End-point assessment plan for Systems Thinking Practitioner apprenticeship standard

Apprenticeship standard number	Apprenticeship standard level	Integrated end-point assessment
ST0787	7	No

Contents

Introduction and overview

This document sets out the requirements for end-point assessment (EPA) for the Systems Thinking Practitioner apprenticeship standard.

It is for End-Point Assessment Organisations (EPAOs), who need to know how the EPA for this apprenticeship must operate.

It will also be of interest to Systems Thinking Practitioner apprentices, their employers, and training providers. Full time apprentices will typically spend 30 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 when:

- 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 the pre-requisite gateway requirements for the EPA have been met and can be evidenced to an EPAO;
- apprentices have achieved level 2 in English and mathematics.

The EPA must be completed within an EPA period lasting typically six months after the EPA gateway. The EPA consists of two discrete assessment methods, as follows:

- Assessment method 1: Work-based Project Report with Presentation
- Assessment method 2: Professional Discussion underpinned by Portfolio.

Performance in the EPA will determine the overall apprenticeship standard grade: Distinction, Merit, Pass, Fail. The assessment methods are weighted equally in their contribution to the overall EPA grade.

The individual assessment methods will have the following grades:

Assessment method 1: Work-based Project Report with Presentation

- Distinction
- Pass
- Fail

Assessment method 2: Professional discussion underpinned by Portfolio

- Distinction
- Pass
- Fail

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

- Distinction
- Merit
- Pass
- Fail

EPA summary table

On-programme (typically 30 months)	Training to develop the occupation standard's knowledge, skills and behaviours (KSBs). Compiling portfolio.
End-point assessment gateway	The employer is satisfied that: • the apprentice is consistently working at, or above, the level of the occupational standard. The apprentice has attained English and mathematics Level 2. The apprentice has completed tasks relevant to the assessment methods: • work practice on which the Work-based Project Report with Presentation will be undertaken; • scope and title for the Work-based Project Report with Presentation agreed with the EPAO; • Submitted the portfolio of evidence.
End-point assessment (which will typically take 6 months)	Assessment method 1: Work-based Project Report with Presentation. The specification for this assessment can be found on page 5. Assessment method 2: Professional Discussion underpinned by Portfolio. The specification for this assessment can be found on page 9. Both assessment methods AM1 and AM2 have the following grades: Distinction, Pass, Fail.
Professional Recognition	An apprentice successfully completing the apprenticeship would be eligible for recognition at Advanced Practitioner level of the professional body: Systems and Complexity in Organisations (SCiO).

Length of end-point assessment period

The EPA will be completed within an EPA period lasting typically 6 months after the EPA gateway.

The portfolio of evidence which underpins the Professional Discussion should be submitted at the gateway.

Order of assessment methods

The assessment methods can be delivered in any order. The apprentice need not await the outcome of the first assessment method taken before proceeding with the next assessment method.

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 at this level. 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.

In addition to the employer's confirmation that the apprentice is working at or above the level in the occupational standard, the apprentice must have completed the following gateway requirements prior to beginning EPA:

- English and mathematics at level 2.

For those with an education, health and care plan or a legacy statement the apprenticeships English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualification are an alternative to English qualifications for whom this is their primary language.

For assessment method 1: Work-based Project Report with Presentation

- the employer must be satisfied that the apprentice's on-programme practice is sufficient for the requirements set out in this EPA plan;
- the apprentice must have completed the work practice on which the Work-based Project Report with Presentation will be undertaken;
- the employer must have set the work-based project report scope and title;
- the EPAO must have approved the work-based project report scope and title.

For assessment method 2: Professional Discussion underpinned by a portfolio of evidence:

- the apprentice must submit a portfolio which they have developed during their on-programme training period i.e. pre-gateway. It must be submitted at the gateway, in electronic form;
- the format, structure and media of the portfolio must be agreed between the employer, the apprentice and the EPAO;
- the portfolio content must be sufficient to evidence that the apprentice can competently apply the required knowledge, skills and behaviours that are mapped to Assessment Method 2 (Professional Discussion). There must be at least one piece of evidence relating to each knowledge, skill and behaviour mapped to assessment method 2. One piece of evidence can be referenced against more than one knowledge, skill or behavioural requirement. A minimum of one piece of evidence and maximum of two pieces should be referenced for each grading cluster. For the cluster Modelling Practice 2, each of the three systems approaches being assessed should have one or two items of evidence. This is not a definitive list; other evidence sources are allowable. See under Portfolio Content below for more detail;
- it should not include any methods of self-assessment aside from S9;
- any employer contributions should focus only direct observation of evidence (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 confirming this;
- the portfolio of evidence must be submitted to the EPAO at the gateway point.

The portfolio is not directly assessed. It underpins the Professional Discussion assessment method and therefore should not be assessed by the EPAO. EPAOs should review the portfolio in

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preparation for the Professional Discussion, but are not required to provide feedback after this review of the portfolio.

Delivery – Portfolio

The portfolio of evidence is intended to showcase the apprentice's achievements and the range of their knowledge, skills and behaviours (KSBs). The portfolio is not directly assessed and instead underpins the discussion between the Independent Assessor and Apprentice.

It should be of sufficient volume and detail to evidence the full range of KSBs assigned to Assessment Method 2, whilst emphasising quality over quantity. It will contain content collated through the course of participation in the apprenticeship and represent the apprentice's real on-the-job work and experience.

Prior to delivery, the apprentice should double-check their portfolio evidence to ensure its validity, currency, sufficiency and authenticity and that the completed portfolio meets the set criteria outlined within this EPA:

- Valid: relevant to the apprenticeship and shows clear links between performance and the grading clusters that are being assessed through this method.
- Currency: evidence reflects the current level of competence.
- Sufficiency: provides enough evidence without redundancy.
- Authenticity: is clearly only the apprentice's evidence and relates to their own performance.

Avoid duplication of evidence where possible. However, where a single piece of evidence is clearly applicable to two or more grading clusters, this can be noted in the portfolio matrix.

Portfolio Matrix
The submitted portfolio should include a covering matrix clearly linking individual pieces of evidence to the relevant grading cluster(s).

Portfolio content
The portfolio should contain accounts, records or products from activities that have been completed by the apprentice in their work practice.

The portfolio of evidence will be made up of a collection of evidence in a variety of formats including written, audio, and video. It should be assembled in electronic form, to enable upload and e-transfer; hard-copy documents should be scanned into electronic form. The combined total of all audio and video evidence is not expected to exceed 30 minutes playback time.

Examples (ie not restricted to) would be:
- Systems maps, models and other relevant diagrams and graphics.
- Photos, video, or audio comments or extracts of live interactions (with necessary permissions from participants to meet confidentiality and ethics requirements).
- Written statements from relevant parties.
- Project or work plans.
- Analyses, summaries, or reports.
- Minutes / action logs.
- Observations.
- Discussions from networks / working groups.
- Presentations.
- Feedback (managers and peers).

- Documents written by apprentice.
- Reflective accounts and self-evaluation (only permissible where evidence applies to Skill 9)
- Performance reviews, data or reports.

These products should be collated into a comprehensive and cohesive body of work with clear structure and signposting.

Each grading cluster of knowledge, skills and behaviours mapped to Assessment Method 2 must be demonstrated through at least one piece of evidence in the portfolio. A minimum of one piece of evidence and maximum of two should be referenced for each grading cluster; Modelling Practice 2 should have one or two pieces of evidence for each of the three systems approaches being assessed. One piece of evidence can be referenced against more than one grading cluster. This should be made clear in the covering matrix document.

The apprentice's manager (or mentor if applicable) will typically support the development of the portfolio, with the EPAO providing further guidance on the content.

All submitted content must meet with GDPR and associated regulatory standards for confidentiality and data protection.

Assessment methods

Assessment method 1: Work-based Project Report with Presentation'

This assessment method has two components.

Assessment method 1 component 1: Work-based project report

Overview and rationale

The work-based project report requires the production of a report. The work-based project report is carried out after the apprentice has gone through the gateway, i.e. the report must be written after the gateway. All work practice on which the work-based project report is based must be completed prior to the gateway.

The rationale for this assessment method is as follows:

- A Systems Thinking intervention can take several months or even years; not all projects go through a full life cycle or have a predicable outcome; sometimes they are terminated, delayed or extended for business reasons outside the control of the apprentice.
- Therefore the practice on which the project is undertaken cannot invariably be designed or delayed to fit into the EPA timescale or the specification of the EPAO.
- The project is designed to demonstrate the application of knowledge, skills and behaviours as they would be in occupation practice. Producing a work-based project report reflects normal practice in the workplace for a Systems Thinking Practitioner, so this assessment method is appropriate.
- It is a significant and complex piece of work that thoroughly tests both higher and lower order knowledge and skills.
- Note that it is essential that the project articulates the apprentice's own work practice rather than the activities performed by the team of which they were part.
- Note that it is the post-gateway work based project report and presentation that are graded as parts of one composite assessment method, rather than the work practice on which they are based.

Delivery

Apprentices must produce the work-based project report and presentation during the EPA period.

The EPAO must provide detailed specifications for a range of projects on which qualifying work-based project reports could be written.

Employers must ensure that apprentices undertake a range of projects (i.e. practice) on-programme, having regard to the EPAO's detailed specifications.

The apprentice will draft a proposal for the work-based project report at the gateway. The scope and title of the work-based project report must include a summary of the work practice covered by the project, and an overview of the apprentice's tasks and responsibilities.

The work-based project report and scope and title must be signed off at the gateway by the EPAO. This ensures adequate controls are in place to meet the requirement that the report and presentation are produced by the apprentice post-gateway.

The employer and apprentice must sign a statement for the Work-based Project Report with Presentation, thereby, confirming that they were commenced and completed after the gateway, and that they are the apprentice's work.

Definition

The Work-based Project Report will be a report of 8,000 words (+/- 10% at the apprentice's discretion), excluding tables, figures, references and annex.

The apprentice must be given 3 weeks to complete and submit the Work-based Project Report with presentation following the EPAO's approval of the report scope and title. Employers must allow apprentices up to eight working days of time (within this 3 weeks period) to do so.

The Work-based Project Report content must include all of (but need not be limited to) the following topics:

- Description of the situation as a system, and its context.
- Objectives of the work practice on which the project report is based.
- Chosen methods, methodology(ies) and rationale.
- Summary of the tasks and responsibilities undertaken by the apprentice.
- Discussion of challenges and barriers observed and actions taken.

A typical Project Report is organised in the following way:

• Executive summary. (This is no more than one side - which summarizes the content of the report. It must be comprehensible to someone who has not read the rest of the report.)

• Introduction. (The scope or hypothesis of the project and terms of reference, setting the scene for the remainder of the report.)

• Background. (A review chapter, describing the background work or research undertaken at the beginning of the project period.)

• Work undertaken: Several chapters describing the work that has been undertaken.

• Outputs. A chapter describing the outputs, deliverables or artefacts that have been produced as a result of the project.

• Further work. (A chapter describing possible ways in which the work could be continued or developed.)

• Conclusions. (A statement of conclusions relating to the work done, and outputs produced to the initial hypothesis and terms of reference.)

The report must include, in addition to the 8000 word count, an annex containing 1-2 pieces of evidence per grading cluster; Modelling Practice 1 should have 1-2 pieces of evidence for each of the systems approaches being deployed in the work-based project: a minimum of six pieces and a maximum of sixteen pieces of evidence. The annex provides evidence of competent practice of each of the grading clusters assessed through the Work-based Project Report with Presentation. The evidence in the annex must include at least one system model for each system approach employed.

The evidence may make use of a range of media including audio and/or video.

The evidence must be attributable to the apprentice and their work practice during the on-programme period. It must be accompanied by a statement outlining the apprentice's contribution, signed by the apprentice and their employer.

The written work-based project report plus materials relating to the presentation (see below) must be submitted together and received by the Independent Assessor at least three weeks before the scheduled presentation. The independent assessor must have reviewed the evidence in advance of the presentation.

Assessment method 1 component 2: Presentation

The presentation will be based on the Work-based Project Report. The presentation should not be formulaic; given the wide and varying nature of Systems Thinking related issues, it will be for the apprentice to decide the nature and focus of their presentation. As a guideline, one or more of the following may be of greater relevance dependent on the nature of the project.

- determining or analysing the system of interest;
- issues of ethics and power;
- selection and application of the modelling approach(es);
- engagement with at least one crucial stakeholder group.

The independent assessor will draw out any further information using questions.

Presentation delivery

The presentation is conducted between the independent assessor and the apprentice and may either be face-to-face or via online video conferencing.

The apprentice may deliver the presentation in a format of their choosing.

The EPAO must ensure that they have access to the following.

- AV presentation equipment;
- flip chart and writing and drawing materials;
- computer.

If the presentation is delivered via a video-conferencing facility, the EPAO must ensure appropriate measures are in place to prevent misrepresentation and ensure the apprentice is not being aided in any way, e.g. use of a 360-degree camera to allow the independent assessor to look around the round the room during the presentation. A face-to-face format for the presentation is recommended.

The assessment will take 60 minutes, plus 10% (at the discretion of the independent assessor) if required. The presentation stage typically lasts for 15 minutes, and the questioning stage for 45 minutes. The additional 10% time available for this assessment can be allocated in any proportion across the two stages.

The independent assessor will ask between six and eight opening questions at the end of the presentation, i.e. one question for each grading cluster assessed through this method, with one opening question for each systems approach used in the report. They must combine questions from the EPAO's question bank and those generated by themselves. Independent assessors must select between four and six opening questions from their bank of questions provided by the EPAO. Independent assessors must ask two opening questions of their own creation.

The independent assessor may ask follow-up questions after the presentation, to seek clarification where required. Follow-up questions may be other initial questions in the 'question bank' or generated by the independent assessor during the assessment.

Assessment procedures

The EPAO must:

- develop a structured work-based project report specification and a question bank.
  - The report specifications must be varied yet allow assessment of the relevant knowledge, skills and behaviours.
  - The question bank must be of sufficient size to prevent predictability and review it regularly (and at least once a year) to ensure that it, and its content, are fit for purpose.

The independent assessor must:

- holistically assess the Work-based Project Report, presentation and answers to the questions against the KSBs as set out in Annex A, using the grading criteria;
- plan the assessment prior to it taking place;
- ensure that the location for the assessment is appropriate;
- ensure the presentation and questioning takes place in a room free from distractions with no
- other people present;
- ensure any special needs of the apprentice are taken into consideration in-line with the EPAO's Reasonable Adjustments Policy;
- provide information to the apprentice about the assessment process, the possible outcomes and how it is graded;
- ensure that the grading criteria and relevant documentation are to hand before commencing;
- capture an audio record of the presentation and questioning;
- document the outcomes using the EPAO's standard documentation;
- collect all presentation materials from the apprentice;
- recognise and maintain the commercial or personal confidentiality of any data the apprentice uses as part of their project report and presentation;
- confirm to the EPAO that the specification has been fully covered and the rules have been followed;
- make the final decision about the outcome of the assessment and recommend the grade;
- send documentation to the EPAO within the agreed time.

Marking

The independent assessor will review and mark the Work-based Project Report, Presentation and answers to questions holistically, in a timely manner, as determined by the EPAO, and without extending the EPA unnecessarily.

All quality control processes will also be conducted in a timely manner, as determined by the EPAO.

Supporting material

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

- project specification for the practice on which the report will be written;
- question bank;
- marking materials;
- examples of work-based project reports, including exemplar reports and annexes.

A structured assessment method specification and question bank must be developed by EPAOs. The 'question bank' must be of sufficient size to prevent predictability and the EPAO must review it

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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.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

Independent assessors must be developed and trained by the EPAO in reaching consistent judgement.

Venue

EPAOs must ensure that the presentation and questioning elements are conducted in a suitable controlled environment in any of the following:

- employer's premises;
- other suitable venue selected by the EPAO (for example a training provider).

The venue should be a quiet room, free from distraction and external influence.

Video conferencing can be used to conduct the presentation and questioning; however, 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. A face-to-face format for the presentation is recommended.

Assessment Method 2 (AM2): Professional Discussion, underpinned by Portfolio

(This assessment method has one component.)

Method 2 Component 1: Professional Discussion, underpinned by a portfolio of evidence
Note: the portfolio itself is not assessed in AM2. It is used by the independent assessor to generate questions for the professional discussion.

Overview

This assessment will take the form of a professional discussion underpinned by a portfolio of evidence which must be created and submitted to the independent assessor at the gateway.

The professional discussion is a two-way conversation between the Independent Assessor and the apprentice. It must be appropriately structured by the Independent Assessor to draw out the best of the apprentice's competence and cover the KSBs assigned to this assessment method. Questioning should assess the KSBs assigned to this assessment method and the apprentice may use their portfolio to support their responses.

The rationale for this assessment method is:

- This method was judged to be the most appropriate for the knowledge, skills and behaviours (KSBs) being assessed through this method. It allows a range of examples to be brought forward during the discussion to show the full range of duties can be undertaken, ensuring that excellence can be evidenced in a robust, yet flexible manner.
- Provision of the portfolio to the independent assessor ahead of the professional discussion ensures the independent assessor can select and generate their questions effectively.

It is cost-effective as it covers disparate KSB's in a time efficient manner.

Professional discussion

The independent assessors will conduct and assess the professional discussion.

The professional discussion must last for 90 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 EPAOs Reasonable Adjustments policy.

During this method, the independent assessor must ask a minimum of ten opening questions, one per grading cluster, with one for each of the three systems approaches being assessed against Modelling Practice 2. They must combine questions from the EPAO's question bank and those generated by themselves. There is no limit on follow-up questions.

Independent assessors must select eight opening questions from their bank of competency based questions provided by the EPAO; independent assessors must ask two questions of their own creation; (i.e. eight plus two = ten opening questions, as above). This approach ensures that all aspects of the portfolio can be probed and ensures that all the KSBs mapped to this method are appropriately covered.

The professional discussion will be conducted as set out here:

- The professional discussion is a two-way discussion between the apprentice and an independent assessor.
- The professional discussion must be appropriately structured to draw out the best of the apprentice's competence and excellence.

- The professional discussion must be conducted in a 'controlled environment' i.e. a quiet room, free from distraction and influence, away from the apprentice's workstation e.g. onsite office or offsite location. This can also be completed via video-conferencing.
- The apprentice and the independent assessor will have access to their own copies of the portfolio throughout the discussion and both can refer to it as needed.

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

The professional discussion is two-way, but the independent assessor will be able to open with questions from the EPAO bank of questions, and then use follow-up questions throughout the professional discussion to allow the apprentice the best opportunity to evidence their competence. These follow-up questions will be in addition to the requirement for eight opening questions

The independent assessor will make notes of evidence / answers provided on the EPAO data capture form.

The independent assessor must use the assessment tools and procedures that are set by the EPAO to record the professional discussion. Recording documentation for the professional discussion must be developed by the EPAOs.

The professional discussion should be graded fail, pass or distinction. Independent assessors must allocate grades using the grading criteria.

The portfolio underpins the professional discussion and will not be assessed or graded during the end-point assessment.

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 (e.g. a training provider's premises);
- alternatively, via video-conferencing, in order to reduce costs.

The apprentice and the independent assessor must have the equipment needed to access their copy of the portfolio.

Other relevant information

A structured specification and question bank must be developed by EPAOs. The 'question bank' must be of sufficient size to prevent predictability and the EPAO must review it regularly (and at least once a year) to ensure that it, and its content, are fit for purpose. The specifications, including questions relating to the underpinning knowledge, skills and behaviours, must be varied and open, based on the experience of the apprentice as evidenced in the portfolio, and allow assessment of the relevant KSBs.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

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

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

- Outline of the assessment method's requirements.
- Marking materials.
- Data capture form for evidence and gaps.

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- Bank of questions to be maintained and meet current rules.
- Guidance document for employers and apprentices on the process / timescales for the discussion as well as a description of the purpose of the discussion.
- Guidance document for independent assessors on how to carry out the assessment.

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 adjustment 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: Work-based Project Report with Presentation

The grading clusters are titled for clarity. Note that the apprentice is assessed solely against the grading criteria.

To achieve a distinction on AM1, the apprentice must pass all Pass level criteria, plus achieve three out of five Distinction level criteria.

KSBs	Grading cluster	Fail	Pass	Distinction
K4.1 K4.2 B4	Ethics and power 1	Does not meet the pass criteria.	Understands ethical and regulatory dilemmas as applied to interventions and how to cope with them. Balances differing interests including legal, health and safety, and compliance.	N/A
K5 S6.1 S6.4 S6.5 S8.3 S11	Information	Does not meet the pass criteria.	Selects, utilises and adapts information gathering and evaluation approach(es) from a range of options, to address different information types and weaknesses in availability, develops robust models, develops relevant evaluation metrics, and supports their adoption.	Sorts information from noise, minimises blind spots, validates evidence and assumptions, creates linkages and recognises patterns.
S3.3 S7 S8.1 B6	Intervention 1	Does not meet the pass criteria.	Explores, develops and tests models and uses systemic inquiry in order to select and design and deliver an appropriate intervention strategy that recognises the constraints of the project, from a range of options and techniques, to achieve agreed outcomes	Adapts and blends recognised approaches, balancing their strengths and weaknesses for that particular situation.
K1.1 K1.2 K1.3 K1.4 S1	Core systems concepts	Does not meet the pass criteria.	Identifies and uses systems principles, concepts and laws, within systems approaches.	Identifies and uses systems principles and laws outside of formalised systems approaches, whilst compensating for own bias.

K2.2 K2.3 S2.1 S2.2 S3.1	Modelling practice 1	Does not meet the pass criteria.	Selects an appropriate systems approach from a range of options to best address the nature of complexity, scale and scope of the situation, and relevant systems, taking into account their own biases in selection.	Uses multiple approaches in parallel or combination, and reconciles their inconsistencies to deliver practical results.
S5.1 S5.4 S6.2 S6.3 B9	Stakeholder 1	Does not meet the pass criteria.	Selects from a range of options and utilises approach(es) to identify stakeholders and their world views, surface and challenge assumptions, handle conflict and resistance, and balance a variety of interests.	Transfers relevant approaches to stakeholders, uses collaborative learning, and manages confrontation to build engagement.

Assessment method 2: Professional Discussion underpinned by a portfolio of evidence

To achieve a distinction on AM2, the apprentice must pass all Pass level criteria, plus achieve five out of eight Distinction level criteria.

KSBs	Grading cluster	Fail	Pass	Distinction
S4 S10.3 S10.4	Leading communicating and influencing	Does not meet the pass criteria.	Adapts language, behaviour, information and models to suit differing stakeholders, so they can adopt relevant language, concepts and models.	Changes stakeholders' thinking so they use systems language and models independently, for themselves.
S9 **B1**	Creativity and learning 1	Does not meet the pass criteria.	Consciously manages own learning; records experiences, plans and reviews learning, self-challenges and acts on feedback, and reflects at first and second/meta levels.	Plans future learning, including; expected impact on future practice and relevant concepts, as well as epistemological learning about systems thinking.
B3 B5.1 B5.2	Creativity and learning 2	Does not meet the pass criteria.	Explores uncertain situations and adopts new approaches, without losing sight of original goals.	Understands and learns effective ways of handling messy situations, to deliver agreed benefits through successful interventions.
B2.1 B2.2 B5.4	Ethics and power 2	Does not meet the pass criteria.	Consciously manages challenge, including adjusting level and approach, to reflect politics, power, issues, and consequences.	Uses challenge to effect systemic change, and to mitigate consequences in planning, action execution and monitoring
K3.1 K3.2 K3.3 **B7.2**	Intervention 2	Does not meet the pass criteria.	Selects appropriate intervention approach from a range of options and adapt that when needed.	Reconciles differences between approaches and /or uses project instability to generate useful insights and still deliver practical results.
K2.1 **S3.2**	Modelling practice 2	Does not meet the pass criteria.	Models a situation using systems approach(es), with the rigour appropriate to that approach, and scale and scope appropriate to the situation, tests the modelling and delivers insights relevant to the brief for the intervention, specifically;	Combines approaches and alters the approach, scale and scope of the modelling to address unfolding situation, including System of Systems Methods (SOSM), and/or supplementary methods.

			a) Systems Dynamics: quantified dynamics and tested validity of model b) Viable Systems Model: derive conclusions (diagnostic or design options) and test validity of model c) Soft Systems Methodology: all stages of inquiry cycle used, including rich pictures, root definitions, systems model(s), and options evaluation(s) d) Critical Systems Heuristics: full structure of assessment framework used, including as-is and ought-to-be comparison.	
K3.4 **S5.2 S8.2 S10.1** **B5.3 B7.1 B8**	Stakeholder 2	Does not meet the pass criteria.	Builds effective relationships with stakeholders in the situation; facilitates and role-models collaboration between stakeholders across the situation. Is adaptable, sensitive to situational and stakeholder dynamics, and resilient.	Transfers relevant approaches to stakeholders, uses collaborative learning, and manages confrontation to build engagement.
S5.3 S10.2	Teamwork	Does not meet the pass criteria.	Uses a range of approaches to work constructively in teams, and to orientate teams in complex situations.	Transfers and synthesises learning between teams, and reconciles conflicts in teams.

Overall EPA grading

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

To achieve a distinction overall, the apprentice requires a distinction in both assessment methods.

To achieve a merit, the apprentice requires a pass in one assessment method and a distinction in the other.

The rationale for awarding a merit is that achieving a distinction on either assessment method deserves recognition.

A fail on either or both assessment methods results in an overall fail.

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 – Work-based Project report and presentation	Assessment method 2 – Professional Discussion	Overall grading
Distinction	Distinction	Distinction
Distinction	Pass	Merit
Pass	Distinction	Merit
Pass	Pass	Pass
Fail	Distinction	Fail
Fail	Pass	Fail
Distinction	Fail	Fail
Pass	Fail	Fail
Fail	Fail	Fail

Re-sits and re-takes

Apprentices who fail one or more assessment method(s) 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 the failed assessment method(s) only.

The timescales for a resit/retake is agreed between the employer and EPAO. A resit is typically taken within 3 months of the EPA outcome notification. The timescale for a retake is dependent on how much re-training is required and is typically taken within 3 months of the EPA outcome notification. All assessment methods must be taken within a 9-month period (i.e. the 6 month typical EPA period plus 3 months for re-sits/re-takes), otherwise the entire EPA will need to be resat/retaken.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to merit/distinction or merit to distinction.

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

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Roles and responsibilities

Role	Responsibility
Apprentice	• 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	• support the apprentice to achieve the KSBs outlined in the occupational standard to their best ability; • determines when the apprentice is working at or above; the level outlined in the occupational standard and is ready for EPA • select the EPAO; • confirm all EPA gateway requirements have been met; • confirm arrangements with EPAO for the EPA (who, when, where) in a timely manner; • ensure apprentice is prepared for the EPA; • should not be involved in the delivery of the EPA.
EPAO	As a minimum EPAOs should: • 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; • have no direct connection with the apprentice, their employer or training provider i.e. there must be no conflict of interest; • 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 EPA plan;

	• have, and operate, an appeals process; • arrange for certification with the relevant training provider.
Independent assessor	As a minimum an independent assessor should: • understand the occupational standard and end-point 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	As a minimum the training provider should: • work with the employer to ensure that the apprentice is given the opportunities to develop the KSBs outlined in the occupational standard and monitor their progress, during the on-programme period; • advise the employer, upon request, regarding 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 appropriate knowledge and experience of the occupation, as follows:

EITHER holds a Systems Thinking qualification which is at least equivalent in level to this apprenticeship;	OR holds a professional accreditation as a Systems Thinking practitioner which is at least equivalent in level to this apprenticeship;
and has a minimum of three years' post-qualification experience as a practitioner working in industry, government or the voluntary sector, applying and practising the range of work activities specified in the Systems Thinking Practitioner Apprenticeship Standard;	and has a minimum of three years' experience as a practitioner working in industry, government or the voluntary sector;
AND is a current practitioner i.e. has undertaken relevant practice within a rolling three-year (36 month) period preceding the EPA that they are performing.	

- appoint independent assessors who are competent to undertake 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 EPA organisation and over time;
- operate induction training and standardisation events for independent assessors:
    - when they begin working on this standard for the EPA organisation;
    - 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;
- have systems in place that ensure that both the EPA organisation and its Independent Assessors learn from past assessments and their results.

Affordability

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

- using an employer's premises;
- using video conferencing.

Professional body recognition

An apprentice successfully completing the apprenticeship would be eligible for recognition at Advanced Practitioner level of the professional body: Systems and Complexity in Organisations (SCiO).

Mapping of knowledge, skills and behaviours (KSBs)

Assessment method 1: Work Based Project with presentation

Knowledge
K1 Systems thinking - Understands core systems concepts and laws that underpin and inform the practical methodologies and methods (K1.1). - Aware of the inter-relationships between Systems Thinking approaches (including methods and methodologies), enabling comparisons of paradigms and underpinning philosophies (K1.2). - Understands provenance of Systems Thinking methodologies and approaches in context of 'schools' of systems thinking and own ontology and epistemology (K1.3). - Understands essential concepts of systems: complexity, emergence, boundaries, inter-relationships, multiple-perspectives, randomness, non-linear relationships, feedback loops, sensitive dependence on initial conditions, and unpredictability (K1.4).
K2 Systems approaches - Understands the applicability, benefits and limits of each systems approach for each situation, and how to integrate them into a broader methodological design (K2.2). - Understands relevance of, and knows methods for, determining appropriate scope, scale and systemic levels, for understanding, diagnosing and modelling situations, or for system design (K2.3).
K4 Ethics - Working knowledge of ethics as applied to systems interventions generally, and as applied specifically to sector where practitioner is working (K4.1). - Appreciates the regulatory environment, and the legal, health and safety and compliance requirements of the sector the practitioner is working in (K4.2).
K5 Assessment and evaluation - Understands a range of quantitative and qualitative assessment and evaluation methods for determining the outcomes and impact of interventions, and for evaluating the effectiveness and impact of intervention decisions and processes.

Skills
S1 Applying systems knowledge - Applies systems laws, concepts and systems thinking approaches in real world situations, either applied directly, or to support systems methodologies.
S2 Approach designs - Recognises the nature of complexity most relevant to the situation of interest, and selects one or more appropriate approaches from the range of systems methods or methodologies. Undertakes these across a variety of domains or sectors (S2.1). - Defines the system of interest, its boundaries, stakeholders and context. Recognises the benefits or limitations of an approach; combines or adapts approaches where needed (S2.2).
S3 Systems modelling - Develops conceptual models of a variety of systems, real world situations and scenarios to provide insights into current or future challenges (S3.1).

- Uses models to explore, develop and test a range of possible interventions relevant to the situation of interest, to establish both short and long-term consequences of potential actions, and to reduce unintended consequences (S3.3).
S5 Engagement and collaboration - Applies techniques to identify stakeholders and to build and sustain effective relationships with them. Seeks out and engages with marginalised viewpoints; counters the dynamics of marginalization (S5.1). - Designs, builds and manages groups to define the desired outcomes and achieve them. Uses tools and techniques to: maximise effective dialogue, to develop a shared understanding of the problem situation and to make decisions (S5.4).
S6 Inquiry, information gathering and analysis - Applies a range of inquiry techniques to gather quantitative and qualitative information, including inputs, transformations, outputs and outcomes. Defines and designs hard and soft measures (S6.1). - Applies a range of questioning and listening techniques to enquire with stakeholders, and to adapt approaches in real time (S6.2). - Uncovers hidden or unstated assumptions, to evaluate stated assumptions, and to constructively challenge these where appropriate (S6.3). - Selects, elicits, manages and interprets appropriate types of data, information and statistics for model building, making the trade-off between value, cost and timeliness (S6.4). - Weighs balance of evidence; identifies gaps, contradictions, uncertainties and anomalies in data, information and any other evidence (S6.5).
S7 Intervention design - Designs an appropriate intervention strategy for the system of interest, recognising relevant issues.
S8 Change implementation - Plans, designs and leads interventions to achieve benefits and learning, based on sound understanding of a range of change methodologies and techniques (S8.1). - Adapts plans in response to new data and insights, perspectives and learning (S8.3).
S11 Assessment and evaluation - Develops and implements suitable monitoring and evaluation criteria and mechanisms, aware of the influence that different system methods can have in situations.

Behaviours
B4 Professional - Seeks to balance the needs of different stakeholders irrespective of personal bias. Regularly assesses ethical issues in interventions. Adheres to professional standards.
B6 Practical - Takes a 'real-world' approach to the application of system models and to the design of interventions. Appreciative of constraints affecting the situation of interest.
B9 Open-minded - Embraces and seeks out diversity; enjoys exploration of multiple perspectives.

Assessment method 2: Professional Discussion

Knowledge
K2 Systems approaches - Has a sound working knowledge of at least three modelling approaches, as defined in the Systems and Complexity in Organisations (SCiO) professional standard framework, including at least two of the widely-used systems methodologies or approaches: Critical Systems Heuristics, Soft Systems Methodology, System Dynamics, Viable Systems Model. (K2.1)
K3 Intervention and engagement - Knows a range of approaches for delivering systems interventions with differing levels of complexity and ambiguity, including double loop learning, change methods, and learning cycles (K3.1). - Has a working knowledge of at least two methods or methodologies for: intervention planning, information gathering, engagement and change implementation (K3.2). - Understands strengths and limitations of each approach; knows when and how to use each approach to gain insight to the organisational/ societal/ political context (K3.3). - Understands the principles of effective relationship building and stakeholder management and their application in a system intervention (K3.4).

Skills
S3 Systems modelling - Uses a range of systems models to: explore boundaries and cause and effect, map interconnections and feedback loops, distinguish between differing worldviews or perspectives, and identify patterns, anomalies and emergent properties. Switches between these skills to achieve insight (S3.2).
S4 Interpretation - Presents systems models, insights and intervention contributions in a way that is understandable in the real world.
S5 Engagement and collaboration - Collaborates with and influences diverse stakeholders, colleagues and clients, identifying and adapting engagement and communication styles (S5.2). - Works effectively as part of multi-disciplinary groups which have divergent or conflicting world views (S5.3).
S8 Change implementation - Uses facilitative processes empathetically to engage stakeholders in change processes and decision-making (S8.2).
S9 Developing self - Applies techniques for structured personal reflexive practice, to monitor and develop knowledge, skills and self-awareness.
S10 Leading, communicating and influencing - Educates and influences stakeholders to participate effectively in challenging and ambiguous situations, including managing confrontation and conflict constructively (S10.1). - Creates effective teams. Orients intervention teams to the organisational / social / political and cultural context. Leverages strengths and develops alliances (S10.2). - Translates systems models and representations into comprehensible language for stakeholders; adapt communication method to audience (S10.3). - Explains the benefits, principles and skills of systems approaches to stakeholders and participants in an intervention in order to guide them through a systems intervention (S10.4).

Behaviours
B1 Develops self and practice - Engages in structured reflection, monitoring and regulating own thought processes and understanding. Aware of the effect of own and others' biases and of the mirroring effect of clients' problems.
B2 Courage and constructive challenge - Prepared to identify and challenge formal and informal centres of power and authority. Willing to constructively challenge assumptions, norms, claims and arguments (B2.1). - Adjusts the degree of challenge against political considerations, to achieve maximum achievable effect with minimum levels of damage. Balances confidence, challenge and humility during interventions. Fosters reflection in others (B2.2).
B3 Curious and innovative - Interested in creative solutions; explores areas of ambiguity and complexity. Seeks innovative solutions and approaches. Develops and tests multiple hypotheses.
B5 Adaptable and cognitively flexible - Enjoys working on ill-defined and/or unbounded problem situations. Is comfortable with high degrees of uncertainty and with working on a variety of situations of interest (B5.1). - Accepts change and innovation; actively considers new approaches to solving problems (B5.2). - Takes an adaptable approach to inquiring, intervening and stakeholder engagement (B5.3). - Aware of possible unintended consequences resulting from acting in complex environments. Avoids over-attachment to particular, pre-determined or expected outcomes (B5.4).
B7 Resilient - Remains motivated to make a difference when facing conflict between client and stakeholders, or a lack of will to engage with the initiative, or the client's lack of willingness to take a systems approach (B7.1). - Accepts that "goal posts move", and that unstable conditions are normal (B7.2).
B8 Collaborative - Is participative and inclusive of others; sensitive to relational dynamics; encourages dialogue and co-operation across diverse people and groups; seeks positive win/win outcomes.