Index

advertising see marketing
advisory panels 48, 50, 59
see also focus groups
advisory programs 53, 59, 60–61, 63
aggregation of demand 82–4
airplanes see Boeing
automobiles
concept testing 33
online customization 35
automobiles case studies 61–2, 106–107
beta testing 36, 38, 63, 87
biomedical firms see Eli Lilly; InnoCentive; TechEx
blogs 26, 54–5, 77
BMW Auto case study 61–2
Boeing’s World Design Team 27
brand values, and virtual communities 83, 85–6
cars see automobiles
chat rooms see focus groups; virtual communities
circuit design, online toolkit 35, 36
cognitive approach to innovation 6–7 collaborative innovation
conceptual framework 26–8
as a distributed innovation
mechanism 66, 73, 74
governance needs 126
and ICTs 22–3
incentives in 126–30, 136
and industry dynamism 125
and knowledge modularity 124–5
mechanisms
Ducati case study 32, 52–8
Eli Lilly case study 32, 58–61
integrated portfolio development 47–52, 88
taxonomy 20
see also Internet, innovation tools
organizational factors 61–4
and proximity dependence 125–6
rationale 13, 14–15
reach of 20–21, 47–8, 53, 59, 97
richness of 21, 47–8, 53, 59
role of customer knowledge 15–18
role of Internet see Internet
and task complexity 126
see also distributed innovation
Collective Action Model 115–17
collaborative innovation 25–6
communication, in virtual communities 83, 85
communities of creation 66, 67–82, 73, 74
see also open-source systems; virtual communities
communities of fantasy 83, 86, 88
communities of interest 83, 84–5, 88, 111–12, 121–3
communities of knowledge 79
communities of practice 67–8, 79, 95
communities of relationships 83, 85–7, 88, 95
community operators see customer community operators
competitions
as an innovation tool 31, 32, 48
case studies 56, 57, 59–60, 63, 103–105
as a marketing tool 39
complaints, as an innovation tool 31, 32
complementary services, as incentives 129–30
computer simulation, for product design 35–6
computer software see beta testing; open-source system
comScore Networks case study 105–106
conjoint analysis 34–5, 38, 48, 49, 51
consumption see customers; virtual communities of consumption
continuous innovation, need for 8–9, 11
copyright see intellectual property rights
costs of innovation 2–3, 4 see also transaction costs
creation see communities of creation; innovation
customer-centric models 20
customer collaboration see collaborative innovation
customer community operators 101, 106–107
customer knowledge utilizing 15–18 see also peripheral customer knowledge; social customer knowledge; tacit customer knowledge
customer loyalty, and virtual communities 83, 86–7
customer network operators 101, 105–106
customer relationship management 31, 40, 42, 43–4 case studies 53, 55, 61–2, 63 see also product life management customers empowerment of 26–7, 59 expectations, and the Internet 25–6 see also virtual communities, of consumption
customization 31, 34–6, 38, 41–2, 43, 48, 51–2, 82–3 case studies 53, 59, 60–61
demand aggregation 82–4
design see product design Desmoblog 54–5 device convergence on the Internet 24 Diesel case study 84
distributed innovation conditions for 12 and dynamic markets 11 governance models 66, 73, 74, 126 and ICTs 8–9, 10 incentives in 72, 73–4, 115–18, 119–21, 128–9 and knowledge distribution 10–11 and knowledge diversity 9–10 mechanisms characteristics 72–4 taxonomy 66–7 see also collaborative innovation; communities of creation; open-source systems; virtual knowledge brokers principles 11–12 rationale 8 distributed learning 9–10, 88–92 Ducati case study 32, 52–8 economic incentives for innovation 120–21, 128, 130 economics, role 1 Edmunds case study 106–107 education see knowledge; learning; patient education Eli Lilly case study 32, 58–61 empowerment of customers 26–7, 59 environment, role in innovation 6, 7 events, for product launch 31, 42–3 exploitation case studies 56–8, 60–61 definition 47 reach and richness 48, 53, 59 tools 49, 51–2 and virtual knowledge brokers 101–105 see also product design; product testing exploration case studies 53–6, 58–60 definition 47 reach and richness 48, 53, 59 tools 48–9, 50–51 and virtual knowledge brokers 101, 105–107 see also idea generation; idea selection Extranet communities 78–9
fantasy, communities of 83, 86, 88 firm-centric models 20, 66–7 see also collaborative innovation; communities of creation
Index

focus groups 31, 33–4, 41
see also advisory panels
forums 53–4, 55, 58, 59, 63–4
see also Extranet communities
fragmentation of markets 10, 125
Free Software Foundation 71, 110
gateways 103
General Public License, for free
software 110, 113
Generation Y, market research about
107
global consumption, and virtual
communities 82–3
governance 66, 73, 74, 126
ICTs 8–9, 10, 22–3
see also computer simulation;
Internet; open source systems
idea generation
concept 3
incentives for 32, 33, 43
investment in 4
role of Internet 30–33, 41, 42, 62
and virtual communities 83, 85,
106–107
see also exploration
idea selection
concept 3
investment in 4
in the rational approach 5
role of Internet 31, 33–4, 41, 42,
55–6
and virtual communities 83, 85
see also exploration
identity, in virtual communities 81–2,
90, 121
incentives
case studies 56, 60
in collaborative innovation 126–30,
136
in distributed innovation 72, 73–4,
115–18, 119–21, 128–9
for idea generation 32, 33, 43
in virtual communities 89–90, 91
see also competitions; intellectual
property rights
indirect knowledge see peripheral
customer knowledge
Infomediaries 106–107
information acceleration 38
information and communication
technologies see ICTs
information democracy see ICTs
information intermediaries see
knowledge brokers
information provision see learning;
patient education
information pump 34, 48, 50
InnoCentive 32, 59–60, 103–105
innovation
costs see costs
dynamics 1
external resources 8–9, 11–12
firms’ objectives 9
organization of 2–4
processes 3–8, 11
risk 4
see also collaborative innovation;
distributed innovation
innovation communities 78
innovation marketplace 48, 50, 101,
103–105
innovative communities see
communities of creation; virtual
communities
integrated portfolio development
47–52, 88
intellectual property rights 31, 32, 63,
69, 90, 91, 92, 115–16, 127
see also licensing; open-source
systems; patent markets
interest see communities of interest
Internet
benefits 19–20, 26–7
characteristics 76
and customer expectations 25–6
innovation tools 30–40
advantages and disadvantages
50–52
case studies 61–4
usage 40–45
see also Ducati; Eli Lilly
multimedia interactivity 24–5
and persistent engagement 22–3
and product life management 42
reach of 20–21, 47–8
response flexibility 23
richness of information 21, 47–8
role 18–19
in idea generation 30–33, 41, 42, 62
in idea selection 31, 33–4, 41, 42, 55–6
in marketing 38, 48
in product design and development 31, 34–7, 41–2
in product launch 31, 39–40, 42–3
in product testing 31, 37–8, 42, 49
in prototype development 33, 36, 38, 48, 52
scalability of 21–2
and social knowledge development 23–4
and Web 2.0 25–6
see also micro-sites; headings
beginning virtual interorganizational strategies see communities of creation
Intranet communities 78
investment see costs of innovation; transaction costs
kitesurfing products, development 122–3
knowledge
communities of 79
development, and routines 7
diversity 9–10
modularity of 10–11, 22–3, 124–5
social creation of 67–8, 80–81
see also collective intelligence; customer knowledge; information democracy; learning
knowledge brokers 18, 19–20, 93, 94, 99, 100
see also virtual knowledge brokers
knowledge dilemma 124–6
Knowledge Management Intranet 78
Kraft Foods case study 63
launch see product launch learning
processes 7–8, 9–10
relationships 15–16, 88–9
see also knowledge
Lego case study 92
licensing, in open-source systems 110, 113–14, 128, 129–30
life cycle see product life management
Lilly see Eli Lilly
Linux 71, 72, 111, 121
Liquid Generation case study 107
listening in 48, 49, 51
case studies 55, 62, 84
market-centric models 66, 67
see also open-source systems; virtual knowledge brokers
market fragmentation 10, 125
market intelligence services
characteristics 48, 50–51
role 49, 62, 63, 156–106
and virtual communities 83, 84–5
see also customer knowledge; knowledge brokers; listening in marketing
case studies 61–2
through competitions 39
newsletters 31, 40, 42, 43
role of Internet 38, 48
viral 39, 43
see also brand value; product launch; virtual market testing
mediated dialogue see knowledge brokers
membership
of open-source systems 118–19
of virtual communities 68–9, 78, 90
Metcalfe's law 22
micro-sites 31, 40, 42, 55–6, 62, 84
modularity, of knowledge 10–11, 22–3, 124–5
motorcycles see Ducati
multidisciplinarity, versus specialization 124–6
multimedia interactivity, on the Internet 24–5
MySQL, copyright issues 129–30
Nestlé case study 62–3
network externalities 21–2, 129, 130
network operators see customer network operators; knowledge brokers
networks
convergence 24
value of 22
see also collaborative innovation; communities of creation; distributed innovation; Internet; peer-to-peer networking; social customer knowledge; social networking; virtual knowledge brokers

newsletters, for marketing 31, 40, 42, 43 Nokia case study 63–4

online concept labs 49
see also virtual concept testing
online surveys 30, 31, 41, 42, 48–9, 50 case studies 53, 55–6, 59, 62, 63

open innovation see distributed innovation

P&G case study 62
parallel approaches to innovation 7–8 participant observation 18 patent markets 31, 36, 42, 48, 49, 51, 101–103 patient education 58–9 peer-based customer support 23 see also open-source systems peer-to-peer networking 25–6 peripheral customer knowledge 18, 19–20, 24 persistent engagement, and the Internet 22–3 personalization see customization pharmaceuticals see Eli Lilly phased project planning 5 portfolio development 47–52, 88 positive network externalities 21–2, 129, 130 practice, communities of 67–8, 79, 95 predatory commoditization 129 Private–Collective Innovation Model 109, 116–17 Private Investment Model 115, 116, 117, 118 product design and development case studies 56–8 concept 3 customer involvement 16 investment in 4 role of Internet 31, 34–7, 41–2 toolkits 31, 34–7 see also exploitation; prototype development; virtual design communities

product launch case studies 54–5, 62 events 31, 42–3 investment in 4 in the rational approach 5 role of Internet 31, 39–40, 42–3 and virtual communities 83, 85 see also exploitation

product life management 42, 83 see also customer relationship management

product testing role of Internet 31, 37–8, 42, 49 virtual 31, 37–8, 42, 43, 48, 52 and virtual communities 87–8 see also exploitation

prototype development concept 3 investment in 4 in the rational approach 5 role of Internet 33, 36, 38, 48, 52 proximity dependence 125–6

rationalistic approach to innovation 5–6 reach, of collaboration mechanisms 20–21, 47–8, 53, 59, 97 relationship management see customer relationship management
relationships
- communities of 83, 85–7, 88, 95
- learning 15–16, 88–9
- management see customer relationship management
- reputation, as an incentive 120–21, 128, 130
- returns, on investment 2–3
- rewards see incentives
- richness, of collaboration mechanisms 21, 47–8, 53, 59
- risk, and investment patterns 4
- routines, and knowledge development 7

Schumpeter, Joseph 1

Siemens case study 63

social creation of knowledge 67–8, 80–81

social customer knowledge 17–18, 19, 23–4, 32–3, 98

social networking 25–6
see also communities of relationship

software see beta testing; open-source system

specialization, versus multidisciplinarity 124–6

structural holes 24

Subaru case study 106–107

suggestion boxes 30, 31, 32, 41, 42, 43, 48, 50

case studies 62, 63

supplier diversity development 59, 60–61

surveys see online surveys

tacit customer knowledge 15–16, 90, 100

target audiences, identification 83

Tech Café (Ducati) 53, 54

TechEx case study 102–3

TechNeed Challenge 102

technological incentives for innovation 120, 121

technology marketplace 101–103

teenagers, market research about 107

testing see product testing

Texas Instruments case study 87–8

transaction costs, as incentives 128–9, 130

transaction processes, and virtual communities 83–4

trust, in virtual communities 81–2, 89–90

users see customers

values see brand values

videoconferencing 33–4

viral marketing 39, 43

virtual communities
- advantages and disadvantages 50
- and brand values 83, 85–6
- case studies 53–4, 62
- characteristics 32–3, 48, 80–82
- communication in 83, 85

of consumption
- control mechanisms 90
- functions 82–7
- as learning tools 88–9

management of 91

requirements 88–92

utilization of 87–8

and customer loyalty 83, 86–7

definitions 77–8

and idea generation 83, 85, 106–107

and idea selection 83, 85

identity in 81–2, 90, 121

incentives in 89–90, 91

membership 68–9, 78, 90

and product launch 83, 85

and product testing 87–8

definitions 77–8

role 27–8, 31

trust in 81–2, 89–90

see also communities of creation;

customer community operators;

Extranet communities; Intranet communities; open-source systems; The Well

virtual concept testing 31, 33, 41, 42, 62–3, 105

see also online concept labs

‘virtual consultants’ 32

virtual customer environments see Internet

virtual design communities 31, 36–7, 49

case studies 53, 57–8
virtual knowledge brokers
characteristics 66, 69–70, 73, 74
impartiality of 98–9
and innovation management 48, 96–100
and knowledge absorption 70, 94–5
and knowledge implementation 70, 95–6
and knowledge integration 70, 95
limitations 99–100
role 93–6, 99
types 100–101
customer community operators 101, 106–107
customer network operators 101, 106–107
innovation marketplace 48, 50, 101, 103–105
technology marketplace 101–103
virtual market testing 31, 48, 52, 55–6, 62, 105
virtual product testing 31, 37–8, 42, 43, 48, 52
Virtual Reality Markup Language 38
virtual teams see virtual design communities
Web see Internet; micro-sites
Web 2.0, role 25–6
weblogs 26, 54–5, 77
The Well 77
Yet2.com case study 101–102