



Six Key Data Project Considerations

Gov agencies need to consider these important factors when building their modern data platform

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Introduction

Data platforms are crucial instruments to aid government agencies in making strategic decisions that are well-informed. They help improve data reliability, integration and management while reducing both interdepartmental and intradepartmental inefficiencies.

Building a successful modern data platform however requires more than just the technology. To get the best possible outcomes, there are 6 things your agency has to consider when developing data projects. By taking these factors into consideration, you can ensure you always have reliable data that enables you to reach your business goals.

Things to consider when building a modern data platform

- It's not all about the technology
- Clear understanding about the data
- Adequate business engagement
- Foundational data activities
- Implementation method and plan
- Data governance

1. 'It's not all about the technology'

Data projects are there to help your agency achieve their strategy, goals and plans. They often not just only require new technologies, but also new behaviours and new ways of doing things.



While choosing the right technology or platform is important, you have to remember that their main role is only to facilitate the accomplishment of your objectives. If you're building a modern data platform, you also have to be clear on what your project is trying to achieve for your business stakeholders. What happens when you're not clear about the goals of your data projects?

Consequences

Unclear project goals means that project staff aren't clear on what the project is trying to achieve. This creates confusion and often a misalignment of requirements and solutions being delivered.

How often have you found that at the end of a project, what has been delivered doesn't quite match expectations?

How to ensure you're clear on your project goals

Start off by creating a vision of what you're trying to achieve. Include answering the question: "What does success look like?"

For instance, is it about business users having access to real time quality data?

Make sure you also have executive sponsorship and commitment so they can set the vision and act as the marketing influence for your goals. Have frequent reviews of what you are delivering to make sure you are aligning to the vision.

2. Adequate business engagement

Many data projects can run the risk of not having enough involvement from business stakeholders.

Business engagement is important on many levels. Business users help drive requirements, use cases and user stories. They know their data better than anyone which means they need to be actively involved in reviews and testing.

In an agile implementation, it is critically important to have a Product Owner who understands the vision and what needs to be delivered. Often we hear business users say they are extremely busy with their day-to-day jobs, but ultimately we need their help to deliver a solution that meets their needs. We need their input in order to help verify the functionality and the value of our data projects.

What happens when there's not enough engagement from business users?



Consequences

Without adequate business representation, the project team is at risk of defining the requirements, use cases, user stories and their prioritisation based on assumptions alone.

If you're unsure about what you need, you may end up not defining the correct data or experience more difficulties when resolving data issues. Ultimately, inadequate business engagement can result in delivering solutions that don't actually meet the end-user's needs.

How to get adequate business engagement

Make sure you have the following from within the business:

- A Product Owner who can define and verify requirements, use cases and user stories as well as the prioritisation. They must also be able to answer ad-hoc queries. If they can't, they need to have access to those who can.
- Access to people who understand the data and what it means. These people will be important in helping with queries and addressing data quality issues, or issues around the meaning of data (metadata).
- Access to people who can tell you what it is they need from the data
- Adequate planning so everyone knows in advance who you need and when. There will always be things that 'crop up.' However if the business knows who you need and when, they can plan around and potentially have backfill resources for their day-to-day operations.
- Know when there are busy times within the business so you can avoid them. For example, if you're implementing a solution for your finance team, you probably won't have much chance of getting their time at the end of the financial year or during budget preparations.

"Data Agility made efficient use of SV's existing waste data repository, upgrading it to accept hazardous waste datasets on an ongoing basis. Powerful analytical and reporting solutions were provided, along with thorough documentation and training, enabling us to make best of use of the data, improve our understanding of Victoria's hazardous waste system, and forecast industry trends."

Robyn Hopcroft, Project Lead – Hazardous Waste Data | Waste & Resource Recovery Planning, Sustainability Victoria

3. Implementation method and plan

It may seem like this doesn't and shouldn't happen today, but sometimes people rush in to get a project going quickly without thinking about their implementation method and plan to deliver. This is critically important particularly where you have key dependencies between tasks.

The Agile methodology lets you be flexible and nimble. However you still need to know what to do when and know the dependencies between activities. This will allow you to deliver your data projects on-time, on-budget and to the required quality.

There are also a lot of activities in a project not directly related to development such as training and change management. You need to make sure you have a method for how these are done and when. What happens when you don't have an implementation method and plan?

Consequences

A lack of method and planning may result in a project team that isn't well organised and unclear of their individual responsibilities for the project. When this happens you can miss key milestones, running over budget or not delivering what is required.

Sometimes the consequence is only one of these three, however oftentimes it is all three. You may scramble to achieve a milestone, but that doesn't quite meet the brief. So you end up having to redo it which in turn costs you more time and money.

How to ensure you have your implementation method and plan in place

Agree on what your implementation methodology is going to be and have an overall plan for what you're managing.

Be clear on the following:

- Who has what role
- What the responsibilities are
- And what they are expected to deliver and when.

If you are delivering a project using an Agile methodology, you need to execute other required activities in addition to sorting roles and responsibilities. These include sprint planning and sprint retro so you can continually monitor and plan your project and set priorities.



4. Clear understanding about the data

This is closely related to having adequate business engagement in the project. Better understanding of the data relies heavily on having the right people who know the data, provide answers to questions and help resolve data quality issues.

What happens when there's a lack of understanding about the data?

Consequences

There are instances when projects implementing data solutions or dashboards don't have the expert involvement of people who really know the data. This includes related metadata, potential quality issues, structure and the history of how and why it has been collected.

It may be that what you're trying to do with the data can't be done without major rework, and the people who really know it are the ones to help you.

When there's a lack of expertise, the project team often needs to make assumptions or at best, a well-educated guess. Sometimes this works, but often it doesn't. This can result in the team spending a lot more time to understand and analyse the data or resolve issues.

How to have a better understanding of your data

Make sure that for each data set that is part of your project you have someone who knows it and can answer questions about it. If you have to make assumptions about it, then have these tested with a data owner or data steward (more on this around Data Governance).



5. Foundational data activities

In addition to understanding your data, you also have to undertake foundational activities when developing your data platform. This includes:

- a. Data architecture (e.g: data model)
- b. Data quality (i.e. Is it fit for purpose or does it need to be improved?)
- c. Metadata, including business and technical metadata
- d. Testing of the data. Make sure you test this and not just the functionality, look and feel

What happens when you miss the foundational data activities?

Consequences

Often the result of not undertaking these activities is rework, or errors and inconsistencies that result in rework. This can also lead to inconsistent reports and dashboards due to people having different interpretations on definitions or data quality issues.

At Data Agility, we test the data platform to ensure it's working correctly; that reports and dashboards function, the data is reliable and they look and feel how we intended them to be. We want it to become more reliable, but also scalable at the same time.

How to undertake foundational activities

Below are a few steps to ensure your data projects are working correctly. Some of them aren't always so simple but need to be done nonetheless.

- Create yourself a data model. This is to help you have a starting point that is based on your requirements, use cases or user stories. Whilst it may not be perfect at the beginning, it gives your team an understanding of the relationships between the data.
- Assess the quality of the data you intend to use so you can determine whether it's fit for purpose or not. You may need to define what is fit for purpose in the first instance. Assessing the quality may mean undertaking some data profiling activities to identify gaps, errors or where data needs to be enriched.
- Make sure there's a common understanding of what the data means. For example, if you will be reporting on specific measures, make sure they are defined and agreed by the business. We have probably all seen instances of multiple reports with the same field names but with different values, only because two different people had different interpretations.
- Define all the technical metadata you may use or load into your data platform.

6. Data governance

Data governance is a set of processes used to ensure that data assets are managed well. If there is a lack of data governance framework and model in place, then there is no defined responsibility for someone to own the data and make decisions about it.

What happens when there's no formal or even informal data governance?

Consequences

Data governance is key in supporting your organisation's productivity and operational efficiencies. Without it, you may end up with the wrong person making key decisions about the data, leading to errors, poor data quality and potential rework.

Without a data owner or data steward, you run the risk of missing critical data for making evidence-based decisions.

How to ensure you have a data governance

The ideal way is to have a data governance framework and model that identifies:

- Who owns the data
- Who supports the data owner on a day-to-day basis (a data steward)
- And the responsibilities of the data owner and data steward

There are also occasions when a formal framework is not in place. If that's your case, at a minimum you need to:

- Identify who the owner and stewards are once you have identified the data you need or are using
- Define their responsibilities, in particular as part of your project
- Get the owner and stewards involved in your project to help you build your understanding of the data, resolve data quality issues and provide the required business metadata

The above are starting points which then can help build what is hopefully a future business as usual or operational data governance capability.

"Data Agility enabled us to deliver a modern data platform that's highly reliable but also significantly more scalable. Using the latest cloud technology, we can bring in data from multiple sources and apply the latest machine learning algorithms to it."

Chris Moon, Chief Information Officer, Information Technology, Environment Protection Authority (EPA) Victoria



Conclusion

Reliability and accessibility of data are key aspects in supporting the implementation of your programs. Clear understanding of your data, adequate business engagement, and having data governance and implementation methods in place will be critical in the success of your modern data platforms.

DataAgility

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About Us

Data Agility are specialists in Data Analytics and Information Management. We support our clients to improve performance and resolve business issues through the effective application of their data. Based in Melbourne, Australia, our clients are in Health, Government and Commercial. Our services include data analytics, information management, project delivery and managed services.

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