

# Tradiebot Industries



WE MEET TRADIEBOT INDUSTRIES' CEO MARIO DIMOVSKI AND NEWLY-APPOINTED COO JASON MILLER WHO TELL US ABOUT THEIR BACKGROUND, WHAT THEY ARE WORKING ON TODAY AND, MORE IMPORTANTLY, WHERE THEY ARE GOING IN THE NOT-TOO-DISTANT FUTURE.

**NCR:** Tell us a bit about who you are and where you've come from.

**MD:** I started my career at 16 years of age as a plastic bumper repairer and by 22 opened my first business in bumper repairs. Over the last two decades I have owned several ventures in automotive plastic repair, parts recycling and mobile technology, including working for a couple of leading companies related to the collision industry. Not unlike other passionate entrepreneurs, some of the ventures have not quite worked out, whilst others have been very successful.

In 2014 I decided that I needed to

fully understand the collision repair process and fine tune my own skillset, so I sought to locate myself inside a panel shop with a view to challenging the status quo on plastic repair in the industry. An old friend, John Spiteri from Rigoli Smash, supported the experiment and for the next 12 months I did all their plastic repairs in-house. It was a huge success, with significant efficiency gains and cost savings. The whole exercise was effectively a pilot program for what became Plastfix.

Plastfix was born, and over the last four years we have been the industry's leading plastic repair solutions

provider, with 36 staff across Australia and NZ exclusively servicing Capital SMART's 45 repair facilities. We run a unique model in that we provide trained technicians to work on site and we manage all aspects of the business centrally. We developed our own hand tools, repair processes and training programs and have 170 online training videos. Every repair is file-finished (no filler) and all technicians are in-house certified and utilise our digital platform on their company smart device.

I am passionate about new technologies and digital transformations and an avid researcher of what's new and what's coming. I enjoy networking, meeting like-minded people and attending expos and conferences to see what's out there and how we can improve. I travel extensively, attending events and building my network to better understand new technologies and possible solutions for my business and the collision repair industry.

All this knowledge has been channelled into Tradiebot, which I founded in 2017, where we develop technologies and artificial intelligence systems for the collision repair industry with the aim to shift manual processes to be more digital and automated.

**NCR:** What was the inspiration behind Tradiebot?

**MD:** It all started back in 2014 as my fascination for 3D printing grew. It's



Jason Miller and Mario Dimovski.

possible to use it in the plastic repair process, especially on headlight lugs. I found a myriad of information, but it was a challenge to separate the “fact from fiction”. For about 24 months we played around with 3D printed lugs for bumpers and headlights and, working with the world’s leaders in 3D printing technology, looked at how we could repair them. There is a huge number of headlight assemblies going to landfill – because they are not recyclable and too hard to separate. There had to be a way to avoid this.

In early 2017, in one of those “light bulb” moments – marrying our work on 3D scanning technology with our 3D printing of the lugs – we may have found a solution, although we needed a partner to develop and protect this valuable IP. By chance I was attending the 2017 Avalon Air Show and I met the Swinburne University team who were demonstrating their work in materials and robotics and I knew then that this was it. I began to research their capabilities and plan the next step.

I presented our proposal and, through the course of the discussion, it became clear we were destined to work together. They also introduced the project to IMCRC who agreed to co-fund the project on behalf of the federal government to the tune of \$1.2 million – Project Repair-bot was born.

We are now well past proof-of-concept in our foundation project, which is the development of a robot that repairs automotive parts and the invention of our own plastic 3D printing material that is compatible with automotive plastic parts.

Tradiebot has several other innovation projects with potential patents, and is working with several stakeholders to develop these innovations. Total investment is almost to \$6 million, including government co-contributions.

**NCR:** What can you tell us about your “foundation partners”?

**MD:** As we started generating exposure about what we were doing, people began to see us as the innovators, not just in collision repair but across the board in the Industry



The Tradiebot Team.

4.0 space. We were this little Aussie company with big ideas and several industry leaders expressed interest in working with us. We were open to working with those that suited the needs of the projects. We decided who was right for Tradiebot and focussed on setting up collaborations with PPG Industries, Capital SMART and AMA Group on separate projects. Each partner was specifically selected for a reason: we have relationships, they are local, we collaborate with each other and they are our pathway to validation.

When you are working with the two biggest consolidators, you really know you’re onto something, although as we are partially government-funded, we have an obligation to provide a level playing field when we receive expressions of interest – but it must be the right partner. We are very excited about what the partners bring to the table and look forward to growing our relationship and creating some exciting things in the not-too-distant future.

**NCR:** Just before we turn to Jason, what have been the “big ticket” achievements in your first 12 months?

**MD:** Notwithstanding the technology achievements, material inventions and planned patents in progress, undoubtedly the biggest achievement is bringing together the Tradiebot team. We have some of the brightest global minds from academia and industry in the fields of robotics, material development, 3D printing,

artificial intelligence, augmented reality, and more. I never cease to be amazed by the calibre of the individuals and their qualifications and they are who has made it all happen thus far. The Tradiebot team has now grown to be 20 strong, undoubtedly the most dynamic team on track to digitally transform sectors of the collision repair industry as we know it.

**NCR:** Now, turning to the lynchpin of the team, Jason – tell us a bit about your background and how you came to be at Tradiebot.

**JM:** I completed a Metallurgy and Materials Engineering degree at RMIT. My first role, in 1992, was with Holden’s Engine Company developing materials, processes and quality systems. I then moved to Bendix Mintex to work on friction material for brake pads as well as process development and field application. From there, I went to Delphi Automotive, working on fuel systems for the locally-based OEMs.

In 1999, to enhance my business credentials, I completed a Master of Management (Technology) at Melbourne Business School, following which I moved to a CSRIO spin-off company outside the automotive industry for a short time before returning to the industry. I joined Clutch Industries and then went on to Futuris Automotive, which really was a milestone in my career. I became Manager of Advanced Development where I worked closely

with the Automotive CRC and developed a strong network across the major universities, including Swinburne, which I joined in 2013 as Research Project Manager.

It was at Swinburne where, among many other projects, I became involved with the Repair Bot project and was part of the team that got the IMCRC across the line as a key partner. As my contract at Swinburne was coming to an end, I was offered the COO role at Tradiebot.

**NCR:** COO can mean different things in different organisations – what does the role at Tradiebot encompass?

**JM:** I see my role as very much engineering-focused, focused on product development methodologies, matching our projects to customers' needs and prioritising and assessing the commercial viability of each project. It's largely a program management function with clear disciplines that bring all the pieces together. Really, it's a technical and operations role encompassing all aspects of the business.

**NCR:** What can we expect to see from Tradiebot over the next 12 months?

**JM:** I see my major focus over the next 12 months as developing relationships with prospective clients, getting time on the shop floor and understanding their needs. This will allow me to customise the roll-out of each project as, obviously, each client has quite different needs. In fact, sometimes the same client has different needs across their different sites. The application of our technology is wide and varied and there is even potential for us to apply for patents on novel technology applications.

**NCR:** Mario, your augmented reality was on show at the Campbelltown TAFE open day. How is this going?

**MD:** We will have all of this on display at the Collision Repair Expo and I'm sure people attending will find it a lot of fun and informative. The AR applications are endless: from using this digital information in repair procedures to scanning the vehicle to assess the damage – it opens a whole new world to the technician of the future. In addition,

the potential efficiency improvements are astronomical. To make this happen, we need CAD and for access to CAD we need the OEMs. However, as a back-up we have already started to develop our own CAD from surface models of parts and vehicles.

**JM:** Just to clarify – there is a distinction between the detailed design, which is loosely defined as the CAD, and then there are the digitised surfaces that provide the data required for these services.

**MD:** When we are ready, we will start exploring partnerships with OEMs and working with them on how best to access this info and make it available for the repair technicians. Of course, we will hold this info with the strictest security measures.



Close up of Headlight Repair.

*[Mario and Jason then demonstrated the technology using the repair manual for a SATA spray gun and then the process of scanning a vehicle with a dented panel where the digital process estimates the material requirements, time to repair and then generates the quote]*

**NCR:** So, what does this mean to the collision repairer?

**MD:** It may well mean that Tradiebot will become a digital supplier of parts between the OEM and the repairer, which is particularly important for 3D printing of replacement parts and even doing repairs robotically or cross-referencing damage on claims.

In a similar vein, we may well be the supplier of the CAD data that allows the digital dismantling of the vehicle – there are prospective partners out there today.

**NCR:** What will success look like from your partners' perspective?

**JM:** The answer simply gets down to economics. If our partners can add

value to their businesses – sell more products, increase efficiencies, improve profitability – then they will see their involvement as a real success. In addition, there's the kudos of being involved with a cutting-edge innovator and innovation is what creates the competitive edge.

**NCR:** You are clearly challenging the status quo – what will we look like in three to five years?

**MD:** The current repair processes will be nothing like what they are today – guaranteed! There will be automation, digital technologies, integrated supply chains all running on a single platform. It's happening now in other industries – we're bringing it to the collision repair sector.

**JM:** If you look at the technology in the OEM sector – that's what it will be like in the repair shops and it's our partners – the visionaries in the industry – that will make this happen. However, let's not forget these business leaders also have the more immediate pressures of running their businesses, but it's their commitment to finding a better way that sets them apart.

**MD:** It's Jason's role to put all the parts together and help the body shops become more efficient, effective and generate a better-quality output. A good example is the use of AR in a post-scan scenario when the results are there for all to see and the records are retained – even the customers can see the results of the repair, giving them greater peace of mind.

**NCR:** And a closing comment?

**JM:** Let's get people doing what people are good at, get machines doing what machines are good at and let's bring it all together. It's a myth that robots will take all the jobs – the reality is that the technology will create different and more exciting jobs for the technician of the future.

**MD:** For me, the most important message is acceptance. We are "Open for Business", I invite key industry stakeholders willing to explore best methods and pathways to deliver such technologies to the collision repair industry, to work together to take a much-needed quantum leap.