EWF alignment with the European Skills Agenda for Sustainable Competitiveness, Social Fairness and Resilience

Considering the impact that green and digital transitions, and lately the coronavirus pandemic, are bringing to the way we live, work and interact with each other, the European Commission presented in July 2020 the **European Skills Agenda for sustainable competitiveness, social fairness and resilience**[1]. The Skills Agenda aims to improve the relevance of skills in the EU by setting ambitious actions for upskilling (improving existing skills) and reskilling (training in new skills) the European Workforce for the next 5 years.

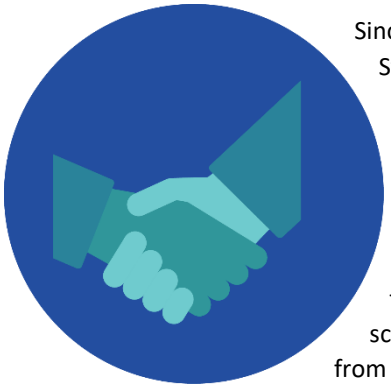
In the actual context, new career challenges are being faced by many people across different sectors in Europe. A wide range of workers will need to be retrain in a new skill or improve their existing skills to adapt to the changes of the labour market.

EWF is an international non-profit umbrella industrial association, pioneer in the establishment of Harmonised Qualifications Systems for the training of Manufacturing Personnel, covering areas like Welding, Joining, Cutting and Additive Manufacturing.

Since 1992, EWF is committed to the Qualification of Personnel in Manufacturing by ensuring that skills' development to leverage advanced manufacturing technologies is fully aligned with the industrial requirements and follows the same quality standards, regardless the context in which training takes place ensuring that industry has access to the right set of skills.

EWF Qualification Systems ensures that the same qualification, knowledge and skills are recognised in all European countries and accepted by enterprises, professionals, training institutions and certification bodies. With this article, EWF proposes to demonstrate how its activity in the field of education and training is aligned with the European Skills Agenda priorities and actions until 2025.

ACTION 1- PACT FOR SKILLS



Since the establishment of the 1st International Welding/Joining Qualification System in 1992, EWF has been mobilising key stakeholders belonging to industry and education across different sectors to create better opportunities for people to be trained.

In conjunction with the relevant national welding institutes and organisations of 31 European countries, EWF has made great efforts in developing, updating and harmonising training and education in the field of welding and joining technologies. The European Qualification System was the first truly harmonised scheme embracing all European countries for the training of personnel at all levels, from crafts people to professional engineers.

The network involved in the implementation of the European Qualification System is currently composed by 41 Authorised Nominated Bodies (responsible for supervising the compliance with EWF Quality Assurance System) and 683 Authorized Training Bodies, schools, centers, institutes using EWF Qualification Guidelines and awarding EWF diplomas, as well as a large network of Companies and SMEs (50.000+).

EWF has recently started setting-up the International Qualifications System in Additive Manufacturing (IAMQS), in line with the ManuFUTURE Vision 2030 Strategy and taking advantage of its role as liaison organisation at CEN/TC438 and ISO/TC261, both technical committees in AM and as member of the AM Platform, of the European Factories of the Future Research Association (EFFRA) and ManuFuture.

[1] https://ec.europa.eu/social/BlobServlet?docId=22832&langId=en

In collaboration with SAM (www.skills4am.eu), CLLAIM (www. cllaimprojectam.eu) and ADMIRE (admireproject.eu) projects' partners and with the support of relevant AM organisations, EWF has conducted market searches and surveys to collect information on market needs for future workers and professionals already involved in the Additive Manufacturing (AM) sector. Validation workshops with experts from the Industry and Education were also organised. This holistic approach has encouraged a close collaboration with major AM organisations to collect inputs for the establishment of the IAMQS.

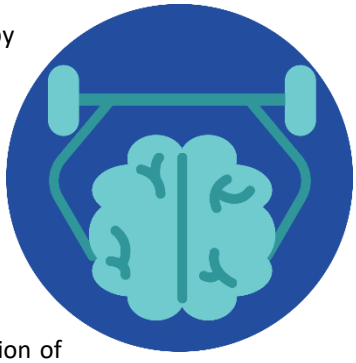
The Blueprint Alliance for Sector Skills Strategy in AM – SAM Project, coordinated by EWF, is now opening the possibility to be part of a large-scale partnership. The engagement process with key stakeholders in AM is being reinforced and carried out through the setting up of the European AM Observatory. The Observatory entails two complementary Councils: one for Qualifications (International AM Qualification Council – IAMQC) and one for Industry (International AM Industry Council – IAMIC).

The IAMQC is composed of a network of representative national stakeholders that are responsible for the governance of education, training and qualification or certification in AM.

In terms of composition, the IAMIC is composed of relevant organisations representing the industrial view and needs in AM, which includes the suppliers, original equipment manufacturers (OEMs), end-users, human resources companies, certification bodies and research organisations. Both councils are working closely towards the revision/creation of Professional Profiles and/or Competence Units by using the SAM methodology to develop and revise qualifications. In addition, the IAMIC also provides information on technology trends, crucial for understanding whether AM Qualifications are in line with the labour market requirements.

EWF is also looking, with the support and involvement of industry, at identifying other Manufacturing areas where an European approach to skills development would be of added value and a way of ensuring that industry can access the right set of skills and knowledge supported by an European Qualification System in Manufacturing.

ACTION 2- STRENGTHENING SKILLS INTELLIGENCE



Both International Qualifications Systems (i.e. Welding/Joining and AM) managed by EWF, are composed by a set of qualifications for different proficiency levels, grounded on industry requirements and validated by experts. The Systems use a modular structure composed by units for learning outcomes, which describe the expected knowledge and skills acquired by trainees after the successful completion of the training courses. Within the Systems, a single syllabus for each level is defined, supported by a harmonised system for assessment and Quality Assurance, resulting in the same International Qualification being awarded, independently from the country.

The use of harmonised Modular International Training Guidelines for the qualification of personnel has the added value of supporting the delivery of training in any country and/or region, underpinned by a Quality Assurance system and aligned with industrial needs. The guidelines can be used in a flexible way, enabling re-skilling and upskilling pathways, thus allowing an easy roll out at national and regional levels aligned with specific needs.

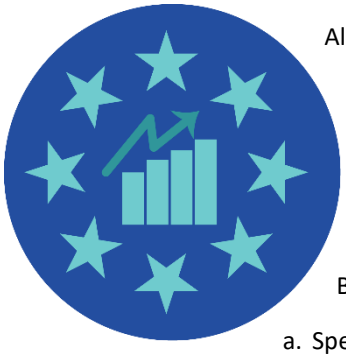
In SAM, the skills intelligence is determined by the AM Observatory, which is putting into practice a methodology for a sustainable and continuous assessment of current and future skills needs, providing real-time mapping and monitoring of AM industry needs, technological trends, skills shortages and mismatches, as well as policies and figures for AM, thus towards the AM career oriented and sectoral skills need.

The AM Observatory is an effective system, that identifies and anticipates the right skills for AM Sector, providing an answer to this issue and contributing towards AM's smart, sustainable and inclusive growth.

The Observatory (body and through its councils) collects and analyses data through a forecast methodology for identification and anticipation of AM skills needs, as well as manage the implementation of an European Qualification System for AM at transnational, national and regional levels supported by a network of experts in AM and stakeholders belonging to education, industry, civil society and government.

This approach and methodology is also being considered and transferred to other Manufacturing Qualifications across different sectors.

ACTION 3 - EU SUPPORT FOR STRATEGIC NATIONAL UPSKILLING ACTION



All Training and Qualification Systems, managed by EWF, aim to reply to the lack of a comprehensive and industry led harmonised training in advanced technological areas, which are Welding, Joining, Cutting and Additive Manufacturing. This training addresses different levels of qualification, providing individuals the opportunity for upskilling and to acquire the knowledge and skills that are needed by Industry which, ultimately, will improve workers employability opportunities and access to the labour market.

Both Qualification Systems are rooted on a quality assurance system based on:

a. Specific rules and requirements to be carried out by the organizations supervising the implementation of the Qualifications in the different countries;

b. Rules and requirements for training organisations that implement the Systems' training Guidelines (leading to the qualifications);

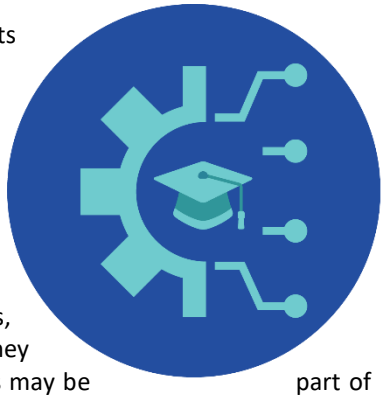
c. Periodical peer revision of those Guidelines by a team of experts in training and education that ensure the alignment of those Guidelines with European policies and tools, as part of EWF's strategy of continuous improvement and adjustment to innovative learnings.

The quality assurance system guarantees the relevance and competitiveness of both Systems and their harmonisation, meaning trainees have access to the same training contents and assessment procedures, regardless of the country in which they are taking their courses.

EWF Qualifications Systems have their own Sectoral Framework containing seven different proficiency levels. Each proficiency level is organized in statements of general descriptors defining the knowledge, skills, autonomy and responsibility of a given qualification for each of the field of activity. This approach ensures EWF qualifications' transparency, recognition and smooth alignment with both National (NQF) and European Qualifications frameworks (EQF). Emphasizing the importance of an European approach to Qualification/Training development that can be transferred and adapted to the different National and Regional requirements.

The outcome of this referencing process has led to the formal recognition of the Welding/Joining Qualifications into the National VET system, as it occurs for example in Portugal, Finland, Hungary and Poland.

ACTION 4 – FUTURE-PROOF ON VOCATIONAL EDUCATION AND TRAINING



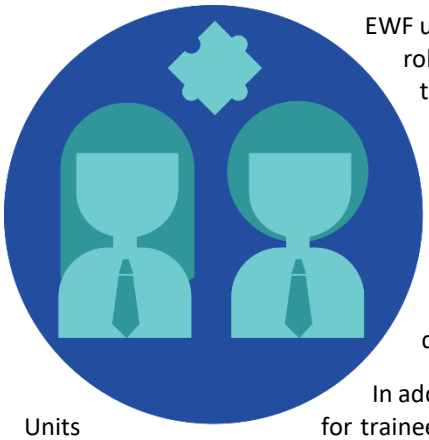
EWF approach in creating and developing qualifications in the scope of its Qualification Systems, is grounded on the bridging between Education and Manufacturing Industry, collecting inputs that allow all EWF qualifications to tackle industry skills needs, RTD activities and International Standardization Organization (ISO) standards (i.e. industry requirements), in line with European policies and tools for VET.

As an example, the IAMQS managed by EWF, is rooted on a modular system that allows flexible approaches to its training guidelines. Each guideline is made of different Competence Units (CUs), written in terms of Learning Outcomes, describing the knowledge and skills (according with the specific EQF level they address) trainees will acquire when successfully accomplishing them. These CUs may be part of different qualifications, validated independently and automatically recognized, allowing trainees to progress inside the system, accessing to different levels of qualification without having to repeat CUs previously accomplished.

The same reasoning is being transfer to the IWJQS, which is gradually shifting into a learning outcomes and modular approaches, in order to guarantee that training needs and industrial requirements are tackled.

The flexibility is also applied to the implementation of the training guidelines, which include work-based learning and apprenticeships, providing trainees direct contact with industry and with the real working environment, better preparing them to reply to industry's needs, ultimately improving their integration on the labour market and to the competitiveness of Additive Manufacturing at European level.

ACTION 9 - INITIATIVE ON INDIVIDUAL LEARNING ACCOUNTS



EWF understands that portable and quality-checked training entitlements play a key role in stimulating lifelong learning for all. This is the reason why the design of the International Qualifications is rooted on a modular bases in which the development starts with the definition of a professional profile for mapping job functions and related activities to develop Competence Units written in terms of Learning Outcomes (LOs), describing knowledge and skills to be acquired by trainees when achieving those LOs.

This learner-centered approach guarantees that trainees are fully capable and qualified in a specific job requirement and is implemented in all qualifications belonging to the Qualifications Systems managed by EWF.

In addition to full professional qualifications, IAMQS also delivers short Competence Units for trainees and professionals seeking for opportunities to expand their skills, a result from the flexible learning pathways offered.

As it was evidenced, EWF is strongly compromised in ensuring Quality in Education and Training for different levels in a collaborative and systemic way. EWF will continue modernizing and updating its Qualifications Systems within the next five years in line with the remaining Skills Agenda Actions, which were not yet addressed by this article. This commitment directly concerns the upskilling of scientist, the development of skills to support green and digital transitions, the promotion of STEM and entrepreneurship skills, as well as the development of an European approach for micro-credentials for the Manufacturing Industry in Europe.