

Index

- ABC inventory classification, 75–76
- Accumulation bins, 98–99
- Activity-based costing, 212–213
- Advance material requests, 44
- Advance shipping notices, 47–48
- Aisle
 - Locations near outside wall, 192
 - Replacement with conveyors, 113–114
 - Width, 191
- Assembly line
 - Configuration, 118
 - Length, 118–119
 - Segmentation, 119
- Auction purchasing, 25–26
- Audit labor routings, 222–223
- Audit
 - Bills of material, 227–229
 - Configuration, 229–230
 - Inventory transactions, 135–136
- Automated guided vehicle systems, 193–194
- Automated storage and retrieval systems, 192–193

- Back order length, 293
- Bar code tracking, 126–127
- Batch sizes, 114, 244–245
- Best practices
 - Duplication, 9–10
 - Failure of, 10–14
 - Implementation of, 6–9
 - Planning for, 3–5
 - Timing of, 5–6
 - Types of, 1–2
- Bills of material
 - Accuracy, 275–276
 - Audit of, 227–229
 - Scrap modification, 230–231
 - Source for obsolescence review, 235–236
 - Substitution modifications, 231–232
- Bin location
 - Centralization, 72
 - Fixed assignment of, 72–73
- Buffer
 - Assembly area, 243–244
 - Hole, 242
 - Manager, 242
- Capacity
 - Machine sizing, 107–108
 - Purchase of, 20–21
- Carousel storage, 80–81

- Case height, match to available storage, 76–77
- Cellular manufacturing, 120–121
- Component
 - Defect rate, 280–281
 - Delivery sequencing, 101
 - Life cycle matching to product life cycle, 19–20
 - Production on same machine, 109
 - Quantity percentage, 279–280
 - Sole sourcing, 38–39
 - Standardization, 233–234
 - Usage in new products, 271–274
- Configuration audit, 229–230
- Consignment inventory tracking, 255–256
- Constraint buffer, 239–241
- Container
 - Size reduction, 115–116
 - Standardization, 99–100
 - Types, 56–57
- Control groups, 141–142
- Conveyor usage, 113–114, 194–195
- Cost reports, 220–222
- Cost trend analysis, 216–218
- Cross docking, 67–68
- Cross-bracing elimination, 85–86
- Cube
 - Information, 49–50
 - Transactional volume, 78–79
- Customer-owned inventory
 - Segregation of, 73–74
 - Storage allocation to, 74–75
- Customers
 - Analysis of service to, 166–167
 - Links to inventory planning systems, 30–31
 - Reduction of, 154
- Cycle counting, 138–141, 142, 258–259
- Cycle time reduction, 117–118

- Data elements, storage of, 125
- Deliveries
 - Frequency, 31–32
 - Inbound split, 33
 - Phased, 33–34
 - Sequencing of, 101
- Delivery promise slippage, 292–293
- Departmental stocks, elimination of, 169
- Direct costing, 221
- Distribution requirements planning system, 170

334 / Index

- Distribution turnover, 277–278
- Dock
 - Assignment, 55
 - Door utilization, 294
 - Just-in-time, 198–199
- Double-deep racking, 83–84
- Drop shipping
 - Best practice, 67
 - Procedure, 253–254
- Dunnage bags, 57–58

- Economic order quantity, 276–277
- Emergency orders, 89
- Employee training, 250–251
- End of life inventory planning, 158
- Ending inventory calculation procedure, 263–264
- Engineering
 - Change orders, approval of, 156–157
 - Supplier concurrent, 18
- Equipment, *see* Machinery
- Expedite zone, 241–242
- Expediting, elimination of, 165

- Fair shares analysis, 173
- Floor stock, 68–70
- Forecasting by product family, 158–159
- Foreign sourcing, 24–25
- Forward picking, 90–91

- Gravity flow, 82–83

- Hold and flow system, 171–172

- Inbound split deliveries, 33
- Incentive pay systems, elimination of, 105–106
- Inspection station locations, 110
- Inventory
 - Accounting, 206–207
 - Accuracy, 294–295
 - Age measurement, 304
 - Availability, 291–292
 - Classification, 157–158
 - Inactive, 236
 - Management, 147–183
 - Measurements, 271–305
 - Picking, 87–102
 - Procedures, 247–270
 - Purchasing of, 15–44
 - Rate of change, 302–303
 - Receiving, 45–56
 - Reduction analysis, 167
 - Returnable, 305
 - Shipping, 54–63
 - Storage, 65–86
 - Transactions, 123–146
 - Turnover, 295–297
- Invoice delivery by delivery person, 59–60
- Item master file accuracy, 276

- Job releases, reduction of, 162–163
- Just-in-case stock, 164–165
- Just-in-time
 - Docks, 198–199
 - Purchasing, 35

- Kanban transactions, 131–132
- Kitted inventory
 - Procedure, 256–257
 - Storage of, 98–99

- Labor routings, audit of, 222–223
- Landed cost, 26, 211
- Lead suppliers, 37–38
- Life cycle matching, 19–20
- Location coding, 71
- Lower of cost or market procedure, 264–265

- Machinery
 - Capacity analysis, 107–108
 - Maintenance by production staff, 111–112
 - Maintenance planning, 112–113
 - Maintenance scheduling, 110–111
 - Setup time reduction, 116–117
 - Sourcing, 108–109
- Manual policies and procedures, 248–250
- Manufacturing, cellular, 120–122
- Material requirements planning
 - Modeling function, 161–162
 - Purchases with, 27–28
- Materials review board, 175–176
- Modular storage cabinets, 79–80

- Negative inventory balances, 137–138
- Nonvalue-added activities, 208–209

- Obsolete inventory
 - Budget, 180–181
 - Percentage, 303–304
 - Reviews, 223–225, 235–236, 269–270
 - Tracking, 176–177
- On-time parts delivery percentage, 278–279
- Open purchase orders, analysis of, 28–29
- Order
 - Forwarding, 93–94
 - Fulfillment zones, 76
 - Lines shipped per labor hour, 288–289
 - Penetration point, 160–161
 - Pricing, 152–153
- Outsource warehouse function, 183
- Overhead allocation based on square footage, 209–210
- Overnight delivery service, 172

- Pallet
 - Inventory per SKU, 301–302
 - Overhang, 77–78
- Pallet-flow racks, 83

- Part, *see* Component
- Part number
 - Order placement, 134–135
 - Redundancy analysis, 232–233
- Payment based on receiving approval, 60–63
- Phased deliveries, 33–34
- Physical count, 138–141, 142–144, 259–262
- Picking
 - Accuracy, 286–287
 - Aisle width, 191
 - Cost, 287–288
 - By location, 88–89
 - Emergency, 89
 - Forward, 90–91
 - From the source document, 90
 - Scale, 97
 - Shift, 101–102
 - Time, 285–286
 - To light, 95–96
 - Voice, 94–95
 - Wave, 91–92
 - Zone, 92–94
- Picking systems
 - FIFO, 82–83
 - Manual, 81–82
- Policies and procedures manual, 248–250
- Procedure
 - Cycle counting, 258–259
 - Drop shipping, 253–254
 - Ending inventory calculation, 263–264
 - Inbound inventory tracking, 255–256
 - Inventory kitting, 256–257
 - Lower of cost or market, 264–265
 - Obsolescence review, 269–270
 - Physical inventory, 259–262
 - Receiving, 254–255
 - Sales returns, 266–268
 - Visual review, 265–266
- Procurement risk avoidance, 18–19
- Produce to order, 15
- Product
 - Forecasting, 158–159
 - Life cycle matching to part life cycle, 19–20
 - Master file, 236
 - Option pricing, 152
 - Option reduction, 151–152
 - Planning responsibility, 160
 - Quantity reduction, 153–154
 - Shutdown planning, 175
 - Sourcing, 38–39
 - Substitution system, 166
- Product design
 - Concurrent engineering of, 18
 - Inclusion of materials managers in, 150–151
 - Inclusion of suppliers in, 17–18
 - Tolerance level reduction, 155–156
- Product batch sizes, 114
- Production schedule
 - Based on delivery region, 163
 - Freeze in short-term, 29
 - Rolling, 34–35
 - Sharing with suppliers, 30
- Product shift standardization, 106
- Products damaged in transit, 290
- Promotions, avoidance of, 155
- Purchase price variance, 203–205
- Purchased component defect rate, 280–281
- Purchase orders
 - Analysis of, 28–29
 - Released with full lead time, 282
- Purchasing
 - Approval elimination, 27
 - Based on material requirements planning, 27–28
 - Centralization, 37
 - Just-in-time, 35
 - Stockless, 36–37
 - Strategic, 41–42
- Push-back racks, 85
- Put away
 - Accuracy, 282–285
 - Aisle widths, 191
 - Cycle time, 283–284
 - Timing, 51–52
 - Zone, 52–53
- Quality review area, 197
- Racking systems
 - Double-deep, 83–84
 - Enclosure of building supports, 190–191
 - Gravity flow, 82–83
 - Movable, 81
 - Multi-story, 81–82
 - Pallet-flow, 83
 - Push-back, 85
- Radio frequency identification, 128–130, 207–208
- Radio frequency transactions, 127–128
- Raw materials
 - Content measurement, 274–275
 - Ownership by suppliers, 42–43
- Receipts authorized by purchase orders, 281–282
- Receiving
 - Area, 197–198
 - Combined with shipping area, 54
 - Data entry, 48–49, 133–134
 - Elimination of, 53–54
 - Procedure, 254–255
 - Put away timing, 51–52
 - Repackaging, 50–51
 - Stock rejection, 45–47
- Reports, cost, 220–222
- Returnable inventory, 305
- Returned merchandise usability analysis, 178
- Reverse logistics system, 182–183
- Rolling production schedules, 34–35

336 / Index

- Safety stock
 - Conversion to just-in-case stock, 164–165
 - Reduction through information acceleration, 21–22
 - Reduction through lead time reduction, 20
 - Variable, 163–164
- Sales returns procedure, 266–268
- Salvage contractors, sales to, 181
- Scrap
 - Analysis, 218–220
 - Basis for bill of material modification, 230–231
 - Percentage, 284–285
 - Reporting, 206
- Service department, sales by, 181–182
- Service parts inventory levels, 177–178
- Service/repair designation, 178–179
- Setup time reduction, 116–117
- Shelf-life control, 179–180
- Shipper delivery performance measurement, 58
- Shipping
 - Accuracy, 289
 - Combined with receiving area, 54
 - Container types, 56–57
 - Dunnage bags, use for, 57–58
- Specific identification costing, 207–208
- Split deliveries, 33
- Stacking lanes, 83–84
- Stockless purchasing, 36–37
- Storage
 - Cabinets, 79–80
 - Carousels, 80–81
 - Cost per item, 300–301
 - Cubic, analysis of, 76–77
 - Density percentage, 299
 - Local, 122
 - Location codes, 71
 - Machine cell, 121–122
 - Optimization, 102
 - Temporary, 70
 - Types based on cubic transaction volume, 78–79
 - Vertical, 189–190
 - Zones, 188–189
- Strategic purchasing, 41–42
- Subplant cost assignments, 214
- Supplier
 - Capacity, purchase of, 20–21
 - Comparison with landed cost, 26
 - Concurrent engineering, 18
 - Contacts with production workers, 107
 - Delivery sequencing, 101
 - Delivery truck types, 55–56
 - Fast replenishment by, 24
 - Foreign, 24–25
 - Lead designation, 37–38
 - Lead time reduction, 20
 - On-site relocation of, 23
 - Payment based on receiving approval, 60–63
 - Production schedule sharing, 30
 - Purchase from nearby, 22–23
 - Rating system, 40–41
 - Raw material ownership, 42–43
 - Relationship building, 41–42
- Target costing, 214–215
- Temporary storage, 70
- Theory of constraints, 237–239
- Total cost of product ownership, 211–212
- Training
 - In procedures, 250–251
 - Teams, 252
- Transactions
 - Auditing of, 135–136
 - Backlogs, 132–133
 - Bar code, 126–127
 - Error analysis, 141–142
 - Kanban, 131–132
 - Paper reduction, 130–131
 - Radio frequency identification, 128–130
 - Radio frequency transmission, 127–128
- Truck types for deliveries, 55–56
- Unit of measure, access to data, 215–216
- Value-added activities, 208–209
- Variable safety stock, 163–164
- Visual review system, 168–169, 265–266
- Voice picking, 94–95
- Warehouse
 - Assignment to customer inventory, 74–75
 - Automation, 195–196
 - Distribution from, 170–171
 - Elimination, 200–201
 - Fair shares analysis, 173
 - Layout, 185–201
 - Lock down, 199–200
 - Management system, 145–146
 - Network rationalization, 173–174
 - Order cycle time, 290–291
 - Outsourcing of, 183
 - Square footage, 298–299
 - Utilization, 200, 297–298
- Wave picking, 91–92
- Work-in-process inventory tracking, 205
- Workstation inspections, 110
- Zone
 - Expedite, 241–242
 - Order fulfillment, 76
 - Picking, 92–94
 - Putaways, 52–53
 - Storage, 188–189