Investing in Data and Digital Infrastructure for the Wellbeing of our Citizen and Creating Economic Opportunities

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History:

DCC Economic Development Unit had floated the idea of replicating the success of CODE in Dunedin to scale to the health sector. There has been several workshops of local stakeholders for "Digital Interactive Health (DIH)". I've been a part of this group (chaired by Murray Strong) to look at opportunities to build and scale health tech locally. Since the inception of DIH, I have met with many Dunedin social enterprise, health and academic leaders to discuss the below ideas. While the ideation continues to iterate and morph, the core concept remains consistent.

The Problem:

I have worked in primary and community care for 10+ years for businesses creating digital health product to improve patient outcomes and clinician experiences. Working in an industry "in-crisis" where:

- Median age of GP's are in their late 50s, which means in 10 years, 50% of the GP workforce will retire. This means more pressure on other clinicians and community care.
- The significantly underfunded, politically charged and flip flopping strategy of the health portfolio continues to impact every day kiwis, with a disproportionate impact on low socio-economic and Māori communities and whānau. This means we are dreadfully behind in where investment needs to be, where infrastructure needs to be and where care needs to be available.
- Providers of care – whether it is primary care (GPs and PHO), secondary care (hospitals), allied health, community and social care are funded to look after their specific areas. This means that funding is based on performance to meet targets, not longer term/longitudinal outcomes.

I recently had an eye opening discussion between David McKenzie (Manager of the Night Shelter) and Gill Brown (Principle Policy Advisor – Housing DCC). What started as a conversation of a new tent spotted in a reserve quickly revealed that between David and Gill, they knew the person, their past history, a range of health and wellness issues that person was facing, other social determinants that impacts this person, and why they were now homeless.

It is a sobering conversation to listen to, but what quickly became evident was that significant care and effort these two were going above and beyond their scope to see what they could do to help this particular person.

What can we do?

The old adage is "data is king". Currently, the state of digital health data on a patient from a primary care lens is an area of focus from Te Whatu Ora Health NZ, with the Primary Health Organisations such as Wellsouth being in the best position to understand the enrolled population.

In the social care space, there is no consistent datasets available – the information on cases (not patients) is based on encounters with the person specific to that organisation/programme that they are part of. That means, using the person living in the tent identified above, who is homeless, has a mental health issue and is not registered with a local GP completely falls through the gaps. While the Night Shelter will help this person the best they can, their scope is to provide a roof over this person heads for several nights a month, and the best they can do is refer them in a manual way (phone call/email) to an array of service providers, and hope that something happens. This means, there is no data on the person beyond what's in these providers heads and any bespoke data systems they might be using.

So what can we do? Simply put, we can put in a system that prioritises the person/ whānau that lives in the city, and provide a digital solution that captures data on them. The access to this solution can be via any provider based in the city, with a model of care focussed on enabling social providers to access appropriate data and be referred – not through the old referral letter/phone call, but enabled through data access based on services needed. This means that service providers are "pulled in" to the solution rather then being sent a referral with little context. The providers can then quantify the work they do, and still get funding as their BAU, but have access to information required and be able to respond quickly.

What opportunity does this present to the DCC and the wider city?

There are multiple opportunities that come from this, but the question is why would the city be interested in backing this?

1. "Society is only as fast as the slowest member" – We are a big enough but small enough city to care. We know citizens care – whether its the church minister that leaves the backdoor open at night to give shelter for the homeless (this is a true story locally), to collective efforts of communities trying to find people access to care. We

can show a citizen model of care that lifts the marginalised citizens to help them back on their feet.

2. "Data driven decision making for investment" – What could this data mean to the city council? What insights would you gain from datasets that tell you where the needs are greatest, whether its playgrounds, water fountains, housing, entertainment, education and training, transportation etc? Uber might look like a taxi alternative but the crown in the jewel is Uber Movement – a transportation census on steroids that helps to plan infrastructure. Google might look like a search engine but Google Analytics is around user behaviour, demographics and engagement that helps to plan investment and sales.
3. "Economic Development Building on the Infrastructure" – What could be done if a city wide solution could be built? What companies would want to be a third party solution to this to cover many opportunities – from building apps to educate on nutrition, city engagement and survey capabilities, to building remote sensing solutions to enhance live data on the moisture of bedroom with a child at risk of respiratory issues? There is limitless opportunities on how develop economic opportunities for digital and other business to innovate and scale. If this is successful, what is the potential value of this IP – How a city addressed true "wellness" of the city and made investment decisions based on cities, and brought economic opportunities for servicing needs in the city? How would this scale beyond Te Wai Pounamu?
4. "Longitudinal Research" – The academic research opportunity is immense. Why? As mentioned, the data in this space is virtually non-existent, which makes a lot of research to be qualitative rather then quantitative. This would present an opportunity partnering with our university to look at a range of socio-economic research in our city to validate new models of care not only for our citizens but for New Zealand.

Below are a few examples of other cities that have invested in a similar way.

- *https://healthpolicy.ucla.edu/our-work/nhpi-data-policy-lab/nhpi-data-policy-lab-data-dashboards*
- https://www.eur.nl/en/upt/about-us/research/urban-economics/urban-health-and-happiness

I appreciate that this is left field to what is typically outlined in the 9 year strategy. However, I think this presents as an opportunity to consider:

- What short and longer term opportunities does this present to our city?
- How can we be precise on investment decisions and support the social and community care industries alongside innovation and research in our city, to something we can scale?
- Can we prove that Dunedin is a "well" city, with numbers to back it?