

# FESTIVAL of INNOVATION

A SUMMER CELEBRATION of IDEAS, VISION & CREATIVITY



## INSPIRATIONAL INNOVATOR INTERVIEW TRANSCRIPT – DAVID TOWNSEND

*This interview took place during summer 2020 as part of SIE's Festival of Innovation. The video of the interview can be watched in full on the Scottish Institute for Enterprise's Youtube Channel. ([youtube.com/scottishinstituteforenterprise](https://youtube.com/scottishinstituteforenterprise)).*

[Music]

**Quentin Cooper (QC)** - Hello whoever you are and wherever you're watching this is the fourth of these Imagining the Future interviews as part of the Scottish Institute for Enterprises, Festival of Innovation. Apologies for starting just a tiny bit late but we were having some interesting technological issues so I'm Quentin Cooper and I'm in a small self-contained sweat box, I don't know where the rest of you are and I should bring you a forecast for possible lightning and thunderstorms so if I suddenly disappear I've been struck by lightning all my connection has or it's gone down. But let's not worry about this, so if you're joining us live then it is Thursday, August the 13th which is an almost suspiciously auspicious day to be celebrating innovation and invention in a Scottish context because it is the day way back in 1888 when John Logie Baird was born who you'll probably be familiar with from TV. Now while I'm sure it'd be fascinating to chat with him about his tele visionary ideas instead we're going to be talking to somebody whose work is arguably every bit as revolutionary as the televiser, that's what Logie Baird called it when he was first trialling in the 1920s. A televiser, who also has the huge added advantage of not being dead it is my great pleasure to welcome for today's innovation conversation someone who is renewing our approach to renewables re-energizing our ideas about energy the multi-award- ining founder and managing director of Town Rock Energy, David Townsend. As usual plan is there'll be some questions from me and then at the end there'll be plenty of time for questions and comments from yourselves so please do keep adding them over the course of the conversation. See in the middle bottom of your screen little box saying Q and A, stick them in there I promise we will get to them so David, first of all hello and where are you joining us from?

**David Townsend (DT)**- Hi I am calling in from Edinburgh.

**QC**- A fine place to be. Now I don't normally do this but let's start with a tour of your awards cabinet you are multi- ward-winning so give us a couple.

**DT**- I got my first award when I was in high school; I don't really like talking about my awards actually it sounds very pretentious but thank you for asking, I got a mathematics award when I was

in high school for getting the best grade in maths and that's maybe one of the ones I'm proudest of because it was probably one of the hardest ones to get because it was a months and months of gruelling studying prior to a bunch of really hard IB exams. But since then I had a really great award that I worked very hard to get from the Scottish Institute of Enterprise in 2013 which is the Young Innovators Award um and that was a £50 000 award if I remember right and that came pretty early.

**QC-** That is why I wanted to lead to this because that must have been a really important kickstart for you?

**DT-** Yeah so that was incredible I mean I was a student, I was two or three months away from graduating I didn't have any jobs lined up I'd applied for a view big corporate jobs hadn't got any yet um and then I got an email from the head of department that they'd sent to all the students saying here's an award you could apply for if you've got a business idea. It jumped out because it said six categories and one category was renewable energy and the top prize money was £50 000 so I thought well this is going to be much more fun to apply for than a bunch of jobs and I had a business idea which was based off of my undergraduate thesis; which had been understanding what the geothermal energy potential is of Fife and around the Firth of Forth so I used that as the basis for my application. Instead of spending the last two months of my university partying with everyone else I wrote a business plan and went to a boot camp and learned what it is to have a business from some very qualified people brought in by SIE and then pitched to the dragon's den investors and fortunately won and the rest is history.

**QC-** Yeah and you also get a bonus point for me for getting a sentence with Fife and the Firth of Forth in nice and early in the interview as well but I mean do you think it's great when you win an award but there are lots of good ideas that don't I mean there has been this argument that is there some more equitable approach to helping because do you think you'd have still got to where you got had just as good an idea and then when that was great you're the runner-up or something like that instead?

**DT-** I'd love to say yes but I think that was a huge kick that I needed to take the leap of faith and set up the business I think the quantity of money there was very important for the very ambitious, very high risk business that I was trying to start because when I pitched it I really didn't have a clear revenue model, I didn't clear have a clear sort of customer segment even to focus on. So I think it depends on the type of business but you're certainly getting some degree of seed funding that at least covers your living expenses is I would say, almost fundamentally important to being able to set up a business because who else is going to pay the bills.

**QC-** Okay we should say a bit more about what this business is because you are the rock on which Town Rock is founded , you are the town which is the other half of its name as well and unlike other forms of renewable energy looking at waves and water and tides you are looking at the heat beneath our feet.

**DT-** that's right so I was inspired researching the topic because there's enormous quantities of heat underneath the surface of the earth everywhere, some places like Iceland have magma blowing out of the surface and it's therefore easier to find very high temperatures. Lots of energy at relatively shallow depths but it is available everywhere and we have the technology to access this renewable energy because of all the innovation that is gone into drilling in the oil and gas industry. No one in the, well a couple of people, UK were approaching this from a commercial perspective and then a whole bunch of academics doing lots of interesting and niche research on it. I just thought somebody needed to be pushing this in Scotland as a commercial opportunity not just a research opportunity

**QC-** I mean that's the most surprising thing about this for me when you explain about geothermal energy and it's there beneath, it's everywhere although there are some parts of the world obviously where it's more suited to than others why weren't more of the bigger players already in there cornering the market and allowing you a undergraduate to be sticking your head in and then within a few years establish establishing yourself as a significant player?

**DT-** I think it's a really good question and a really important kind of prelude to the answer is that every country is vastly different when it both comes to the types of geothermal resources available but also the government incentives for developing this low-carbon renewable resource and the amount of data that's available to de-risk the resource and that's the key answer there is the appetite for risk. There are a lot of big companies, oil companies, energy companies and housing developers that would be able to make a decision to spend a few million pounds on a well that has a high chance of producing enormous quantities of very low carbon energy but they don't because they don't like the fact that there is a degree of risk attached to it. So as a graduate setting up my own business I can take on a lot more risk than a big company can and unfortunately I don't have a few million pounds sitting in my pocket to put into a well but that's what the whole business has been about, it is gathering that momentum so that we do find the right projects and the right clients who can put that money into the right project.

**QC-** I was going to say I mean there's an element of risk transference here isn't there? I mean you're not taking the risk you're encouraging others to take the risk because they've got more money, you're a consultancy.

**DT-** Yeah exactly so I have explored ways that Town Rock Energy could take on more of the risk by raising a big pile of investment and developing a few projects ourselves but I've realized that because of the relatively early stage of the industry and the early stage of us as a business it's made more sense for us to be consultants to the big players that are really going to be able to benefit from this opportunity when they make the decision to invest in it.

**QC-** Were you surprised once you started taking those first steps as an undergraduate getting this £50 000 award going out there that oh actually this area hasn't been taken over already and this idea here hasn't been dominated that actually how much progress you made in how short an amount of time?

**DT-** Yeah it was very encouraging I mean it took a year and a half to get our first client so that's how hard it was to really persuade people that this is something worth looking at from a commercial perspective. The only reason is because they're like well point at someone else doing this in Scotland and I could say well our engineering associate built two of them in the late 90s and they've worked fairly well but they're quite small mine water housing heating projects, sorry I drifted from the question.

**QC-** That's all right it was a tectonic plate movement there as I think you would say but I'm wondering it's one thing as an undergraduate you look at things like gosh why aren't more people doing stuff about geothermal energy that's a really easy it's another thing you think that you're the person to do it you know a lot of would-be start-ups have great ideas and then either they leave it to somebody else and don't do anything about it or they tell somebody down the pub and that person down the pub ends up doing it for them what made you think not only was this the thing to do but that you were the person to do it.

**DT-** Yeah I'm so I think maybe I've always had a little bit of an issue with authority, I was maybe a bit of a smart ass when I was in school and at university I certainly know some of my lecturers would agree and so I think actually that when I decided that I could be in charge then suddenly there was no one to be a smart ass to anymore and I could then take full responsibility for the challenge I was tackling. SO I realized it really suited my personality to take on that level of responsibility quite early on.

**QC-** Did it suit all of your personality? Weren't there voices in your head sometimes going oh my god what am I doing here? I'm the guy who left most of my dissertation on a mega bus you know so yeah am I to be trusted running a company?

**DT-** Yeah well that's it. I mean I think I knew that I could switch it on if, I could turn on that level of responsibility and organization if I was motivated and the ownership of the company and therefore the responsibility. The motivating factor of our overarching purpose of tackling climate change made me grow up if you wish and stop making some mistakes but then the fundamental thing is I've needed to find help the whole way I have had enormous help from very good mentors: some of which are formal associates and directors of the company some of which are external researchers or other business leaders. But whenever I'm chewing that over and questioning that I just reach out and I get help and that's a key piece of advice I would give to anyone but don't ever be afraid of asking for advice from anyone and everyone and then filtering it through and making it suit yourself but asking for it is the key bit

**QC-** It's the two yes separate aspects: one too many people don't even ask advice because they're afraid they might look weak and secondly, when they get advice they need to remember not to do necessarily exactly what they're told to do because they are innovating, if you're innovating you don't just copy what other people do .

**DT-** Yep exactly I mean you can copy someone to a point and then you've got to make it better and when you're dealing with a very complex energy project as we are, where there's heat customers, the geothermal resource, then there's all the cost engineering, the financial models and the policy around it and the permitting. When you're juggling all of these different pieces it's pretty smart to copy what you can from other projects and what other people are doing in other parts of the world and then make it bespoke and optimal for the location and the clients that you're working for.

**QC-** Now you talked about the importance of mentors but you also have a few inspirational figures one of whom is Matt Haig.

**DT-** Yeah I'm a big fan of Matt Haig I actually emailed him a couple days ago just through his website and sent him this link and said you know I'm a really big fan just....

**QC-** Explain those who aren't familiar with Matt Haig.

**DT-** Sure so Matt Haig is a writer who's really tackled head on the challenges faced by our current society with regards to mental health. His probably most famous and popular book is called "Reasons to Stay Alive", so it's a very in your face title and he autobiographically goes through his challenges with severe depression and anxiety in a very personal way but incredibly in a very light-hearted and funny way with very practical advice through that book. I found that when I was in Geneva airport after a ski trip and I was going home to go visit my grandfather who was on his deathbed and I was obviously feeling quite low about that whole situation and feeling quite drained from a big holiday as well and I saw this book in duty-free and I bought it and I read it in about a day and it just resonated with me. I saw Matt Haig speak in the Edinburgh international book festival last year and thanked him for it and got him to sign some books and I would recommend it to everyone. Not just people that have struggled with depression or anxiety but anyone that's interested in that topic and how to maybe help friends that struggle with it just read that book and it's short and very easy to read and very entertaining.

**QC-** I wonder I mean the fact that you sort of dig up Matt Haig and talk about his work on stress and anxiety I wonder if at some level you're not just trying to change our attitude to what's beneath our feet, you're trying to change our attitude to what's beneath our skin. That we don't have to always present this face to the outside world of being super confident and super cool, that we shouldn't be afraid to reach out or go I need help here or I'm a bit stressed here.

**DT-** yeah I think it's really important. It's very tempting to put up a kind of facade and to be cool or be what's expected of you and people use it all the time as a kind of defence mechanism but I think it comes around to bite you when you're not being your genuine honest self.

**DT-** I mean I wouldn't suggest applying the geothermal resource assessment to your own self I think it's a quite different topic but it's fundamental to being able to tackle whatever challenges you want to tackle. Your brain is your main tool your most useful tool in the right state of mind to be able to work on anything and I think this is something that comes through. There's a really excellent piece you wrote for the SIE website caring for yourself and humanity and you start the whole piece with a list of things that people can get worried about: inequality, pandemics, racism, climate change, resource over extraction, biodiversity loss, divisive politics, crap leadership. It's the pandemic of crap leadership that really worries me and but you point out that actually this is not something to make you just lock yourself into room; to point out that we've always felt like that, we've always overcome it we've always evolved we've always adapted.

**QC-** Absolutely yeah I guess in that first paragraph I was trying to give someone a panic attack and then talk them out of it

**DT-** The bold journalistic technique

**[Laughter]**

**DT-** Yeah it's absolutely true I've read another book um called "Factfulness", that explains why we always think the world is in a terrible state and then runs through all the statistics as to why now it's not and it's actually in one of the best states it's ever been in. We do have huge challenges to tackle and we only have a little bit of time to tackle them; climate change is the one that I'm particularly focused on but I'm also clearly interested in in the political issues and also mental health issues.

**QC-** But do you manage to remain optimistic about climate change even as we miss seemingly final deadline, after seemingly final deadline?

**DT-** Yeah it's a roller coaster to care so much about it that's for sure. I mean I got really emotional when I saw Greta Thunberg's first speech because I thought wow cool there's a glimmer of hope and then I had the polar opposite reaction when Trump got elected and started dismantling the EPA in the States. I mean I think with the way that I've coped with it is to try to distance myself a little bit, I've said this is my work and this is my passion that's involved in my work but I try to avoid talking about it too much when I'm down in the pub or hanging out with friends. When other people want

to talk about it a lot sure, I'll share my thoughts and insight but I don't want to use the word distract myself but it's ultimately a coping mechanism to just categorize a little bit that stress into a certain compartment of my life and be able to really enjoy other elements of my life. Not feel guilty about you know maybe some of the carbon emissions I'm creating from some of those activities like traveling because I get so much out of them and I need to make sure I'm capable of working on this challenge to be you know first and foremost

**QC-** And it's also the realization that you might do good positive work with geothermal energy but that's not going to solve it by itself and if you just concentrate on your area and don't talk to other people that's not going to solve it by itself. But if you can do good work on geothermal energy and then be part of other groups and encourage more activism out there then you can make a bigger difference and of course you are on this what's it called the Scotland's 2050 climate group which is helping do this.

**DT-** Yeah so this is a really exciting group which I was one of about 20 different co-founders of young professionals across Scotland in 2014 it was set up and I was on the board of trustees for four years and I'm still engaged occasionally but I stepped down and let younger fresher people come under the board. The group is mobilizing the young people of Scotland to tackle climate change in three different spheres: their individual behaviour, their actions of their business and career sphere and their the political sphere which is you know potentially the most important. It puts about 150 young leaders through this program every year where some of the best people in the country come and inspire them and teach them how to practically tackle this challenge. I joined the group because I realized exactly what you said you know I'm working on geothermal energy which may have a small impact on the UK's renewable heat or sorry heating carbon emissions by displacing some gas but this is not the solution this is a little piece of the puzzle and I thought by helping the 2050 climate group I could have a much broader influence and learn as well about. I was most fascinated to learn from these experts how do I get engaged in politics with regards to environmental sustainability.

**QC-** And what's your feeling now are you optimistic?

**DT-** It's a roller coaster, so yeah

**QC-** Then you're optimistic

**DT-** Yeah on a daily basis, it's important to kind of focus on the big picture and I found that there's so much good climate science that comes out that's all horrendously depressing about the methane, escaping the permafrost, massive wildfires, every year there's more and more droughts and severe storm events.

**QC-** That's how you can find that news, because too often as a journalist it's hard to get that stuff into newspapers or on the air because they go oh not climate change again rather than going hang on this is the single most pressing issue of our time.

**DT-** Exactly how do you? The whole message must be reframed I mean the media have this orientation towards making profit or at least getting as many clicks as possible and generally the scary news articles get those clicks. The stories we need to be telling are the really positive stories of all the people that are out there innovating to tackle this challenge and all the activists that are tackling it and keep pushing away at the positive sides of things the risk of that you make everyone feel oh it's cool you know Greta's got it we don't need to worry about this anymore. There's a very fine balance of scaring people and telling the positive inspirational stories, that's a debate for another day that kind of version of indulgences where you're going to go oh it's okay I recycle therefore I don't need to do anything else.

**QC-** One last question for me before I throw it open, really hope your questions have been coming in I'm going to hand you over to Fiona in a minute to deal with them but, when you're asked about heroes and inspirations you now often cite Matt Haig but I noticed in your early interviews you also used to name check somebody who I was at university with the mountaineer Joe Simpson

**DT-** Oh yeah

**QC-** Now Joe is obviously famous for taking ridiculous risks and somehow more through luck, rather than good judgment surviving is that part of your business thinking as well?

**DT-** I think I find him very inspirational because of the way that he showed the human capacity for survival, the fact that you can be knocking on death's door frozen on a mountain with no food and water and still survive purely because of this innate need inside of us to try our very best to stay alive. I think anyone that had a near-death experience like that or gone through some trauma where they thought they might have died is a blessing in disguise because it suddenly makes you value your life a lot more and really changes that perspective almost overnight. I don't know if there's a smaller scale you can say for a lot of stuff they think that if somebody has a start-up and it fails that's the end of the world but actually if you talk to many people who run successful companies they've got at least one failed start-up behind them.

**QC-** Exactly yeah it's a good metaphor for the business startup space. I think everyone is always well not everyone but most start-ups are semi-expecting to fail and that takes a bit of the pressure off and allows them to relax into just getting the job done day to day and then oh wow we didn't fail and it's been five years now.

**DT-** I think that you know accepting failure before it's happened is quite a healthy approach to failure .

**QC-** Okay now I'm going to hand over to uh Fiona Godsman Chief Executive of the Scottish Institute for Enterprise who I hope has a whole bundle of questions I didn't leave quite enough time for the questions last week Fiona so I hope you've got plenty this time?

**Fiona Godsman (FG)-** Hi yeah I have a load of questions actually they've been piling in and I think quite a lot of them have actually been addressed in your conversation because there's been an awful lot of interest around the whole kind of mental health and well-being aspect which I think is really important because people don't talk about that enough. I'm going to just pick a couple of things because around the theme of advice for other young entrepreneurs so I think that will be very useful so the first one was the critical skills required in a consultancy when what you're selling is so intel intangible you don't have an obvious product to sell so what are the critical skills around that?

**DT-** That's a really interesting question, so I would almost categorize them in two different ways and so with the consultancy you have the meat of the product that you're selling which is all of the technical expertise, the financial expertise and the engineering expertise that forms the basis of the report which advises our clients on what their geothermal opportunity is and then there's the other side of it which is I guess the business development, the sales and the management and organization which is actually finding that client that has a potential project and convincing them that they should pay you to tell them what the opportunity is. That's what I really enjoy doing, I like chasing opportunities, I really like maturing opportunities from the relationship perspective understanding what the client needs, understanding what their motives are and understanding how what we do can actually help them meet those targets even if it's just a report they end up with. They sit on for a few years until certain elements change whether it's government policy or the financial side of things so I'm kind of smashing those together and wanting to be hungry for that, chase, to make a sale is probably almost more important than having the technical skills to deliver it.

**QC-** I know I've handed over to Fiona but I'm just going to jump in and say short answers please David, because we want to try it more quick not your entire mind but keep it short Fiona back to you.

**FG-** Yeah thanks Quinton, well we do not have an awful lot of time so one more question was what have you learned about yourself during this entrepreneurial journey? I think you have gone into quite a lot of detail here was there one thing that surprises you about yourself

**DT-** I think it's what drives my motivation and I think it is the challenge of climate change even though it's so intangible that when I know I'm doing something that has a goal that is creating some momentum around that, yeah that really motivates me.

**FG-** Yeah great thank you and the second one really relates to the current or the post- Covid recessionary environment how do you think businesses will view the low carbon renewable resources? Is it something that they are going to forget about? How do we keep it in the agenda?

**DT-** Green transition has to be in my mind, the fundamental recovery from coronavirus retaining jobs that are unsustainable environmentally doesn't make sense because throwing government money them right now to save them so that they disappear in five years anyway. Why do that when you could throw money at the transition and create new sustainable jobs that will last for generations.

**FG-** Okay as I say we had a lot of different questions and interesting mindset but I think we've probably covered most of those so I think from my perspective thank you very much it's been absolutely fascinating I'll leave it to Quinton to wrap up.

**QC-** Brilliant! We're going to finish just about perfectly on time so yes David I'm sure you've got loads of energy in reserve but we'll have to wait for another occasion so our thanks to David Townsend for his inspiration and perspiration, to Fiona of course for fielding all your many questions and to yourselves for taking time out from whatever it is you're supposed to be doing rather than watching this. Next week at 12 30 I think it is the penultimate of these innovation conversations or lock down smackdowns call them what you will and it's the pick of the bunch: Rebecca Pick, CEO of Pick Protection will be talking about safety through technology protecting loan workers and how Covid-19 is changing our whole approach to the workplace. So that's Rebecca pick in the mix with me next Thursday, the 20th at 12 30 and you can register free through the SIE website. Until then goodbye!