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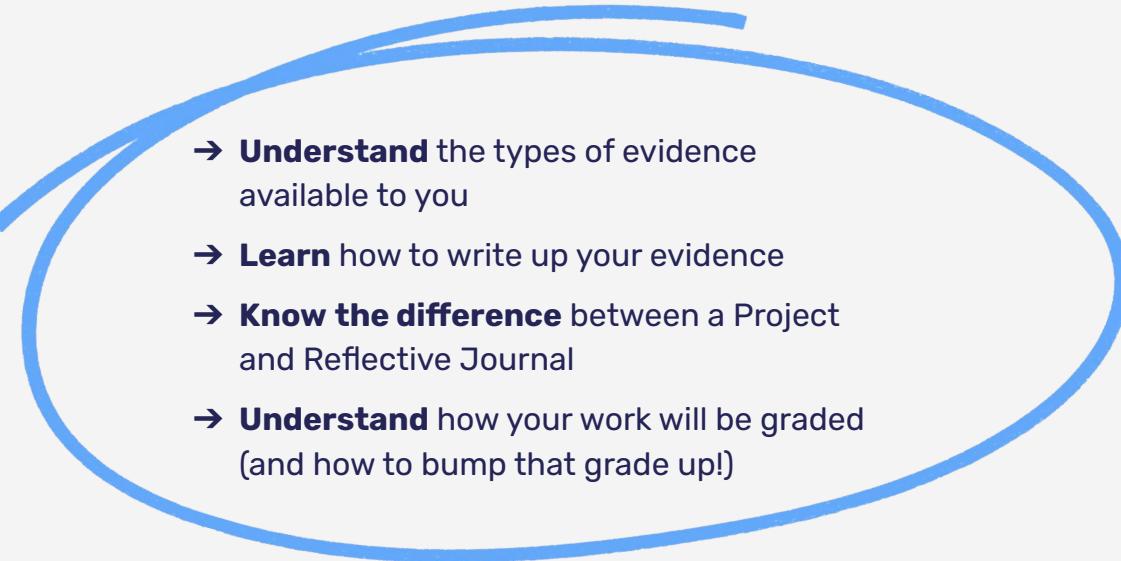


Data Fellowship
Acceptable Evidence





Objectives for the session

- 
- **Understand** the types of evidence available to you
 - **Learn** how to write up your evidence
 - **Know the difference** between a Project and Reflective Journal
 - **Understand** how your work will be graded (and how to bump that grade up!)



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What do we need
Evidence for?





End Point Assessment (EPA)





What counts as Evidence?

Your best work:

- Show you applying your learning and skills
- Contain substantial real work tasks that you have completed.

Your account of your learning and skills development journey





What is a mock EPA?

Mock EPA 1:

- Month 9
- 3 reflective journals
- 1+ project

Mock EPA 2

- Month 13
- Portfolio should be ready
- 4-6 projects
- Any extra Reflective Journals



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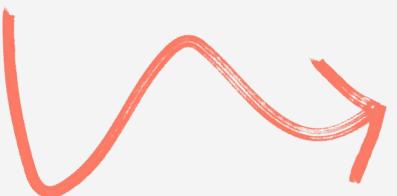


What counts as
Evidence?



What counts as Evidence?

- Written accounts of your work
 - Projects (Applying skill/s)
 - Reflective Journal (Learning skills)
- Recordings
- Testimonials
- Performance Reports





How do I choose what to write up?

The standards for your apprenticeship fall into two groups:

→ Technical

- Analytics specific
- Requires the use of specialist software or code

→ Personal

- Wider business understanding
- Interactions with others





Technical

Interpersonal



Technical

Statistical analysis

Automation

Linear Regression

Data Mining

Time Series (with
forecasting)

Transferring a process
from Excel to Python,
R, SQL etc

Regular Reports

Data Wrangling
(for yourself)

Ad hoc reports

Data Wrangling
(for a colleague)

Dashboards

Adaptability(!)

Stakeholder
Management

Managing conflict

Taking the initiative/
leading a project

Commercial
awareness

Strategic thinking

Presentations

Interpersonal

TC1. Identify, collect and migrate data to/ from a range of internal and external systems



What you need to show? (minimum)	Possible evidence you can provide
<ul style="list-style-type: none">→ Show that you are competent enough to understand your boss's/clients' requirements and can identify what input data you need for analysis→ Show how to collect the data for a project from different sources; even if it comes from sensors, cameras, recording devices or satellites, etc.→ You also know how to migrate/ transfer data across systems and convert them into right format/data type when required	

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How do I write up
my Evidence?



Where do I start my Portfolio?

Writing a strong introductory section at the beginning of your portfolio will allow you to reduce the amount of context you are required to provide in your projects and reflective journals.

Your introduction should detail:

- The industry you work in
- How your company is positioned within that industry
- What your team's function is within the business
- Your (analyst) responsibilities in your role





How should I write up a Project?

Your project is intended to prove to the assessor that you have acquired the skills required of a Data Analyst.

You must ensure that you cover:

- What you did
- How you did it
- Why you chose that approach
- Who you interacted with throughout





Good Practices

There are a number of ways to strengthen your portfolio write ups, including but not limited to:

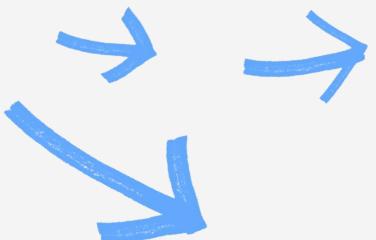
- Use 'I' rather than 'we'
- Avoid acronyms or industry jargon
- Use a few sentences instead of one long one
- Always comment on a screenshot/visualisation you've included
- Use language from the apprenticeship standards e.g. external stakeholder rather than client





What structure should I use?

The assessor EXPECTS your projects to be written using the STAR format.





Situation

**Where you set the scene for the scenario you
are going to describe:**

- What is the business context?
- Who are the stakeholders?
- What is your role within the team/company?





Situation

“I work as an analyst in the Specialist Testing team of an exam board, analysing the test statistics from a series of multiple choice questions. I ensure that students are never disadvantaged by performing statistical tests to identify poorly designed questions. My work is monitored externally by IFATE and DfE and I must submit my reports to the Qualification Delivery Assessment Manager by the 22nd of each month.”



Task

Where you show the purpose of your scenario:

- What was the problem you were trying to solve?
- Why should it be solved?
- Is there a commercial impact?





Task

“The purpose of this task is to reduce workload in my team, to allow for greater time to be spent editing new assessment prior to review; reducing the time external consultants are required and therefore lowering our operating budget.”



Action

Where you describe what actually happened:

- What type of analysis/automation/modelling did you use?
- What coding language/program (if any) did you use?
- How did you choose your dataset?
 - Have you made any assumptions?
- What steps did you take?
 - Why?
- Which pieces of legislation/company policies applied to your data?





Action...

Paper Code	Number of Learners	Number of Centres	Question Number	Key		a		b		c		d	
				Point Biserial	p-value								
RE-03 v202	59	28	1	0.90	0.32	0.90	0.32	0.07	-0.27	0.03	-0.12	0.00	0.00
			2	0.62	0.29	0.00	0.00	0.38	-0.28	0.00	0.00	0.62	0.29
			3	0.90	0.19	0.90	0.19	0.10	-0.18	0.00	0.00	0.00	0.00
			4	0.76	0.30	0.00	0.00	0.76	0.30	0.09	-0.18	0.16	-0.21
			5	0.88	0.29	0.88	0.29	0.09	-0.26	0.02	-0.13	0.02	0.01
			6	0.43	0.28	0.07	-0.15	0.16	-0.16	0.34	-0.09	0.43	0.28
			7	0.97	0.31	0.03	-0.25	0.00	0.00	0.00	0.00	0.97	0.31
			8	0.86	0.13	0.03	-0.06	0.05	-0.02	0.86	0.13	0.05	-0.12
			9	0.47	0.00	0.47	0.00	0.29	0.04	0.07	-0.01	0.17	-0.04
			10	0.33	0.26	0.33	0.26	0.36	-0.14	0.12	-0.18	0.19	0.01
			11	0.83	0.17	0.12	-0.11	0.83	0.17	0.05	-0.12	0.00	0.00
			12	0.93	0.25	0.05	-0.15	0.93	0.25	0.00	0.00	0.02	-0.18
			13	0.79	0.17	0.00	0.00	0.79	0.17	0.09	-0.16	0.12	-0.07
			14	0.97	0.03	0.00	0.00	0.00	0.00	0.97	0.03	0.03	-0.02
			15	0.36	0.27	0.05	0.06	0.34	-0.18	0.36	0.27	0.24	-0.14
			16	0.84	0.12	0.02	-0.09	0.12	-0.09	0.02	0.01	0.84	0.12
			17	0.86	0.23	0.00	0.00	0.86	0.23	0.05	-0.07	0.09	-0.22
			18	0.76	0.20	0.00	0.00	0.24	-0.20	0.76	0.20	0.00	0.00
			19	0.48	0.27	0.52	-0.27	0.48	0.27	0.00	0.00	0.00	0.00
			20	0.93	0.43	0.02	-0.22	0.03	-0.32	0.02	-0.09	0.93	0.43

Point biserial correlation

$$r_{pb} = \frac{(\bar{y}_1 - \bar{y}_2)\sqrt{pq}}{sd_y}$$

KR-20 measurement

$$KR - 20 = \frac{k}{k-1} \left(\frac{s^2_x - \sum pq}{s^2_x} \right)$$

Pass rate

$$PR = \frac{\sum Passed}{\sum Failed} \times 100$$

Action...

Export and include your code!

Code should be:

- **Properly formatted**
- **Commented out**
- **Correct**

```
'Cycle through each version
For k = 1 To Versions

    If k <> 1 Then
        'Change version number on Pivot Table
        OldVersionNumber = VersionArray(1, k - 1)
        NewVersionNumber = VersionArray(1, k)

        For p = 1 To 5

            wb.Sheets("Pivot Table " & p).PivotTables("PivotTable" & p).PivotFields ("paperCode")

                With wb.Sheets("Pivot Table " & p).PivotTables("PivotTable" & p).PivotFields("paperCode")

                    .PivotItems(PaperCode & " " & NewVersionNumber).Visible = True
                    .PivotItems(PaperCode & " " & OldVersionNumber).Visible = False

                End With

            Next p

        End If

    End If
```



Action...

Export and include your code!

Code should be:

→ Commented out

→ Properly formatted

→ Correct

```
'Cycle through each version
For k = 1 To Versions

    If k <> 1 Then
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        For p = 1 To 5

            wb.Sheets("Pivot Table " & p).PivotTables("PivotTable" & p).PivotFields ("paperCode")
                With wb.Sheets("Pivot Table " & p).PivotTables("PivotTable" & p).PivotFields("paperCode")

                    .PivotItems(PaperCode & " " & NewVersionNumber).Visible = True
                    .PivotItems(PaperCode & " " & OldVersionNumber).Visible = False

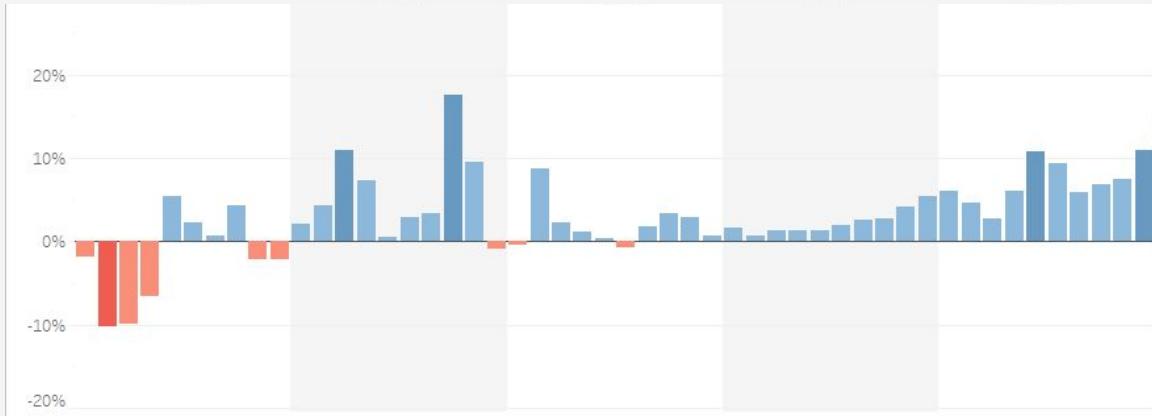
                End With
            Next p
        End If
```



Action...

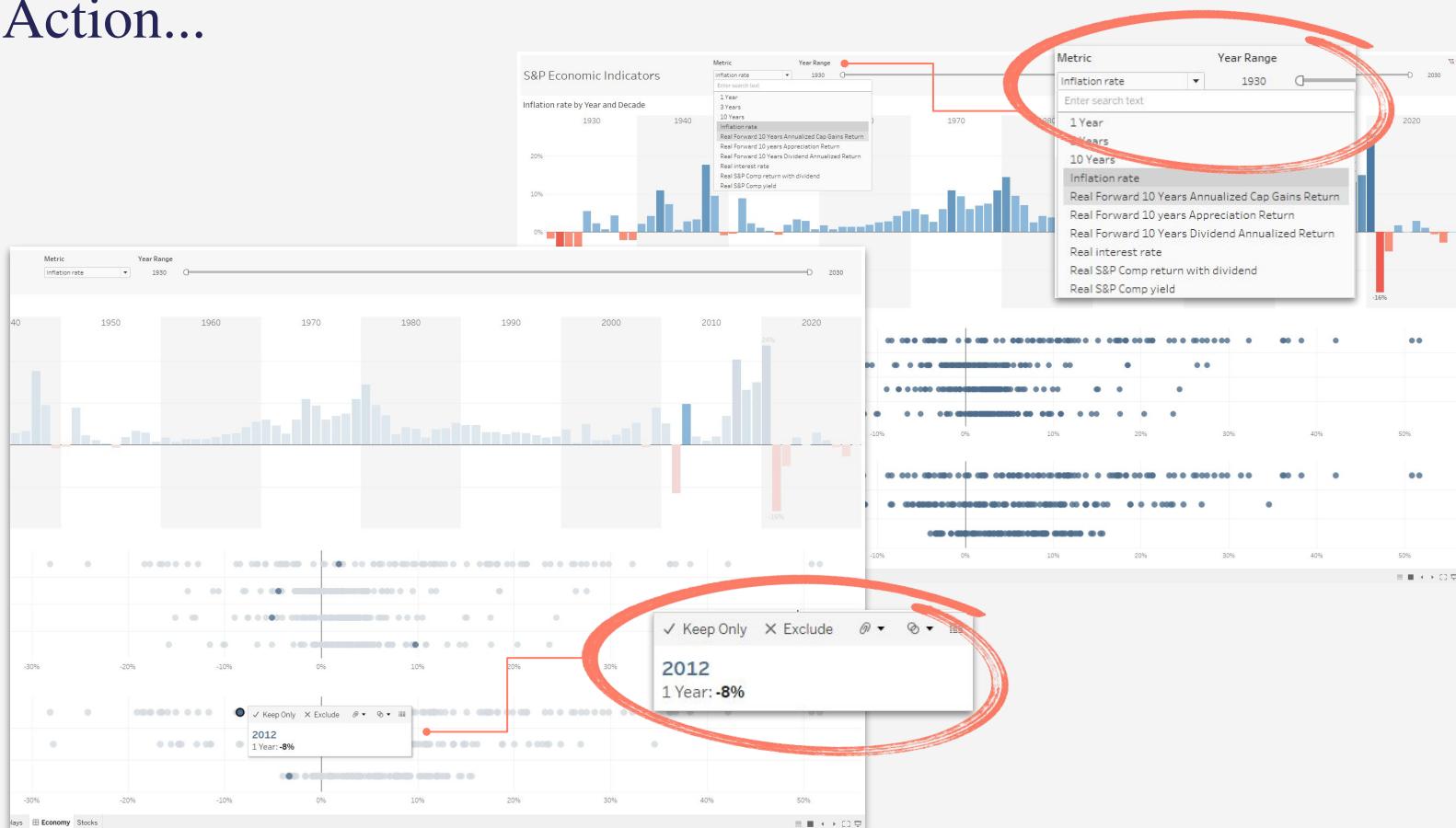
Visualisations require:

- Titles!
- Axis labels
- Commentary





Action...





Action...

Remember that the Assessor does not work in your industry, and if you are using a particularly advanced algorithm they may have no direct experience.

So make sure you explain each step.



Result

Where you show impact of the activity:

- What were the key achievements/insights?
 - Was there a commercial impact to your work?
- Were you successful in your goal?
- Would you approach the problem differently next time?
- Could you extend your project?





Result

“The automation of this analysis reduced the runtime to 30 seconds, thus saving approximately 90 mins per subject, per team member. As the suite of subjects covered is over 150 this significantly reduced the administrative load on my team, as I had hoped.

If I was to automate a similar process I would look to eliminate the use of PivotTables and replace them with a series of steps in PowerQuery.

The automation was harder than initially anticipated because the datasets required did not have a common naming convention; which required me to write a number of...”

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What is a Reflective Journal?



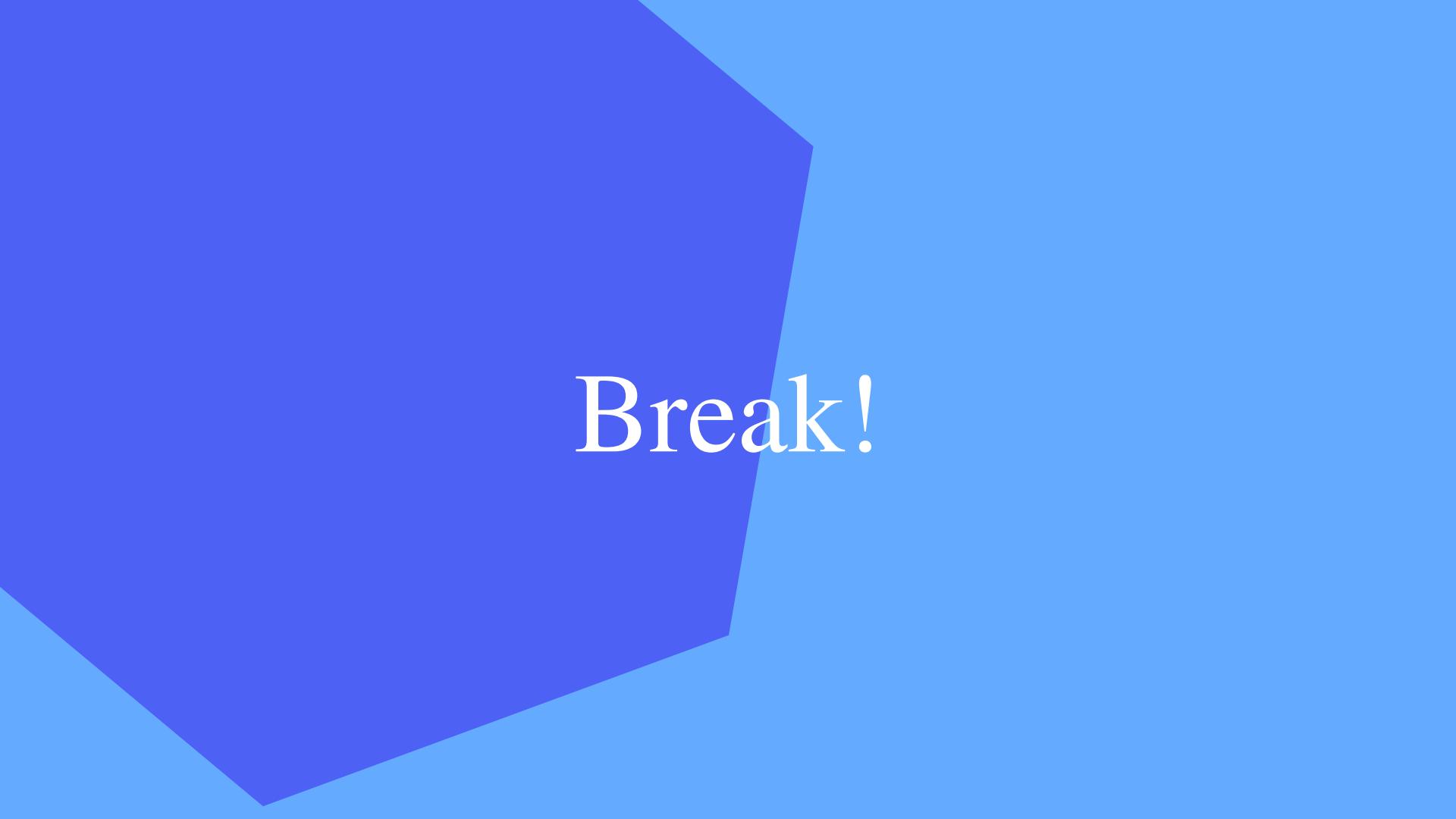
What is a Reflective Journal?

Reflective Journals are an opportunity to sign-post to the assessor any significant pieces of learning you have undertaken.

They are particularly useful if there are certain standards that you will struggle to undertake as part of your role, identify these early!

Reflective journals should use the STAR format in the same way as a project, but these will be much smaller pieces of evidence.





Break!

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How will my evidence
be graded?



How will my Evidence be Graded?

Your evidence will be graded by an Independent Assessor from Accelerate People (AP), not your coach.

They will review all of your evidence (portfolio, synoptic project, interview) and then return a grade that reflects your performance across each element of the three.

You will be assessed on **what** you did, **how** you did it, **why** you did it and your **interactions with others** whilst doing it.



How will my Evidence be Graded?

Pass

"You must satisfy the minimum requirements"

Do exactly what it says in the standards, no more
no less.

Your **what** is at Pass

Your **how** is at Pass

Your **interaction with others** is at Pass

Overall Pass

How will my Evidence be Graded?

Distinction

"You must demonstrate quality that is significantly greater than the minimum requirement"

You consistently demonstrate behaviours that show you taking on extra responsibilities or going further than asked

Your **what** is at Distinction

Your **how** is at Distinction

Your **interaction with others** is at Distinction

Overall Distinction





How will my Evidence be Graded?

We are going to look at a short statement that wants to address the SAB1 Standard

SAB1	Logical and creative thinking skills	Explores analytical possibilities before committing to a final plan
		Demonstrates an understanding of the business problem & context
		Proceeds via rational steps
		Evaluates the relevance and value of evidence
		Supports recommendations/conclusions with evidence
		Identifies any shortcomings of the data/analysis
		Demonstrates adaptability in the face of change
		Makes connections between different data sources



How will my Evidence be Graded?

SAB 1

**...before committing to the final plan I
explored a range of analytical possibilities.**

What = **Pass**

How = **Pass**

Interactions = **Missing**



How will my Evidence be Graded?

SAB 1

**...before committing to the final plan I
explored a range of analytical possibilities.**

What =

How =

Interactions =



How will my Evidence be Graded?

SAB 1

**...before committing to the final plan I
explored a range of analytical possibilities.**

What = **Pass**

How = **Missing**

Interactions = **Missing**



How will my Evidence be Graded?

SAB 1

**...before committing to the final plan I
explored a range of analytical possibilities
with the members of my team.**

What = Pass

How = Missing

Interactions = Pass

Customer/client relationships:

- Understands their requirements, including constraints and limiting factors
- Sets reasonable expectations
- **Involves them in decisions and actions**
- Interacts positively with them
- Provides a complete answer in response to queries ('transparency', 'full disclosure')



How will my Evidence be Graded?

SAB 1

...I explored a range of analytical possibilities, this included speaking with analysts from other teams around the business to understand any restrictions I may have faced. I then trialled a number of models before selecting the most accurate to present to my team for approval. I used RMSE as my measure of accuracy as I wanted to significantly penalise for outliers...

What = **Distinction**

How = ??

Interactions = **Distinction**



How will my Evidence be Graded?

SAB 1

...I explored a range of analytical possibilities, this included speaking with analysts from other teams around the business to understand any restrictions I may have faced. I then trialled a number of models before selecting the most accurate to present to my team for approval. **I used RMSE as my measure of accuracy** as I wanted to significantly penalise for outliers...

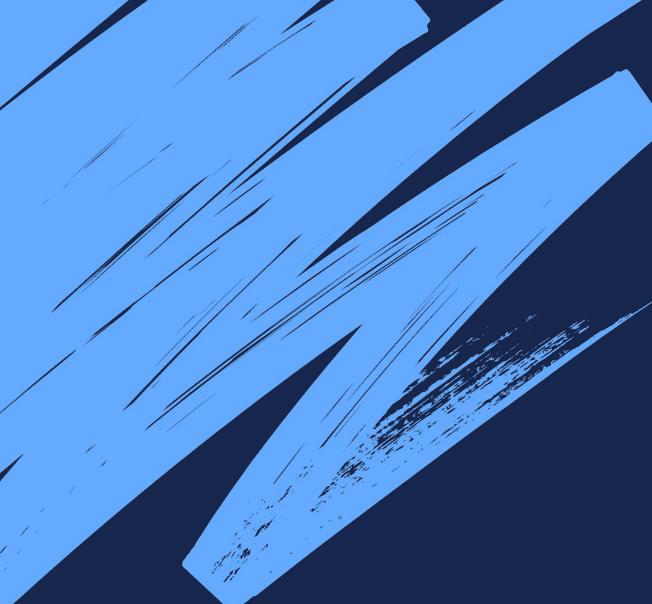
What = **Distinction**

How = **Distinction**

Interactions = **Distinction**

Customer/client relationships:

- Understands their requirements, including constraints and limiting factors
- Sets reasonable expectations
- Involves them in decisions and actions
- Interacts positively with them
- Provides a complete answer in response to queries ('transparency', 'full disclosure')

A series of thick, diagonal blue brushstrokes with black texture, angled from the top left towards the bottom right.

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Finished!

A thin blue brushstroke with black texture, positioned horizontally near the bottom center of the slide.