

SDS PODCAST

EPISODE 133

WITH

TOM BROWN



Kirill: This is episode number 133 with the Founder of The Information Lab, Tom Brown.

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Welcome to the SuperDataScience podcast. My name is Kirill Eremenko, data science coach and lifestyle entrepreneur. And each week we bring you inspiring people and ideas to help you build your successful career in data science. Thanks for being here today and now let's make the complex simple.

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Welcome to the SuperDataScience podcast, ladies and gentlemen, boys and girls. And today we have a very prominent figure in the space of data science and visualisation, Tom Brown. Tom is the Founder and the Managing Director of The Information Lab. The Information Lab is a company, it's the longest-standing Tableau Gold Partner in the UK, and they help their clients to understand how to use Tableau and Alteryx, how to implement them, how to make the most out of them. So they provide consulting and educational services in that space. And also, you may remember from our podcast, from our previous sessions, we've already heard from Andy Kriebel, and Rachel Phang, and also Emma Whyte. All those people are also involved in The Information Lab and the Data School, which is a training school attached to The Information Lab, and all of that was started by Tom Brown.

With Tom, we talked about quite a lot of interesting things. So you'll hear his story, which is a really interesting and fun story, on how he got into Tableau in the first place, and that



involves a session at the pub, and everything that happened after it. You'll hear his passion, how he's passionate about Tableau, and how that passion has driven his career, and how it's shaped it along the way. You'll hear some very useful technical comparisons between Tableau and Excel, as well as Tableau and some other tools in the Gartner Magic Quadrant, such as Power BI and Qlikview. And also you'll hear about the Data School and how you can get involved if you're interested in participating in that, or any other catch ups and meetups for data scientists in the UK.

So there we go. A very exciting episode coming up ahead. Can't wait for you to check it out. And without further ado, I bring to you Tom Brown, the Founder of The Information Lab.

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Welcome ladies and gentlemen to the SuperDataScience podcast. Today I've got on the show the Founder of The Information Lab, Tom Brown. Tom, welcome, how are you today?

Tom: Thank you very much. I'm very well. What a great introduction. I feel like I'm walking into a boxing ring or something.

Kirill: Yeah, yeah, I experiment with them sometimes. But I'm really excited because those who have been following our podcast have already heard Rachel, Emma, and Andy Kriebel from The Information Lab, and finally we have the Founder on the show. How are you feeling about this podcast? What have the others told you about their experience?



- Tom: That is a good question, one I was not prepared for at all. Well, they've sort of told me I have to do it. So I don't know whether they felt it was a painful experience that they thought I should also go through, or whether they thought it was a fantastic experience that I should get through. But it's one of those two things. I think they've enjoyed it, and certainly they've had a lot of people come up to them afterwards and thank them for their contributions to the podcast. So I guess you must have an audience out there which is the right kind of audience. So I'm proud to be here.
- Kirill: Totally. And I think it's really a great mix. Because what you're doing in The Information Lab plus the Data School is exactly helping people get into the space of data science and understand how to build their careers then how to use the tools there, and that's exactly what this podcast is about. So I think it will be a good fit in that sense.
- Tom: Yeah, it's been really fun to see the data school come to life and to see lots of young people find their way into the data science space because of what we're doing. So that's certainly been one of the most fun parts of it.
- Kirill: Fantastic. We've got quite a lot to cover. So where would you like to start us off? Maybe tell us about The Information Lab and how it all started?
- Tom: Ok, why not. So we'll have to go back to about 2005, if that's ok. I know that seems a long time ago, maybe some of your listeners were only just born then. But 2005 is the year I founded my first company, the company before The Information Lab. And we were just founded with a group of



friends through a technology company, and what we were doing was creating websites and building web applications and kind of business applications for organisations, but focusing on Microsoft technology. And as that company grew, I think by about 2008, we had about 60 people in the company. As that company grew, we realised we had a group of people that made up a business intelligence or a data analytics team. So we decided to found that department within that company. And it fell to me, as the director with the most interest in that area to become the director responsible for the business intelligence team. And that's what really set me on the journey that's got me to where I am today.

But at that point, the work we were able to do with the Microsoft technology that we were using at the time was really not good enough. We were using the foundation products from the Microsoft stack, like Analysis Services, and Integration Services, and SQL Server, of course. And that was all great. But Microsoft didn't really provide a viable front end for what people started to call self-service analytics at that time. We could build some reports using reporting services and so on, but we couldn't help customers to [inaudible].

So that's when my search for new products that could help us do that started. And in about some time in late 2008, I can't remember exactly when, we started to look at these products and came across Tableau. And that really changed everything for me. Do you want to hear my story of my first use of Tableau? That was really crucial.

- Kirill: Of course!
- Tom: The crucial use for me. Of course, it started in a pub, which happens.
- Kirill: Like everything in London!
- Tom: Like a lot of good things. So, a colleague of mine said, “I know you’re looking at these analytics products and a month ago I mentioned Tableau to you. I understand you haven’t looked at it yet. Why not? Go and look at it tonight.” So I said, “All right, calm down, I will. When I get home, I’ll download it and look at it straight away.” So I got home around midnight, my wife was already asleep and I thought, “Maybe now is a good time for me to download Tableau and start playing with it.”
- Kirill: How many beers was that in already?
- Tom: Oh, I can’t remember, but let’s say four or five. I probably wasn’t in the finest frame of mind for decision making, so maybe it wasn’t the right time to critique a new piece of software, but it turned out that maybe it was as well. You need a certain level of creativity to make these decisions. But what ended up happening was I stayed up all night. My wife woke up at sort of regular time and found me still at my laptop, still watching videos and playing with Tableau. I was just absolutely blown away by it.
- I remember thinking that it was as if a group of developers have been sat in Seattle writing software specifically for me, specifically the software I needed to do what I was trying to achieve. And that was quite a strange feeling given that, of course, that wasn’t what they were doing. So, from my



background and a lot of work in data, a lot of using SQL Server, a lot of using Excel and Reporting Services, Tableau was just so easy to use. Suddenly I could do all the things I wanted to do right there. I didn't feel like I needed much training, I was just up and running.

So that then changed everything. I went back into my company Monday morning—well, I assumed it changed everything. I remember going back into my company and getting as many people as I possibly could into one room and doing my first Tableau demo. This was, like, 2008. I showed everybody and everybody was a bit like, "Huh? I don't really get it. What's so important about that?" Everyone left the room and I stood there on my own thinking, "I've got to get out of here. I've got to go. I've got to go and find other people that saw what I saw in Tableau," rather than trying to move a company which by then is nearly 100 people.

Kirill: And this was your old company?

Tom: It was my company. I founded it with two other friends, one friend from university and another friend I previously worked with. So yes, it was my own company and I realized I had to leave it if I was going to exercise my addiction or what really became an addiction for working with Tableau. But it didn't quite happen then. You know, one of the questions I'm sure you ask people is about who influences them and who actually makes you. It tends to be another person that pushes you over the line just like my friend pushing me over the line to look at Tableau in the first place. It tends to be



someone else that sort of influences you to actually do the things that you're thinking about doing.

And so it took me about another 18 months or so in my previous company before I realized that I actually did need to leave and found The Information Lab. That didn't happen until September 2010. What actually pushed me over the line there was going to Tableau's conference in Seattle in 2010 because there I met a group of people who really surprised me. I met Pat Hanrahan, I met Chris Stolte and Christian Chabot – that's the three founders of Tableau. The conference for Tableau now is like 16,000 people or something so you have no chance of meeting these people there. But back in 2010 it was only 500-600 people. So you get to meet them repeatedly and spend an hour with them and have coffee with them and have breakfast with them.

And I spent an hour talking to Pat Hanrahan. He's the founder of Tableau, he's also a very significant engineer on RenderMan, which is the product which makes Pixar famous and produces "Toy Story," a very important piece of software for the Hollywood movie industry. But I remember talking to him for about an hour thinking, "I literally didn't understand a single thing he said, like we were talking completely different languages." But I remember thinking, "I'm just going to hang around with him because he's going to make something amazing." (Laughs) So that was a big influence in terms of realizing I wanted to work with Tableau, because not just the software but the people were amazing. I came back from that conference and founded The Information Lab the next day.



- Kirill: Oh, fantastic.
- Tom: That's how it all started. Then I had the real impetus to go and do something different.
- Kirill: Awesome. That's such an inspiring story and I really love the whole concept of people pushing all of us to take those leaps of faith or take those steps in our lives and careers. I just wanted to ask, just before we move on to The Information Lab, for those of our listeners—I'm sure there's a significant portion of our listeners who do understand the concept of Tableau and have worked with it before, but for those who haven't heard of Tableau before, could you describe it in a nutshell? What is this tool used for and how does it work?
- Tom: Sure. You know, at The Information Lab we now represent two products: both Tableau and Alteryx. Tableau is a tool for bringing data to life by drawing pictures from it. So, Tableau's mission, they call it, is helping people see and understand data. And a really important part of that is to actually see it. So Tableau is the visualization tool for data. And they've tried to build a product which can be used by anybody because they believe, and I believe too, that unlocking what's in the heads of teachers and journalists and doctors is more important than leaving perhaps more technical tools in the hands of just a few people who can operate that machinery. There's thousands of people that can't currently operate the machinery for analytics, but who have questions that can be answered from data, and Tableau is trying to expose those people to the idea of data analytics. So that's what Tableau is, a way to draw pictures from data.



Tableau likes to draw pictures from relatively clean data, but data is never clean. So we involved Alteryx in our business as well because Alteryx likes to make clean data from dirty data. It also does a bunch of other things like spatial analytics and predictive analytics, but those two tools together turned out to be quite a powerful combination for analysts.

Kirill: Okay, fantastic. Thank you for the quick intro to Tableau. Let's move on to The Information Lab. So, once you founded it, what happened there?

Tom: Well, my first job was to try to find some customers. I knew I was trying to create a company, but I also needed to feed my family, so I spent some time working as a consultant. You know, I was a data scientist, I was a data analyst working as a consultant for other companies for about nearly 18 months or so on my own. But what I was doing at a time was really trying to make sure that I didn't get dragged into projects that went on for six months because I didn't want to be a contractor in this space. I wanted to found a company. So every time a company asked me to do six weeks of work, I had to explain to them that they could have me for two days, but I would teach them how to do it themselves. Really, that's possible because of Tableau.

Tableau is a product that should be used by the people that are closest to the data, not by consultants. Although my opinion on that has changed over time, at the time I was trying to introduce as many people to Tableau as possible and then move on and find someone else. So we were working with maybe 30 companies after 18 months or so, so

I managed to find quite a few people that had interest in Tableau.

So I started a company which we were a reseller for Tableau – we still are – so we were selling their software whilst also training and consulting around it. For 18 months that was just me and then I bumped into a chap called Craig Bloodworth who I definitely will be passing the baton for this podcast onto next. (Laughs) Actually, it wasn't 18 months, it was about 15 months. He joined us in December of 2011. He had a very similar addiction to Tableau that I did. He bought his own license because in his company at the time, his boss wouldn't buy him a copy so he bought one out of his own money. He paid his own way to go to conferences because his boss wouldn't send him. So he had a level of addiction to Tableau that I did and we recognized that in each other when we met at conferences and he and I basically founded The Information Lab as you see it today together.

Kirill: Oh, fantastic. So you kind of clicked through your common passion?

Tom: Exactly. There were some problems. He lived in York, I lived in London – that didn't seem to make sense, but when we talked about it we realized that that seemed unimportant when everything else was perfect. You know, I actually haven't realized when I first met Craig that he was quite so addicted because I haven't realized that he'd done things like pay his own way to go to conferences and bought his own copy of Tableau. You know, he made decisions like that which shaped his career. And when his boss said, "No, you can't buy that software," he didn't agree with him. He went



out and bought his own copy. And I know lots of other people have done the same thing as well, so I like that kind of maverick streak in Craig and that made it obvious that we should work together despite the fact that he lived in the north of the U.K. and I lived in London.

Kirill: Okay, interesting. So you guys got together, founded The Information Lab. But what was the mission originally of the company and did it change over time?

Tom: Well, it's changed a bit recently with the introduction of the Data School, but the mission of the company pretty much is still the same today, and that is to introduce as many people as we can to Tableau and Alteryx. We are addicts now of both of these products and we feel like we're kind of missionaries running around the world, trying to stop people having to do data analytics work using boring tools, spending time hacking away in CSV files and Excel files, you know, using tools that don't help them expose the interesting stories in data. So we're trying to find other people that are interested in those stories and tell them there's better ways to do it and generally that means using Tableau and Alteryx.

Kirill: I was about to ask, and I'll still ask this question, probably for like fifth time on this podcast. How is Excel worse than Tableau for visualization?

Tom: Well, there's just literally so many ways to answer that question. First one is this sort of productivity way. Tableau is just so fast to use that I tell people—you know, if I'm in a sales situation, I would tell people I'm about a hundred times more productive with Tableau than I am with Excel. I

stop short of telling them the real answer, which is way more than a hundred times more productive because people just don't believe me. People can just about get their head around being a hundred times more productive. You know, I can definitely do things in seconds which can take other people days in Excel. There's no question about that. So productivity is sort of a way.

That makes the assumption, if you're only making the productivity argument between Excel and Tableau, then actually you're missing the point because the bigger point is that you're going to be able to do things that you just can't do in the other product. And therefore you're going to miss opportunities. So Tableau is by and large an analytical tool for doing analysis with datasets, to find stuff out. And it's very, very hard to find stuff out in Excel, so you're going to miss opportunities. If you've got, you know, "Give me a million rows of data in Excel," and then let me just ask you to find an opportunity to change something in that dataset and you've only got Excel, you're not going to be able to find it very quickly. You're not going to be able to test enough hypotheses in that data to find opportunities, whereas we can test one hypothesis a minute in Tableau. So you can keep making guesses about where the interesting information is and it has no apparent cost.

Actually, a really good metaphor that I like to use for the difference between Tableau and actually a lot of other reporting tools – Excel is just one of them – is about the same sort of metaphor as the difference between digital photography and regular old photography. I wrote a blog post on this years ago. If I try to remember what I wrote, it

was about the fact that regular old photography has a cost, right? You have to buy the film, you have the cost of developing the pictures that you take, you have the cost of storing the actual photographs after you've had them developed. So because there's a cost to each photograph, you are very restrictive in the photos that you take. I don't know if you remember taking regular photos—

Kirill: The 36, yeah?

Tom: Yeah, you've got 24 or 36, you're like, "Let's get this exactly right. I'm not sure I want to waste a shot on this because it's going to cost me 30 pence to get that photo developed." So you restrict yourself, you restrict your creativity. But now we have digital photography. How many pictures do you take of your cats? You don't just take one. If your cat does something funny, you take twenty. Maybe you bother tidying them up and deleting them so you've got the best photo, but more often than not, you just let it go into Google Photos or something and Google Photos makes an amazing video out of it or something crazy happens like that. Almost all free of charge at the point of use. Of course there's a storage cost, but it's infinitesimally small, you can't even measure it.

So what that means is you can be creative. And what digital photography has done is it has made many, many more photographers. It's made people that can be creative in that space. And the same is true of so many other things. It's true of digital image editing software like Photoshop and so on. Imagine how expensive it was to make a printing press, to make an actual piece of paper printed. Ridiculously expensive. And yet now you can just knock something up in

Photoshop. If it doesn't work, throw it away and do it again, try things, be creative.

So that's actually what Tableau gives you, is an opportunity to play around on this canvas at no cost. When you make a visualization in Tableau, if it's not right, you just go back, go forward, change it, throw something else on the canvas, see how it looks. When you're designing in something like Reporting Services, you know building it is going to take you half an hour. So you're very careful about what it is you build because you don't get a chance to build a thousand of them. You only get a chance to build two or three, so it restricts creativity. That means that less people can get involved in the process as well.

Kirill: That's such a good analogy. Really, really apt analogy. It also reminded me of the difference in project management approaches, like Waterfall versus Agile. In Waterfall you have to really think things through in advance so you don't make any mistakes along the way because it's going to be costly to rectify them. Whereas in Agile you just try again and fail and try again and fail and try again until you get the best result very quickly. It's a very fast turnaround.

Tom: Exactly. Iteration is the important word here, right? How quickly can you iterate? You know, how do we start a Tableau project? We just hook up to some data and start throwing some stuff around. There's a really famous—I can't remember the designer that drew it, it was titled "The Design Squiggle" and it shows this design process from left to right with time on the horizontal axis. And on the left-hand side

it's just a whole squiggle of mess and then the line just starts to sort of organize itself and then become flat.

And the idea is that when you start a project you don't know what you're doing. It's creative process. You just want to explore stuff and throw ideas around. Over time, you start to hone in on interesting things and finally you worry about the way things are designed and laid out, and if you're building dashboards, the chart types you're using and how you're communicating. You worry about that stuff later, after you've had the exploration experience.

That's what Tableau does extremely well, that exploration experience. Your original question was about Excel. In my opinion, Excel doesn't give you that exploration experience at all. So people are left with trying to answer questions they already know the answer to rather than find new questions. Sorry, that was a bit of a longwinded answer. You poked a bear there, that's my favourite question. (Laughs)

Kirill: Yeah. One of the best answers I've had to that question. But also, there's this report by Gartner, the Magic Quadrant. Tableau has always been in the lead in the Magic Quadrant, both in the ability to execute and in terms of vision. They have those two axes as far as I remember. But over the recent years I've noticed that some of the competitors came close. And it's actually very interesting because the Gartner Quadrant comes out in February, so from today when we're recording this podcast, that's like a few weeks. It'll be interesting to see what happens this year in 2018. So what are your thoughts on that? What are your thoughts on competitors such as Power BI from Microsoft, they've

innovated quite a bit over the past couple of years, and you've got Qlik and you've got a couple of others. Any comments there?

Tom: Well, if I said the question about Excel was my favourite question, I was lying. This is actually my favourite question. (Laughs) This has basically been my life, answering this question, for the last 7 years.

Kirill: I'm glad I asked it then.

Tom: That's really the Tableau versus Power BI/Qlik question, but the Magic Quadrant question is an interesting one and one that always gets asked around this time of year. My first opinion of the Magic Quadrant is people should make sure they don't overuse it. The only real sensible use case of the Magic Quadrant is to very rapidly find a shortlist of things to look at. If you use it for anything much deeper than that, then I think you might be overusing it.

So, for example, to say that Tableau is a bit better than product X because it's slightly to the right or it's a bit worse than product Y because something else is slightly to the left is probably investing too much in the actual Magic Quadrant itself. But if you want to find six products to look at, go and pick the ones in the top right of the Magic Quadrant. That would be my starting point. If you use that to choose a product, then you've made a mistake. The only way to do that is through exploration of the products, running trials yourself. So I don't think the Magic Quadrant should be used in that way.

The other thing to say about the Magic Quadrant, people often ask me about the position of Tableau versus Microsoft.

They make the mistake of assuming that Microsoft means Power BI. The obvious thing to say here is, if it did, if the Microsoft in the Magic Quadrant for BI software did mean Power BI, then wouldn't that bubble have moved over the last few years given that it didn't exist in 2014 or 2013 and it was in V1 in 2015? Wouldn't that Microsoft bubble have moved as they developed the product? So obviously that bubble does not refer to Power BI; it refers to the entire Microsoft stack. And so it's very hard to separate. In my opinion, Power BI does not appear in the Magic Quadrant because that bubble refers to the Microsoft stack.

Kirill: I fell into that trap. I did not know that.

Tom: Yeah, it's certainly not the Power BI bubble because you have to say it would have moved. It's been in the exact same position over the last five years and five years ago Power BI didn't exist. So, the bubble doesn't refer to Power BI. Quite what it refers to, it's difficult to extract because Gartner don't give us that much information. They make it sound like it refers to Power BI, which is confusing for some people.

Kirill: Okay, and then we've got to move a little left with QlikView then.

Tom: Well, if you'd like me to compare Tableau and Power BI and Qlik, I can actually do it in one comparison because Power BI and Qlik are very similar in some respects. But when I talk about Qlik, I'm actually talking about Qlik Sense.

Kirill: It's confusing, isn't it? They have two products, QlikView and Qlik Sense, and yet they're both called Qlik.

Tom: Well, the company is called Qlik. They're both called Qlik for sure, but they're QlikView and Qlik Sense; QlikView for building guided analysis dashboards that are normally built by developers, Qlik Sense for doing faster visual exploration of data, still used by developers but also used by business users in the same way that people might use Tableau.

So I think Qlik responded to Tableau's growth in the marketplace with Qlik Sense and Microsoft did it with building Power BI. The interesting question with those two products is how did they build them so quickly. They both brought them to market around 2013/14/15, and they came to market very, very quickly. Now, the only way in my mind to build something quickly is to do it by bolting together things that are already in your workshop. If you can find things already lying around that you can bolt together, that can save you a lot of time in the development space.

And the way Microsoft and Qlik chose to do this is they embedded D3 into their products, D3 being a JavaScript library for visualization of data on the web. And both Microsoft and Qlik decided they didn't have time to write their own visualization engine so they introduced D3 into their products. Now, that might have made it possible to bring these products to the market quickly, but it doesn't mean that you can escape the limitations of D3. So, they have now embedded something which has serious limitations into their key products.

This is why Tableau still stands alone in the space of data analytics and data exploration, is because D3 was never actually meant for that process. D3 is built as a reporting

library, so consequently, Power BI and Qlik are both reporting tools, not data exploration tools. And you can try and use them in that way, but they don't come with the feature set that's required to do that. So Tableau still stands alone in the data exploration space, albeit you can build a dashboard in both Qlik Sense and Power BI, but you're going to need to know what it is you want to build. You can't explore the data first.

Kirill: Okay, that's interesting. I did not know that about D3. I've used D3 before, but I didn't know it went into the foundation there.

Tom: Yeah. So it has some serious limitations, like D3 has a limitation of only being to display 3,500 data points. So if you're trying to display dense clusters in a scatter plot or some dense mapping information, for example, both Qlik and Power BI will stop when they try and produce 3,500 points. But Tableau is just going to keep going. If you want to display a million data points, no problem.

That's sort of going back to—remember I said who my influences were and I said I met Pat Hanrahan? Well, it's Pat Hanrahan that built the visualization engine for Tableau's product. And that's a little different, to use Pat Hanrahan to do that, to craft your own, rather than to grab what's available and embed it in your product. Because Pat Hanrahan is one of the father figures of making things come to life on computer screens, or in fact screens in general, through his work at Pixar.

Maybe it's just me who's made the leap, but I think RenderMan, which is the software product that brings "Toy

Story” and all the famous Pixar movies to life, for me it’s almost the exact same product as Tableau. Maybe I’m just making this up, but in my mind somewhere there’s a database called “Toy Story 1” and RenderMan connects to that database and draws Buzz Lightyear, which if you think about it, is identical to what Tableau does. Tableau connects to databases, the rendering engine of Tableau, which was also built by Pat Hanrahan, then draws charts and graphs and brings them to life in the same way that RenderMan brings “Toy Story” to life. Does that make sense or do you think I’ve taken that a bit too far?

Kirill: I think there’s definitely some part of truth there, but it’s really inspiring to hear that these two tools used for completely different things, RenderMan and Tableau, were created by the same person. So definitely some truth to that.

Tom: And of course the other truth about RenderMan is that RenderMan allows people to make amazing animated movies, who have nowhere near the skills necessary to do it. You know, they’re taking people that are designers and storytellers, and allowing them to make amazing movies like “Finding Nemo” and so on. That, again, is what Tableau is trying to do, is to make superheroes, data analytics superheroes out of regular people.

Some of our customers, for example, are teachers and social workers and lawyers and managing directors, people who are not generally expected to be data analytics professionals. And they’re not specialists in that area, but they have data and their job is improved by being able to do analysis with it. So Tableau is trying to take that product out to everybody.



Kirill: Okay. Exciting times. Thanks for that overview of Tableau. Switching gears a little bit, let's talk about Data School. This is like a new module in your Information Lab, so to say. How did it come about, the Data School?

Tom: We often have these conversations. We're trying to think back to the various things that triggered it. If I go back to 2014, it was triggered by a conversation between me and Andy Kriebel, but I'll come back to that in a moment, because I think there were some events that happened maybe a year or two before that that made me start thinking about something like a Data School. For the listeners that don't know what the Data School is, it's basically our training program for new consultants within The Information Lab. At the moment we train about 24 people a year deeply in Tableau and Alteryx and then they work on a number of different places with our clients. And then at the end of a two-year period, we help them go on their way, generally into fantastic data science or data analytics careers.

But the first time that I think I ever had any thoughts about developing something similar was one week back in – let's say it was 2013, it was probably about then – when Accenture's recruiting team decided it would be a good idea to phone everybody at The Information Lab at the time, which might only have been 7 or 8 people, and phone them all up in the same week and see whether they'd like a career at Accenture. I was quite annoyed by that because had all seven of them decided to take these wonderful jobs at Accenture at the same time, then of course The Information Lab would not exist.

So I decided to call the head of recruitment in the U.K. for Accenture and asked them to stop calling my team, and they agreed to. But when I called them I said, “I think having five or six new people join your team at Accenture might help you today, but is it really going to help? How many people do you really need?” And they expressed the fact that they probably needed hundreds of people a year in the analytics space. So I proposed an idea to them, which was that they gave me a couple of million quid and a building, and I would use the five or six people we had at The Information Lab to create a conveyor belt of talented analysts which could all go and work for Accenture, thereby stopping my team getting taken and giving Accenture what they needed.

Now, Accenture never agreed to that. That’s not the point. The point is, that’s the first time ever in my mind I thought about this idea of using the skills we had in The Information Lab. We were spending a lot of our time training, bear in mind, because we still try to meet lots and lots of customers, not do lots of work for one customer. So we spend a lot of our time training. Right now, for example, in The Information Lab core team every consultant is a Certified Trainer for Tableau. We’re still very much a training-led organization. So it seemed to me the best way to respond to Accenture’s need for lots of people was to actually create these people for them with this training conveyor belt. And that’s the first time I ever thought of anything that looked in the same way that the Data School does.

When that idea actually came to reality was when Andy Kriebel approached us from the U.S. and said that he was interested to come to London. He’d been to a conference over

here, a Tableau conference with his wife and he and his wife decided that despite the weather, London was a good choice. And he called us and said is there a place for him in The Information Lab. Of course, my initial response was, “Absolutely not! No way!” I know Andy from before so— (Laughs)

Kirill: Why not? Tell us.

Tom: It just seemed too confusing to me. Andy was such a legend in the Tableau world and I’m just thinking, “Oh, my God. How do we find a role that makes sense for Andy?” Because at the time, I was thinking about the roles we had in the business as it was, you know, consulting roles and sales roles and so on. And there was nothing that made sense for Andy.

Kirill: Yeah. He’s like a 5-time Tableau Zen Master or something like that.

Tom: Correct. Same as Craig Bloodworth, one of the original group of seven Tableau Zen Masters. And he was so well-known within the Tableau community, he runs VizWiz, which is the most popular Tableau blog out there, so it was very difficult to try and find a role for someone like this. It’d be a bit like Christian Chabot saying, “I’m leaving Tableau. Can I come and work for The Information Lab?” It’d be like no, what could you possibly do for us?

So we then thought about, “Well, maybe Andy could just train. He’s obviously got an interest in training. He was running the Tableau training camp at Facebook when he decided to join the Data School. So we talked about him training just the consultants that The Information Lab, what



we now call the core team, needed. But we realized our ambitions to grow that team weren't as great as Andy could train. So we thought maybe we needed five new consultants a year or something like that, but we really thought that underplayed what Andy could do from a training perspective.

And hence we came back to this idea that I'd mentioned in reference to Accenture, so that brought us back to the idea of building the Data School around Andy. And that's what happened.

He came over in April 2015, and by June 2015 we had our first eight trainee consultants who spent four months in the training school with Andy, and still today that's what happens. Every February, June and October we have a new group of eight people that join the training school and Andy and a bunch of others—you mentioned Emma Whyte, who's been on the podcast before, she is heavily involved in training as are quite a few others from The Information Lab team. I even train myself occasionally, but not as often as I would like. So that's how the Data School came to life.

Kirill: Very interesting. It's a very small group of select individuals, right? From what I understand, it's eight people you train per quarter?

Tom: Yeah. Not per quarter, we do it three times a year, so February, June and October we have intakes. At the moment it's eight people at the time, but the next thing I have to do this morning after I finish the podcast is to go and look at buildings because we are about to take the data school away from the small facility we're in at the moment



and put it into a building that's going to be about ten times the size. That's going to give us an opportunity to massively increase the amount of people who are going through it. Probably not by ten—that would be ridiculous—but probably by the end of 2018 we're going to have at least doubled the intake, and by the end of 2019 we expect to triple it.

Kirill: How are you going to clone Andy?

Tom: Well, we have lots of people who look a little bit like Andy now. Like I said, The Information Lab is full of trainers and people like Emma Whyte and Craig Bloodworth and Robin Kennedy, Jonathan MacDonald, these are all names of people that have been at The Information Lab three, four, five years. Chris Love, of course, another Tableau Zen Master, the only person in the world who is a Tableau Zen Master and an Alteryx Ace. These are all people that are available to be involved on the training staff and they're very keen to do so. So, I think we're going to clone Andy by keeping Andy in the head coach role, but making sure that plenty of other people are involved in the training.

Kirill: Very interesting. So if you're only taking eight, and hopefully you'll double or triple that, that still means that the selection process is quite rigorous. What kind of candidates do you look for when you're reviewing applications for the Data School?

Tom: Yeah, the selection process is rigorous. It's rigorous, it's competitive, but it's also really fun. It's fun from our side and a lot of the people involved in it report it's actually quite fun from their side too. So, we've got something right around the recruitment process. What kind of candidates do we look

for? Well, the crucial thing is people who we can teach. So providing some evidence of being teachable is very important to us.

Often that means pointing out that you've previously learned something because too many times I ask people in the interview, "What are you good at?" and people tell me they're good at learning new stuff. And I always respond to that question by saying, "Fabulous. What have you learned? If you're good at learning stuff, you must have learned something." And quite often people haven't really got a great answer to that question. But then occasionally people come back to me and say, "I'm the Hungarian chess champion. Is that any good?" And I'm like, "Well yes, that is good. Because that's way harder to learn than what we're hoping to teach you. So if you've learned to become the Hungarian chess champion, we can obviously teach you data science." That particular person was also the Hungarian pool champion, so he's just generally good at learning stuff.

Kirill: And generally a champion.

Tom: Exactly. So being very teachable is crucial. Second to that, we're looking for people that are really interested in this subject. You know, we started it because we're addicts of working with Tableau and Alteryx and generally curious people that want to work with data. And so we're looking for people that have that similar sort of interest. And the way we find those people is by asking them to send us some content they've made in Tableau. It seems a simple response, but the variety in the content that people send us is remarkable.

Some people have maybe done half an hour's work, and that's fine, we're not requiring people to do more work than they otherwise might want to, but if somebody's only done half an hour's work for their application, then they probably didn't get that passionately interested in it. And so we use this method of sort of filtering the people that are really passionate.

We've had some people, for example—you know, one guy was actually on holiday and he was so interested in this application that he was determined to respond to us as quickly as he possibly could. He took himself away from his holiday for a week, bought a laptop, dived into Tableau, sent us this amazing response during that time and demonstrated just how passionately interested he was in this because he was prepared to give up a week of his holiday. Now, we're not requiring people to give up that much personal time to do the application. We don't want people necessarily doing that, but this guy clearly demonstrated how interested he was in the subject.

Now, you can imagine, if we fill a room with people who are passionately keen about a subject and they're easy to teach, you get a bunch of people that are just set for success in this. And that's what we've seen. The vast majority of people that we teach become real expert users in Tableau and Alteryx remarkably quickly.

Kirill: Wow, it sounds like you found the formula to set yourself up for success no matter what. There's no chance of these people failing.

Tom: It's almost true. There has been one or two people through the school that have been less successful than others, but the success rate is remarkably high, maybe as high as we'd hoped for. So it's been great and it's been so much fun seeing people develop—you know, people who have come to us, previously they've worked in a pub or worked in a restaurant or something, often in those situations it might help if they've also got a degree in math or statistics or something. People that have perhaps wanted to work in this area, but maybe didn't know it existed or maybe didn't have quite the route to get into this area, you know, we know people that have come to Data School and they've been rejected by big corporates or companies they think they should have been able to get into because they had the wrong kind of degree or went to the wrong university and so on. But we don't look at any of that stuff.

We try to be completely inclusive and that means that we don't even ask people to send us their CVs, because we don't really want to be influenced by whether they happen to go to Oxford or Cambridge or some other great university in the U.K. because that isn't necessarily a predictor of success for us.

Kirill: Very interesting. From here, I think this transitions nicely into what you mentioned just before the podcast, why are you doing all of this. You said that right now there's tens or even hundreds of millions positions that constitute this gap in the supply of data scientists. So the demand for data scientists is much higher than the supply. Could you elaborate on that a little bit, please?



Tom:

Well, there's two ways to think about that. You can say we're a hundred million people short because everybody should be a data scientist, but I'll talk about that in a second. But more importantly for me and more what drove us to do it was that we've been working in the Tableau world focusing initially on the U.K. And we go to all the user groups, we go to all the conferences, and after a while we sort of realized that we've met everybody that was good at Tableau in the U.K.

You know, clearly that's not quite true, but we thought we'd met most of them and there just were nowhere near enough of them to continue the journey of expanding Tableau in the U.K. and beyond. In fact, more importantly than just users of Tableau, there weren't anywhere near enough evangelists and champions and missionaries. Because don't forget that's where we came from, we are a group of missionaries for Tableau and Alteryx. So the Data School is actually about creating people who are going to be on a missionary journey and influence others.

We look at sort of particular champions that we know and it's clear they've influenced—you know, we often think about the pyramid of people that exists below one person in terms of a pyramid of influence, if you like. We know people who have influenced thousands or tens of thousands of people through their activities like writing blogs or running user groups and so on. So we figured that one of the best ways to try and get tens and tens of thousands of people, an army, was to create the generals, was to create the influencers and the missionaries and then let them free.

So people only join the Data School and they stay there for two years and then they go off into the world. We want to set them free in order to convince other people that Tableau and Alteryx is the right software to work with. And perhaps other software products in the future, who knows. Just generally working with data is the right way to do things.

So initially we were trying to solve a problem of lack of Tableau and Alteryx resources in the U.K., but the question perhaps for the audience is that it's just a much, much bigger field than that. If you think about what the future looks like for data analytics, in my opinion everybody should have pretty basic skills or intermediate skills in data analytics. And by that, I mean everybody that works at a computer, everybody that's this sort of information worker. It should be a skill that every single person has. And I feel that 20, 30, 40 years from today it will be ludicrous to ask for some data analytics work to be done by your colleague. That will feel as ludicrous as it does to ask a colleague to write an e-mail for you today. I don't know whether you agree with that point. Do you think that's going to be the case that everybody does this stuff?

Kirill: No, I totally agree. I think there will be a requirement for some level of data literacy across organizations. It will vary. Just like 10 years ago, not everybody was required to use an iPad, they just came out, and not everybody knew how to use a smartphone, it wasn't really necessary for survival in this current society. But now some employees of companies are required to know how to use Apple Pay systems, for example. Not just the smartphones, but things like Apple Pay systems just because it's an inherent part of the

organization. Yeah, I totally agree that to one extent or another, everybody in an organization will be required to have a level of data literacy.

Tom: Another thing to compare it to is, you know, it's a requirement to be able to send your own e-mail, right? You can work for a corporation somewhere and it's a requirement that you can send your own e-mail. 50 years ago, that wasn't true. 50 years ago, we had entire departments, you know, we called them typing pools. There were entire rooms and departments dedicated to people typing out messages sent down from the executives on some kind of change control form or some kind of document that explained the message that was going to be typed out and they were formatted and built by the people in the typing pool and then sent out.

And that entire industry has been replaced by software, by Word, by great e-mail products and so on, which now mean that everybody in the workplace is expected to do their own writing. The last photo I could find from a typing pool was about 1971 or something like that. That was the last time that industry existed and, in fact, the last typewriter was made in Britain in 2012.

That industry has been replaced by software, so it's not ludicrous to think that the data analytics industry, the fact that there is a data analytics department or a business intelligence department, should be replaced entirely by software. The endgame of that is always people ask, "Aren't there specialists? Won't we always have a need for specialists?" And I think we will because we still have

specialist writers. I don't know about you, but I don't write my own books and I don't write my own legal contracts, but trying to think of other things I don't write – there aren't many things. You know, I write most of my own stuff. So there still are a few specialists, but there aren't many.

And I think that's going to be the case with data science pretty soon. You'll be expected to do your own work. So, for example, at The Information Lab, which is a small company which is full of people who understand data, nobody would ever ask a colleague who the top 20 customers are who have bought Tableau from us. That's not a question anybody would ever ask anyone. They would just go on to Tableau and query the data and get the answer. Whereas I think in a big corporate, having that level of connection to your data and having everybody having the ability to answer those questions is unusual. I don't think it will be in 15, 20 years' time.

Kirill: I couldn't agree more. Very, very apt. I like that, it actually answers the question I usually ask at the end about what you see for the future of this profession and what people should prepare for. But let's replace it with another question. I have a question that I'm very eager to ask you. You've mentioned a couple of times that you're very excited, very passionate about Tableau and just generally the space of data science and analytics. What makes you the most excited? What is the biggest thing that puts a smile on your face when you wake up in the morning and what's the most inspiring and exciting thing for you in data science?



Tom: That's a good question. It's changed over time. You know, I've been a Tableau consultant, I've been a Tableau trainer, I've been a salesperson and now I run the company and don't do many of those things anymore. So my role has changed. I still remain incredibly excited about the technology, so I still try to use Tableau and Alteryx frequently. I probably use Tableau every day or close to every day. So I still remain excited about that, but that has faded away a bit compared to how excited I was. Attending conferences in 2010/2011 was the most amazing thing, to see the new features and to meet new users and realize there's this community. So that's kind of faded away a little bit, but it's been replaced actually with two things.

Firstly, seeing young people develop through our Data School has been surprisingly exciting for me and I'm really excited to be expanding that so that we can see 70 people a year going through our program rather than 25. So, seeing people having the ability to get into these exciting roles, where before they didn't, because of something we're doing is really exciting me. And in addition to that, seeing the communities that are forming around these products, you know, some of these people in the community have turned into great friends of mine and they've been great friends of other people and they're supporting each other in their careers and what they're trying to achieve.

So those communities themselves growing is quite an exciting area as well. It's something, in fact, we're thinking about as we look for this new building for the Data School, we're thinking a lot about the communities that we work in, particularly the Tableau and Alteryx communities based in



London. And in fact, the building we're trying to build is going to be in part Data School, but also in part a clubhouse for the Tableau and Alteryx communities in London. So, we're trying to work how we really make that work, but it's going to involve lots of events being run there, kind of generally open house office where people can drop in if they're a part of Tableau and Alteryx communities. So it's that community that's a really big, exciting thing for me at the moment. That was kind of a long answer, I think.

Kirill: No, that's really good. And it's also very inspiring to see how you're growing the number of people that are going to grow out of your school, but also how you're looking to create the opportunities to give back to the community. I think that's always very noble and it's a great way to help people out, even by providing space and facilitating these catch-ups and so on. That will be very, very helpful for sure.

Tom: Yeah, these people help us endlessly as well. The community itself is a place where we meet friends, we meet possible customers, we get support from and so on, and so I think it seems so much fun to build a building that people actually feel welcome in. We're trying to work out what that really means, but that's certainly our intention and I hope we manage to pull it off. I'm going to be a bit disappointed if we just build a regular office.

Kirill: I'm sure you will definitely pull it off. Thanks a lot, Tom. We're going to wrap up here. It's been a great pleasure. How can our listeners of the podcast contact you, follow you, or maybe learn more about the Data School and The Information Lab and so on?

- Tom: Okay, it's pretty easy. I'm more than happy for anybody to e-mail me directly if they've got any questions about any of the content. I'm on tom.brown@theinformationlab.co.uk. Twitter is [@_tombrown_](https://twitter.com/_tombrown_). See what I did there? And of course, if you're interested in the Data School, then we're at thedataschool.co.uk. And then of course theinformationlab.co.uk is our U.K.-based website for The Information Lab. So if that isn't enough ways to contact me, then drop me an e-mail and I'll tell you all the rest of the other ways you can contact me.
- Kirill: Can people connect with you on LinkedIn?
- Tom: Sure. Maybe you can put the link to my LinkedIn next to the podcast.
- Kirill: Yeah, we'll add it there for sure.
- Tom: I'm pretty easy to find on LinkedIn.
- Kirill: I'm connecting with you right now. I'm surprised we haven't connected yet. Yeah, that's really cool. Guys, all these links will be in the show notes and you'll be able to find them there. Once again, thank you so much for coming. I just have one last question for you today. What is a book that you can recommend to our listeners that will help them through their careers?
- Tom: One book? Well, I have my bookshelf to my left – now, what's on it? There's a book about wine there, that's quite a good one. No, presumably you mean in the data analytics space?
- Kirill: Yes.

Tom: The most commonly featured author on my bookshelf is Stephen Few. So rather than pick one book, I'll pick one author, if that's okay?

Kirill: Yeah.

Tom: Stephen Few, whose books I read compulsively in 2010/2011, helped me understand that there was a whole academic area around data visualization and he helped me understand really why it was possible to build a company and a career in this space. It seemed to me that understanding data through visualization was something that everybody in corporations expected each other to know. But nobody really had ever been taught how to do it, so when people turned up junk reports full of chart junk and absolute rubbish into meetings in giant tables of data, nobody could ever really articulate why they weren't enjoying the experience of trying to understand data that way.

And reading Stephen Few's books, I realized that someone has been studying this and could explain and articulate why we were having a bad time working through data in this way. And also that it was a deep and rich enough area to build a career and a company from. You know, it seemed at first that reporting looked to me like making a few pie charts and so on, and it's just become such a much more fulfilling and deep area than that. And it was probably thanks to Stephen Few that that happened. If you haven't read his books, I really think you should.

Kirill: Awesome. We've had Stephen Few recommended a few times, or at least once on the podcast. To help our listeners avoid choice paralysis, because Stephen has like seven

different books or something, what's the one that pops to mind first to get started?

Tom: His black book, "Now You See It" is my favourite one. There is a reasonable amount of repetition in some of Stephen's books, so if you only want to buy one I would buy "Now You See It."

Kirill: Okay, gotcha. "Now You See It" by Stephen Few and any other books by the same author if you have already read that one or are looking for a couple. All right. On that note, thank you again so much for coming on the show. It's been a great pleasure and I'm sure so many people are going to get so much value out of it and Tableau is going to get so many new customers.

Tom: (Laughs) I hope so! That is, of course, our mission. Thank you for listening. Thank you for taking the time to interview me. It was a really wonderful experience and I'm going to pass the baton to Craig Bloodworth, employee number two of The Information Lab. He can take this on at some point. Really great to speak to you.

Kirill: Thanks, Tom.

Tom: Take care. Bye-bye.

Kirill: So there you have it. That was Tom Brown and I hope you enjoyed this episode. As you can see, what a journey. Such a diverse and rich journey of experiences, decisions, career decisions and clients and passion. My personal favourite part was the unexpected twist in Tom's career journey where he was so passionate about Tableau that after that time when he spent a whole night using the tool and seeing how



great it is, then when he came back to work, his own company and people weren't that excited about it there and he then understood that he needs to move on.

That is a major decision in my view, to move on even from your own company just to pursue something that you are passionate about. And that just stands to show how important passion is in life and how important it is to do things that you really believe in and I'm really grateful to Tom for this example, that if a business owner can move on from their own company to something else just because of passion, then I think any of us should be able to do that and should at least find a career where we're doing something that we really, truly love and we want to keep doing on and on and on.

This episode, as always, you can find the links and the show notes on the SuperDataScience website at www.superdatascience.com/133. There you can also find the URL for Tom's LinkedIn and connect with him there and other places where you can follow him and find him.

And if you know somebody in the U.K. who could benefit from this, then send them a link to this episode so that they can find out a bit more about The Information Lab and the Data School. And if you are in the U.K. yourself, then find out when the next meetup is that Tom's organizing and I highly recommend attending that. Or if you're interested in getting involved with The Information Lab and the Data School itself, then also reach out to Tom and see what opportunities exist there. And on that note, thank you so much for being here today and spending this hour with us. I



look forward to seeing you back here next time. Until then,
happy analysing.