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| **Validated COMPetency Instrument (COMπ)**  **Entrepreneurial competencies** | | | | |
| **Criteria** | **Absent (Level 0)** | **Basic (Level 1)** | **Advanced (Level 2)** | **Expert (Level 3)** |
| Technology benchmarking | Not aware of market drivers, emerging technologies, competitions, pricing and customer needs, regulations and standards | Little awareness of market drivers, emerging technologies, competitions, pricing and customer needs, regulations and standards | Awareness of market drivers and emerging technologies, but little awareness of competitions, pricing and customer needs, regulations and standards | Awareness of market drivers, emerging technologies, competitions, pricing and customer needs, regulations and standards |
| Financial awareness | Not aware of financial capital (funding, cash flow, taxes, wages, etc.) | Little awareness of financial capital (funding, cash flow, taxes, wages, etc.) | Awareness of financial capital (funding, cash flow, taxes, wages, etc.) | Deep awareness of financial  capital (funding, cash flow, taxes, wages, etc.) |
| Business acumen | Not able to identify business opportunities nor to apply business modelling and problem solving to implement strategic responses | Difficulties with identifying  business opportunities and applying business modelling and problem solving to implement strategic responses | Identifies business opportunities  but has difficulties with applying business modelling and problem solving to implement strategic responses | Identifies business opportunities  and applies business modelling and problem solving to implement strategic responses |
| Stakeholder management | No knowledge about stakeholders’ needs, concerns and desires | Little knowledge about  stakeholders’ needs, concerns and desires | Knowledge about stakeholders’ needs, concerns and desires | In-depth knowledge about stakeholders’ needs, concerns and desires |
| Value/cost consciousness | Not aware of project values and costs when creating, designing, implementing and operating it | Little awareness of project values  and costs when creating, designing, implementing and operating it | Awareness of project values and costs when creating, designing, implementing and operating it | Manages project values and costs |

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| **Innovation competencies** | | | | |
| **Criteria** | **Absent (Level 0)** | **Basic (Level 1)** | **Advanced (Level 2)** | **Expert (Level 3)** |
| Curious for innovation | No curiosity to identify and to  explore innovative ideas/products/services which give market value | Little curiosity to identify and to explore innovative ideas/products/services which give market value | Curious to identify and to explore innovative ideas/products/services which give market value | Besides being curious, motivates others to identify and explore innovative ideas/products/services which give market value |
| Problem solving | Not able to identify problems, generate and evaluate the risk of alternatives | Difficulties with identifying  problems, and with generating and evaluating the risk of alternatives | Identifies problems in the real  world, but requires help to generate and evaluate the risk of alternatives | Identifies problems and estimates risks, evaluates the different options and weighs the solutions |
| Critical thinking | Not able to consider issues,  develop strategies to overcome obstacles, estimate risks and implement solutions | Difficulties with considering issues, developing strategies to overcome obstacles, estimating risks and implementing solutions | Considers issues, develops  strategies to overcome obstacles, but requires help to estimate risks and to implement solutions | Considers issues, develops  strategies to overcome obstacles, estimates risks and implement solutions |
| Ideation | Lacks creativity tools and  processes and others’ advice to create functional new ideas or to improve existing ideas | Uses little creative tools and processes and others’ advice to create functional new ideas or to improve existing ideas | Uses creativity tools and  processes, and others’ advice to create functional new ideas or to improve existing ideas | Besides being creative,  encourages others to come up with new functional ideas by applying their creativity and innovation methods |
| Idea implementation | Not able to implement activities which enable creative ideas to move from the design to the marketplace | Little ability to implement activities which enable creative ideas to move from the design to the marketplace | Implements activities which  enable creative ideas to move from the design to the marketplace | Manages the implementation of activities which enable creative ideas to move from the design to the marketplace |

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| **Teamwork competencies** | | | | |
| **Criteria** | **Absent (Level 0)** | **Basic (Level 1)** | **Advanced (Level 2)** | **Expert (Level 3)** |
| Cross-cultural understanding | Not able to understand cultural differences, recognise their importance/benefit nor stimulates teamwork among different cultures | Understands cultural differences  but does not recognise their importance/ benefit nor stimulates teamwork among different cultures | Understands cultural differences  and recognises their importance/ benefit but does not stimulate teamwork among different cultures | Understands cultural differences  and recognises their importance/ benefit and stimulates cooperative teamwork among different cultures |
| Interdisciplinary thinking | Not able to collaborate interdisciplinarily with team members of engineering disciplines and of other disciplines, and clients | Difficulties collaborating interdisciplinarily with team members of engineering disciplines and of other disciplines, and clients | Collaborates interdisciplinarily with team members of engineering disciplines, but not with members of other disciplines nor clients | Collaborates interdisciplinarily with team members of engineering disciplines and of other disciplines, and clients |
| Interconnection/ interrelation ability | Not able to understand the importance of networking nor how to get the knowledge to interconnect and create links among individuals | Understands the importance of networking but has little knowledge of how to interconnect and create links among individuals | Understands the importance of networking and pays attention to building formal and informal relationships | Builds and retains formal and  informal relationships naturally and fosters others’ networking |
| Listening skills | Does not pay attention nor acts  on what someone says or does | Is sometimes not paying attention  and not acting on what someone says or does | Listens and understands verbal messages, but hardly acts on what someone says or does | Listens and understands verbal messages, and consequently acts on what someone says or does |
| Managing conflict | Not able to accept others’  opinions generating conflicts between team members | Difficulties accepting others’  opinions generating some conflicts between team members | Accepts and respects others’  opinions but has difficulties managing conflits between other team members | Manages effectively conflicts  between team members by prompting healthy debates to reach agreements |

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| **Communication competencies** | | | | |
| **Criteria** | **Absent (Level 0)** | **Basic (Level 1)** | **Advanced (Level 2)** | **Expert (Level 3)** |
| Quality of presentation method | Not able to use a presentation method and medium | Uses the same presentation  method and medium without adaption to topic and target group | Uses the appropriate presentation methods and medium depending on topic and target group | Develops innovative presentation methods and mediums depending on topic and target group |
| Presentation skills | Gives unclear, disorganized and monotonous speech and does not answer questions from the audience | Gives clear, organized and logic  but monotonous speech and answers questions rudimentary | Gives clear, organized and logic speech and answers all questions adequately but without elaboration | Gives clear, organized and logic speech and answers all questions adequately and with elaboration |
| Adaptive communication style | Not able to communicate properly, adapting style and language to the purpose, context and environment | Difficulties communicating,  adapting style and language to the purpose, context and environment | Communicates properly, adapting style and language to the purpose, context and environment | Masters communication, adapting style and language to the purpose, context and environment with ease |
| Self-confidence | No confidence when talking in  formal or informal settings and maintains no eye contact with the audience | Confidence requires development when talking in informal settings and little eye contact is maintained, only with part of the audience | Has confidence in talking in  informal settings but little in formal settings, maintaining eye contact with part of the audience | Has confidence in all situations  both in formal and informal settings and easily maintains eye contact with the whole audience |
| Pitching skills | Not able to convey and persuade  an audience with a short time speech (1-3 min) | Difficulties with conveying and persuading an audience with a short time speech (1-3 min) | Able to convey and persuade an audience with a prepared short time speech (1-3 min) | Able to convey and persuade an audience with a spontaneous short time speech (1-3 min) |

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| **Lifelong learning competencies** | | | | |
| **Criteria** | **Absent (Level 0)** | **Basic (Level 1)** | **Advanced (Level 2)** | **Expert (Level 3)** |
| Strengths and weaknesses awareness | Not aware of own strengths and weaknesses and no interest in getting more self-knowledge | Little awareness of own strengths  and weaknesses and no interest in getting more self-knowledge | Awareness of some strengths and weaknesses but no interest in getting more self-knowledge | Awareness of some strengths and weaknesses and interest in getting constant self-knowledge |
| Professional role awareness | Not aware of personal and professional needs and engineering professional roles | Limited awareness of personal and professional needs and engineering professional roles | Concrete personal and  professional needs but little awareness of engineering professional roles | Concrete personal and  professional needs and awareness of engineering professional roles |
| Active learning | No responsibility for own learning  and no proactivity to develop learning strategies and practices | Little responsibility for own learning and little proactivity to develop learning strategies and practices | Recognises responsibility for own learning but has little proactivity to develop the learning strategies and practices | Recognises responsibility for own learning and continuously seeks and develops strategies and practises to improve the learning process |
| Autonomous work | No autonomy when working and studying, no responsibility for simple tasks, and does not manage projects nor supervises people | Works and studies with little autonomy, has little responsibility for simple tasks, and does not manage projects nor supervises people | Works and studies with autonomy,  has responsibility for routine tasks, manages simple projects and supervises people | Works and studies with autonomy,  has responsibility for complex tasks, manages complex projects, and supervises people |
| Time Management | Not able to prioritize, determine  tasks, schedule appointments, allocate team roles and meet deadlines | Difficulties in prioritizing,  determining tasks, scheduling appointments and meeting deadlines | Prioritizes, determines tasks and schedules appointments, but sometimes has difficulty to meet deadlines | Prioritizes, determines tasks, schedules appointments, allocates team roles and meets deadlines |