

The E-business Supply Chain

Jo: *Welcome to the Knowledge Tree everyone. Today we're speaking with Dr Marc Bowles who's the Director of Working Futures, a private research and consultancy company specialising in e-learning and e-knowledge, based in Launceston, Tasmania (Australia). Welcome Marc.*

Marc: Thank you Jo.

Jo: *Thanks for speaking with us, so in tune with the theme with this edition, tell us about your definition of e-business.*

Marc: I think it's a little bit clouded what e-business is, particularly within the general public at the moment and the education community. I think that e-business really is where you have a business that uses technology to enable its business processes and without that technology it can't conduct its core business. Now we need to be really careful about that definition, what I'm saying is that you can be in e-business and you can be doing things such as using the technology, but if its not related to your core business process, then I question whether you actually are in e-business. I prefer to see that as e-commerce, where you're using technology to enable standard business processes, but your core business functions aren't reliant on that technology... so it's a fundamental difference, I guess, in terms of how some people cluster anything that's happening with any business process, with any technology enabler, as being in e-business.

Jo: *Yeah, so for you it's to do with the core business that's being delivered.*

Marc: Yeah.

Jo: *If that's 'e', then you're doing e-business.*

Marc: Yeah, let me give you an example.

Jo: *Yeah, that would be good.*

Marc: In e-learning we have seen people using technology for learning processes but at the end of the day if they can still get away with doing face to face or they can get away with doing a CD rom based learning, then I wouldn't necessarily classify them as an e-business. But if all their learning delivery was actually facilitated online then...and they collected money online and basically their core business process was enabled by that technology, then I would see them as an e-business, specialising in e-learning.

Jo: *OK, great, well that's good to have that sort of area clarified for us a little bit, so what are some of the tensions that you see business facing in that sort of convergence, either opportunities or issues?*

Marc: This is a complex question again. The fundamental answer here is really simple, that is that the fundamental tension is that people don't know how to use technology for their core business purposes. And that means that if you don't know what your core business is, then any technology will do but nothing is going to work, and I think that is the biggest tension I've seen at the moment in the e-learning space and we have organisations adopting technology appropriate for particular learning approaches and

suggesting that they are going to be, how they're going to commercialise their services yet that technology is completely inappropriate from an e-learning business point of view and again I can give you an example of that. We see small registered training organisations using Moodle because it's free to do a learning management system and then they expect to be able to commercialise that opportunity because it's now widely available to the market place any where, any time and so on, etc. The reality is that it doesn't conclude any of the core business principles of what that makes that technology work for that business, so you'll often see that some people that buy systems are buying a cheaper based system then say a very expensive end learning management system or related technologies, but they can actually build interfaces to do the e-commerce functions and do what I would consider to be the e-business or the e-commerce components and that's really where we've tried to work a lot, in those sort of areas.

Jo: Ok so tell us a little bit about your business and how you might respond to sort of some of those issues that businesses are facing.

Marc: You need to understand my position, my position is that I work with the clients that have the problems, i.e. registered training organisation. We're a research consultancy so we have large, very large corporate clients, some of the largest in Australia and South East Asia, that are confronting the same problems that I consider are confronting a small business, a small RTO. The reality of the problems are that we've got the technology for learning being discovered by educational professionals whereas in actual fact there's a whole world of experience in the IT and in the business field about how to use that technology better. By that I'm saying we're developing technology solutions as educators and thinking they're unique and novel and wonderful and they might be in isolation for education, but when you start to try and build business systems around them, they have major, major problems. So we set up a test bed which was to test all the available e-learning technologies, but within two key fundamental e-business principles, the first being that it had to be looked at as a supply chain, it's no use getting a bit of the picture right if it doesn't fit with everything else and the second one was, although the Department of Education, Science and Technology now have been told not to use this word, 'interoperability', it's no use getting one piece of technology that works if it doesn't talk to every other piece of technology. So we've set up a test bed to ensure that we were getting a supply chain solution for e-learning that resulted in the optimal solution for a student, but it made business sense and that resulted in a number of particular research and innovative developments, not just least of testing new technologies and how they worked together and coming up with a 'best of breed' solution. The major e-business solution was what we started off calling a 'service layer', where you create an application that spans all the other applications and instead of creating an interface between multiple applications, you create one service layer and that is what we call an 'integration layer' now and that is where your e-commerce and your e-business (if you like) functions reside. So e-commerce, in the sense, as an RTO I can come into the test bed type environment and use that to achieve electronic business outcomes or I can take over the whole model and brand it as my own and I've actually got an e-business that can use that technology as the backbone of my e-learning business.

Jo: So is that the sort of service you're offering to RTOs or is that just an example?

Marc: As an example, the test bed's spun that off, what we've done is we've had people who have been commercially interested in buying it as large vendors who have suddenly recognised the value of an integration layer that allows them, as a particular type of

learning management system, to have any authoring tool talk to it or any content management system, learning object repository, interfacing with it. The interoperability isn't in each application, it's actually in the data, it must be standards compliant, but the overall architecture is service orientated, which means that it is customer oriented, which also means from an e-business point of view, that you're actually operating in an optimal world. You want your brand and your image and how you service your client to be unique to you, not generic to everybody. So we've tested the technology and spun it off. You have companies like the Knowledge Exchange which has just actually purchased the IP [intellectual property] for the business model. The Knowledge Exchange is a commercial version and what they are intending to do is exactly that, set up a system whereby as an RTO you can come in and instead of buying all the licences and spending your million dollars, you can basically get access to everything for \$45 per head per person per course. To me that is a very accessible sort of model.

Jo: It certainly sounds like it, so tell us about, can you provide an example of one of the problems that one of your clients came to you with and the solution you provided for them, like, in specific terms?

Marc: There's multiple, the best example I can think of and would be familiar with the people that are viewing this, would be the cost of the technology itself to start with and the cost of maintaining it in the long term. So we had multiple different variations of learning management systems out there, but what we did at the end of the day in the test bed is uncouple the learning management from the business supply chain. And that's the really important thing that people really haven't understood the significance of. What we're doing is that we've actually made authoring of content, in terms of the supply chain, move into a learning object repository or a learning content management system. The problem being that people couldn't re-use their content once it was locked into a learning management system. Or they couldn't access it from someone else and use it on the technology. Commonly we saw people with standards compliance, (SCORM, IMS, whatever), their content locked in assessment instruments for instance, or locked into particular types of content. What we do is make sure it is authored separate to the learning management system, stored in an object repository and then assembled in the learning management system, which means that, learning management systems that, are supposedly standards compliant, once you've made it standards compliant with a system, you can never remove it from that system, that does not occur.

So from a business sense what we've done now is increase the value of the content because it can be reused. We've also, within that process, we've made it so that you can put it into templates that will allow the content to be authored and converted into templates that will size to different screen sizes, they will go across a mobile device, they will go across a fixed Internet-/Web- PC device but also you can make it fully accessible. So you can choose when you're converting it, to make the content appear how you want it to for certain technologies, and you can brand it. So that means from a business point of view, the smaller RTOs, but also increasingly the large providers, the large providers can work with multiple RTOs now instead of having to work with one to get it right. We've actually set up a system where the content can be developed in a particular model but when it appears at the interface end of the user, it looks like, feels like, smells like, tastes like, exactly what they want it to look like, smell like, taste like.

Jo: OK so it's doing a lot for making it very customised.

Marc: What we're doing is uncoupling the learning management system, which from my point of view is the contrivance of educators to solve a particular problem, that ended up by the vendors being a bottleneck in the whole supply chain, and we were actually bastardising what we do best, to fit the technology rather than the other way around.

Jo: OK, that makes a lot of sense, yes, absolutely. So what new e-processes or technologies are on the horizon in your view, or need to be designed to make responses more effective between e-learning companies and their clients?

Marc: Umm the thing that has been driving me for the last 18 months, I'll share it with you because I don't think I'll personally ever realise it with the amount of grunt that I've got in my company, is 18 months ago we started talking about an i-tunes for learning object repositories, 18 months later we've seen an i-tunes roll out in Australia. It's December now in 2005 and what we're seeing is the beginnings of the wave of content sharing for MP3s if you like. To truly create an e-business in the educational marketplace, you need two things, one is you need government to butt out of market situations, (a very right wing fascist point of view) but what you want to do is to be able to create the capacity for people who have content which has value, to share it with people on a real return basis. By that I mean that you want to be able to have a B to B exchange (a business to business exchange), where people can come in and collect objects, that are actually in object repositories, with the person has put the content there knowing its rights to be managed have been predetermined by them. So it sits where they want it, so they can control it. At the moment we have enormous arrays of valuable content that people will not put into the public space because they're afraid of it being ripped off, but more importantly the mechanisms at the Federal and the State level to share that content is based on a free sharing principle. Great, but there's a whole world of better content out there, that will allow the market to, in actual fact, expand and e-businesses to have a real business model. So I see B to B and the learning object exchange as probably the single almost vital e-business growth area and an opportunity for Australia globally in the e-knowledge space.

Jo: So you are going to be pursuing that as far as you can?

Marc: I think I'm just about done, I don't know whether I can push it any further.

Jo: OK so thank you very much for giving us your time and telling us about your projects. And we'll make sure that the link to your website where people can see all the different work that you're doing and the reports that you've produced, so we'll make that available on that. So thanks very much for speaking with The Knowledge Tree.