

Feature Article

Bruce Lewis: Road to Innovation

Hi Bruce, I wish to interview you about your journey in the realisation on one of your innovations - your WHS product OnGuard. Also for the purposes of highlighting your innovation process, I will enlarge particular terms for our readers.



Bruce has always had a love of fast vehicles.



Here is Bruce with his 'superkart' that he raced for 5 years.

As someone who has subscribed to and used OnGuard for many years now, I have seen the product evolve and improve over time. The purpose of this article is to provide others with some insight into how you got started, maybe some of your highs and the low points, as well as some advice for our readership who may be floundering at the beginning stages of product development.

Bruce, you are an experienced Technology Education teacher (trained in Industrial Arts) who has worked in both State Departmental and Catholic systems. Can you describe the situation, or the time when ideas about OnGuard first started coming to mind?

I have always had a firm belief that students in my care must be instructed well when it comes to safety. As far back as 1982 I was preparing safety booklets for my metalwork and automotive classes. I was teaching at Shalvey High School in Mt Druitt and literacy was a huge focus of the Disadvantaged Schools Program in the Met-West region at that time.

In 1998 I was teaching in a small country school, and the Principal appointed a new member to my faculty. The teacher had no previous experience teaching in technology workshops, so I called the regional head office, NSW DET in Sydney and NSW WorkCover. I needed to know what my responsibilities were, and where I stood in the event of a student

getting seriously hurt. My **research** indicated that I in fact, had a 'duty' to make sure I did everything I could to eliminate any 'foreseeable risk'. (BTW - this is where experience working in workshop environments equips the experienced TechEd teacher)



Bruce's passion for kart racing filtered into his teaching. Whilst teaching at Shalvey High School, Bruce secured funding from the Disadvantaged Schools Program to run an automotive program. It involved the manufacture of 10 fun karts each year.

I documented my **findings** and then I started to produce my faculty policies and procedures – in essence to protect myself from any possible legal issues if a student was injured. Then I created safety training resources for students to back up my policies and procedures. My aim - student safety training was to be consistent across all classes and independent of the workshop teacher!

Apart from your independent research, how did you come to the realisation that this was something that may be a product that others could benefit from?

My partner Deborah Jones commented one night on what was I working on? She asked why I wasn't utilising resources found in the library. I advised her that there were no such resources. She suggested that perhaps other TAS coordinators would be interested in such a resource and even consider buying them. It was 1999 and I was about to attend a TAS teacher conference. This seemed a great opportunity for me to present my resources and gauge if there was any interest. So I took along a print copy of my new faculty policies, procedures and safety resources. In terms of **market research**, I showed my 'stuff' to the group during one of our evening 'bonding' sessions. After a few beers and a port or two (just a few Bruce? - Dave), everyone liked what I had produced and several asked: "How much do you want for a copy for this stuff?" My hard work it seemed could indeed transform into a **saleable product**! OnGuard was born. In the meantime Deborah researched mailing list companies to determine ways to communicate our marketing message.

The 'product' needed a name. It was originally called 'TechSAFE' – OH&S Guide for Head Teachers. It was a partnership with my partner Deborah Jones. Deborah worked as a financial planner and had an established home office with staff. We called the new business - ITE Services. Having this office backup was critical in establishing the business – staff, phones, fax machine, internet, photocopier, post box etc. We initially sold 'TechSAFE' – OH&S Guide on CD. The 'OnGuard' section in the 'TechSafe' Guide included over 60 blackline safety tests for TechEd

machines and powertools. Teachers started calling the TechSAFE CD, the 'OnGuard' Safety CD – because all they really wanted was the safety tests, so we eventually changed our name. In 2008 we created the company 'OnGuard Safety Training Pty Ltd'. Some sixteen years on, the current 'OnGuard' range of products looks nothing like the original.

Bruce I am trying to get an idea of what expertise you possessed at the time to help you realise this innovation. If we were to try to unpack some of this, what experience did you have, and what were the gaps in your knowledge and skills. I am assuming you have built on these along the way in realising OnGuard?

I have always been computer savvy. My dad had a Tandy TRS 80 business when I was at Sydney Teacher's college, and I helped him set up. I have been a faculty Head Teacher from the age of 30, and in that time I was proactive in my use of computers - starting with an Apple IIe in 1987, progressing to PC laptops (1990), the BBC Acorns (1994), then Apple Macs and PCs through to 2007. This gave me a good foundation in basic network and computer use. I was also a Curriculum Coordinator, and became quite proficient at using desktop publishing software to develop subject booklets. Then I taught Stage 6 Industrial Technology – Multimedia for a number of years. The **new knowledge and skills** that I have acquired since 2000 have included: web site design and creation, server technology, MYOB accounting, Copyright and Intellectual Property, business administration, marketing and of course WHS Legislation. My learning curve has been quite steep with regard to learning new software. Some programs include: MYOB accounting suite, TextaLoud, HTML Protect, Camtasia, Acrobat Extended Pro, Corel Draw, MS Expressions and many more.

This certainly seems to also demonstrate the evolution of technology and how your skills and knowledge have also had to adapt over time. This is evidenced by your transition from CDs to the delivery of your products over the internet and now the use of mobile devices. It must be difficult to manage some of the more technical aspects in working with computers. Do you have any help?

Yes. Since 2006 I have had a contract programmer – Adam – who works on OnGuard with me. In 2008 we moved the OnGuard product to a cloud solution, so he looked after all of the server aspects and assisted me with the coding and scripting of all the new features in the program. We have worked closely together recently, on the new 'Just-In-Time' Mobile Web, utilising mobile devices and QR Codes. It only took us 7 months from conception to completion. Deborah's role as our Business Development Manager involves the **marketing** and **administration** of the business and dealing with our clerical/accounts office staff on a daily basis. This is great as I don't have to get involved in this area of the business and I can continue to focus on product design and delivery. We of course have an accountant, a lawyer and an IT guy that looks after our office network.

A few years back we employed a NSW Sales Representative – Trevor (a retired NSW Industrial Arts Head Teacher, who many of our readers may already know). Trevor and I taught together as 'first-year-out' teachers in 1978. Trevor has added considerable depth to the services we offer

to schools in NSW. He conducts workshop safety audits, trains staff in the use of OnGuard ACEProPLUS and provides professional development by conducting 'currency' machine training for workshop teachers.

This journey has been both a lonely and courageous one, with a lot of risk taken on by you. At the end of the day, if you don't sell your product, you won't eat! What has been some of the successes that you have enjoyed with the realisation of OnGuard?



Bruce and Deborah, receiving an award

Lonely? Courageous? Risk?
Not really Dave. 😊

Just head down, bum up and mouth shut. When I look back on my teaching career, it offered me heaps of opportunity and experience, but It didn't matter how hard I worked or the long hours I put in every day, I was really only a 'soldier ant'. Starting OnGuard and leaving teaching has given me a new and invigorating outlook on my work life.

In terms of success – I know in my heart that OnGuard is helping fellow Industrial Arts (TechEd) teachers all over Australia. Two awards that we have received include:-

- **2006 NSCA National Award – Best OH&S Training Program, and**
- **2008 QLD Finalist in the Telstra Small Business Awards.**

OnGuard has had continued growth since we began. The business first started in 2000 and when I was still teaching – it was a hard slog – I worked every weekend and all my holidays on OnGuard. The business grew to the point that in 2008 I resigned from teaching after 30 years and worked full time on OnGuard. The business experienced significant growth due in part to my increased focus. Another significant event was the signing of the Catholic Archdiocese of Sydney in 2012. This signalled an impressive feat – every Catholic diocese in NSW was now using OnGuard.

We currently have about 35% of all high schools in Australia using OnGuard, across all three education systems. Considering our market penetration in WA and SA is minimal, the percentage of schools using OnGuard in the eastern states is closer to 50%!

As you know teachers can be pretty liberal with the copying and situation of other peoples work. How did you go about protecting your innovation, and has there been any times where you have had to remind teachers regarding intellectual property?

YES - constantly. We have been very clear and upfront that our business model changed in 2008 to one of a subscription based licence – much like Foxtel. The more you subscribe to, the higher your subscription.

We know that even when schools cancel their subscription, they continue to use paper copies of our resources. We also know, that they know, they are breaking the law. We are a member of Copyright Agency Limited – an organisation that audits workplaces including schools for copyright usage/infringements. These audits result in a monetary charge for the resources used in schools according to their findings. These charges are passed onto us annually. This is how we know teachers do ignore our copyright notices and pay little regard to our **Intellectual Property**. We are continually monitoring the situation and Deborah is working closely with our legal team in this regard. It is important that teachers understand, any person charged can face a huge fine and/or a jail sentence. So in summary a copyright breach is just not worth it.

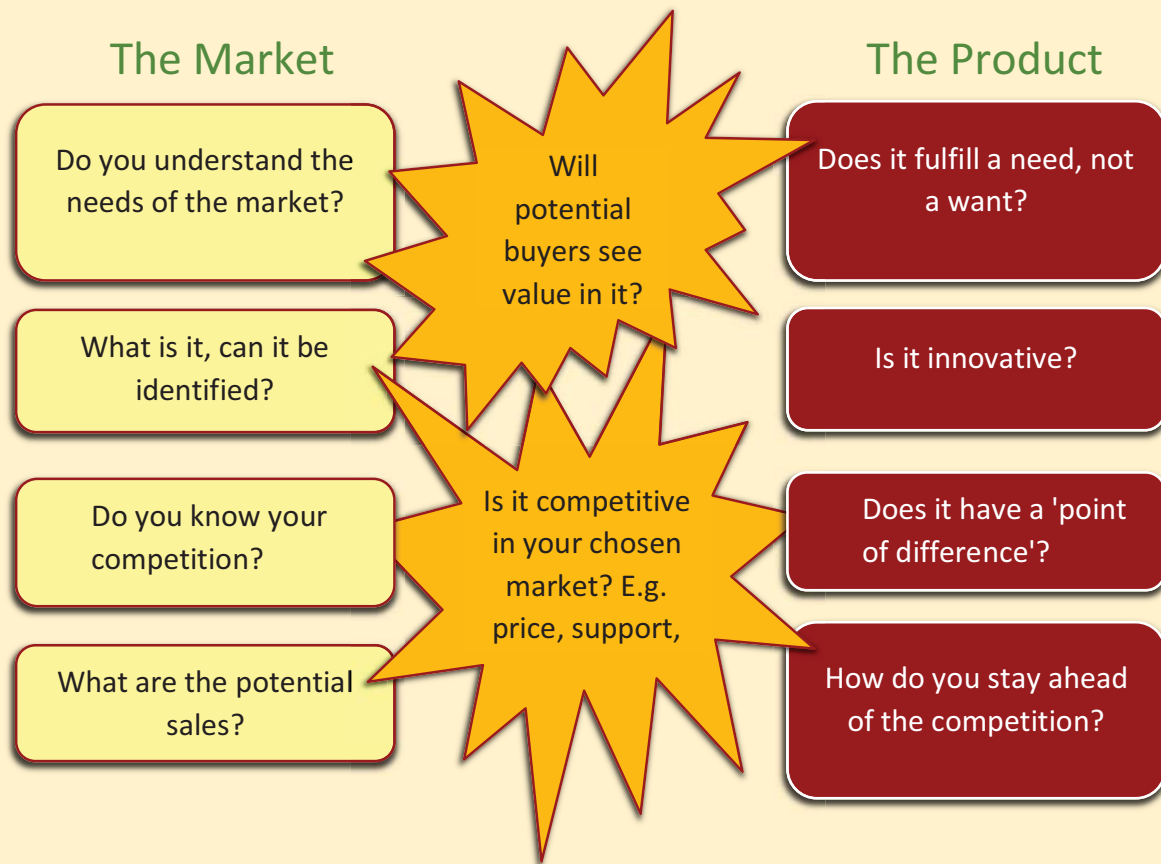
Bruce, unfortunately as we know with WH&S issues, ignorance won't protect you. I think the culture of 'borrowing' and 'sharing' work is part of teaching, but when it comes to commercial products, I think all teachers need to be aware of copyright and the implications if they breach it.

Thankfully Dave, we have a huge 'fan' base of clients all over Australia, and they tend to inform us of 'folk' that are deliberately ignoring Copyright law and using our resources unlicensed. To date a polite and courteous phone call from me usually sorts out the problem. 😊

For those readers out there that may have an idea about developing a future innovation, what are some words of advice that would help them to make that first step and to possibly avoid some of the mistakes that you initially made?

Mistakes? Only one comes to mind. We signed up a business coach for me in 2007. It cost us \$6000 and all the guy tried to do really, was sign us up to his telemarketing program – which we knew would not work in schools – because teachers are teaching during work hours and cannot be contacted!

If you have a 'product or service' and want to start your own business the following are areas you need to have a good understanding of: –



Constant client feedback is very important. Thankfully we do not have a comparative competitor in our market segment (Education) in Australia. Some say this is lucky – but really luck has had nothing to do with it. Before starting out back in 2000, we knew the market (TechEd Education in secondary schools), we knew there was a specific need in this market (safety training resources for students) and we knew how to reach the specific 'decision makers' in our market. (TechEd head teachers / faculty leaders).

Bruce, from personal experience, you have certainly improved the WHS practices that have occurred in the schools I have taught at. Is there anything you wish to plug, or any plans for the future that you wish to let the audience know?

Thank you Dave. We are constantly getting great client feedback. We know that OnGuard does make a difference in TechEd faculties in schools - it improves WHS culture and it actually has been proven to lessen the number of workshop accidents and near misses in schools using it.

What's new in 2015? The 'Just-In-Time' Mobile Web is a **new product** we have developed utilising QR Codes. It was in response to a **real need**, expressed by TechEd teachers at the 2013 IIATE Conference in Sydney. Our clients needed a simple method of conducting regular machine inspections.

OnGuard Safety Training
 MAKING SENSE OF WORKPLACE SAFETY TRAINING
 www.1300BeOnGuard.com

Just-In-Time Mobile Web

Machine Type	Serial #	Room	Year of Inst.	Seriousity	QR Code	
Industrial Fan	43032302	CHEM303		1	Pass	
Refrigerator	206555	COOK303		1	Pass	
Refrigerator	328202	COOK303		1	Pass	
Refrigerator	324620	COOK303		1	Pass	
Blender	82727	PMG3		1	Pass	
Hot Water	832335	PMG3		1	Pass	
Roller Chair	888	PMG3		1	Pass	
Handheld Pressure Washer	206520	PMG3	2008/2014	Passed	1	Pass
Power Orbiter	84842	PMG3		1	Pass	
Eye Washer	912332	PMG3		1	Pass	
Roller Chair	453233	PMG3		1	Pass	
Labstat	1333333	PMG3		1	Pass	
Hand Protection	206520	PMG3		1	Pass	
Compressed Air Gun	912332	PMG3		1	Pass	
Hand Saw	912332	PMG3		1	Pass	
Hand Saw	912332	PMG3		1	Pass	
Hand Saw	912332	PMG3		1	Pass	

Regular Machine Inspection Checklists
 Improve efficiency, reduce paperwork and retrieve data with interactive, customisable machine inspection checklists that can be completed on the spot..... Just-In-Time..... using your tablet, iPad or smartphone. The inspection results are instantly recorded in the Machine Inspection Register. Failed inspection notices are emailed directly to your facilities manager.

This led to us creating the FREE ‘Just-In-Time’ Mobile Web. TechEdu teachers can now conduct machine inspections, record machine demonstrations and record student machine competency - all on the run – on their phone or tablet. Students can also scan a QR Code to open machine safety training and tests with their mobile device.

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 MAKING SENSE OF WORKPLACE SAFETY TRAINING
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Just-In-Time Mobile Web

Access Cloud Safety Training
 Access the OnGuard ACEProPLUS Safety Training Program. Users scan the QR Code attached to the machine, launch the Safe Operating Procedure, read/listen to the content and complete the online knowledge test..... the training session is recorded on the user's training record, for later retrieval and reporting.

Next, we have developed a ‘SUPPORTED LEARNING’ pack for use with students who require one-on-one support with their studies. Every machine training unit for year 7 and year 8 within the Food, Metal, Textiles, Workshop and Wood packs have been revised and simplified. The SOPs include strategies that highlight the learning outcome required and assist the student to satisfactorily complete the

necessary knowledge test. Like the ‘Just-In-Time’ Mobile Web, the ‘SUPPORTED LEARNING’ pack is FREE to ACEProPLUS clients. We will continue to improve the OnGuard suite of products as long as our clients want us to. There are also at least a dozen or so new features on my ‘design board’ for 2015.

Definitely watch this space!