

IBM Podcast

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MATHENY: Welcome to this podcast. I'm Angelique Matheny. In this podcast, Graham Stradling, WCDMA and LTE Systems Design Quality Manager for Alcatel-Lucent talks about the importance of effective requirements management in delivering high-quality systems to customers.

With technologies converging and increased pressure on the telecommunications industry to provide increased speed and bandwidth to customers ensuring a reliable fast, efficient system is critical in order to maintain a competitive edge.

By managing requirements across the whole lifecycle, Alcatel-Lucent is able to make sure that quality is not compromised and they can successfully meet their customers' needs. As I just mentioned, joining me to discuss Alcatel-Lucent's requirements engineering success is Graham Stradling. Hi, Graham. Welcome to the podcast. Thanks for joining us.

STRADLING: Hi, Angelique.

MATHENY: Graham, to kick us off, could you tell us a bit about Alcatel-Lucent's business and your role in the

organization?

STRADLING: All right. Alcatel-Lucent are a telecommunications company. We provide solutions to public vendors providing this complete item to give high-quality solutions in the telecoms arena.

My role is to ensure that the systems engineering and design team, that we produce a high-quality output, on time, and enable the business to produce high quality and provide the level of customer care that we feel is essential in the current business climates.

MATHENY: Graham, I'm sure there are many challenges in the telecoms business, and from your perspective, what do you see as the major challenges on telecoms development projects?

STRADLING: Telecoms really suffers from the sort of classical engineering triangle, if you'd like, where you have to balance cost, quality and time. So cost, you know, for our end providers that we sell solutions to, they're selling to customers and every one of those customers wants more bandwidth for less money.

They want high-quality solutions so you want actual good quality of the connections, but also for our customers, we

need to ensure that systems don't go down. Any downtime for one of our customers impacts them with a huge amount of issues. So reliability is essential.

And time: we need to be able to hit the market with innovative solutions for our customers. We need to get there first, it's a very competitive business. So the time for solutions to market is really important for us.

On top of that, you have to offset that with the fact that we're producing very complex quite large solutions. So we need a way of balancing that classical triangle and ensuring that we deliver the best for our customers.

MATHENY: Getting more specific into requirements practices, how do you see the importance of requirements engineering in addressing those challenges that you just mentioned, and what practices can help?

STRADLING: Requirements management and engineering, the practice around it, really an essential part of balancing our business needs. You know, we have to have correct customer requirements, so we need to make sure that we're providing the right solutions to our customers. That's really essential.

And then we have the back those up with our technical system

requirements to make sure that we provide the solution correctly so we've got that reliability, the quality, the expectations and we can provide the key performance that our customers need.

You can split the requirements practices pretty much into two fairly clear areas, which is how CMMI tends to look at it where you have the requirements definition phase. We use that area for clear identification of customer and system expectations and to define how our system should behave.

And then after that first phase -- which is really the part that a lot of people mistakenly look at as being the requirements part -- you enter the requirements management processes. And those are much more essential and longer-term propositions. We need to track the implementation of those requirements, track the changes in the implementation, in the development and test.

And the goals as changes come in due to tests, due to customer requirement changes. The solution shifts during development so the requirements management process means we need to track those shifts to ensure that by the time the product has gone from its initiation phase through to being delivered to our customers that we're still delivering the business needs for our customers.

MATHENY: Okay. In order to make requirements engineering practices successful, who should be involved in the process?

STRADLING: Well, as I implied a little in my last answer, you've got to remember that requirements engineering, especially the requirements management part, is a business practice. But it goes beyond that.

Really it's a formalization of essential communication amongst the business, and it has to be there at every point through production. The lifecycle of a requirement often tends to be taken, again as I said, just the definition phase.

But that lifecycle really spans from the idea phase where you first start roughing out the customer requirements all the way through to product test obsolescence. The requirements are still valid and can still sometimes change when you've got bug fixes and things like that to go through. So it's the complete business process.

MATHENY: And lastly Graham, let's go back to the challenges you identified earlier. I believe he said they were up time and speed to market. What's the potential impact on an equipment manufacturer and its customer if these challenges aren't met?

STRADLING: If these aren't met, obviously, downtime for a system into one of our customers would end up with very poor press and they would lose their customers. So that would be a very bad thing for them.

From the time to market, the telecoms industry really is very, very [con thrust]. It's very quick. It's really essential that if you've got new idea, a market differentiator, that you want to be there first so that people will, the next time they change, upgrade their provider, they'll look at coming to you to get specific services.

Without [INAUDIBLE] items going on, without ensuring that we get that cost/quality/time balance right, then our customers will be missing market opportunities if we're missing market opportunities to them. And you end up and downward spiral.

It's essential.

MATHENY: Well, Graham, thank you so much. This was very important. Thanks for taking time out to discuss Alcatel-Lucent's requirements engineering success. We really appreciate it.

STRADLING: You're welcome.

MATHENY: That was Alcatel-Lucent's Graham Stradling,

WCDMA and LTE Systems Design Quality Manager. This has been an IBM Podcast. I'm Angelique Matheny. Thanks for listening.

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