

QLIK CASE STUDY

NZ Health Partnerships – Hono Oranga Aotearoa



NZ Health Partnerships – Hono Oranga Aotearoa, is part of Te Whatu Ora – Health New Zealand and delivers the Health Finance, Procurement and Information Management System (FPIM).

FPIM supports the New Zealand health system's day-to-day finance, procurement and supply chain operations, managing how goods and services are sourced, ordered, delivered, stored, used and paid for.

As part of this work, the organisation has developed a Health System Catalogue. This delivers a single national procurement catalogue, national data standards, a central data repository of actual spend on medical devices, known as the Spend Data Repository (SDR), and a framework for procurement compliance.

Moving from data analytics to insights

NZ Health Partnerships (NZHP) has been tasked with taking a national view of health spend data, starting with medical devices. This information is held in the nine different Enterprise Resource Planning (ERP) systems used across the country's 20 hospital districts.

Half of these districts use the national FPIM solution, while the rest use a range of ERPs to manage their day-to-day operations.

Erik Salzmann, NZ Health Partnerships Solutions Architect, explains that the organisation needed to pull that data together to provide a national view.

"We went to tender to look for a partner to help us build pipelines to all of these ERP systems," Salzmann explains

"We looked at the typical players in the analytics space, but we also looked at what was already being used successfully by the sector. We chose Qlik as it was already well used and very well received."

NZ Health Partnerships is using the full Qlik Software as a Service (SaaS) analytics and reporting tool. Qlik Sense for data analytics, Qlik Compose for data warehouse management, and the Qlik Replicate solution to replicate data out of contributing systems.

The organisation went live in 2021 with Qlik and a data platform and rapidly stood up the data pipelines to all ERP systems, with work due to be completed by the end of 2022.

The key challenge then becomes harmonising and standardising the data.

"The hard part is pulling all of that together and making sense out of it, and that is where we are using Qlik tools and Acumen BI to assist us," Salzmann says.

Qlik is used to do data validation and verification, as well as the visualisation, analytics and forecasting for the Spend Data Repository.

Procurement teams within districts have access to the data relevant to their districts to view what is happening locally and whether staff are buying catalogued items off national contracts. If not, they can have the conversation about 'why not'?

Jakkie van Wyk, NZHP Director Programmes and Data, says the organisation created a four-year business plan for 2021-2024, which focused on moving from data to analytics to insights.

"We thought it would take us four years to get there, but we have been able to move much faster than expected and are already doing a lot of work on insights," she says.



“Whatever we do, we always aim to make life easier for users and to help improve patient experiences – enabling better decision making through data insights.”

Jakkie van Wyk, NZ Health Partnerships Director Programmes and Data

Agile and flexible financial forecasting

The SDR was originally created to collate spend reporting for District Health Boards (DHBs). In July 2022, the DHBs were disestablished and the new national organisation, Te Whatu Ora – Health New Zealand, was created.

van Wyk says NZ Health Partnerships’ ability to access spend data at a national level meant it was asked to produce regular national reports.

Using Qlik, the organisation developed the Financial Forecasting and Reporting solution for Te Whatu Ora (and eight other entities that make up Te Whatu Ora) consolidating the budgets of all former DHBs.

van Wyk describes that as a minimum viable product that NZ Health Partnerships is now looking to productionise, as it has had a huge impact

“We are very proud that our application was used to help Te Whatu Ora do the budget and we have seen the real value in that application,” she says.

The data analytics tool means that if finance and reporting hierarchies change, they can build the new hierarchy inside Qlik and remap the existing cost centres, without touching the ERP system themselves, which would be a hugely costly and lengthy process.

“It means we can be really agile and flexible and respond quickly

to requests, without touching the integrity of our data sitting underneath,” van Wyk says.

There are huge efficiency gains to be made by being able to see data at a national level, such as replenishing from central warehouses and viewing where stock is sitting and where demand is.

“Qlik helps us draw the data out and consolidate those views because they need that high level data at a national level,” she says.

Data sharing

Salzmann says, “the great thing about Qlik and our data environment is the ease with which we can share this information with other entities.”

NZ Health Partnerships has completed a sharing exercise with HealthSource, the organisation which does procurement for the four Northern Region Districts.

HealthSource uses Qlik and the same data platform solution, so once data sharing agreements were legally in place, the technical sharing of data was done “in the blink of an eye”, he says.

“We just shared accounts and suddenly they had access to run Qlik reports across our data and we have access to run reports across their data.

“By linking data sources together, HealthSource have been able to retain a single source of truth by keeping data in the area where it is recorded, rather than duplicating it into another database.”



“The great thing about Qlik and our data environment is the ease with which we can share this information with other entities.”

Erik Salzmann, NZ Health Partnerships Solutions

This means NZ Health Partnerships can now look at spend for the Northern region over a period of time, without copying any information into their own environment and the organisation wants to enable this for all the districts to do their reporting

“They can continue to run their business and we can continue to do our work without duplicating any of that effort, by linking databases together,” van Wyk explains

“The ability to share data without having to build data pipelines makes the solution really beneficial as we aim to become a ‘one stop shop’ for any financial procurement or inventory information to the sector.

“That’s really the vision.”

Enabling self-service

New Zealand Health Partnerships sees itself as the custodians of health data related to finance procurement, inventory and supply chain.

Salzmann says by providing secure and reliable data, the organisation can enable users to innovate across the sector.

“We want to be contributors into the sector by ensuring the data is accurate and reliable, so other people can draw on the data and get benefits from it,” he says.

A custodian approach means if a user wanted to overlay financial inventory information with patient information or ward occupancy, in order to do comparisons or planning, they could be given

self-service access to this data without having to build major pipelines between systems.

Salzmann says, “most people in the health sector are not data scientists or data analysts: what they want is just an easy app on the phone to tell them what’s going on.

“The potential is vast as the data is out there, but currently it’s sitting in isolated silos. We aim to pull it together to give people access so they can run their own reports.”

He describes Qlik as user friendly, making the transition for people who have never worked on an analytics tool “easy and intuitive.”

van Wyk agrees, saying, “the beauty of SaaS is you get a login and it’s all single sign-on, so you get authorised to access Qlik and have your role assigned to you automatically.

“You get trained up, you go in and that’s it - no more spreadsheets.”

Enabling the future

The Spend Data Repository is initially focused on medical devices, of which there are an estimated 250,000 in the sector.

van Wyk says this build provides the foundation to expand the scope to other areas. Using Qlik, they are already inputting all spend data from the districts.

Work has moved so rapidly that NZHP is already looking to assess what additional categories will be added to the Health System Catalogue.

The organisation is also embarking on a proof of concept around machine learning.

Salzmann says one of the challenges facing the sector is around demand forecasting for medical devices or medical equipment on the hospital wards.

This currently requires a lot of physical counting of what is on the shelves by health staff.

The proof of concept will use key pieces of information – such as ward occupancy, patient turnaround or staffing levels – to determine what inventory levels are needed.

This will not be possible to do for every item, but could potentially apply to around half of all devices and equipment.

“You can predict the requirements of a ward based on historical data based on machine learning,” Salzmann says.

“This means you no longer have to cycle count every day, but may just once a month, which releases resource to do other work.

“And that’s just the beginning as from that point onwards, the world’s your oyster in terms of what you can do with the data.

“We are pushing the boundaries quite hard on this one as we have seen this work in other industries. We are lucky having a partner like Acumen BI that is open to work with us.”

van Wyk agrees saying, “it is incremental wins and gains that actually make a huge difference.

“Whatever we do, we always aim to make life easier for users and to help improve patient experiences – enabling better decision making through data insights.”



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