

Business/project plan European Iron Academy (EIA)

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1. Introduction and goal

At the beginning of this century, various cities in Europe have confirmed their cultural and historical connection with iron and forging through the foundation of the Ring of the European Cities of Iron Works. The member cities aim at long-term care and maintenance of the iron and forging culture by working together in friendship. It is important to them that the profession of the blacksmith does not disappear, and that it gets a new revival, e.g. in a lifelong learning programme within a European Iron Academy (EIA). The Ring of the European Cities of Iron Works association has been talking about an EIA for several years now. Each member of the Ring has experience with metal education, young men and women locally, but there is a lack of practical ways to work together in Europe.

A start has been made with elaboration of the idea to create an EIA during the meeting of the competent council of blacksmiths of the Ring in May 2012.

The first application was a Leonardo da Vinci Life Long Learning project, which was delivered in 2013. The project was too extensive and the National Agency advised to split the project into two parts. The second application was delivered as an Erasmus+ project. That year was quite unsuccessful because of the start-up problems. The third EU application in 2015 was successful and a financial contribution was granted. Seven partners, connected to the Ring, started to shape the plan between 2015-2017.

The aim of the entire European Iron Academy project is to develop continuing VET education for forging and metal designers in Europe, which allows for the exchange of students and teachers, based on common values.

In order to achieve this, another application will be submitted to the EU for the second phase of the project.

2. Brief review

Between 2015 and 2017 the partners of the EIA researched the current state of forging and metal education in European countries (EU). The conclusion was that no European further education in forging and metal education currently exists. Following the results of a questionnaire (sent to various European countries), a matrix was created presenting the data on forging and metal education in European countries. Also, a list was made of competences on EQF level (final attainments). During the ME the stakeholders expressed their desire to expand and upgrade their education, this in collaboration with the EIA.

The website contains documentation of the studies that were done on both the existing forging and metal education, and the EQF levels. Various educational institutes/companies have already requested to make use of the studies done by the EIA.

These are: AIMSAD (Woodworking Machinery and Side Industries Association of Turkey), Hereford College of Arts in England, Couleurs de Forge in France and The Foundation "Ambacht Academy" in cooperation with CINOP Netherlands.

3. Problem exploration

In an increasingly standardized world of products, there is also a growing demand for individually designed and handcrafted single pieces. Both in interior design as well as in building constructions, gardens, landscape and public spaces. Forging and metal designers should be able to recognize trends early on, to respond properly and professionally, and present their products and skills in a way that is suitable for the media. The basic professional training doesn't offer that.

As a continuing vocational training, the EIA wants to achieve these objectives. The motivation lies in the way and level of teaching and studying metal work. Many creative crafts include regional and international training institutions. In terms of forging and metal design that is not the case. After the apprenticeship of training, no further training development is offered, neither in metal design nor in a material-technical direction. Metal work and metal design are both fundamentally important handcrafts and professions for the economy of a country.

What does the world of forging look like? (education)

These days there is a lot of attention for the maintenance of monuments throughout Europe. The value of conservation is acknowledged. As a result, craftsmen are needed to carry out this work. There is a shortage of specialized craftsmen. Blacksmiths are still trained in companies (forges) here and there, but a specialized further education on a European level does not exist. However, forces have been joined to preserve the craft. Some member countries do have continuing education, but they are not coordinated. Uniform quality requirements are needed for the basic education, in order to move on into a further education of the EIA.

Why the EIA is needed:

- A. The craft is in danger of disappearance if we choose to do nothing (ageing population, turnover etc.)
- B. The disappearance of the craft would mean a loss of quality. The quality of the craft is at risk when it is not fostered and guarded collectively.
- C. Uniform quality requirements in Europe EIA (added value for students and training centres).
- D. Small scale forces to develop education/training on a European level
- E. The EIA stands for innovation and knowledge exchange. The development and innovation of the craft is better facilitated. Specialization is possible, so students can travel through Europe to specialize, think of the old 'guilds'.

These arguments will be further explained and connected to the need for an EIA, below.

Continuation and sustainability of the EIA and the craft

- A. **The craft is in danger of disappearance if we choose to do nothing (ageing population, turnover etc.)**

Back in the days, the craft of forging was passed on from father to son. In those days, all techniques were passed on. Nowadays, this is no longer the case and all blacksmiths need to be trained by a school/institution. Turnover as a result of age also plays a role. Where do we find successors?

By formulating the existing basic education in Europe using uniform requirements and quality, blacksmiths can also specialize abroad.

Ambition:

The EIA wants to give blacksmiths, forging and metal designers a solid foundation by means of this international continuing education (design and technology), to obtain the value in private and public construction that it had in the past and will have in the future. Today a blacksmith should present his ideas, designs and himself at eye level in the circle of administrative professionals, architects, construction managers and investors. The image of "traditional men who forge and turn black in dark workshops" must be changed. Also desk studies, design and research

are important elements for this technical study. In fact, forging and metal designers set individual quality jobs into the aid of all modern metalworking techniques. These skills are trained at an Iron Academy. Through networking, the valuable existing regional knowledge will be made available internationally.

B. The disappearance of the craft would mean a loss of quality.

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The ultimate goal of the EIA is to ensure that by the end of this education and training, young people will have developed certain key competences. Skilled teachers teach forging and metal design in a motivating way, adding more practical methods to the education in all partner countries. The businesses and branch organisations will establish a long lasting cooperation with schools for learning by doing in an entrepreneurial way.

The results are:

1. a technical and social skills (communication, collaboration) development course in the education chain secondary education to vocational education.
2. continuous curricular strands from preparatory vocational education to vocational education and higher professional education
3. an increase in graduating students on EQF level 3, 4 and eventually EQF 5 and 6
4. an increase in number of graduating students with entrepreneurship skills
5. an increase in quality and employability of education for teachers

If businesses, schools and professional practices see the usefulness and added value of an EIA, the project will continue and they can also financially support the project.

The partners have to stimulate inclusion of material in the curricula of VET schools.

This material will be further developed and described in a (two year) educational development program for the EIA. Results and experiences used in this project will be included, like exchanges of teachers, staff of enterprises and students.

If it gives an extra boost to the region or province, they might also contribute. National and regional government can also be asked for financial funding.

Courses are supported by training funds in various countries. For example, in the Netherlands: A + O fund, OOM (Opleiding Ontwikkelfonds Metaal) and Rijksdienst Monumentenzorg.

Tax exemption is also a possibility. For example, participating businesses in the Netherlands then will have less costs for their students.

A suggestion made during the ME, is to create a European fund for crafts to support mobility. (That fund already exists in the form of Erasmus+ projects for schools.)

C. Uniform quality requirements in Europe EIA (added value for students and training centres). •

Periodic review of partners affiliated with the EIA through quality assurance means the maintenance of the craft and its quality. The level of the incoming students will be recognized/known in each participating country.

-It guarantees the quality of their work

-Added value for the students due to increased competencies, the higher their (technical) qualification the more opportunity it offers = better employment/self-employment

-Possibility of working abroad. Some countries are saturated with

blacksmiths whereas other countries need them
-Blacksmithing is a continuous learning process. New technologies, new methods etc. So students will always be able to find somewhere, someplace, that meets their needs by using the website.

D. Small scale forces to develop education/training on a European level

EIA is meant to focus on main goals of the Copenhagen Process, to improve vocational education popularity and quality, to develop, take in use common learning tools and to strengthen mutual learning. EIA is not only for students to test their skills, but also for teachers to exchange best practices on an international level.

EIA gives participants (students, teachers, government, business community, entrepreneurs) the opportunity to explore best practice in the field of training tools, joint ventures and trade fairs. The students, to be trained for the various specialist forging training programs, will need to know about the specialist forging training. EIA should actively recruit through publications in professional magazines and a website that is easy to find, but also through forging manifestations in various countries in Europe. For this reason, it is important that the specialist forging training programs quickly gain a good reputation and become known among smiths but also among various educational institutions. Also clients such as governments should know that a good specialist forging training exists whenever activities should be carried out that demand craftsmanship.

A distribution will have to be made of the training locations in Europe. These will be distributed all over Europe at locations that are easily accessible. Also the training sites, which the partners have, will be made suitable as a training place for EIA.

To make sure that the quality of education is guaranteed, the EIA itself takes care of quality assurance.

The training and instruction spaces should have enough space for 6-8 students to work simultaneously in their own workspace with enough tools and the necessary machines.

EIA will also encourage the balance between social and professional skills for students and teachers learning about European countries, culture and language.

EIA will show new possibilities for teachers for use of craftsmanship as a learning method.

E. The EIA stands for innovation and knowledge exchange. The development and innovation of the craft is better facilitated. Specialization is possible, so students can travel through Europe to specialize, think of the old 'guilds'.

The partners have to stimulate inclusion of material in the curricula of VET schools. This material will be further developed and described in a (two year) educational development program for the EIA. Results and experiences used in this project will be included, like exchanges of teachers, staff of enterprises and students.

Students and teachers may specialize across whole Europe. As a result, there can be 'guilds' again.

4. Structure and content of the EIA:

This (business) plan for the strategic partnership EIA consists of 7 partners from 6 European countries. The aim of this project is to create further education for forging and metal designers in Europe. Therefore we need more strategic partners.

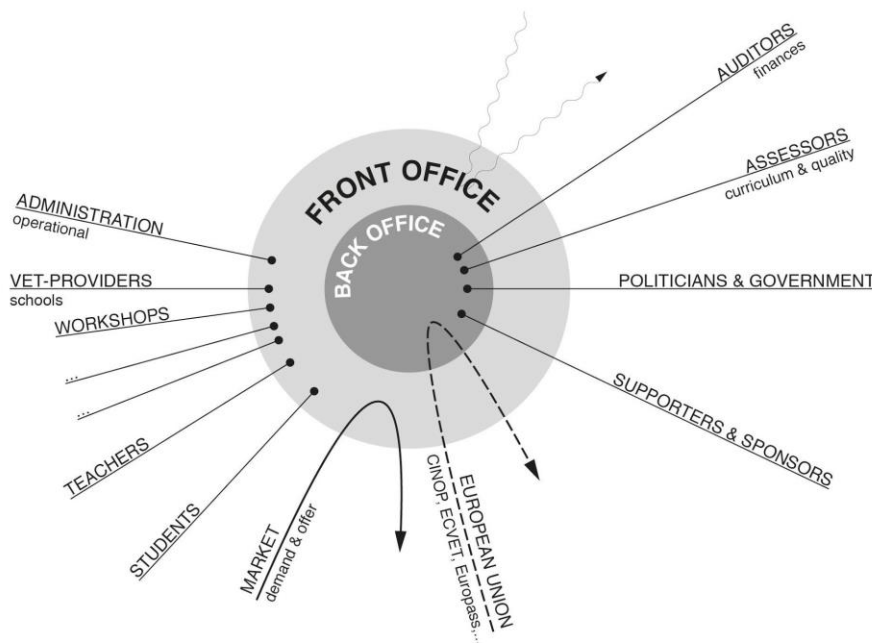
The partners started in the period 2015-2017 to create a method to visualize competencies (technical skills and soft skills) and make these measurable, a method for clear communication and an agreement of understanding. We made an inventory of levels of the various education possibilities in Europe and try to level those to the same European scale (EQF).

The website EIA is a portal where information about the education can be found. For this part, the project EIA has received an amount of financial support by Erasmus+.

The second step is to use the final results of the first step as a kick-off and come to a further education for the basic studies that already exist in Europe. We would like to connect these studies, so it will be clear where students can go for their further education. The content and certification of this further vocational education will be filled in.

The website will also be used by students who would like to register for education, training or apprenticeship. Supply and demand will meet.

Organogram of a future European Iron Academy



The EIA does not have a pyramid hierarchy as often seen in corporations, where a CEO directs from the top and the workers make up the vast majority at the bottom, including several levels of control and administration with graduation in size in between.

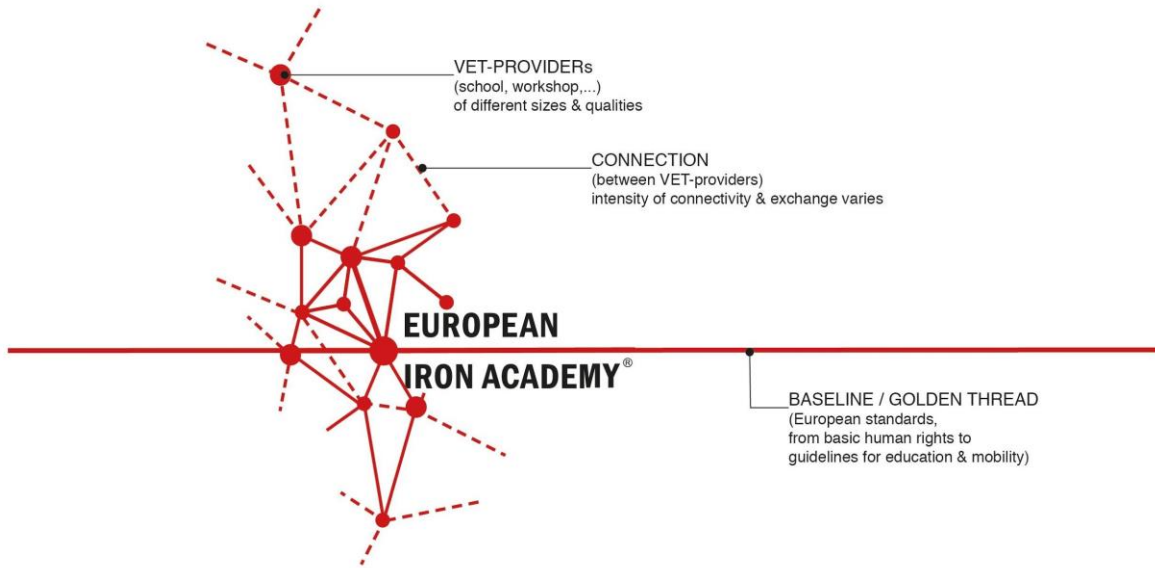
The EIA, as a virtual institution, will be a polar arrangement. It will have a structure like a cell. The thick cell wall is the front office made up of all the operational groups.

The nucleus is the back office, where the legislation and standards are set up.

The front office cell hosts all stakeholders and interested people. It hosts the executive administration, VET-providers (such as workshops, schools), teachers and students. The market including demand and supply is displayed like a dynamic curve, mainly relevant to the front office.

The back office contains the principal legislation. This includes auditors and assessors, supporters and sponsors, politicians and government. The European Union with its funding and regulation institutions and with its standards is a dynamic curve affecting the legislative nucleus of the European Iron Academy but also its front office section.

The EIA must also be imagined as a polycentric organization (see web-logo of EIA, not tied to only one specific location or institution. Blacksmith education is spread across Europe and there are many VET-providers which will be addressed by students and teachers through mobility).



5. Opportunities (added value) and threats (risks)

How can the EIA stimulate companies and training opportunities to value the value of the EIA? What is the added value for these target groups?

For students:

- It guarantees the quality of their work
- Added value for the students due to increased competencies, the higher their (technical) qualification the more opportunity it offers = better employment / self -employment
- Possibility of working abroad. Some countries are saturated with blacksmiths whereas other countries need them
- Blacksmithing is a continuous learning process. New technologies, new methods etc. So students will always be able to find somewhere, someplace, that meets their needs by using the website.

For teachers:

- Update of their education if necessary
- Experiences in other European countries
- Strengthening of their network
- Blacksmithing is a continuous learning process. New technologies, new methods etc.

For businesses:

- The EIA offers a specialized and qualified workforce
- The EIA offers a series of continuous, interdisciplinary and itinerant training courses (LLL)
- Recognized qualifications at a European level (EQF), therefore companies can also employ people from outside their country giving more choice
- The EIA could become a sort of databank of trained people, for example for temporary positions (e.g. a blacksmith who is working on a commission, and needs an extra pair of hands, will know whether a student will have the necessary competencies to help).

For municipalities:

- Growing amount of inhabitants
- Strengthening of their network
- New education

What are the chances of success? Is there a need for an EIA?

During the final symposium of this project (ME), many stakeholders have answered this question. They would like to preserve the cultural heritage of the profession of blacksmith, strengthen the spirit and energy of this project, are curious about it or would like to educate in the European field of art. The market also demands technically qualified young people more than ever. Within a few years, the demand for VET practically educated young people has risen to great proportions. The project needs to connect local experts on a European level and focus on reachable results.

What could be the value of international cooperation and exchange?

A future without mobility is impossible. Widen the horizon and get out of the bubble of “traditional men who forge and turn black in dark workshops”. A blacksmith should transform more or less and perform on the same level as administrative professionals, architects, construction managers and investors. Also desk studies, design and research are important elements for this technical study. Blacksmith principles are explainable within 10 minutes but it takes about 10 years to learn these principles.

What steps should be taken to provide the offer of blacksmith courses?

A course must be valuable for students with strong and interesting topics. The quality of the teachers should be at an acknowledged master level, and it should be tailored to a proper job. Every course should be aimed at specific skills and their results should help with specialized blacksmith jobs (working specializations). Also their partial financial participating (via fees) may be an important motivation for students.

Marketing is not possible without energy and money spent on promotion and spreading information to target groups. Only satisfied students and teachers will spread a good notion about the courses. The website can be a good and sustainable platform for informing about the wide offer of courses from all over Europe.

Risks

Within the EIA, there must be a constant care for the risks. Possible risks include loss or shortage of people, no registration by students, too little time is invested by the partners, failures in communication. Communication is at the heart of the project. What are the consequences? Example: By using the permitted education levels (EQF), we can reduce the risk of exceeding the estimated time and costs, or not being able to present the desired results without early warning and monitoring. We will create a contract that obliges participants to respond in case of disagreement. Proper agreements should be made in advance, and also working with “useful models” examples for everyone. Partners and stakeholders will keep in touch via Skype, website or email, and need to be informed about any issues.

Finally

There must be awareness of the courses offer, which is not possible without energy and money spent on promotion and spreading information to target groups. For the development of learning materials and the adjustment of the various training locations we will have to assess what is already there at the various partners, In case adjustments or major renovations should be done, we should make a provisional budget plan so we know what costs to expect. That may mean that some partners have to invest money for start-up costs. These costs should be included in the exploitation budget. A calculation should be made per country for the costs of the tuition, because the compensations from the government and interest groups will vary. The rate of the teachers and costs will vary as well.

After the project is finished, the website has to be maintained and paid for. The partners could e.g. pay a yearly contribution for that matter for maintenance of the website.

Partners (as entrepreneur or school) will decide about the content and costs of the EIA education. The most important thing is that the student has reached the learning outcomes at the end of the ride (ECVET). The final learning outcomes are European. established and periodically reviewed.

During this second phase, part of money could be used for a pilot blacksmith further education program (series of courses). The EIA website could be a good and sustainable platform for information about the wide offer of courses all Europe.