



**The State of Information Management in 2017**

**with**

**Rachel Benzies, Syngenta**

**Jill Shuman, Shire**

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KENNEALLY: We appreciate you joining us today for our program, *The State of Information Management in 2017*. If you are like most information managers, and no doubt you are, you face a constant need to justify the value of your role and your department. We know you're busy. We know it's your job, as well. As information scientists, librarians, and knowledge managers, you are handling a flood of information that's reached tsunami proportions. Big data is the big story. Every day, humankind and our machines together create 2.5 quintillion bytes of data. That's a one with 18 zeroes. According to IBM, total world data will reach 44 zettabytes by 2020. A zettabyte is one sextillion bytes, or  $10^{21}$ . So we are talking big numbers here, and these are the numbers that concern you every day.

Information surrounds us all, but is especially important in the corporate information center where you work, where news, data, and insights have the power to transform thousands of lives as well as your business. Given how busy you are, we first of all want to thank you for joining us. We're grateful you're here and taking the time to search for and identify trends in information management. There is a reward for doing so, of course. When patterns reveal themselves, we learn about the world in new ways.

So our agenda today is broken into three parts. We are sort of building it around these three important professional challenges – managing content, managing access, and managing resources. The issues that we'll hopefully touch on include rising costs, rebundling of content and the budgeting that goes with it, evaluating usage, investing in the proper ways in new technology, and most of all, just managing everything – managing the technology, managing the people, and managing the information.

Let's get started with the first area of important trends, and that is technology's impact on research. Of course, technology would have to impact research. It's impacting everything else in our lives. Certainly, the way we live our lives outside of the lab or outside of the workplace matters today, because we bring with us to work, to the lab, to our research the practices, the habits, the skills, in fact, that we make use of in our daily lives and the expectations that result, as well.



So we want to talk about all of that, and we want to start by bringing on to the program Jill Shuman. Jill, welcome.

SHUMAN: Thank you.

KENNEALLY: Jill Shuman heads up the corporate library and knowledge management centers at the US offices in Lexington, Massachusetts, of Shire, a leading global biotechnology company focused on serving people with rare diseases and other highly specialized conditions. Jill is also an adjunct faculty member at the Tufts University School of Medicine in the Boston area, where she teaches courses in grant writing, searching the biomedical literature, and expository writing.

I think, Jill, it is a fair point to make that that experience not only in the corporate world, but in the academic world is one that you're bringing with you to the presentation today, because what you teach at Tufts University to those fledgling doctors is really what you probably have to teach to your partners at Shire. It's really all about the very basic point of searching literature. It sounds like a simple task, but as we mentioned, with all those gigabytes and zettabytes of data, it must be an overwhelming one.

SHUMAN: Well, it is somewhat overwhelming, and it's complicated by the fact that mobility is everything, and people are not just at their desks, working on their computers. They're having manicures and pedicures and they're on their cell phones, and they want to find the information they need. They're out in the field, speaking with key opinion leaders and health care providers, and they need information on their mobile devices.

So not only is there more information than ever, but we have to be very strategic about how that information is delivered. Do we want it to be cloud-based, for example, so that people can reach it from everywhere? How do we want people to sign on to be able to get their information? These are issues that didn't exist probably five to six to seven years ago, but right now, that's a big part of what we're facing is just – before we even talk about the amount of information is how are people accessing it and the fact that people just no patience to wait for it.

KENNEALLY: Right. Access is key. Obviously, everything starts with access. All the best information in the world isn't at all useful if you can't reach it. Once you sort of open the door, once you get past the authentication issues, once you get past the whole matter of making sure that people get the information when they want it, where they want it, and on the device that they want it, then they have to deal with that flood of information and learn to filter it. I know this is something you care about yourself and try to pass on to people at Shire there, which is the importance of filters, the importance of distinguishing the news you can use versus the news that can wait.



SHUMAN: Right. We try and help people find the information they need. We have lots and lots of tools to do that. And for people that may not be comfortable doing that or don't know how to apply the appropriate filters, we have a staff of biomedical researchers and literature searchers who work with our clients and our customers and our colleagues to help them do exactly that – to be able to pinpoint the resources that they actually need without having to go through lots of stuff that they are likely to not need. We'll talk a little bit more about that in the second section, in the trends section.

KENNEALLY: And finally, Jill, getting the information is critical, so the access, sort of curating the information, but then context is everything. I know that the work that you do at Shire is genetic-based research regarding very, very specific diseases. So when you identify a certain gene, for example, you need to find that gene mention where it will be an appropriate place, not just everywhere. We need to sort of zero in.

SHUMAN: Right. And there are new tools, like text mining and context-based searching, that allow the researcher to do exactly that. We don't just want to search for the BRCA2 gene, for example. Perhaps we want to search for the BRCA2 gene in conjunction with a specific population of people. Those are some very exciting tools, those text mining and context searches coming down the road, that I think will transform how people actually translate the information that they get and will help them get much more focused-type searches when they do the searches.

KENNEALLY: Let's turn now to the second guest on our program today. She joins us from Basel in Switzerland. Rachel Benzies, welcome.

BENZIES: Hello. Thank you for having me here.

KENNEALLY: We're very happy you can join us. Dr. Rachel Benzies currently leads the scientific literature service for Syngenta R&D, a leading agricultural company helping to improve global food security. The service supports nearly 6,000 internal customers worldwide with discovery and access for relevant literature. A chemist by training, Rachel worked at the University of Basel before joining Syngenta in 2013.

The work that Syngenta is concerned with is obviously of importance for everyone listening to us, because we all have to have lunch or dinner later on today. So global food security is an important topic. Just briefly, this must really be fascinating, because it's not just a kind of interesting intellectual question. This is about feeding people. It all comes down to putting meals on tables.



**BENZIES:** Well, that's right. I'm sure we're all aware of the ever-expanding world population and the ever-decreasing land that's available to provide food for that population. So yes, Syngenta are very much involved with all aspects of food security, so that's how do we control the pests and the diseases that affect our ability to produce food, but also how do we maintain the biodiversity? How do we continue to look after the farmers that are so vital to producing the food off the land that is available – so making best use of the land, retaining and reviving agricultural land, and matching food production to the growing population demands.

**KENNEALLY:** So technology is really, obviously, assisting you in that work, but technology is changing not only how people farm, but it's changing the research you're doing there at Syngenta. Jill Shuman was telling us about the ways that they approach this challenge at Shire. When it comes to Syngenta, you've got a particular challenge, because your team there just barely makes it as a team, because it's two people. If it were one fewer people, then it would not be a team at all. But this team of two serves 5,000. How do you go about that? Technology must be a tremendous resource for you. Without that technology, you simply couldn't do the job.

**BENZIES:** Absolutely. And the ability to manage a central service that is completely electronically based – we couldn't do it without that approach being possible. Also, I think the connectivity between the different parts of that process that a scientist will go through from discovery through to access, being able to make as seamless as possible, because as you were mentioning earlier, the speed of access to the relevant information is so important, and we have the challenge of field site really meaning field site. People are out in fields and need to be able to often access very similar information to the people that are working in the labs on our main R&D site.

So I think the ability to authenticate, but also to follow the whole process through from the discovery with the specialist tools, search tools, and discovery tools right through to full-text access in as simple and straightforward way as possible is key, because our service is very much focused on helping people to self-serve effectively. So yeah, absolutely critical.

**KENNEALLY:** And that's got to be seamless. You mentioned the self-service piece of it. Because these folks are not just at the next bench or the next desk. As you mentioned, they could be out in the field, and the field could be anywhere in the world. So the connectivity has to be seamless and the workflow has to be seamless. You mentioned some tools you've got to sort of make sure that you go from discovery to access. And what you're learning is that there are some power users. Really, you want to give them the best tools possible. You've got 5,000 people you work with, but the power users, really active users, might be only one out of five.



BENZIES: Yeah, and they do tend to be the ones that sit in an R&D location. But yes, they're very savvy, and we need to be able to support them at their higher level of capability, if you like, in accessing and using the literature. I think some of the things that Jill mentioned are also critical – being able to make that connection with information in context, in appropriate context of the work that they're doing.

KENNEALLY: The challenge, then, really is in the people. Training is a critical piece. So technology is changing the way you do your work, but again, you can't simply put a device on a desk or an application onto the device. You've really got to make sure that the training happens. How do you manage that? You must need to work with the vendors, the suppliers, with people like Copyright Clearance Center, even, to make sure that the training happens.

BENZIES: Absolutely. That is exactly how we do that, and it is a mixture of online training that means that anybody can access it and with the key sites, being able to go on site with the support of the providers. As you mentioned, our team is incredibly small, so having that relationship with our providers that allows us to capitalize on the expertise that resides there is critical to us to be able to make sure people have the level of expertise they need to use search tools and to use the process effectively.

KENNEALLY: So in a sense, you know what you know and you know what you don't know, and so you rely on the people who do for service there.

The area we want to talk about now is information management skills. One of the new skills needed for the job that weren't necessary maybe five or 10 years ago – obviously, a lot has happened in the 10 years just past. We didn't have iPads or tablets, really, 10 years ago. We didn't have all the video. We didn't have so much immediate access through Wi-Fi and various networks. So really, Rachel, there must be a host of new skills, and I would imagine that again, diving into this enormous pool, this ocean of data, really is something that must be daunting. So you've got to not only deliver the information, but provide some degree of analysis, as well. Tell us more about that – the analytical piece of this along with the delivery piece of it.

BENZIES: Right. Yes, I think something that I guess most of us in these roles will have had to acquire is at least an understanding of the principles of how the technology works, because we need to be able to make good choices about how different systems work together and how we are connecting those and deriving best value from a portfolio of resources.

And I think our ability to also see how our customers are behaving, what is of most value to them by analyzing what goes on behind the scenes with our service, and then also using that to communicate the benefits that the service brings – I think



what is helpful is that there is this body of information that can demonstrate how the service is being used. And as you can imagine, with the number of users we have, we're talking about lots of use cases and a lot of people that we're trying to analyze, so it does help us to create a picture of how our service is being exploited. Perhaps it also helps us look for the gaps so that we can make modifications and improve what we offer based on what we learn about how people are using and what they are using for what purpose.

**KENNEALLY:** Right. So demonstrating value and showing ROI – I guess that's what you're speaking to there. But you are at a research facility at a company that does research, so innovation is important. You need to be able to promote innovation. What kind of skills does that require – helping people sort of stretch and reach for something that wasn't there or wasn't within their grasp even just a short time ago?

**BENZIES:** This is also something I think we'll come on to when we talk about trends, is the ability to do more detailed analysis of the external information. But something that we've started to explore is how do we analyze what we've been searching, what we've been using, and to derive information from that and look for the relationships that might be unexpected. You're looking for unexpected connections between the approaches that we're taking internally and also hopefully progress to being able to relate that to what's happening in the outside world, too – looking for connections.

We work with our technical scouting group. Obviously for them, finding out what's happening in the outside world is critical to bringing technology into Syngenta, maybe things that weren't altogether obvious in the first place. That's another part of our customer base – those who are looking outside, to help them identify those connections or unexpected connections to drive innovation.

**KENNEALLY:** I think it was no less than Steve Jobs, and I'm going to mangle the quote, but he said something like you can only connect the dots looking backwards, and that wasn't enough for him. He wanted to connect dots moving forward. For Steve, that meant trusting that there would be a connection – sort of moving forward and hoping for luck or karma or whatever it was. Jill Shuman, I know that this is something, again, that is – we're talking about information management skills, but these sound like people management skills, as well. There are new kinds of professionals today with different sorts of work styles than in the past. It's not just the technology that's changed, the skills that are needed, but the people are changing as well as they change with it. How does that change the kinds of skills you have to have?

**SHUMAN:** I just want to confirm what Rachel said, that certainly a knowledge of technology beyond the Microsoft suite is so important to this job. I remember I think I had been on the job a week, and I went to an IT meeting and people started



talking about things like SAML and (inaudible) and Okta, and I was sure I was completely in the wrong place. But you do learn it, and you do need it to keep your systems up and running.

But in terms of other skills, I can't encourage people enough to take courses in things like reading a contract or vendor negotiation. As you alluded to, we do have a very different workforce. We have people who were in school 20 and 30 years ago, and we have folks coming out of school in the recent two to three years. Very different learning styles, very different expectations. And we can all work very, very well together, but it takes an adaptive person to be able to recognize that all people on a team have things to contribute.

So I think some human resource training is valuable. Again, content negotiation. A little bit of financial training is very valuable. And I know our company offers lots of seminars and opportunities to learn these things, and my theory is you're never too old or busy to learn something new. Those are the things that I focus on.

**KENNEALLY:** I want to bring you back to the point about learning to read a contract. It's fascinating. You wouldn't think of that as being essential to the work in a library or in an information center, but I have to ask you then – can you pass along for everybody listening one gotcha clause that really got you one time? Or is there an area you pay particular attention to?

**SHUMAN:** Yes. You need to pay very, very, very close attention to what your rights of cancellation are – who has to notify whom within what timeframe and what you may still be responsible for. That's a very important clause. In most companies, these go through legal, but typically we get them first. So I always read through them, vet them, point out anything that might be troublesome to my legal team, and then we work through them that way. But contract cancellation can be a very important piece of a contract.

**KENNEALLY:** All right. Well, we're going to move right along, then, to the final area of investigation for our brief, fast-paced, and really fascinating webinar with Rachel Benzies of Syngenta and Jill Shuman of Shire, and that is looking ahead beyond today or tomorrow, even, and sort of further on down the road. To do that, we want to stick with Jill and talk about some trends. We've been bringing up a variety of these points, so there won't be too many surprises here. But text mining – I think you mentioned that as an area that is beginning to develop. Are things still in the early stages, or has that become more mainstream, would you say?

**SHUMAN:** It's still in the early stages. The tools are rapidly coming along. I think that we as information professionals are more aware of some of these tools than our constituents and colleagues, for example. But that is definitely – contextual search



is something that I think will become an embedded part of searching within the next 18 months for most of us.

I think other trends to watch are, again, as we talked about, access – how are people accessing content? Where content is coming from – we may have to do some very careful vetting on our own. And probably the biggest trend that we're seeing are increasing content costs. That's not going away anytime soon. Unfortunately, our budgets are not increasing at the same rate that the increase in content costs are rising. So that's a trend that we are going to have to follow very carefully and perhaps think about new ways of how we license content. Is there perhaps a different model for the way we do it? Will we bundle? Will we unbundle? Will we cost-share? I don't know what that's going to look like. But that's definitely an ongoing trend.

**KENNEALLY:** All right. So one of the challenges, then, Jill, is to do more with less, or at least with fewer resources. Let's bring back Rachel Benzies there and a glimpse into your crystal ball there in Basel at Syngenta. I would imagine that you would agree with Jill that text mining is going to become critical, and it's going to become critical because big data is an issue that isn't going away anytime soon.

**BENZIES:** Right. I would totally subscribe to what Jill said. I read something recently that said at the moment, maybe only 10% of the roles we're in are really using analytics and text mining today. So I think it will have to move to the point where it becomes part of our everyday activity, for sure.

**KENNEALLY:** And we've already brought this up, but I would anticipate that the acceleration toward mobile access is going to continue, and it's going to continue not only because the devices are getting more powerful, they're getting more ubiquitous, but also the way people work – you've been telling us about work in the field. In many countries around the world, people are now no longer sort of at the desk 9:00-5:00. In fact, you don't have a desk anymore in some companies. They do what they call hoteling – you just sort of show up. Wherever there's a free desk, you sit down there. So I would suspect, then, that handling access, managing authentication, doing it in new ways that is going to make it seamless – that's going to be something we'll be seeing 2017, 2018, and beyond.

**BENZIES:** Yeah, I think what's important isn't just that we are able to use them on our mobile devices, but that the approaches start to become more consistent, because publishers today are offering us lots of different ways of accessing things on the go, but they're all slightly different. For those providing service, that's a huge challenge in complexity, and also for our users. If I want to look at content from one publisher, I do it this way. If I want to look at one from another – so those gateway technologies or single approaches that will allow us to effectively do what



we do at our desks on a mobile device are simply – I think we need to move in that direction.

KENNEALLY: And in the 60 seconds remaining to us, I want to go back to Jill Shuman very briefly and bring up a point you mentioned, Jill, which was that knowledge management centers – we use a lot of phrases about libraries and information centers and knowledge management centers, and we take them to all mean roughly the same thing. But what is important about the difference today and moving forward is not only do libraries gather information, but you are now generating information.

SHUMAN: Right. There is a very big difference between a library information center and a knowledge management center, and I think that we will all begin to move towards a model that doesn't just put out content and help people search for things, but uses the capacity of the intellectual power of their constituencies to also bring things to the knowledge management center. So it's not just giving out, but it's pulling in, as well.

KENNEALLY: All right. Well, I want to thank you both for joining us today. We've been speaking with Dr. Rachel Benzies, who leads scientific literature service for Syngenta R&D, based in Basel, Switzerland. Rachel, thank you for being with us on the program.

BENZIES: Thank you.

KENNEALLY: And we have also been joined by Jill Shuman, who heads up corporate library and knowledge management centers for Shire out of the US office in Lexington, Massachusetts. Jill, pleasure to have you on the program as well.

SHUMAN: Thank you very much.

KENNEALLY: For all of us at Copyright Clearance Center, my name is Chris Kenneally. Have a great day.

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