

End-point assessment plan for Data Technician apprenticeship standard

Apprenticeship standard reference number	Apprenticeship standard level	Integrated end-point assessment
ST0795	3	No

Contents

Introduction and overview	1
EPA summary table	2
Length of end-point assessment period	3
Order of assessment methods	4
Gateway	5
Assessment methods	6
Reasonable adjustments	11
Grading	12
Re-sits and re-takes	15
Roles and responsibilities	16
Internal Quality Assurance (IQA)	18
Affordability	19
Professional body recognition	19
Mapping of knowledge, skills and behaviours (KSBs)	19

Introduction and overview

This document sets out the requirements for end-point assessment (EPA) for the Data Technician apprenticeship standard. It is for end-point assessment organisations (EPAOs) who need to know how EPA for this apprenticeship must operate. It will also be of interest to Data Technician apprentices, their employers and training providers.

Full time apprentices will typically spend 24 months on-programme (before the gateway) working towards the occupational standard, with a minimum of 20% off-the-job training. All apprentices must spend a minimum of 12 months on-programme.

The EPA period should only start, and the EPA be arranged, once the employer is satisfied that the apprentice is deemed to be consistently working at or above the level set out in the occupational standard, all of the pre-requisite gateway requirements for EPA have been met and can be evidenced to an EPAO.

For level 3 apprenticeships and above, apprentices without English and mathematics at level 2 must achieve level 2 prior to taking their EPA.

The EPA must be completed within an EPA period lasting typically 3 months, after the EPA gateway.

The EPA consists of 2 discrete assessment methods.

The individual assessment methods will have the following grades:

Assessment method 1: Scenario Demonstrations with questioning

- Fail
- Pass
- Distinction

Assessment method 2: Professional Discussion underpinned by a portfolio

- Fail
- Pass
- Distinction

Performance in the EPA will determine the overall apprenticeship standard grade of:

- Fail
- Pass
- Merit
- Distinction

EPA summary table

On-programme (typically 24 months)	Training to develop the occupation standard's knowledge, skills and behaviours (KSBs). Training towards English and mathematics Level 1 and 2, if required Compiling a portfolio of evidence
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End-point assessment gateway	<ul style="list-style-type: none"> • Employer is satisfied the apprentice is consistently working at, or above, the level of the occupational standard. • English and mathematics Level 2 <p>Apprentices must submit:</p> <ul style="list-style-type: none"> • a portfolio of evidence
End-point assessment (which will typically take 3 months)	<p>Assessment method 1: Scenario Demonstration with questioning With the following grades:</p> <ul style="list-style-type: none"> • Fail • Pass • Distinction <p>Assessment method 2: Professional Discussion underpinned by a portfolio With the following grades:</p> <ul style="list-style-type: none"> • Fail • Pass • Distinction <p>Performance in the EPA will determine the overall apprenticeship standard grade of:</p> <ul style="list-style-type: none"> • Fail • Pass • Merit • Distinction

Length of end-point assessment period

The EPA will be completed within an EPA period lasting typically of 3 months, starting when the EPAO has confirmed that all gateway requirements have been met.

Any supporting material which underpins an EPA assessment method should be submitted at the gateway.

Order of assessment methods

The assessment methods can be delivered in any order.

Gateway

The EPA period should only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, that is to say they are deemed to have achieved occupational competence. In making this decision, the employer may take advice from the apprentice's training provider(s), but the decision must ultimately be made solely by the employer.

For Scenario Demonstration with questioning:

- no specific requirements

For Professional Discussion, the apprentice will be required to submit a portfolio:

Portfolio of evidence requirements are:

- apprentices must compile a portfolio of evidence during the on-programme period of the apprenticeship
- it must contain evidence related to the KSBs that will be assessed by the professional discussion
- the portfolio of evidence will typically contain 8 discrete pieces of evidence
- evidence must be mapped against the KSBs
- evidence may be used to demonstrate more than one KSB; a qualitative as opposed to quantitative approach is suggested
- evidence sources may include:
 - workplace documentation/records, for example workplace policies/procedures, records ◦ witness statements ◦ annotated photographs
 - video clips (maximum total duration 5 minutes); the apprentice must be in view and identifiable at all times.
 - This is not a definitive list; other evidence sources are allowed.
- the portfolio should not include any methods of self-assessment or self-reflection
- any employer contributions should focus on direct observation of performance (for example witness statements) rather than opinions
- the evidence provided must be valid and attributable to the apprentice; the portfolio of evidence must contain a statement from the employer and apprentice confirming this
- the portfolio of evidence must be submitted to the EPAO at the gateway
- The portfolio is not directly assessed. It underpins the professional discussion and therefore should not be marked by the EPAO. EPAOs should review the portfolio in preparation for the professional discussion but are not required to provide feedback on the portfolio itself

The portfolio can be digital / paper based or a mixture of both. In cases where the apprentice is working in a confidential environment, the employer may insist that the independent assessor (on behalf of the EPAO) reviews the portfolio at the employer's premises only and that the portfolio is not made available for review away from those premises. In such cases, the EPAO and independent assessor should use their discretion to make suitable arrangements to verify to their satisfaction that the portfolio was

completed and available for review at the gateway. Detailed arrangements for satisfactory portfolio review by the independent assessor must be agreed with the employer as part of their arrangement with the EPAO.

Assessment methods

Assessment method 1: Scenario Demonstrations with questioning

Overview

Apprentices must be observed by an independent assessor completing 2 scenario demonstrations in which they will demonstrate the KSBs assigned to this assessment method. This will be supplemented by questioning by the independent assessor to establish the apprentice's understanding of underpinning reasoning. The end-point assessment organisation will arrange for the observation to take place, in consultation with the employer. Scenario demonstrations must be carried out over a total assessment time of 90 minutes. The demonstrations may not be split, other than to allow comfort breaks as necessary. The independent assessor has the discretion to increase the total time of the scenario demonstrations by up to 10% to allow the apprentice to complete the last task that is part of this element of the EPA. The apprentice will be given one demonstration at a time by the independent assessor and they will complete the first scenario demonstration and questioning before going on to the second demonstration.

An independent assessor may observe a maximum of 1 apprentice at any one time. Questions must be asked during the observation on a one-to-one basis. The independent assessor is responsible for ensuring the security of questions and that they are not overheard by other apprentices.

The rationale for this assessment method is:

Scenario demonstrations allow a demonstration of competence and involves direct testing under controlled conditions. Undertaking the scenario demonstrations in a controlled environment allows for pre-determined independent assessor training and assessment resources to be developed and helps to guarantee the required demand and challenges that appear during this end point assessment method.

In this occupation, an observation of practice in a live setting was not selected, as the apprentice is not likely to cover the breadth and depth of practice required. Scenario demonstrations avoid situations where occupational activities are not available or do not occur on the day and avoids issues around confidentiality or exposing an organisation's confidential information. The apprentice will be presented with scenarios where they will be able to demonstrate how they can apply their knowledge, skills and behaviours.

Delivery

One week in advance of the scenario demonstrations, the EPAO must provide the apprentice and employer with a guidance document, with information on the format of the test, including timescales. Apprentices must be provided with both written and verbal instructions on the tasks they must complete, including the timescales they are working to.

The scenario demonstrations should be conducted in the following way to take account of the occupational context in which the apprentice operates:

The scenario demonstrations with questioning will each take 45 minutes. The apprentice will be presented with scenarios relevant to their normal sphere of work, or sufficiently similar as to be equivalent in complexity, but which may use data sets that are in a different business domain to the one in which they normally work. The EPAO must ensure that all scenarios provided meet the KSBs mapped to this method

Apprentices must conduct the demonstrations in a suitably controlled environment that is a quiet space, free of distractions and influence. The invigilation will be carried out by the independent assessor. The EPAO is required to have an invigilation policy that will set out how the scenario demonstrations will be carried out.

The EPAO is responsible for ensuring the security of scenario demonstrations they administer to ensure the assessment remains valid and reliable. This includes any arrangements for access to any data source locations which may be available locally or online.

If the scenario demonstration is via live streaming the EPAO must ensure that the apprentice is unable to gain an advantage through materials in the room, screen sharing or other behaviours.

The EPAO must verify the suitability of the venue for taking carrying out the demonstrations and the identity of the person taking the test. The independent assessor must be unobtrusive whilst conducting the scenario demonstrations in a controlled environment. When questioning the apprentice, the independent assessor must be mindful of their impact on the ability of the apprentice to concentrate and complete the scenarios in the given time.

There will be two scenarios: one scenario requiring the apprentice to conduct data gathering operations, and one scenario requiring data analysis and validation operations. At the beginning of each scenario, the apprentice will be provided with a scenario description of not more than 250 words accompanied by annexes containing any relevant documentation e.g. on data source locations, data set content descriptions, context on data provenance and purpose. The independent assessor may supplement the scenario description with verbal guidance for the purpose of clarification but must not give additional guidance on how to interpret or execute the tasks required.

The following activities MUST be observed during the scenario demonstrations as without these tasks it would seriously hamper the opportunity for the apprentice to demonstrate occupational competence in the KSBs assigned to this assessment method.

- Access multiple different data sources
- Examine data retrieved from sources using appropriate tools
- Make adjustments to a data set, for example to correct obvious errors or to filter a data set to a required subset of records and/or fields
- Save a data set to a required location in a specified format
- Make notes on observations and actions taken
- Identify and explain key characteristics of a data set, relevant to the stated purpose

The independent assessor can ask questions throughout the scenario demonstrations and at the end to allow the apprentice to evidence any gaps in KSBs not evidenced by the demonstrations. The questions will be taken from a list prepared by the EPAO and the independent assessor can supplement with their own questions if required. The questioning will be within the 90 minutes total time for the scenario demonstration. KSBs observed and answers to questions must be documented by the independent assessor.

The apprentice will be given the scenario at the beginning of each demonstration, previously unseen, developed and provided by the EPAO. The scenarios can describe separate groups of data sets and tasks or relate to multiple processing stages of a single group of data sets.

Typical Scenarios:

Scenario Demonstration 1 – Data Gathering

Example content

- Access multiple data sets from different sources
- Blend or correlate these data sets via common fields to generate an aggregated data set - Store this aggregated data set for later analysis
- Review the aggregated data set for obvious trends or patterns, documenting the findings for use by those conducting analysis on it - Value of data to the organisation

Scenario Demonstration 2 – Data Analysis and Validation Example

content

- Access a data set and filter it to contain only those records stated as being relevant for the purpose
- Examine the filtered data set and document primary statistics about the records and their most important fields (as related to the stated data purpose)
- Cleanse the filtered data set of errors, correcting those where appropriate (e.g. removing duplicates, fixing spelling mistakes), highlighting others for further review (e.g. outliers), documenting all actions taken
- Conduct field encoding and/or structural normalisation actions to improve efficiency of storage and/or analysis

There may be breaks during the scenario demonstrations to allow the apprentice to move from one location to another and for meal breaks. EPAOs must manage invigilation of apprentices during breaks in order to maintain security of the assessment in line with their malpractice policy.

KSBs observed and answers to questions must be documented by the independent assessor.

The independent assessor will make all grading decisions.

Questions and resources development

EPAOs will create and set open questions to assess KSBs mapped to this assessment method. Each EPAO must develop a question bank of sufficient size to prevent predictability and review them regularly (and at least once a year) to ensure the questions they contain are fit for purpose.

Independent assessors must use the question bank as a source for questioning and are expected to use their professional judgment to tailor those questions appropriately. Independent assessors are responsible for generating suitable follow-up questions in line with the EPAOs training and

standardisation process. The questions relating to underpinning KSBs must be varied yet allow assessment of the relevant KSBs. The questions can be asked both during and after the scenario demonstrations. The independent assessor must ask a minimum of 10 questions across both scenarios. Questioning must be completed within the total time allowed for the scenario demonstration. EPAOs will produce specifications to outline in detail how the scenario demonstrations will operate, what it will cover and what should be looked for. It is recommended that this be done in consultation with employers. EPAOs should put measures and procedures in place to maintain the security and confidentiality of their specifications if employers are consulted. Specifications must be standardised by the EPAO.

EPAOs must develop ‘practical scenario banks’ of sufficient size to prevent predictability and review them regularly (and at least once a year) to ensure they, and the scenario specifications they contain, are fit for purpose. The scenario specifications, including questions relating to underpinning KSBs must be varied, yet allow assessment of the relevant KSBs.

Venue

Scenario demonstrations must be conducted in one of the following locations:

- the employer’s premises
- a suitable venue selected by the EPAO (e.g. a training provider’s premises or another employer’s premises)
- via live streaming

The venue must have available:

- Computer systems with access to data sources
- Working internet if applicable large display screen enabling the independent assessor to clearly observe the apprentice’s actions
- Access to software for manipulating data, appropriate to the scenarios selected by the independent assessor

Support material

EPAOs will produce the following material to support this assessment method:

- Outline of the assessment method’s requirements
- Marking materials
- Create and set a question bank of open questions to assess related underpinning knowledge, skills and behaviours
- Create and set a ‘practical scenario bank’ to assess related underpinning knowledge, skills and behaviours
- In advance of the scenario demonstrations, provide the apprentice and employer with a guidance document, with information on the format of the test, including timescales
- Provide the grading criteria for the independent assessor to use and record

Assessment method 2: Professional Discussion underpinned by a portfolio

Assessment method 2 component 1: Professional Discussion underpinned by a portfolio

Overview

This assessment will take the form of a professional discussion which must be appropriately structured to draw out the best of the apprentice's competence and excellence and cover the KSBs assigned to this assessment method. It will involve questions that will focus on the KSBs mapped to this method of assessment.

The rationale for this assessment method is:

A professional discussion is a two-way dialogue between the apprentice and independent assessor. It allows the apprentice to evidence how they have met the KSBs which are underpinned by evidence drawn from their portfolio. A professional discussion is a well-recognised method widely used within the digital sector. It allows for knowledge, skills and behaviours that may not naturally occur as part of another assessment method to be assessed and more easily discussed. The apprentice can draw upon other supporting evidence in the portfolio and can effectively determine the authenticity of that supporting evidence.

As a structured, in-depth two-way conversation between the independent assessor and apprentice, the professional discussion will provide assessment of understanding knowledge, skills and behaviours.

The EPAO will send the portfolio to the independent assessor (or make other arrangements for the independent assessor to review the portfolio) a minimum of 10 days before the intended date of the Professional Discussion to allow the independent assessor to review the portfolio.

Delivery

The independent assessor will conduct and assess the professional discussion.

The professional discussion must last for 60 minutes. The independent assessor has the discretion to increase the time of the professional discussion by up to 10% to allow the apprentice to complete their last answer. Further time may be granted for apprentices with appropriate needs, in-line with the EPAO's Reasonable Adjustments Policy. The professional discussion must be audio-recorded. The professional discussion will be conducted as set out here:

The professional discussion is a structured one-to-one discussion between the apprentice and an independent assessor.

The independent assessor must ensure the apprentice has been given the opportunity to evidence all the knowledge, skills and behaviours for the assessment method.

The professional discussion will be graded fail, pass or distinction. The portfolio supports the professional discussion and will not be assessed or graded during the end-point assessment. The independent assessor must allocate grades using the grading criteria.

The apprentice and the independent assessor will have access to their own copies of the portfolio (either electronic or bring a copy with them) throughout the discussion and both can refer to it as

needed. The apprentice can draw on the contents of the portfolio to underpin the discussion, selecting items to inform and enhance their answers.

The independent assessor must ask a minimum of 10 open questions.

During this method, the independent assessor must combine questions from the EPAO's question bank and those generated by themselves. Questions must be open, and the professional discussion should be holistic in nature to enable the apprentice to combine KSBs as part of their response. Follow up questions are permitted where clarification is required.

Video conferencing can be used to conduct the professional discussion, but the EPAO must have processes in place to verify the identity of the apprentice and ensure the apprentice is not being aided in some way.

The independent assessor must use the assessment tools and procedures that are set by the EPAO to record the professional discussion.

The independent assessor will make all grading decisions.

Venue

The professional discussion should take place in a quiet room, free from distractions and influence.

The professional discussion can take place in any of the following:

- employer's premises
- a suitable venue selected by the EPAO (for example a training provider's premises) •
live streaming can be used if available

Other relevant information

A structured question bank must be developed by EPAOs. The 'question bank' must be of sufficient size to prevent predictability and the EPAO must review regularly (at least once a year) to ensure that it, and its content, are fit for purpose. The specifications, including questions relating to the underpinning KSBs, must be varied yet allow assessment of the relevant KSBs.

Independent assessors must be developed and trained by the EPAO in the conduct of professional discussions and reaching consistent judgement.

EPAOs will produce the following material to support this assessment method:

- outline of the assessment method's requirements
- marking materials
- a structured discussion template for the independent assessor to record assessment decisions
- Grading criteria for the independent assessor to use during the professional discussion

Reasonable adjustments

The EPAO must have in place clear and fair arrangements for making reasonable adjustments for this apprenticeship standard. This should include how an apprentice qualifies for reasonable adjustments

and what reasonable adjustments will be made. The adjustments must maintain the validity, reliability and integrity of the assessment methods outlined in this assessment plan.

Weighting of assessment methods

All assessment methods are weighted equally in their contribution to the overall EPA grade.

Grading

Assessment method 1: Scenario Demonstration with Questioning

Fail: Does not meet the pass criteria

KSBs	Pass The apprentice must achieve all the following pass descriptors.	Distinction The apprentice must meet the pass criteria plus all these distinction descriptors
K2 K3 K6 * K7 K8 K9 S1 S2 S3 S4 S5 S6 S7 S8 S9 S16 S18 B2 B3 B4 <small>*Note that K6 is split between both assessment methods. See mapping section</small>	<p>Data Gathering</p> <p>Accesses, formats, collates, blends and extracts data from multiple identified sources in line with current industry standards</p> <p>Locates and migrates data from already identified sources</p> <p>Manipulates and links different data sets using tools and techniques to identify trends and patterns</p> <p>Presents data in a format appropriate to the task</p> <p>Summarises and explains the results of the gathered data</p> <p>Identifies trends and patterns in data (K2 S1 K3 S2 S3 K6 S4 S5 S6)</p>	<p>Critically analyses the reasons why data is gathered and the importance of using multiple sources</p>
	<p>Data Analysis and Validation</p> <p>Applies algorithms and basic statistical methods to identify trends in data to audit results</p> <p>Cross checks and filters data to identify faults</p> <p>Cleans, tests and assesses the confidence and integrity of the data</p> <p>Identifies opportunities to use automation (K7 K8 K9 S7 S8 S9 S16)</p>	<p>Justifies why we undertake crosschecking of data</p> <p>Evaluates why we need to identify trends and faults in data</p>

	<p>Approach to Work</p> <p>Prioritises multiple data sets within the given task using own initiative</p> <p>Works independently, following standard procedures to complete prioritised tasks on time (S18 B2 B3 B4)</p>	Evaluates the prioritisation of tasks within a project
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Assessment method 2: Professional Discussion underpinned by portfolio

Fail: Does not meet the pass criteria

KSBs	Pass The apprentice must achieve all the following pass descriptors.	Distinction The apprentice must meet the pass criteria plus all these distinction descriptors
K1 K4 K5 K6* K10 K11 K12 K13 K14 K15 K16 S10 S11 S12 S13 S14 S15 S17 B1 B5 B6	<p>Data Gathering</p> <p>Explains the different types of data sets and their formats</p> <p>Describes the value of the data to the organisation and the importance of analysis management</p> <p>Describes the role of data in the digital domain (including the use of external trusted data sets) and how it underpins every digital interaction including applications, devices, IoT and customer centricity</p> <p>Explains the different types of data formats and data architectures including premises and cloud</p> <p>Describes the characteristics of presentation tools to visualise and reviews the characteristics of data and communication tools and technologies for collaborative working</p> <p>(K1 K15 K4 K6)</p>	<p>Evaluates and justifies why using different data sets is important to the business and evaluates how incorrect data gathering can affect the output</p>

*Note that K6 is split between both assessment methods.

See mapping section	<p>Data Analysis and Validation</p> <p>Describes the methods of validating data how to identify common data quality</p>	
	<p>issues and the importance of corrective action (K10 K11)</p> <p>Distribution and Dissemination</p> <p>Describes communication methods, formats and techniques commonly used and how these have been applied in a range of roles including customer, manager, client, peer, technical and nontechnical</p> <p>Explains the legal requirements of using data and the importance of using data ethically</p> <p>Describes how they have communicated the results of data analysis to different audiences that assists understanding</p> <p>Explains the significance of customer/end user issues, problems, value to the organisation, brand awareness, cultural awareness/ diversity, accessibility to both an internal and external audience</p> <p>Explains how they have stored, managed and distributed data in line with data security standards and legislation</p> <p>Explains how they have produced clear and consistent technical documentation (K5 K12 K13 K14 S10 S11 S12 S13)</p>	<p>Critically evaluates why we communicate data and why we utilise different communications methods</p> <p>Evaluates why we need to store, manage and distribute data and justifies the importance of maintaining ethical and security standards</p>

Approach to Work Describes how they have reviewed their own development and kept up to date with developments in technologies, trends and innovation Explains how they have integrated into a multi-functional team both internally and externally to their organisation Describes how they have worked in an inclusive manner Works independently to meet required deadlines, managing stakeholder expectations (K16 S14 S15 S17 B1 B5 B6)	
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Overall EPA grading

All EPA methods must be passed for the EPA to be passed overall.

Grades from individual assessment methods should be combined in the following way to determine the grade of the EPA as a whole:

Assessment method 1 Scenario Demonstrations with Questioning	Assessment method 2 Professional Discussion underpinned by portfolio	Overall grading
Fail	Any grade	Fail
Any grade	Fail	Fail
Pass	Pass	Pass
Pass	Distinction	Merit
Distinction	Pass	Merit
Distinction	Distinction	Distinction

Re-sits and re-takes

Apprentices who fail one or more assessment method will be offered the opportunity to take a re-sit or a re-take. A re-sit does not require further learning, whereas a re-take does.

Apprentices should have a supportive action plan to prepare for the re-sit or a re-take. The apprentice's employer will need to agree that either a re-sit or re-take is an appropriate course of action.

An apprentice who fails an assessment method, and therefore the EPA in the first instance, will be required to re-sit or re-take any failed assessment methods only. New scenarios must be used for resits or retakes.

Any assessment method re-sit or re-take must be taken during the maximum EPA period, otherwise the entire EPA must be taken again, unless in the opinion of the EPAO exceptional circumstances apply outside the control of the apprentice or their employer.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to a higher grade.

Where any assessment method has to be re-sat or re-taken, the apprentice will be awarded a maximum EPA grade of distinction, unless the EPAO determines there are exceptional circumstances requiring a re-sit or re-take.

Roles and responsibilities

Role	Responsibility
Apprentice	<p>As a minimum, apprentices should:</p> <ul style="list-style-type: none"> • participate in development opportunities to improve their knowledge skills and behaviours as outlined in the standard • meet all gateway requirements when advised by the employer • understand the purpose and importance of EPA and undertake EPA
Employer	<p>As a minimum, employers should:</p> <ul style="list-style-type: none"> • support the apprentice to achieve the KSBs outlined in the standard to their best ability • determines when the apprentice is working at or above the level outlined in the standard and is ready for EPA • select the EPAO • confirm arrangements with EPAO for the EPA (who, when, where) in a timely manner • ensure apprentice is well prepared for the EPA • Should not be involved in the delivery of the EPA

EPAO	<p>As a minimum, EPAOs should:</p> <ul style="list-style-type: none"> • understand the occupational role • appoint administrators/invigilators and markers to administer/invigilate and mark the EPA • provide training and CPD to the independent assessors they employ to undertake the EPA • provide adequate information, advice and guidance documentation to enable apprentices, employers and providers to prepare for the EPA • deliver the end-point assessment outlined in this EPA plan in a timely manner • prepare and provide all required material and resources required for delivery of the EPA in-line with best practices • use appropriate assessment recording documentation to ensure a clear and auditable mechanism for providing assessment decision feedback to the apprentice
	<ul style="list-style-type: none"> • maintain robust internal quality assurance (IQA) procedures and processes, and conducts these on a regular basis • conform to the requirements of the nominated external quality assurance body • organise standardisation events and activities in accordance with this plan's IQA section • organise and conduct moderation of independent assessors' marking in accordance with this plan • have, and operate, an appeals process • arrange for certification with the relevant training provider

Independent assessor	<p>As a minimum, an independent assessor should:</p> <ul style="list-style-type: none"> • understand the standard and assessment plan • deliver the end-point assessment in-line with the EPA plan • comply to the IQA requirements of the EPAO • be independent of the apprentice, their employer and training provider(s) i.e. there must be no conflict of interest • satisfy the criteria outlined in this EPA plan • hold or be working towards an independent assessor qualification e.g. A1 and have had training from their EPAO in terms of good assessment practice, operating the assessment tools and grading • have the capability to assess the apprentice at this level • attend the required number of EPAOs standardisation and training events per year (as defined in the IQA section)
Training provider	<p>As a minimum, the training provider should:</p> <ul style="list-style-type: none"> • work with the employer to ensure that the apprentice is given the opportunities to develop the KSBs outlined in the standard and monitor their progress during the on-programme period • advise the employer, upon request, on the apprentice's readiness for EPA prior to the gateway • play no part in the EPA itself

Internal Quality Assurance (IQA)

Internal quality assurance refers to the requirements that EPA organisations must have in place to ensure consistent (reliable) and accurate (valid) assessment decisions. EPA organisations for this EPA must:

- appoint independent assessors who have knowledge of the following occupational areas: Experience of the application of this occupation across a variety of industries. Experience of working in the field of data analysis demonstrated within the Data Technician Apprenticeship Standard Experience of working with real life data analysis projects. Understands the implementation of projects
- appoint independent assessors who have recent relevant experience of the occupation/sector gained in the last year or significant experience of the occupation/sector.
- appoint independent assessors who are competent to deliver the end-point assessment
- provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading

- have robust quality assurance systems and procedures that support fair, reliable and consistent assessment across the organisation and over time
- operate induction training and standardisation events for independent assessors when they begin working for the EPAO on this standard and before they deliver an updated assessment method for the first time
- ensure independent assessors attend standardisation events on an ongoing basis and at least once per year for this occupational standard.

Affordability

Affordability of the EPA will be aided by using at least some of the following practice:

- providing the option for live streaming
- using an employer's premises

Professional body recognition

Professional body recognition is not relevant to this occupational apprenticeship.

Mapping of knowledge, skills and behaviours (KSBs)

Assessment method 1: Scenario Demonstrations with Questioning

Knowledge
K2 How to access and extract data from a range of already identified sources
K3 How to collate and format data in line with industry standards
K6 How to undertake blending of data from multiple sources*
K7 Algorithms, and how they work using a step-by-step solution to a problem, or rules to follow to solve the problem and the potential to use automation
K8 How to filter details, focusing on information relevant to the data project
K9 Basic statistical methods and simple data modelling to extract relevant data and normalise unstructured data

*Note that K6 is split between Scenario Demonstrations and Professional Discussion

Skills
S1 Source and migrate data from already identified different sources
S2 Collect, format and save datasets

S3 Summarise and explain gathered data
S4 Blend data sets from multiple sources and present in format appropriate to the task
S5 Manipulate and link different data sets as required
S6 Use tools and techniques to identify trends and patterns in data
S7 Apply basic statistical methods and algorithms to identify trends and patterns in data
S8 Apply cross checking techniques for identifying faults and data results for data project requirements
S9 Audit data results
S16 Clean data i.e. remove duplicates, typos, duplicate entries, out of date data, parse data (e.g. format telephone numbers according to a national standard) and test and assess confidence in the data and its integrity.
S18 Prioritise within the context of a project
Behaviours
B2 Work independently and take responsibility
B3 Use own initiative
B4 A thorough and organised approach

Assessment method 2: Professional Discussion underpinned by portfolio

Knowledge
K1 Range of different types of existing data. Common sources of data - internal, external, open data sets, public and private. Data formats and their importance for analysis. Data architecture - the framework against which data is stored and structured including on premises and cloud.
K4 Data formats and their importance for analysis. Management and presentation tools to visualise and review the characteristics of data. Communication tools and technologies for collaborative working
K5 Communication methods, formats and techniques, including written, verbal, non-verbal, presentation, email, conversation, audience and active listening. Range of roles within an organisation, including customer, manager, client, peer, technical and non-technical
K6 The value of data to the organisation*
K10 The range of common data quality issues that can arise e.g. misclassification, duplicate entries, spelling errors, obsolete data, compliance issues and interpretation/ translation of meaning
K11 Different methods of validating data and the importance of taking corrective action

K12 Communicating the results through basic narrative
K13 Legal and regulatory requirements e.g. Data Protection, Data Security, Intellectual Property Rights (IPR), Data sharing, marketing consent, personal data definition. The ethical use of data
K14 The significance of end user issues, problems, organisation value, brand awareness, cultural awareness/ diversity, accessibility, internal/ external audience, level of technical knowledge and profile in an organisation context
K15 The role of data in the context of the digital world including the use of external trusted open data sets, how data underpins every digital interaction and connectedness across the digital landscape including applications, devices, IoT, customer centricity
K16 Different learning techniques and the breadth and sources of knowledge

*Note that K6 is split between Scenario Demonstrations and Professional Discussion

Skills
S10 Demonstrate the different ways of communicating meaning from data in line with audience requirements
S11 Produce clear and consistent technical documentation using standard organisational templates
S12 Store, manage and distribute in compliance with data security standards and legislation
S13 Explain data and results to different audiences in a way that aids understanding.
S14 Review own development needs
S15 Keep up to date with developments in technologies, trends and innovation using a range of sources
S17 Operate as part of a multi-functional team
Behaviours
B1 Manage own time to meet deadlines and manage stakeholder expectations
B5 Work with a range of internal and external customers
B6 Value difference and be sensitive to the needs of others