Welcome to the Innovation Suite

These healthcare execs are creatively leveraging technology to improve their operations and better the lives of their customers.

By Chad Michael Van Alstin, Features Editor

Pixar Animation Studios Director and Executive Producer John Lasseter once said, "The art challenges the technology, and the technology inspires the art."[1] He's right. The animators at Pixar may use tech to craft their vision, but without their creativity and imagination, the tool is merely an untapped resource. But as the technology advances, the limits of imagination expand with it.

This logic can be applied to those who work in hospitals and clinics – overlooked places where creative individuals are working to solve pressing issues and improve upon outdated systems. With that in mind, *HMT* profiles C-Suite Innovators who are leveraging HIT to turn inspiration into reality, and consequently expand upon the limitations outlined in the instruction manuals of the tools they wield.

Crafting an IT strategy for a brand new hospital

MATTHEW KULL, MBA, CHCIO, SVP, Chief Information Officer, Division of Information Technologies, Parkland Health & Hospital System

Matthew Kull is the Senior Vice President and CIO of Parkland Health & Hospital System in Dallas, TX. A 20-year IT veteran with a background on the software vendor and consulting side, he began working in healthcare 14 years ago, with a resume that includes some of the largest hospitals, pharmacies, and utility systems in the United States.

Kull is a CHCIO – Certified Healthcare Chief Information Officer – and maintains professional affiliations with both the College of Healthcare Information Management Executives (CHIME) and the Healthcare Information and Management Systems Society (HIMSS).

He joined Parkland in 2014, just in time to see the new facility open its doors in the summer of 2015, replacing the 70-year-old building across the street.

Can you tell me a little bit about the new Parkland facility?

In 2015, we opened our brand new 2.5-million-square-foot single facility. We are the Dallas County safety net for much of the uninsured and underserved populations.

The usable life on a hospital is hopefully about 60 years, and that's about the cycle we've been working on. We just not only outgrew the old building, but we had any number of facility operation and technical restraints inside of a building that was built in 1954. We ran out of the ability to retrofit modern medicine-tech capabilities and infrastructure.

What specifically was the issue with the old hospital's technology?

We had a number of disparate infrastructure systems, different facility systems; our entire computer fleet was a multitude of different technologies – it all lacked consistency. We also were largely – I don't want to say an analog hospital – but our ability to have large broadband interconnective devices was somewhat constrained by the physical design of the building and an inability to retrofit the concrete structure that had been in place for the last 60 years.

Did the physical plan for the new building take into account the tech you may utilize?

Yeah, it did. The new Parkland hospital is one of the first truly digital hospitals in the United States. With exceptions, like our back-up emergency analog phones, the whole hospital is 100 percent digital. The new campus is filled with technology today that didn't exist when we began planning. When planning, we looked not only at what the then-current technology was, but we looked at the future. What did we need to have in place from an infrastructure perspective to ensure that as we grew over the next 60 years in this facility, we'd be able to keep up with the pace? And you know, the future was pretty uncertain. It was hard to predict, but we looked at a lot of things – like, we knew we were going to need dense and reliable wireless interconnectivity throughout the hospital. So, we have hospital-grade Wi-Fi capabilities throughout the entire facility's 2.5 million square feet, as well as some of the exterior areas.

What were some of the other modern technical advancements you adopted?

When we realized we were close to doubling the size of our hospital, we didn't want to have to double the size of IT infrastructure support. Where we really got the big gains there was through our virtual desktop solution. By using the VDI platform, we were able to do a few things to affect how we deploy technology. All the point-of-care areas in our hospital are zero clients; so they all run an inexpensive, zero-footprint "dumb terminal," if you will, that essentially re-

peats the VMware Virtual Desktop that's running in our data center.

What this enables – and this we found to be one of our largest physician engagements, technically speaking – is the tap-and-go solution. A provider walks in, they tap, and they turn and immediately interact with the patient. The virtual desktop is taking care of the rest.

Did you end up seeing a financial benefit?

It's interesting you ask that, because one of the things we budgeted initially was we were required to salvage 40 percent of the best-performing equipment from our old hospital and move it to the new hospital, at the same approximate time we moved 700 patients from our old building to our new building.

What we found was, when we started evaluating the virtual desktop solution, our total cost allowed us to replace 100 percent of the point-of-care computers for the same budget that initially called for us to move 40 percent of our older equipment from across the street. We came in to our brand new hospital with an entire array of brand new equipment, and we reduced our patient risk by not having to move computers along with patients.

Did the new hospital take over the old's operations immediately?

We had a day-one turn on. There were no phases or staged events – we moved all of the patients from our old hospital to our new hospital over two days. We brought all systems up day one, and we were working out of the gate. It was about the biggest *bang* we could possibly do, and we did it quite smoothly.

How confident were you things would go smoothly? Did you

visit other facilities as part of your strategy?

We visited a number of other facilities as part of that decision process, but in a number of cases, we were kind of in some uncharted territories. We were the first people, or some of the largest people, to do some of these things, and in that vein, we partnered with a variety of vendors in development agreements to make sure we were helping to shape the product as we were implementing it.

In many areas, the technology we were moving forward with simply didn't exist. This really allowed us to secure vendor engagement, because we were starting to shape products on their behalf or in partnerships with them – they're going to want that product to work beyond us. I don't want to call Parkland a test facility, but I will say we were a development partner for a lot of this technology. **HMT**

REFERENCE:

1. https://www.youtube.com/watch?v=uFbOOjAC_Fg