



Beyond Bits and Bytes

With the possibilities of personalized medicine ahead, Siemens strengthens its commitment to healthcare IT in order to make radiology, laboratory, and general patient information available when needed, where needed. Strong implementation support and local presence are the backbone of the company's long-term strategy.

By Doris Pischitz, MA

In order to learn more about where this strategy is heading regarding hospital information systems (HIS) as well as radiology information systems (RIS) and picture archiving and communication

systems (PACS), *Medical Solutions* spoke with Janet Dillione, CEO, Health Services, and Arthur Kaindl, PhD, CEO, Image and Knowledge Management, of Siemens Healthcare.

“It’s not just about a product.”

Healthcare extends beyond one person, one department, one building. It is an active process that requires communication, collaboration, and decision-making across care providers and care settings. Siemens hospital information systems support patient information flows – enabling better collaboration and more informed and efficient decision-making.

How are things moving along with Soarian®?

DILLIONE: We remeasure Soarian’s progression year after year, and it’s progressing very, very well. Over 34,000 users work with Soarian every day worldwide. We have about 200 global customers, and 160 of them are actively implementing the system.

The automation of healthcare workflow is a key differentiator in innovation for Soarian. Last year set a benchmark, which we have now exceeded. We now have 237 live workflows across 41 customers, which was a 240-percent growth from the previous year.

We receive positive comments from our customers and have made great strides in reducing implementation time. Anyone in my role would want to see ‘speed, speed, speed.’ Customers need things to be faster and easier, so we’ll always be pushing the envelope on that.

Where do you stand in the product development life cycle?

DILLIONE: We are maturing. With Soarian Clinicals, we are into release 6, with Soarian Financials well into release 3. The product is maturing, so the processes are maturing greatly. We have 152 patents pending on Soarian. As the customer base really started expanding, we put great focus on the implementation side to make sure our customers have excellent, measurable results.

You released some product developers during a recent restructuring. Is this a signal that you are stopping the investment in Soarian?

DILLIONE: Not at all. Soarian remains the single most important investment that we continue to make. The reduction in

workforce reflects the growing maturity of Soarian. It was in our multiyear plan that more staff was needed during the early development phase. In 2007/2008, Soarian, as planned, came out of an incubation phase, meaning that in the future, development could be done more efficiently, requiring less staff. While the head count on the product development side was reduced, about 50 people migrated from R&D [research and development] into the implementation side of the business. The developers bring a lot of in-depth product knowledge to the implementation team, which is great for our team and for our customers.

Can you talk a little bit about the intricacies of developing software for the global market?

DILLIONE: The one big challenge of healthcare IT, as opposed to some other types of IT, is that healthcare is local. Locally delivered and locally regulated. Each time we go into a country, we must be engaged on local requirements, customer demands, medication regulations, billing rules, and so forth. Essentially, each market entry is a process unto itself that we have to intimately understand – it’s really think globally, act locally.

Of course, Siemens global healthcare IT portfolio includes other solutions beyond Soarian. What is your strategy with regard to local legacy systems?

DILLIONE: The answer is simple – but the execution to achieve it is one of the toughest IT challenges ever. We want Siemens customers to remain Siemens customers so that we can attract new customers. That means supporting customers in their use of the Siemens products they have already purchased. It

means providing them with options and roadmaps to guide them so their healthcare IT continues to grow to support their operational needs. It also means that we must anticipate the future challenges our customers will likely face and deliver the innovative healthcare IT they will need early enough for it to be deployed in time to meet those challenges. But it is absolutely critical we perform our efforts on our customers’ behalf with minimum disruption to their primary mission, the care and treatment of their patients. This is no small order, but as evidence of our success over time and across geography, Siemens can simply point to our comprehensive portfolio of products in daily use in so many markets by so many customers for so many years. The key to success at this level is to never lose sight of the importance of our customers’ success. When you have been in the business as long as Siemens has, you realize that new products roll-out, get enhanced, mature, and then get replaced by newer products. But this IT lifecycle must be driven by the need to help our customers continue to improve the quality and the efficacy of the care they deliver and not by technology for its own sake. Our portfolio strategy must also keep Siemens successful; we will be no help to our customers if we don’t stay in business or can’t fund the R&D necessary to deliver the innovative solutions our customers will need.

What does this strategy mean for customers using the healthcare IT in Siemens portfolio, particularly those on older or less advanced legacy systems? And what about new customers?

DILLIONE: Our portfolio of products is not only broad in terms of global reach. We



Janet Dillione, CEO,
Health Services,
Siemens Healthcare

“The one big challenge of healthcare IT is that healthcare is local.”

Janet Dillione, CEO, Health Services, Siemens Healthcare, Malvern, Pennsylvania, USA

have products, such as Aurora in Italy and Spain or KAI in Japan, that represent the previous generation of healthcare IT products. While the bulk of our portfolio is of the current generation of healthcare IT, which, by the way, is also what our competition without exception is selling, Siemens has already begun the move to the next generation with the launch of our Soarian family of products. For each of our legacy products, Siemens has or is updating plans and roadmaps that demonstrate to our customers our long-term

commitment to them. We involve our customers in the creation of these plans to not only better determine the future state we should be aiming for but also so that customers are well informed as to where we are heading and can plan accordingly. So, for example, we continue to work with our i.s.h.med® customers and our partners SAP® and T-Systems to plan the development necessary to move i.s.h.med and the companion SAP for Healthcare solution portfolio, both based on the SAP NetWeaver™ platform, to the

next generation of hospital information systems. Similar planning efforts are ongoing for our current generation products in the other markets we serve. And, we have plans to address products at the end of their life cycle. For example, in Spain, we are working with our Aurora customers to develop migration plans to the go-forward replacement product Selene.

As for new customers, the above efforts keep our go-forward products competitive and able to generate new sales. We

are aggressively rolling out the latest member to the Soarian family – Soarian MedSuite – in key growth markets in Africa, the Middle East, Asia/Pacific, and Latin America. This workflow-driven, innovative, role-based HIS can lower the total cost of ownership for value markets.

Who are the ideal customers?

DILLIONE: In any scenario, the ideal relationship is: number one, built on trust. Number two, clients who see IT as part of their strategy. They're investing in IT because they see it as a way to get better outcomes for their patients, better outcomes for their enterprise. Many people view IT as costs, as a line item. When you go someplace and hear 'my current percentage spending on IT is X. How can you reduce my spending?' – that's not a strategy. It's not just about a product. Customers have to be efficient and cost-competitive, but the ideal customers are those for whom IT is a part of their strategy because their strategy is to deliver higher quality, more efficient healthcare. That's the ideal in any language, in any country, and in any product line. The greatest customers are those who understand that it's not just the vendor's system – that we absolutely are partners. We will kill ourselves to help you, to support you, and to be with you. We don't want customers for two years; we want customers for 20 years, 30 years. They need to feel that it's collectively our system. I love it when customers brand their own IT system with names unique to their facility, which has gotten more and more common. It's part of them, it's their identity, their brand.

There is a certain amount of complexity surrounding a healthcare IT installation or the migration to a new

platform. Can you describe your implementation approach and how Siemens handles these large-scale projects?

DILLIONE: We actually have a whole program that takes the client from the clinical sales process into the implementation process. Typically, you have just a small group of people on the client side who are involved in the sale. Now, they'll need to tell all the physicians, nurses, and administrators, 'by the way, here's what you're going to do now.' So, we introduced a new step, right after the sale is complete, which takes two to three days with our product and sales staff literally walking all customer stakeholders through the system. Here are the processes, and here's how we'll go through the implementation. These are the expectations. It's a very mutual process and an opportunity to get everyone aligned before the implementation starts. We introduced this early in 2008, and it's getting tremendously positive feedback. Healthcare facilities are complex enterprises. We like to say that a healthcare CEO is more like a mayor than a CEO. There are a lot of stakeholders to manage and a lot of complexity, so governance is key. We will work with our clients to get the right project governance in place. We need to be experts and bring that expertise to the clients. This is what we do for a living – our customers do patient care – so, of course, our customers look to us for advice.

What trends do you see taking shape within the healthcare IT industry in the coming years?

DILLIONE: There are certain undeniable global trends that have to do with demographics, the aging population – it's a global dynamic in most of the markets

that we serve. It adds pressure on the healthcare delivery system, which puts pressure on IT, which is supposed to be an enabler of that delivery system. So, we see it as a trend we have to be able to support.

We expect an ongoing focus on costs and reimbursements, with a growing emphasis on appropriateness of treatment. And on quality. Pay not for use, but for demonstrated quality. Again, we must support our customers with that. Just as with any highly skilled area, we see, and the market shows, that there continues to be staffing shortages. There aren't enough nurses, doctors...so you want to demonstrate that your IT system can bring efficiencies, which can help alleviate some of the pains of these shortages.

Finally, absolutely, personalized medicine. Not everyone is going to get an Aspirin® because not everyone is going to have the appropriate response to Aspirin. But here's what that individual should get. Obviously, there's tremendous cost saving, tremendous quality in that. This is a multiyear journey we are on.

How is Siemens going to lead the way in bringing personalized medicine?

DILLIONE: We're the only company that has brought together integrated care, with diagnostics through the acquisitions of DPC, Bayer Diagnostics, and Dade Behring, with the imaging modalities, and with the delivery and knowledge platform provided by IT. So, Soarian was invested in and always built with the idea that it would be the IT platform that will be delivering to the clinical end-user the information he or she needs to make decisions at the point of care. Soarian is not a one- or two-year journey. It's not for the faint at heart.



Arthur Kaindl, CEO,
Image and Knowledge Management,
Siemens Healthcare

“Software is a people business.”

Workflow is key when it comes to efficient patient care on a high quality level. With *syngo*, Siemens provides trendsetting end-to-end imaging workflow solutions that are role-based, context-sensitive, and knowledge-driven – making information available to the right user in the right workflow context.

How are things moving along with *syngo*®?

KAINDL: *syngo* has been a huge success. Since its launch ten years ago, we have sold and installed 100,000 licenses around the globe. Users are experiencing the same software whether they're working on a CT [computed tomography]

scanner, an MRI [magnetic resonance imaging] system, or on nuclear medicine equipment. No competitor has a software platform that crosses all imaging modalities.

And how is your strategy moving forward?

KAINDL: *syngo* continues to be the backbone of the Siemens Healthcare imaging business, and we are heavily investing in the *syngo* products portfolio while refocusing our strategy on how to get to our planned R&D [research and development] results. One example is the *syngo* platform to further improve workflow and



increase clinical usability. We are investing in intelligent postprocessing and knowledge-driven applications. These developments enable workflow improvements, second-reader capabilities, image analysis, and follow-up.

At the same time, we're working hard on *syngo* Workflow, our radiology information system [RIS], as well as on *syngo* Imaging, the picture archiving and communication system [PACS]. We're focusing on role-based portals on the RIS, for instance for radiologists, transcriptionists, executives, and referring physicians. We recognized the demand for information points that provide our customers with the relevant information where they need it most – at the point of decision-making.

Can you provide more details specifically for your PACS strategy?

KAINDL: The PACS system is the very central component in radiology and cardiology departments. It helps to smooth and improve workflow when it comes down to reading and diagnosing all the individual exams that are generated by the imaging equipment. In order to improve performance, we are focussing on applications. Siemens is extremely strong on applications in diagnostic imaging – and we're Number One in the market for a reason. Our customers like the innovations that we are putting not just into our diagnostic equipment, but also into our imaging applications.

With PACS as a central archiving as well as an imaging analysis and diagnostic tool, we can bring all these applications together at one place. In doing so, we help cardiologists and radiologists to make faster, more secure diagnoses in order to better serve their patients. Therefore, our focus, together with the imaging modalities, aims toward getting

more advanced applications to the reading station and making them accessible anytime, anywhere, in a Web-based approach. A lot of investment is going into that.

On the other hand, data management and archiving, the so-called PACS back end, does not allow further differentiation in the market anymore. Therefore, we plan to partner with big IT players outside the healthcare arena who can help us bring synergies to the healthcare industry and thereby make data management, storage, and retrieval more cost effective. We feel that we can serve our customers better by doing so than by trying to do it all ourselves.

How do you plan to help customers making the step toward Web-based image reading and diagnosis?

KAINDL: Smooth upgradeability is an important part of our philosophy. We are always offering a path to an upgrade because we want our customers to benefit from the latest innovations. We can only grow customers' satisfaction by making sure that they have a way towards the future. So, lots of effort is going into finding means for current customers to upgrade to next-generation technology by being able to use existing components, be it soft- or hardware. This allows customers to move to the next level of performance and achieve workflow improvements by adding components rather than by having to replace everything.

In what parts of the world is *syngo* currently available?

KAINDL: There is not a single installation of our imaging equipment that doesn't have *syngo* software in it – so it's global. From my MRI background, I know that five years ago we shipped MRI systems to 50 or 60 countries worldwide – now

it's more than 100. And all those systems have *syngo* in them. So *syngo* software is being spread to wherever Siemens Healthcare is present. We are becoming more and more present in smaller countries; many of them are investing in healthcare and healthcare IT.

Can you comment on internationality and how training is conducted?

KAINDL: Software is really a people business, and the Siemens people are part of the solution and are absolutely vital for the customer's satisfaction. Therefore, we need to have a local presence. Also, it is extremely important for Siemens people to interact with clients at the highest level of competency. That can only be achieved when you are bundling and teaming up the people who are taking care of our customers – the sales force, the project planning staff, as well as the implementation engineers. Therefore, we set up three competence centers – Malvern [Americas], Vienna [Europe, Mideast, and Africa], and Singapore [Asia-Pacific]. These centers of competence will house a small group of resource people for the region with the bulk of support personnel being out in the countries – close to our customers. All *syngo* products are currently being translated into many different languages, and we support customers with Siemens people who speak their language. English is always the fallback, but in certain countries in Europe and Asia, for example, we also want to have people who can communicate both with the Siemens team and with our customers in the local language. Indeed, this is one criterion – multilingual skills – to identify the best business managers. It's not just the technical competence but the language skills, reinforcing the notion that communication is key, and this is a people

business, not just a software business. Consequently, we are investing heavily in training our qualified local people to help them work with clients.

How are Soarian and *syngo* working together?

KAINDL: They are working together in a highly integrative way. Soarian and *syngo* are at the core of our IT strategy. Healthcare IT is supporting patient care across the whole healthcare continuum. When the patient comes into the hospital, from registration, to clinical assessment, to treatment plan, to medication management, Soarian describes the product portfolio that we have in that part of the business. It enhances efficiency and interoperability of the various partners in the healthcare continuum. *syngo*, the diagnostic-imaging-focused portfolio, is supporting the procedure-driven workflows. It's all imaging-related; we are also offering a RIS, including scheduling, for the radiology department that collects reports and sends them out to referring physicians so that the proper billing can be done. So, there's an imaging-specific administrative part in *syngo*. Once the report has been done, then it's back to Soarian. In this way, we

“Support personnel will be based in the customers' countries and thus be familiar with local requirements.”

Arthur Kaindl, CEO, Image & Knowledge Management, Siemens Healthcare, Erlangen, Germany

have a sort of yin/yang interaction of our IT solution under the umbrella of the two brands; an intrinsic interaction of the two product lines.

Embedding our PACS with the RIS and interacting with a Soarian hospital information system helps to dramatically improve the report turnaround time from what is standard in some areas, which is about 24-plus hours. We have customers that are operating on average with a two-hour report turnaround – two hours between imaging and having the report completed. That's a great improvement financially as well as for the patients, radiologists, and primary care doctors.

Doris Pischitz is the Chief Editor of Medical Solutions.

Further Information

www.siemens.com/healthcare-IT