

HIGHER EDUCATION



DAVID D. TSITELADZE

# PROJECT MANAGEMENT

TEXTBOOK

**znanium.com**  
электронно-библиотечная система

Moscow  
INFRA-M  
2023

**УДК 005.8+811.111(075.8)**  
**ББК 65стд1-21:81.432.1Англ.я73**  
**Т89**

Reviewers:

*V.M. Anshin*, Doctor of Economics, Professor, National Research University “Higher School of Economics”;

*V.A. Lapidus*, Doctor of Technical Sciences, Professor, Chairman of the Board of Directors of “Prioritet” Group of Companies

**Tsiteladze D.D.**

Т89 Project Management: textbook / D.D. Tsiteladze. – Moscow: INFRA-M, 2023. – 339 p.: il. – (Higher Education). – DOI 10.12737/1859087.

ISBN 978-5-16-017502-7 (print)

ISBN 978-5-16-110022-6 (online)

The textbook outlines modern concepts and methodology of management projects that need to be mastered when studying the discipline “Project management”. The textbook materials are based on the recommendations of the International Project Management Association IPMA (IPMA ICB and IPMA OCB) and the international standard ISO 21500 and ISO 21502.

Textbook materials help students develop the necessary competencies in accordance with federal state educational standards of higher education of the last generation in the direction of “Management”.

For undergraduate and graduate students of universities studying management. May be used in practice by managers and specialists related to project management in organizations of various profiles.

УДК 005.8+811.111(075.8)  
ББК 65стд1-21:81.432.1Англ.я73



Данная книга доступна в цветном исполнении  
в электронно-библиотечной системе Znanium

ISBN 978-5-16-017502-7 (print)  
ISBN 978-5-16-110022-6 (online)

© Tsiteladze D.D., 2023

# CONTENT

<b>Preface</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>5</b>
<b>Chapter 1. Significance of project management methodology and standards</b> .....	<b>8</b>
1.1. The concept of project management methodology.....	8
1.2. International project management standards.....	11
1.3. National project management standards.....	15
<b>Seminar 1. Presentation of the project work</b> .....	<b>19</b>
Examples.....	24
Case.....	25
Questions for self-control.....	26
Bibliography.....	27
<b>Chapter 2. System project management</b> .....	<b>28</b>
2.1. Project and project management.....	28
2.2. Classification of projects.....	31
2.3. Approaches and methods of managing various types of projects.....	38
2.4. Systematic approach to project management.....	41
<b>Seminar 2. Basic tools for project description and analysis</b> .....	<b>49</b>
Examples.....	53
Case.....	55
Questions for self-control.....	57
Bibliography.....	57
<b>Chapter 3. Management of subjects of management and organizational structures</b> .....	<b>58</b>
3.1. Project stakeholders.....	58
3.2. Structural models of the project.....	64
3.3. Structural decomposition of project work.....	66
3.4. Types of organizational structures.....	70
3.5. RACI roles and responsibilities matrix.....	78
<b>Seminar 3. Basic tools for project description and analysis</b> .....	<b>81</b>
Examples.....	86
Case.....	91
Questions for self-control.....	92
Bibliography.....	92
<b>Chapter 4. Stages of project management processes</b> .....	<b>93</b>
4.1. Project initiating.....	93
4.2. Planning a project or its phases.....	106
4.3. Organization and control of the project or its phases.....	110
4.4. Analysis and regulation.....	110
4.5. Closing.....	110
4.6. Algorithm of the project management process.....	111

<b>Seminar 4. Analysis of the Investment attractiveness of the project .....</b>	<b>113</b>
Examples.....	121
Case .....	122
Questions for self-control .....	122
Bibliography.....	123
<b>Chapter 5. Management of functional areas of the project .....</b>	<b>124</b>
5.1. Management of the subject area of the project (scope & deliverables).....	124
5.2. Project timing management.....	131
5.3. Project cost and financial management.....	139
5.4. Quality management in the project.....	149
5.5. Project risk management.....	157
5.6. Project human resource management .....	177
5.7. Project communications management.....	183
5.8. Project supply and contract management.....	188
5.9. Project change management .....	191
<b>Useful paragraph notes .....</b>	<b>201</b>
<b>Seminar 5. Management of functional areas of the project .....</b>	<b>203</b>
Examples.....	203
Case.....	207
Questions for self-control.....	211
Bibliography .....	211
<b>Chapter 6. Common project management systems .....</b>	<b>212</b>
6.1. Agile project management paradigm .....	212
6.1.1. SCRUM .....	215
6.1.2. Kanban.....	225
6.1.3. XP — project team management technique .....	230
6.2. Key aspects of Lean manufacturing .....	233
6.3. Kaizen .....	236
6.4. Project management methodology Lean Six Sigma .....	245
6.4.1. Six Sigma method .....	245
6.4.2. Lean + Six Sigma .....	255
6.5. Critical chain project management .....	263
6.6. Comparative analysis of project management methods.....	274
Questions for self-control .....	280
Bibliography.....	280
<b>Chapter 7. Project Management Information Systems .....</b>	<b>281</b>
7.1. Program and portfolio management.....	281
7.2. Project management office.....	283
7.3. Analysis of the criteria and functions of the PMIS.....	287
Questions for self-control .....	292
Bibliography.....	292
<b>Chapter 8. Laboratory activities .....</b>	<b>294</b>
8.1. Laboratory work for project portfolios.....	295
Laboratory work 1. Organization of project portfolios in the information control system.....	295
Laboratory work 2. Filling portfolios with projects .....	297

Laboratory work 3. Decomposition of projects by project checkpoints.....	298
Laboratory work 4. Planning project milestones .....	299
Laboratory work 5. Accounting and monitoring of project constrains.....	302
Laboratory work 6. Modeling management decisions in the projects.....	303
Laboratory work 7. Modeling the current state of the project.....	305
8.2. Laboratory work on analytics of pre-project activities.....	306
Laboratory work 1. Monitoring activities and assessing of the sales department .....	306
Laboratory work 2. Monitoring and analysis of the transactions.....	307
Laboratory work 3. Monitoring and analysis of the sales.....	307
Laboratory work 4. Maximizing return on sales using a simulation system .....	307
Bibliography.....	307
<b>Glossary.....</b>	<b>309</b>
<b>Annexes. Basic templates for project management.....</b>	<b>320</b>

*По вопросам приобретения книг обращайтесь:*  
**Отдел продаж «ИНФРА-М» (оптовая продажа):**  
127214, Москва, ул. Полярная, д. 31В, стр.1  
Тел. (495) 280-33-86 (доб. 222, 564)  
E-mail: books@infra-m.ru

•  
**Отдел «Книга—почтой»:**  
тел. (495) 280-33-86 (доб. 222)

ФЗ № 436-ФЗ	Издание не подлежит маркировке в соответствии с п. 1 ч. 2 ст. 1
----------------	--

*Учебное издание*

**Tsiteladze David Dzhemalovich**

# **PROJECT MANAGEMENT**

**TEXTBOOK**

Оригинал-макет подготовлен в НИЦ ИНФРА-М  
ООО «Научно-издательский центр ИНФРА-М»  
127214, Москва, ул. Полярная, д. 31В, стр. 1  
Тел.: (495) 280-15-96, 280-33-86. Факс: (495) 280-36-29  
E-mail: books@infra-m.ru <http://www.infra-m.ru>

Подписано в печать 23.05.2023.  
Формат 60×90/16. Бумага офсетная. Гарнитура Petersburg.  
Печать цифровая. Усл. печ. л. 21,19.  
Тираж 500 экз. (I – 50). Заказ № 00000  
ТК 771134-1859087-230523

Отпечатано в типографии ООО «Научно-издательский центр ИНФРА-М»  
127214, Москва, ул. Полярная, д. 31В, стр. 1  
Тел.: (495) 280-15-96, 280-33-86. Факс: (495) 280-36-29