IBM

University of Pittsburgh Medical Center partners with IBM to make tomorrow's patient care a reality.

Overview

■ **Challenge**

UPMC, a leading IT innovator, sought to become a truly integrated, self-regulating healthcare system, utilizing evidence-based medicine to produce superb clinical outcomes and lower costs.

■ **Why Become an On Demand Business?**

UPMC knew it needed an innovative relationship combined with world class technology to achieve its goals. It saw IBM's pioneering vision and technology as a way to simplify its IT systems, facilitate the sharing of data and improve its flexibility.

■ **Solution**

In a landmark strategic partnership valued at $402 million over 8 years, UPMC's systems will be transformed into an On Demand Business environment using IBM products and services. On this foundation, IBM and UPMC will work together to bring new healthcare solutions to market.

■ **Key Benefits**
  ▪ Expected IT cost savings of up to 20%
  ▪ Major increase in efficiency through server consolidation and virtualization

  >> On Demand Business defined
  "An enterprise whose business processes—integrated end-to-end across the company and with key partners, suppliers and customers—can respond with speed to any customer demand, market opportunity or external threat."

ON DEMAND BUSINESS™

UPMC is the premier health system in western Pennsylvania and one of the most renowned academic medical centers in the United States. Its 40,000 employees and 4,000 doctors are spread across a network of 19 hospitals and 400 smaller sites throughout western Pennsylvania.

This is a story of how two important players in the healthcare space—one a leading integrated health system, the other a leading provider of IT solutions—discovered they had a shared vision of tomorrow's healthcare delivery model, and how their common goals became the foundation of a new kind of relationship. It's the story of how these players, IBM and the University of Pittsburgh Medical Center (UPMC), saw the opportunity to combine and complement each other's strengths to forge a new generation of healthcare solutions. Perhaps most unique, it's an example of how they went outside the

"We are combining IBM's unparalleled infrastructure knowledge with our medical knowledge. At the end of our eight-year transformation project, we expect to see cost savings of 15 to 20 percent."

– Dan Drawbaugh, CIO, UPMC

On Demand Business Benefits

- Project up to a 20% reduction in overall IT costs

- Simplified infrastructure, facilitating integration of data from across the UPMC enterprise

- Increased cost predictability through IBM Open Infrastructure Offering financing model

- Increased flexibility to grow systems and add new technologies by virtue of open systems support

- Single point of access for all clinical applications, improving caregiver efficiency and quality of care

- Improved ability to develop, commercialize and profit from clinical innovations

boundaries of a customer-vendor relationship and selected each other as partners, an arrangement likely to serve as a template for the healthcare business in the coming years. Here's how it happened.

From its roots as a major academic medical center, UPMC (www.upmc.com) has evolved into Pennsylvania's largest integrated health care delivery system—with revenues of $5.8 billion—and one of the nation's most influential healthcare institutions. In addition to operating the nation's largest transplant program and an array of highly specialized clinical services that draw patients from across the nation and around the world, UPMC acts as the major source of routine healthcare services for residents of western Pennsylvania. UPMC is also closely affilated with the University of Pittsburgh, one of the top recipients of National Institutes of Health research funding. As the term "integrated delivery network" implies, UPMC's mission is to provide outstanding patient care and to shape tomorrow's health system through clinical innovation, biomedical and health services research and education. With UPMC's rapid growth and large investments in advanced IT initiatives, being integrated hasn't always been easy. Each new hospital added to the network added to the complexity of the organization; each new system added to the complexity of its IT infrastructure. In combination, these factors made it that much harder for UPMC to integrate its resources for the benefit of its patients. In the big picture, this created a tremendous challenge—finding an effective way to leverage integrated information across its large and diverse system. UPMC's early efforts to address this challenge led to its first contacts with IBM.

Every relationship has a starting point, and for UPMC and IBM it was a specific engagement focused on improving the performance of its Cerner Millennium electronic health record system. One of the many solutions that place UPMC among the healthcare industry's leading innovators, the Cerner system performed adequately but fell short of UPMC's high expectations due to response time and availability problems. IBM proposed that it could address it by consolidating and simplifying the infrastructure on which it ran. UPMC engaged IBM to redeploy the new Cerner system, which had been running on HP servers, on the IBM eServer™ pSeries® platform. The improvement was immediate and dramatic, with response time going from five seconds to "blink speed" and downtime falling precipitously. But more important, the engagement gave UPMC concrete proof of how IBM's vision and expertise could be applied to its broader vision—the integration of all of its healthcare information resources. That's where the real story begins.

Building a foundation for the future

Having established a new level of credibility with UPMC, IBM sought to provide it with a fuller picture of its own healthcare vision and the depth and breadth of resources it had to back it up. UPMC—interested in hearing more about IBM's roadmap for integration, transformation and simplification—provided a willing audience. In extensive meetings involving a cross section of top UPMC decision-makers, an equally broad-based IBM team presented its vision of how On Demand Business supports the emerging requirements for world-class healthcare delivery. Hearing IBM articulate its strategy for On Demand Business, UPMC was struck by how closely it resonated with its own needs and vision— this realization marked the foundation of the partnership between IBM and UPMC.

UPMC looked at the dynamism of the healthcare industry and saw a host of challenges and opportunities that mandated the need for a strategic partner. The challenge was to establish, support and pay for an infrastructure that is flexible, robust and secure enough to support its healthcare vision. The opportunity for UPMC was to bring a stream of innovative new solutions to the market without diluting its focus. UPMC saw IBM—with its common vision, unmatched strengths in research and development and solid track record in the Healthcare and Life Sciences—as being singularly well-equipped to meet them. IBM saw UPMC as the perfect center of evidence for IT solutions for healthcare. Both companies realized that the close-knit, long-term nature of the mission, and the shared vision and high reward stakes, called for a new kind of customer-vendor relationship that would serve as a model for healthcare in the 21st century.

A new relationship model, a new era

The result was an 8-year, $352 million agreement under which IBM Global Services – Integrated Technology Services and IBM Business Consulting Services—will work with UPMC to transform its IT infrastructure through consolidation and standardization across the entire enterprise. Under the deal, UPMC's 931 servers will be reduced to 319 (IBM eServer xSeries, pSeries, zSeries and BladeCenter servers), nine operating systems reduced to four, and 40 storage databases reduced to just two (running on IBM TotalStorage Enterprise Storage Servers). To manage the infrastructure centrally and efficiently, the solution will employ a common toolset based on IBM Tivoli products. Moreover, its reliance on standard technology enables a high degree of virtualization within the infrastructure, further driving efficiency and leading to overall IT cost savings of up to 20 percent. IBM's integration efforts were guided by its Component Infrastructure Roadmap, a defined and agreed-upon blueprint for integrating the appropriate capabilities into a client's IT environment.

What makes the deal truly groundbreaking is its second major component: a $50 million strategic partnership—funded equally by UPMC and IBM—aimed at supporting the co-development and commercialization of new healthcare solutions. The partnership, whose value could potentially reach $200 million,

enables UPMC to turn its full attention to its strong suit—clinical and research innovation—while leveraging IBM's proven ability to bring open solutions to market. Moreover, the new revenue stream created by the venture provides UPMC with a solid return on its investment in innovations as well as a means of sustaining and expanding them.

In the final analysis, though, the relationship's true value has to be measured by its support of UPMC's efforts to transform the way it cares for the patient. Here are some fundamental examples of how it will. UPMC's new infrastructure will enable the seamless and secure sharing of patient data across applications and multiple locations, thus providing caregivers with instant access to the information they need to deliver the best possible patient care.   At the core, infrastructure simplification—characterized by the flexibility, adherence to standards and data model consistency of IBM's service-oriented architecture approach—is what makes it possible. These same infrastructure properties will enable UPMC to add new capabilities rapidly and seamlessly. And as UPMC develops new solutions for the broader market, its open infrastructure, combined with IBM's go-to-market expertise, will speed their fruition.

While it's easy to view technology as the driver of UPMC's choice to partner with IBM, the deal in fact rests on several of IBM's unique strengths, such as its ability to pull together resources from across the company into "one IBM" and present it to UPMC as a single offer. Indeed, UPMC's access to the flexible funding of IBM's Open Infrastructure Offering—a key aspect of IBM's On Demand Business framework—enabled it to avoid large upfront expenditures, while guaranteeing access to all the IBM resources it needs to realize its vision. As IBM Executive Sponsor Dan Pelino sees it, IBM is eager to bring its mix of vision, expertise and technology to its partnership with UPMC to develop new and better ways to improve healthcare. "As partners, UPMC and IBM can make the difference in healthcare, nationally and globally. This is about two world class organizations coming together to deliver on a single vision—world class health care for each and every one of us."

For more information

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