

# Content

Preface .....	V
List of Figures .....	XXI

## Main Chapter I: Introduction and Overview

1. Introduction to Digital tax Law .....	1
1.1. The added value of a digitalized tax process .....	1
1.1.1. Summary .....	1
1.2. Pull of demand and technological pressure .....	2
1.2.1. Pull of demand .....	2
1.2.2. Technological pressure .....	4
1.3. Taxes and information technology, exemplary highlights .....	5
1.4. Taxation information technology .....	9
1.5. Goal and purpose of the Tax Law Technology Principles .....	10
1.6. Recap .....	10
1.7. Literature .....	11
2. What is digitalization for tax functions? .....	11
2.1. Introduction .....	11
2.2. Terminological Frame of Reference: The concept of tax, the tax function, the tax department, tax consulting, and the tax area .....	14
2.3. Detailing and concretizing the tax area .....	14
2.3.1. The company's tax strategy .....	15
2.4. Tax functions of the company .....	17
2.4.1. Structure of the tax function .....	17
2.4.2. Employees and leadership in the tax function .....	18
2.4.3. External tax consultancy .....	18
2.4.4. Tax controls and risk management .....	19
2.4.5. The process of taxation .....	19
2.4.6. Tax Compliance .....	20
2.5. Tax information system pyramid .....	22
2.5.1. Data .....	25
2.5.2. Technology .....	25
2.5.3. Processes .....	25
2.5.4. Strategy .....	25
2.5.5. People and culture .....	25
2.6. The future of tax consulting in 2027 .....	26
2.6.1. Why change in the tax system is a challenge? .....	26
2.7. What are the „myths of digital tax transformation”? .....	27
2.7.1. Who are the right „experts” to drive digital change? .....	27
2.7.2. Which process descriptions are suitable for standardizing and automating your tax workflows? .....	28
2.8. What are the upcoming trends according to Gartner? .....	30
2.9. How to visualize the future of taxes – the fourth generation of tax technology? .....	31
2.10. How would 4th Generation of tax + technology support the tax function? .....	31
2.10.1. How does the transition of people, processes and technologies change the landscape? .....	33
2.11. Recap .....	35
2.12. Further Exercises .....	35
2.13. Literature .....	35
3. TaxTech as a discipline .....	35
3.1. Summary .....	35

3.2.	Taxation Tradition and TaxTech .....	36
3.3.	Applied research and application-oriented basic research .....	36
3.4.	Observation levels of control applications .....	37
3.5.	Observation levels of control applications .....	39
3.6.	Relations to other scientific disciplines .....	40
3.7.	Further Exercises .....	42
3.8.	Recap .....	42
4.	Basics of Technologies for Taxes .....	42
4.1.	Introduction .....	42
4.2.	Business Intelligence .....	43
4.3.	Artificial Intelligence .....	43
4.4.	Distributed Ledger Technology / Blockchain .....	43
4.5.	Enterprise Performance Management .....	44
4.6.	Conclusion .....	44
4.7.	Literature .....	44
5.	The CASE AG, Study for the book on technologies in taxation .....	44
5.1.	Summary .....	44
5.2.	Introduction .....	45
5.3.	Fields of application .....	46
5.4.	Case Studies .....	46
5.5.	Overview of the CASE AG .....	47
5.5.1.	The business segments of CASE AG .....	48
5.5.2.	Affiliated companies of CASE AG .....	48
5.6.	The tax department of the CASE AG .....	48
5.7.	The information technology used by CASE AG .....	49
5.8.	The vision of CASE AG .....	49
5.8.1.	Summary and outlook .....	50

## **Main Chapter II: The interaction of People, Process and Data/Technology**

6.	Tax function from an industry perspective .....	52
6.1.	Overview .....	52
6.2.	Background .....	52
6.3.	Core concepts .....	53
6.3.1.	Basic terms and life cycle .....	53
6.3.2.	ITIL as de-facto-Standard .....	55
6.4.	Application fields .....	56
6.5.	Case Study 1 .....	57
6.5.1.	Context .....	57
6.5.2.	Solution .....	57
6.5.3.	Results .....	58
6.6.	Real-life example: GE Tax function Outsourcing .....	58
6.7.	Conclusion .....	58
6.8.	Recap .....	58
6.9.	Exercises .....	58
6.10.	Literature .....	59
7.	Tax function from a government perspective .....	59
7.1.	Overview .....	59
7.2.	The Framework for Tax Governance .....	59
7.3.	Why do we need to be taxed? .....	59
7.3.1.	Level of tax revenue .....	60
7.3.2.	Composition of tax revenue .....	61
7.3.3.	Choosing the right taxation system .....	62

7.3.4.	Personal income tax .....	62
7.3.5.	Corporate income tax .....	62
7.3.6.	Value added tax, excise duties and import duties .....	62
7.3.7.	Tax incentives .....	63
7.4.	The impact of digitalization on tax legislation and tax administration .....	64
7.5.	The interrelationship between tax technologies and tax authorities is a complex one .....	65
7.5.1.	Tax assessment and verification technologies .....	67
7.5.2.	Tax technologies and tax compliance .....	69
7.6.	Conclusion .....	69
7.7.	Recap .....	69
7.8.	Exercises .....	69
8.	Digital Maturity Models for Tax Functions .....	69
8.1.	Overview .....	69
8.2.	Maturity models Concept and objective .....	70
8.3.	Maturity Models (MM) for Tax Functions .....	72
8.3.1.	The building blocks of Tax Administration 3.0 – Overview .....	73
8.3.2.	Building block 1: Digital identity .....	74
8.3.3.	Building block 2: Taxpayers touchpoints .....	74
8.3.4.	Building block 3: Data management and data standards .....	74
8.3.5.	Building block 4: Tax rule management and application .....	74
8.3.6.	Building block 5: New skillsets .....	75
8.3.7.	Building block 6: Governance Frameworks .....	75
8.3.8.	Reflection summary Tax Administration 3.0 .....	75
8.4.	Maturity Models (MM) Industry version .....	75
8.5.	Conclusion .....	77
8.6.	Recap .....	77
8.7.	Exercises .....	77
9.	Sustainability in Tax Reporting .....	77
9.1.	Overview .....	77
9.2.	Implementation of sustainability requirements .....	79
9.3.	Process and data/IT requirements .....	80
9.4.	The European Green Deal, Plastic tax, CBAM and other procedures .....	81
9.4.1.	Plastics tax .....	82
9.4.2.	Carbon Border Adjustment Mechanism (CBAM) .....	82
9.4.3.	Process Efficiency .....	83
9.4.4.	Outlook .....	83
9.5.	ESG and Transfer Pricing .....	83
9.6.	Conclusion .....	85
9.7.	Recap .....	85
9.8.	Exercises .....	85
9.9.	Literature .....	85

### Main Chapter III: Tax processes & Tax Law

10.	Methodology .....	87
10.1.	Overview .....	87
10.2.	A comparative analysis of alternative models for the enhancement of operational performance within an organizational unit .....	87
10.3.	Models to improve the business process .....	89
10.4.	Flowchart Technology .....	89
10.5.	Tabular Application Development (TAD)-Methodic .....	89
10.6.	Business Model Canvas (BMC) .....	89
10.7.	Technology roadmap (TRM) .....	90

10.8. Methodology .....	90
10.9. Recap .....	91
10.10. Exercises .....	91
11. Process-Related Technology .....	91
11.1. Overview .....	91
11.2. Business processes and automation tools .....	92
11.3. Further advantages of using process technologies .....	93
11.4. Conclusion .....	94
12. What is a process? .....	95
12.1. Overview .....	95
12.2. Typical company processes .....	95
12.3. What are tax-relevant processes? .....	96
12.4. Recap .....	97
12.5. Exercise .....	98
13. Process management .....	99
13.1. Overview .....	99
13.2. Background .....	99
13.3. Core concepts .....	101
13.3.1. Objectives of process management .....	101
13.3.2. Basic Terminology .....	102
13.4. Origins of the process management .....	103
13.4.1. Life cycle/process of process management .....	103
13.4.2. Process management as a project .....	104
13.4.3. Process management as a program .....	104
13.4.4. The boundaries of the process organization .....	105
13.5. Exercise .....	105
13.6. Fields of application .....	106
13.7. Case Study 2 .....	106
13.7.1. Context .....	106
13.7.2. Solution .....	107
13.7.3. Results .....	111
13.8. Conclusion .....	112
13.9. Recap .....	112
13.10. Literature .....	112
14. Process Innovation .....	112
14.1. Overview .....	112
14.2. Background .....	112
14.3. Core concepts .....	113
14.3.1. Goals of process innovation .....	113
14.3.2. Process innovation orbit .....	113
14.3.3. Improvement of existing processes / process heuristics .....	114
14.3.4. Designing new practices using design thinking .....	114
14.4. Case Study 3 .....	115
14.4.1. Fields of application .....	115
14.4.2. Context .....	116
14.4.3. Example of application .....	121
14.5. Outlook .....	123
14.6. Recap .....	124
14.7. Exercises .....	124
15. Business Process Modeling Notation, BPMN .....	124
15.1. Overview .....	124
15.2. Background .....	124
15.3. Core Concepts Business Process Management Notation .....	126
15.3.1. Resource perspective .....	130
15.3.2. Example: Dividend distribution .....	130

15.4.	Principles of orderly modeling .....	133
15.5.	Process map .....	133
15.6.	Fields of application .....	133
15.7.	Case study 4 .....	134
15.7.1.	Context .....	134
15.7.2.	Solution .....	135
15.7.3.	Conclusion .....	138
15.8.	Recap .....	138
15.9.	Exercises .....	138
15.10.	Literature .....	138
16.	Decision Modeling Notation, DMN .....	138
16.1.	Overview .....	138
16.2.	Clarity and transparency .....	139
16.2.1.	DMN organizations .....	139
16.2.2.	Consistency and accuracy .....	139
16.2.3.	Agility and flexibility .....	139
16.2.4.	Improved governance and compliance .....	139
16.2.5.	Improved quality of decision-making .....	139
16.2.6.	Integration with business processes .....	140
16.2.7.	Base Case Study: Application of DMN in business processes .....	140
16.3.	Components of decision modeling notation (DMN) .....	140
16.3.1.	Example .....	140
16.3.2.	The elements in this example are .....	141
16.3.3.	Combine conditions .....	141
16.3.4.	FEEL input parameters .....	142
16.4.	Decision requirements diagram .....	144
16.4.1.	Decision table .....	145
16.4.2.	Example .....	145
16.4.3.	Practical applications of the DMN components .....	145
16.4.4.	Fields of application .....	146
16.5.	Case Study .....	146
16.6.	Case Study .....	148
16.7.	Recap .....	149
16.8.	Exercises .....	149
17.	Process Mining .....	150
17.1.	Overview .....	150
17.2.	Make processes understandable and transparent .....	150
17.3.	Process Mining – Functionality .....	151
17.4.	Process Mining, Prerequisites .....	152
17.5.	Core concepts .....	155
17.5.1.	Data Value Chain Concept .....	155
17.5.2.	Data generation .....	155
17.5.3.	Data collection .....	155
17.5.4.	Data processing .....	155
17.5.5.	Data preprocessing .....	156
17.5.6.	Data analysis .....	156
17.5.7.	Data evaluation .....	156
17.6.	Objectives of analysis .....	156
17.6.1.	Descriptive analysis .....	156
17.7.	The fields of application of tax law .....	157
17.7.1.	Automation .....	158
17.7.2.	Determination of KPIs .....	159
17.7.3.	Simulation prospects .....	159
17.7.4.	Change-Management .....	160
17.7.5.	Monitoring of processes .....	160

17.8.	Case Study 5 .....	161
17.8.1.	Context, problem and objective .....	161
17.8.2.	Solution .....	161
17.8.3.	Results .....	161
17.8.4.	Discussion on the case study .....	165
17.9.	Conclusion .....	165
17.10.	Recap .....	166
17.11.	Exercises .....	166
17.12.	Literature .....	166
18.	Workflow-Management-Systems .....	166
18.1.	Overview .....	166
18.2.	Background .....	166
18.3.	Core concepts .....	168
18.3.1.	Basic terms .....	168
18.3.2.	Modeling the workflows .....	168
18.3.3.	Central functions .....	168
18.3.4.	System architecture .....	169
18.3.5.	Workflow application development process model .....	170
18.4.	Fields of application .....	172
18.5.	Case Studies 6 .....	173
18.5.1.	Tax Audits .....	173
18.5.2.	Tax risk reporting .....	173
18.5.3.	Withholding Tax .....	174
18.5.4.	Excise Taxes .....	174
18.5.5.	Solution .....	174
18.6.	Conclusion .....	180
18.7.	Recap .....	180
18.8.	Exercises .....	180

#### Main Chapter IV: Data Analysis for Tax Law

19.	Types of Analytics .....	181
19.1.	Overview .....	181
19.2.	Data analysis principles .....	181
19.3.	Examples .....	181
19.3.1	Risk Management .....	181
19.3.1.	Anomaly detection .....	182
19.3.2.	Predictive analysis .....	182
19.3.3.	Tax Audit Analysis and Automation .....	182
19.3.4.	Real-time checks and verification .....	182
19.4.	Data privacy in general .....	183
19.5.	Use of data analysis and limitations .....	183
19.5.1.	Ethical restrictions .....	183
19.5.2.	Minimization of data .....	184
19.6.	Benefits through data minimization .....	185
19.7.	Data minimization examples .....	185
19.7.1.	Application possibilities .....	185
19.7.2.	Data protection by tax authorities, examples .....	186
19.8.	Recap .....	187
20.	Multi-dimensional data analysis .....	187
20.1.	Overview .....	187
20.2.	Background .....	187
20.2.1.	Examples: Treatment of revenue .....	188

20.3.	Core concepts .....	188
20.3.1.	Data cubes .....	188
20.4.	Fields of application .....	189
20.5.	Case Study 7 .....	190
20.5.1.	Context .....	190
20.5.2.	Solution .....	191
20.5.3.	Results .....	191
20.6.	Case Study 8 .....	191
20.6.1.	Liquidity effects from a tax audit .....	192
20.7.	Conclusion .....	192
20.8.	Recap .....	193
20.9.	Exercises for chapter 19. and 20. ....	193
21.	Statistical data analysis .....	193
21.1.	Overview .....	193
21.2.	Background .....	194
21.3.	Example .....	195
21.4.	Field of application .....	196
21.5.	Case Study 9 .....	196
21.5.1.	Application of mathematical-statistical methods by the German tax authorities during audits .....	197
21.5.2.	Description of the summary risk assessment, SRP .....	197
21.5.3.	Economic valuation of the SVB .....	198
21.5.4.	Legal regulation of AI algorithms in Germany .....	201
21.5.5.	German law on AI algorithms .....	201
21.5.6.	Rules for semi-automated decision making .....	201
21.5.7.	Rules for fully automated decision-making .....	202
21.6.	Conclusion .....	203
21.7.	Recap .....	203
21.8.	Exercises .....	203
21.9.	Literature .....	203
22.	Data Mining .....	204
22.1.	Overview .....	204
22.2.	Background .....	204
22.3.	Core Concept .....	205
22.4.	Classification and clustering of objects .....	206
22.5.	Field of applications .....	207
22.6.	Case Study 10 .....	208
22.6.1.	Context .....	208
22.6.2.	Solution .....	208
22.6.3.	Result .....	208
22.6.4.	Evaluation .....	209
22.7.	Case Study 11: Interaction between income taxes, customs duties and VAT .....	209
22.7.1.	Context .....	209
22.7.2.	Solution .....	214
22.7.3.	Conclusion .....	214
22.8.	Recap .....	215
22.9.	Exercises .....	215
22.10.	Literature .....	215
23.	Blockchain Fundamentals .....	215
23.1.	Overview .....	215
23.2.	Background .....	215
23.3.	Core concepts .....	217
23.3.1.	Basics .....	217
23.3.2.	Economic consideration .....	218

23.4.	Fields of application .....	219
23.5.	Fields of application according Gartner Hype Circle Format .....	221
23.6.	Case study 12, Blockchain for the European VAT ID .....	222
23.6.1.	Context, problem and goal .....	222
23.6.2.	Solution .....	223
23.6.3.	Result .....	223
23.6.4.	Discussion .....	223
23.7.	Operational example Henkel / Microsoft / Siemens Blockchain Platform .....	223
23.8.	Practical example Summitto B. V. ....	225
23.9.	Practical example DATEV .....	225
23.10.	Evaluation .....	225
23.11.	Recap .....	226
23.12.	Exercise .....	227
23.13.	Literature .....	227

### Main Chapter V: Database systems for Tax Law

24.	Database System .....	228
24.1.	Overview .....	228
24.2.	Background .....	228
24.3.	Core Concept .....	229
24.3.1.	Relations model .....	229
24.3.2.	Database system .....	230
24.3.3.	Transactions .....	232
24.3.4.	Creation of a database schema .....	232
24.4.	Fields of application .....	232
24.5.	Case Study 13 .....	233
24.5.1.	Databases for customs and VAT .....	233
24.5.2.	Solution .....	234
24.5.3.	Import procedure with GTS .....	235
24.5.4.	Reporting objectives .....	236
24.5.5.	Results .....	237
24.6.	Outlook .....	237
24.7.	Recap .....	237
24.8.	Exercises .....	237
24.9.	Literature .....	238
25.	Non-standard database systems .....	238
25.1.	Overview .....	238
25.2.	Background .....	238
25.3.	Core Concepts .....	239
25.3.1.	Facets of the meaning of big data .....	239
25.3.2.	Practical problems of standard database applications .....	241
25.3.3.	Specialized system architectures .....	241
25.3.4.	Field of applications .....	243
25.4.	Case Study 14 .....	243
25.4.1.	Context .....	243
25.4.2.	Solution .....	244
25.4.3.	Results .....	245
25.4.4.	Discussion .....	246
25.5.	Outlook .....	246
25.6.	Recap .....	246
25.7.	Exercises .....	246
25.8.	Literature .....	246

## Main Chapter VI: Introduction to technology to be applied (BI, AI, ML, LLM etc.)

26.	Knowledge-based systems .....	247
26.1.	Overview .....	247
26.2.	Background .....	247
26.3.	Core Concepts .....	248
26.3.1.	Representation of knowledge .....	248
26.3.2.	Architecture of knowledge-based systems .....	250
26.3.3.	Knowledge acquisition component .....	251
26.3.4.	Special knowledge types .....	252
26.4.	Fields of application .....	252
26.5.	Case Study 15 .....	253
26.5.1.	Context .....	253
26.5.2.	Solution .....	255
26.5.3.	Result .....	256
26.5.4.	Discussion .....	256
26.6.	Practical examples VERTEX .....	256
26.7.	Conclusion .....	257
26.8.	Recap .....	257
26.9.	Exercises .....	257
27.	Self-learning Systems .....	257
27.1.	Overview .....	257
27.2.	Background .....	257
27.3.	Core Concepts .....	258
27.3.1.	Basics .....	258
27.3.2.	Symbolic versus sub-symbolic approaches .....	260
27.3.3.	Validation, explainability and interpretability .....	262
27.3.4.	Criteria for application .....	262
27.3.5.	Fields of application .....	262
27.4.	Case Study 16 .....	262
27.4.1.	Context .....	262
27.4.2.	Solution .....	264
27.4.3.	Results .....	264
27.4.4.	Evaluation .....	264
27.5.	Practical example DATEV .....	264
27.6.	Outlook .....	264
27.7.	Recap .....	265
27.8.	Exercises .....	266
27.9.	Literature .....	266
28.	Large Language models (LLM) .....	266
28.1.	Overview .....	266
28.2.	Background: ChatGPT as a new challenge .....	266
28.3.	An „old technology“ with new applications? .....	267
28.4.	ChatGPT: a new large language model .....	268
28.5.	Data sources and learning process .....	270
28.6.	Possible applications of ChatGPT .....	270
28.7.	Risk management and forward-looking analysis .....	270
28.8.	Effects on the future work of tax compliance .....	271
28.9.	Development and implementation of LLMs .....	272
28.10.	Inaccurate answers and „hallucinations“ .....	272
28.11.	Discriminatory and biased answers .....	273
28.12.	Concerns regarding transparency .....	273
28.13.	Privacy, confidentiality and data protection issues .....	274
28.14.	Responsibility for the ChatGPT output .....	274
28.15.	Sustainability aspects .....	275

28.16. The path to the future .....	276
28.17. Current regulatory landscape .....	276
28.18. Principle approach .....	277
28.19. Transparency and explainability .....	277
28.20. Confidentiality, privacy and data protection .....	278
28.21. Conclusion .....	278
28.22. Recap .....	278
28.23. Exercises .....	278
29. Anomaly detection systems .....	279
29.1. Overview .....	279
29.2. Background .....	279
29.3. Core Concepts .....	281
29.3.1. Basic terms .....	281
29.3.2. Classification based approaches .....	281
29.3.3. Evaluate systems and address errors in judgment .....	282
29.4. Fields of application .....	282
29.5. Case Study 17 .....	283
29.5.1. Context .....	283
29.5.2. Solution .....	283
29.5.3. Results .....	284
29.5.4. Evaluation .....	284
29.6. Outlook .....	284
29.7. Recap .....	285
29.8. Exercises .....	285
29.9. Literature .....	285
30. Dialogue and assistance systems .....	285
30.1. Overview .....	285
30.2. Background .....	285
30.3. Core Concepts .....	286
30.3.1. Appearances .....	286
30.3.2. Dialog systems .....	287
30.3.3. Fields of application .....	288
30.4. Case Study 18 .....	289
30.4.1. Context .....	289
30.4.2. Solution .....	289
30.4.3. Results .....	290
30.4.4. Discussion .....	290
30.5. Conclusion .....	290
30.6. Recap .....	290
30.7. Exercises .....	291
30.8. Literature .....	291
31. Robot-assisted process automation (RPA) .....	291
31.1. Overview .....	291
31.2. Background .....	291
31.3. Core Concepts .....	292
31.3.1. Software robots and software agents .....	292
31.3.2. Process automation bots .....	292
31.3.3. Mechanical operation of user interfaces .....	293
31.3.4. Cognitive services .....	294
31.4. Case Study 19 .....	296
31.4.1. Fields of application .....	296
31.4.2. Field of applications .....	297
31.4.3. Solution .....	298
31.4.4. Results .....	301
31.4.5. Discussion .....	301

31.5.	Current developments .....	301
31.6.	Recap .....	302
31.7.	Exercises .....	302
31.8.	Literature .....	302
32.	Business Intelligence .....	302
32.1.	Overview .....	302
32.2.	Background .....	303
32.2.1.	Data quality and data management .....	303
32.2.2.	Data visualization and reporting .....	303
32.2.3.	Ease of use and self-service BI .....	303
32.2.4.	Advantages and challenges of self-service BI .....	304
32.2.5.	Examples of self-service BI in tax law .....	305
32.2.6.	Tools and technologies .....	305
32.2.7.	Conclusion for Self Service BI .....	305
32.2.8.	Augmented BI .....	305
32.3.	Case Study 20 .....	306
32.3.1.	Context .....	306
32.3.2.	Solution .....	306
32.3.3.	Conclusion .....	307
32.4.	Recap .....	307
32.5.	Exercises .....	308
32.6.	Literature .....	308

### **Main Chapter VII: Data and Use Case structure**

33.	All about data .....	309
33.1.	Overview .....	309
33.2.	Background .....	309
33.2.1.	The Role of Data in Modern Society .....	309
33.3.	Core concepts .....	310
33.3.1.	Types of Data and their Characteristics .....	310
33.3.2.	Data Generation and Collection .....	311
33.3.3.	Data Storage and Management .....	313
33.3.4.	Data processing .....	315
33.3.5.	ETL Processing .....	316
33.3.6.	Data Analytics .....	317
33.3.7.	Data Privacy and Security .....	320
33.4.	Data Applications across Various Sectors, Case Studies .....	322
33.4.1.	Finance and Banking .....	322
33.4.2.	Retail and E-commerce .....	322
33.4.3.	Various aspects of taxation .....	322
33.5.	Emerging Trends in Data .....	323
33.5.1.	Artificial Intelligence and Machine Learning .....	323
33.6.	Conclusion .....	325
33.7.	Recap .....	325
33.8.	Exercises .....	326
33.9.	Literature .....	326
34.	Business Model CANVAS for Tax Law Use Cases .....	326
34.1.	Overview .....	326
34.2.	Background .....	327
34.3.	Key Concepts .....	328
34.3.1.	Value Proposition .....	329
34.3.2.	Client Segments .....	330
34.3.3.	Client relationship .....	330

34.3.4. Distribution channels .....	330
34.3.5. Key Resources .....	330
34.3.6. Key Activities .....	331
34.3.7. Key Resources .....	331
34.3.8. Cost structure .....	331
34.3.9. Sources of revenue .....	331
34.4. Apple example .....	332
34.5. Applications .....	332
34.6. Areas of application .....	332
34.7. Case study 21 .....	333
34.7.1. Value chain .....	333
34.7.2. Human resources management .....	334
34.7.3. Performance Evaluation .....	334
34.7.4. Resolution .....	335
34.7.5. Result .....	335
34.8. Further Case studies .....	335
34.8.1. Use Case „Automation of TP Documentation Process“ (perspective of a Company) .....	337
34.8.2. Business Model CANVAS: Preparation of Tax Declarations within a German Tax Department in an MNE .....	341
34.8.3. Use Case: Transfer Pricing – Intercompany Services CANVAS Model .....	345
34.8.4. Use Case: Client Portal for a tax firm, CANVAS Model .....	349
34.8.5. Use Case: Transfer Pricing – Intercompany Services CANVAS Model, Tax Advice 4.0 .....	352
35. Reference modeling .....	357
35.1. Overview .....	357
35.2. Background .....	358
35.3. Core Concept .....	359
35.3.1. Terminology .....	359
35.3.2. Process Models .....	360
35.3.3. Non-standard reference modeling .....	361
35.3.4. Customizing .....	362
35.3.5. CMMI-Implementation .....	362
35.3.6. Field of application .....	365
35.4. Case Study 22 .....	365
35.4.1. Context .....	365
35.4.2. Solution .....	366
35.4.3. Results .....	367
35.4.4. Discussion .....	367
35.5. Outlook .....	367
35.6. Recap .....	367
35.7. Exercises .....	368
35.8. Literature .....	368

## Main Chapter VIII: Tax Compliance & Security & Risk Management

36. Governance-, Risk- and Compliance Automation .....	369
36.1. Overview .....	369
36.2. Background .....	369
36.3. Core Concepts .....	370
36.3.1. Framework .....	370
36.3.2. Governance .....	370
36.3.3. Risk Management .....	371

36.3.4. Compliance Management .....	373
36.3.5. Compliance „by design“ versus „by detection“ .....	375
36.4. Process Compliance and Process Conformance .....	376
36.5. Field of applications .....	376
36.6. Case Study 23 .....	377
36.6.1. Context .....	377
36.6.2. Solution .....	378
36.6.3. ALARP-Methodology .....	384
36.6.4. Figure in an IT tool .....	384
36.6.5. Integration of opportunity and risk management into the ongoing corporate management .....	384
36.6.6. Project experience .....	385
36.6.7. Results .....	385
36.7. Discussion .....	385
36.8. Conclusion .....	385
36.9. Recap .....	385
36.10. Exercises .....	385
36.11. Literature .....	385

### **Main Chapter IX: Glossary of Terms & Circumstances**

37. The classification and categorization of business tax application systems .....	387
37.1. Overview .....	387
37.2. Background .....	387
37.3. Core Concepts .....	387
37.3.1. Basic terminology .....	388
37.3.2. Systematics of operational applications .....	392
37.3.3. Industry software .....	392
37.4. Information pyramid for tax tasks .....	392
37.4.1. Operational tax management tasks .....	393
37.4.2. Advisory functions .....	393
37.4.3. Strategic management tasks .....	394
37.4.4. Fields of application .....	394
37.5. Case Study 24 .....	395
37.5.1. Context .....	395
37.5.2. Solution .....	395
37.5.3. Results .....	397
37.6. Conclusion .....	398
37.7. Recap .....	398
37.8. Exercises .....	398

### **Main Chapter X: Tax & customs function of the future**

38. Technology-Radar .....	399
38.1. Overview .....	399
38.2. Background .....	399
38.3. Core Concepts .....	400
38.3.1. Concept of early technology detection .....	400
38.3.2. Basic Terminology .....	400
38.3.3. Process of early technology detection .....	401
38.4. Methodological notes for a technology radar .....	401
38.5. Case Study 25 .....	403
38.5.1. Context .....	403
38.5.2. Solution .....	403
38.5.3. Results .....	405