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**WP3 – Definition of competences associated to creativity and innovation in the
metalworking sector**

SPECIFIC DEFINITIONS

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1. Main competences highlighted

On the bases of results of WP3 “*Definition of competences associated to creativity and innovation in the metalworking sector*” results and report, the present document provides a definition of the competences to be trained through the collaborative platform and some remarks on why they are considered important in the metalworking sector.

A brief premise needs to be done: creativity is a very abstract concept, and it can be intended most as general approach rather to a skill itself. Therefore, all the competences identified are directly related to creativity in the sense of having the ability to solve problems or to adapt to changeable environments in a creative way. This is particularly valuable in metalworking sector, due to the big pressure its workers daily deal with (time constraints, international competition, continuous innovation, continuous changeable circumstances in the demands of the customers, etc.).

The following competences can be considered as the ones shared by TIM Partners. Some local contexts, then, seem to have their own peculiarities. We’ll provide a brief overview on that in the last section of the report.

The common competences identified to be trained through TIM final tools are:

1. **Communication**
2. **Adaptability and flexibility**
3. **Organizational skills**
4. **Teamwork**

2. Definition of competences

In order to propose a tool with valuable training contents for our target group, a common definition of each competence is needed.

In the following lines a list of abilities related to each competence is provided, also according to the contributions provided by each Partner in explaining why those competences are important for metalworking sector.

Technical note: when relevant, we matched each ability with the different project target groups (T for Technicians, A for Administrative workers, D for Draftsmen, F for Foremen).

2.1 Communication (internal and external)

- Ability to listen and to understand what clients want to say and their needs
- Ability to choose the right channel and style of communication, according to your interlocutor (F)
- Ability to negotiate using the right arguments (this helps to make deals, solve problems, manage conflicts and preserve relationships)
- Ability to listen and to understand what colleagues want to say and their needs (T; A; D; F)
- Ability to give clear assignments and roles and make everyone respect deadlines (A; D)
- Communication clear and concise (effective, not too much, not too few) (T; A; D; F)
- Ability to reflect the organization image both towards the inside and the outside (vision, mission, values, external and internal clients)
- Ability to negotiate in order to avoid and manage conflicts (D; F)
- Check that everyone do knows what to do, how and for when, not to give things for granted (F)
- Ability to communicate with proper technical language, even in English when needed (T)
- Ability to foster a fluent communication among the different departments within the organization (it is highlighted that flat-hierarchy has been shown as a key factor for succeed in this) (A; D; F).

2.2 Adaptability and flexibility

- Ability to quickly react to foreseen or especially unexpected changes in the context, also altering plans according to new situations (short reaction times are essential as production never stops) (F)
- Ability to find creative solutions to problems, using generic or ad hoc methods, in an orderly manner (T; D)
- Ability to adapt to the other people needs and capabilities (F)
- Be open minded and able to put yourself in the others' shoes (T; A; D; F)
- Ability to put into action corrective actions in case of emergencies (F)
- Ability to find new ways and methods for improving the work, even if the one commonly used seems to work well (creative approach to tasks) (T; A; D; F)
- Ability to adapt to new tools, technologies and methodologies (T; A; D; F).

2.3 Organizational skills (self-management and others' work management)

- Good time planning and management (T; A; D; F)
- Ability to self-define deadlines (A; F)
- Ability to respect the deadlines (A; D; F)
- Ability to coordinate both internal and external resources
- Ability to motivate yourself at dealing with different tasks and in different work environments (T; A; D; F)
- Ability to motivate workers at the common scope of their job (leadership) (F)
- Self-confidence, in order to be able to exercise your leadership (F)
- Ability to coordinate teams coming from different departments, combining different working styles (T; D; F)
- Ability to delegate tasks to the relevant people, and to take charge of the ones you consider as priority (F)

N.B. It is noted that these skills are of major importance for workers not directly involved in a rigid production chain.

2.4 Teamwork

- Awareness of the impact that individual work has on other co-workers' job (T; A; D; F)
- Ability to motivate colleagues (T; A; D; F)
- Ability to transmit enthusiasm and positive attitude (F)
- Ability to create trust among the workers and toward your role
- Ability to satisfy each others' expectations (T; A; D; F)
- Ability to solve conflicts together (T; A; D; F)
- Ability to negotiate and foster a win-win approach (T; A; D; F)
- Ability to valorise the strong points of each member of the team (D; F).

N.B. It is noted that team-building competences are absolutely necessary especially for foremen and other intermediate managers.

3. Final remarks

Many limits at the development of metalworking sector are caused by the fragmentation of the sector and the lack of cooperation among different entities. Lack of cooperation both among enterprises and research/institutional institutes negatively affects the flow of information, thus having an impact on the low level of development and competitiveness improvement on the market. An **education to cooperation and collaborative work** would then be useful, and starting from each single enterprise relationships could positively affect the cooperation attitude among enterprises, and among enterprises and other bodies.

In parallel, it is important to highlight that training in the metalworking sector is mostly addressed to the development of technical skills or tasks that are usually carried out in the daily job. **The training of transferable competences is quite rare**, with the exception of those workers in top managerial positions.

The use of **on-line tools** is not extended either, and this is a common features shared by all TIM Partners Countries. First of all, because normally the training takes place in the work place, is facilitated by a trainer and is focused on the training of those technical tasks the workers need to do at work (like handling a specific machine). Besides, most of the metalworking workers have a low level of ICT competences.

According to what found during WP2 and WP3 activities, we can strongly state that **TIM project is innovative in the contents and the approach**, as it is addressed to the training of transferable competences, and also in its methodology, because uses collaborative learning through an on-line environment as the way to build knowledge and to develop competences.

However, it is necessary to be careful with the implementation of this pedagogical methodology because it might result too much for the target group. This is why is recommended that even using this methodology and changing the focus of the training on less traditional objectives, **the training should count with a facilitator/trainer**. S/he will have – firstly - the task to raise awareness among the target group about the necessity to develop these competences and – secondly - will guide participants through the contents so they can take out the best of them developing not only the competences to be creative in their work but also other lateral competences such as ICT. It is also suggested that an extra incentive for employees could be the grant of a certification, for the subject of the attended course.