Index

Achievability of profession,	Automatized innovational process,
principle of, 190	130–131
Agricultural/agriculture	Automatized production, 15
in AIC 4.0, 25	map of competences for controller,
competences maps for future	20
professions representatives	Automatized R&D, 129, 136
în, 41–42	Autonomous transport vehicles,
digital technologies	popularization of, 149
implementation, 34	Bachelor program, 85, 115
entrepreneurship, 34	Big Data technologies, 7
factors affecting future	Blockchain technologies, 8
development of	Body care and fitness sector, 96, 102
agriculture, 27	algorithm for mastering future
labor markets, 41–42	professions in, 115
optimizer, 38	changing human appearance, 109
products, 33	characteristics, 99, 103
results, 30–31, 34–38, 42–46	competences for consultant
social treatment of, 33	for change of human
theoretical bases, 26-30, 34, 42	appearance, 112
Agro-Industrial Complex 4.0 (AIC	competences for designer of
4.0) (see also Fourth	human appearance, 113
Industrial Revolution	cosmetologist for creation and
(Industry 4.0)), 25, 41	removal of body parts, 114
factors affecting future	cosmetologist function, 107
development of	dynamics of number of employees
agriculture, 27	and unemployment rate,
results, 30–31	104
theoretical bases, 26–30	environment and social fashion, 97
Analog, 10, 16, 29, 52, 54, 131	factors, features, and tools
modern, 98–100, 129, 152, 154–155	influencing achievement, 97
Artificial intelligence (AI), 6, 10, 13,	fitness instructor and psychologist,
19, 30, 35, 131	114
management, 136, 143	functions, 105
map of competences for AI tester,	future outline, 100
19	human professions, functions of,
technical support for, 143	110
Automatization (AU), 6, 10, 29	innovational fitness equipment,
of agricultural production, 34, 35	106
Automatized digital devices	labor efficiency in body care and
(ADD), 31	fitness in countries, 111

polystructural character, 102	analyses, 38
self-esteem, 95	Consumption, 131–132
sport services, 98	Cosmetological services, 106–107
theoretical bases, 96, 103, 110	Cosmetologist, 98, 100, 103,
theoretical bases, yo, 103, 110	107–110, 114
Brainstorming, 136, 143	competence map for creation and
BRICS, 140	removal of body parts, 114
Business processes, 13, 59, 103, 109,	Cosmetology, 98
177, 179	Crispr-Cas9, 50
in agricultural production 35	Cyber security, 154
Business-to-business (B2B) (see also	Cyber-physical systems, 12
Direct B2B marketing;	Cyber-physical systems, 12
	Danismation of anximoment 26
Reverse B2B marketing), 9	Denigration of environment, 26
Business-to-consumers (B2C), 9	Dependent variable, 124
educational services, 74	Digital
Business-to-government (B2G), 9	communications, 103
	competitiveness index, 184
Cloud technologies, 7	database, 31
Clustering, 198	economy, 41
Communication, 103	EdTech, 83
spheres, 74	educational materials, 90
Communicative competences, 139,	employment, 183
178	technologies, 12, 15, 55, 184
Communicativeness, 90	Digital marketing, 78, 81, 104, 106
Comparative approaches of medical	specialist, 90
services, 50–51	Digital modernization, 49
Competences	of AIC, 29
competence-based approach, 18,	of industry, 18
190, 193	Digitization
for future professions, 175–182	of healthcare, 55, 63
map for cosmetologist for creation	of labor market, 183
and removal of body parts,	of pharmaceutical activities, 55
114	Direct B2B marketing, 136
maps for future professions	in R&D, 142
representatives in	Direct institutionalization, 199
agriculture, 41–46	Direct marketing, 104, 106
maps for representatives in	of services, 110–111
industry, 17–22	Distribution, 151, 153, 161–162, 177,
of work with documents, 139	179
Complex character of education, 184	Distributive business process, 106
Comprehensive systemic scientific	Doctoral program graduate, 87
ideology, 87	Drip irrigation technology, 25
Computer and information	Drones, 8
sciences, 87	
Computers, 98	Ecologization, 29, 34
Consumer preferences, 44	EdTech, 83, 183

Education(al)	features and competences,
future professions in, 80–90	175, 181
materials, 84	functions in education in view of
programs, 17, 79	business processes, 82
sector, 73–74	functions of school counsellor, 83
services, 79, 85, 87–88, 110, 129	higher education system, 85
systemic character of, 184	indicators reflecting value of level
technologies, 80	of education, 177
value of, 41, 74, 184	in industry, 11–16
Electronic queuing systems, 55	information economy, 81
Electronic scientific communications,	materials, 86–87
83	mechanism for mastering
Emotional intelligence, 90	professions and executing
Employers, 74	professional functions, 178
Employment, 17	180
service, 199–200	in medicine, 59–62
Entrepreneurial structures, 74	in R&D, 133–138
Environment factor, 96–98	remote education, 80
External sources of treatment, 51	remote teacher, competences for,
	89
Favoritism, 189	results, 179–182, 190–192
Federation Council of Federal	school counselor in remote
Assembly of Russian	education, competences
Federation (2018), 80	for, 89
Financial sphere, 201	state management model for,
Financing of grants, 199	195–200
Fitness instructor, 114	theoretical bases, 80-81, 176-179,
Fourth Industrial Revolution	190
(Industry 4.0) (see also	in transport and communications,
Agro-Industrial Complex	157–161
4.0 (AIC 4.0)), 3, 195–196	
transformation processes, 3–8	G7, 140–141, 147, 158–159
unified scenario, 8–10	General professional
Future human, 54	competences, 87
Future professions	Genetic modification, 49, 52, 61, 68
in agriculture, 33–38	Genetic modifier, 59, 65
algorithm for mastering, 90	competences for, 66
algorithm for selecting and	Genetic revolution, 50, 56, 65
mastering, 189, 191	Genome
comparative analysis of modern	codes, 67
and future practice, 179	decoding, 53, 54, 67
criteria for evaluating general	decryption, 61
competences, 193	modification, 50
digital EdTech, 83	Global economy, 73–74
digital marketing specialist,	characteristic, 134
competences for 87–88	system, 129

Healthcare system, 56, 64 Hi-tech companies, 198 Hi-tech future economy, spheres of, 191–192 Higher education system, 85	Information economy, 73, 79, 86 forecast scenarios for development of educational sector, 77 individual education, 76 mass education, 76
Human	
	self-education, 76
functions, 103, 106, 136, 159–160	sphere of education in age, 78
genome, 50	theoretical bases, 74–75
intellect, 29	Information security, 75
role in genome development, 54	Innovation(al), 153, 161, 177, 179
society development, 49	activity, 129
T 1 1 4 111 122	cosmetological equipment, 98
Independent variables, 122	economy (see
Individual education, 76, 184	Knowledge—economy)
Individualization of educational	fitness equipment, 98, 106
services, 79	medicine, 61
Industrial economy, 73	processes, 13, 29
Industry, 11	technologies, 31, 202
AI tester, map of competences for,	Innovational financial services
19	(FinTech), 73
algorithm for mastering future	Innovations, 162, 177
professions in industry, 21	Innovators, 100
automatized production controller,	Institutional approach, 74–75
competence map for, 20	Institutional traps, 189–190
competence maps for future	Insurance of risk, principle of, 197
professions representatives,	Integrated economic structures, 129
17	Intellectual resources, 119, 132
future professions in, 11–12	Internal sources of treatment, 51
practical skills, 22	International Federation of Robotics,
results, 13–16, 19	121
robototronics engineer,	International Telecommunication
competence map for, 20	Union, 150
theoretical bases, 12–13, 18–19	Internet, 63, 98
transition to Industry 4.0, 11	Internet of things (IoT), 7, 13, 19, 35,
Information and communication	152
technologies (ICT), 75, 79,	
98, 103, 129, 149	Knowledge, 65–66, 87, 106, 119
characteristics of future outline of	economy, 75, 119
sphere of transport amid	
revolution, 151, 153	Labor market, 63
future outline of sphere of	Law enforcement, 95
transport amid revolution,	Lecturers, 79
152, 155	Lifelong learning, 183
level of development, 150	comparative analysis of modern
results, 151–155	and future practice, 187
theoretical bases, 149–151	logic for modern employee, 188

participation in, 186	Mobile communication, 98
regression analysis of dependence	Modeling agricultural products,
of digital knowledge index,	38, 43
187	Moderation, principle of, 197
results, 185–188	Modern analog, 98–100, 129, 152,
theoretical bases, 184–185	154–155
theoretical bases, 101 105	Modernization of technologies,
Malfunction repair, 15	183–184
Managerial competences, 139	103–104
	N 1 40
Manipulators, 15	Non-human resources, 49
Marginal utility theory, 197	Noosphere approach, 74
Market(ing)	
information processing, 38	Online communication, 81
market-ready innovations,	Online education, 80
131–132	Organizational competences, 139
remote educational services, 81	
research for agricultural products,	Paternalism, 189
38	Patients demand services, 63
segment, 129	Plastic
Mass	surgeon, 103
education, 76	surgery sectors, 110
media, 96	Popularization of healthy living, 27
Mastering future professions in	Population growth, 26–27
agriculture, 45–46	Portal of Federal State Educational
Masters program, 115	Standards of Higher
Medical services, 55, 63, 96	Education (2018), 87
Medical workers, 63	Postgraduate program, 85
*	
Medicine, future professions in, 59	Postindustrial economy, 11
algorithm for mastering future	Preferring desired profession,
professions in medicine, 69	principle of, 190
for creative immunologist,	Preferring most accessible profession
competences, 67	principle of, 190
digitization of pharmaceutical	Prestigious professions, 176,
activities, 55	201–202
for genetic modifier, competences,	Prewritten program, 52
66	Production, 131–132, 151, 154,
genetic revolution, 65	160–162, 177, 179
process of genetic modification, 68	Professional competences, 45, 68,
results, 59–62	87–88
theoretical bases, 56–59, 64–65	Program development, 61
Medicine at threshold of genetic	Programing, 52
revolution	Provided services, 165
correction of genome, 49-50	Psychology, 67
future outlines of, 51–52	-301,
results, 50–54	Quality of educational services, 17
theoretical bases, 50	Quantum technologies, 8
incorcical bases, 30	Quantum technologies, o

Radiation sterilization, 25	Selector, 38
Remote education, 80–81, 85, 97	map of competences for, 43
Research and development (R&D),	Self-education, 76
11, 50, 73–74	Self-esteem, 95
actual and estimated indicators of	Social fashion, 96–97
labor efficiency, 141	Social function of healthcare, 59
algorithm for mastering of future	Socialization, 95
professions, 145	Societal norms, 95
characteristics, 130	Socio-economic systems, 73, 75
correlation graph, 122, 126–127	Software programs, 98
dynamics of GDP per capita, 121,	Specialist/masters program, 85
124, 126	Speciality, 17, 42, 87
future professions in, 133–135	Specialized cosmetological digital
generator of innovational ideas,	technologies, 115
map of competences for,	Specialized medical digital
	technologies, 63
market-ready innovations,	Sport services, 98
131–132	Sports instruction, 106–107
materials, 121	Sports services, 96, 106
regression analysis of dependence	State financing, 199
of GDP per capita on	State management model for
robot density, 123, 125, 128	future professions,
results, 142–145	195, 198
sector, 131, 139	case study, 196–197
tester of automatized innovational	dynamics of values of indicators,
process, map of	196
competences for, 144	results, 197–200
theoretical bases, 119–120, 140	State-funded education, 199
Reverse B2B marketing, 136	Structural and functional approach,
in R&D, 142	74–75
Reverse marketing, 106	Students, 17, 79
of services, 111–112	Susceptibility, 49
Risk management, 68, 100	Sustainable development, 75
Robot density, 121	
Robot-innovation, 130–131	Technical competences, 139
Robot-innovators, 131	Technical maintenance, 5, 7–10, 29
management, 138	Technical support
technical support for, 144	for AI, 136, 143
Robotization (RB), 6, 8, 10	for robot-innovators, 138, 144
Robototronics, 15	Technological progress, 27, 30
map of competences for	Theoretical competences,
robototronics engineer, 20	178–179
	Three-dimensional printing (3D
School counselor in remote	printing), 7
education, 89	Total coverage, principle of, 197
Science fiction, 50	Transformation processes, 3–8
11011011, 00	114110101111411011 p1000000, 5 0

Transition to AIC 4.0, 29 of medical services, 64 Transport and communications (see also Information and communication technologies (ICT)), 165 algorithm for mastering future professions in, 170 business processes and subjects, 160 developer of new modes of communications, competence map for, 168 dynamics of values for indicators of growth and development, 158

engineer of unmanned transport vehicles, competence map for, 167 future professions in, 157 indicators, 166 operator of unmanned transport vehicles, competence map for, 167 results, 159-161, 166-171 specialist in cyber security, map of competences for, 168 theoretical bases, 157–159, 165–166

Unified scenario of Industry 4.0, 8–10 Universal competences, 87 University graduates, 85, 185

Value of education, 41, 74, 184