

---

# Contents

---

<b>Introduction</b> . . . . .	xvii
Dimitri UZUNIDIS and Fedoua KASMI	
<b>Chapter 1. Meaning – The Meaning of Innovation: Theoretical and Practical Perspectives</b> . . . . .	1
Joëlle FOREST	
1.1. Introduction . . . . .	1
1.2. Conceptions of the meaning of innovation over time. . . . .	3
1.3. When innovation, like the phoenix, rises from the ashes. . . . .	5
1.4. In search of lost meaning . . . . .	8
1.5. The PSI approach: a philosophy of, and for, action. . . . .	11
1.6. By way of conclusion . . . . .	15
1.7. References . . . . .	15
<b>Chapter 2. Engineering – Innovation Engineering: A Holistic and Operational Approach to the Innovation Process</b> . . . . .	19
Laure MOREL and Mauricio CAMARGO	
2.1. Introduction . . . . .	19
2.2. Innovation engineering: a field of research that has struggled to structure itself in France. . . . .	21
2.3. Practical guide to innovation engineering . . . . .	32
2.3.1. First bias: there are no good or bad innovative ideas! . . . . .	33
2.3.2. Second bias: any innovation process requires contextualization of the situation . . . . .	34
2.3.3. Third bias: there is no innovative project management without collaboration . . . . .	35

2.3.4. Fourth bias: a universal innovation process does not exist! . . . . .	35
2.3.5. Fifth bias: the importance of materializing and evaluating ideas as early as possible by including users in the process . . . . .	36
2.4. Conclusion . . . . .	37
2.5. Acknowledgments . . . . .	38
2.6. References . . . . .	39
<b>Chapter 3. Absorption – Technological Absorptive Capacity and Innovation: The Primacy of Knowledge . . . . .</b>	<b>43</b>
Sonia BEN SLIMANE	
3.1. Introduction . . . . .	43
3.2. Technological absorptive capacity: a cognitive process . . . . .	43
3.3. The multidimensional nature of absorption capacity and innovation . . . . .	45
3.4. Measuring absorptive capacity . . . . .	46
3.5. Conclusion . . . . .	47
3.6. References . . . . .	48
<b>Chapter 4. Big Data – Artificial Intelligence and Innovation: The Big Data Issue . . . . .</b>	<b>51</b>
Laurent DUPONT	
4.1. Introduction . . . . .	51
4.2. Humans and data: diversity and consensus . . . . .	52
4.3. Big Data: an interdisciplinary approach to technology and its uses . . . . .	54
4.4. A wide range of applications: promises and fears. . . . .	55
4.5. Conclusion . . . . .	56
4.6. References . . . . .	57
<b>Chapter 5. Blockchain – Blockchain and Co-creation within Management Methods . . . . .</b>	<b>59</b>
Eric SEULLIET	
5.1. Introduction . . . . .	59
5.2. The interest of Blockchain in the field of immaterial exchanges . . . . .	60
5.3. The limits of the co-creation process. . . . .	61
5.4. Blockchain in mobilizing and organizing co-creation processes . . . . .	62
5.5. The promises of Blockchain . . . . .	63
5.5.1. Intellectual property renewal. . . . .	63
5.5.2. “Empowerment” of individuals . . . . .	63
5.5.3. Scaling up . . . . .	64
5.5.4. Collective intelligence . . . . .	64
5.5.5. New forms of organization and social impact . . . . .	64
5.5.6. Necessary developments . . . . .	64

5.6. Conclusion . . . . .	65
5.7. References . . . . .	66
<b>Chapter 6. Bricolage – From Improvisation to Innovation: The Key Role of “Bricolage”</b> . . . . .	67
Paul BOUVIER-PATRON	
6.1. Introduction . . . . .	67
6.2. Bricolage: new concept, old practice. . . . .	67
6.3. Current application of the bricolage concept . . . . .	68
6.4. Bricolage and improvisation . . . . .	69
6.5. Bricolage and frugal innovation . . . . .	70
6.6. Conclusion . . . . .	72
6.7. References . . . . .	73
<b>Chapter 7. Circularity – The Circular Economy as an Innovative Process</b> . . . . .	75
Sonia VEYSSIÈRE	
7.1. Introduction . . . . .	75
7.2. The circular economy: a transformative concept . . . . .	76
7.3. The circular economy as a source of innovation . . . . .	77
7.4. Conclusion . . . . .	81
7.5. References . . . . .	82
<b>Chapter 8. Co-creation – Co-creation and Innovation: Strategic Issues for the Company</b> . . . . .	85
Paul BOUVIER-PATRON	
8.1. Introduction . . . . .	85
8.2. Co-creation: a strategic challenge for companies . . . . .	86
8.3. Co-creation, DIY and DIWO . . . . .	87
8.4. Co-creation, creativity and innovation. . . . .	88
8.5. Co-creation and intellectual property rights . . . . .	89
8.6. Co-creation and eco-design. . . . .	90
8.7. Conclusion . . . . .	90
8.8. References . . . . .	91
<b>Chapter 9. Community – Innovative Communities of Practice: What are the Conditions for Implementation and Innovation?</b> . . . . .	93
Diane-Gabrielle TREMBLAY	
9.1. Introduction: communities of practice and innovation . . . . .	93

9.2. Communities of practices, a definition: group cohesion, complicity and dynamism . . . . .	94
9.3. Work teams and virtual communities . . . . .	95
9.4. Organizational learning . . . . .	97
9.5. Animation role . . . . .	97
9.6. Conclusion . . . . .	98
9.7. References . . . . .	99
<b>Chapter 10. Craftsman – The Innovative Craftsman: A Historically Permanent Socio-economic Function . . . . .</b>	<b>101</b>
Sophie BOUTILLIER and Claude FOURNIER	
10.1. Introduction . . . . .	101
10.2. The craftsman, an ignored innovator . . . . .	102
10.3. The innovative craftsman of the 21st century . . . . .	103
10.4. Conclusion . . . . .	106
10.5. References . . . . .	106
<b>Chapter 11. Defense – Military Innovation: Networks and Dual-use Technological Development . . . . .</b>	<b>109</b>
Pierre BARBAROUX	
11.1. Introduction . . . . .	109
11.2. Military innovation: main attributes . . . . .	110
11.2.1. Military innovation as a knowledge-intensive and dual process. . . . .	110
11.2.2. Military innovation as a technology-driven process . . . . .	111
11.2.3. Military innovation as a demand-oriented process . . . . .	112
11.3. Conclusion . . . . .	113
11.4. References . . . . .	114
<b>Chapter 12. Design Thinking – Design Thinking and Strategic Management of Innovation . . . . .</b>	<b>115</b>
Bérangère L. SZOSTAK	
12.1. Introduction . . . . .	115
12.2. The origins of design thinking . . . . .	116
12.3. Design thinking in innovation management . . . . .	117
12.4. Conclusion . . . . .	119
12.5. References . . . . .	119

<b>Chapter 13. Digital – Digital Entrepreneurship as Innovative Entrepreneurship</b> . . . . .	121
Birgit LEICK and Mehtap ALDOGAN EKLUND	
13.1. Introduction . . . . .	121
13.2. Definition and characteristics of digital entrepreneurship . . . . .	122
13.3. Digital entrepreneurship in the field of innovation studies . . . . .	124
13.4. Conclusion . . . . .	126
13.5. References . . . . .	126
<b>Chapter 14. Entrepreneurship – Social Innovative Entrepreneurship: An Integrated Multi-level Model</b> . . . . .	129
Susanne GRETZINGER	
14.1. Introduction . . . . .	129
14.2. State-of-the-art: contemporary issues, approaches and levels of analysis . . . . .	130
14.3. Integrated multi-level model of innovative social entrepreneurship . . . . .	132
14.4. Conclusion . . . . .	133
14.5. References . . . . .	134
<b>Chapter 15. Fintech – Technology in Finance: Strategic Risks and Challenges</b> . . . . .	137
Arvind ASHTA	
15.1. Introduction . . . . .	137
15.2. Evolution of technology in finance . . . . .	138
15.3. Risks of fintech . . . . .	141
15.4. Concluding remarks . . . . .	142
15.5. References . . . . .	142
<b>Chapter 16. Gerontech – Geront’innovations and the Silver Economy</b> . . . . .	145
Blandine LAPERCHE	
16.1. Introduction . . . . .	145
16.2. The Silver Economy: a new area for innovation . . . . .	146
16.3. “Gerontechnologies”: the technological dimension of innovations in the Silver Economy . . . . .	147
16.4. Towards “geront’innovation” . . . . .	148
16.5. Conclusion . . . . .	151
16.6. References . . . . .	151

<b>Chapter 17. Greentech – Contributions and Limitations to the Environmental Transition</b> . . . . .	153
Smaïl AÏT-EL-HADJ	
17.1. Introduction . . . . .	153
17.2. Green technologies, the first technological response to the environmental crisis . . . . .	153
17.2.1. New energies. . . . .	153
17.2.2. Information technologies and green technologies . . . . .	154
17.2.3. Biology as a preferred carrier of green technologies . . . . .	154
17.2.4. Nanotechnologies: cross-technology dimension of green technologies. . . . .	155
17.2.5. New services and organizations: recycling, industrial ecology, the economy of functionality . . . . .	155
17.3. From green technologies to a sustainable technological and socio-economic system. . . . .	156
17.3.1. Green technologies are a one-off and partial response to the environmental challenge . . . . .	156
17.3.2. The shifting of boundaries and environmental problems. . . . .	156
17.3.3. The global environmental limit implies responding with a global reconfiguration of the technological system . . . . .	157
17.3.4. The global environmental limit implies a societal reconfiguration beyond technology. . . . .	157
17.3.5. The current criticality of the environmental threat implies a massive and rapid transition. . . . .	158
17.4. References . . . . .	158
 <b>Chapter 18. Hacker – Hackerspace as a Space for Creative Exploration</b> . . . . .	161
Dave MOBHE BOKOKO	
18.1. Introduction . . . . .	161
18.2. The rise of hacker culture . . . . .	162
18.3. Cybercrime or creative exploration? . . . . .	163
18.4. Conclusion . . . . .	165
18.5. References . . . . .	165
 <b>Chapter 19. Health – Telemedicine: Decentralized Medical Innovation</b> . . . . .	167
Patricia BAUDIER	
19.1. Introduction . . . . .	167
19.2. Information technology at the service of medical care . . . . .	167
19.3. High-performance medical devices . . . . .	168
19.4. Conclusion . . . . .	169
19.5. References . . . . .	170

---

<b>Chapter 20. Intellectual Corpus – Inventive Intellectual Corpus: Knowledge-based Innovation</b> . . . . .	173
Pierre SAULAIS	
20.1. Introduction . . . . .	173
20.2. Concept of knowledge-based innovation. . . . .	174
20.3. Modeling knowledge creation. . . . .	176
20.4. Activation of the chaotic inspiration model of knowledge evolution by emergence using the <i>ICAROS</i> <sup>®</sup> method. . . . .	178
20.5. Conclusion . . . . .	180
20.6. References . . . . .	180
<b>Chapter 21. Imagination – Imagination, Science Fiction, Creativity and Innovation: An Integrated Process</b> . . . . .	181
Thomas MICHAUD	
21.1. Introduction. . . . .	181
21.2. Tame the imagination in order to innovate. . . . .	182
21.3. Imagination: from creativity to innovation. . . . .	183
21.4. Conclusion . . . . .	185
21.5. References . . . . .	185
<b>Chapter 22. Marketing – Marketing of Innovation and University–Industry Collaboration</b> . . . . .	187
Cheikh Abdou Lahad THIAW	
22.1. Introduction. . . . .	187
22.2. Innovation marketing and inter-organizational collaboration. . . . .	188
22.3. The cross-functionality of innovation marketing . . . . .	190
22.4. Conclusion . . . . .	192
22.5. References . . . . .	192
<b>Chapter 23. Milieu – Innovative Milieu: The Strength of Proximity Ties</b> . . . . .	195
Fedoua KASMI	
23.1. Introduction. . . . .	195
23.2. Definition and characteristics of an innovative milieu . . . . .	196
23.3. Proximity and territorialized innovation networks . . . . .	198
23.4. Conclusion . . . . .	199
23.5. References . . . . .	200

<b>Chapter 24. Nanotech – Nanotechnologies: The Future of Innovations</b> . . . . .	201
Jean-Louis MONINO	
24.1. Introduction . . . . .	201
24.2. Nanotechnology applications . . . . .	203
24.3. RFID chips . . . . .	203
24.4. Global potential risks . . . . .	204
24.5. Conclusion and outlook . . . . .	205
24.6. References . . . . .	207
24.7. Webography . . . . .	207
<b>Chapter 25. Novelty – Novelty and Innovation: The Nodal Place of Creativity</b> . . . . .	209
Laure MOREL	
25.1. Introduction . . . . .	209
25.2. Innovation and novelty. . . . .	210
25.3. Creativity as a prerequisite for innovation . . . . .	213
25.4. Conclusion . . . . .	214
25.5. References . . . . .	214
<b>Chapter 26. Open – Open Source and Open Data: Filiation, Analogies and Common Dynamics</b> . . . . .	217
Laurent ADATTO	
26.1. Introduction . . . . .	217
26.2. Open source and open data: guiding concepts . . . . .	218
26.3. Open source: process innovation and legal innovation via copyleft . . . . .	218
26.4. Open data: dynamics of open innovation 2.0 in line with open source . . . . .	220
26.5. Conclusion . . . . .	222
26.6. References . . . . .	222
<b>Chapter 27. Personality – The Deviant Personality of the Innovative Actor</b> . . . . .	225
Dimitri UZUNIDIS	
27.1. Introduction . . . . .	225
27.2. The actor, the system and the question of the complementarity of roles . . . . .	226
27.3. The deviant personality of the innovator . . . . .	228
27.4. Conclusion . . . . .	230
27.5. References . . . . .	230



<b>Chapter 28. Real Estate – Business Real Estate and Innovation: A New Profession for New Spaces</b> . . . . .	233
Frédéric GOUPIL DE BOUILLÉ	
28.1. Introduction . . . . .	233
28.2. The prevalence of the financial referent, reasoning and industrialist practices . . . . .	234
28.3. Weakness of the human resources paradigm applied to real estate . . . . .	235
28.4. Employees empowered by change management. . . . .	235
28.5. Powerful, but inconsistent with regard to use, real estate marketing. . . . .	236
28.6. The real estate market versus the innovative company . . . . .	237
28.7. Conclusion . . . . .	238
28.8. References . . . . .	239
<b>Chapter 29. Skills – Innovation and Entrepreneurial Skills</b> . . . . .	241
Giovanni ZAZZERINI	
29.1. Introduction . . . . .	241
29.2. Innovation skills . . . . .	242
29.3. Entrepreneurial competencies . . . . .	242
29.4. Ideas and opportunities . . . . .	243
29.5. Resources . . . . .	244
29.6. Into action. . . . .	244
29.7. References . . . . .	246
<b>Chapter 30. Small Business – Small Business and Innovation: Specificities and Institutional Context</b> . . . . .	247
Son Thi Kim LE	
30.1. Introduction . . . . .	247
30.2. The relation between small business and innovation . . . . .	248
30.2.1. What is small business? . . . . .	248
30.2.2. Small business and innovation . . . . .	249
30.3. The specificity of small business innovation. . . . .	250
30.3.1. Innovation efforts: external knowledge source rather than in-house R&D . . . . .	250
30.3.2. Adopting and adapting external knowledge resources . . . . .	250
30.4. Government support for small business innovation . . . . .	252
30.5. Conclusion . . . . .	253
30.6. References . . . . .	254

<b>Chapter 31. Spin-off – Research Spin-off: How the University Fosters Innovative Entrepreneurship</b> . . . . .	255
Elisa SALVADOR	
31.1. Introduction . . . . .	255
31.2. An overview of the development of research spin-offs . . . . .	256
31.3. Main perspectives and taxonomies of research spin-offs . . . . .	258
31.4. Fragility and future avenues for improvement . . . . .	259
31.5. Conclusion . . . . .	261
31.6. References . . . . .	261
<b>Chapter 32. Start-up – Start-ups, Venture Capital (SVC) and the Financial Cycle of the SVC System</b> . . . . .	263
Angelo BONOMI	
32.1. Introduction . . . . .	263
32.2. Start-ups . . . . .	264
32.3. Venture capital . . . . .	265
32.4. The SVC system cycle . . . . .	266
32.5. Conclusion . . . . .	267
32.6. References . . . . .	268
<b>Chapter 33. Territory – Territorial Dynamics and Innovative Services</b> . . . . .	269
Michelle MONGO	
33.1. Introduction . . . . .	269
33.2. Innovation in services: what are we talking about? . . . . .	270
33.2.1. What does it mean to innovate in services? . . . . .	270
33.2.2. Which service for innovation analysis? . . . . .	271
33.3. Geography of innovation in knowledge-intensive business services and territorial impact . . . . .	272
33.3.1. Stylized facts about the geography of knowledge-intensive business services . . . . .	272
33.3.2. The contribution of knowledge-intensive business services to territorial innovation dynamics . . . . .	273
33.4. Public innovation policy: historical actions and future prospects . . . . .	273
33.5. Conclusion . . . . .	274
33.6. References . . . . .	275

---

<b>Chapter 34. Well-being – Subjective Well-being and Innovation</b> . . . . .	277
Francis MUNIER	
34.1. Introduction . . . . .	277
34.2. Creative destruction impacts subjective well-being . . . . .	278
34.3. A questionable relationship . . . . .	279
34.4. Innovation-care: theoretical approach and applications . . . . .	280
34.5. Conclusion . . . . .	281
34.6. References . . . . .	282
<b>List of Authors</b> . . . . .	283
<b>Index</b> . . . . .	287
<b>Summary of Volume 1</b> . . . . .	293