Data Dash: Needs assessment and engagement platform

Responding to Challenge 1

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Symptoms

Queensland Health have identified that there is variation in understanding, motivation, and level of engagement between relevant stakeholders. Through our primary research and the information presented to us, we understand that stakeholders are dealing with complexity and duplicity of information and systems, with a high cognitive load and risk aversion regarding the accountability related to decision-making processes. More specifically, we have identified three primary symptoms that data custodians and data requestors are experiencing. These include (i) complex operating environment, (ii) high cognitive effort, and (iii) risk aversion. These symptoms are perpetuated by heterogeneity of understanding, motivation, and engagement across stakeholders (i.e., data custodians and data requestors).

Diagnosis

The symptoms suggest that the large number of moving parts, the complexity of the system and the diverse agendas of those interested in QLD Health data present a challenge for the creation of a uniform system for the approval, access, and utilisation of rich datasets. This is resulting in an inefficient user-experience for all parties.

Treatment Recommendations (Simplification and Communication)

We are proposing the creation of platform that provides a “needs assessment” tool to simultaneously identify and respond to the diverse data intentions of multiple stakeholder groups. This means reducing asymmetries by identifying the intended outcomes of data requestors and nudging the two parties to communicate earlier in the process and co-create a mutually beneficial outcome. From here, the data approvers are automatically given the tools necessary to guide their decision-making process, with this being dependant on the needs outlined by the data requestor. Our solution gently pushes cognitively overloaded and risk adverse data custodians in the right direction, whilst also keeping time-poor data requestors in the loop.

This nudge essentially delivers a system that:

1. Clarifies the rules and regulations surrounding data access (i.e., offers a customised decision toolkit for custodians, based on the data they are requesting (i.e., identifiable, or unidentifiable), who the data requestor is (i.e., QH employee or external), and the intended data usage (i.e., motivation).
2. Reduces the pressure associated with the onus of responsibility of giving approval (i.e., making it a better informed, and transparent decision-making process, and empowering the custodian to visualise the progression of the data).
3. Responds to the preferred method of communication/information transfer relevant to each stakeholder group (i.e., visualisation, passing the EAST Framework test).

Outcome

Increased efficiency, information transparency, reduced waiting times for data requestors, creation of a loop (as opposed to the stop-start currently being experienced).

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Originality

To the best of our knowledge, this approach has not been previously used in a data sharing context. We see the dialogue component of our solution, alongside the customisation, as being the core value proposition and success of our nudge. The creation of a feedback loop is a notable contribution to the discourse on data sharing and data governance, therefore positioning our solution as one that is desirable from the perspective of QLD Health.

Theoretical basis of the nudge

Our proposed nudge is grounded in the theoretical underpinnings of social marketing and behavioural economics. Specifically, the theory underpinning our nudge suggests that both data custodians and data requestors must be actively engaged for data access governance to be a sustainable long-term solution. This approach is underpinned by the DART Framework of value co-creation, alongside using elements of the EAST Framework to incentivise users to use our platform, respond to the primary barriers, risks and aversions related to data access (Prahalad & Ramaswamy, 2004; Service et al., 2014). An understanding of user experience principles, usability and heuristics was also utilised.

Feasibility & Implementation

With respect to organisational investment, we consider this to be a low-cost solution. This feasibility of our approach is considered through lenses of technical feasibility, and the viability lens of the organisational perspective (i.e., tangible resource investments). With respect to technical feasibility, we argue that we can leverage QLD Health's existing infrastructure (e.g., hosting system, web developers, employees, etc.) as a modality of hosting the platform and needs assessment tool. The 'toolkit' that is automatically generated for data custodians to inform their decision-making process is feasible to create, given the existing flow charts and choice architecture tools that govern the approval processes. Our solution therefore taps into this 'sandpit' to connect the two parties making it legally feasibility, grounded in the existing legislation. Lastly, our approach can be implemented on a mass scale using the DART framework as the guiding principle, as a starting point, we have provided a set of strategies and recommendations. We encourage QLD Health to explore the DART Framework as an effective modality to guide tools for data sharing.

Meeting the brief

Queensland Health have identified that there is variation in understanding, motivation, and level of engagement between relevant stakeholders. By using a co-creation of value (carried out by the DART framework), we can present information in a way that resonates and maximises understanding between the data requestors and data custodians. Our platform and "needs assessment" tool allow for mediated engagement between the two parties. This will nudge both parties to into co-creative cycle, by creating dialogue (D), access (A), reducing risk aversion (R), and increase transparency (T). In our analysis of the problem, we have found that the primary barriers for data requestors are cognitive overload (posed by the complex operating environments). Our proposed treatment alleviates and removes these barriers by offering our needs assessment quiz to take a simplified and automated approach. In contrast, data custodians are typically faced by cognitive overload and risk aversion issues. Through our platform, we can optimise their decision-making process, by taking the necessary steps to automate the decision-making tools that they need (to make an informed decision) and reduce risk aversion perpetuated by trust issues and decision-making repercussions. While we follow a novel framework, we also highlight that this solution is strengthened by its presence in the real-world. For example, the Women's Butterfly Project uses a similar needs assessment/matching tool to navigate complexity and have experienced a positive outcome since implementing this approach (expressed anecdotally). By design, our solution reduces the variability in practice, encourage greater use of data for research purposes by 'demystifying' available pathways (by automatically presenting the 'correct' tools and information), and reducing the associated resource burden (i.e., increased efficiency), while allowing for a catered approach for a diverse range of stakeholders (i.e., providing information in a way that it is best received).

References

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