

Index

- 3D-printed arm and hand for children 51
- 5G 59
- 100 year life 1
- academic commercialisation
 - consensus 206–7
- academic entrepreneur 212
- Affordable Care Act 64
- Agency for Health Research and Quality (AHRQ) programme 85
- agile innovation 98
- Ahmed, S. 64
- Alvesson, M. 146
- American Academy of Paediatrics (AAP) 116
- anticipation 15, 17, 104, 164, 177, 179, 200, 211, 224, 234
- aortic support 49
- Asthma Self-Management System 64
- asymmetric incentives 141
- Australia 51
- Australian Inland Mission Aerial Medical Service 222

- Baldry, M. 83
- barriers and success 204
- Bate, P. 141
- Belgium 26, 51
- BeMyEyes 49
- Beveridge model 24, 243
- Big Change Program 229
- Bismarck model
 - advantages 26
 - disadvantages 26
- Blink 128
- Blink concept 127
- Blink innovation
 - inclusivity and 135–6
 - prototyping and beta testing 130–31
 - redesign and
 - pre-commercialization 131
- Blue Button feature 82
- BMC 241, 244
- Bos, L. 59
- bottom-up networks 180
- bottom-up process 178–9
- Brazil 53, 185, 187, 190, 194
- Brown, J. S. 57
- business innovation 122
- business model 102, 105
- Business Model Canvas 247
- Business Model Canvas (BMC) 104, 241
- business organization 110
- business organizations 109–10
- business plan 102, 138
- buying process 144

- Cafferty, L. A. 62
- Canada 51
- Canhão, H. 33–4
- Cardio-Pulmonary Resuscitation (CPR) committee 114
- CareConnect 167, 177, 180
 - emergence of 171
 - existing software, adaptation of 172–3
- caregivers 44–5
- care recipients 176
- Census-Based Surveying™
 - methodology 85
- Centers for Medicare & Medicaid Services (CMS) 81
- Centres for Medicare and Medicaid Services (CMS) 85
- certified EHR technology (CEHRT) 81
- Chaplin, Charlie 97

- Christensen, C. 4, 23, 243
 chronic obstructive pulmonary disease (COPD) 129
 Civil Defence 113
 Clarysse, B. 214–15
 client-centred care system 174
 CMS 81
 CMS Core Health-Related Social Needs Screening Tool 85
 Code of Federal Regulation (CFR) 52
 Coeckelberg 14
 cognitive dimension 154, 156
 cognitive forces 141
 cognitive legitimacy 143
 cognitive pillars 140
 colour blindness, test tool 136
 commercialisation 200, 201, 204–7, 215
 commercialisation funding 205
 commercialisation of research 197
 commercialization 223
 conceptual framework, firm level 11
 conservatism 141
 Consumer Assessment of Healthcare Providers and Systems (CAHPS®) tool 84
 ‘consumer-centric’ healthcare 2
 Consumer Electronics Show (CES) 129
 contemporary regional innovation literature 166
 Cora 146, 148–9, 150, 152–3, 155
 core value proposition 99
 Corley, K. G. 146
 corporate knowledge 214
 corporate profitability 109
 corporate social responsibility 109
 Cox, B. 64
 Cuba 24
 cultural-cognitive pillar 143

 data analysis 186–7
 data collection 112, 186–7
 decision-making processes 16
 ‘de facto’ practices 11
 defensive cultures 141
 ‘deficit’ model 164
 deliberation 104

 demand-based innovation 121
 demographic challenge 128
 Denscombe, M. 200
 design space 98, 233, 234
 and technological determinism 94
 design thinking 98
 development funnel 12
 de Ven, Van 57
 digital e-health solutions 145
 digital healthcare 1, 2, 232, 241
 digital healthcare technology 232
 digital health information platform 98
 digitalisation 199, 201, 202
 digitalization 31, 186
 digital prototypes 208
 digital technologies 38
 digital therapeutics 6, 221, 230
 for patients 225
 for providers 225
 digital tools 2
 digitization 35
 disruptive innovation 4
 disruptive innovations 11, 17
 distributed ledger technologies 59
 diverse stakeholders 6
 doctor–patient relationship 56
 doctor–patient relationships 34
 Dogaru 222
 Drejer, Ina 67
 drivers 11
 Dutch healthcare system 174
 Dutch health insurance 168

 e-billing 89
 economic actors 13, 18
 economic disparity 110
 eHealth application 6
 e-healthcare products 193
 e-health entrepreneurs 157–8
 eHealth innovation process 167
 e-health start-ups 157
 EHR 64, 66, 71, 243, 244
 EHR Incentive Programs 81
 EHRs 58, 80
 Electronic Health Record (EHR) system 80

- electronic health records
 - disseminating 59
- electronic health records (EHR) 5, 59
- Electronic Health Records (EHR) 242
- electronic health records (EHRs) 57
- engagement workshops 13
- entrepreneurs 144, 150, 158–9, 186
- environmental and ecological
 - degradation 110
- Epic integration process 82
- ETSI (GSM) 59
- Eurostat 60
- experience-based entrepreneurship 159
- expert-field innovations 67
- explicit knowledge 184, 192, 193
- external knowledge 192

- face-to-face interactions 192
- factory organization 97
- family carers 175
- FasoSoap 50
- FDA 52
- federal EHR Incentive Program 80
- firm innovation process
 - catalyst of 9
- firm-level innovation process 4
- Fisher, B. 64
- flexibility 105
- flexible innovation models 12
- Florén 17
- Fogg, R. 23, 243
- fold-up wheels 51
- Ford, Henry 97
- Foss, L. 198
- France 26
- free innovation model 239
- FUIV project 132, 133, 137

- GDP 1, 23, 141
- general practitioners (GPs) 64
- general-purpose technologies 44
- Geoghegan-Quinn 88
- Germany 26, 53
- Gibson, D. V. 198
- Gioia, D. A. 146
- global diffusion, technologies 44
- GP referral system 145

- GPs 65
- Graebner, M. E. 187
- Great Britain 24

- Habicht, H. 45
- Hagel III, J. 57
- Hamilton, A. L. 146
- Hand Talk 189, 192
 - new knowledge and product
 - adaptation 191
 - stakeholder's participation in idea
 - generation phase 190
 - stakeholder's participation, new knowl-
 - edge generation 191
 - stakeholders' participation, product
 - launch 190–91
- hardware development 134
- Hargrave, T. J. 57
- HBS syndrome 28
- health and healthcare innovation 43
- healthcare 1, 4, 35, 180, 183, 187, 232, 233
 - Beveridge model 24
 - costs and spending 1
 - digitalization of 29
 - potential payers 225
- healthcare costs 23
- healthcare delivery sector 2
- healthcare delivery Trust 100
- healthcare funding systems 1
- healthcare institutions 59
- healthcare networks 205
- healthcare professionals 175
- healthcare providers 72
- healthcare, quality of 193
- healthcare sector 43, 45, 193
- healthcare Trust 100, 103
- health information 59
- health insurances 175
- health literacy 31
- HealthMine 60
- Health Personnel Act 151
- health professional–patient
 - relationship 31
- Health TV 244
- HealthTV 99

- Hernandez, S. E. 69
 Hibbard, Judith H. 63, 64
 high-income earners 26
 Hippocrates 56
 Honeyman, A. 64
 Hong Kong 24
 Horizon 2020 project 134
 horizon scanning 211
 hostage bargaining syndrome (HBS) 28
 Howrey, B. T. 60
 Hwang, J. 4
- inclusion 15, 16, 17, 164, 178–9, 184
 inclusiveness 104, 236
 inclusivity 200, 207–8, 224
 individual privacy 90
 information and communication technologies (ICT) 222
 information asymmetry 10
 information parity and equality 56
 information security 151
 informed patient 235, 236, 237
 initial vague model 105
 innovating patient 235, 238–40
 innovation 42, 99, 138, 247
 innovation adoption and diffusion 97
 innovation diffusion 121
 innovation incentive 239
 Innovation Norway 155
 innovation outcomes 119
 innovation process 7, 10, 24, 177, 183, 192
 actors in 11
 innovation process theories 12
 innovative patient 5
 innovators 13, 52
 institutional analysis 72
 institutional change 57, 140
 institutional entrepreneurship 140
 institutional innovation 57
 institutional theory 35
 institutional voids 186
 institutional wall 140–41, 157–9, 246
 intelligent homes 2
 Internet 30, 59, 61, 172
 Internet of Things (IoT) 127
 involved patient 235, 237–8
 IoT 129
- Japan 26
 Jhpiego 119
 job security 203
 John Humphrys Test 212
 Jutel, A. 61
- Katz, J. 56
 Keehan, S. P. 23
 knowledge 13, 17, 29, 207
 knowledge management 192
 Konrad, K. 10
 Kvitsøy 129
- Laerdal, Aasmund 117, 245
 Laerdal, Aasmund S. 113–14
 Laerdal company 117
 Laerdal Global Health (LGH) 117
 Laerdal Impact Report 112
 Laerdal Medical 115–16, 120
 Laerdal training 120
 Latin America 26
 lean manufacturing 95
 lean start-up 98
 lean start-up (LSU) model 242
 ‘lean start-up’ model 105
 Ledford 62
 Libro 99, 100–103
 Libro Pathway model 101
 Lind, Bjorn 114
 LSU 242
 Luddite bias 96
 Luminita, P. 222
 Lupton, D. 61
 Lyse 128, 136
 Lyse Group 127
- Macnaghten, P. 3, 14–15, 98, 104, 146, 164, 199, 234, 244
 malleable innovation design space 105
 mantelzorgers 171
 Martin, J. A. 187
 medical devices, hacking 53
 medical innovations 97

- medical malpractice 80
- medicare 225
- Medicus 146, 149, 150, 151, 153, 155
- minimum viable product (MVP) 242
- Minimum Viable Product (MVP) 139
- MiniTV 99, 100, 102, 103
- modern society 30
- Modern Times 97
- Morph Wheels 51
- mouth-to-mouth technique 114
- multidisciplinary miniature 3D camera system 49
- multiple stakeholders 184
- municipalities 175, 179
- municipality 175
- MyChart 84, 87–90
- My HealtheVet 82

- National Federation of Deaf 190, 193
- National Program for IT (NPfit) project 198
- Nelles, J. 198
- Netherlands 26
- Newborn Resuscitation Programme 118
- New Zealand 24
- non-professional caregivers 43
- normative dimension 151
- normative pillar 142, 156, 158
- normative process 165
- Norway 114, 129, 138, 140, 150, 157
- Norwegian healthcare system 142
- NPfit project 202

- occupational therapy 65
- Oliveira, P. 33–4, 44, 45
- Omada Health's diabetes reversal programme 225
- OMT Technologies 135
- open innovation 98, 245
- open-source software 53
- organization of care, maintaining 65
- ostomy bag 48
- ostomy bags 48
- Owen, R. 3, 14, 15, 68–9, 98, 104, 146, 164, 199, 234, 244

- Palthe, J. 143

- PAM 63
- pathway concept 101
- Patient Activation Measure (PAM) 63
- patient autonomy 31
- patient-centred approach, medicine 31
- patient centred care 57
- patient-centred care 69
- patient-centred high quality healthcare delivery 2
- patient-centred medicine 34
- patient-critical knowledge 171
- patient-developed innovations 36
- patient–doctor communications 72
- patient feedback 32
 - expectations 61
- patient feedbacks 72
- patient-initiated innovations 70, 72
 - stages in development 69
- patient innovation
 - case studies 47
 - evidence of 47
 - screening process 46
- patient innovation platform 45–6
 - users of 46
- patient innovation platform diffusion 52
- patient-oriented healthcare 37
- patient portal 86
- Patient Portal 60
- patient portals 79
- patient-specific Care Plans 85
- peer-to-peer communication 59
- peer-to-peer exchange 59
- peer-to-peer technology 61
- People's Liberation Army in China 232
- perception 207
- personalized healthcare 64
- physiotherapy function 66
- Pisacane 221, 223
- plain white plates 50
- Portugal 53
- positive social impact 124
- possible indicators, hospital environment
 - anticipatory 68
 - deliberative 68
 - reflective 68
 - responsive 68

- primary care giver 145
- primary care practices 81
- Privacy Act 151
- private healthcare 185
- (private) sickness funds 25
- professionalism 31
- profitability 123
- prototypes 128
- psychological contracts 215
- psychological contracts, value 203–4
- public health agenda, maintaining 65
- public health offering 101
- public-sector 140
- public technology spending 159
- qualitative research strategy 185
- quality of life 193
- recommended preventive care 81
- reflection 17, 104
- reflexiveness 105
- reflexivity 15, 164–5, 178, 179, 200, 208, 209, 224, 234
- regional innovation networks 167
- regulative dimension 150
- regulative pillar 142, 156
- rehabilitation function 66
- research agendas 17
- research commercialisation 197
- responsibility 213
- responsible innovation
 - process 12
 - purpose of 12
 - responsible outcomes 12
- responsible innovation (RI)
 - defined 2, 9
- responsible research and innovation 109
 - data analysis 186–7
 - data collection 186
 - outcomes of 112
 - process 111
 - purpose of 111
 - regional dimension 166
 - social impact 110
- responsible research and innovation (RRI) 10, 221, 223
- Responsible Research and Innovation (RRI) 9, 43, 85, 163
- Responsible Research and Innovation (RRI) framework 79
- responsiveness 15, 17, 105, 132, 137–8, 164, 166, 178–9, 184, 200, 224, 234
- Resusci Anne 114, 115
- Resusci Folding Bag 115
- resuscitation 119
- resuscitation method 114
- resuscitation research 117
- ReWalk 49
- RI barriers 13
- risk assessment 234
- risk–benefit analysis 15
- RI tools 13
- Roundy 187
- Royal Flying Doctor Service 223
- RRI 53, 121
- RRI barriers 10
- RRI concept 88
- RRI drivers 10
- RRI framework 90
- RRI outcomes 10
- RRI tools 10
- Russell, T. C. 62
- SafeWander™ 50
- Salter, A. 214–15
- Sandberg, J. 146
- São Paulo 187, 188
- Saving More Lives Together – Vision for 2020 112
- Scandinavia 24
- Schnipper 64
- Schumpeter, Joseph 67
- Science, Technology and Society (STS) 9
- ‘Science, technology and society’ (STS) movement 2
- Scott, R. 141, 143, 146
- shareholders’ value maximization 109
- shareholder value maximization ideology 109
- Shcherbatiuk, V. 45
- short-term anticipation 177

- Shower Shirt® 48
 SIAF 123
 sickness funds 25
 SimMan 116
 Simula 67
 SIP protocol 133
 Sistema Único de Saúde (SUS) 185
 smartphone application (app) 189
 Smith, Peter 99
 social desirability 17
 Social Determinants of Health (SDH) 85
 social entrepreneurs 105
 social impact 117
 Social Impact Assessment framework (SIAF) 123
 social impact assessment frameworks (SIAF) 123
 social impacts 110
 social inclusion 184
 social inequality 183
 socially responsible business 122
 social order 142
 social reformation 124
 social responsibility 122
 societal actors 10
 societal desirability 13
 socio-political legitimacy 142
 SOSPS 184, 192
 new knowledge and product adaptation 189
 stakeholder's participation in idea generation phase 188
 stakeholder's participation, new knowledge generation 188
 Spain 24
 Stahl, B. 14
 stakeholder participation 193, 194
 stakeholders 16, 87, 96–7, 99, 106, 119, 121–2, 146, 153, 166, 192–3, 207–8, 214, 223, 233
 stakeholders' knowledge
 tacit and explicit 184
 Stanescu, I. 222
 Stewart 64
 Stilgoe, J. 3, 14–15, 98, 104, 146, 164–5, 179, 199, 234, 244
 structured deliberative process 178
 Sunday Times 209
 SUS 185
 sustainable business 117
 Sustainable Development Goals (SDG) 37
 sustainable patient-initiated innovations 70
 Switzerland 26, 221
 tacit and explicit knowledge 183
 tacit knowledge 184, 192, 193
 Tartari, V. 214, 215
 technical aids 53
 technological interventions 162
 'technology-push' model 12
 technology transfer offices 206, 215
 Technology Transfer Offices (TTOs) 197
 Teodoro, R. R. 56
 The Health Information and Technology for Economic and Clinical Health Act 80
 Tjomsland, Nina 112
 top-down system 24
 Topol, Eric 56
 Tore Laerdal 115
 traditional medicine 43
 transdisciplinary approach 11
 translational research phase 89
 true patient empowerment 59
 TTOs 214, 215
 two-way communications 66
 UK 53
 UK academic policy context 199
 UK NHS digitalisation 198
 Unified Health System 185
 United Kingdom 51
 United States 221
 United States of America 51
 university–industry collaborations 85
 university–industry relations 197
 University of Virginia Health System (UVAHS) 83
 University of Virginia (UVA) 82
 user-led innovation 178
 user-led regional innovation

- networks 162
- US Federal Government 60
- UVAHS 85, 88, 89
- UVAHS MyChart 86, 87
- UVA MyChart 83
- UVA MyChart system 80
- Vahdat, S. 32
- Valley of Death 89
- Veteran's Administration (VA) 82
- Veterans Health Administration (VHA) 82
- Vickers, I. 141
- video communication service 128, 129
- Voco 146, 147, 148, 150, 152, 153, 154
- von Hippel, E. 34, 45, 95, 238
- Von Schomberg 223
- Vorley, T. 198
- Waldeck, A. 23, 243
- Walhout, B. 10, 165, 167
- walkshop approach 13
- website plug-in 189
- website translator 189
- WellStart Health 227
 - challenges 229–30
- WellStart Health's programme 228
- World Health Organization (WHO) 185
- Zejniliovic 33, 34

ENDORSEMENTS

'People ageing and the welfare society demand the intensive use of technology to provide a modern and sustainable care service. But the use of technology also raises new ethical questions about the way the knowledge is obtained and patients' privacy managed. This book is a benchmark on finding a solution to this challenge: taking advantage of the awesome possibilities of new technologies while respecting the privacy and dignity of the patient at all times. Congratulations.'

Jose Antonio Ondiviela, SmartCities Solutions Director, Microsoft, Western Europe

'Medical care can be shifted towards a patient-centered innovation and care process. The editors of this book focus on an important aspect of this emergent system: digital health. Contributors especially focus on responsible ways digital health systems can be designed to protect patient privacy, and teach us a great deal about this important topic. A valuable book!'

Eric von Hippel, Massachusetts Institute of Technology, USA

'Based on major international research, this inspiring volume provides rich and suggestive insights into responsible innovation, often enabled by digital technologies and initiated by patients or caregivers. It is packed with observations, ideas and inspiring examples of value for researchers as well as innovators and managers within and beyond the health sector.'

Per Davidsson, Queensland University of Technology, Australia

