

## **GLOSSARY OF MULTI-LEVEL FACTORS**

### **RELATED TO THE PRACTICE OF ENTREPRENEURIAL ENGINEERING**

#### **Role Based (Individual Level)**

- Creativity – The ability to generate novel and useful ideas.
- Expertise – Domain-specific knowledge and skills relevant to engineering and entrepreneurship.
- Intrinsic Motivation – Internal drive to engage in tasks for personal satisfaction rather than external rewards.
- Cognition – Mental processes involved in understanding, problem-solving, and decision-making.
- Personality – Individual traits that influence entrepreneurial behavior, such as openness and risk-taking.
- Sense-Making – The process of interpreting and giving meaning to complex or ambiguous situations.
- Emotions – Affective states that impact decision-making, risk-taking, and creativity.
- Values – Core beliefs that shape attitudes and behaviors in entrepreneurial settings.
- Competencies – A combination of knowledge, skills, and abilities necessary for entrepreneurial engineering.
- Social Network – Professional and personal connections that provide support, resources, and opportunities.
- Person-Organization Fit – The alignment between an individual's values and the organizational culture.
- Innovative Work Behavior – Actions taken by individuals to introduce and implement new ideas at work.
- Entrepreneurial Self-Efficacy – Confidence in one's ability to successfully engage in entrepreneurial activities.
- Resilience – The ability to recover from setbacks and persist in challenging situations.
- Learning Agility – The ability to rapidly acquire new knowledge and adapt to changing environments.
- Risk Tolerance – The willingness to take calculated risks in pursuit of innovation.
- Reflection & Metacognition – Awareness of one's thinking processes and the ability to learn from experiences.
- Work Ethic & Grit – Sustained effort and perseverance in entrepreneurial endeavors.

#### **Project/Task Level**

- Job Complexity – The level of difficulty and skill required to perform tasks.
- Routinization – The extent to which tasks are repetitive and standardized.
- Job Requirements – The specific skills, knowledge, and competencies needed to complete a job.
- Customers – The influence of end-users and clients on entrepreneurial decision-making and innovation.
- Paradigm Shifts – Fundamental changes in industry norms, technologies, or business models.
- Validation – The process of testing and confirming the feasibility and market potential of an innovation.

- Innovation Projects Management – The processes and practices used to oversee and execute entrepreneurial engineering projects
- Technology Readiness – The maturity level of the technology being developed or applied.
- Regulatory and Compliance Factors – Legal and industry standards that affect engineering entrepreneurship.
- Iterative Experimentation – The use of rapid prototyping, testing, and feedback loops to refine innovations.
- Collaboration with External Stakeholders – Engaging with suppliers, research institutions, and partners.
- Sustainability Considerations – The impact of projects on environmental, social, and economic sustainability.

### **Team Level**

- Interdisciplinary Understanding – The ability to integrate knowledge and perspectives from multiple disciplines.
- Team Climate (West, 1990) – The shared perceptions and attitudes within a team that influence collaboration and innovation.
- Complementary Skills/Group Composition – The mix of expertise and skills that enhance team performance.
- Group Characteristics – Traits such as size, diversity, and cohesion that impact team effectiveness.
- Leadership – The ability to guide, motivate, and coordinate team efforts toward innovation.
- Psychological Safety – The extent to which team members feel safe taking risks and expressing ideas.
- Knowledge Integration – The process of combining diverse expertise to generate innovative solutions.
- Team Learning – The ability of the team to collectively acquire, share, and apply new knowledge.
- Trust and Cohesion – The degree of mutual confidence and alignment among team members.
- Decision-Making Styles – The approaches used in collective problem-solving and strategy formulation.
- Conflict Management – Strategies for resolving disagreements constructively within entrepreneurial teams.

### **Organizational Level**

- Business and Innovation Strategy – The overarching plan for competitive advantage and market growth through innovation.
- HR Strategy – Policies and practices that support talent development, retention, and innovation.
- Organizational Communication – The flow of information and knowledge-sharing mechanisms within the organization.
- Middle Management Approach – The role of mid-level leaders in facilitating innovation and strategic alignment.
- Knowledge Management and Corporate Memory – The systems and practices for capturing, storing, and leveraging organizational knowledge.

- Resources (Finance, Time, Personnel) – The availability of funding, workforce, and time to support entrepreneurial activities.
- Contingency Factors – External and internal variables that influence decision-making and organizational flexibility.
- Culture and Subcultures – The shared values, norms, and behaviors that shape an organization's identity and operations.
- Ambidexterity and Routines – The balance between exploration (innovation) and exploitation (efficiency).
- Psychological Contract – The implicit expectations between employees and employers regarding mutual obligations.
- Top Management Support and Leadership – The commitment of senior leaders to fostering an entrepreneurial culture.
- Structure – The formal arrangement of roles, responsibilities, and decision-making authority.
- Size – The scale of the organization and its impact on agility, resource allocation, and innovation.
- Corporate Entrepreneurship (CVC vs. VC) – The internal (Corporate Venture Capital) vs. external (Venture Capital) approaches to funding and supporting innovation.
- Organizational Design – The framework that determines how an organization is structured to support innovation and efficiency.
- Open Innovation Practices – The extent to which the organization engages in knowledge-sharing and collaboration beyond its boundaries.
- Intrapreneurial Culture – The presence of systems and incentives that encourage employees to act as entrepreneurs within the organization.
- Digital Transformation – The integration of digital technologies into business processes and innovation strategies.
- Corporate Governance & Ethics – Ethical considerations and decision-making structures that influence entrepreneurial initiatives.
- Market Orientation – The organization's ability to sense and respond to market trends and customer needs.
- Dynamic Capabilities – The ability of the organization to adapt and reconfigure resources in response to environmental changes.
- Funding Mechanisms for Innovation – Internal and external financial support structures, such as innovation grants or venture arms.
- Employee Autonomy – The level of freedom employees have in shaping their work and pursuing innovative ideas.
- Diversity & Inclusion – The impact of diverse perspectives on innovation, creativity, and problem-solving.