



The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

YEAR:

2012

STATUS:

Laureate

Organization name:

Dell

Organization URL:

www.dell.com

Project Name:

Dell Health Giving Program

What social/humanitarian issue was the project designed to address? What specific metrics did you use to measure the project's success?

Dell believes technology is a critical part of enabling more effective treatment of disease. Our philanthropic contribution on improving healthcare is to focus on accelerating pediatric cancer treatment and we're starting with the children diagnosed globally each year with neuroblastoma, one of the deadliest forms of cancer. With a multimillion-dollar, multiyear commitment of technology solutions and team member engagement, Dell Powering the Possible giving program will help power clinical researchers and doctors around the world to support research to identify and share personalized treatments in days instead of months, and expand the reach and impact of the world's first FDA-approved personalized medicine trial for pediatric cancer, a collaboration between the Translational Genomics Research Institute (TGen) and the Neuroblastoma and Medulloblastoma Translational Research Consortium (NMTRC). Dell is committed to funding and supporting pediatric cancer research. Dell is prioritizing neuroblastoma as the focus of this giving initiative because of the crucial and immediate role Dell can play by donating cloud computing, a key component in addressing the void of new and innovative treatments available for children with this devastating disease. Neuroblastoma strikes one in 100,000 children annually in the United States and can produce aggressive tumors that are unique to each child and often don't respond to conventional "one-size-fits-all" treatment. With little commercially or federally funded research under way because of its small patient base, parents and pediatric oncologists have relied largely on "trial and error" in their search for a treatment that will work from among the hundreds of available adult cancer trials. To overcome these challenges, Pat and other parents have teamed up with physicians and scientists from the NMTRC, the Van Andel Research

Institute (VARI) and TGen to launch the world's first personalized medicine clinical trial investigation for pediatric cancer.

Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.

The Dell technologies used to deploy this initiative include Dell Precision workstations; Compellent Storage Center Arrays; PowerEdge Blade Servers; PowerVault Storage Arrays; Force10 network infrastructure; Dell technical expertise and knowledge. The above-mentioned technologies and Dell's donated cloud will provide needed computing power to help increase TGen's gene sequencing and analysis capacity by 1,200 percent over TGen's existing clinical computing cluster and improve collaboration between the team of physicians, genetic researchers, pharmacists and computer scientists working on the trial. Specifically, the cloud system will automatically and dynamically link patient data to prior biomedical knowledge in order to accelerate the time it takes to interpret genomic data into targeted treatment options from months to days per patient. By reducing the interpretation bottleneck, the cloud will enable the trial to scale up for each patient and expand participation from a handful of children today to hundreds of children over the next three years, with the goal of establishing an information framework that, subject to regulatory approval, could one day help thousands of pediatric cancer patients. The new TGen cloud will also facilitate rapid transfer of information to international partners and lay the groundwork for expansion of the trial to additional types of childhood cancers in the future. The additional computing power will also improve the availability of critical information and allow researchers to develop a real-time knowledge repository of the latest findings on the most effective treatments for oncologists to use globally.

Please list the specific humanitarian benefits the project has yielded so far.

While we don't have any hard results right now, Dell has donated cloud platforms that will help medical researchers expand participation in the world's first personalized medicine clinical trial for pediatric cancer from a handful of children today to hundreds of children over the next three years, with the goal of establishing an information framework that, subject to regulatory approval, could one day help thousands of pediatric cancer patients. Dell is focusing on pediatric cancer because in the United States, cancer is the leading cause of disease-related deaths in children ages 1 to 14 and a child is diagnosed with cancer every hour. Specifically, neuroblastoma strikes one in 100,000 children annually, usually before the age of 5, and despite it being so rare, it is so deadly that it is responsible for one in seven pediatric cancer deaths. It attacks the sympathetic nervous system, which controls heart rate, blood pressure and digestion, with aggressive tumors that are unique to each child. In fact, it is the unique and aggressive nature of neuroblastoma tumors that render ineffective conventional approaches to developing a blockbuster, one-size-fits-all treatment to the disease. With little commercially or federally funded research under way because of its small patient base, parents and pediatric oncologists have relied largely on "trial and error" in their search for a treatment that will work from among the hundreds of available adult cancer trials. It's time to do more for neuroblastoma and pediatric cancer and this is an area where Dell solutions, people and funding can address an unmet need and have a real and lasting impact.

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

Pat Lacey, the father of seven-year-old Will, found out his son had Stage IV neuroblastoma when Will was only 6 months old. After doctors told their family they couldn't do anything more to help

Will and to just go home and enjoy the time they had left with him, Pat and his family set out to find another way to help their son. That's when they met Dr. Giselle Sholler, who is working on ground-breaking treatments that use targeted therapies specific for neuroblastoma cancer cells. With technology from Dell, doctors and researchers are able to use high-performance computing to target the treatment specifically for Will to ensure that his cancer does not spread and he can be a normal seven-year old boy. Dell, Will and his family, doctors and researchers will continue to focus on improving healthcare by accelerating pediatric cancer treatment, so one day no child or family has to go through what they have had to go through. "Now, thanks to innovative doctors and Dell's incredible support, kids will finally get a chance at treatment designed to improve their lives and survival," said Patrick Lacey, cofounder and president of Friends of Will Cancer Foundation.