



A Change for the Better

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While the perception exists that doctors resist adopting information technology, in fact, the human dynamics of healthcare tend to make the consequent changes of IT more difficult to accommodate. Experience shows that it helps to engage practitioners early in the implementation process—and offer them solutions that acknowledge their needs.

In late 2005, Atlantic Health Sciences Corporation (AHSC), New Brunswick's largest Regional Health Authority, tendered a Request for Proposal for a new Clinical Information System (CIS). In doing so, AHSC was putting into action a plan to change a computer system in use since 1981, in turn affecting the processes and procedures of 420 doctors, 4,400 staff and tens of thousands of patients. The new CIS would, for example, support Computerized Physician Order Entry (CPOE), enabling doctors to enter orders electronically rather than by hand—thereby lowering the risk of error associated with transcription and handwriting legibility. The system would provide sophisticated decision support in patient diagnosis and treatment—and would do so in real time.

On a change scale of 10, a project such as the CIS is “way beyond 10” according to Derrick Jardine, Chief Information Officer at AHSC. “We’re transforming the way our clinicians work, and we’re doing it as they work. Someone suggested that this implementation is like changing the engine of 747 in mid-flight. I’d have to agree.”

Jardine echoes the sentiments voiced by others in healthcare when he points out that adopting change in this sector is not like adopting it elsewhere. “You’re not manufacturing car parts or printing airline tickets—you’re dealing with treating human beings, who are not all the same, and for whom processes need to be customized to make treatment effective.”

All information technology is driven by human need to some degree. However, what might for banking executives be more or less ‘an IT project’ must in a healthcare setting become a much broader, people-based initiative. And therein lays the impetus for AHSC’s decision to participate in an innovative process called Transformation Architecture.

Often compared with traditional facilitation, Transformation Architecture is in fact quite fundamentally different from facilitation in that, rather than trying to control a group of people and steer their thinking, it encourages the group to set its own agenda and create its own strategy for executing it. Transformation Architecture operates on the principle that, given the right tools, participants themselves are in the best position to establish priorities because they’re the ones who best understand their work—and what needs to be done to make it work better.

That isn’t to say a Transformation Architecture session isn’t structured; it is, but the framework is designed to let stakeholders themselves determine the optimal course of action. They do this by working toward three key objectives: breakthrough thinking, collaborative transformation, and outcome realization. All three are pivotal components in the change-management process; however, it is the first one that ‘gets the ball rolling’ and moves it forward—sometimes in circumstances where moving forward once might have seemed near impossible.

“It used to be called a paradigm shift,” says Christopher Comeau, Director, Transformation Architecture, xwave. “In order for this kind of shift—this breakthrough thinking—to take place, a certain environment must be created: one that fosters true collaboration, and that encourages people to consider insight rather than give in to the often instinctive urge to criticize it.”

Transformation Architecture is a consultancy within xwave, the information and communications technology (ICT) provider that looks after AHSC’s information systems as part of a 10-year outsourcing agreement. xwave operates one of Canada’s largest healthcare-consulting practices and, by virtue of service

levels maintained for AHSC, garnered Company of the Year at the 2006 Canadian Health Informatics Awards.

The company is an ardent advocate of people-based project delivery, readily acknowledging the fact that, as statistics show, the majority of IT projects fail not because of IT but because of people—their inability to agree on how to move forward with an implementation, or their rejection of it after the fact because it has failed to meet their needs.

"Lack of adoption is one of the greatest hurdles faced by healthcare IT projects," says Nadeem Ahmed, Director of Healthcare at xwave. "Having the Transformation Architecture method in our toolkit complements the more technical aspects of a project, mitigating the risk of adoption failure. By increasing the level of confidence in the technology, we greatly improve the chances of a successful delivery."

With these concerns in mind, and in the final stages of RFP selection, Derrick Jardine and his team wanted to be certain the Clinical Information System they were leaning toward would meet everyone's expectations, with no surprises afterward.

"This was the hand-off," Jardine says matter-of-factly. "We had the high-level support; we had the government backing. We were now saying to stakeholders, 'Okay, this is your opportunity to take ownership of this system.'"

On February 6th and 7th, 2006, 265 AHSC stakeholders converged in a meeting room at the Hilton Trade & Convention Centre in Saint John, NB. They represented a diverse cross-section of AHSC, and healthcare in general: Physicians, nurses, support staff, administrators...mental health, public health, physiotherapy, pharmacy, research...the list goes on.

The first day began with attendees identifying 85 topics they believed should be addressed. These ranged in nature from physician charting and nursing documentation to bed utilization and patient discharge. Each item was discussed, and the results summarized in 66 reports written by the participants. On the second day, the reports were ranked in order of priority, and seven areas were highlighted as requiring immediate attention. These were evolved into seven action plans outlining how to deliver on these key areas of need.

"Transformation Architecture worked for us on two important levels," says Vicki Cowan, Program Manager of AHSC's I3 Project—"I3" refers to integrated interdisciplinary information, the provision of which is the ultimate goal of the Clinical Information System. "First, the session involved a diverse group of people early in the project. Second, it allowed them to openly discuss what they're most excited about—and what they're most concerned about."

She adds, moreover, that many of these people are front-line workers who, though integral to AHSC's day-to-day operations and provision of care, had never before been engaged to contribute to its strategic direction.

The operative word here is 'engage'.

"Research that examines the critical success factors for IT adoption consistently singles out user-engagement among the top three," says Michael Martineau, Director of the Branham Group, an Ottawa-based market research and consulting firm, "Transformation Architecture is helpful because it fully engages users—and by 'engage', I'm talking about meaningful engagement."

Branham interviewed 147 healthcare providers in compiling its second annual eHealth in Canada study. Armed with this feedback—and supplemented by many years of ICT industry experience—Martineau makes the point that vendors have tended to take an after-the-fact approach to developing information systems, creating the products and then persuading users to adopt them. While this tactic can hinder adoption in any sector, it presents significant obstacles in healthcare. "We're talking about a user group here that is not only highly educated and skilled, but also trained to think autonomously—an attribute fundamental to the spontaneous and sometimes critical decision-making doctors face."

These factors considered, he says, physicians are less likely than other IT users to accept a system that they haven't had a say in developing—a system which will change processes that, though admittedly not perfect, are tested and proven. "Doctors have lives in their hands," says Martineau; "Their current system may have issues, but it works." In addition, there is the simple fact that doctors are very busy people. In adopting a new IT system they may feel they're being asked to run and tie their shoes at the same time.

These are some of the dynamics that drove the discussions of the Transformation Architecture participants as they sought to answer the following fundamental question:

"What do we need to do to ensure the new Clinical Information System supports both your work and patient care?"



Derrick Jardine, CIO AHSC

In 66 reports and 219 pages of documentation and seven priority action plans, one of the overwhelming responses was: Provide training. "There were some key areas that emerged in the course of the session," says Derrick Jardine. "The most apparent was that of training—it was the number-one concern." Reinforcing this finding, Martineau points to a study jointly conducted by Accenture and the Vanderbilt Center for Better Health: Training has been identified as one of eight key success factors in clinical system implementation.

"We therefore decided," says Derrick Jardine, "to re-allocate to training an additional \$.7 million that, had we waited until after implementation, would have been difficult to secure."

End-user devices—tablet PCs, for example—were identified as another area of need, with AHSC realizing that more of these devices would be required. Extra funding also had to be allocated to that.

As these areas of concern made themselves evident, so did leaders willing to tackle them. Fifteen leaders in total emerged during the two days, and had the session not taken place, says Vicki Cowan, some these 'hidden gems' might never have been discovered.

"We actually use the Transformation Architecture attendee list when we recruit people for projects," says Cowan. And more important, the 219-page document containing the sum results of the event continues to be referred to, and has served as a foundation for—among other things—a solid communication plan.

"The challenge with a process such as Transformation Architecture is maintaining momentum after the event," says Jardine. "Our communication plan continues to reiterate milestones that help us stay on track."

Thus, while the reticence of some AHSC practitioners might have been construed as rejection of the CIS, in fact what people were looking for was an affirmation of its value—its ability to genuinely improve the processes used to treat patients.

"There's a bit of an assumption that healthcare practitioners are Luddites, but that's not the case," Martineau points out; "Outside work, doctors are actually fairly heavy users of information technology—PDAs for example. And if you move beyond IT—look at the advances made with arthroscopy, for example—medical technology plays an enormous role in the delivery of care; "Value is key; Doctors have to be able to see the value in technology before they're willing to adopt it."

"At a high level," says AHSC's Vicki Cowan, "one of the most valuable outcomes of the Transformation Architecture session has been that people realize this IT project isn't something happening to them—it's something they own." ●

Gary Folker is an eHealth pioneer in Canada; he has 30 years of experience spearheading the implementation of a wide range of innovative healthcare technologies.



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