was over the last 100 years. And I think, Kraken’s job really is to make that as efficient and customer friendly as possible. And if we're able to learn things in one country and reapply into another, that's only going to be better for the planet. And better for consumers, for citizens.

**Russ:** [00:11:53] Sure. Just explain what a partnership like the one that you have with E.ON means to Octopus Energy.

**Greg:** [00:11:59] It's colossally important. Well, it's already too late to prevent catastrophic climate change. The best we can do as a species now is to work as fast as we can to replace fossil fuels with renewables. Kraken makes that easier and cheaper for countries and for companies. And I think there's no way that Octopus Energy alone can drive that. Instead, by taking the technology we've created and then working with the most forward thinking, large, decisive companies that wish to drive change, we can scale out faster than we ever could alone. Karsten mentioned one of the things that's been successful is decisiveness. And I think great leadership requires decisiveness. That's both the leadership of the company and the company's leadership when you're facing into these massive global challenges. And I think what's been particularly effective here has been the rate of decision making at E.ON to do the right thing and to drive the change that we all need. I hope and I'm pretty sure that their decisiveness in adopting Kraken and then implementing it, at such light speed, is actually going to demonstrate to the rest of the world that instead of trying to hold back change, we should drive change.

**Russ:** [00:13:11] Karsten, same question to you, but on the flip side, what does the partnership mean to you? And just listening to what Greg was just saying there?

**Karsten:** [00:13:17] Look, we couldn't have done that ourselves. For me, what is very special about this partnership is that with E.ON NEXT, when you talk with the teams, you do not differentiate, this is Kraken, this is E.ON, this is just E.ON NEXT. So, it's really one team. And as Greg said, at the end of the day, in energy, of course, we serve a much greater purpose. So also, E.ON, with our business model, is 100 percent devoted towards making the energy transition work for all our customers. And all our customers are receiving green electricity today. And this software is very flexible of making sure when a green electron is being produced, that it actually makes it to the customer who actually needs electricity in that moment. And this is quite a delicate problem to solve and if you ask me what makes this partnership so successful and sets all the partnerships that I've been enjoying so far, sets this apart from it, I think are four things which makes that unique. First, I think both companies from the beginning were very clear and aligned on the target picture what we had to achieve, migrate all customers from Npower onto the platform so we can wind down the business. And let's then work on a similar plan for the E.ON business over time, but crystal clear on outcome. The second one is both parties were equally clear on each role we have to play. So, Kraken is very clear on what they play. We are clear about their role, and they are clear about our role and it's complementary. The third one is both have done our homework. So, we had enough time to understand the problem, to understand the technology. And Greg and the team, they were open enough to share everything. We shared everything. So very big openness. And what's then, of course, most important is trust. And that comes down to people, and I think this has worked incredibly well and there has not been one moment where we were not able to solve any issue based on trust, based on a phone call, based on a quick conversation. And it requires sometimes only a handful of people. We then work together and that makes this happen.

**Russ:** [00:15:34] Greg, you were nodding along to everything that Karsten was saying there.

**Greg:** [00:15:38] I was I mean, I think it has been exemplary in terms of the respect that the teams have shown to each other, and that is really hard to deliver when, essentially a lot of people on the outside look in and say, well, these are rival companies. And by the way, when each company feels it is bringing in an awful lot to the table to have respect and understand that you're only able to be as good as each other is an incredible experience. I think what it's driven through this joint commitment is a world in which people have been focused on success as being are customers, getting outstanding experiences? Are we delivering the efficiency that we set out to do and are we delivering against the timetable that we intended? And continually I hear conversations about those three things. Collectively that makes it a much more enjoyable process for the team, because instead of them trying to push water up a hill, every day they're delivering successful results together. In fact, last week I saw one of the Octopus employees who's working on delivering E.ONnext say “Yes, we've overtaken Octopus” because they've now migrated more customers from E.ON onto E.ON NEXT onto Kraken than Octopus has. And I just thought that was a spectacular example of the degree of mutual commitment in this process.

**Russ:** [00:17:06] What's the roadmap looking like then, moving forward for Kraken technologies, Greg?

**Greg:** [00:17:10] People often ask me about that, and I think what matters in Kraken is it is designed to be an incredibly agile platform, that enables us to build towards a wide array of potential futures, and that's incredibly important in a sector, a heavily regulated sector like Energy, because even though we've got our own views about what customers will want and how renewable energy generation is going to change over time and the penetration of electric vehicles like all that stuff, ultimately regulators and governments in the sector will make decisions month in, month out, which changes what a platform has to do. So fundamentally, what Kraken has to be able to do is to be very, very flexible to a world in which, what citizens do may or may not be what we expect and what governments do will change all the time. And you don't want to end up with a sort of a great big spaghetti platform. Instead, what you need to do is have, like an Octopus, has to be incredibly agile to handle all these different outcomes. And really, that is the fundamental of Kraken. Now, we know what direction it's pointing in, its job is to make decarbonisation cheaper and faster than anyone could imagine across the world. And it does that, as Karsten said, by fundamentally understanding that renewables are cheaper energy, but only if we use them right. So, Kraken’s direction to travel is to be able to enable people to use renewable energy in the ways which will be most cost effective, and in doing so, to have the best customer experience possible and that will be whether they're an Octopus Energy customer an E.ON NEXT customer or an origin customer in Australia.

**Russ:** [00:18:47] Do you have a target in terms of how many accounts you want to see on the platform by a certain date?

**Greg:** [00:18:51] You know, it's really funny. I definitely wanted to give people a sense it needs to be big. So, I put the number out there, 100 million accounts by 2027. I don't know is that under ambitious is over ambitious. I've no idea. But the point being, if we're going make a difference, we've got to be big. I think Steve Jobs said, 'make a dent in the universe' and well our job is to make a big green dent. And the word big is pretty important.

**Russ:** [00:19:13] Brilliant. Karsten, we should make reference to the fact that and it has actually been announced that you are set to leave E.ON to become CEO of the German consumer electronics retailer and Ceconomy, so many congratulations on your new role. Do you feel you are leaving E.ON in a better place now with the partnership that you established with Kraken?

**Karsten:** [00:19:31] Well, first of all, I look very much forward to a new opportunity, which maybe I'm still devoted to sustainability because consumer electronics, of course, is inextricably linked with energy, at the end of the day, and sustainability will continue to play a crucial role and Ceconomy actually, more than every third European has bought in this place and the question of simply how will this business flourish in an Internet world besides Amazon, for instance, and what's the business model? So, I'm excited by this entrepreneurial opportunity. At the same time, I've put a lot of energy into what I've done at E.ON and met fantastic people, made friends. And so, it's actually hard to leave as well because so many great things we've built with the teams over time, we've built new growth businesses at E.ON in Europe for cities, for making cities more sustainable, industry clients more sustainable. We are the fastest growing solar and battery company making installation in people's homes, and we managed to transform the UK, based on Kraken, and so with that, I also feel a sense of pride in what we have achieved. And that's important. The team has achieved, and I feel that I reached some milestones where I'm pleased to hand it over to my successor, who will do with this team an equally great job or better job in the future. So, I think we are well set for the future.

**Russ:** [00:21:03] And what about from a personal perspective? What would you say you've learned from this partnership that you're going to take with you now to your new role?

**Karsten:** [00:21:09] So first, I hope I'll keep the relationships and the friendships alive that I've built also with the people here on this podcast, but what I have learned is and I’ve actually said that to the people in the new company, which I've only met virtually a few people there. But I said something to them and I had Kraken and this project on my mind, because they also struggle a little bit with IT and technology, and I said if there's one thing I've learned is how fast when you know what you're doing and you have the right capabilities, partners with you, how fast, based on technology, you can solve problems for customers, for businesses that you didn't think was possible. And that speed and the impact in a short period of time one can have when really thinks a bit differently about a problem and has the right solution. This is something I will definitely have learned from this partnership and that amazes me still.

**Russ:** [00:22:13] Fantastic. Greg, last thoughts from you on this one.

**Greg:** [00:22:17] Well, first of all, I'm gutted to see Karsten go. I think it was his personal leadership and decisiveness that enabled this project to happen in the first place and that have been one of the key contributors to success. And I think that partly comes from sort of shared humility and respect, which is, look for me, I spend a lot of my life talking about bloated, inefficient incumbent companies and actually recognising that, some of those are incredible companies with incredible people, doing incredible work, has been a really important part of this process, I think, in going the other way, one of the interesting features of Kraken and is it's a sort of a take it or leave it model, Kraken is a very complete platform. And unlike a lot of other kind of technology solutions, it's not designed to be mix and match to make the solution that a company wants, instead it's designed to be an holistic whole. And it's very, very hard for companies to accept, we're going to take the whole thing, rather than we're going to try and tinker with it to make it our version. And I think Karsten has really driven kind of the respect within his organisation to help people say, look, let's take Kraken as it is, rather than be tempted to improve it. And as a result, I think both of us have really learned a lot together and have delivered the success that will be so important at the big picture level. On a personal level, Karsten invited me onto his podcast a few weeks ago, and I was so in awe of some of the values and visions described that I was desperate to go for a beer with him. Currently he's in Germany. I'm here in the U.K. and Covid kind of gets in the way a bit, but I desperately want that beer and probably quite a few more to follow.

**Karsten:** [00:24:09] First of all, thank you very much, Greg, for your very touching words. I remember when I went first time to the UK, and you showed me over the course of two days the software and what you were doing. I had the chance to talk to your people at Octopus and saw their passion. I remember that there was one email which was an answer to a customer and always said ‘love and power’ at the end. And I thought just this passion that came through all this communication. I loved it, but I came back and I sat in the office of our CEO at the time, Johannes Teyssen, and he said to me so how was it? How was it? And I said, this was the best time so far at E.ON, what I learned in the UK,. I have not seen this kind of technology before, how they think about the problem and how they've translated this and separated regulation complexity from simplicity and how they manage and manufacture this software. I said I was really in awe. And he said, so what do you think? I said, I think there is a chance to solve our problem that way. He said, that's very risky they're a small company, I said, well, we'll continue to talkAnd he mentioned that actually, in his leaving do, this conversation. So, this was a very proud moment. And I definitely will follow from afar Octopus and Kraken and E.ON and E.ON NEXT, of course, and I will always be a great advocate. And Greg, maybe you want to look into other industries as well and solve their problems too, retail is an important one as well.

**Greg:** [00:25:45] We're very tempted, I think we can talk to you about the blueprint and maybe you can solve that one. Yeah, that'll be great and fun.

**Russ:** [00:25:53] Right. Good place to leave it, Dr Karsten Wildberger, thank you once again for giving up your time to chat to us. And Greg, always a pleasure. That's actually it for this episode of Inside Octopus. As always, if you've got any comments on anything we've discussed today, please do get in touch via the website at Octoput.Energy or via the usual social channels. But for now, from me, Russell Goldsmith, thanks for listening and goodbye.