Forecast methodology: assessment of current and future needs in Additive Manufacturing

SECTOR SKILLS STRATEGY
IN ADDITIVE MANUFACTURING

Set of Kits to be deployed by the European AM Observatory

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SCOPE

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SAM
SECTOR SKILLS STRATEGY
IN ADDITIVE MANUFACTURING

Skills needs identification

- Surveys and Interviews Real Case Scenarios (immediate needs)
- Short term Scenarios (future needs)
- Foresight Scenarios (future needs)
- ESCO and Skills Intelligence

Feedback on training

- Tracking students, future employers and jobseekers
- Collecting feedback on the IAMQS qualifications and training modules

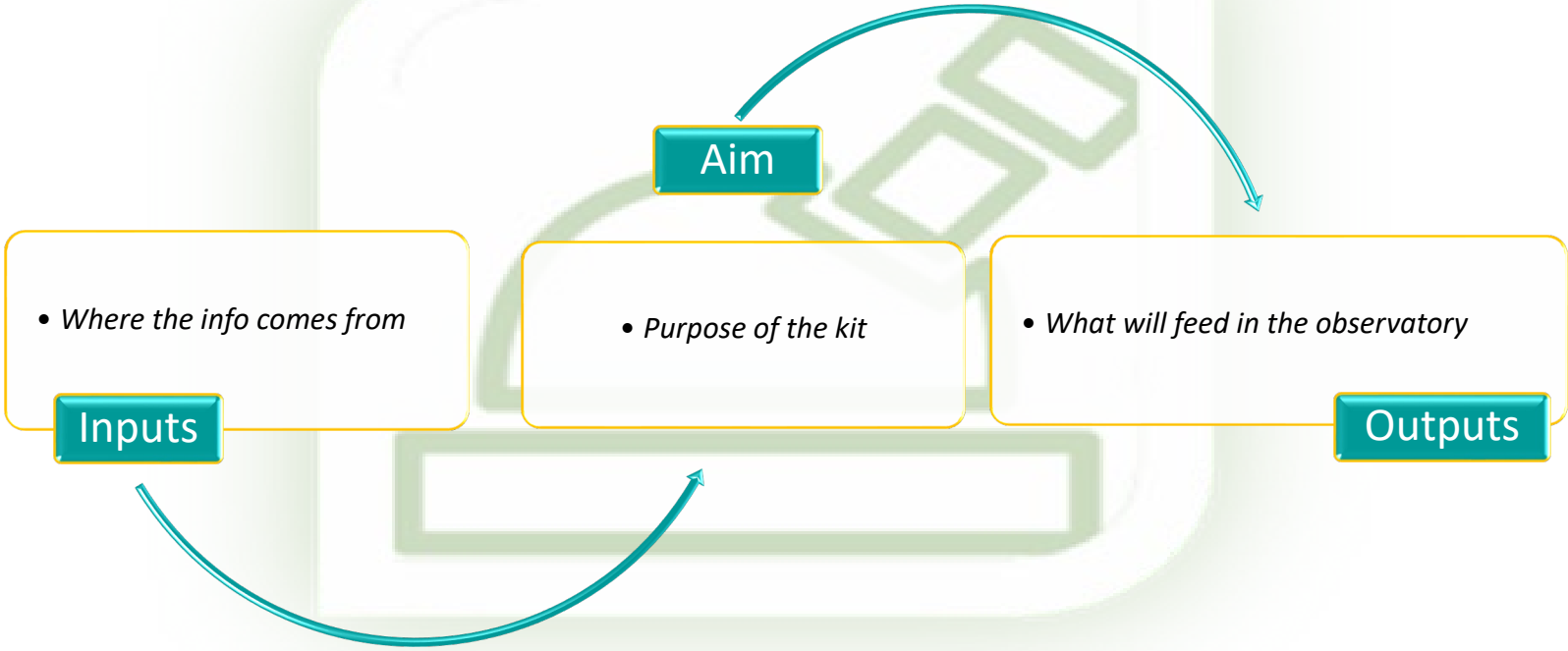
Needs validation, review and development of training guidelines

- Workshops and working sessions

IN EVERY KIT

KITs FLOWCHART TEMPLATE

TIMELINE — **Occurrence in time**



Tools

- Which tools are used and needed?
- Surveys, world cafes, etc it varies from kit to kit

Target

- To whom ?
- Who are the stakeholders engaged

INDICATOR/LEVEL OF IMPACT

Linked with project KPI

D2.1

Survey's and Interview's kit

Check the Full Kit

Occurrence Every year

Aim

- Identify example of questions to be applied for each scenario (real case, short term and foresight) and their purpose;

Inputs

- Data gathered from desk research
- Expertise

Outputs

- Surveys for 3 scenarios for all target groups
- Interview for 3 scenarios for all target groups

Tools

- How to develop surveys and interviews
- Online surveys

Target

- Other sectors aiming to undertake skills forecast through surveys and interviews
- Members of the AM Observatory

D2.2

Real case scenario kit

Check the Full Kit

Occurrence Every 1 year

Inputs

- Literature review and job offers;
- Previous background and answers to surveys;
- Analysis of the contents coming from Interviews and Surveys applied at current needs (less than 1 year)

Aim

- Identify the immediate skills to be addressed

Outputs

- Review, update and/or development of AM Qualifications / Units of Learning Outcomes
- Data on AM skills needs and up and reskilling existing Professionals

Tools

- Surveys
- Interviews

Target

- Industry/employers representatives
- Training centers
- AM workers /professionals
- Etc.....

D2.3

Short term scenario kit

Check the Full Kit

Occurrence Every 3 years

Inputs

- Literature review and job offers;
- Previous background and answers to surveys;
- Analysis of the contents coming from Interviews and Surveys applied at short term (3 years)

Aim

- Identify the short-term skills shortage to be addressed (3 years)
- Identify future professional profiles to be developed
- Identify job opportunities and employability data
- Identify technological trends

Outputs

- Emerging professional profiles
- Reskilling/upskilling skills needs required for AM workers
- Review, update and/or development of AM Qualifications / Units of Learning Outcomes

Tools

- Surveys
- Interviews
- World cafes…

Target

- Industry representatives / Employers
- AM Workers professionals
- Research and Technology Centres
- Training Centres
- Recruitment Agencies

D2.4

Foresight scenario kit

Check the Full Kit

Occurrence Every 10 years

Inputs

- Roadmaps of AM skills analysis
- Long-term technological and industrial plan analysis
- Analyses of the contents coming from interviews and surveys applied at long term (10 years)

Aim

- Identify the future skills to be addressed (10 years)

Outputs

- Review, update and/or development of Qualification or Competence Units
- Data and trends on AM skills needs, new Professional Profiles

Tools

- Delphi
- Brainstorm
- World cafes

Target

- Industry representatives/employers
- Research and technology centres

D2.5

ESCO and EU Skills Intelligence Kit

Check the Full Kit

Occurrence Every 2 years

Inputs

- ESCO templates for Occupations, Skills and Qualifications
- Skills Intelligence practical framework
- Data gathered from desk research, surveys, interviews and workshops
- Indicators from the AM observatory

Aim

- To provide information regarding AM Occupations, Qualifications and Skills/Competence and AM sectoral skills evidence

Outputs

- Information regarding AM Occupations, Qualifications and Skills /Competences to ESCO
- AM sectoral skills evidence for Skills Intelligence

Tools

- ESCO templates for Occupations, Skills and Qualifications
- ESCO data model
- Skills Intelligence (prior Skills Panorama) practical framework for including skills evidence in Skills Intelligence platform

Target

- AM Observatory
- European Commission (ESCO) and CEDEFOP (Skills Intelligence)

D2.6

Kit for tracking students, future employees and job seekers in AM

Check the Full Kit

Occurrence **Continuous (6 months after training)**

Inputs

- Participants involved in training for the IAMQS, either a Qualification or Competence unit in the last 6 months and 2 years

Aim

- To facilitate the integration and the location of AM trainees /students within the AM labour market

Outputs

- Employability rate in AM sector
- Average time required for the integration in the labour market
- Feed Skills Intelligence

Tools

- AM Observatory Platform
- Follow up questionnaires to trainees /students to be applied within 6 months after training (by email)

Target

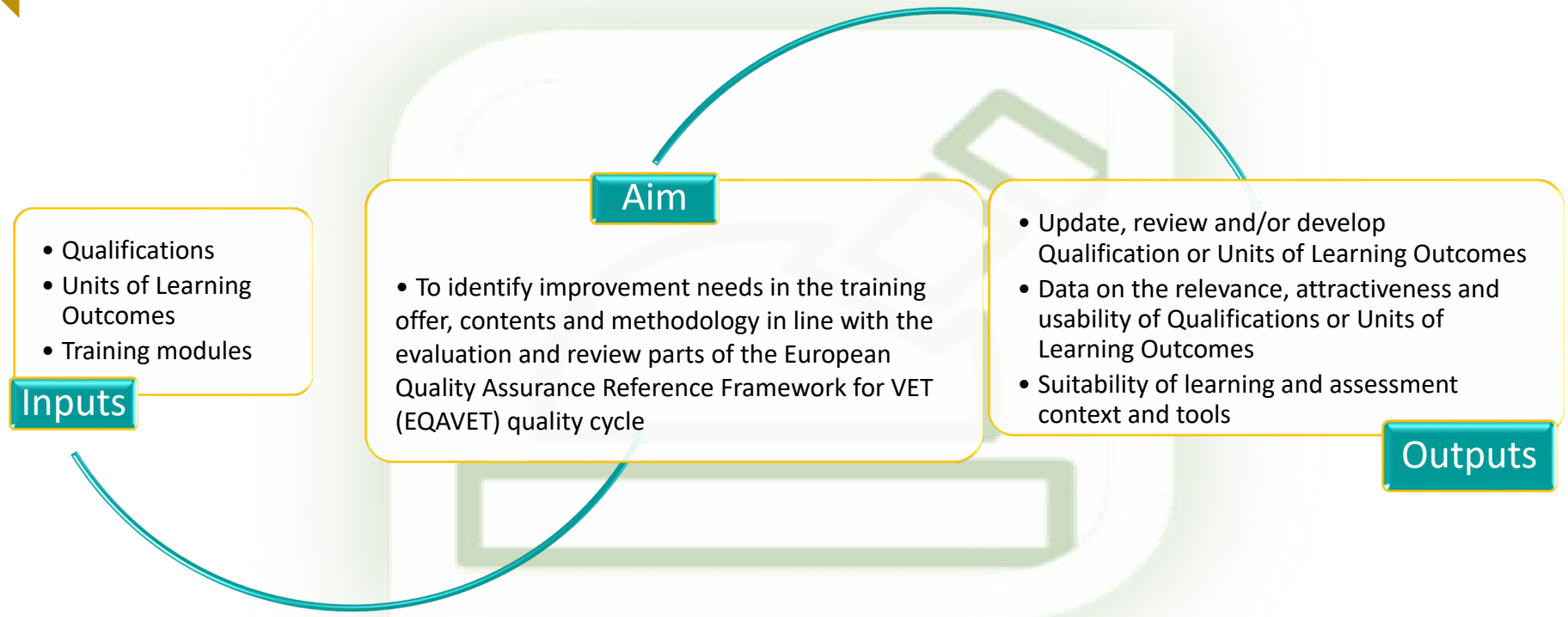
- AM trainees / students
- European Commission and CEDEFOP (Skills Intelligence)

D2.7

Kit to collect feedback on the qualifications and training modules

Check the Full Kit

Occurrence — **Continuous (Last day of training)**



Tools

- Surveys

Target

- AM trainees / students
- Trainers

D2.8 Workshops and working sessions kit

Check the Full Kit

Occurrence Every year

Inputs

- Data gathered from desk research, interviews, surveys addressing the different scenarios
- Reports on the analysis of data in AM
- Feedback report on existing qualifications and training modules

Aim

- Guide the organisation and conduction of workshops to analyse data in AM and validate skills needs
- Guide the conduction of working sessions to review and/or design PP/Qualifications,/training modules

Outputs

- Fulfilled templates for revising and/or developing new professional profiles /qualifications/ Competence unit
- Updated or new training guidelines (if applicable)

Tools

- Plenary session (results presentation)
- Group dynamics (e.g. Hands-on; real-time queries, etc.)
- Evaluation questionnaire to assess participants satisfaction
- Supporting documents (Agenda, attendance list, presentations, summary documents, check-list, etc)

Target

- Industry experts from different sectors (Members of IAMQC and IAMIC)
- Representatives from Trade Union, Employers Associations and Recruitment Agencies
- VET and organisations; Technology Centres
- National Qualification Agencies

Additive Manufacturing Reports

SECTOR SKILLS STRATEGY IN ADDITIVE MANUFACTURING

4.5 Reports on the Analysis and Validation of Needs

The 1st Report (2020) in skills gaps and demands of the AM Sector for **the real case and short-term scenarios**. It addresses the 1st round of auscultation with key target groups, namely Companies, and Research and Technology Development Organisations (RTOs).

The 2nd Report (2021) on **2nd round of auscultation with industry** (AM companies & workers), **training organisations and recruitment agencies**.

The Foresight Report on forecasting the AM skills, trends and developments until 2030..

4.6 Feedback Reports on the Existing Qualifications and Training Modules

The 1st report (2021) on the feedback of students on the existing / attended training in AM during 1st stage of pilots on Real Case. And the 1st Impact and Follow Report (2021)

The 2nd report (2021) on the feedback of students on the existing / attended training in AM during 2nd stage of pilots on Real Case.

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