

Breaking Down Single-Person Data Dependencies at Tasmania Health

by David Deacon

From ancient monuments to modern homes, humans have long understood the stability of building on multiple supports. Every new column you build enables the structure to hold more weight. It also creates a more stable foundation and prevents weight from shifting. For most of us, it's a familiar concept.

However, for some reason, data expertise within organizations is often placed on the shoulders of one person. Although many organizations have accepted that data is a necessary support, we still tend to believe one person can handle it. That person essentially becomes the guru of data, an enviable sage capable of translating assumptions into business intelligence.

But what if I were to tell you that building a data-driven operation on one person is as problematic as building a house on swampy ground with only one support beam?

The Data Hero and Villain

Regardless of the organizational structure, if your entire data structure relies on "Simon," then you don't actually have a process in place. What you have is a hero, or villain, depending on the circumstances. He might be a hero in many decisions, but what if Simon takes a vacation? Or worse, what if he quits?

A single person for your data needs is also a single point of failure.

Of course, I speak from personal experience. At one point, [Tasmania Health](#) was separated into silos, and each structure had its own Simon. We were all doing our own thing, developing databases, and performing analysis in complete isolation from the rest of the health system. We needed a more unified structure to better serve our organisation—and our patients.

The Tasmania Department of Health focuses on safeguarding and improving the health and wellbeing of our state. We provide a broad range of health services as part of this responsibility. In addition to managing hospitals around the state, we partner with other essential public services to improve, promote, protect and maintain the health, safety and wellbeing of Tasmanians through service planning, managing, procuring and delivering high quality health services.

Analytics—Sort Of

As part of the effort to improve our services, it was around 2010 that the DoH began making forays into data analytics. Around this time, 3 of the four health regions were delivering data through one person working with a massive Excel workbook. We knew that it was time to begin thinking in terms of data warehouses and improved analysis. As part of this idea, we first began working with [QlikView](#). The result was an explosion of new data and requests for information.

Unfortunately, we were still new to business intelligence. As a result, our organization did not include the best structures for data delivery. Each of the regions worked in silos to develop the best mechanisms to answer the call of using data. We essentially created a network of individual "Simons" rather than a cohesive data analysis operation.

That worked from a microscopic view, since each region had a data hero for their data needs. But we needed more than that. We wanted to tell a holistic story about our patient delivery services. Developing insights into our processes and outcomes was simply not possible within such a disjointed system.

It was following an organizational change in 2016 that this need came into focus. We finally had an imperative to find a way to create a more centralized data process and remove data confusion. Part of this was due to the change from QlikView to [Qlik Sense](#). QlikView worked great for guided analytics. And it still does. However, [Qlik Sense](#) made it possible to develop more powerful near real-time dashboards called (focus boards).

The problem was, our internal capability was too outdated to take advantage of Qlik Sense. In addition, our data culture was too immature to fully incorporate the benefits of data-driven decisions. We needed to find a way to restructure our business intelligence operation so that it was ready for the future.

First Time Was Not the Charm

When I began as a state manager with Tasmanian Health Service in 2016, I had the vision that each region should not have a separate data guru. I believed our analytics had to be centrally located. Better coordination is possible when everyone has the same data foundation and can learn from the insights of others. Data integrity is also stronger when everyone pulls from the same data pool.

Interestingly enough, my vision was met with resistance. At first, I assumed this was a general resistance to change. However, I soon learned that the pushback stemmed from the feeling of having an important resource removed. The regions were struggling to accept my vision and strategy of centralized data analysis because they were afraid of losing their go-to person for data.

Never underestimate the importance of change management when introducing new data structures in your organization.

I realized I had underestimated the cultural impact of my new model. It was fine to switch the technology, but you have to prepare and train the people to truly change. People have to trust that your vision includes their needs.

I learnt that, Culture eats strategy for breakfast!

(Peter Drucker)

Handling Ad Hoc and Real-Time Data Needs

We answered this problem in two ways. First, we created a data request system which we called Front Door. The old system may have been flawed, but everyone knew who to contact for data. One of the fears was that under a new centralized system, requests for data reports may get lost in the shuffle. Front Door was created as a web application that treats staff differently. They aren't doctors or nurses—they're customers. I asked myself what experience I expect working with a business. What level of customer service can I expect? What is the process like if I'm unsatisfied and need to make a return?

No matter who makes the request, Front Door helps to facilitate the flow of the data request through the process from the first contact through our end data output. The end result might be a one-off data report, or a dashboard that can be constantly used for a department.

Front Door gave our staff the ability to trust that each request was treated seriously and would get an appropriate and timely response. We have a 10 member multidisciplinary team, and to ensure we live and breathe customer service, each of them takes a turn serving as the support person. That way I know everyone understands the requests we get, and the clinical staff always gets to talk to someone knowledgeable.

After Front Door, the next initiative was to build SIMON (Statewide Information Management Operation Node) no more Simon's. The SIMON data analysis portal was built on top of Qlik Sense. We sat down with clinical decision-makers to get a sense of the kind of information they need to support their decisions. What are the key metrics they need access to every single day? We also met with executives and leaders in other areas to ask the same questions. The idea was to create a system of dashboards with a design tailored to the needs of each unit.

Every staff member with a license should be able to open SIMON and quickly retrieve critical information at a glance. The dashboards we created gave them the data they needed, right at their fingertips. If they

ever needed new information or a new approach to old reports, they used Front Door.

From Paper Reports to Real-Time Dashboards

SIMON is now used first thing in the morning at the Safety and Quality huddle by all our senior clinicians. They can quickly understand which patients are sitting in the emergency department, who those patients are, and where they'll go next. This real-time dashboard replaced paper reports that the Safety and Quality team would analyze during this huddle.

One of SIMON's uses is in analyzing patient flow through the hospital stay. This proved particularly valuable during the COVID-19 pandemic. In only a couple of days, we put together a dashboard so our clinicians could use SIMON to understand patient flow and study the overall occupancy rates and expected rates based on current patients.

These real-time dashboards are the power of Qlik Sense. We still use QlikView for retrospective dashboards. However, Qlik Sense provides better real-time dashboards that are easily displayed on a variety of screens. That capability was invaluable during the beginning stages of the pandemic. Our doctors and nurses did not have the time to engage in detailed discussions about data tracking to see overall trends. Hospital administrators were focused on locating resources and finding available beds, not facilitating data sharing meetings across institutions.

Having a Qlik Sense-based product in place allowed the data analysis process and resulting insights to happen in the background. It gave administrators the ability to wirelessly track patient progress and capacity. They could simply open SIMON and see on the dashboard that the facility has 25 people sitting in the emergency department and 15 current bed requests. The system even allowed us to mark the more complex patients, and instantly share that information across the hospital.

A True Data Partner

While Qlik's platforms have helped us transform our data processes, the people behind the scenes have been just as valuable. Qlik treats us as important long-term customers. The staff were willing to work closely with my team during the decision to move from QlikView to Qlik Sense. They gave us trial licenses so I could convince the team that we needed more real-time dashboards. And it paid off. By building out these proof of concept dashboards, I could demonstrate the value of Qlik Sense.

With data analytics: show, don't tell.

Best of all, the Qlik customer service process is out of this world. I always know I can contact local support and get the assistance I need. The entire Qlik organization seems to understand the value of partnership.

Today, we have evolved beyond the single-dependency data problem. We have a team of specialists with vastly different backgrounds all working to support the business intelligence vision. Front Door helps us to facilitate great customer service to any department employees with special requests. SIMON gives us great real-time support for ongoing information needs.

Underneath it all, Qlik Sense provides us the integration and communication tools we need to truly become a data-driven organization. Our customers, indeed the very health of our state, depend on our efforts.