# PMO Conference

LONDON 2023

# Data, What is it Good for?

Peter Macey

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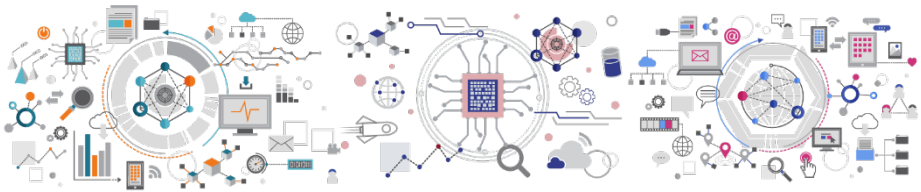


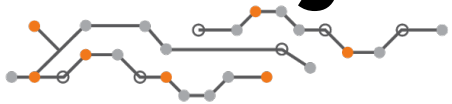
# Synopsis Abstract

Data is fundamental to any organisation and adding value to the organisation should be top of the PMO goals.

Therefore, is crucial to understand the data that PMO's use and transact with on a daily basis.

Understand how that data needs to be of a high quality, and how it needs to be accurate and up to date to ensure stakeholders are informed with the latest available information.

# What We're Going to Cover Today



- What is accurate and good quality data.
- Why linking good data adds value and insight
- Having a central data view that can be sliced in many ways, helps inform the organisation.
- Why having disparate sources of data is not ideal, there should be one source of the truth.
- How data should be freely available to process in whatever way required.
- Why your data & process should define how you work, not which tool you use.

# What we're talking about when we're talking about 'data', 'data models', and 'tooling'

**Data** – facts and statistics collected together for reference or analysis. Data is a collection of discrete values that convey information

**Data Model** – is an abstract model that organizes elements of data and standardizes how they relate to one another and to the properties of real-world.

**Tooling** – by this we are referring to PPM tools, SharePoint sites, or Business Intelligence tools (e.g. Power BI).

# Some Questions

- **Does the tools you use drive your process, or does your data support your process, agnostic of the system in which it is held?**

  As developer I implemented solutions where **there was a 75% fit on requirements**. However, **it was the other 25% where the majority of work was done**, and the solution that were being configured were not fit for purpose

- **How accessible is the data model to interact with Reporting and BI Tools?**

# What You'll Take Away from Today

- That you question and understand the data you have, and how different bits of data are linked.
- How individual and collective pieces of data can add value & insight to your organisation.
- How you can use that data in a meaningful way.
- How data should be openly accessible, and agnostic of reporting tools.
- That data when interacted with, in an accessible environment, adds value to an organisation and can support rapid delivery and reporting.

# What is accurate and timely data?

Accurate
*"the quality or state of being correct or precise."*

Timely
*"done or occurring at a favourable or useful time; is it up to date?"*

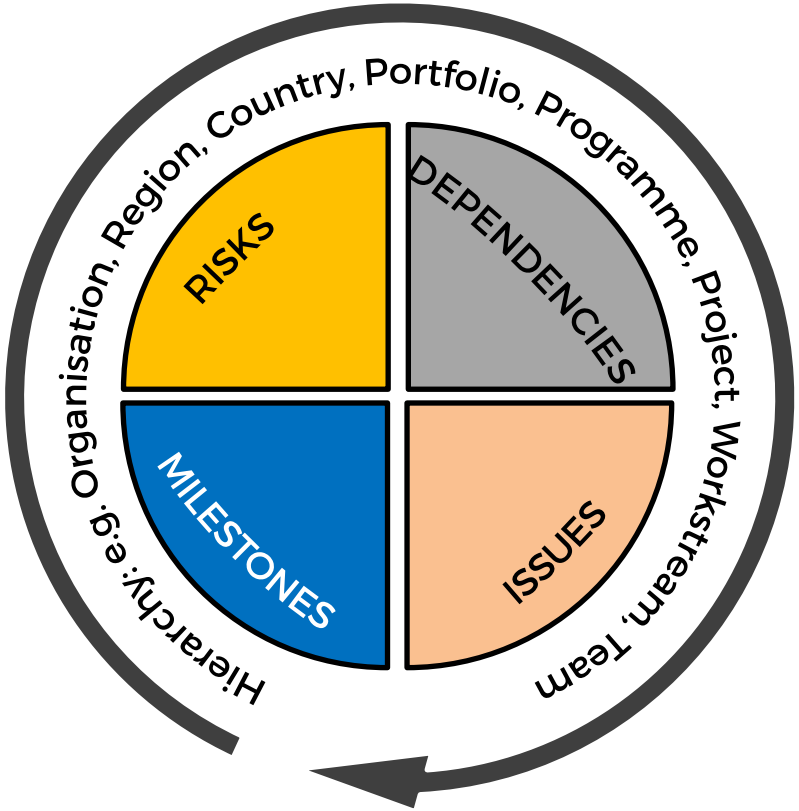
This is where your PMO skill comes in to ensure there are clear frameworks, standards and processes documented and in place, and this is where you are adding your value to the data.

# Three Examples

A risk that clearly articulates a potential problem can be **accurate**, but it hasn't been updated in four months, so it is **not timely**

A milestone clearly describes a delivery is **accurate**, and the latest update delivered on time says it is overdue. This **is timely**. Even those the milestone is overdue with a forecast date in the future.

A project manager regularly updates his risks and issues, it **is timely**, however the data is of such a poor quality it is useless to report. This is **not accurate**

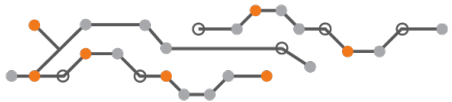



# Why linking good data adds value and insight

4 key data points most PMOs are familiar.
***Risks***, ***Issues***, ***Milestones*** and ***Dependencies***

- A ***Risk*** when realised becomes an ***Issue***
- Both ***Risks*** and ***Issues*** can link to ***Milestones***
- ***Milestones*** can be linked to ***Dependencies***
- ***Dependencies*** therefore are linked to ***Risks*** and ***Issues***
- All are linked to ***Project***, ***Programmes***, ***Portfolios***, etc

***In isolation they don't really hold much value or insight***



# What is ‘value’ and ‘insight’?

**Value** – the regard to which something is held, or its relative importance

**Insight** – the capacity to gain accurate and deep understanding.

**Risks**, **Issues**, **Milestones** and **Dependencies** (the data points) can all provide useful information on their own.

***But when linked together they can be powerful and informative***

# How Can Data Be Valuable and Insightful?

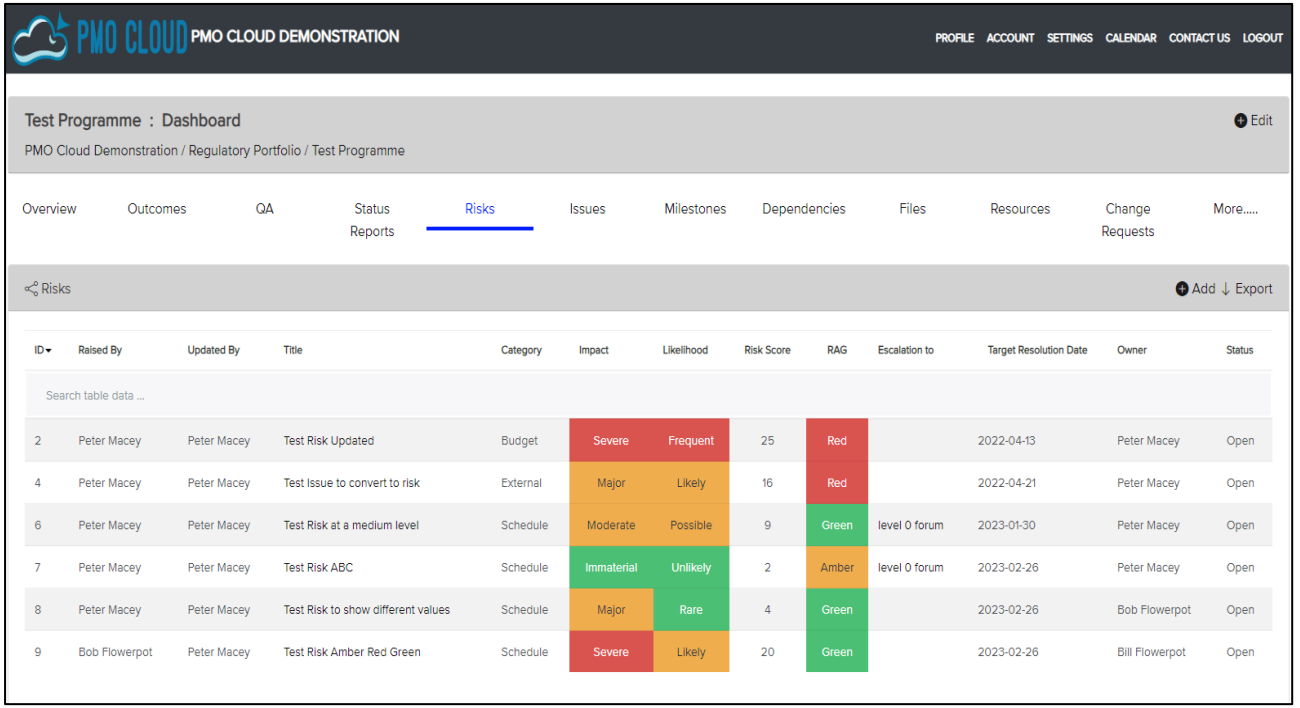
**Risks**, **Issues**, **Milestones** and **Dependencies are considered to be the four most valuable** (the data points) and have their own metrics and value-added information.

The following slides provide examples of how these individual data points could be enhanced to add value and provide the insight to support the PMO through standardised metrics.

**Your processes and reporting should be reflective of what your organisation requires. No two organisations will be the same**

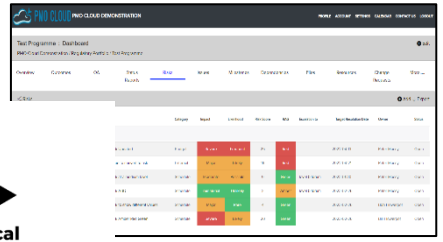
# Risk Score (Impact x Likelihood)

Risks can be measured by multiplying the Impact with the Likelihood using a 5 box model.
From **1** (Immaterial & Rare)
To **25** (Severe & Frequent)
**The Risk Score provides a relative value which will enable PMO's to provide insight to not only the individual risk, but measure it alongside other project or programme risks, and provide a risk profile average.**
This can provide insight to other data sets within the PMO scope.




| ID | Raised By | Updated By | Title | Category | Impact | Likelihood | Risk Score | RAG | Escalation to | Target Resolution Date | Owner | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | Peter Macey | Peter Macey | Test Risk Updated | Budget | Severe | Frequent | 25 | Red | | 2022-04-13 | Peter Macey | Open |
| 4 | Peter Macey | Peter Macey | Test Issue to convert to risk | External | Major | Likely | 16 | Red | | 2022-04-21 | Peter Macey | Open |
| 6 | Peter Macey | Peter Macey | Test Risk at a medium level | Schedule | Moderate | Possible | 9 | Green | level 0 forum | 2023-01-30 | Peter Macey | Open |
| 7 | Peter Macey | Peter Macey | Test Risk ABC | Schedule | Immaterial | Unlikely | 2 | Amber | level 0 forum | 2023-02-26 | Peter Macey | Open |
| 8 | Peter Macey | Peter Macey | Test Risk to show different values | Schedule | Major | Rare | 4 | Green | | 2023-02-26 | Bob Flowerpot | Open |
| 9 | Bob Flowerpot | Peter Macey | Test Risk Amber Red Green | Schedule | Severe | Likely | 20 | Green | | 2023-02-26 | Bill Flowerpot | Open |

# Risk Score (Impact x Likelihood)



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This can provide insight to other data sets within the PMO scope.

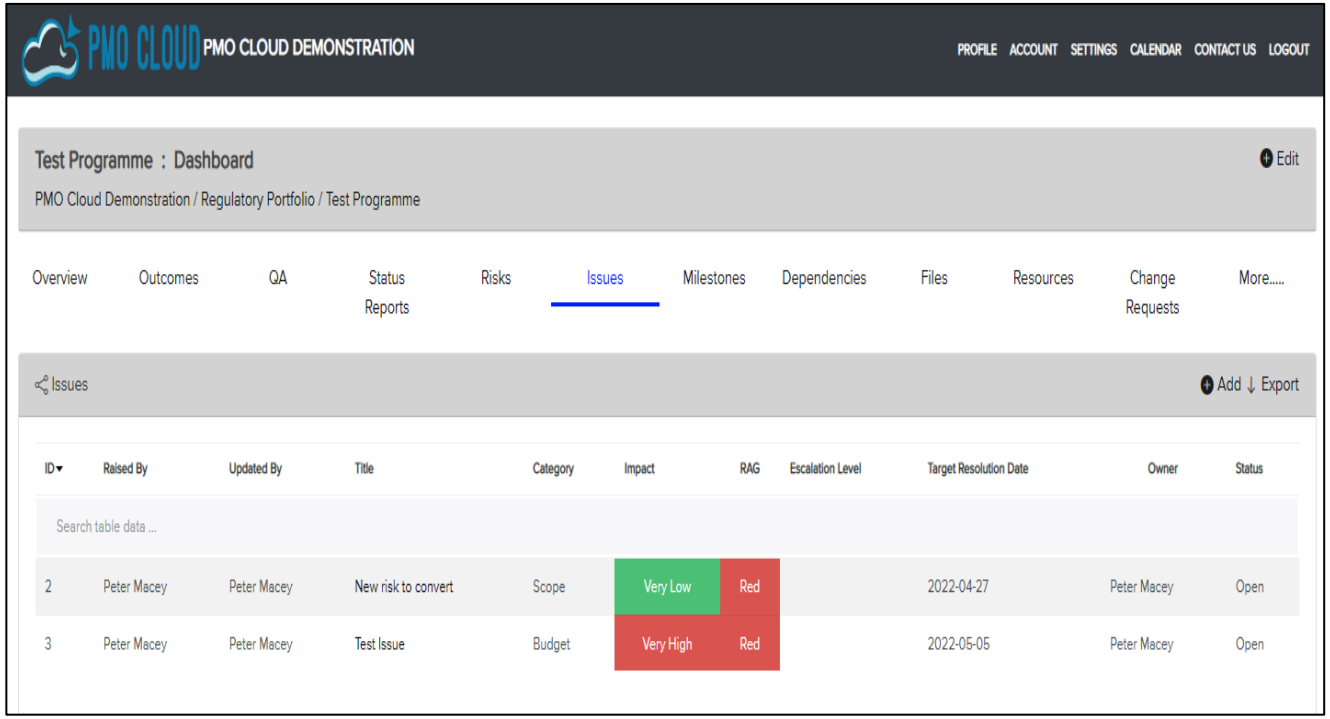
**Impact**

**Likelihood**

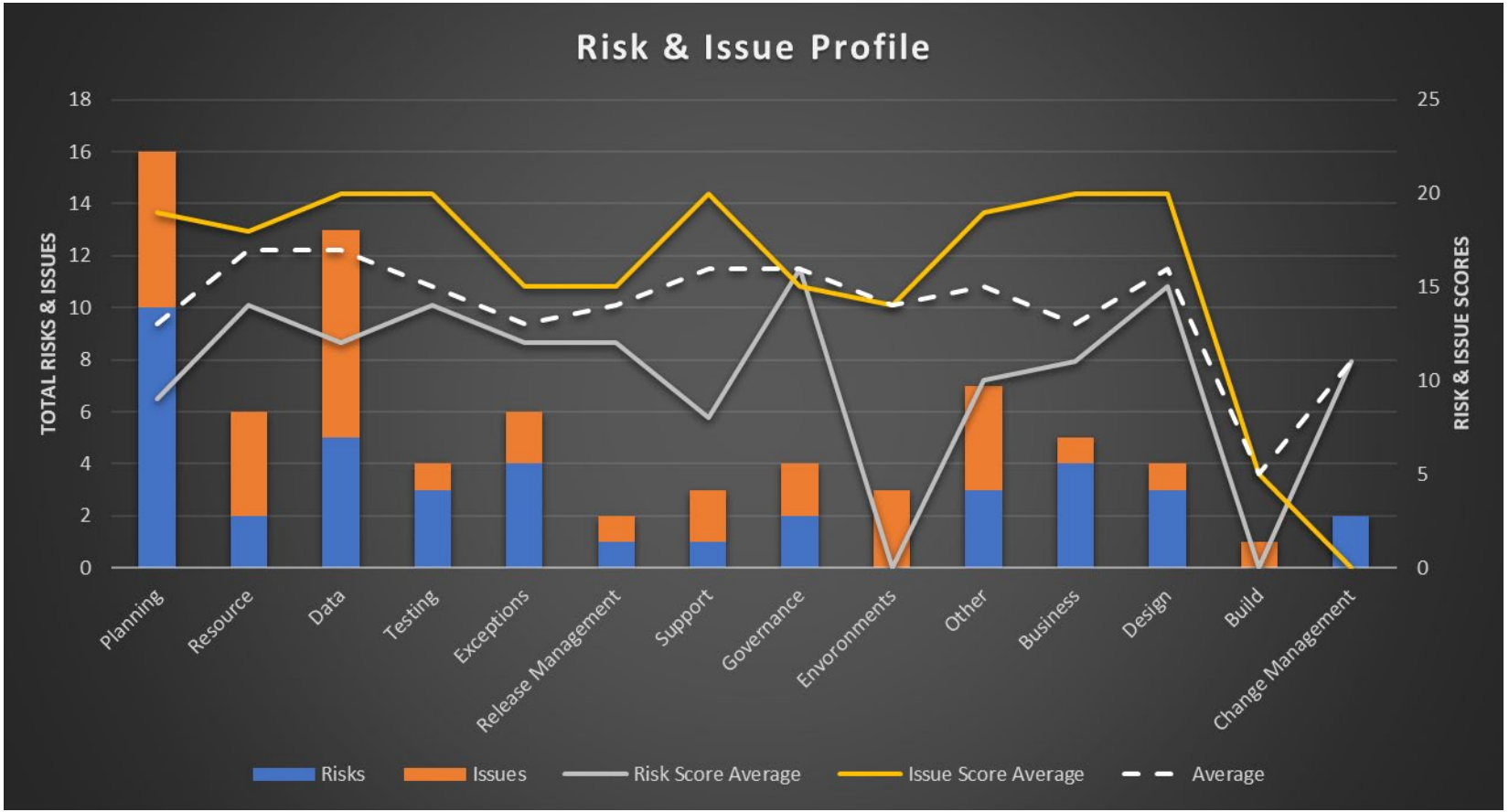
| Likelihood \ Impact | Insignificant | Minor | Moderate | Major | Critical |
|---|---|---|---|---|---|
| Rare | 1 | 2 | 3 | 4 | 5 |
| Unlikely | 2 | 4 | 6 | 8 | 10 |
| Possible | 3 | 6 | 9 | 12 | 15 |
| Likely | 4 | 8 | 12 | 16 | 20 |
| Certain | 5 | 10 | 15 | 20 | 25 |

# Issue Score (Impact)

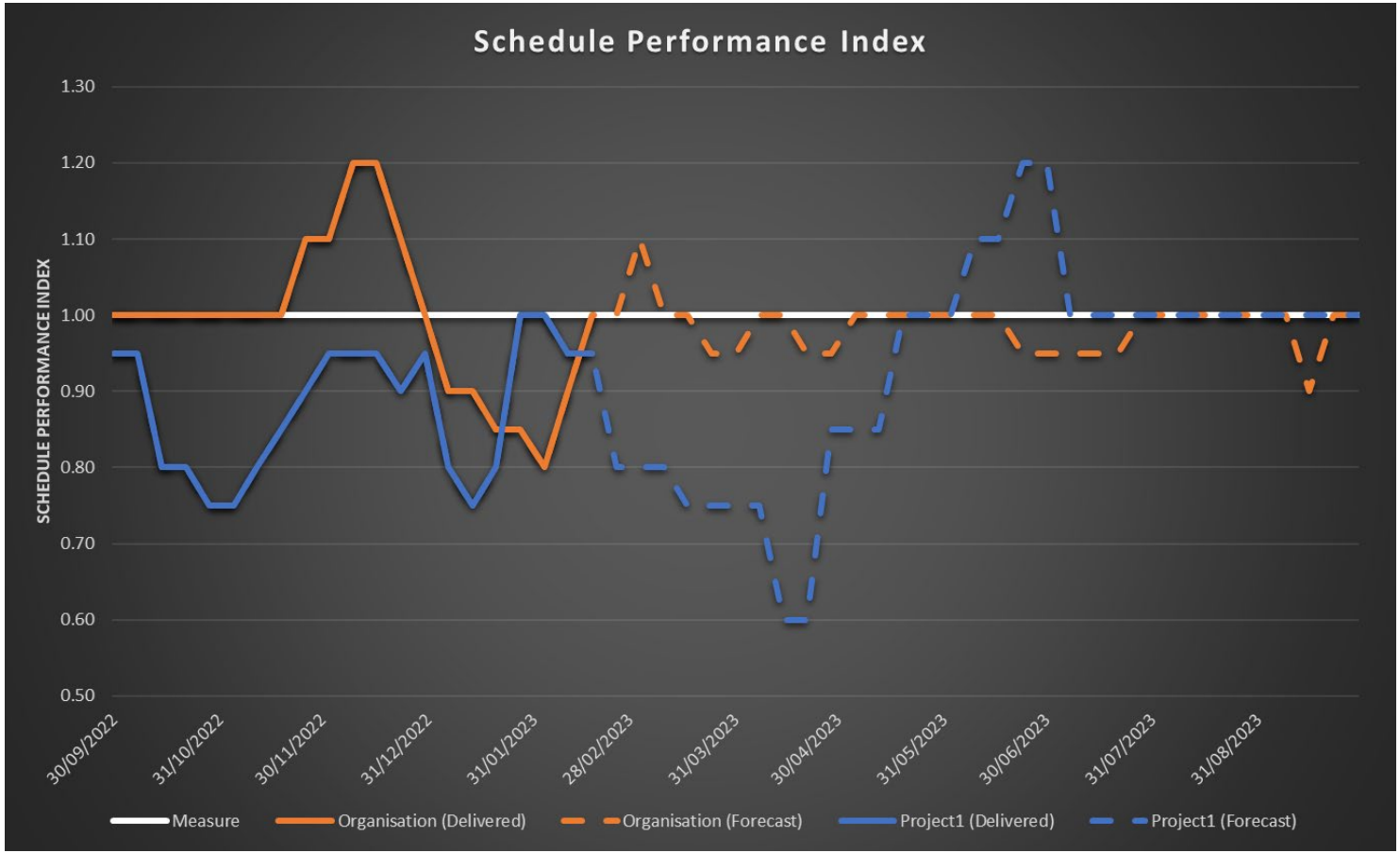
Issues can be measured by scoring the Impact field.
From **1** (Very Low)
To **5** (Very High)
**The Issue Score provides a relative value which will enable PMO's to provide insight to not only the individual issue, but measure it alongside other project or programme issues, and provide an issue profile average.**
This can provide insight to other data sets within the PMO scope.



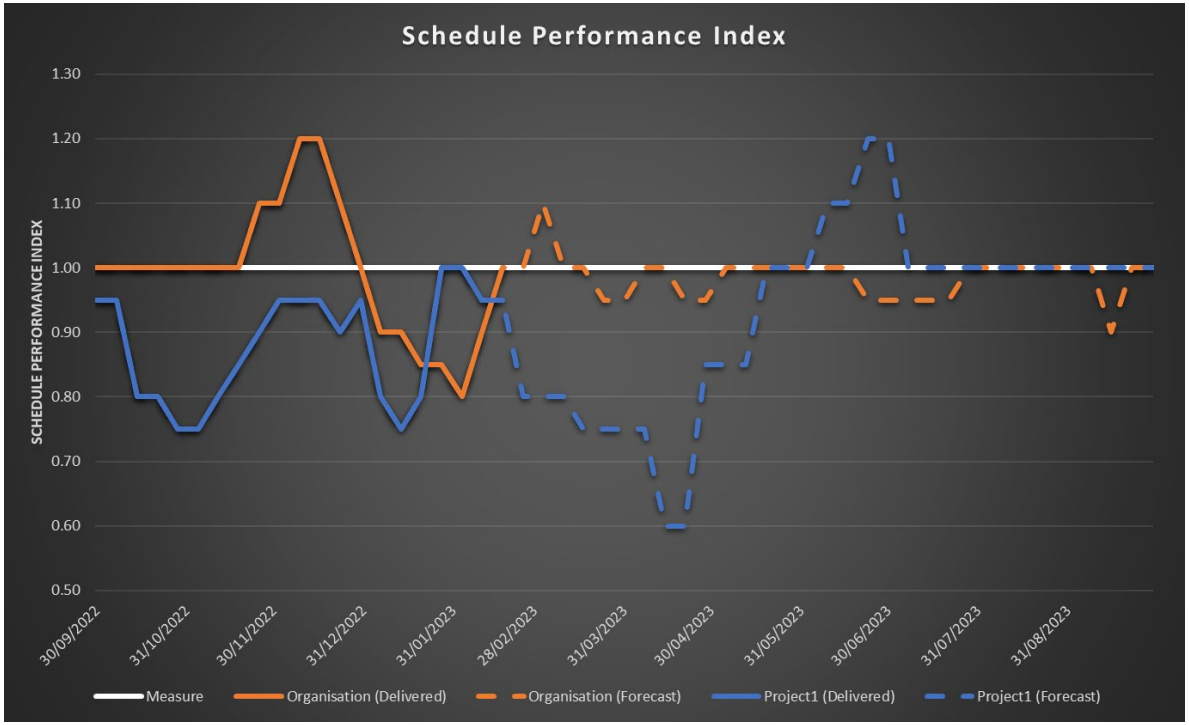
# How Risk and Issue Data Can Be Used



# Milestone Delivery Metrics



# Milestone Delivery Metrics



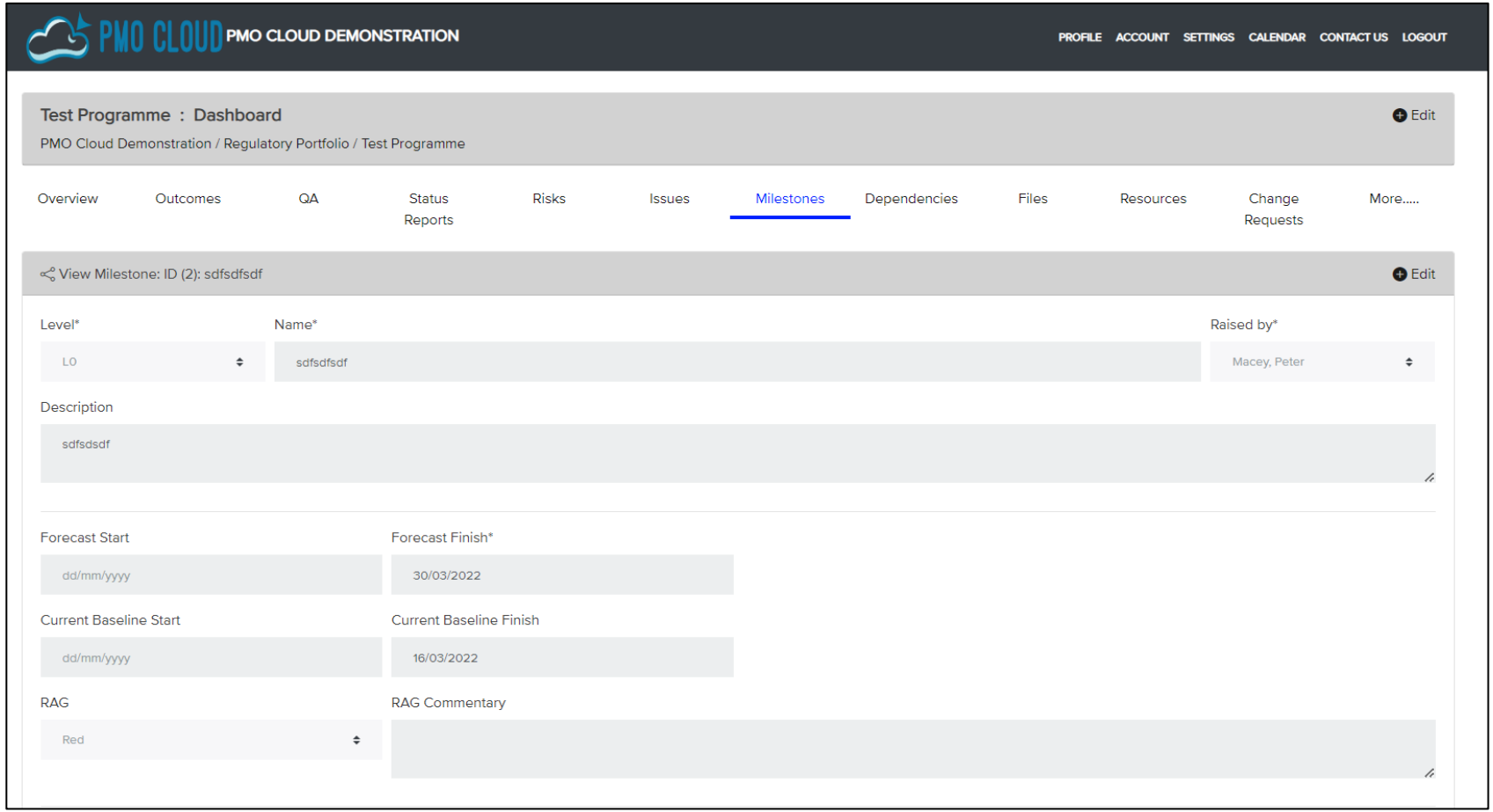

One way to track milestone delivery is to measure your baseline plan verses your forecast plan.

The graphic opposite shows a Schedule Performance Index, which plots the number of milestones you said you would deliver, against the number of milestones you did deliver. The perfect score is 1.

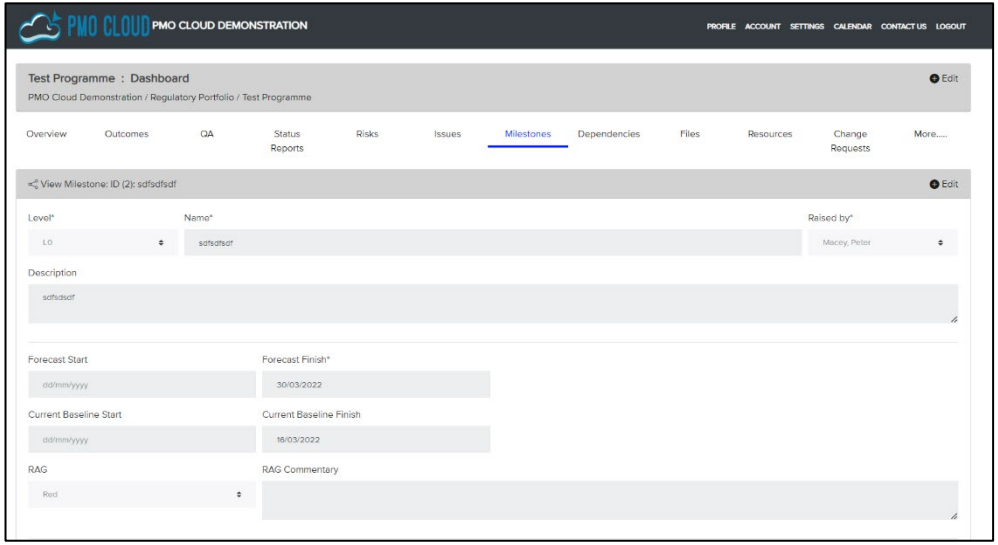
Over 1 and you are over delivering on your plan.
The usual boundaries used are:

- 0.00 – 0.69 = Red
- 0.70 – 0.84 = Amber
- 0.85 and Above = Green

# Milestone Score (Baseline v Forecast)

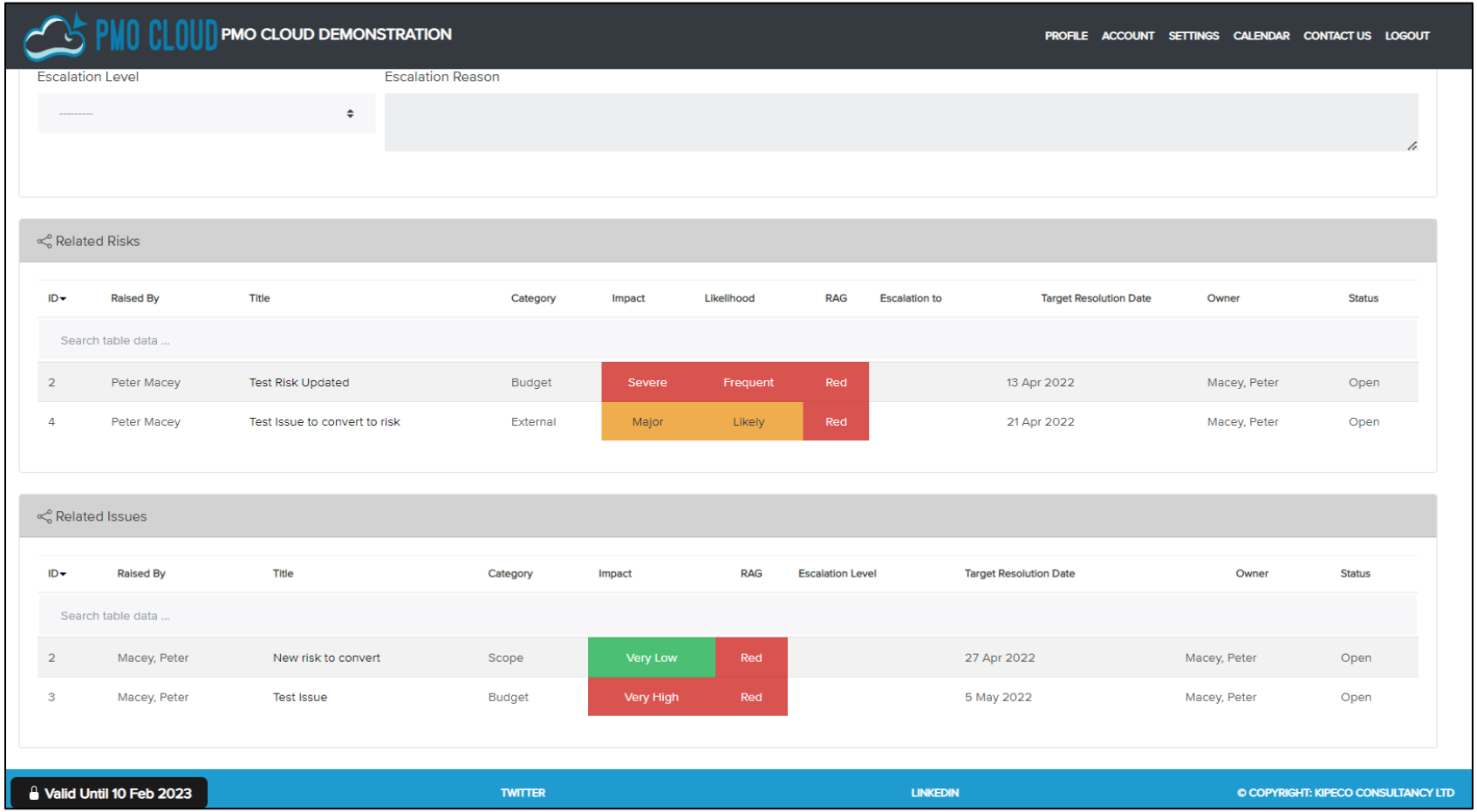


# Milestone Score (Baseline v Forecast)

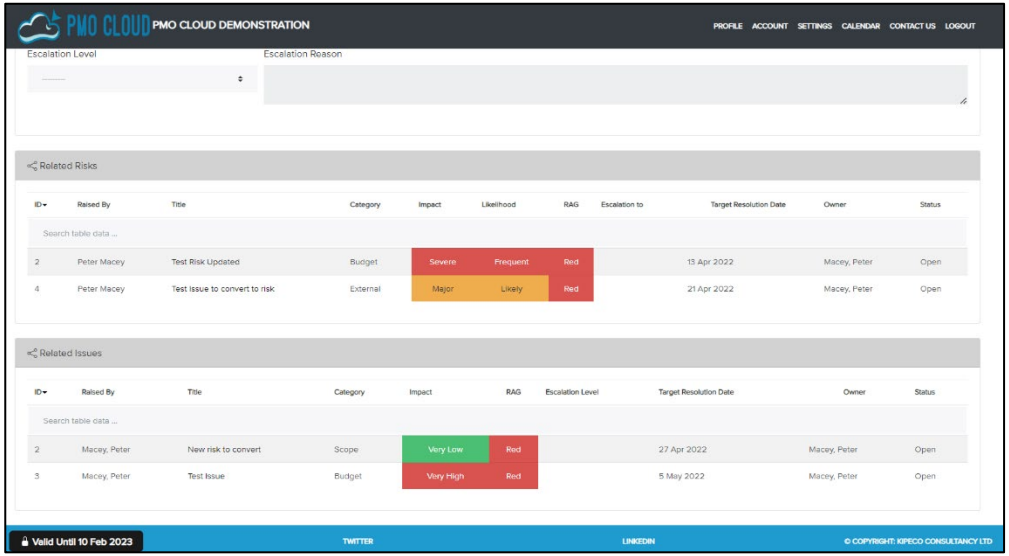



- **Lets take a different approach with Milestones**
- **Milestones** can provide a metric of delivery. By using the baseline finish field the delivery of the milestone can be measured against the forecast finish field.
- But **Milestones** are also associated with **Risks** and **Issues**.
- We start with a Milestone Score of 1.
- If the Milestone has missed it's baseline finish date then we remove 0.5
- If the Milestone is forecast to miss it's baseline date then we only remove 0.25
- Next we need to take into account the Risks and Issues Score, and subtract that from the **Milestone Score.**

# Milestone Associated Risks & Issues



# Milestone Score (Risks & Issues)



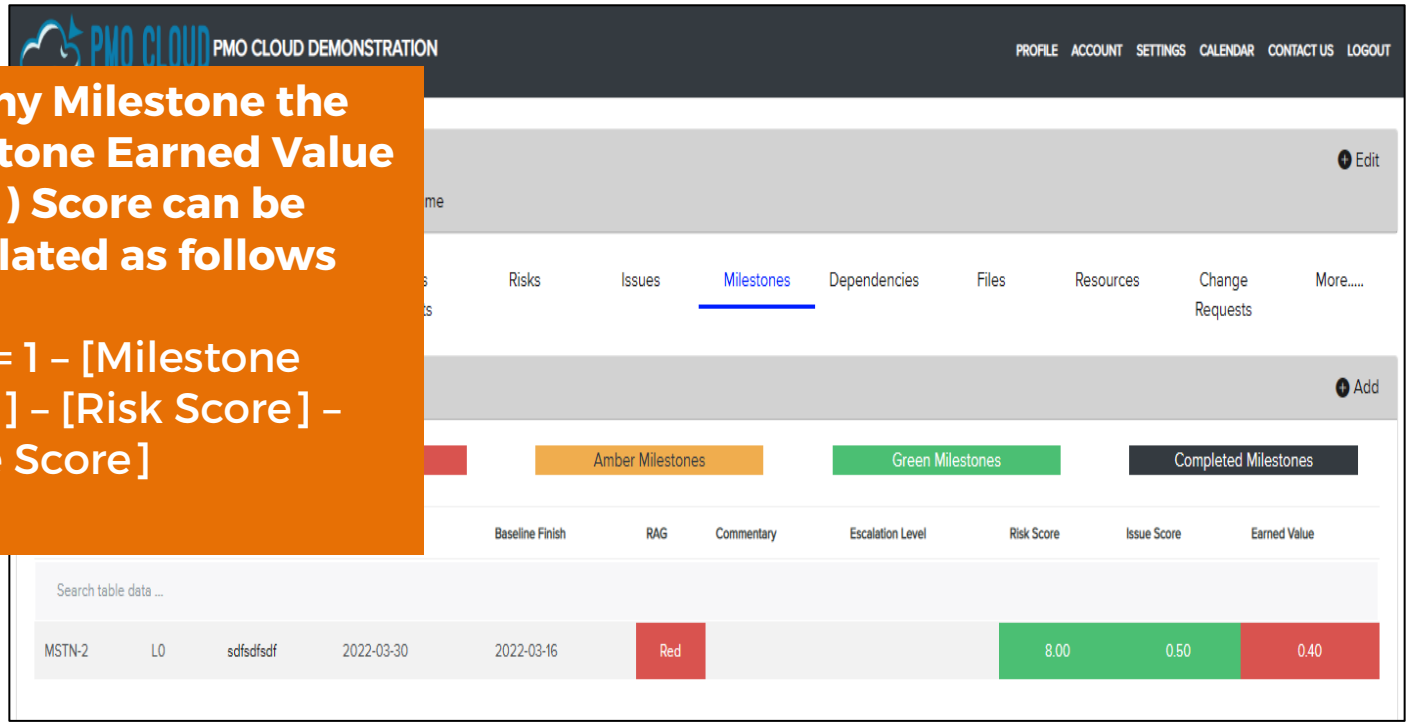

- On the previous slide we identified the first part of the Milestone Score. This will be either 1.00, 0.75 or 0.50.
- Within the milestones we can see the associated Risks and Issues, so by using the Risk Score and Issue Score for the milestone we can identify an Earned Value Score.
- The Risk Score for the Milestone is calculated between 1 and 25. (Divide by 100 to get a score (0 to 0.25)
- The Issue Score for the Milestone is calculated between 1 and 5. (Divide by 20 to get a score (0 to 0.25)

**Milestone Earned Value Score = Milestone Score – Risk Score – Issue Score**

# Milestone Earned Value Score (MEV)

**For any Milestone the Milestone Earned Value (MEV ) Score can be calculated as follows**

**MEV** = 1 – [Milestone Score] – [Risk Score] – [Issue Score]




**Milestone is measured between 0 and 1. The lower the score the more risk to the Milestone**

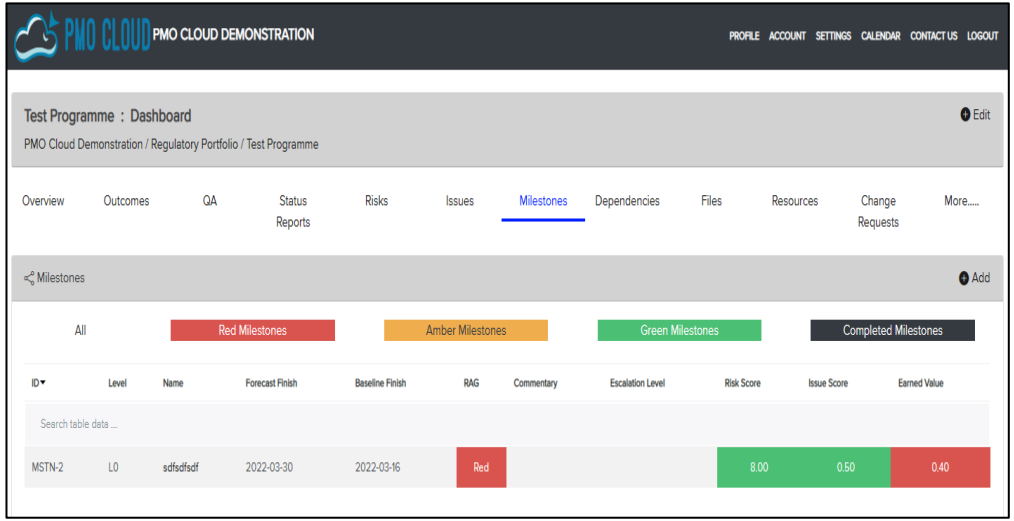
# Milestone Earned Value Score (MEV)

**MEV** = 1 – [Milestone  Score] – [Risk Score] – [Issue Score]

**Milestone Score**
Missed Milestone = **– 0.50**
Forecast Missed Milestone = **– 0.25**
Milestone on Track = **– 0.00**

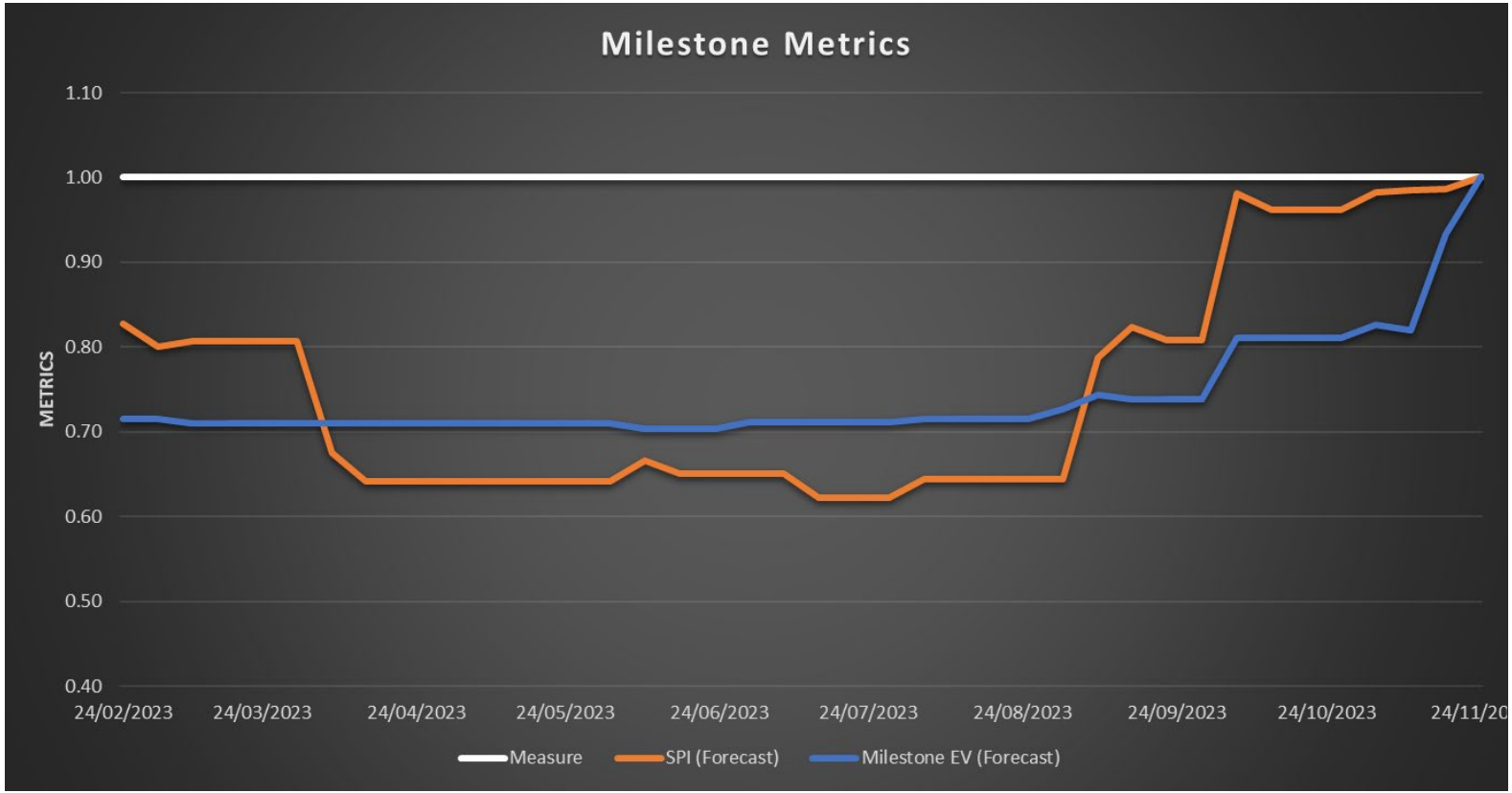
**Risk Score**
Score between 1 and 25. Divide by 100 to get average between 0.00 and 0.25

**Issue Score**
Score between 1 and 5. Divide by 20 to get average between 0.00 and 0.25




**Milestone is measured between 0 and 1. The lower the score the more risk to the Milestone**

# Milestone Earned Value (As a graph)



# Milestone Earned Value (As a graph)

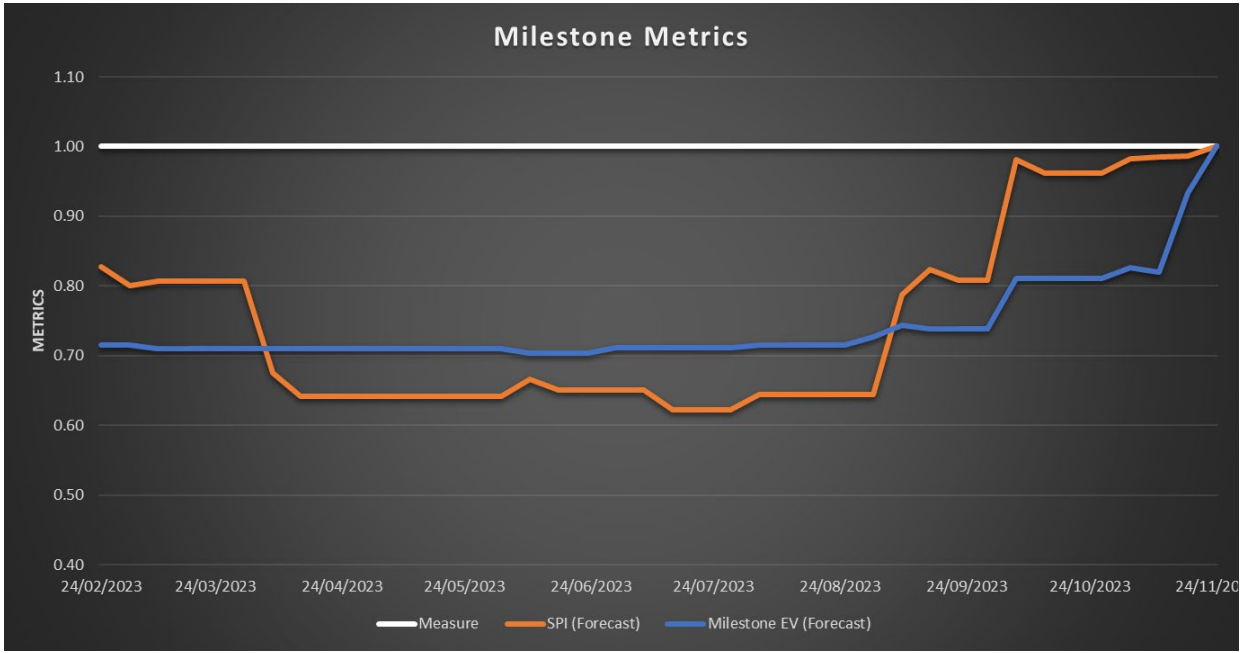
Milestone EV make more sense at the Milestone Level, though it can be plotted on a graph giving a view against the Schedule Performance Index.

The chart opposite shows the SPI (how you are delivering against your baseline plan).

The blue line indicates the inbuilt risk alongside the in built delivery.

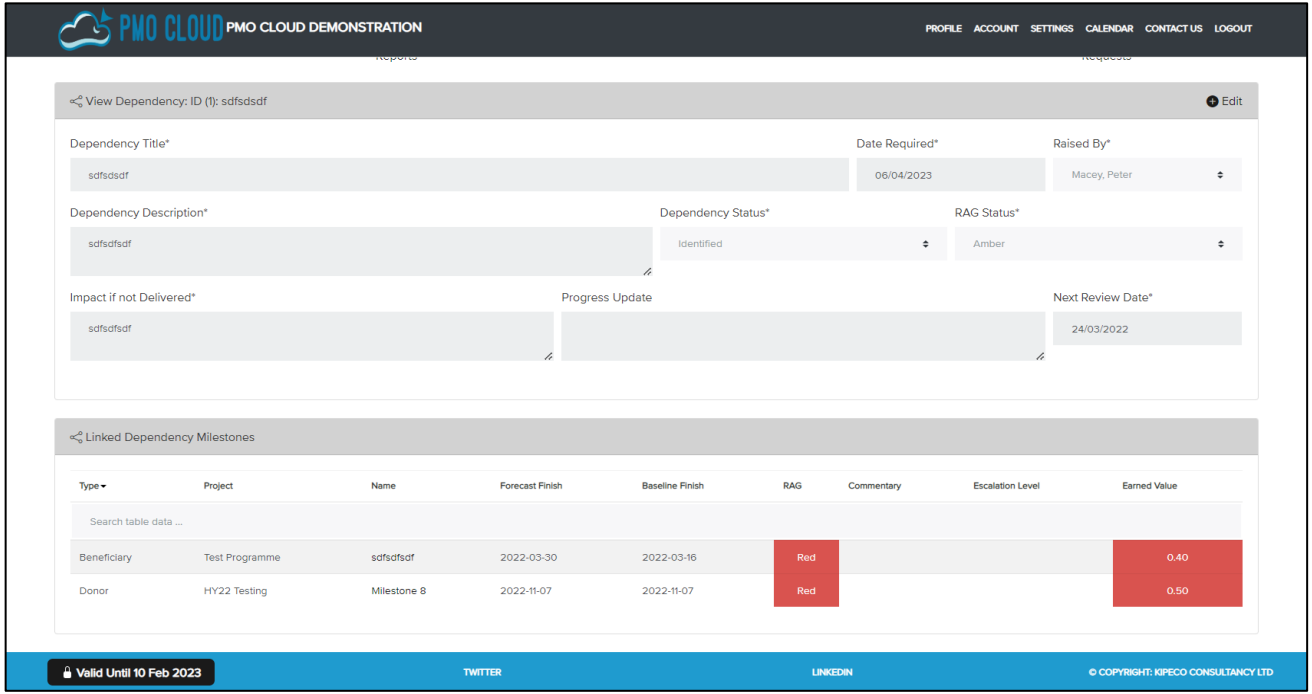
The optimum is to deliver as near to a score of 1 for SPI.

The closer the Milestone EV is the less risk the delivery has.



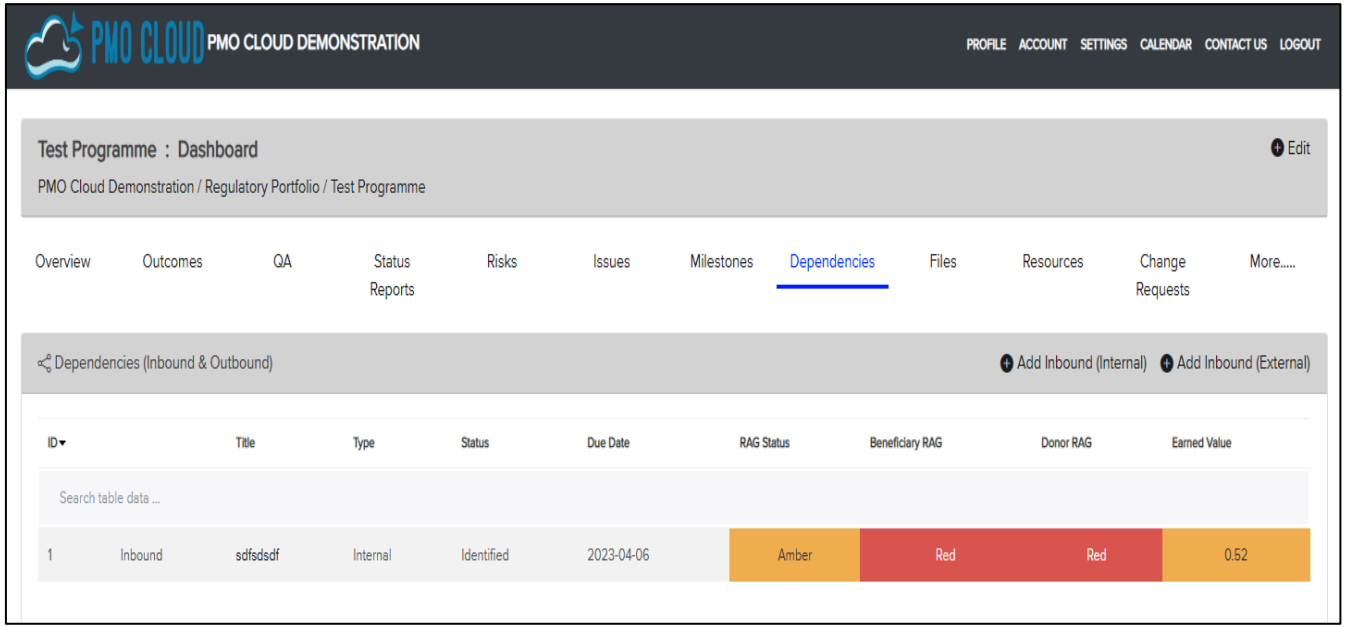
# Dependencies and Milestone Earned Value

- The Milestone Earned Value figure can be used to support the information relating to the delivery of a Dependency.
- The milestones and their relative metrics would provide input to the dependency, but that is just one component.
- There are dependency details that can add to the Milestones Earned Values and provide a Dependency Earned Value

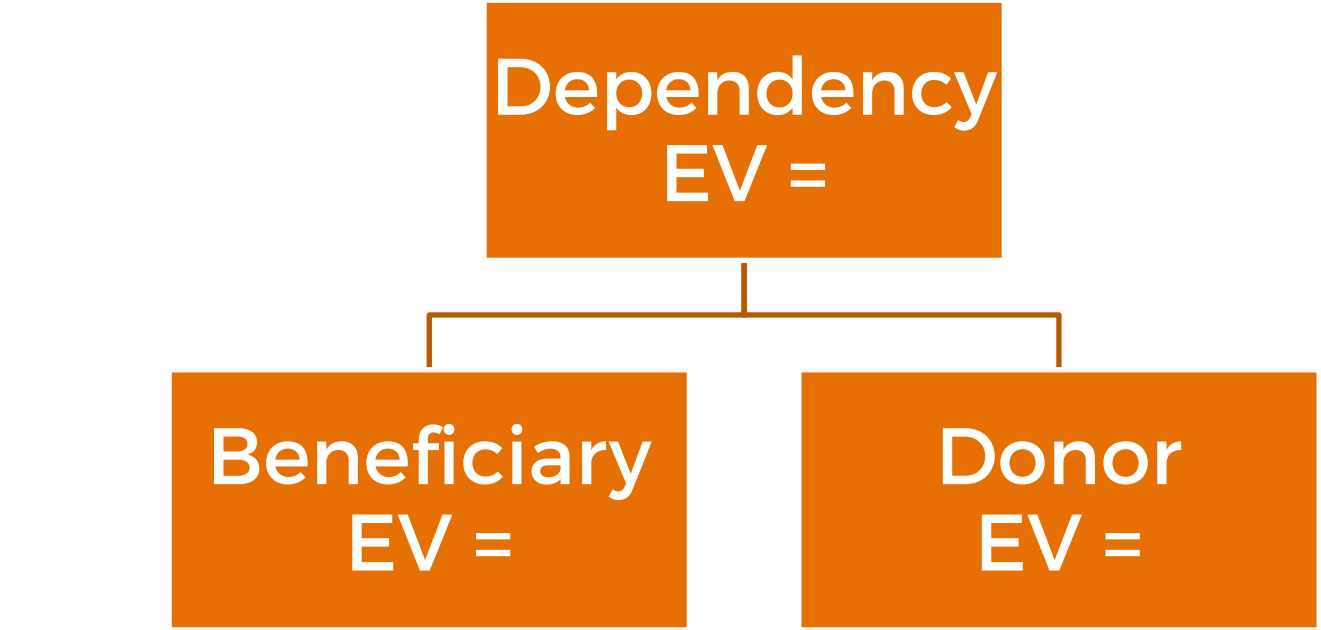


# Dependencies – Earned Value

- Starting with the Dependency Status, RAG Status and Date Required, a value for the relative merits of the dependency can derive an initial value, whether it is agreed or not, or whether it is Red, Amber or Green.
- That value can then be enhanced by factoring in the Donor and Beneficiary Milestone Metrics to enable you to derive a Dependency Earned Value Metric that enables you to measure each dependency.



# Dependencies – Earned Value

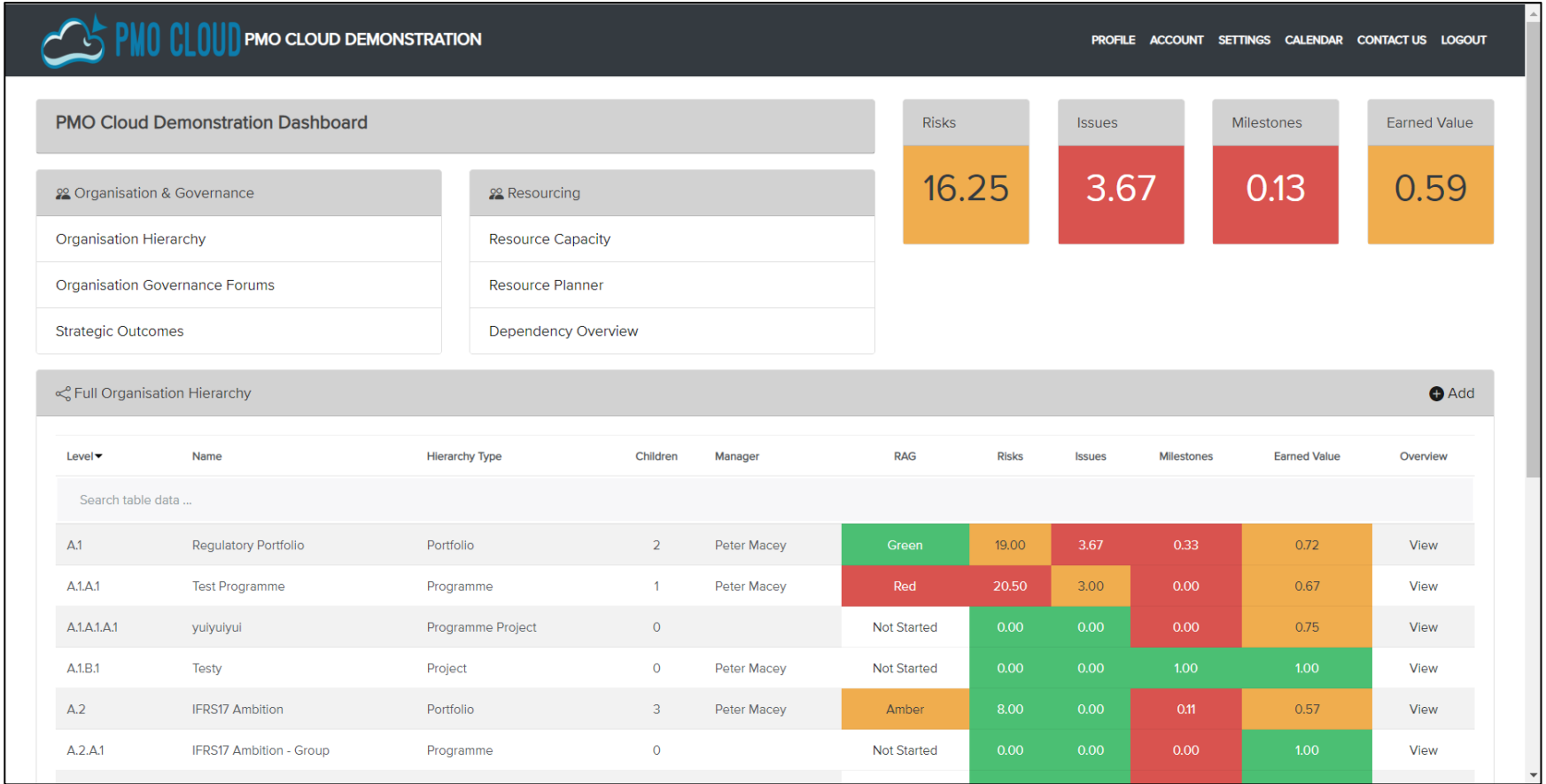



Beneficiary (receiver of the dependency)

Donor (provider of the dependency)

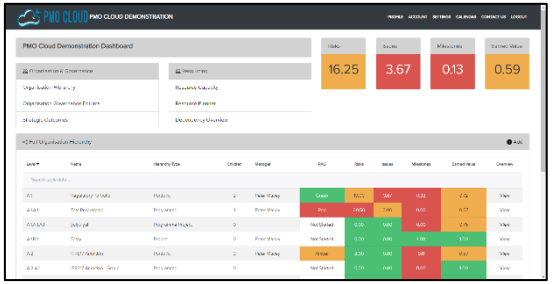
These metrics help evaluate the progress and impact of the dependency on both sides.

# Consistent Metrics



# Consistent Metrics

- All of the metrics and Earned Value data can be sliced at all levels of the organisational hierarchy.
- The view shows the summary, the data is rolled up at project, programme, portfolio and organisation level.
- This simple view shows each of the metrics against the subset of their hierarchy and allows comparison to take place.

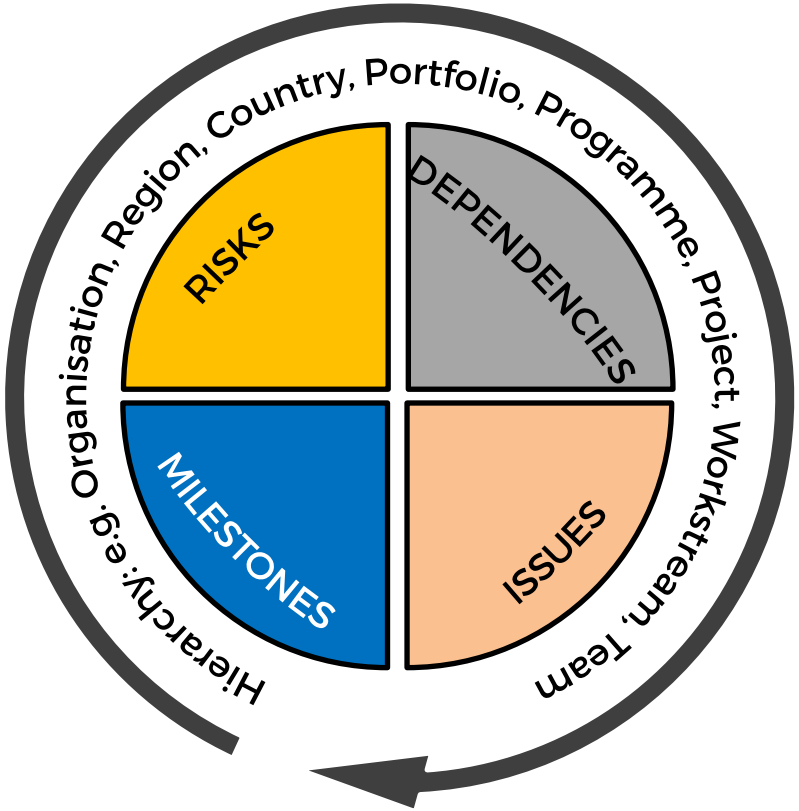


# Metrics, so what?

We've reviewed some possible metrics, but how are they useful?

The data points can, and should be, aligned to things such as strategy, outcomes and benefits, so that these can be tracked through the lifecycle of any project programme or portfolio delivery.

**The information that can be gained from these types of data slices, allows the PMO to add its own value analysing the metrics and scores to assist leaders**




# Having a central data view that can be sliced in many ways, helps inform the organisation

Having all the data in (or accessible from) one place, drives the following:

- **Standardised** capture of data
- **Completeness** of data capture across the organisation
- Good **governance** of data within standard architecture
- **Integrity** of data, which when updated frequently, leads to accurate and timely data
- A **comprehensive** set of reportable data

# Why having disparate sources of data is not ideal, there should be one source of the truth

Most organisation have prescribed tools for type of activities

**None of which are ever joined up**, thus overburdening processes and ensuring data is never joined up. At best the data is inconsistent, not accurate and mostly very stale.

- Finance Systems
- HR Systems
- Portfolio and Project Management Systems
- Development systems (e.g. JIRA and Confluence)

# Disparate Data – What Can the PMO Do?

This is my challenge to you:

- Define the data you want to collect and use
- Define the processes that capture that data, and any processes to run your PMO.
- Identify how the data you have captured is to be used / presented / governed
- Identify information and metrics that add value and define those

Last of all:

- Look at the flexibility of PPM solutions to support **your needs**
- Do your processes fit within the solutions you are using or want to use?

# A final thought on data

**Data should be freely available to process in whatever way required**

**Application Programming Interface (API)**

*“a set of functions and procedures allowing the creation of applications that access the features or data of an operating system, application, or other service.”*

In short if the data is held centrally, it should be freely available for all within the organisation to use. The easiest technical implementation of this is through API’s which can be used by tools such as Power BI, Excel, or your own custom-built applications

# Takeaways

Your data and processes should define the way you work. Not the systems you use

Understand your current PMO Data Architecture.

Map and identify your key data, where can you add value and insight to it.

Think about what might be useful not only now but, in the future, (what can inform senior stakeholders)

Look at how you can pull your data together in one place and make reporting seamless, and openly accessible

**Remember that Data and Reporting can add value and insight and assist you in assisting your organisations**

# Thank you

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