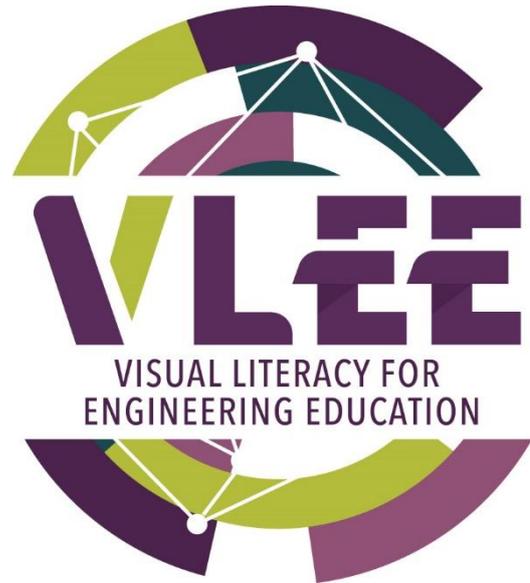


VISUAL LITERACY FOR ENGINEERING EDUCATION



VISUAL LITERACY DEFINED

Our review of academic Works and other references showed us that there are plenty of definitions of visual literacy. Therefore, our first effort was to clarify this concept. To achieve that, exhaustive review of references as well as discussions were performed. The result of these process gave an agreement according to the scope of our project of what we understand as Visual Literacy.

Visual Literacy can be defined as the set of skills and abilities to understand, to create, as well as to think and learn using all kind of visual material, such as images, pictures, and graphics or 3D objects. If literacy is the interpretation and creation of texts, Visual literacy means the set of abilities that allows the understanding of information, the ideation and communication by visual materials.



www.vleeproject.eu

Engineers use a Visual language which is made up of symbols, standardized pictorial representations and annotations



VISUAL LITERACY IN ENGINEERING CONTEXT

Our Team Project researchers from Universidad Politécnica de Madrid helped us understand that visual literacy in engineering is reflected in their work development: engineers are problem solvers who handles a lot of visual information. An engineer requires visual means to express completely the results of their work: a mechanical design or an electronic scheme cannot be defined completely by describing it with words, it requires a pictorial description supported by symbols and annotations, which may be concrete (a mechanical object' drawing) or abstract (an electronic scheme). Engineers uses and

produces visuals in all of the technical problem-solving tasks, since the identification of the problem to sharing the solution Engineers need to understand and create messages in a visual format to share technical ideas.

This understanding will lead further steps in our project, such as VLEE **ToolKit** which aims directly at teachers and trainers who wish to increase the quality of their teaching using digital visual media tools and VLEE **Online Course** which complements classroom work, providing teachers a practical resource to help consolidate student's skill.



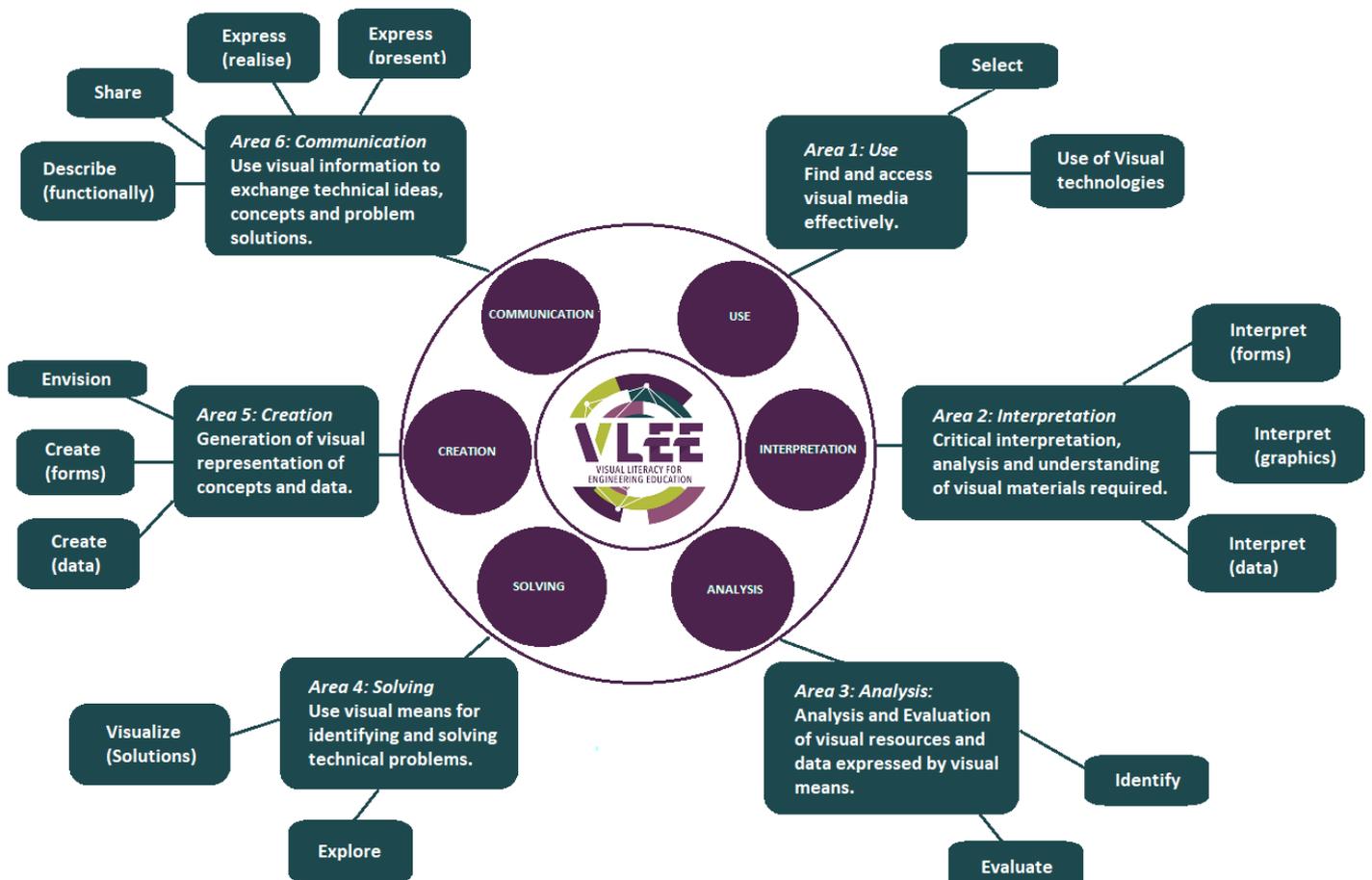
VLEE COMPETENCE FRAMEWORK

The Visual Literacy for Engineering Education competence framework (VLEE) responds to the acknowledged need that visual competences are of great importance for engineers across all disciplines because of the visual involvement of engineering activities, since problem solving to sharing concept designs. It also recognises the interesting possibilities for enhancing the development of Visual skills and abilities thanks to the proliferation of Technologies of information and communication.

The VLEE Framework captures and describes the 16 Visual Literacy digital competences structured in 6 areas. The Framework includes a model that gives support to educators in the progressive development and evaluation of visual

competences. The proposed model establishes three different levels through which a visual competence of the student progresses in a gradual way: basic, intermediate, and competent. At the basic level, engineers acquire new concepts and start with basic visual and graphic practices. At the intermediate level they apply, expand and organize such visual and graphic practices. At the competent level, the engineer is able to transmit knowledge, have a critical attitude and develop new practices in accordance with the competences.

This Framework offer and suggest the revision to the contents of VET and HE engineering educational programs. You can read more about Competence Framework on the project's website.



VLEE PROJECT

VLEE is an EU **Erasmus+ Project** based on the collaboration of partners and experts from Poland, Spain, Denmark, Ireland and the United Kingdom.

The aim of the project is to strengthen and enhance the visual literacy of engineers and to introduce innovative visual literacy training into vocational teaching and provision.

Our Website and Social Media

By joining our community on:

Facebook:

<https://www.facebook.com/VLEEerasmus/>

LinkedIn:

<https://www.linkedin.com/in/vlee-visual-literacy-for-engineering-education-1094091a6/>

Website:

<https://www.vleeproject.eu/>

you can read more about at the latest trends on the topic, and gain access to our training materials and courses.



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momentum
[educate + innovate]



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