

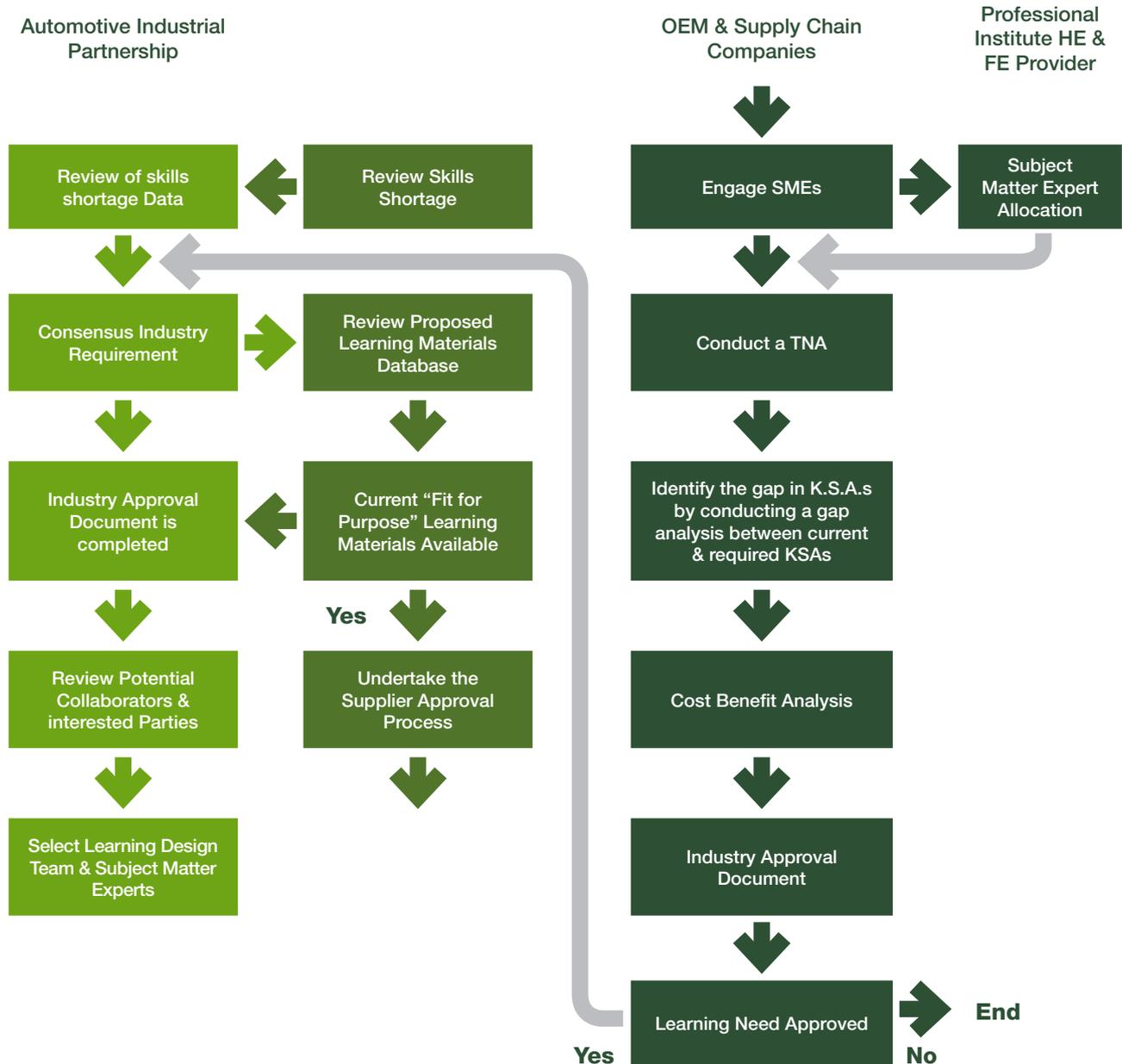


Learning Analysis, Design and Development Framework

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Analysis Phase



Before any learning solutions can be discussed, it is imperative that a detailed analysis is undertaken to ensure that the learning is:

- In line with the overall objectives of the business
- Addresses a genuine skills requirement or critical skills shortage
- Is cost effective
- Adds value and leads to a return on investment

Level of Analysis

It is important to identify levels of analysis that will be applied. This will reflect the complexity of the subject matter and subsequent task for which learning materials are being proposed. In other words, decide from the outset what level of analysis will be undertaken for the learning solution. But, be aware that a more complex level can be utilised if required during the analysis phase.

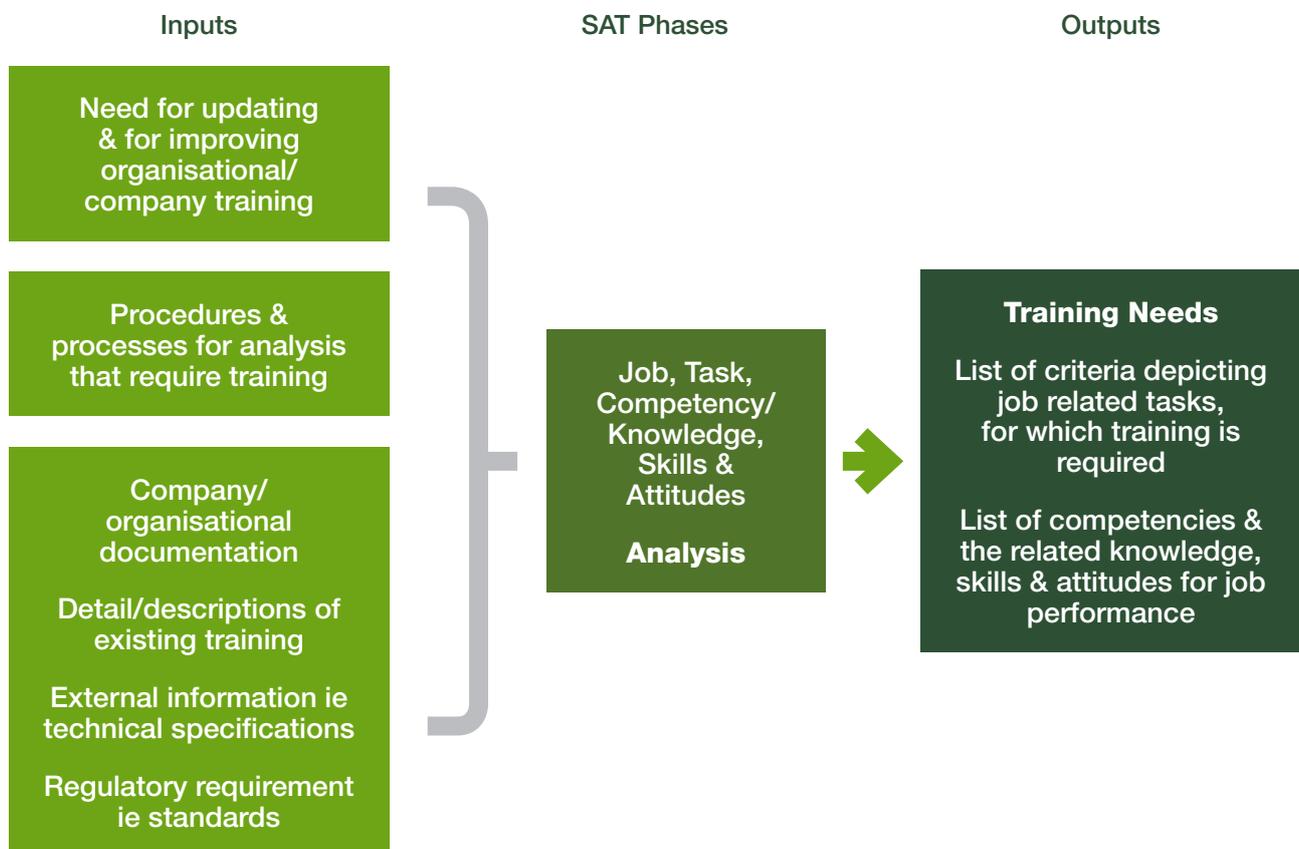
Analysis will comprise of three levels:

- **Simple**
- **Normal**
- **Complex**

Each organisation and/or company will identify the lines of criteria that underpin the level.

Overview of Inputs and Outputs of the Analysis Phase

The model below depicts the detail of the inputs and outputs required from the company and/or organisation within the analysis phase of the systematic approach to training (SAT).



Review Critical Skills Shortage

An output of the Automotive Industrial Partnership is a critical skills shortage analysis research report, linked to an industry job framework. Here, critical skills shortages are referenced and classified as Critical, Severe, High or Future. It is recommended that the Automotive Industrial Partnership reviews the analysis and agrees a consensus industry view or priority of learning materials to be developed, in order to plan resources and future proof industry knowledge skills and attitudes.

Review National Learning Provision Database

In conjunction with the critical skills shortage research report, additional research was conducted to identify what learning provision is currently available. Reviewing both information sources will allow the Automotive Industrial Partnership to recommend what is an industry priority, so key resources can be focused on the analysis, design and development of learning solutions.

Process for Reviewing the Current National Provision Analysis



Determine the Business Outcome

Before a training needs analysis can begin, the employer will articulate the objective of the learning. That is, what are the expected business objectives of the proposed learning?

The learning outcomes will correspond to a business objective. This can be specific to an individual employee, department or the entire automotive sector.

The ultimate goal of the learning should be clearly articulated and kept in the forefront to answer the question – how is success to be measured?

Process to Determine Business Outcome



Link Business Objectives to the Required Knowledge, Skills and Attitudes

To link business objectives employers will identify the competencies, underpinning knowledge, skills and attitudes required to achieve this. This is undertaken through the collection of information from stakeholders. These stakeholders will comprise of:

- Subject matter experts
- Job incumbents

Data collection will take the form of interviews, focus groups or surveys. Regardless of the method used, the data should result in a clear knowledge of how important each competency is to achieving the desired business objective (ie how important is this for successful job performance?) This is articulated via a difficulty, importance and frequency analysis, see page 12.

Process to Link Business Objectives to the Required Knowledge, Skills and Attitudes



Identifying the Training Needs

The first step in the analysis phase is to identify the learning needs. This is a prerequisite for justification of the business objective for developing or improving learning solutions. This will be undertaken by a training needs analysis. To identify learning needs the following information is collected:

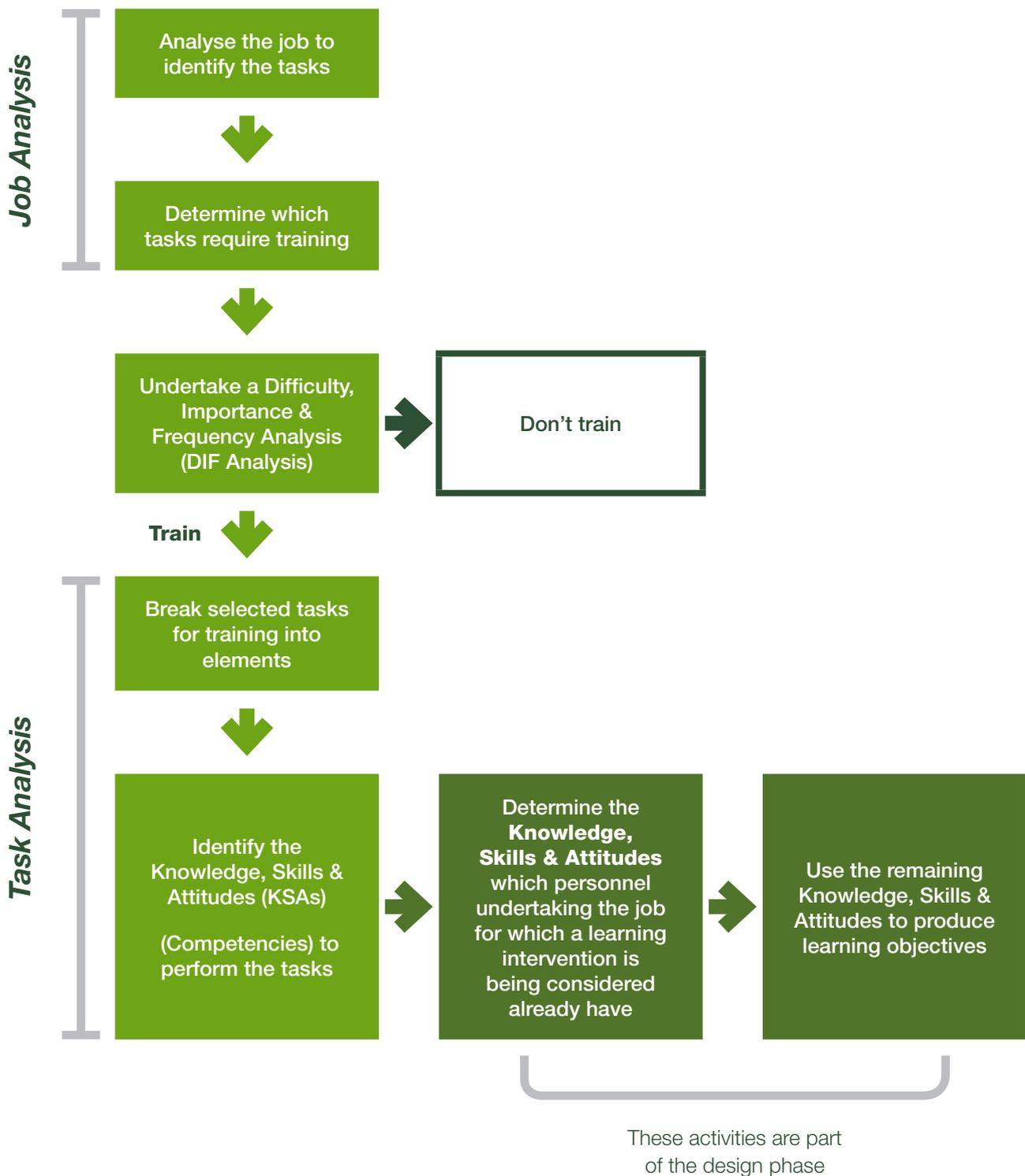
- Changes due to lessons learned from operational experience (OPEX)
- Product, organisational and/or company organisational safety cases
- Changes in policies, procedural and product documentation (eg procedures, technical specifications) and regulatory requirements
- Information about the content of existing training programmes and the qualifications of personnel
- Regulatory requirements
- Human performance of employees
- Job performance deficiencies

Identifying the training needs for each new or existing job will be preceded by a careful review of each new or existing task, referred to as a training needs analysis. In other words - identifying training needs, deficiencies in performance and appropriate solutions. Changes or additions to existing training materials may or may not be appropriate, therefore considerations to the analysis of task performance problems and materials will consist of:

- Improved procedures
- Equipment modifications
- Improved safety
- Improved supervision
- Job performance deficiencies

Only if training needs can be identified does the process continue to the subsequent steps of the analysis phase.

Overview of Job and Task Analysis Phase Resulting in the Competencies That Develop the Objectives in the Design Phase



Job Competency Analysis in Detail

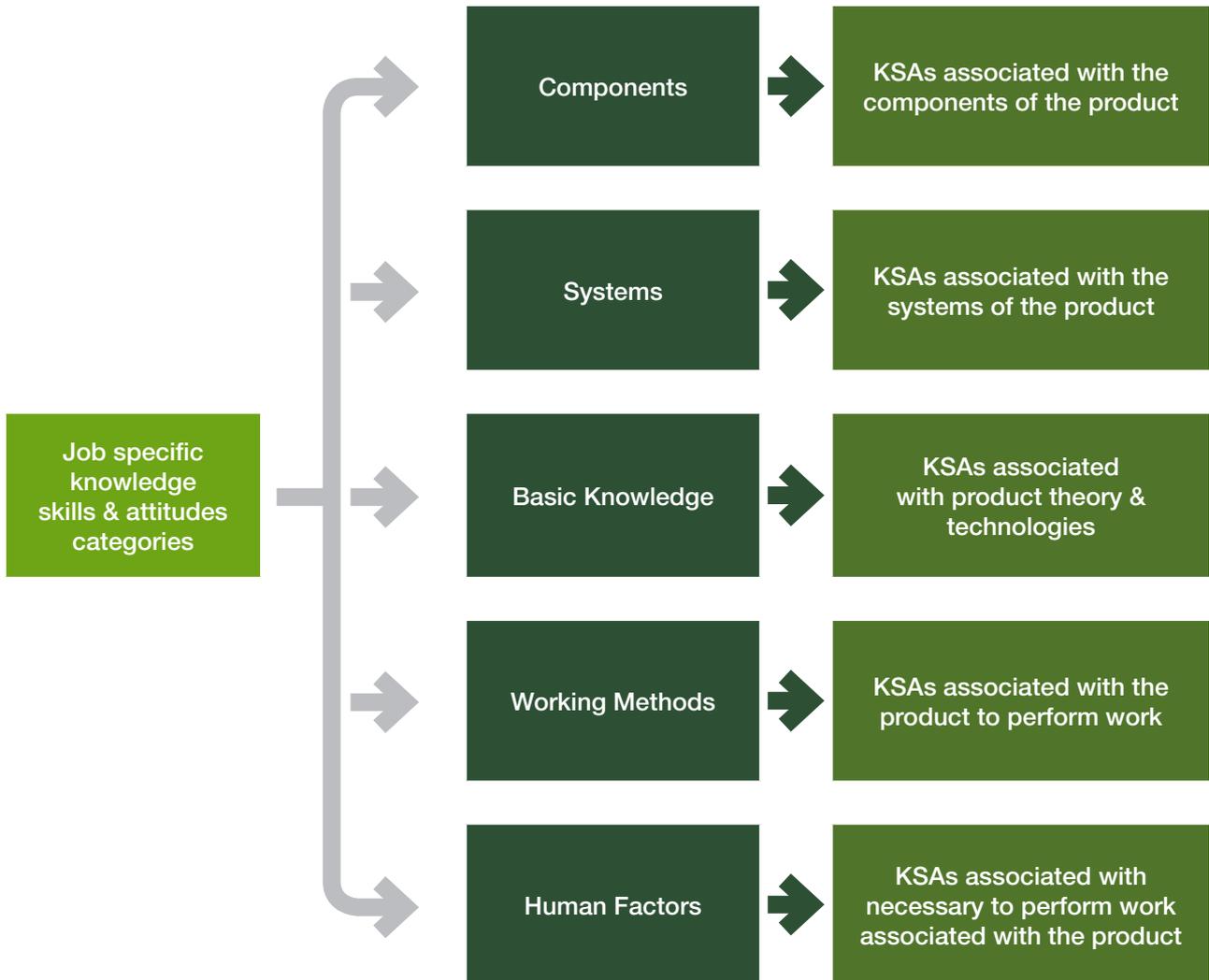


Competencies are groups of knowledge, skills and attitudes required to perform a particular job. An example of a competency:

When inflating a wheel the knowledge is: a tyre's maximum inflation pressure is the highest pressure that the tyre is designed to contain when cold.

These competencies, (divided into knowledge, skills and attitudes) which are identified by a group of subject matter experts can be selected to articulate particular tasks within a job.

Below is a depiction of what job specific knowledge, skills and attitudes from which competencies are derived from



Competencies are groups of Knowledge Skills & Attitudes = KSAs

Difficulty Importance and Frequency Analysis

Once the job task analysis has taken place a difficulty, importance and frequency analysis will be undertaken for each task independently by subject matter experts and will be rated against three criteria to determine the:

- Difficulty of the task
- Importance of the task
- Frequency of the task

This analysis applied to the proposed learning solutions identifies what skills are:

- Nice to have
- Necessary to have

Rate each task the individual does against the three criteria.

Difficulty and Importance

Decide for each job:

How difficult do they find it?

How important is it?

Describe your decisions on a scale of 1 – 4. 1 Low – 4 high.

1 is the most competent end of the scale, 4 is the least competent end of the scale.

Frequency

Work out how often the task is completed in relation to the whole job.

Measure this out of 100% - as a percentage of the whole.

Now you can do a sum to work out what development needs to be tackled first.

Fill in the chart and multiply: **Difficulty x Importance x Frequency**

Tasks	Service a car	Test the brakes	Replace clutch	Replace the exhaust	Repair the suspension	Totals
Degree of difficulty						
Level of Importance						
Frequency of task						
Task scores D x I x F						

Professional Institutions HE and FE Provider - Analysis of Employer Requirements

It is recognised that when undertaking the analysis phase it may be beneficial to collaborate with wider stakeholders. An existing industry approach is to engage with professional bodies and professional learning institutions, who will possess the necessary expertise and subject matter experts to inform the analysis phase, particularly when analysing potential learning delivery methods.

The benefits of collaboration with these wider stakeholders can be reciprocated and often automotive organisations will be called upon during the analysis phase to provide insight into industry requirements and trends, all of which support the development of employer-led qualifications.

Industry Learning Approval Document

It is recommended that this document is used to present a high level proposal for consideration by the Automotive Industrial Partnership. It will identify the business drivers and needs of the required learning solutions, reflecting the current status, via data gathered through the Automotive Industrial Partnership's skills research or by undertaking a training needs analysis at an organisational level.

Having identified the learning need, an estimate of the costings will be presented reflecting the potential delivery methods, and whether the learning solution can be delivered internally or externally by a third party. Also the associated level of the solution provider eg, certificate of awareness, certificate of achievement or a qualification. Where possible, the potential benefits of the learning solution should be identified and may include an upskilled workforce, multiskilling, improved productivity, employee retention or long term sustainable skills deployment.

Finally, it is recommended that analysis, (identifying potential stakeholders, timescales, milestones and required resources) will be produced to facilitate further discussion.

Reference Materials

Material	Author/ Source
Taxonomy for Learning, Teaching and Assessing	Lorin W. Anderson and David R. Krathwohl
Teaching Training and Learning a Practical Guide	Ian Reece and Stephen Walker
Employers' Views of the Jobs and Skills Required for the UK Automotive Industry February 2016	Sara Bettsworth and Phil Davies



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