

Index

- 9/11 attacks 4, 21, 23, 92, 182, 185, 232
 - Commission Report 248
 - defense of U.S. airspace 64
 - EU initial response to 49–50
 - international aviation security after 46–9
 - on Pentagon 2, 4, 46
 - on World Trade Center 2, 4, 46, 237
- 9/11 Commission Act (2007) 93
- Abuja Declaration on Civil Aviation Security 195
- access control systems 73–7
- access investigation process, implementation of 74
- Account Consignors 92
- advanced imaging technology (AIT) 109
- Advance Passenger Information (API) 55
- aerodrome operators 184
- Aeronautics Act (1985), Canada 125, 127, 133, 134–5
- Afghanistan, US-led invasions of 248
- African Civil Aviation Commission (AFCAC) 195
- African Roadmap on Civil Aviation Security 195
- air accident investigation
 - Air Accidents Investigation Branch (AAIB), UK 208
 - National Transportation Safety Board (NTSB), US 208
 - procedures for 211
- air cargo 1, 7, 25
 - business-to-business model 87
 - business-to-consumer model 87
 - Certified Cargo Screening Program (CCSP) 115–16
 - ‘closed loop’ process 88
 - configuration of 87
 - consumer-to-consumer model 87
 - freight forwarders 87
 - ‘holding’ cargo, process of 95
 - Last Point of Departure (LPD) 97
 - nature of 85–6
 - regulation process for 89–92
 - role in global supply chain 85, 88
 - security of *see* air cargo security
 - tampering of 156
 - theft of 156–7
 - transportation models 86–8
 - Unit Load Devices (ULDs) 87
- Air Cargo Advisory Group (GACAG) 116
- air cargo industry 85, 94, 100–101
- air cargo security 6, 85, 157–8
 - actors involved in 101
 - Air Cargo Advance Screening (ACAS) 98, 100
 - in Brazil 157–8
 - in Canada 131
 - chronology of terrorist threats 187
 - electronic screening 185
 - future aspects of 100–101
 - global practices and objectives in 90, 92
 - history of 88–9
 - implementation of 91
 - insider threats 93
 - in Kenya 184–7
 - operational issues 96–100
 - physical search of shipments 95, 185
 - post-certification inspections 186
 - regulations for 89–92
 - risk-managed cargo profiling procedures 185
 - roles of stakeholders in 186, 188–9
 - securing and screening process 92–4
 - technology and procedures for 94–6
 - in United States 115–16

- Yemen incident 98
- see also* air transport security
- Air Cargo Security Technology List (ACSTL) 116
- air carrier security programme 53
- aircraft, as flying missile 172–3
- aircraft flight tracking 205, 210–11, 216–17
 - satellite-based systems for 151
- aircraft maintenance
 - associated maintenance classes 153–4
 - in Brazil 151–2
 - economies of scale 152
 - maintenance, repair, and overhaul (MRO) 151, 152
 - nose-to-tail lines 152
 - one-off checks 152
 - Original Equipment Manufacturers (OEMs) 152
 - quality of 152–5
 - technical competence standards 153
 - training for 8
- aircraft manufacturing 8, 147, 150
- aircraft operator security
 - cockpit doors, reinforced 79
 - flight deck barrier protection 79
 - post-9/11 78
 - and private sector 78–9
 - surface-to-air missile defense systems 79
- Aircraft Owners and Pilots Association (AOPA) 117
- aircraft security
 - human element vs. technological element in 174
 - in Israel 168
 - in United States 111
- Air India Flight 182 disaster (1985) 46, 123
- airline identification badge 75
- airline industry 66–7, 136, 157, 199
- airlines 147–9
 - Airlines for America 18
 - screeners, solutions for managing 67
 - tickets demand 34
- Air Marshalls 28, 80
 - Federal Air Marshall Service (FAMS) 111
 - sky-marshals 176, 248
- air navigation safety 45
- airport breaches 77
- Airport Characteristics Measurement Tool (ACMT) 116
- Airport Cooperative Research Program of the Transportation Research Board 82
- airport identification badge 73, 75–6
- airport perimeter security 6
 - access control 73–7, 189–90
 - identity management 73–7
 - in Kenya 180, 189–90
 - major areas covered under 74
 - perimeter fencing 189–90
 - perimeter intrusion detection systems (PIDS) 63, 77–8
- Physical Access Control Systems (PACS) 73
 - risk assessment 73
 - safety and security regulations 77
 - technologies developed for 73
 - use of private security contractors for 73
- airports 149–50
 - ‘category one’ status 182
 - Hold Baggage security (HBS) system 175
 - location of 187–9
 - objectives for upgrading 182
 - perimeter fencing 189–90
 - security of 8
 - in Kenya 182–4
 - perimeter intrusion detection systems 63
 - programme for 53
 - security screening *see* airport security screening
 - security zones and baggage areas 251
- Airports Council International (ACI) 22, 26, 82, 90
 - Security Standing Committee 22
- Airport Security Access Control Systems 74
 - DO-230F Standards for 74
- Airport Security Business Center (ASBC), Japan 232, 236
- airport security screening 93
 - checked baggage screening 72
 - checkpoints 65, 71

- full-body scanning (FBS) technology
 - for 130
- Gore Commission on 66–7
- ‘Managed Inclusion’ Program
 - 108
- methods of 40
- models of 38–40
- pre-boarding passenger screening
 - 130
- ‘PreCheck’ program 108
- role of private sector in security
 - screening 66
- Screening Partnership Program (SPP) 69–71
- screening personnel for 63, 65–9
- stages of 39
- technologies for 63, 65–9, 71–2
- in United States 108–11
- X-ray scanning and chemical trace
 - 40
- air services to rural areas, development
 - of 17
- air traffic control (ATC) 71, 114, 115, 129
- air traffic management 8, 147
 - in Brazil 151
 - ground-based radar for 151
 - satellite-based systems for 151
 - during World War II 151
- air transportation 1
 - airlines 147–9
 - in Brazil 147–55
 - International Air Transport Association (IATA) 147
 - in Kenya 180–82
 - recent trends in 181–2
 - security *see* air transport security
- air transport security
 - for airports
 - access control 189–90
 - location 187–9
 - perimeter fencing 189–90
 - challenges to 187–91
 - improving border and control
 - measures 191
 - in Kenya 182–91
 - prohibited items 248, 257
 - security screening equipment and
 - procedures 190
 - technologies for 190
 - training of security personnel for
 - 190–91
- air travel risk, public awareness of
 - 203
- Allan Kessing Affair (2005) 250
- al-Qaeda 4, 47, 98, 166, 263
- American Airlines 46, 66, 79, 176
- American Association of Airport Executives (AAAE) 75, 82
- American Society of Industrial Security (ASIS) 78, 256
- American Transportation Security Administration (TSA) 176
- Ann Murphy case (1986) 169
- Argenbright Company 68
- Atta, Muhammed 170
- Australia, aviation security in
 - ad hoc review of 257
 - aftermath of 9/11 245, 248–9
 - Allan Kessing Affair (2005) 250
 - ANAO report on 246, 247, 249
 - and audit of national policing capabilities 253–4
 - Aviation Security Identity Card (ASIC) system 248
 - audit of 255
 - background and method of 245–6
 - Counter-Terrorism Control Centre 254
 - cover ups and persecution of whistleblowers 258
 - critique of aviation policy and practice 258–9
 - ‘Domestic flights vulnerable to attack’ report (2016) 257
 - home grown and lone wolf terror threats 255–7
 - inquiry into the adequacy of 253
 - issues with regional airport security 252–3
 - liquid explosives plot (2006) 253
 - National Intelligence Coordination Committee 254–5
 - Police Federation of Australia 252
 - prior to 9/11 246–8
 - Review of the Australia’s Counter-Terrorism Machinery* (2015) 257
 - Schapelle Corby Affair (2004) 249–50
 - Senate Rural and Regional Affairs

- and Transport References Committee (2016) 257
- success of counter-terrorism system 257–8
- unified policing model (UPM) for 251
 - federal audit of police capabilities 253–4
 - initial problems with 251–2
 - vulnerabilities to 247
 - Wheeler Review 250–51, 258
 - White Papers (2009 and 2010) 254–5
 - Wilkins Report on 252
- Australian Crime Commission (ACC) 253
- Australian Federal Police (AFP) 251
- Automatic Dependent Surveillance-Contract (ADS-C) 216
- Autonomous Distress Tracking (ADT) 217
- Aviation and Transportation Security Act (ATSA, 2001), US 64–5, 75
- aviation risks, minimization of 37
- Aviation Security and Facilitation Office, and the Aviation Security (AVSEC) 9, 21, 50–54, 90, 181, 186, 191, 194–6
- aviation security, concept of 182
- Aviation Security Identity Card (ASIC) system 17, 183, 248
 - audit of 255
- Aviation Security Improvement Act (1990), US 72
- Aviation Security Improvement Act (2000), US 67
- aviation security industry 76, 81, 83
- Aviation Security International* magazine 81
- Aviation Security (AVSEC) mechanism 9, 21, 181, 194–5
 - after 9/11 attacks 46–9
 - birth of 43–6
 - challenges to 187–91
 - current trends in 138–42
 - definition and guiding principles of 124
 - initiatives to implement 195–6
 - in Kenya 194–5
 - private and public equilibrium levels of 34
 - types of 124
 - Working Group 195
- Aviation Security Policy (ASP) 90
 - in Australia 245
 - in Canada 133–8
- aviation-security risk management 247
- aviation terrorism
 - evolution of 165–6
 - history of 163
 - in Japan 232
 - in Middle East 163
 - Nezar Hindawi plot (1986) 165
 - tactics of 165
 - types of 164–5
 - see also* hijacking; terrorist attacks, on aviation
- Babu, Lazar 40
- badging and credentialing software systems 73
- baggage screening 238–9, 253
- Bali bombings (2002) 248
- Beijing Convention 20, 21, 48
- Beijing Protocol (2010) 21, 48
- benefits, of aviation security 36–8
 - cost benefit analysis 38
 - Gillen and Morrison model for analysing 38
 - net present value 38
- Ben Gurion International Airport, Israel 68, 173
- Billy Bishop International Airport, Toronto 126
- Bin Laden, Osama 4
- biometrics
 - identifiers 128
 - use of 76
- ‘Black September’ terrorist group 166
- Boarding Pass Security System (BPSS) 130
- body scanners 26, 254
- bomb disposal and explosive detection 64
- Brazilian aviation security
 - aircraft maintenance 151–2
 - aircraft manufacturing and 150
 - air transportation 147–55
 - airlines 147–9
 - airports 149–50

- general aviation (GA) sector
 - 150–51
 - operational and financial data 148
 - traffic management 151
 - cargo security 157–8
 - cargo theft 156–7
 - crimes against passengers 155–6
 - gross domestic product (GDP) 147
 - internal and external security
 - challenges 145
 - lack of investment in 159
 - Olympic Games and World Cup 144, 158–9
 - overview of 145–7
 - passenger security issues 157
 - recommendations for improvement
 - of 157–8
 - regulation of 158
 - safety issues 155
 - Zika virus, threat of 158
- Brazilian Civil Aviation Regulation (RBHA) 151–2
- Brazilian Repair Station Certificate (CHE) 152
- British House of Commons 26
 - European Scrutiny Committee of 26
- Brussels airport bombings (2016) 26, 257
- Canadian Air Transportation Security Authority (CATSA) 71, 127–8, 131
 - Canadian Air Transport Security (CATSA) Act (2002) 127, 135–6
- Canadian aviation security
 - air cargo security 131
 - airport authorities 129–31
 - Airport Security Awareness Training course 135
 - Boarding Pass Security System (BPSS) 130
 - bombing of Air India Flight 182 (1985) 123
 - breaches of security 137
 - current trends in 138–42
 - definition and guiding principles of 124
 - Law Enforcement Record Check Report 126
 - major events have shaped 123
 - Minister of Public Safety and Emergency Preparedness 136–7
 - multilayered security matrix 123, 124–7
 - National Airports System (NAS) 129
 - National Civil Aviation Security Program 125
 - National Information Exchange Model (NIEM) 128
 - National Transportation Policy 133
 - Passenger Protect Program 128
 - policy and law to safeguard 133–7
 - Aeronautics Act (1985) 125, 127, 133, 134–5
 - Canadian Air Transport Security (CATSA) Act (2002) 135–6
 - Canadian Aviation Security Regulations (CARs) 135
 - Criminal Code of Canada 133
 - Secure Air Travel Act (2015) 136–7
 - pre-boarding passenger screening 130
 - programs and measures in 131–2
 - public and private actors involved in 125
 - Restricted Access Identity Card (RAIC) Program 128
 - safety management practices 125
 - standards of 131
 - Transportation Security Clearance (TSC) 125
 - types of 124
- Canadian Aviation Security Awareness Program (CASAP) 125, 132
- Canadian Aviation Security Regulations (CARs) 127, 135
- cargo operators 86, 91
- cargo screening technology and procedures 17, 94–6
- cargo security *see* air cargo security
- cargo trackers 156
- carry-on baggage scanners 114
- Casus Belli*, declaration of 164
- Certified Cargo Screening Program (CCSP) 115–16
- Charles de Gaulle airport (France) 25
- Charter of Fundamental Rights 57
- checked baggage screening 72

- Chicago Convention (1944) 3, 19–20, 22, 44–5, 90, 191, 211
 Annex 3 of 217
 Annex 6 of 216
 Annex 17 of 23, 27, 184, 192, 246
 Article 3 of 217
 Document 8973 45
 national civil aviation security program 192
 Safeguarding International Civil Aviation against Acts of Unlawful Interference 45
 sovereignty, principle of 218, 221
 Civil Aviation Act (2013), Kenya 183
 Civil Aviation Issues Reporting System (CAIRS) 139
 Civil Aviation National Agency (ANAC), Brazil 8, 151, 158, 266
 certificated repair stations 152
 civil aviation operations, safety of 211
 Civil Aviation Safety and Security Oversight Agency (CASSOA) 194
 ‘Clipper Maid of the Seas’ jumbo jet 168
 closed-circuit television (CCTV) 73, 131, 139
 closing airspace, definition for 218, 222
 cockpit doors, reinforced 6, 9, 17, 20, 37, 78–9, 107, 111, 168, 194, 248
 cockpit voice recordings 217
 Commonwealth Aviation Transport Security Act (2004) 246
 Computerized Tomography (CT) 175, 239
 conflict zone risk 205, 210, 217–20
 assessment of 218–20
 closing airspace, definition for 218
 operator accountability regarding 220
 Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation 19
 Convention on Civil Aviation *see* Chicago Convention (1944)
 Correctional Service Canada (CSC) 128
 crimes against passengers 8, 155–6
 Criminal Code of Canada 133
 Critical Elements (CE) 184
 cross-border crimes 58
 Customs and Border Patrol (CBP) 67, 116
 cyber-attacks 3, 18, 49, 77, 113, 115
 cybersecurity 49, 115
 in United States 114
 dangerous goods 7, 86, 88, 213, 234
 data mining 64
 Dawson Field affair (1970) 44–5, 167, 170–71
 Declaration on Aviation Security (2010) 48
 defense in depth, security principle of 78
 Department of Homeland Security (DHS), US 69, 107, 240
 Sensitive Systems Directives 114
 Designated Aviation Channeler (DAC) 75
 Directorate General for Mobility and Transport (DG MOVE) 91
 distress flight tracking 217
 DO-230F *Standards for Airport Security Access Control Systems* 74
 ‘Domestic flights vulnerable to attack’ report (2016) 257
 dual-filing, issues of 99
 Dutch Safety Board (DSB) 208
 East African Community (EAC) 191
 Civil Aviation Safety and Security Oversight Agency (CASSOA) 194
 economics of aviation security
 airline tickets demand 34
 consequences of terrorist acts on 32
 cost benefit analysis 38
 growth of air transport for freight and persons 32
 marginal benefit curve 37
 marginal cost curve 36
 models of airport security screening 38–40
 net benefits 36–8
 net present value 38
 positive and negative externalities of 33–5
 risk assessments 35–6

- electromagnetic resonance imaging technologies 64
- Embraer 150
- essential air services (EAS) 17
- EU regulations for aviation security
 - Article 251 TEC 50
 - AVSEC regulations 50–54
 - on Commission's powers of inspection 53
 - on Maximum Take-off Weight (MTOW) 52
 - on passenger name records 54–8
 - policies for air transport security 24–5
 - Regulation (EC) No. 300/2008 51, 53
 - Regulation (EC) No. 2320/2002 51
 - response to 9/11 attacks 49–50
- European Aviation Safety Agency (EASA) 152
- European Civil Aviation Conference (ECAC) 53–4
- European Commission 23
 - powers of inspection 53
- European Court of Justice 24
- European Parliament 49, 51, 54, 57
- Explosive Detection Systems (EDS) 72, 190
- explosive residue detectors 108, 114
- explosives traces
 - Explosive Trace Detectors (ETDs) 72, 95
 - testing for 248
- externalities, of aviation security
 - loss of revenues for airlines 34
 - negative 33–5
 - positive 33–5
- Factiva (electronic newspaper database) 245
- 'Fatah' Palestinian movement 4, 166
- Federal Air Marshall Service (FAMS) 111
- Federal Aviation Authority (FAA) 18, 65, 67, 89, 91, 107, 114–15, 152
 - 'category one' status for airports 182
- International Aviation Safety Assessment Program (IASA) 155
- monopoly over US's air traffic control system 71
- Federal Bureau of Investigation (FBI) 67, 75
- FedEx 79, 86, 98
- fence mounted sensor systems 77
- fingerprint-based criminal history record check 75
- flare-based anti-missile systems 79
- flight deck barrier protection 6, 79
- flight fuel management 216
- Flight Guard system 172
- Flight Information Region (FIR) 193
- forcible intrusion, on board an aircraft 43, 183, 193
- Foreign Air Carrier Licensing 18
- Freedom of Information 256
- freighter aircraft operators 86
- freighter aircrafts 86, 97
- freight forwarders 5, 7, 18, 33, 41, 87, 91, 92, 97–8
- Fukra, Taufik 176
- full-body scanning (FBS) technology 130
- gate-type explosive substance detection system 243
- general aviation (GA) 116–17
 - in Brazil 150–51
- Germanwings Flight 9525, crash of (2015) 256
- Gillen and Morrison model, for aviation security 38
- Glasgow International Airport 256
- Global Aeronautical Distress and Safety System (GADSS) 211, 212, 217
- global economy 1, 100
- global flight trafficking 211
- Gore, Al 66
- Gore Commission 66–7, 107
- Government Accountability Office (GAO), US 68, 71, 109, 115
- gross domestic product (GDP) 147, 206
- Habash, George 163, 164
- Haddad, Waddi 163
- Hague Convention (1970) 19–21, 45, 234
 - for suppression of unlawful seizure of aircraft 45

- Haneda Airport, Tokyo 231
- Heathrow International Airport,
London 68, 242
- hijacking 1, 6
- Dawson Field affair (1970) 44–5,
167, 170–71
 - Dhaka hijacking (1977) 235–6
 - Dubai hijacking (1973) 234–5
 - of El-Al flight 426 Boeing 707 163–5
 - hijacking-for-negotiation tactic 176
 - Israeli strategy regarding 168
 - prevention of 37
 - for taking hostages 165
 - Trans Australia Airlines Flight 408
44
 - use of Air Marshalls as defense
against 28
 - ‘Yodo-Go’ incident (1970) 233–4
- Hold Baggage security (HBS) system
175, 239, 251
- ‘holding’ cargo, process of 95
- homegrown terrorists 232
- hostage-taking, on board aircraft 193
- House Air Waybill Number (HAWB)
88, 99
- human eye detection platform 170, 173
- identification cards (IDs) 183
- Aviation Security Identity Card
(ASIC) system 248
 - audit of 255
- identity management 6
- concept of 73–7
- identity verification system 135, 246
- improvised explosive devices (IED) 98,
113, 131
- Indirect Air Carriers (IACs) 82, 92
- information security, in United States
113–15
- InfraGard 81
- insider threats 93
- perimeter issues 112–13
 - securing airports and planes from
112
 - in United States 112–13
- inspection 185
- of baggage 108, 195, 239
 - methods of 40
 - parameters of 39
 - of passengers 108, 171, 239
 - powers of 24, 53–4
 - by private contractor security
personnel 73
 - of shipments 93
 - stages of 39
- intelligence gathering and
dissemination 63
- international agreements and
conventions
- Beijing Convention 21
 - Beijing Protocol (2010) 21
 - Chicago Convention (1944) 3,
19–20, 22
 - Convention for the Suppression
of Unlawful Acts against the
Safety of Civil Aviation 19
 - Hague Convention (1970) 19–21
 - Montreal Convention (1971) 19–21
 - Montreal Protocol (1988) 21
 - Paris Convention (1919) 19
 - Tokyo Convention (1963) 3, 19–20
- The International Air Cargo
Association (TIACA) 90
- International Air Transport
Association (IATA) 22, 57, 90,
112, 147, 199, 211
- distress-tracking standard 217
- IOSA certification 211
- IOSA Standards Manual (ISM) 219
- membership of 211
- Operational Safety Audit (IOSA)
program 155
- International Aviation Safety
Assessment Program (IASA) 155
- International Civil Aviation
Organization (ICAO) 3, 9, 19,
21–2, 24, 53, 97, 116, 155, 181,
205, 211, 267
- 33rd Assembly 46
- ad-hoc working group (ADWG) on
flight tracking 211
- air accident investigation 211
- air cargo regulation process 90
- Annex 17 43, 73–4, 78
- aviation security defined by 58
- ‘Aviation security plan of action’ 47
- definition of
- Account Consignors 92
 - Known Consignor 92
- distress flight tracking 217

- distress-tracking standard 217
 efforts to enhance global aviation security 20
 General Assembly 48, 57
 Global Aeronautical Distress and Safety System (GADSS) 211, 212
 Global Aviation Safety Plan (GASP) 211
 objectives of 211
 global flight trafficking 211
 guidelines on passenger name records (PNR) 56
 Hague Convention (1970) 234
 High Level Safety Conference 216
 legal framework regarding security 21
 Montreal Convention (1971) 235
 Resolution A39-18 49
 Standards and Recommended Practices (SARPs) 20–22, 47, 90, 193
 standards for air transport security 191–3
 State Safety Program (SSP) 211
 Task Force on Risks to Civil Aviation 218
 Tokyo Treaty (1969) 233
 Triennial Assembly meeting 22
 Universal Safety Oversight Audit Program (USOAP) 184
 Universal Security Audit Program (USAP) 184
 International Conference on Air Law (1971) 45
 International Transport Workers Federation (ITF) 22
 intra-state flights 193
 Iraq, US-led invasions of 248
 Islamic State (ISIS) 4, 242, 256, 263
 Islamic terrorists 245, 248
 Israel, aviation security in
 Ann Murphy case (1986) 169
 aviation terrorism and *see* aviation terrorism
 Casus Belli, declaration of 164
 commando assault on Belgian Sabena Boeing 707 jet 166
 Dawson Field affair (1970) 44–5, 167, 170–71
 evolution of 163
 Flight Guard system 172
 hijacking of El-Al flight 426 Boeing 707 163–5
 Hold Baggage security (HBS) system 175
 human element *vs.* technological element 174
 human eye detection platform 170, 173
 Magen Rakia ('Sky Shield') system 172
 multi-circle strategy for 166–7
 Nezar Hindawi plot (1986) 165, 168
 perception regarding aircraft security 168
 philosophy of 166–7
 profiling system 170, 176
 rescue operation of hijacked plane in Uganda 166
 security circles, concept of 167–73
 security procedures at airports 175
 strategy to prevent hijacking 168, 177
 terrorist attacks 163
 terminal security 168–72
 Japan Civil Aviation Bureau (JCAB) 234, 237–40
 Japanese aviation security system 10
 Airport Security Business Center (ASBC) 236
 airport security committees 232
 anti-hijacking measures 236
 anti-terrorism joint drills 232
 baggage screening 238–9
 civil law pertaining to hijacking 234
 counterterrorism measures 231
 Dhaka hijacking (1977) 235–6
 Dubai hijacking (1973) 234–5
 Haneda Airport, Tokyo 231
 history of 233–8
 influence after September 11 attack 237–8
 management of 241
 measures for the prevention of hijacking 234
 Ministry of Land, Infrastructure and Transport (MLIT) 232, 236
 organizational structure of 240–41

- principal responsibility for 232
- problems and challenges in 238–43
 - balance between security and service 241–3
 - imposition of expenses 239–40
 - organizational structure 240–41
 - voluntary security checks 238–9
- and upcoming international events 243
- ‘Yodo-Go’ case (1970) 233–4
- Japanese Communist League-Red Army Faction 233
- Japanese Red Army 44, 233–6
- John F. Kennedy Airport, New York 77, 114
- ‘just-in-time’ supply chain 184
- Kenya Airport Authority (KAA) 182–4
- Kenya Civil Aviation Authority (KCAA) 184, 186
- Kenya Defense Forces (KDF) 184
- Kenyan aviation security
 - acts of unlawful interference and 183, 193, 194
 - air cargo security 184–7
 - chronology of terrorist threats 187
 - post-certification inspections 186
 - roles of stakeholders in 186
 - airport security 180, 182–4
 - air transport 180
 - cargo handling 182
 - challenges to security of 187–91
 - recent trends in 181–2
 - security of 182–91
 - total passenger traffic 182
 - AVSEC mechanism 194–5
 - Civil Aviation Act (2013) 183
 - Corrective Action Plan 184
 - EAC Civil Aviation Safety and Security Oversight Agency (CASSOA) 194
 - Flight Information Region (FIR) 193
 - ICAO standards for 191–3
 - National Civil Aviation Security Program 193
 - passenger and cargo traffic 180
 - possible options for 191–3
 - procedures and protocols in 191–6
- Kessing, Allan 250, 258
- key performance indicators (KPIs) 202
- Khaled, Leila 167, 171, 173, 177
- Known Consignors (KCs) 91, 92, 186
- LAN Airlines of Chile (LATAM) 147
- laptops on flights, restrictions
 - involving 3
- laser-based anti-missile systems 79
- Last Point of Departure (LPD) 97, 99, 267
- legal framework of aviation security
 - 9/11 Commission Act (2007) 93
 - Aeronautics Act (1985), Canada 125, 127, 133, 134–5
 - after 9/11 attacks 46–9
 - Aviation and Transportation Security Act (2001), US 64–5, 75
 - Aviation Security Improvement Act (1990), US 72
 - Aviation Security Improvement Act (2000), US 67
 - AVSEC regulations 50–54
 - Canadian Air Transport Security (CATSA) Act (2002) 127, 135–6
 - Chicago Convention (1944) 44
 - Civil Aviation Act (2013), Kenya 183
 - Civil Aviation Act (1969), Malaysia 213
 - Civil Aviation Act (1996), Malaysia 213
 - Criminal Code of Canada 133
 - Declaration on Aviation Security (2010) 48
 - in European Union 49–50
 - Hague Convention (1970) 19–21, 45, 234
 - Montreal Convention (1971) 19–21, 45, 235
 - on passenger name records 54–8
 - for prevention of unlawful acts 43–6
 - Tokyo Convention (1963) 44
- liquid explosives
 - detonation of 47, 253
 - hydrogen peroxide-type explosives 253
 - plot in Australia 253
 - use of 72
- Lockerbie bombing of Pan Am Flight (1988) 45–6, 88, 247

- London's public transport system,
bombings on (2005) 255
- lone wolf terror threats 232, 255–7
- Magen Rakia ('Sky Shield') system 172
- Magnetic Resonance Imaging (MRI)
64, 175
- Malaysia Airlines (MAS) 200
key performance indicators (KPIs)
202
- MH17 missile shooting incident
(2014) 203, 208
- MH370's disappearance 199, 203,
207–8, 216, 256
response to
aircraft tracking 220–21
conflict zone mitigation 220–21
- Malaysian aviation security system
199
aircraft flight tracking system
216–17
challenges of 216–21
Civil Aviation Act (1969) 213
Civil Aviation Act (1996) 213
civil aviation industry 205–7
Civil Aviation Regulations 2016
(CAR) 216
commercial aviation accidents
207–10
details of initial response of
missing aircrafts 209–10
in last 40 years 200, 201
MH17 missile shooting incident
(2014) 203, 208
MH370's disappearance (2014)
199, 203, 207–8, 216, 256
conflict zone risk mitigation 217–20
response to 220–21
Department of Civil Aviation
(DCA) 208
Aviation Security Division (ASD)
213, 214
functions and responsibilities of
213
episodes related to 210–16
regulation in civil aviation 213–16
implications of 216–21
legislation related to 215
and passenger movement in all
airports 206
recommendations of 216–21
security practices and accountability
200
Vision 2020 aspirations 206
- Malaysian Airlines Flight 370 incident
(2014) 199, 203, 207–8, 216, 256
- man-portable air defense systems
(MANPADS) 113, 172
- marginal benefit curve (MB) 37
- marginal cost curve (MC) 36
- Master Air Waybill (MAWB) 88
- Maximum Take-off Weight (MTOW)
52
measures for aviation security, subsets
of 37, 90, 236
- Minister of Public Safety and
Emergency Preparedness
(Canada) 128, 136–7
mobile detection systems 77
- Monster Passengers (MPs) 239
- Montreal Convention (1971) 19–21,
45, 235
- Montreal Protocol (1988) 21
- Nairobi's Embakasi International
Airport (Kenya) 166
- National Airports System (NAS),
Canada 129
- National Aviation Policy White Paper
16
- National Bureau of Investigation of
Ukraine (NBAAI) 208
- National Civil Aviation Security
Program (NCASP) 65, 125,
192–3
- National Information Exchange Model
(NIEM) 128
- National Transportation Safety Board
(NTSB), US 208
net present value 38
- NextGen system 18, 114–15
- Nezar Hindawi plot (1986) 165, 168–9
- Normal Aircraft Tracking
Implementation Initiative
(NATII) 217
- Northern Corridor Transport
Improvement (NCTI) project 181
- Notice of Proposed Amendment 140
- Notice of Proposed Rule Making
(NPRM) 99

- Offences against Air or Maritime Safety 133
- Office of Global Strategies (OGS) 91
- Office of International Aviation 17
- Office of Security Policy and Industry Engagement (OSPIE) 91
- on-board armed security personnels
 - see* Air Marshalls
- on-the-job training 110
- optimal quantity, of aviation security 37
- Organization of American States (OAS) 27
- Original Equipment Manufacturers (OEMs) 152
- Pacific Aviation Safety Office (PASO) 27
- Pacific Island Countries 27
- Pan Am 103, destruction of (1988) 2, 106
- Paris Convention (1919) 19
- Parliamentary Joint Committee on the Australian Crime Commission (PJACC) 253
- Parole Board of Canada 128
- passenger aircrafts 86
 - cargo transported on 93
- passenger name records (PNR)
 - collection of 55
 - ICAO guidelines on 56
 - Recommended Practice for 55
 - Facilitation Panel (FALP) on 56–7
 - as instrument in fight against organized crime 55
 - terrorism 55
- personal data 55
- PNRGOV standards 57
- regulations on 54–8
- passenger screening 22, 38, 130, 139, 190, 246
- passenger security, issue of 8, 39, 118, 157
- Pentagon, 9/11 attacks on 2, 4, 46
- perceived risk, in aviation security 35, 41
- perimeter intrusion detection systems (PIDS) 63, 77–8
- Personal Identification Number (PIN) 75
- Physical Access Control Systems (PACS) 73
 - plastic explosives 47, 94
- Police Federation of Australia 252
- policies for air transport security
 - body scanners, use of 26
 - EU's rules 24–5
 - in Germany 24
 - ICAO's efforts to enhance 20
 - international dimension of 19–23
 - international terrorism, threat of 23
 - regional and bilateral dimensions of 23–8
 - similarities and differences in 266–8
- policy instruments 5, 16, 20, 22
- politically motivated violence (PMV) 247
- Popular Front for the Liberation of Palestine (PFLP) 2, 44, 163, 234
- pre-boarding passenger screening 130
- pre-boarding security 37
- predicted risk, in aviation security 5, 35
- Preload Air Cargo Targeting (PACT) 100
- Pre-Loading Advance Data Information (PLACI) 100
- PREloading Consignment Information for Secure Entry (PRECISE) 100
- Presidential Commission on Aviation Security, The (1996) 66
- private sector and aviation security
 - aircraft operator security 78–9
 - on airport perimeter security 73–7
 - government-funded research 63
 - identity management 73–7
 - on intelligence, interdiction and research 80–81, 83
 - law enforcement issues 79–80
 - non-profit and trade associations 81–2
 - perimeter intrusion detection systems (PIDS) 63, 77–8
 - security personnels 79–80
 - security screening technologies 65–9
 - Travel Document Check (TDC) 66
- Program for Applied Research in Airport Security (PARAS) 81–2
- prohibited items, for air transport security 248, 257

- public-private partnership 74
Public Safety Canada 128
- Qantas 216, 249
- quality control, programmes for 24, 51, 53
- Radio Technical Commission on Aeronautics (RTCA) 73–4, 81
- random screening, principle of 128, 135
- real risk, in aviation security 35
- Recommended Airport Security Guidance for Airport Planning and Construction 81
- Regulated Agent (RA) 91–4, 99, 186
- Reid, Richard (shoe bomber) 28, 119, 176
- Restricted Access Identity Card (RAIC) Program 128, 135
- Review of the Australia's Counter-Terrorism Machinery* (2015) 257
- risk assessment, in aviation security 32, 73
in Australia 247
quantification of 36
and its related costs 35–6
stages of 36
types of societal risks 35
- Risk Based Security (RBS) 108
- risk repository 218, 220
- robbery and theft, on airport property 155
- sabotaging the aircraft, threat of 168, 173
- Safe Skies Alliance 81–2
- safety in air transport, risk related to 32
- Safety Management System 184
- San Francisco International Airport 69, 76
- San Jose Airport, California 77
- Schappelle Corby Affair (2004) 249–50
- Schiavo, Mary 107
- Screening of Passengers by Observation Techniques (SPOT) 108–9
- Screening Partnership Program (SPP) 69–71
- screening-point tests 246
- security circles, concept of 167–73
the aircraft (first circle) 167–8
around the aircraft (second circle) 168
preventing the use of aircraft as a ‘flying missile’ (fourth circle) 172–3
terminal security (third circle) 168–72
- security measures, productive efficiency of 38
- security personnels 79–80
Air Marshalls 28, 80
- security screeners 18, 183, 232, 237–8
- September 11 attacks *see* 9/11 attacks
- Shaath, Nabil 4
- shipments, physical search of 95
- ‘Skyliner’ airport transit railway (Japan) 231
- sky-marshals 176, 248
- sovereignty, principle of 218
- Special Flight Operations Certificate (SFOC) 139–40
- Standards and Recommended Practices (SARPs) 20–22, 47, 49, 90–91, 184, 193, 196
- Standard Security Programs (SSPs) 91, 99
- State Safety Program (SSP) 211
- statistical risk, in aviation security 35
- ‘Stinger’ missile 172, 189
- suicide attacks 46, 48
- surface-to-air missile defense systems 79, 208
- surveillance technologies 8, 64, 156, 266
- sustainable development 15
- Sydney Lindt Café siege (2014) 257
- Syrian Civil War 256
- TAM Airlines (Brazil) 147
- technologies, for airport security
screening 63, 65–9, 71–2
- terminal security 9, 168–72
- terrorist attacks, on aviation 1, 21, 23
Air India 812 disaster 46
‘Black September’ terrorist group 166

- Brussels airport bombings (2016) 26
- Christmas Day bombing attempt 47
- convictions for 257
- detonation of liquid explosives 47
- economic consequences of 32
- hijacking-for-negotiation tactic 176
- home grown and lone wolf terror threats 255–7
- by Islamic terrorists 248
- Lockerbie bombing of Pan Am Flight 45–6, 88, 106
- MANPADS attack against El-Al flight 426 Boeing 707 166
- strategy of prevent 163
- suicide attacks 48
- Threat Image Projection 114
- Tokyo Convention (1963) 3, 6, 19–20, 44
- Tokyo Treaty (1969) 233–4
- training, of security personnel 190–91, 269
- Transportation Security Administration (TSA), US 18, 64, 91, 99, 107
 - Airport Characteristics Measurement Tool (ACMT) 116
 - Certified Cargo Screening Program (CCSP) 115
 - Online Learning Center (OLC) 110
- Transportation Security Clearance (TSC) 125
- Transportation Security Clearinghouse (TSC) 75
- Transportation Security Officers (TSOs) 71
- Transport Canada 71, 125, 128, 131, 139, 265
 - Notice of Proposed Amendment 140
- Transport Security Administration (TSA) 6, 27, 267
- Travel Document Check (TDC) 66
- Treaty on the Functioning of the European Union (TFEU) 57–8
- Ukrainian Air Traffic Control (UATC) 208
- unified policing model (UPM) 251–2
- United Airlines 66–7
- United Nations (UN) 192, 211
- United States, aviation security in
 - air cargo 115–16
 - aircraft security 111
 - airport checkpoints 105
 - application of security standards beyond borders 119
 - cybersecurity threat 114
 - Federal Air Marshall Service (FAMS) 111
 - general aviation (GA) 116–17
 - Gore Commission on 66–7, 107
 - information security 113–15
 - insider threat and 112–13
 - ‘Managed Inclusion’ Program 108, 109
 - NextGen system 114
 - on-the-job training 110
 - organization and culture of 117–18
 - passenger aviation 105
 - perimeter issues and 112–13
 - pre 9/11 106–8
 - ‘PreCheck’ program 108, 110
 - screening process 108–11
 - shortcoming in 118
 - teams of dogs trained to detect explosives 109
- Unit Load Devices (ULDs) 87, 95, 97
- Universal Safety Oversight Audit Program (USOAP) 155, 184
- Universal Security Audit Programme (USAP) 20, 47, 184
- unlawful seizure of aircraft, suppression of 19, 43, 45, 193
- unmanned aerial systems (UAS) 150
- Unmanned Aerial Vehicles (UAVs) 113, 139, 173
 - with complex operations 140
 - with limited operations 140
- UN’s Security Council 23
 - Resolution 2309 of 49
- UPS 86, 98
- US Customs and Border Protection (CBP) 67, 82, 99, 116
- US Department of Transportation (USDOT) 107
- Varig Airlines (Brazil) 147
- VASP Airlines (Brazil) 147

- vehicle borne improvised explosive devices (VBIED) 113
- video surveillance systems 74, 77
- Virgin Australia 216
- virtual fences 77

- walk-through face recognition system 243
- War on Terror 248
- Weapons of Mass Destructions (WMD) 46, 59, 64, 165
- Wheeler, John 250–52, 258
- White House Commission on Aviation Security (1997) 247
- World Bank 1, 146

- World Customs Organization (WCO) 57, 100
- World Trade Center, 9/11 attacks on 2, 4, 46, 237

- X-ray screening, for airport security 40, 63–4, 71–2, 93, 95–6, 98, 101, 109, 114, 128, 131, 134, 169, 186, 235, 239, 247–8, 254

- Yemen incident 98
- ‘Yodo-Go’ hijacking case (1970) 233–4

- Zika virus, threat of 158

