Level 5
Improvement Specialist apprenticeship standard
(Lean & Six Sigma Black Belt)

Target Portfolio Kit (TPK)   Issue 1.1

Content

Overview

This guide has been produced to give training providers an understanding on how a portfolio of evidence covering Knowledge, Skills and Behaviours (KSB) should be structured to enable their leaner/apprentice to succeed and what will support them during their professional discussion underpinned by a written log.

UCE – United Centre *of* Excellence are registered on the Register of End Point Assessment Organisations (RoEPAO). Responsible for carrying out an independent End Point Assessment (EPA) on a range of the new Improvement Apprenticeships and the only End Point Assessment Organisation (EPAO) dedicated to the Lean, Six Sigma and Lean Six Sigma currently in England.

Full-time apprentices will typically spend 14 to 15 months on-programme working towards the apprenticeship standard, with a minimum of 20% of this time being off-the-job training.

Apprentices without English and Mathematics at level 2 must achieve level 2 before taking their EPA. The EPA should only start once the employer is satisfied with those gateway requirements for EPA have been met and that the apprentice is consistently working at or above the level set out in the standard.

The EPA consists of two distinct assessment methods: -

- **Profession discussion:** underpinned by portfolio of evidence
- **Examination:** based on mini case-studies

WARNING! This Portfolio Kit is not designed to cover everything in the syllabus!

Assessment Method	Area Assessed	Assessed by	Grading	Weighting
Professional discussion, underpinned by portfolio of evidence	Knowledge, skill and behaviour elements	End Point Assessment Organisation	Fail/Pass/Merit/ Distinction	50%
Examination, based on mini case-studies	Knowledge, skill and behaviour elements	Examination End Point Assessment Organisation	Fail/Pass/Merit/ Distinction	50%

Please note that on-programme assessment does not count toward the EPA/apprenticeship grade. Performance in the two assessment methods is combined to determine the EPA and apprenticeship grade of fail, pass, merit or distinction.

EPA can only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the standard. Employers may wish to take advice from their apprentice's training provider(s).

Employers must ensure that the apprentice has met the following requirements before EPA taking place, and provide a signed declaration confirming this to UCE to trigger the EPA:

- Completion of a log detailing all training, learning and workshops demonstrating that a minimum of 20% off-the-job training has been completed over the course of the apprenticeship. The log must ensure there is a minimum of one piece of evidence that demonstrates each required Knowledge, Skills & Behaviours.

Assessment Method	Key	Target Reference & Support
Professional discussion	P	Target Knowledge Sheets – **TKS**
Examination	E	Target Work Sheets – **TWS**
EPA Readiness (This document)	K	Target Portfolio Kit - **TPK**

LEVEL 5 - Improvement Specialist	IfATE: KSB	UCE Code	EPA Method
Compliance & Commercial environment	K5	TKSBB01	P
Team formation & leadership	K1	TKSBB02	P
Presentation & reporting	N/A	TKSBB03	P
Project management & planning	K2	TKSBB04	P
Change management & planning	K4	TKSBB05	P
Principles & methods for Improvement	K6	TKSBB06	P
Project selection, scoping, reviewing & coaching	K3	TKSBB07	P
Problem definition & Business benefits	N/A	TKSBB08	P
Process mapping & analysis	K8	TKSBB09	P
Data analysis	K9	TKSBB10	E
Statistics & measures	K10	TKSBB11	E
Process capability & performance	K13	TKSBB12	E
Root cause analysis	K14	TKSBB13	E
Experimentation & optimisation	K15	TKSBB14	P
Identification & prioritisation	K16	TKSBB15	P
Sustainability & control	K18	TKSBB16	P
Measurement system analysis	K12	TKSBB17	E
Data analysis & statistical methods	N/A	TKSBB18	P
Lean concepts & tools	K11	TKSBB19	P
Failure mode avoidance	K17	TKSBB20	P
Voice of the customer (VoC)	K7	TKSBB21	P

Improvement Specialist	IfATE: KSB	UCE Code	EPA Method
Compliance	N/A	TWSBB01	P
Communication	S3	TWSBB02	P
Voice of the Customer (VoC)	N/A	TWSBB03	P
Project management & planning	S5	TWSBB04	P
Change management & planning	S6	TWSBB05	P
Principles & methods for Improvement	S7	TWSBB06	P
Project selection & scoping	S8	TWSBB07	P
Problem Definition	N/A	TWSBB08	P
Process mapping & analysis	S9	TWSBB09	P
Data acquisition for analysis	N/A	TWSBB10	P
Statistics & measures	S12	TWSBB11	E
Process capability & performance	S14	TWSBB12	E
Root cause analysis	S15	TWSBB13	E
Lean tools	S10	TWSBB14	P
Identification & prioritisation	N/A	TWSBB15	P
Sustainability & control	S20	TWSBB16	P
Data analysis & statistical methods	S13	TWSBB17	E
Benchmarking	S18	TWSBB18	P
Measurement system analysis	S11	TWSBB19	P
Experimentation & optimisation	S16	TWSBB20	P
Capability Development	S4	TWSBB21	P
Data analysis - Statistical Process Control (SPC)	S17	TWSBB22	E
Failure Mode Avoidance	S19	TWSBB23	P
Leading Improvement Teams	S1	TWSBB24	P
Strategic Deployment of Continuous Improvement	S2	TWSBB25	P

Improvement Specialist	IfATE: KSB	UCE Code	EPA Method
Drive for results	B1	TPKBB01	P
Team-working	B2	TPKBB02	P
Professionalism	B3	TPKBB03	P
Continuous development	B5	TPKBB04	P
Safe working	B6	TPKBB05	P
Process Thinking	B4	TPKBB06	P

The requirements for each assessment method are detailed below.

1. **Professional discussion, underpinned by portfolio of evidence**

- The apprentice will attend the EPA with a technical expert from the apprentice's employer, the UCE assessor with carry out the EPA which will last **2 hours and more than 2 hours 20 minutes** in duration. The technical expert's role is to provide the assessor with clarifications around specific company policy and procedure or technical knowledge only. They must not provide information on behalf of the apprentice, ask the apprentice questions or influence the apprentice in any way. The technical expert must not amplify or clarify points made by the apprentice. Note that the EPA judgement lies solely with the UCE assessor who grades the professional discussion.

- The UCE assessors will ask open/competency-based questions to cover the KSBs mapped against each method

Explain in detail……	Describe……	Give an example……
Demonstrate……	Take us through your calculation of……	Why did you……
Where do you find……	How did you……	What was the objective……

- Questions for the professional discussion will be devised by the UCE assessor following a review of the evidence in the apprentice's portfolio of evidence uploaded to ACE360, including the video of the training session, prior to the professional discussion.

- The UCE assessors will ask open/competency-based questions to cover the KSBs mapped against this method as shown in Appendix 3 of this document.

- The skill/judgement of the UCE assessors will be above level 5 and may nudge the apprentice with follow-up questions if required to seek clarification of the answer provided to make a sound assessment against the grading criteria set-out in Appendix 2 of this document.

- Apprentices may at all times refer to the portfolio of evidence if required when answering the questions asked by the UCE assessor.

- Questions must be devised by the apprentice's assessor following a review of the evidence in the apprentice's portfolio of evidence, including the video of the training session, prior to the professional discussion.

   a. **Portfolio of evidence requirements:**

- The portfolio of evidence must include a minimum of one set of evidence for each of the topic areas assessed by the professional discussion as shown in Appendix 3. The evidence **_must include_** a range of documents, such as reports from process improvement projects, graphs showing process analysis, charts showing impact readiness, image of House of Quality and extracts from project plans

- The portfolio of evidence _**must**_ also include evidence relating to the preparation and delivery of a training session which can have been delivered during the on-programme phase of the apprenticeship with Level 4 learning outcomes linked to one or two improvement topics:

- Training session and evidence requirements: It must cover a subject selected from the following list:
  - Project Management,
  - Change Management,
  - Process Mapping and Analysis,
  - Lean Principles and Tools,
  - Measurement System Analysis,
  - Data Collection Planning, Graphical Analysis,
  - Process Capability,
  - Root Cause Analysis,
  - Designed Experiments,
  - Statistical Process Control.

- The training materials must be prepared by the apprentice (i.e. they must not deliver published training material prepared by someone else and this requirement will be authenticated by a signed statement provided by the apprentice's employer)

- It must be delivered to a group of Level 4 delegates in their normal working environment and last 35-40 minutes in duration

- A continuous video recording of the session must be included in the portfolio of evidence

- Training materials may include for example PowerPoint presentation, lesson plan, training notes, photographs of white boards, handouts, flipcharts

- All training materials and records of delegate feedback must be included in the portfolio of evidence

- The evidence must be mapped holistically against the KSBs, as shown in Appendix 3

- Apprentices should focus on the quality of evidence rather than quantity

- The evidence must be generated by the apprentice (either independently or in a team-based environment) with the apprentice's role and that of a team, clearly identified and authenticated by a signed statement provided by the apprentice's employer (which should be included in the portfolio of evidence)

- The portfolio of evidence must be used to underpin the professional discussion in the EPA and is not assessed as part of the EPA

- The completed portfolio of evidence must be submitted to UCE within two weeks of EPA gateway completion to allow time for the EPAO to review it and prepare for the EPA

- The skill/judgement of assessors will be necessary to formulate and ask sufficient questions (including follow-up questions if required to seek clarification) to make a sound assessment against the grading criteria set out in Appendix 2 & 3

- Apprentices may refer to the portfolio of evidence when answering questions.

UCE accept different organisations require different training; however, it is the training companies and employer's responsibility to ensure the standard is being achieved to the EPA plan. Details can be obtained from: (revision uplift dated 5.8.20) https://www.instituteforapprenticeships.org/media/1748/st0555-_improvement-specialist_l5_-epa_for_publication_23_april_18.pdf

2. Examination

- The apprentice must complete an examination which will consist of eight separate mini case studies, covering the following topics where there will be a series of right/wrong answers.

    1. Sampling,
    2. Measurement System Analysis,
    3. Capability Analysis,
    4. Transformation,
    5. Hypothesis Testing,
    6. Correlation,
    7. Regression,
    8. Statistical Process Control.

- Each case-study will have a brief description of a scenario and a set of data, this will be provided as part of the online examination portal and the data must be copied and pasted in Excel, Minitab or an alternative software package. It must require the apprentice to work with the set of data in Excel, Minitab or an alternative software package, apply tools and draw conclusions.

- The apprentices must answer 10 multiple-choice questions in relation to each case-study. Which will cover their knowledge on the topic where there will be a series of right/wrong answers.

- The apprentices will be required to select the correct answer from a multiple-choice set of four possible answers where one answer is correct.

- The apprentices will be allocated four hours to complete the examination, allowing approximately 30 minutes to answer the questions for each mini case-study.

- The examination will be open-book i.e. apprentices can refer to notes or materials, since this is representative of the working environment of Improvement Specialists; however please note that the quantity and complexity of questions will mean that the apprentices will not have time to consult reference material for every question so please prepare.

- The examination will be online, and the following steps will be required:
- Your laptop/PC or tablet must have a working camera to invigilate you carrying out the exam
- A timer bar will appear at the top of the online exam and will change to red with the word "SUBMIT" when you have 1-minute left. DO NOT PANIC... if you go over time it will continue to record the time and the bar will read "OVERTIME".
- Be sure your Laptop/PC or tablet is plugged in and has sufficient power.
- Be sure you have a good Wi-Fi Signal if your computer is not hard wired to your internet network
- Be sure your camera is working on your Laptop/PC or tablet
- Be sure your Mobile Phone / Telephone is switched off
- Be sure you have no distractions during the Exam and you complete the Exam in one seating

End Point Assessment – Final Judgement

Solely the UCE independent assessor will determine the decision on the learner/apprentices performance of the EPA.
It is anticipated that the same independent assessor will mark the project report, presentation & questioning and professional discussion underpinned by log, although this is not a requirement to allow flexibility. The independent assessor that conducts the report, presentation and professional discussion assessment will combine the results from each assessment method to determine the EPA/apprenticeship grade as described later in this document.

The learner/apprentice will be notified of the UCE's outcome in writing within four weeks of the completion of the EPA, including detail of areas for further development and improvement where they have failed.

Failure/Re-sit and Re-take information

Learners/apprentices that fail the EPA will have the opportunity to re-sit/re-take. Re-sits/re-takes are not to be offered to learners/apprentices wishing to move from pass to merit/distinction or merit to distinction. A re-sit does not require further learning, whereas a re-take does.

The conditions relating to re-sits/re-takes are outlined below.
Learners/apprentices who fail anyone EPA method will be offered the opportunity to take a re-sit/re-take for that one method.

The re-sit/re-take must be taken within one month of notification of the result of the original EPA; otherwise the entire EPA must be retaken. The re-sit/re-take will be graded pass/merit/distinction and combined with the grades for the other two assessment methods to determine the EPA grade. If an apprentice fails the re-sit/re-take they will be required to re-take the EPA in full after a period of further learning. Learners/apprentices who fail more than one of the EPA methods or who have to re-take the EPA in full due to conditions described above will be required to re-take the entire EPA after a period of further learning. The maximum grade awarded will be 'pass', unless the UCE establishes that the reason for the original fail was for reasons beyond the learners/apprentices control. In all cases, the learners/apprentices employer will need to agree that a re-sit or re-take is an appropriate course of action.

End Point Assessment – Summary of Roles and Responsibilities

Employer
- Selects United Centre *of* Excellence (UCE - may be advised by the training provider)
- Confirms all EPA gateway requirements have been met, signs off to this effect and triggers EPA via UCE
- Confirms arrangements with UCE for the EPA (who, when, where).
- Ensures apprentice is aware of the EPA, is prepared and ready, and ensures attendance.
- Selects appropriate employee (supervisor or above) to attend the presentation & questioning and professional discussion to ensure the accuracy and veracity of the apprentice's presentation and statements.

Training Provider
- May assist the employer in confirming that all EPA gateway requirements are completed before EPA (e.g. through demonstrating to the employer results of any on-programme testing).
- May assist the employer by making arrangements with UCE for the practical aspects of the EPA (who, when, where).
- Prepares learner/apprentice for EPA during the on-programme phase.

United Centre *of* Excellence (UCE)
- Develop and provide all required material and resources required for the EPA
- On receipt of 'trigger' from either the employer or training provider or both, contact the employer and arrange dates, times and locations for the required EPA.
- Ensure all required material is present at the EPA venue.
- Provide appropriate and qualified staff to enable completion of all aspects of the EPA.
- Confirm result of EPA to apprentice and employer.
- Arrange for certification.
- Maintain robust internal quality assurance procedures and moderation.
- Support as requested the activities of the nominated external quality assurance body.

Appendix 1 – Behaviour guidance sheets

TPKBB01 Drive for results

Co-ordinates and delivers sustained improvement across the business by engaging with, and inspiring stakeholders; adopting a can-do attitude. By documenting the current best practice, standardized work forms the baseline for kaizen or continuous improvement. As the standard is improved, the new standard becomes the baseline for further improvements, and so on. Improving standardized work is a never-ending process.

Continuous drive for change and encourages others to deliver results across functional areas capturing and standardising best practice
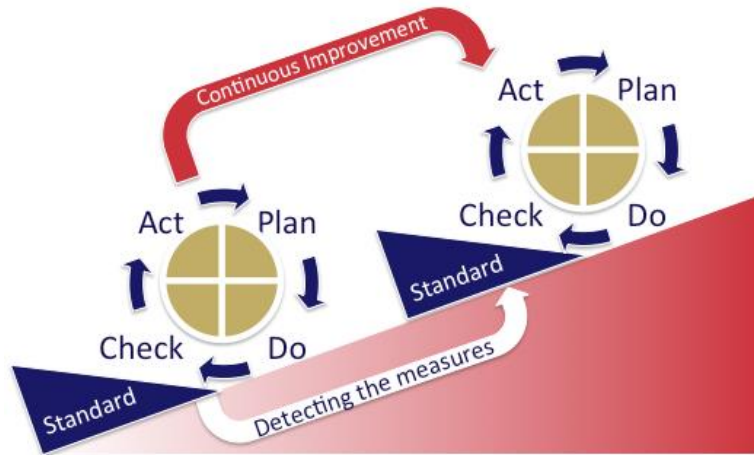
Once the process, service, or product has been improved with Plan-Do-Check-Act (PDCA), then the newly improved process is standardised via the wedge, or standard work. Then, we continually improve via PDCA. And whenever we do, we standardize the new process.

A Standard allows us to have a basis for comparison and allows us to see what is "normal" versus "abnormal" conditions. Without a standard, we don't know and cannot tell what condition our process, service, or product is in.

The benefits of standardised work include documentation of the current process for all shifts, reductions in variability, easier training of new operators, reductions in injuries and strain, and a baseline for improvement activities. The wedge prevents the standard from rolling back using measures to detect change and drive for results.

Standardising the work adds discipline to the culture, an element that is frequently neglected but essential for lean to take root. Standardised work is also a learning tool that supports audits, promotes problem solving, and involves team members in developing mistake proofing or inadvertent error prevention.

Suggested evidence:

- Stakeholder engagement conversations
- Promoting a continuous Improvement Culture
- Continuous personal development plan

Suggested open questions:

- Explain how you drive for results using a can-do attitude?

TPKBB02 Team-Working

A "high-performance work team" refers to a group of goal-focused individuals with specialised expertise and complementary skills who collaborate, innovate and produce consistently superior results. Leads cross functional project teams proactively, regularly supports others and replicates learning. The group relentlessly pursues performance excellence through shared goals, shared leadership, collaboration, open communication, clear role expectations and group operating rules, early conflict resolution, and a strong sense of accountability and trust among its members.

Awareness of own and others' working styles creates high performing team

What distinguishes high-performance teams from other groups is that a team is more than a collection of people simply following orders. To function effectively, a high-performance team also needs:

- A deep sense of purpose and commitment to the team's members and to the mission.
- Relatively more ambitious performance goals than average teams.
- Mutual accountability and a clear understanding of members' responsibilities to the team and individual obligations.
- A diverse range of expertise that complements other team members' abilities.
- Interdependence and trust between members.

The behaviours for teamwork are a mix and match of different qualities and values. Each will be suitable for different situations; the learner/apprentice will need to know when to use what to get the most of the team. A notable experience during the apprentice's journey will make a good discussion point during the professional discussion.

Characteristics of High-Performance Work Teams

Although there is no simple measure of performance effectiveness for groups, and no team is identical, there seems to be a shared understanding of what makes an effective group work. High-performance work teams are generally composed of a combination of purpose and goals, talent, skills, performance ethics, incentives and motivation, efficacy, leadership, conflict, communication, power and empowerment, and norms and standards.

Team purpose, goals and roles: High-performing teams are synergistic social entities that work toward the achievement of a common goal or goals—short term and long term. They often exemplify a total commitment to the work and to each other. Team members do better work when their roles are clear: They know how to do their jobs and why they are doing them. Each member must understand and support the meaning and value of the team's mission and vision. Clarifying the purpose and tying it to each person's role and responsibilities enhances team potential, as does the inclusion of "stretch" goals that increase the challenge necessary to motivate team members.

Talent, skills and work ethic: High-performance teams begin by recruiting and retaining their best talent while quickly helping low-performing members find other places to work. Morale typically increases as performance increases. After selecting for talent, it is critical to ensure that the team members possess complementary skills (e.g., technical, problem-solving, decision-making and interpersonal skills).

Incentives, motivation and efficacy: Both monetary and nonmonetary systems that encourage high performance have a positive impact on tactical implementation of the team's goals. Over the long term, intrinsic motivators such as personal satisfaction at work and working on interesting projects provide the greatest impact on performance. In addition, a belief in one's self and abilities encourages people to take more strategic risks to achieve team goals.

Leadership: High-performing leaders generally accompany high-performance work teams. Essential leadership qualities include the ability to

a) keep the purpose, goals and approach relevant and meaningful;
b) build commitment and confidence;
c) ensure that team members constantly enhance their skills;
d) manage relationships from the outside with a focus on the removal of obstacles that might hinder group performance;
e) provide opportunities for others without seeking credit; and
f) get in the trenches and do the real work required. There is widespread agreement that effective team leaders focus on purpose, goals, relationships and an unwavering commitment to results that benefit the organization and each individual.

Conflict and communication: Conflict management is an essential part of becoming a high-performance team. Open communication in such teams means a focus on coaching instead of on directing and a focus on the ability to immediately address issues openly and candidly. The key to team performance is open lines of communication at all times to provide motivation, maintain interest and promote cooperation.

Power and empowerment: Empowered work teams increase ownership, provide an opportunity to develop new skills, boost interest in the project and facilitate decision-making. Researchers refer to the ideal situation as being "loose-tight," such that specific decision-making boundaries are constructed with enough room for individuals to make empowered choices.

Norms and standards: Like rules that govern group behaviour, norms can be helpful in improving team development and performance. Norms for high-performance teams include open lines of communication, early resolution of conflict, regular evaluation of both individual and team performance, high levels of respect among members, a cohesive and supportive team environment, a strong work ethic that focuses on results, and shared recognition of team successes. The key is that high-performing teams actually discuss and agree to their operating rules—standards that each team member agrees to uphold and for which they hold each other accountable.

Suggested evidence:

- Communicating a RACI chart
- Teaching others through work instructions
- Continuous personal development plan

Suggested open questions:

- Can you demonstrate how you would manage conflict within a team?

TPKBB03 Professionalism

All companies will Promotes a moral, legal and socially appropriate working manner, aligns behaviours to the organisation's values. Maintains flexibility to needs of project. Professionalism exemplifies high standard of professional integrity, ethics and trust within the organisation, whilst maintaining flexibility to the needs of the business
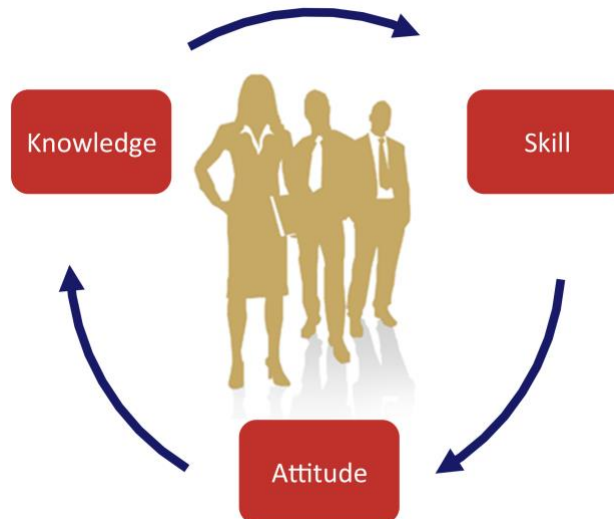
Professionalism is a way of conducting yourself in your place of work by demonstrating some of the following behaviours:

Respect for others: Courtesy and respect for others are fundamental elements of professional behaviour. A professional strives to understand the differences among classmates and colleagues, provides objective, constructive feedback when asked to evaluate others, contributes equitably in group work, and is punctual and avoids disrupting the learning and work environment. Professionals respect others' expectations of confidentiality and privacy.

Commitment to quality: A professional aims for the highest possible standard of performance and endeavours to produce work in which he or she can take genuine pride.

Responsibility: A professional takes responsibility for his or her owns progress by being prepared for training, coaching and working alone and other activities. A professional also takes responsibility for his or her actions with care for consequences that might evolve and for how their actions will affect others.

Personal integrity: Professionalism is reflected by the extent to which others can rely upon you. A professional can be counted on to follow through on commitments, avoid conflicts of interest and bias, and adhere to the rules of society or organisations with which they may be a part off.

The behaviours for professionalism are a mix and match of different qualities and values. Each will be suitable for different situations; the leaner/apprentice needs to be able to know when to use what to get positive feedback. Using their written log, they can refer to any experience they may have had applying this type of behaviour during their apprenticeship to support any questions during their professional discussion.

Suggested evidence:

- Business code of conduct
- Example of ethics and trust demonstrated
- Continuous personal development plan

Suggested open questions:

- When approached with a gift from a customers which is against your ethics policy what action would you take?

TPKBB04 Continuous Development

Identifies & models opportunities for development of self & others. Proactively seeks and acts on feedback. Reflects on performance and has a desire for development. Adapts quickly to working with new situations/stakeholders/challenges to demonstrate continuous development behaviour.

One of the attributes all employees need to have is being able to adapt to change. In this current economy, everyone is moving around from one company or group to the next. We've accepted that employees don't stay in one role for life and one of the challenges that comes with that is to handle new situations/stakeholders/challenges that you haven't before. In order to better handle change in the workplace, here are ten tips for you:

1. Maintain a positive attitude: You always have to be optimistic and maintain a good attitude, regardless of what new company, department or group you're working with. Come to terms that your new situation might not be perfect but your previous situation probably wasn't either. Think about how you can best leverage your skills, experiences and network to maximize your new role. If you have a negative a attitude, your new manager and co-workers will notice and they won't want to work with you.

2. Recognize that change is constant: People have several careers and jobs in their lifetime and companies are constantly moving employees from group to group based on current needs. You will have change happen to you whether you like it or not so you must accept that reality. The good thing about change is that it prevents you from getting bored in your current role and challenges you to work on projects that you haven't before.

3. Stay connected to previous co-workers: Never forget about the people you've already had the chance to work with because they could become extremely beneficial to you down the road. If they are staying with your previous group or moving around, you could tap them to help you on a project. They could also become your lifeline back to your previous group or a different group within your company (or at another company).

4. Communicate with others to learn your new role: After you get moved into your new role, you should quickly find all of the stakeholders that you rely on and connect with them. Find those that have already been in your role and get them to teach you everything you need to know so you can get up to speed. Become good at asking questions because the more you know, the better equipped you will be in this role and the easier your life will be. If you wait too long to reach out to them, your performance will start lacking and people will notice.

5. Be optimistic even though you might not be currently happy: Regardless if you like your new role or not, you need to make the best of it. Who knows what a year or more in this role can really do for you. You might also move again soon after starting. Think about the tasks you like in your current role and how to best use your strengths and increase your performance.

6. Self-reflect: Take some time to relax and think about what you've already accomplished and what your goals are for your new role. Think about what skills you need to acquire, who you need to meet and assess your entire situation. Talk with your new manager so that they realize what you're looking to get out of the role and set expectations for the deliverables you're going to be working on.

7. Learn new skills: You naturally are forced to learn new skills based on the type of work you have to do for your job. Make a list of skills that are required for your new role and invest time each week in developing those skills. For each skill, give yourself a deadline to master it so that you can quickly become an expert and increase your value.

8. Over communicate: Whether you're working from an office or working from a remote office, you should constantly be in touch with your new colleagues. They need to know that you're responsible, that you're getting the work done and that you exist. When you're emailing them, or in a meeting, make sure to clarify what you or they say so that everyone is on the same page.

9. Ask as many questions as possible: There are no bad questions unless you ask something that has already been asked or explained. Come up with a list of questions and as you receive the answers, write them down. This way, you can show people that you're paying attention to what they have to say. Asking questions will help you further develop yourself in a role.

10. Look for ways to help others cope with change: One of the best ways to deal with your position is to help others get situated while you are trying to yourself. By doing this, you feel more comfortable because you realise that others are going through what you are. In addition, by helping others in this way, they will be more inclined to want to help you in return The behaviours of learning and continuous development will take time and energy, and it will sometimes take the learner/apprentice out of their comfort zone.

Suggested evidence:

- Self-learning plan
- Continuous personal development plan
- Model used for continuous development

Suggested open questions:

- How do you motivate yourself to learn?

TPKBB05 Safe Working

Adopts a proactive approach to safety, encouraging others and suggesting compliance improvements. Ensures safety of self and others, speaks out to challenge safety issues.

An individual that is observable can define behaviour as an action by others. It's estimated that up to 80% of work-related accidents, employees' behaviour – in the form of acts or omissions – is a contributing factor. Such behaviour can pave the way for many pre-existing factors to come together in a negative event. There are many reasons why employees engage in 'at-risk' behaviour at work. Some examples are:

1. Cutting corners to save time: how often do employees decide not to use personal protective equipment (PPE) because a task may only take seconds to complete? In this example, the at-risk behaviour (the failure to use PPE) has the instant perceived benefit of saving time.

2. Ergonomic factors: Inappropriately placed machine controls may lead to improvised and potentially dangerous access arrangements.

3. Accepted practice: We've always done it that way.'

4. Reinforcement of at-risk behaviour by the actions of supervisors: This may also undermine employees' confidence in the management's commitment to manage concerns such as safety

5. Misunderstanding at-risk behaviour: Employees may be unaware, or have a low perception, of the risks associated with a particular task or activity. This could be due to insufficient information or training

6. Instinctive risk-taking behaviour: Some people are more naturally inclined than others to take risks.

The behaviours of safe working will sometimes come naturally for the learner/apprentice depending on their working environment. The experience will depend on industry-to-industry, but the goal of "Nobody Gets Hurt" will remain the same the learner/apprentice must be able to demonstrate how they have applied and acknowledged safe working during their professional discussion.

Suggested evidence:

- Compliance document for health & safety
- Risk assessment
- Use of PPE

Suggested open questions:

- Can you demonstrate how you have applied safe working in your company?

TPKBB06 Process Thinking

In today's fast changing business environment, it's all about speed and scale, and business leaders are turning to the latest technology to provide solutions to their most complex challenges. This however is not successful without a culture of process thinking and having employees that adapt a data driven process thinking behaviour that drives customer focus and decision making.
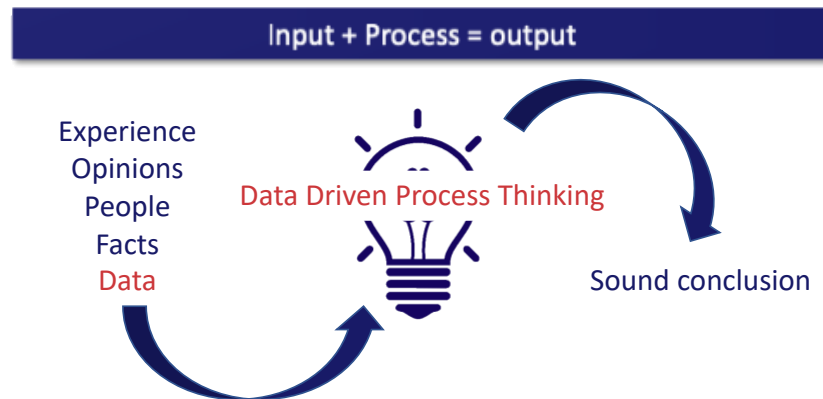
Input + Process = output

Experience
Opinions
People
Facts
Data

Data Driven Process Thinking

Sound conclusion

Process Thinking: Drives process-thinking and customer-focused, data-driven decision making. Data Thinking is a framework for the research, design, development and validation of data-driven solutions with a user data and future oriented focus. It is therefore easy to see that data driven process thinking is the clear way forward.

A sound conclusion (output) requires high-quality inputs (e.g. accurate information and access to the right people) and a high-quality thinking process. Focusing on the inputs in not enough to ensure success, you need to give equal attention to the process or what we do with the inputs e.g. how we collect, organise and analyse them.

Why **Data** Driven **Decision Making** Is Important? The importance of **data** in **decision** lies in consistency and continual growth. It enables companies to create new business opportunities, generate more revenue, predict future trends, optimise current operational efforts, and produce actionable insights, as an employee that promotes and demonstrate process thinking and data driven decision making it encourages the culture of the business to be adapted in the same way.

Here are ten simple steps to remember:

1. Guard against your biases
2. Define objective
3. Gather data now
4. Find the unresolved questions
5. Find the data needed to solve these questions
6. Analyse and understand
7. Don't be afraid to revisit and re-evaluate
8. Present the data in a meaningful way
9. Set measurable goals for decision making
10. Continue to evolve your data driven business decisions

Suggested evidence:

- Data used to make decisions
- Graphs, charts and tables
- Objectives with statistical data

Suggested open questions:

- Explain where you have used data to make an informed decision?

Appendix 2 - Grading Criteria

Each assessment methods' contribution to the overall grade of the EPA/apprenticeship is set out in the following table:

Professional discussion, underpinned by portfolio of evidence	Examination, based on mini case-studies	Overall grade to be awarded
FAIL	ANY	**FAIL**
ANY	FAIL	**FAIL**
PASS	PASS	**PASS**
PASS	MERIT	**PASS**
PASS	DISTINCTION	**MERIT**
MERIT	PASS	**PASS**
MERIT	MERIT	**MERIT**
MERIT	DISTINCTION	**MERIT**
DISTINCTION	PASS	**MERIT**
DISTINCTION	MERIT	**DISTINCTION**
DISTINCTION	DISTINCTION	**DISTINCTION**

Each of the two assessment methods of the EPA needs to be passed to gain a minimum grade of 'pass' for the EPA and thus the apprenticeship. The grade from each assessment method is combined reflecting it's weighting to determine the EPA grade, of pass, merit and distinction.

The **Examination criteria** will be weighted as follows:

Fail Criteria	Pass Criteria	Merit Criteria	Distinction Criteria
0-74	75-79	80-84	**85-100**

The EPA must be completed within two months of completion of the EPA gateway. By the end of month one, the learner/apprentice must have submitted their log and project portfolio to their EPAO and have prepared their project report and presentation.

The project report, presentation & questioning and professional discussion underpinned by the log will take place during month two with a minimum notice period of 2 weeks required.

It is anticipated that the report presentation & questioning and professional discussion underpinned by log will take place on the same day; however this is not a requirement. The multiple-choice examination can take place at any point during the EPA period.

Requirements for technical experts

Employers must appoint technical experts to support assessors of the Professional Discussion and they must:

* Have knowledge and experience of the processes being measured and improved by the apprentice.
* Ideally be trained to Level 6 in Improvement principles and tools for example, certified as a Lean Six Sigma Master Black Belt or have equivalent experience

Appendix 3 - KSBs mapped against this method for Professional discussion

Knowledge statement - Improvement Specialists has the Knowledge and understanding of:	Assessment method	UCE reference
K1. Leading improvement teams: Personality types, team development stages, motivational techniques, situational leadership, learning styles, mentoring models	Professional discussion	TKSBB02
K2. Project planning: Multi-element business case, financial plan, benefits realisation plan, risk management plan, project plan	Professional discussion	TKSBB04
K3. Project reviews & coaching: Coaching models, Maslow's hierarchy of need	Professional discussion	TKSBB07
K4. Change planning: Change management methods, impact/readiness, influencing strategies	Professional discussion	TKSBB05
K5. Commercial environment: Business and economic risks including changes in legislation, government regulation or trading conditions that can impact all aspects of improvement from Project Selection through to selection/implementation of improvements	Professional discussion	TKSBB01
K6. Principles & methods for Improvement: How to apply Improvement Methods (e.g. Practical Problem Solving, Define Measure-Analyse-Improve-Control, 8-Disciplines, Identify Define-Optimise-Verify) across all functions, policy deployment principles, Lean culture	Professional discussion	TKSBB06
K7. Voice of the customer: Interviewing and focus groups, Quality Function Deployment principles and how to build a House of Quality	Professional discussion	TKSBB21
K8. Process mapping & analysis: Activity network diagrams, design structure matrix, process modelling, key function diagrams and analysis	Professional discussion	TKSBB09
K11. Lean concepts and tools: Principles of Lean Thinking and Lean tools including origins and cultural aspects critical to successful application within an organisation	Professional discussion	TKSBB19
K15. Experimentation: Principles of full and fractional designed experiments including replicates, repeats, randomisation, blocking and centre points, resolution, and confounding. Planning and analysis using residuals, main effects & interaction plots, hierarchy of terms, Response Surface Method, Split plots, Analysis of variance (ANOVA). Approaches for model optimisation	Professional discussion	TKSBB14
K16. Identification & prioritisation: Creativity tools e.g. theory of inventive problem solving (TRIZ), Pugh matrix	Professional discussion	TKSBB15
K17. Failure mode avoidance: System state flow, boundary diagram, interface analysis tables, fault tree analysis, robustness checklist, tolerance design and analysis. Principles and links between Failure Modes and Effects analysis for concepts, designs, processes.	Professional discussion	TKSBB20
K18. Sustainability & control: Control and reaction plans. Prevention controls	Professional discussion	TKSBB16

Skills statements - Improvement Specialists has the following Skills:	Assessment method	UCE reference
S1. Leading improvement teams: Holding team members/stakeholders to account for delivering agreed actions within an improvement project and building/maintaining appropriate stakeholder relationships inside and outside the organisation to deliver improvement project objectives	Professional discussion	TWSBB24
S2. Strategic Deployment of Continuous Improvement: Contribute to deployment of improvement strategy, participating as an active member of the improvement community	Professional discussion	TWSBB25
S3. Communication: Prepare and present concise proposals and plans. Capture and share progress through effective formats and channels. Use and handle questions effectively. Build rapport with others.	Professional discussion	TWSBB02
S4. Capability Development: Train, facilitate and critique the application of tools used by improvement practitioners including tool-selection, links between tools, how they are used within a structured method, analysis of results and presentation of recommendations	Professional discussion	TWSBB21
S5. Project planning: Plan and manage finances, multi-stakeholder delivery and benefits realisation	Professional discussion	TWSBB04
S6. Change planning: Design reinforcement, engagement and communication strategies	Professional discussion	TWSBB05
S7. Principles and Methods for Improvement: Guide others on the selection of appropriate methods (e.g. Practical Problem Solving, Define-Measure-Analyse-Improve-Control, 8Disciplines, Identify-Define-Optimise-Verify) to deliver improvements. Conduct gateway assessments to ensure suitability of projects to progress	Professional discussion	TWSBB06
S8. Project selection & scope: Guides others on the selection and scoping of improvement projects and the initial response to product/process performance issues. Identify, scope, and prioritise improvement opportunities that map to high-level organisation objectives and key value-streams	Professional discussion	TWSBB07
S9. Process mapping & analysis: Guide others on the selection of appropriate process mapping and analysis tools. Critique improved state	Professional discussion	TWSBB09
S10. Lean tools: Identify and analyse value-streams using appropriate methods and tools to optimise flow to customer. Develop a plan for Lean deployment within the organisation including effective and relevant performance metrics	Professional discussion	TWSBB14
S11. Measurement: Guide others on the planning, analysis and interpretation of data collection & measurement studies including the design of tests to recreate failures & steps to diagnose/reduce short & long-term measurement variation	Professional discussion	TWSBB19
S16. Experimentation & optimisation: Guide others on the planning, analysis and interpretation of experiments. Plan, conduct, analyse and optimise both full & fractional experiments	Professional discussion	TWSBB20
S18. Benchmarking: Guide others on benchmarking to support all stages of improvement projects including future-state design	Professional discussion	TWSBB18
S19. Failure mode avoidance: Decompose complex systems in order to define main functions. Analyse system interactions. Cascade knowledge through fault tree analysis. Create and assess design rules, standards & verification methods. Complete robustness studies to select appropriate control strategies and detection methods	Professional discussion	TWSBB23
S20. Sustainability & control: Guide others on control and sustainability planning including methods and tools to maintain benefits, extraction of learning, replication, sharing and consolidation of new knowledge into organisational learning.	Professional discussion	TWSBB16

Behaviour statements - Improvement Specialists demonstrate the following Behaviours:	Assessment method	UCE reference
B1. Drive for results: Co-ordinates and delivers sustained improvement across the business by engaging with, and inspiring stakeholders; adopting a can-do attitude	Professional discussion	TPKBB01
B2. Team-working: Leads cross functional project teams proactively, regularly supports others and replicates learning	Professional discussion	TPKBB02
B3. Professionalism: Exemplifies high standard of professional integrity, ethics and trust within the organisation, whilst maintaining flexibility to the needs of the business	Professional discussion	TPKBB03
B4. Process Thinking: Drives process-thinking and customer focused, data-driven decision making	Professional discussion	TPKBB06
B5. Continuous development: Identifies & model's opportunities for development of self & others	Professional discussion	TPKBB05
B6. Safe working: Adopts a proactive approach to safety, encouraging others and suggesting improvements on compliance.	Professional discussion	TPKBB04

Appendix 3 - KSBs mapped against this method for Examination

Knowledge statements - Improvement Specialists demonstrate the following Behaviours:	Assessment method	UCE reference
K9. Data acquisition planning: Stratification, rational sub-groups, power and sample size	Examination	TKSBB10
K10. Statistics & measures: Probability distributions and how to test for fit of probability distributions to data. Confidence intervals, central limit theorem. How to test data for stability and normality and strategies for dealing with non-stable or non-normal data	Examination	TKSBB11
K13. Process capability: Data transformation, life data analysis and prediction	Examination	TKSBB12
K14. Root cause analysis: Matrix plots, multi-vari charts, hypothesis testing principles and methods, correlation and regression principles and methods	Examination	TKSBB13
K12. Measurement System Analysis: Repeatability & Reproducibility analysis. Long term measurement error	Examination	TKSBB17

Skill statements - Improvement Specialists demonstrate the following Behaviours:	Assessment method	UCE reference
S12. Statistics & measures: Confirm data and fit for a range distribution models. Establish predictions. Calculate confidence intervals	Examination	TWSBB10
S13. Data analysis-statistical methods: Model random behaviour and make inferences with levels of confidence. Calculate/recommend sample size. Test hypotheses for all data types. Assess input/output correlation. Generate, analyse and interpret simple and multiple predictive relationship models	Examination	TWSBB17
S14. Process capability & performance: Identify data stability/distribution issues and apply appropriate strategies to enable robust Capability Analysis. Analyse life data to establish rates and patterns	Examination	TWSBB12
S15. Root cause analysis: Make appropriate use of data to assess contribution of critical inputs/root cause(s) to product/process performance using appropriate graphical and statistical tools to draw and communicate conclusions	Examination	TWSBB13
S17. Data analysis – Statistical Process Control: Monitor and asses ongoing process variation and changes through chart-selection, control-limit setting, sample sizing/frequency and control-rules	Examination	TWSBB17

Evidence Matrix

		Professional Discussion Criteria of portfolio evidence matrix																															
Evidence number →						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
UCE Document Reference		Area of standard	Knowledge	Skill	Behaviour	Deployment matrix	house of quality	minutes of meetings	coaching session	RACI chart	Risk assessment	inhouse bench marking	Project plan with finances																			
TKSBB02	TWSBB24	Leading improvement teams	K1	S1		1				1	1		1																				4
TKSBB04	TWSBB04	Project planning	K2	S5									1																				1
TKSBB07	-	Project reviews & coaching	K3					1					1																				2
TKSBB05	TWSBB06	Change planning	K4	S6			1						1																				2
TKSBB01	-	Commercial environment	K5			1		1																									2
TKSBB06	-	Principles & methods for improvement	K6																														0
TKSBB21	-	voice of customer	K7				1																										1
TKSBB09	TWSBB09	Process mapping and analysis	K8	S9		1																											1
TKSBB19	TWSBB14	Lean concepts and tools	K11	S10																														0
TKSBB14	TWSBB20	Experimentation	K15	S16					1																								1
TKSBB15	-	Identification and prioritisation	K16																													0
TKSBB20	TWSBB23	Failure mode avoidance	K17	S19				1																									1
TKSBB16	TWSBB16	Sustainability and control	K18	S20																													0
-	TWSBB25	Strategic deployment of continuous improvement		S2																												0
-	TWSBB02	Communication		S3																												0
-	TWSBB21	Capability development		S4																												0
-	TWSBB06	Principles and methods of improvement		S7																												0
-	TWSBB07	Project selection and scope		S8					1																							1
-	TWSBB19	Measurement		S11																												0
-	TWSBB18	Benchmarking		S18								1																				1
-	TPKBB01	Drive for results			B1	1	1		1				1																			4
-	TPKBB02	Team working			B2	1	1		1				1																			4
-	TPKBB03	Professionalism			B3	1	1		1				1																			4
-	TPKBB06	Process thinking			B4	1	1		1				1																			4
-	TPKBB05	Continuous development			B5	1	1		1		1																					4
-	TPKBB04	Safe working			B6						1																					1
						8	8	3	6	1	3	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

The content must be about quality and competence not quantity
If the key shows K it is knowledge only
If the key shows k and s then both knowledge and aplication of the skills must be assessed
Behaviour will be assessed at all times

Fail, Pass, Merit and Distinction criteria

Area of Standard	UCE reference Or Training company reference	Suggested portfolio evidence. (Not compulsory and not exhaustive)	**Caution** Fail Criteria The Apprentice will fail if they display any of the following below. **Caution**	Pass Criteria The apprentice must demonstrate all of the following	Merit Criteria In addition to the pass criteria the Apprentice must demonstrate 12 or more of the following, two-three of which must be behaviours	Distinction Criteria In addition to the merit criteria the Apprentice must demonstrate 10 or more of the following, one-two must be behaviours
K1 & S1. Leading improvement teams: Personality types, team development stages, motivational techniques, situational leadership, learning styles, mentoring models Holding team members/stakeholders to account for delivering agreed actions within an improvement project and building/maintaining appropriate stakeholder relationships inside and outside the organisation to deliver improvement project objectives	K1 TKSBB02 S1 TWSBB24	- DISC profile - Minutes of progress meetings - Deployment matrix (Hoshin Kanri) - RACI chart - Training materials for coaching others.	Work alone, without engaging appropriate stakeholders.	Set-up and lead an improvement team to deliver strategically aligned business benefits, following the steps of a recognised Problem-Solving Methodology (e.g. DMAIC, PPS) and conducting gateway reviews to assess suitability to proceed. Select and apply **published approaches** (such as situational leadership and mentoring models) to communicate with and lead an improvement team over the course of an improvement project, engaging with stakeholders throughout.	1. Mentor others in setting up and leading effective improvement teams.	1. Set-up or lead new activities that contribute to the selection and application of methods or the processes for conducting gateway assessments to ensure suitability of projects to progress. 2. Promote the principles and benefits of coaching.
K2 & S5. Project planning: Multi-element business case, financial plan, benefits realisation plan, risk management plan, project plan	K2 TKSBB04 S5 TWSBB04	- Business Case - Benefits realisation - Risk Plan	Incorrect or missing details in the business case, financial plan, benefits realisation plan and/or project plan. Fail to consider risk.	Manage a portfolio of multiple improvement projects, ensuring appropriate financial planning, benefits realisation, and governance.	2. Establish or improve processes for identifying, prioritising, and allocating improvement projects.	3. Use Failure Modes and Effects Analysis principles and tools to identify and manage/mitigate risk in the context of managing a multi-project

Plan and manage finances, multi-stakeholder delivery and benefits realisation						improvement programme.
K3. Project reviews & coaching: Coaching models, Maslow's hierarchy of needs	K3 TKSBB07	- Coaching Model used - Self-learning plan - CPD – Continuing Professional Development	Fail to use coaching techniques to enable and encourage delegates to think and learn independently.	Understand at least 1 coaching model.		
K4 & S6. Change planning: Change management methods, impact/readiness, influencing strategies Design reinforcement, engagement and communication strategies	K4 TKSBB05 S6 TWSBB05	- Type of Change Method applied - impact/readiness plan or strategy - Type of influencing strategies applied	Fail to consider the impact of change in the context of an improvement project. Fail communicate status and progress of improvement project to stakeholders.	Apply Change Management tools to ensure effective and efficient delivery of business benefits through an improvement project. Develop a plan and use a range of strategies to influence others over the course of an improvement project.	Guide others in the preparation and/or presentation of proposals and plans.	4. Promote Improvement principles, methods and tools to others.
K5. Commercial environment: Business and economic risks including changes in legislation, government regulation or trading conditions that can impact all aspects of improvement from Project Selection through to selection/implementation of improvements	K5 TKSBB01	- SWOT and PESTLE analysis - Deployment matrix - Minutes of meetings	Fail to consider the wider business operating environment when identifying, managing, and implementing improvement projects.	Identify and prioritise business and economic risk in the context of identifying, managing, and implementing improvement projects.	4. Identify new approaches to identifying and prioritising business and economic risk in the context of managing a multi-project improvement programme.	5. Consider, and improve awareness across the business, of new risks that may arise in the future (e.g. the impact of Industry 4.0).
K6. Principles & methods for Improvement: How to apply Improvement Methods (e.g. Practical Problem Solving, Define-Measure-Analyse Improve-Control, 8Disciplines, Identify-Define Optimise-Verify)	K6 TKSBB06	- Structured Problem Solving technique - Hoshin Kanri (Objectives)	Fail to apply a recognised methodology and to select and use tools linked together in a logical and clear flow.	Apply Improvement methodologies to improve processes in at least 2 different parts of the business.	5. Apply a recognised methodology to design a new process, product or service right first time.	

across all functions, policy deployment principles, Lean culture		- Lean Culture implemented	Fail to link improvement activities to business strategy through policy-deployment principles. Fail to consider key inputs required to build a Lean culture.			
Ref 7. K7. Voice of the customer: Interviewing and focus groups, Quality Function Deployment principles and how to build a House of Quality	K7 TKSBB21	- Interview notes from focus groups - House of Quality Assignment	Fail to identify all customer groups and to select and take steps to understand their requirements.	Use methods to understand the voice of customers.	6. Build a House of Quality to support the design of a new process, product, or service.	6. Guide others in the application of Voice of Customer principles and tools.
K8 & S9. Process mapping & analysis: Activity network diagrams, design structure matrix, process modelling, key function diagrams and analysis Guide others on the selection of appropriate process mapping and analysis tools. Critique improved state	K8 TKSBB09 S9 TWSBB09	- Process map - Workshop minutes - Current and future state process diagram	Rely only on documents and reports from others to understand a process as part of an improvement project.	Use methods to map and analyse processes. Seek opportunities to guide others in the application of Process Mapping and Analysis principles and tools.		
K11 & S10. Lean concepts and tools: Principles of Lean Thinking and Lean tools including origins and cultural aspects critical to successful application within an organisation Identify and analyse value streams using appropriate methods and tools to optimise flow to customer. Develop a plan for Lean deployment within the organisation including effective and relevant performance metrics	K11 TKSBB19 S10 TWSBB14	- Forms of waste - Company Lean Culture - Value-stream map - Performance metrics	Fail to apply Lean thinking, principles, and tools as part of an improvement project.	Apply Lean tools to identify to improve processes in at least 2 different parts of the business. Select and apply methods and tools to identify and analyse a value-stream to optimise flow to customer. Develop a plan to deploy Lean principles, methods and tools in their area of responsibility.	7. Guide others in the application of Lean principles and thinking and tools.	7. Develop and implement a plan to build a Lean culture in their area of responsibility.

K15 & S16. Experimentation: Principles of full and fractional designed experiments including replicates, repeats, randomisation, blocking and centre points, resolution and confounding. Planning and analysis using residuals, main effects & interaction plots, hierarchy of terms, Response Surface Method, Split plots, Analysis of variance (ANOVA). Approaches for model optimisation Guide others on the planning, analysis and interpretation of experiments. Plan, conduct, analyse and optimise both full & fractional experiments	K15 TKSBB14 S16 TWSBB20 These are a combined document.	- Data Analysis using Design of Experiments - Statistical software charts	Fail to select appropriate tools, to accurately interpret results and to make appropriate recommendations regarding next steps.	Guide others on the planning, analysis and interpretation of experiments. Plan, conduct, analyse and optimise both full and fractional experiments.	8. Select and apply tools to optimise models.	8. Promote the principles and benefits of designed experiments to others.
K16. Identification & prioritisation: Creativity tools e.g. theory of inventive problem solving (TRIZ), Pugh matrix	K16 TKSBB15	- Assignment demonstrating understanding of TRIZ - Prioritisation of problem and or solution			9. Apply creativity tools to support the identification and prioritisation of improvement opportunities and/or solutions.	9. Guide others in the principles and benefits of applying creativity tools.
K17 & S19. Failure mode avoidance: System state flow, boundary diagram, interface analysis tables, fault tree analysis, robustness checklist, tolerance design and analysis. Principles and links between Failure Modes and Effects	K17 TKSBB20 S19 TWSBB23	- Use of a fault tree analysis (FTA) - Assignment on principles and links between Failure Modes and Effects analysis - Complete robustness studies		Apply Failure Mode Avoidance tools to support the design and implementation of an improved process, product or service in the workplace.	10. Apply Failure Mode Avoidance tools to support the design and implementation of a **new** process, product or service in the workplace.	10. Guide others in the principles and benefits of applying Failure Mode Avoidance principles and tools

analysis for concepts, designs, processes. Decompose complex systems in order to define main functions. Analyse system interactions. Cascade knowledge through fault tree analysis. Create and assess design rules, standards & verification methods. Complete robustness studies to select appropriate control strategies and detection methods the		to select appropriate control strategies and detection methods				
K18 & S20. Sustainability & control: Control and reaction plans. Prevention controls. Guide others on control and sustainability planning including methods and tools to maintain benefits, extraction of learning, replication, sharing and consolidation of new knowledge into organisational learning.	K18 TKSBB16 S20 TWSBB16	- Handover training video - Control and sustainability plans - Knowledge sharing	Fail to build a control plan for critical process inputs and outputs to support sustainment of improvements.	Guide others on control and sustainability planning including methods and tools to maintain benefits, extraction of learning, replication, sharing and consolidation of new knowledge into organisational learning.		
S2. Strategic Deployment of Continuous Improvement: Contribute to deployment of improvement strategy, participating as an active member of the improvement community	S2 TWSBB25	- Working group - Communities of practice - Draft or implemented improvement strategy	Fail to engage with others outside of their role in the pursuit of continuous improvement.	Contribute to deployment of improvement strategy, participating as an active member of the improvement community within the business.	11. Participate in the improvement community outside of the business.	11. Set-up or lead new activities that contribute to the improvement community outside the business.
S3. Communication: Prepare and present concise proposals and plans. Capture and share progress through effective formats	S3 TWSBB02	- Communication Plan - Q&A Sheet - Communication strategy	Fail to apply appropriate methods for effective communication taking account of the situation.	Identify and communicate key points concisely.		

S4. Capability Development: Train, facilitate and critique the application of tools used by improvement practitioners including tool-selection, links between tools, how they are used within a structured method, analysis of results and presentation of recommendations	S4 TWSBB21	- Minutes of the meeting - Coaching actions - Video of coaching through Microsoft teams	Fail to identify needs/learning outcomes, plan and take steps to meet these needs/outcomes, measure effectiveness of the intervention and identify opportunities to improve in the future.	Training session delivered during includes: ⬜ a range of delivery methods to suit different learning styles ⬜ Delivery and resources that are clear, technically correct, logically presented and pitched at the correct level for the audience Checks of learning throughout the session, correcting/reinforcing learning where necessary Provide specific and accurate feedback to others such there is a clear understanding of gaps and next steps required.	12. Guide others in developing capability.	12. Set-up or lead new activities that contribute to the development of capability in others.
S7. Principles and Methods for Improvement: Guide others on the selection of appropriate methods (e.g. Practical Problem Solving, Define-Measure-Analyse Improve-Control, 8Disciplines, Identify-Define Optimise-Verify) to deliver improvements. Conduct gateway assessments to ensure suitability of projects to progress	S7 TWSBB06	- Recording of an online training session - Coaching assignment - Breakdown of breadth and depth of project	Fail to articulate the links between different methods and the similarities/differences.	Guide improvement practitioners on the selection of improvement methods (e.g. Practical Problem Solving, Define Measure-Analyse-Improve Control, 8-Disciplines, Identify-Define-Optimise Verify) and the selection and application of tools linked together to deliver improvements.		
S8. Project selection & scope: Guides others on the selection and scoping of improvement projects and the initial response to product/process performance issues. Identify, scope and prioritise improvement opportunities that map to high-	S8 TWSBB07	- Value-stream map - Project scoping document - Priority matrix	Fail to apply improvement principles, methods and tools when delivering an initial response to problems.	Identify and prioritise new opportunities in the context of a portfolio of multiple improvement projects.	13 Identify new approaches to identifying and prioritising improvement	13. Consider new opportunities that may arise in the future (e.g. the impact of Industry 4.0).

level organisation objectives and key value streams						
S11. Measurement: Guide others on the planning, analysis and interpretation of data collection & measurement studies including the design of tests to recreate failures & steps to diagnose/reduce short & long-term measurement variation	S11 TWSBB19	- Gage R&R Study - Identification of measurement errors - Statistical software screens and explanation	Fail to identify the need for a planned measurement study as part on an improvement project.	Guide others on the planning, analysis and interpretation of data collection and measurement studies including the design of tests to recreate failures and steps to diagnose/reduce short and long-term measurement variation.	14. Identify new approaches to improving the repeatability and/or reproducibility of data in the context of an improvement project.	
S18. Benchmarking: Guide others on benchmarking to support all stages of improvement projects including future-state design	S18 TWSBB18	- Current state to future state inc. Benchmarking - Process improvement - External benchmark report	Fail to conduct benchmarking to support the setting of targets.	Guide others on benchmarking to support all stages of improvement projects including future-state design.	15. Promote the principles and benefits of benchmarking.	
B1. Drive for results: Coordinates and delivers sustained improvement across the business by engaging with, and inspiring stakeholders; adopting a can-do attitude	B1 TPKBB01	- Stakeholder engagement conversations - Promoting a CI Culture - Continuous personal development plan	Fail to deliver sustained improvement across the business.	Overcome barriers in the pursuit of continuous improvement.	16. Guide others in overcoming barriers to continuous improvement.	
B2. Team-working: Leads cross functional project teams proactively, regularly supports others and replicates learning	B2 TPKBB02	- Communicating a RACI chart - Teaching others through work instructions - Continuous personal development plan	Fails to lead cross functional project teams proactively. Does not provide regular support for others and does not replicate learning	Leads cross functional project teams proactively, regularly supports others and replicates learning.	17. Diagnose potential causes for ineffective teams and plan actions to address these.	

B3. Professionalism: Exemplifies high standard of professional integrity, ethics and trust within the organisation, whilst maintaining flexibility to the needs of the business	B3 TPKBB03	- Business code of conduct - Example of ethics and trust demonstrated - Continuous personal development plan	Fail to maintain high standard of professional integrity, ethics and trust within the organisation, whilst maintaining flexibility to the needs of the business.	Exemplifies high standard of professional integrity, ethics and trust within the organisation, whilst maintaining flexibility to the needs of the business.	18. Drive high standards of professional integrity, ethics and trust within the organisation.	
B4. Process Thinking: Drives process-thinking and customer-focused, data driven decision making	B4 TPKBB04	- Data used to make decisions - Graphs, charts and tables - Objectives with statistical data	Fail to use data to drive decision making.	Drives process-thinking and customer-focused, data-driven decision making		14. Promote the principles and benefits of process thinking and customer focused, data-driven decision making
B5. Continuous development: Identifies & models opportunities for development of self & others	B5 TPKBB05	- Self-learning plan - Continuous personal development plan - Model used for continuous development	Fail to recognise/identify gaps in own capability and to implement plans to close these gaps.	Identifies & models opportunities for development of self & others.		15. Set-up or lead new activities that contribute to recognising/identifying gaps in capability and to developing plans to close these gaps.
B6. Safe working: Adopts a proactive approach to safety, encouraging others and suggesting improvements on compliance.	B6 TPKBB06	- Compliance document for health & safety - Risk assessment - Use of PPE	Fail to adopt a proactive approach to safety, encourage others and suggest improvements on compliance.	Adopts a proactive approach to safety, encouraging others and suggesting improvements on compliance.		