



Aged just 19, Josh Valman has done everything from consulting for multinational firms to managing supply chains. Now the Managing Director of his own global business, the engineering genius and robot enthusiast tells *QW* how he thinks differently

## FROM IDEA TO

# EMPIRE

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Josh Valman is many things – a businessman, engineer, robot enthusiast – but most of all, an incredible success story. At just 19-years-old he is Managing Director of global business firm RPD International and his job involves helping companies of all shapes and sizes to access a flexible supply chain, comprising of everything from designers and engineers to distributors. It would be easy to assume that, given his age, Josh inherited his senior title and lucrative business from a successful relative. However, he built the company from scratch and it's actually his second start-up to date. He currently employs 56 staff around the world, and as it stands, his company has a multimillion dollar valuation.

Josh's mission statement is simple: "I want to make product design and manufacturing accessible to everybody. Everybody has ideas. So why should resources be the limiting factor to what this world can achieve?" Bold words. It's clear to see that Josh is an old head on young shoulders.

Sitting in the boardroom of his new office in Westminster, Josh spoke to *QW* about his passion, the challenges he faced starting his own venture and why it's important to follow your gut instinct.

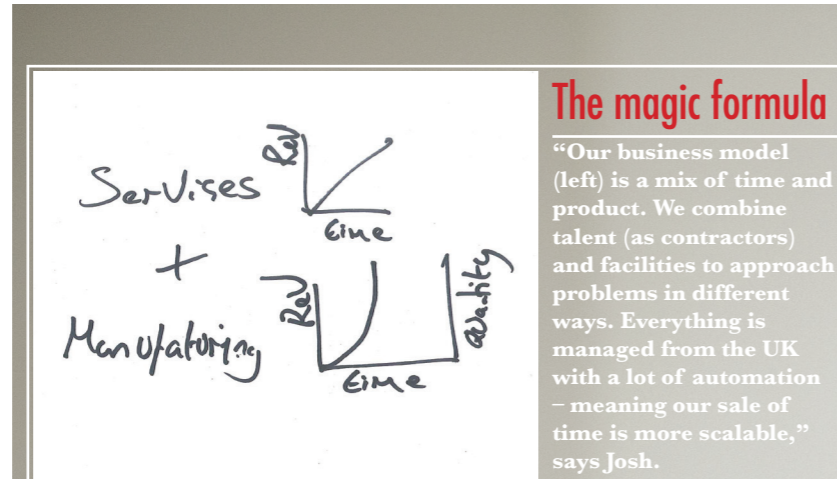


## Insatiable curiosity

Josh's love of engineering began at an early age. "My father is a chemical engineer. When I was two, he found me scribbling all over plant drawings for Shell," says Josh. "I understood pressure systems before I really understood how to read." But it was his fascination with the popular television show *Robot Wars* that led to the then 10-year-old Josh attempting to build his first robot. "I was obsessed with the show," explains Josh. "It was the weirdest sort of geek fighting in the world and I just wanted to compete."

The competition's rules dictated that the robot had to be remote operated, fit in a 100mm cube and weigh less than 150g. Josh drew up the components using Computer Aided Design (CAD) modelling, wrote detailed specification sheets and listed the tolerances and materials each part needed to be made from, but he had nowhere to manufacture it. "I understood what I needed but I didn't have access to it. The robot was too expensive to make in the UK but I heard China was cheaper," says Josh. "I started Googling Computer Navigated Cutting factories out there, picked the top search result, and then sent them my life savings of £500 to have my drawings made into real components."

Despite the risks involved, the advanced components came back within two weeks and were made to specification completely. The 3D CAD file allowed the factory to scan the parts so every component could be made within 0.1mm. "The robot (pictured right) was based around a 3D-printed nylon chassis and I designed a medium pressure pneumatic system in that weight class based on a compact pilot-activated shuttle valve. The pilot valve opened the main valve with air, reducing the open time and keeping the

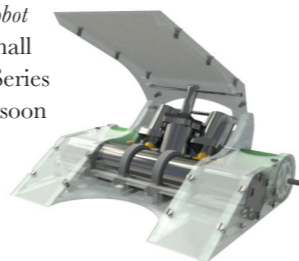


## The magic formula

"Our business model (left) is a mix of time and product. We combine talent (as contractors) and facilities to approach problems in different ways. Everything is managed from the UK with a lot of automation – meaning our sale of time is more scalable," says Josh.



flow-rate high," explains Josh. "The robot was pressurised with air to 100 pounds per square inch. I calculated the wall thickness by hand and then used simulation software in SolidWorks to optimise the system." Although initially intended for *Robot Wars*, Josh's creation never made it onto the small screen. However, after competing at a World Series robot event a few years later, the inventor was soon flooded with requests to design for others.



## Booming business

At 15, Josh began working as a freelance consultant for multinational firms. He was taking conference calls from China before school and at one point was earning on average £10,000 a week. "I turned up to these robot events with some crazy designs and it caught people's attention," says Josh.

"It was strange. PhD doctors were coming up and admiring my work. I started doing small-scale stuff for companies, such as manufacturing children's toys and managing an efficient supply chain, but eventually it spiralled out of control and I began working for the bigger firms. No one ever asked how old I was."



“There was a lot of talk about why should you trust this kid. It was very hard to validate myself”



Founding his first company, Miproto – a business that allows anybody with a product idea to upload and develop their concept into a manufactured prototype – was a logical way for Josh to manage his ever-growing workload. “People were paying me crazy money and it’s all because I worked differently. It sounds odd but when you don’t know how things are meant to be, you can shake things up. My job was to help people find and understand new and useful ways of working.”

As his portfolio grew so did the media interest and it soon became common knowledge that Josh was only 16-years-old. Although he can’t tell us the companies he worked for because of a non-disclosure agreement, he can reveal the complexities of the situation. “They really liked my work but unfortunately there was too much legality around employing someone who is not officially qualified to do the work I was doing.” But it didn’t affect his determination – it was only the beginning of the entrepreneur’s story.

### If at first you don’t succeed

Starting his second company, RPD International, was difficult because, as Josh says, “why would anybody give cash to a 17-year-old kid?” As well as the money he had stashed away from his freelance work, Josh still had to raise another £250k from investors. “The problem is I’m impatient. There was a lot of talk about why should you trust this kid and because I couldn’t shout about the major work I had done before it was very hard to validate myself,” explains Josh. “I did a lot of pro bono work in order to build up a repertoire with people. I managed to get my hands on some work as part of the London 2012 Olympics and used that as a springboard.” An investor soon hopped on board and it wasn’t long before others followed suit, but raising the money was a learning curve for Josh. “The right investor believes in a person, not a plan. Their worth has to be more than their money if the relationship is to last,” he says.

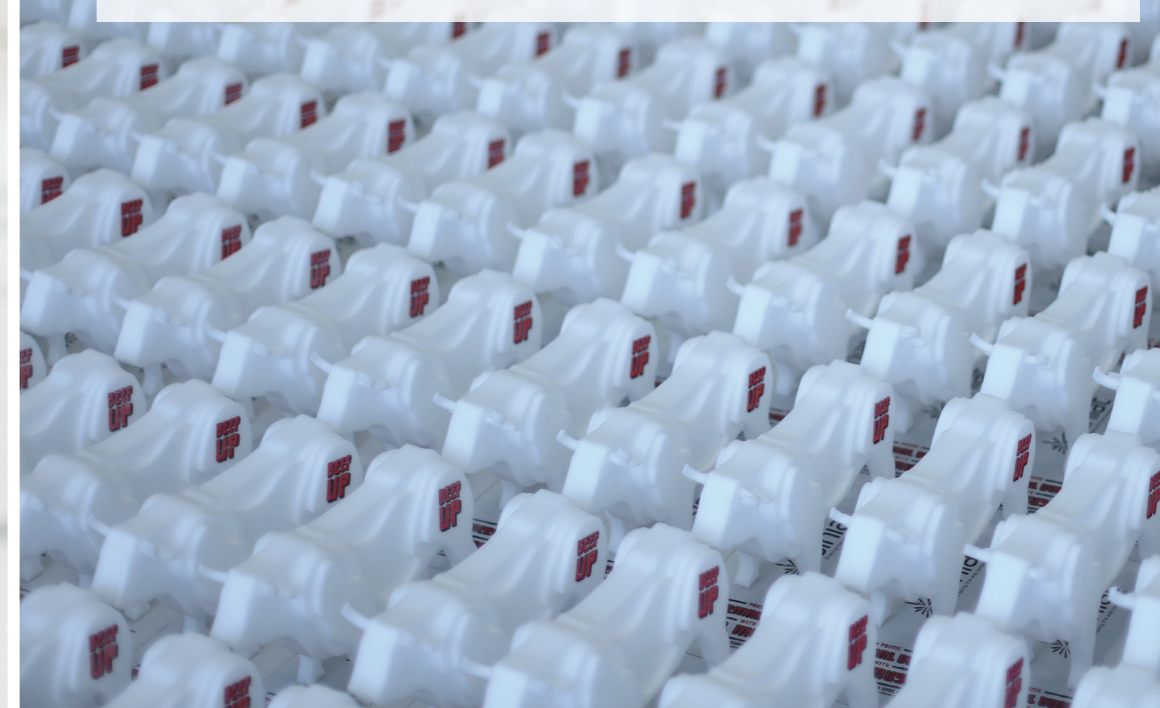
Set up in November 2013, RPD now powers design and manufacturing for companies, handling everything from product development

through to mass manufacture and delivery logistics. Each project is priced and billed individually, based on hourly rates and manufacturing costs. The company is known for its variety of clients and has taken on production of everything from wristbands to jet engines, with clients including marketing agency Karmarama and Matrix APA, which designs products for high street retailers such as Topshop.

“We build a custom supply chain for every single project that comes to us,” says Josh. “Whether you’ve got a sketch and need a prototype or have a manufacturing-ready

### Case study Siniat

Esther Gray, Account Director for Siniat at Taxi Studio, says: “RPD produced an army of 600 foam bulls (pictured below) for our client Siniat – one of the UK and Ireland’s leading plasterboard producers. The bulls were part of an integrated promotional campaign and were used as in-store counter points of sale. It was the first time we had worked with Josh and he definitely rose to the challenge, making the bulls to specification and in a very tight timescale – only two weeks. He offered us a cost effective solution, efficient supply chain and delivered the product with real professionalism.”



“We test factories for up to two years before releasing them to our customers as trusted manufacturers”

product and need a million produced and delivered, we put it together through a system that we’ve built.”

RPD’s business model offers expert consultation as well the ability to power supply chains and because of its adaptability, it has proved to be a hit with both small-to-medium-sized enterprises and larger organisations. “We make a mark-up on all the manufacturing we do and leverage the volume of all of our clients through the same factories,” he says. “Therefore, the prices we get are much lower because we’re seen as a much bigger customer than a client on its own. It’s why people use us. As a new business you have no leverage, and if it’s your first

project with a factory, they tend not to care as much. It’s hard to tell if the factory will offer the best price and stick to deadlines, whereas for an organisation that is well known, such as RPD, they will.”

Josh’s manufacturing model not only guarantees time saving in prototyping and production but gives access to a global network, ensuring the best minds and facilities are being used.

“A company that develops products shouldn’t be wasting time on the supply chain. All their focus should be on great ideas,” says Josh. “My business is simple: our customers create inventions and we make them happen.”



### Assuring the supply

RPD started with a detailed database so the company could be audited effectively from day one. “Having structure completely changes how fast things can happen and how efficiently a company runs” says Josh. “If selling efficiency is what we do, then the company needs to run efficiently.” But with the integrity of the supply chain a contentious issue today because of stories such as the horsemeat scandal and the Dhaka factory collapse last year, how does Josh vet the suppliers he works with? “We try a lot of factories. I like to give chances because I was in the same position when I started. I had no credibility,” explains Josh. “We test factories for up to two years before releasing them to our customers as trusted manufacturers, conducting various trial projects. It’s a long period before any client actually touches them but we do it because we have to be thorough. Quality and reliability is everything.”

Bringing in at least five new factories into the testing phase every week is a rigorous process and the tests the factories endure can vary depending on their specialist field. “We make trial projects up out of the blue or use a project from a client and produce it twice,” explains Josh. “We will conduct the project with one of our reliable factories and then as a trial at one of our test factories. When both are done, we compare the quality. It helps us see who is good and who is not.”

Apart from having to pass the businessman’s spontaneous tests with flying colours, the factories also have to be certified to ISO standards, such as ISO 9001:2008, and other standards related to manufacturing tolerances. “With these certifications we can ensure consistency in a factory but it also means we have more chance of ensuring consistency across multiple factories.

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This can be a big issue when manufacturing the same product in multiple locations in order to reduce time and cost in shipping,” says Josh.

### Raising the bar

The future is looking bright for the young entrepreneur, with clients such as Air New Zealand and Unilever knocking at his door. “I’m keen to do more high-technology stuff, especially in the aerospace and motorsport industries,” says Josh. “I’m also quite intrigued to see what we can do with smaller companies and how far we can push innovation.”

And it’s clear he’s going to go from strength to strength because he knows his weaknesses. “Traditional companies assume that if you haven’t done something for 20 years then you don’t know anything about it and this is a problem,” explains Josh. “I don’t know a single business leader that doesn’t make a mistake every single day and admit it. The day I can’t admit it is the day I will worry.” ■

## Josh’s top tips for start-up success:

- Do it
- Do it quicker
- Break it
- Fix it.

