

TECHNOLOGY AND ENGINEERING
MANAGEMENT SOCIETY

BODY OF KNOWLEDGE, TEMSBOK

CALL FOR
AUTHORS

Initiative

<https://bit.ly/TEMS-BOK>

Approved by:
IEEE TEMS Board of Directors



A) Purpose

The IEEE TEMS Board of Directors approved the development of a Body of Knowledge dedicated to Technology and Engineering Management, to be published by end of 2021.

The value that a Body of Knowledge provides is a set of benefits for engineers and entrepreneurs leading initiatives and projects as well as to the members of the institutes that represent the vision and objectives of the Professional organizations including :

- a) A common set of updated good practices and guides for the profession
- b) A reference guide for entrepreneurs
- c) A basis for future official formal certification programs
- d) The opportunity to summarize extensive literature on the Management field in order to publish reference documentation for supporting new initiatives and business based on technology.

The initiative is being managed by a steering group of selected professionals, a group of more than thirty five reviewers and a set of authors who are leaders in their field.

B) Scope

The structure of the TEMSBOK is organized in Knowledge Areas
TEMSBOK Knowledge areas:

- 1 Market research and Business analysis
- 2 Strategy and Change Management
- 3 Leadership
- 4 Managing Innovation
- 5 Entrepreneurship
- 6 Project Management
- 7 Digital disruptions
- 8 Digital Transformation
- 9 Data science
- 10 Ethics copyrights and legal issues
- 11 Acronyms

Every knowledge area contains several chapters and sections that include basic information, benefits, use cases examples, good practices and references for further study.

Sections will be leaded by experts in the field that will consolidate contents form authors.

C) Structure

The sample list of Sections is summarized as follows

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1) Market research and Business analysis

Section 1.1: Market Requirement Analysis

Section 1.2: Business Analysis Governance planning

Section 1.3: Financial analysis, evaluation and control

Section 1.4: Risk analysis of market opportunities

Section 1.5: Business plan, OKR, Vision and objectives registers

2) Strategy and Change Management

Section 2.1: Strategic planning

Section 2.2: Strategic models

Section 2.3: Technology adoption

Section 2.4: New product and services, vision and communication

Section 2.5: Project strategic management

3) Leadership

Section 3.1: Leading and managing working groups

Section 3.2: Optimizing group creation and evolution

Section 3.3: The evolving organization

Section 3.4: Leading Agile organizations and working groups

Section 3.5: Enterprise Agile governance

4) Managing innovation

Section 4.1: Innovation in Engineering and technology Management

Section 4.2: Open innovation

Section 4.3: Planning development stages

Section 4.4: Research policies and innovation

Section 4.5: Integration of new Technologies

5 Entrepreneurship

Section 5.1: Marketing plans for new products and services

Section 5.2: Risk analysis and challenges for entrepreneurs

Section 5.3: Procurement and collaboration

Section 5.4: Virtual group co-development, ecosystems

Section 5.5: Policies, international support and sources for funding projects

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6) Project Management

Section 6.1: Projects, Portfolios and Programs, economic constraints and roles

Section 6.2: Integration management and control of change

Section 6.3: Project plan structure

Section 6.4: Managing Scope, cost, time, quality and resources

Section 6.5: What is the gain of using existing Project Management Body of Knowledge?

7) Digital disruptions

Section 7.1: Smart cities and eco systems

Section 7.2 : Internet of Things, Industrial Internet and Industry 4.0

Section 7.3: BioTechnologies

Section 7.4 : Wireless 5G

Section 7.5: Blockchain Distributed Ledgers and CyberSecurity

8) Digital Transformation

Section 8.1: Big Data, Cloud and Edge computing Open transparent data infrastructure and ecosystems

Section 8.2: Digital reality, Digital Twins

Section 8.3: AI fundamentals, ethics and Management

Section 8.4: Human - Machine shared knowledge

Section 8.5: Standards for Digital transformation architecture and framework

9) Data science

Section 9.1: Analytics and representation, Data and information

Section 9.2: Statistics applications

Section 9.3: Machine learning

Section 9.4: Data management

Section 9.5: Open data platforms, Context management, Data sovereignty

10) Ethics copyrights and legal issues

Section 10.1: Professional code of conducts

Section 10.2: Managing contracts and suppliers

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