Shane Tickell: Being open about open source

IMS MAXIMS broke new ground in 2014 when it made the code for its patient administration system and electronic patient record open source. However, some have accused IMS MAXIMS of 'open washing', or using open source for marketing purposes. The company's chief executive Shane Tickell responds to that criticism in this frank assessment of some of the challenges faced by a tech supplier to the NHS.

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IMS MAXIMS entered whole heartedly into the open source arena by releasing our code in 2014; but since then market conditions have changed. Despite this, we have not abandoned the project. In fact, we remain fully committed to it and optimistic that the new team at NHSX will recognise its value. Let me explain.

Why did IMS MAXIMS go open source?

We never intended to become an open source company when we were established 33 years ago. However, we have been working in an almost open source fashion with the Health Service Executive (HSE) in Ireland for more than 25 years.

The HSE owns the code for the software, but we are the custodians of it. This approach has helped us to develop our products to better meet the needs of frontline staff.

Then, around five years ago, English policy makers caught on to the idea of open source. There was a lot of discontent with suppliers over vendor lock-in at the time. NHS customers complained that they couldn't change or fix a product once it had gone live.

NHS England representatives asked us if we could provide the country with our patient administration system (PAS) and electronic patient record (EPR) MAXIMS on an open source basis.

After a lot of analysis and hard work, we decided we could. We saw that healthcare was a fast-moving environment and felt that technological solutions needed to recognise that. We felt that, by making our product open source, anyone with the ability to code could make such changes if they really needed to; and then share those enhancements with the user community. But the goal was to allow greater collaboration, advancement of digitalisation, improved safety and a faster roll out of capabilities to millions more patients that are supported by our systems, and tens of thousands more users.

We felt that that users would be able to help us to enhance the software to help it meet the safety and usability needs of healthcare professionals – not just for the NHS in England, but for the global market.

We said we would take the invitation as an opportunity to disrupt the market, most importantly to speed up adoption. I felt we were embarking on a 10-year experiment. Or, put another way, I felt it could take up to 10 years for this to really catch on and scale. In 2014, a community interest company (CIC) was created by the NHS and the first users of OpenMAXIMS, the open source version of our PAS and EPR software.

The CIC enabled interested NHS trusts to act, along with IMS, as guardians for the golden code stream for OpenMAXIMS. We then published on the open source distribution channel GitHub and invited people to download and use the software.

What happened next?

Since then, many people have downloaded the code experimentally. We are not aware of anyone who has actually put it into practice in the setting it was designed to serve, other than the customers we had worked with and have come to us directly.

As some recent critics have spotted, we have not updated the original code for some time. Why is that? Well, multiple factors have impacted on the time we have been able to spend on further developing our open source model.

Firstly, the focus of health tech policy makers changed about three years into our experiment. A new team at NHS England was significantly less interested in partnering and in open source initiatives, and much more interested in traditional acute roll-outs.

Some of this switch in focus translated positively into the Global Digital Exemplar (GDE) programme – and we are delighted to be able to say that our customers, Taunton and Somerset NHS Foundation Trust, secured a place in the initial tranche of selected trusts, with our fast follower being Wye Valley NHS Trust.

It was also clear that some NHS managers really just wanted to buy products from a supplier, and to have a supplier relationship with them. They somehow thought that IMS being open source changed that, although it was not the case, and we had to manage their expectations.

Secondly, I will acknowledge that we faced some technical issues. We are managing three major versions of the MAXIMS product portfolio on behalf of our valued customers, and that makes regular code releases a bit challenging.

Having so many versions of MAXIMS in use is a major overhead for us as a company - but we are not the kind of supplier that switches off a customer using an older version.

We appreciate that there can be complex scenarios that make upgrading difficult. We encourage all customers to be on the latest release, but are sympathetic to those that may struggle. We consider this to be part of the partnership approach that we take with all our customers

The really good news is that we are bringing together a comprehensive consolidation of all previous versions for our 2020 Global Digital Exemplar (GDE) release.

I am delighted to say that we are already in beta testing with our customers on that version 15 release. We will go on to update this annually. This will help us support regular updates to the source code.

Thirdly, there has been a general shift in interest away from open source code and towards interoperability and open APIs. That's really good news, and many readers will know that we have invested hard in interoperability, for the MAXIMS product and industry as a whole.

For example, Paul Cooper, our former research director, helped to create industry group INTEROPen with Amir Mehrkhar and David Stables. This aimed to try and advance the interoperability agenda by getting companies and the NHS to actually adopt and put into practice open standards and artefacts such as FHIR APIs.

Now, INTEROPen has some 200 organisations as members, and has made some real progress over the last few years.

Another issue has been the challenge of meeting open source community expectations on the speed of releases that they expect to see.

Take, as just one example, developing Spine interoperability for the Personal Demographic Service. It took us three years, and a significant amount of resource in developing and undertaking witness testing, before we could make it available.

I think there were only six products in the world, with that level of compliancy, at the time we finished that work. So it was not the kind of thing you can just release, safely, every couple of weeks. Indeed, it would not have been responsible to let any unfinished work into the community.

Please be clear; we are leading experts in this area, and even we did not understand the draw on resource and the complexity that would be required when we started. There was not the evidence to say that the community existed to help with such development and testing in an open source way, which other projects usually may enjoy when they are further advanced.

Finally, it has been a tough market for PAS and EPR systems in the NHS in England, especially for indigenous suppliers, in my view. We are growing at IMS, with customers across the third, private and public sectors, and considerable interest from potential fast followers on the GDE programme.

However, growth has not been at a pace that would help us feed even more energy and ideas into the product. And, just to reiterate, over the five years since we released the code, not a single person has said: 'I have changed the code, enhanced it, and given it back to the community to use'.

This tells me that, whatever the mood music at the start, we were not failing our clients and we have a good product. So, the experiment has been a success to date; we just wish we could encourage more users to more rapidly take advantage of the partnership to advance adoption and improve safety and efficiency.

What could IMS MAXIMS done differently?

I think we could have worked a lot harder with the NHS to get the message right about what we were doing. Also, what it really meant to convert to open source for a company that has developed the code and products for many years in a traditional fashion.

While we have taken some flack from the open source community for not going far enough, we found that a lot of CIOs, CCIOs and CEOs were spooked by the phrase open source, and believed that they would have to employ an army of coders and take full responsibility of the code and support.

Nothing could have been further from the truth, but that was what we picked up; and it turned out to be quite a hard task to reassure people that what we are doing is safe and easy, if you know how!

Back to that criticism from the open source community. We don't mind criticism at all; we welcome feedback in all its forms. But let me address some of the points that we hear.

Have we made the software as easy to download and compile and install as we possibly could? Possibly not. But we did ask some people to help us with that; bearing in mind that it is not something for which we are being paid.

We can and will address that, if it is a problem. But, sometimes we have had single-handed, non-IT professionals try to download what is effectively an enterprise, mission critical acute system.

Our software is designed to support large scale institutions, health and care communities, such as the developing sustainability and transformation partnerships and integrated care services in England, and even country-wide health systems.

One of our clients uses a single instance of our product across 60 hospitals, so we are talking about software that is relied on over ten million patients. Much of the criticism that we have received has not come from the intended type of user, so we are always going to disappoint those people, I fear.

Have we created a product that is easy to adapt to different NHS settings and specific use cases? Yes but, again, we need to bear in mind that OpenMAXIMS EPR was designed for acute and community settings, not all NHS, or indeed all healthcare settings. It is designed to integrate.

As I've already said, we have had people criticise the OpenMAXIMS programme, who are not intending to use the product for the purpose for which is meant, let alone in the settings it is intended for.

If people want to take the software and do other things with it, that's fine; but that is not our main purpose, and our focus has to be to be on supporting customers who actually use the product.

Having said that, when anyone has legitimately come to us and said 'we are struggling to compile the software', or 'we want some help for experimentation', we have gone out of our way, without charge, to help. I can point to examples in many universities and interest from the United States and Africa.

So, our invitation is still very much to come on board and work with us, the best way to do that is by talking to us directly.

And I have to say that, when we get criticism in public, I wonder how real the interest of the people making that criticism is, especially when it is delivered anonymously. Because those people who are genuinely interested have emailed or picked up the phone or got in touch somehow, and I can guarantee that we have responded to every single one of them.

How is IMS MAXIMS taking forward the open source philosophy?

Five years in, we would love our experiment with open source to stop being an experiment and for it become a movement at scale.

To make an open source community work, it needs more users than we have got; that has been the real sticking point for us over the past two to three years. We have some really fabulous users doing some amazing things and we would love to see people pick up that blueprint and speed up adoption.

At the moment, user involvement with our product tends to be by direct requests from existing IMS users of MAXIMS, and also channelled via the IMS user group. More users would enable us to develop the community.

What I am thrilled about is the new NHSX team. I have had the privilege of meeting Matthew Gould and some of his colleagues several times now. I am hoping to have a different type of conversation with them, about working in a collaborative mode, and about building on the assets we have as a country that we can adopt and share.

I believe that IMS is not just one of those assets but a very important player in the British supply of EPRs. So, for me, the project is very much a project "not abandoned"; it remains a project that we would like to take further.

If anyone wants to get in touch, I would be delighted to speak with them directly. I am always keen to learn and engage in a meaningful way. We are still on the journey, please do join us as we move forward.

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