# Design, development and deployment

## An interview with Neil Patterson

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### Podcast transcript

**Eric Green**: Hello and welcome to a new podcast series from IBM software that explores the challenges IT managers and business professionals are facing today. I'm Eric Green and I'll be talking with a range of experts to discover new perspectives, approaches and examples that can help meet these challenges and introduce you to the capabilities of smarter software from IBM. So let's get started.

Welcome back to the show. Today we're going to talking about design, development and deployment. With us is Neil Patterson, who has 25 years of experience in design and development of systems and is currently in IBM's Software Group with a focus on design and development solutions. Neil, thanks for joining us.

**Neil Patterson**: Thanks Eric.

**Eric Green**: So Neil, can you please give our listeners your definition of design, development and deployment as it relates to software-intensive systems?

**Neil Patterson**: Thanks Eric, it would be my pleasure. Design, development and deployment solutions bring diverse, distributed teams together to deliver new business products and services faster through collaboration, automation and leveraging of existing assets, skills and

multi-platform infrastructures. That's a lot of words, but in a nutshell, our customers use these solutions to take their user requirements and make them real, turning ideas into software we can use and products we can touch. With our solutions, systems engineers and embedded software developers take systems and software specs and build the complex real-time products that are part of our everyday lives. We also have web-based software and services that are important and critical to our everyday lives. These are architected, built and deployed using our technology. We also see markets where rapid response to changing market demands is critical, and this technology, design, development and deployment solutions is important to our customers to be able to rapidly respond to those changing market needs. In short, Eric, design, development and deployment solutions are about taking vision and innovative ideas and turning them into reality.

**Eric Green**: Excellent. Thank you. So what challenges are organizations facing today that bring the need for this capability?

**Neil Patterson**: There are actually several that come to mind, including the rapid evolution of technology, the increasing importance of personalization and customization, the shrinking time to market windows, and of course the ever increasing complexity of the software, systems and products that are being built.

**Eric Green**: So around complexity you were just talking about, can you sort of elaborate on that? What does that exactly mean to an enterprise?

**Neil Patterson**: Sure thing. So let's key on the aspect of complexity around growing consumer expectations for customization, the things that they use every day. Consumers are demanding simplicity of use and the ability to customize their environments to suit their own personality. As in the world of mobile devices, smart phones, social media sites and even their automobiles, this simplicity and personalization is great for

the consumer but causes great pain for the organizations that must deliver this simplicity in software, systems and products that are increasingly interconnected, instrumented and intelligent. The complexity involved in achieving this level of sophistication is staggering. It is driving our customers to turn to IBM for solutions that will help with them to design, develop and deploy their software intensive systems more rapidly.

The other issue that comes in with complexity is introducing security and quality while at the same time being able to deliver on time. These areas of complexity increase as we look at the way the teams are organized. Teams are normally distributed across the organization. We have people that are writing requirements, we have people that are doing the actual design and development, we have people that are doing the testing, and ultimately people responsible for the operations side. All of these people, wherever they're located in the company, need to come together to work on the designs so that what gets delivered is actually what's expected by the consumer. These are all areas of complexity in not only design, but organizational, and also the process in which they work together to create these software and systems that are being deployed to consumers and to their customer.

**Eric Green**: That's great. So, you know, you talked just now about complexity. In our market, we see time to market as a tremendous change these days. Everyone wants everything immediately and exactly customized to their needs. And then of course there's ROI, because budgets are decreasing, people want more things quicker. So in this space, with this capability and from what you're seeing, how have things changed in the past say 10 to 12 months or so?

**Neil Patterson**: That's a good question, Eric. We've seen a realization in the market for acceptance of different ways of doing things, across different organizations, depending on the types of things that they're actually creating. Careful attention to design has always been important

for obvious important applications. You know, software in a heart monitor can't fail. Software in an airplane can't fail. But in other industries, being first to market arguably even at the cost of quality is very important. As it would be in the case of if you were developing something free for the mobile entertainment market, and you need to capitalize on a fleeting market opportunity, often generating revenue through ad clicks or ad sales. However, if your mobile app will be handling confidential customer data, including financial information, transmitting this information, and you're charging your customers for this app, then there are acceptable degrees of security and quality that require attention.

Security and quality are becoming important in this market, especially over the last 10 to 12 months as we see various important websites and market leaders having problems with security and some quality issues. I think we've reached a point now where the market is not only cognizant of the need for security and quality, but believes that these are critical aspects of all software intensive systems, being built into such systems from the earliest design, through to deployment, and once again increasing the degree of complexity. As software delivery solution providers, we've started to effectively address the pains that our customers feel around design being difficult or cumbersome, and designs not fitting with their agile development. And we're helping customers face the new reality that a strong emphasis on design, development and deployment capabilities across their entire team is critical to their success in the market.

**Eric Green**: So let's bring this to life a little bit for our listeners. Could you give a few examples of enterprises using this capability?

**Neil Patterson**: Sure. A good example is the recently announced success that General Motors has had in using our design, development and deployment solutions to deliver their electric vehicle, the Chevy Volt. Using our integrated platform, they were able to design and develop and

ultimately deliver their Chevy Volt, which is an extremely complex vehicle, as you can imagine. They were able to do this in the period of 29 months, which is down from the normal five year schedule that they've taken for other vehicles at this level of complexity.

Another example is a good one from one Korea's largest investment companies. The client was using a highly manual process to analyze and create data records. They selected our solution to implement a next generation system which allows them to analyze their business processes and requirements and in the second phase, focus on creating detailed designs in a short period of time, based on that analyzed data. The client used a model to model transformation, again, a way to rapidly and with automation take their ideas and transform it into actual results, actual features in terms of software, and automate the creation of their designs.

The client also used our capabilities to be able to generate the software that ultimately was deployed to build the designs into actual functioning code and functioning applications. The benefits – they shaved approximately 200 staff hours off their development time. They were able to maximize the use of their modeling language standards, and they were able to cut costs at the very earliest stages of development, and this is the most important time to shave time because of the ability to then focus on introducing quality right from the beginning. Their project risks were reduced through automation and their quality was improved, along with their productivity. This is a good example of how using our design, development and deployment technology was able to help this customer to achieve the goals of automating their process and ultimately resulted in a lot of cost savings around improved productivity by their team.

**Eric Green**: Great, so finally can you discuss a little bit where IBM is innovating in this space?

**Neil Patterson**: I'd be happy to. To start, IBM recognizes that design, development and deployment is actually a team activity. It needs to be more accessible to the broader team. And to achieve this, we're actually lowering the bar of entry for the greater team to participate in design exercises. We're introducing new capabilities called collaborative design management into this space which elevate our existing technology and allows stakeholders from across the company, in fact from organizations that are outside of the company doing the design, to view, comment and mark up design diagrams through a browser. There's nothing to install, nothing to configure. So what we've done is make it much simpler for clients and operations teams, or someone in management to take a look at the direction of the project, view its progress, and actually contribute to the design. We're taking design, development and deployment to the next level. We're giving our customers the ability to collaborate on design across the organization and across the set of interested stakeholders. These capabilities are being introduced in order to allow design, development and deployment solutions to impact the bottom lines of our customers. This is new technology that we're introducing now, we're building upon it into the future, and we believe that these capabilities – collaborative design management being the first of several that we will be introducing, and building upon – these capabilities will allow our customers to be much more successful in their focus on design, development and deployment into the future.

**Eric Green**: So that's about all the time we have for this podcast today, but Neil, thanks so much for joining us.

**Neil Patterson**: Thanks so much again, Eric, and appreciate the time.

**Eric Green**: Thanks for listening. Please do visit IBM.com/software to connect with our experts, continue the conversation, and to learn more about smarter software from IBM. Let's build a smarter planet.

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