

ANNEX 3: TYPICAL EQUIPMENT LIFETIMES

Different organizations have tried to estimate typical equipment lifetimes for healthcare technology. This annex contains the results from two different sources – the American Hospital Association, and the GTZ (German Government Technical Aid Agency).

LIST 1: The American Hospital Association (AHA)

Source: American Hospital Association, 1998, 'Estimated Useful Lives of Depreciable Hospital Assets', American Hospital Association, Chicago, USA

The AHA's extensive list reflects how equipment lasts within the United States' healthcare system, whether it was manufactured in the US or abroad.

Their list was compiled following:

- ◆ discussions with manufacturers of healthcare equipment
- ◆ discussions with various hospital department managers
- ◆ analysis of actual retirement practices for actual hospital assets.

Their list is made up of a series of tables of different categories of equipment determined by the equipment's role in the health facility.

Part One: Estimated Useful Lives of Land Improvements, Buildings, and Fixed Equipment

Table 1: Land Improvements

Land improvements are assets of an above-ground or below-ground nature, found in the land area contiguous to and designed for serving a health care facility. The asset cost would include a proportionate share of architectural, consulting, and interest expense for newly constructed or renovated facilities.

Item	Years	Item	Years
Bumpers	5	Paving (including roadways, walks, and parking) (continued)	
Culverts	18	Brick	20
Fencing		Concrete	15
Brick or stone	25	Gravel	5
Chain-link	15	Retaining wall	20
Wire	5	Shrubs and lawns	5
Wood	8	Signs, metal or electric	10
Flagpole	20	Snow-melting system	5
Guard rails	15	Trees	20
Heated pavement	10	Turf, artificial	5
Landscaping	10	Underground utilities	
Lawn sprinkler system	15	Sewer lines	25
Parking lot, open-wall	20	Water lines	25
Parking lot gate/s	3	Waste water treatment system	20
Parking lot striping	2	Water wells	25
Paving (including roadways, walks, and parking)		Yard lighting	15
Asphalt	8		

Table 2: Buildings

Buildings are structures consisting of building shell, exterior walls, interior framings, walls, floors, and ceilings. The asset cost would include a proportionate share of architectural, consulting, and interest expense for newly constructed or renovated facilities. In assigning the estimated useful lives in this table, the following factors were considered: the type of construction, the functional utility of the structure, recent regulatory or environmental changes, and the general volatility of the health care field.

Item	Years	Item	Years
Boiler house	30	Metal-clad building	20
Garage		Multilevel parking structure	25
Masonry	25	Reinforced concrete building, common design	40
Wood frame	15	Residence	
Guardhouse	15	Masonry	25
Masonry building, reinforced concrete frame	40	Wood frame	25
Masonry building, steel frame		Storage building	
Fireproofed	40	Masonry	25
Nonfireproofed	30	Metal garden-type	10
Masonry building, wood/metal frame	25	Wood frame	20

Table 3: Building Components

Building components are assets that are a part of the building shell or interior construction. The asset cost would include a proportionate share of architectural, consulting, and interest expense.

Item	Years	Item	Years
Canopies	15	Floor finishes (continued)	
Carpentry work	15	Quarry	20
Caulking	5	Sealer	5
Sealants	5	Terrazzo	15
Ceiling finishes		Vinyl	10
Acoustical	8	Folding partitions	10
Gypsum	10	Loading dock bumpers and levelers	10
Plaster	12	Magnetic/MRI shielding	10
Computer flooring	10	Millwork	15
Corner guards	10	Overhead doors	10
Cubicle tracks	10	Partitions, interior	15
Designation signs	5	Partitions, toilet	15
Doors and frames		Railings	
Automatic	10	Freestanding (exterior)	15
Hollow metal	20	Handrails (interior)	15
Wood	15	Roof covering	10
Drapery tracks	10	Skylights	20
Drilled piers	40	Storefront construction	20
Floor finishes		Wall covering	
Carpet	5	Paint	5
Ceramic	20	Wallpaper	5
Concrete	20	X-ray protection	10
Hardwood	10		

Table 4: Fixed Equipment

Fixed equipment includes assets that are permanently affixed to the building structure and are not subject to movement but have shorter useful lives than that of the building. The asset cost would include a proportionate share of architectural, consulting, and interest expense.

Item	Years	Item	Years
Benches, bins, cabinets, counters, and shelving, built-in	15	Laminar flow system	15
Cabinet, biological safety	15	Lockers, built-in	15
Canopy-ventilating for laundry ironer	15	Mailboxes, built-in	20
Central dictation system	10	Medicine preparation station	15
Coat rack	20	Mirrors, traffic and/or wall mounted	10
Conveyor system, laundry	10	Narcotics safe	20
Cooler, walk-in	15	Nurses' counter, built-in	15
Curtains and drapes	5	Pass-through boxes	15
Emergency generator set	20	Patients' consoles	15
Generator controls	12	Patients' wardrobes and vanities, built-in	15
Hood, fume	15	Projection screens	10
Fire protection in hoods	10	Sink and drainboard	20
ICU and CCU counters	15	Sterilizer, built-in	15
Illuminator		Telephone enclosure	10
Multifilm	10		
Single	10		

Table 5: Building Services Equipment (overleaf)

Building services equipment refers to mechanical components or systems designed for the building(s), including air conditioning, electrical elevators, heating lighting plumbing sprinklers, and ventilating. The asset cost would include a proportionate share of architectural, consulting and interest expense for newly constructed or renovated facilities.

Annex 3: Typical equipment lifetimes

Item	Years	Item	Years
Air-condition equipment		Fire protection system	
Centrifugal chiller	15	Fire alarm system	10
Compressor, air	15	Fire pump	20
Condensate tank	10	Smoke and heat detectors	10
Condenser	15	Sprinkler system	25
Controls	10	Tank and tower	25
Cooler and dehumidifier	10	Furnace, domestic	15
Cooling tower, concrete	20	Heating, ventilating, and air conditioning (composite system)	15
Wood	10	Heat pump system	10
Duct work	20	Humidifier	15
Fan, air-handling and ventilating	20	Incinerator, indoor	10
Metal	20	Insulation, pipe	15
Piping	20	Intercom system	10
Precipitator	10	Laboratory plumbing, piping	20
Pump	10	Magnetic door holders	10
Air-conditioning system		Medical gas system (composite system)	15
Large (over 20 tons)	10	Nurse call system	10
Medium (5-20 tons)	10	Oil storage tank	20
Small (under 5 tons)	5	Oxygen, gas, and air piping	20
Air curtain	15	Paging system	20
Antenna system	10	Physicians' in-and-out register, built-in	10
Boiler	20	Plumbing, composite	20
Deaerator system	15	Fixtures	20
Boiler smokestack, metal	20	Piping	25
Clean-air equipment	15	Pump	15
Clock system, central	15	Pneumatic tube system	15
Co-generation plant, generator powered	15	Radiator	
Door alarm	10	Cast-iron	25
Door-closing devices, for fire alarm system	15	Finned tube	15
Electric lighting and power		Sewerage, composite	25
Composite	18	Piping	20
Conduit and wiring	20	Sump pump and sewerage ejector	10
Emergency lighting system	15	Solar heating equipment	10
Feed wiring	20	Surge suppression system	15
Fixtures	10	Telephone system	10
Switch gear	15	Television antenna system	10
Transformer	30	Television satellite dish	10
Elevator		Temperature controls, computerised	10
Dumbwaiter	20	Unit heater	10
Freight	20	Vacuum cleaning system	15
Passenger, high-speed automatic	20	Water fountain	10
Passenger, other	20	Water heater, commercial	10
Emergency generator	20	Water purifier	10
Controls	12	Water softener	10
Energy management system, computer based	10	Water storage tank	20
Escalator	20	Water wells	25
Fans, ceiling-mounted	10		

Part Two: Estimated Useful Lives of Major Movable Equipment

Major movable equipment is defined as assets that are generally assigned to a specific department within the health care facility, but with the capacity of being relocated. The assets have a minimum useful life of at least three years and a unit cost sufficiently large to justify the expense of maintaining an equipment ledger.

Note: Included within the departmental listings are assets that may be considered to be minor equipment (for example, surgical instruments with a three-year life assignment). Minor equipment may be defined as assets that are relatively small in size and unit cost and have high usage. They are generally found in the obstetrics, surgery, and dietary departments.

Table 6: Administrative Departments

Administrative Departments consist of administration, barber shop, board room, admitting, business office, communications, data processing, education, facilities management, finance, foundation, graphics, home health, human resources infection control, library, lobby, marketing, medical education, medical records, medical staff facilities, nursing administration, pastoral care, patient education, physician on-call rooms, public relations, quality assessment and improvement, social services, and volunteer services departments.

Item	Years	Item	Years
Beeper, paging	3	Computer printer	5
Bench, metal or wood	15	Computer software	3
Binder, punch machine	10	Computer terminal	5
Bookcase, metal or wood	20	Credenza	15
Bulletin board	10	Data printing unit	5
Cabinet file, metal or wood	15	Data storage unit	
Camera	5	Mechanical	10
Cathode-ray tube (CRT)	3	Nonmechanical	15
Chair		Data tape processing unit (including controller, drive, and tape deck)	5
Arm	15	Desk, metal or wood	20
Conference	15	Dictating equipment	5
Executive	15	Display cases	20
Folding	10	Duplicator	5
Guest	15	Facsimile transmitter	3
Side	15	Files	15
Check signer	10	Electric rotary	15
Clock	10	Legal	15
Collator, electric	10	Regular	15
Computer		Filing system, portable	20
Laptop	3	Imprinter	
Large	5	Address	5
Micro	5	Embossed plate	10
Mini (personal)	3	Integrator	10
Computer disk drive	5	Intercom	10
Computer networking equipment		Label maker	10
Controller	5	Library furniture	20
Hub	5	Mailing machine	10
Modem	5	Microfilm unit	10
Mux unit	5		
Server	5		
Token ring	5		

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Table 6: Administrative Departments (continued)

Item	Years	Item	Years
Microphone	5	Shelving, portable, steel	20
Microprojector	10	Sofa	12
Organ	10	Stamp Machine	10
Paper burster	8	Stapler, electric or air	10
Paper cutter	10	Stencil machine	10
Paper shredder	5	Stereo equipment	5
Paper shredder	5	Table	
Partitions, movable office	10	Folding	10
Photocopier		Metal or wood	15
Small	3	Television receiver	5
Large	5	Time recording equipment	10
Piano	20	Transcribing equipment	5
Projector		Typewriter, electric	5
Overhead	10	Valet, office	15
Slide	10	Video cassette recorder/player	5
Video	5	Walkie-talkie	5
Recorder, tape	5	Water cooler, bottle	10
Safe	20	Word processor	
Scale, postal	10	Large	5
Screen, projector	10	Small	5
Settee	12	Work station	10

Table 7: Nursing Departments

Nursing departments consist of cardiac care, chemical dependency, intensive care, medical/surgical care, neonatal intensive care, nursery, pediatrics, pediatric developmental disabilities, and psychiatric units.

Item	Years	Item	Years
Bassinet	15	Cabinet	
Bath		Bedside	15
Sitz	10	File	15
Whirlpool	10	Instrument	15
Bed		Metal or wood	15
Birthing	15	Pharmacy	15
Electric	12	Solution	15
Flotation therapy	10	X-ray	15
Hydraulic	15	Central supply furniture	15
Labor	15	Chair	
Manual	15	Blood drawing	10
Orthopedic	15	Dental	15
Bench, metal or wood	15	Executive	15
Bin, metal or wood	15	Folding	10
Blood pressure device, electronic	6	Geriatric	10
Bookcase, metal	20	Hydraulic, surgeon's	15

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Table 7: Nursing Departments (continued)

Item	Years	Item	Years
Chair (continued)		Operating stool	15
Kinetron	15	Ophthalmoscope	10
Podiatric	15	Osmometer	7
Shower/bath	10	Otoscope	7
Specialist's	15	Ottoman	10
Chart rack	20	Patient monitoring equipment	10
Chart recorder	10	Phototherapy unit	10
Clothes locker		Physicians' in-and-out register, portable	10
Fibreglass or metal	15	Physiological monitor	7
Liminate or wood	12	Pump, breast	10
Computer, caridial output	5	Scale, baby	15
Credenza	15	Settee	12
Crib	15	Shelving, portable, steel	20
Croupette	10	Sofa	12
Defibrillator	5	Stall Bars	15
Desk, metal or wood	20	Table	
Doppler	5	Anesthetic	15
Dresser	15	Autopsy	20
Food service furniture	15	Electrohydraulic tilt	10
Frame, turning	15	Examining	15
Housekeeping furniture	15	Folding	10
ICU and CCU furniture	15	Food preparation	15
Infant care center	10	Fracture	15
In-service education furniture	15	Instrument	15
Insufflator	5	Light	15
Labor and delivery furniture	15	Metal	15
Laboratory furniture	15	Obstetrical	20
Lamp		Operating	15
Bilirubin	10	Orthopedic	10
Emergency	10	Overbed	15
Lawn and patio furniture	5	Pool	10
Light		Refrigerated	10
Delivery	15	Therapy	15
Examining	10	Traction	10
Portable, emergency	10	Urological	15
Natural childbirth backrest	10	Wood	15
Nursing service furniture	15	Telemetry unit, cardiac	5
Operating room furniture	15	Thermometer, electric	5
		Ultrasonic fetal heart monitor	7
		Work station	10

Table 8: Diagnostic and Treatment Departments

Diagnostic and treatment departments consist of ambulatory surgery, anesthesia, cardiac rehabilitation, catheterization laboratory, CT scan, ECT, EEG/EMG, emergency, employee health, enterostomal therapy, GI laboratory, hemodialysis, hyperbaric medicine, in vitro medicine, IV therapy, inpatient pharmacy, laboratory, lithotripsy, mobile air care, medical oncology, MRI, noninvasive cardiology, obstetrics, occupational therapy, physical therapy, postanesthesia care unit, radiation therapy, radiology, respiratory therapy, speech therapy, and surgery departments.

Item	Years	Item	Years
Accelerator	7	Blood gas analyzer	5
Alternating pressure pad	10	Blood gas apparatus, volumetrics	8
Amino acid analyzer	7	Blood transfusion apparatus	6
Amplifier	10	Blood warmer	7
Anaerobe chamber	15	Blood warmer coil	7
Analyzer, haematology	7	Bone surgery apparatus	3
Anatomical model	10	Breathing unit, positive-pressure	8
Anesthesia unit	7	Bronchoscope	
Ankle exerciser	15	Flexible	3
Apnea monitor	7	Rigid	3
Apron, lead-lined	47	Carbon monoxide recorder/detector	10
Arthroscope	5	Cardiac monitor	5
Arthroscopy instrumentation	3	Cardioscope	8
Aspirator	10	Cart	
Audiometer	10	Emergency-isolation	10
Autoclave	10	Medicine	10
Autoscaler, ionic	10	Caspar ACF instrument and plate system	7
Bacteriology analyzer	8	Cassette changer	8
Baci incinerator	5	Cautery unit	
Balance		Dermatology	7
Analytical	10	Gynecology	7
Electronic	7	Cell freezer	7
Precision mechanical	10	Cell washer	5
Basal metabolism unit	8	Centrifuge	7
Bath		Centrifuge, refrigerated	5
Fluidotherapy	7	Cerebral function monitor	7
Paraffin	7	Child immobilizer	15
Serological	7	Chloridimeter	10
Water	7	Chromatograph, gas	7
Biochemical analysis unit	7	Clinical analyzer	5
Biochromatic analyzer	7	Clopay wrapping machine	10
Biofeedback machine	8	Coagulation analyzer	5
Biomagnetometer	7	Cold-pack unit, floor	10
Bipolar coagulator	7	Colonoscope	3
Blood cell counter	5	Colorimeter	7
Blood chemistry analyzer, automated	5	Colposcope, with floor stand	8
Blood culture analyzer	8	Computer, clinical	5

Continued opposite

Table 8: Diagnostic and Treatment Departments (continued)

Item	Years	Item	Years
Computer-assisted tomography (CT) scanner	5	Exercise equipment, outdoor	10
Conductivity tester	5	Exercise system, computer assisted	5
CO-oximeter	10	Exerciser, orthotron	10
Cryoophthalmic unit, with probes	7	Eye surgery equipment (phacoemulsifier)	7
Cryostat	7	Fiberoptic equipment	5
Cryosurgical unit	10	Fibrometer	7
Cyclotron	7	Film changer	8
Cystic fibrosis treatment system	10	Film viewer	10
Cystometer	10	Flow cytometer	5
Cystometrogram unit	10	Fluid sample handler	5
Cystoscope	3	Fluorimeter	10
Decalcifier	10	Fluoroscope	8
Deionized water system	7	Frame, turning	15
Densitometer, recording	5	Furnace, laboratory	10
Dental drill, with syringe	3	Gamma camera	5
Dermatome	10	Gamma counter	7
Diagnostic set	10	Gamma knife	10
Diathermy unit	10	Gamma well system	7
Digital fluoroscopy unit	5	Gas analyzer	8
Digital radiography unit	5	Gastroscope	3
Diluter	10	Geiger counter	10
Dispenser, alcohol	10	Generator	5
Distilling apparatus	15	Gloves, lead-lined	3
Doppler	5	Hand dynamometer	10
Dose calibrator	5	Heart-lung system	8
Dryer, sonic	10	Heat sealer	5
Duodenoscope	3	Hemodialysis unit	5
Echocardiograph system	5	Hemoglobinometer	7
Echoview system	5	Hemophotometer	10
Electrocardiograph	7	High-density mobile film system	10
Electrocardioscanner (Holter monitor scanner)	7	Holter Electrocardiograph	7
Electroencephalograph	7	Electroencephalograph	7
Electrolyte analyzer	5	Homogenizer	10
Electromyograph	7	Hood, exhaust or Bacti	10
Electrophoresis unit	7	Hydrocollator	10
Electrosurgical unit	7	Hydrotherapy equipment	15
Ergometer	10	Hyfrecator	10
Evacuator	10	Hyperbaric chamber	15
Evoked potential unit	10	Hypothermia apparatus	10
Exercise apparatus	15	Image analyzer	5

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Table 8: Diagnostic and Treatment Departments (continued)

Item	Years	Item	Years
Image intensifier	5	Nebulizer	
Immunodiffusion equipment	10	Pneumatic	10
IMX analyzer	7	Ultrasonic	10
Incubator, laboratory	10	Nephroscope	7
Inhalator	10	Neurological surgical table headrest	10
Intraarterial shaver	10	Neutron beam accelerator	8
Iontophoresis unit	8	Noninvasive CO2 monitor	7
Isodensitometer	7	Optical readers	5
Isolation chamber	12	Orthotron system	10
Isotope equipment	7	Orthourological instruments	10
Isotope scanner	7	Oscilloscope	7
Kiln	10	Oven	
K-pads	5	Paraffin	10
Kymograph	10	Sterilizing	10
Lamp		Oximeter	10
Deep-therapy	10	Oxygen analyzer	7
Infrared	10	Oxygen tank, motor, and truck	8
Mercury quartz	10	Pacemaker, cardiac (external)	5
Slit	10	Pacing system analyzer	7
Laparoscope	3	Panendoscope	10
Laryngoscope	3	Parallel bars	15
Laser, coronary	2	Pelviscope	7
Laser, surgical	5	Percussor	5
Laser positioner	5	Perforator	10
Laser smoke evacuator	5	Peripheral analyzer	10
Lifter, patient	10	pH gas analyzer	10
Linac scalpel	5	pH meter	10
Linear accelerator	7	Phonocardiograph	8
Lithotripter, extracorporeal shock-wave (ESWL)	5	Photocoagulator	10
Magnetic resonance imaging (MRI) equipment	5	Photography apparatus, gross pathology	10
Mammography unit		Photometer	8
Fixed	5	Physioscope	10
Mobile (van)	8	Pipette, automatic	10
Marograph	7	Plasma freezer	10
Mass spectrophotometer	7	Platelet rotator	20
Microbiology analyzer	8	Positron emission tomography (PET) scanner	5
Microscope	7	Proctoscope	3
Microtome	7	Prothrombin timer, automated	8
Microtron power system	7	Proton beam accelerator	7
Mirror, therapy	15	Pulmonary function analyzer	8
Muscle stimulator	10		

Continued opposite

Table 8: Diagnostic and Treatment Departments (continued)

Item	Years	Item	Years
Pulmonary function equipment	8	Slide stainer, laboratory	7
Pulsed oxygen chamber	10	Spectrophotometer	8
Pulse oxymeter	7	Spectroscope	10
Pump		Sphygmomanometer	10
Infusion	10	Spirometer	8
Stomach	10	Stand	
Suction	10	Basin	15
Surgical	10	Intravenous	15
Vacuum	10	Irrigating	15
Radiation meter	8	Mayo	15
Radioactive source, cobalt	5	Steam-pack equipment	10
Radiographic duplicating printer	8	Stereo tactic frame	5
Radiographic-fluoroscopic combination	5	Sterilizer, movable	12
Radiographic head unit	5	Steris sterilization system	7
Rate meter, dual	10	Stethoscope	5
Refractometer	10	Stress tester	10
Refrigerator, blood bank	10	Stretcher	10
Resuscitator	10	Hydraulic	7
Retractor	5	Surgical shaver	5
Rhinoscope	3	Tank	
Rinser, sonic	10	Cleaning	10
Rotoosteotome unit	10	Full-body	15
Saw		Hot-water	10
Autopsy	10	Therapy	15
Neurosurgical	10	TDX analyzer	7
Surgical, electric	10	Telemetry unit, cardiac	5
Scale		Telescope, microlens	10
Bed	10	Telescopic shoulder wheel	15
Chair	10	Telethermometer	10
Clinical	10	Tent	
Scale, metabolic	10	Aerosol	8
Scintillation scaler	8	Oxygen	8
Sensitometer	10	Thyroid uptake system	5
Seriograph, automatic	8	Tissue-embedding center	8
Shaking machine (vortexer)	8	Tissue processor	7
Sharpener, microtome knife	10	Titration, automatic	10
Sigmoidoscope	3	Tonometer	10
Signal-averaged EKG	5	Totalap	10
Simulator	5	Tourniquet, automatic	10
Single-photon emission computed tomography (SPECT) Scanner	5	Tourniquet system	7
Sinuscope	7	Traction unit	10
Skelton	10	Transcutaneous nerve stimulator system	5
		Transesophageal transducer	5

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Table 8: Diagnostic and Treatment Departments (continued)

Item	Years	Item	Years
Treadmill, electric	8	Wheelchair	5
Tube dryer	10	X-ray equipment	
Tube tester	10	Developing tank	10
Ultrasound, diagnostic	5	Film dryer	8
Ultrasound unit, therapeutic	7	Film processor	8
Vacurette	10	Furniture	15
Ventilator, respiratory	10	Image intensifier	5
Vial filler	10	Intensifying screens	5
Vibrator	10	Silver recovery unit	7
Video		X-ray unit	
Camera	5	Fluoroscopic	5
Light source	5	Mobile	5
Monitor	5	Radiographic	5
Printer	5	Superficial therapy	5
		Tomographic	5
		Wiring	5

Table 9: Support Departments

Support departments consist of biomedical engineering, central sterile supply, dietary, engineering/maintenance, housekeeping/environmental services, laundry, materials management, security, and staff facilities departments.

Item	Years	Item	Years
Air conditioner, window	5	Cart	
Ambulance	4	Food/tray, heated-refrigerated	10
Automobile		Linen	10
Delivery	4	Maid	10
Passenger	4	Supply	10
Battery charger	5	Utility	10
Bedpan washer	15	Cash register	5
Blanket dryer	15	Central data processing unit	10
Blanket warmer	15	Clock	10
Bottle washer	10	Coffee maker	5
Broiler	10	Compactor, waste	10
Burnisher, silverware	15	Compressor, air	12
Cage, animal	10	Conveyor, tray	10
Camera, identification	5	Cooker, pressure, for food	10
Camera, surgical	5	Cooler, walk-in, freestanding	15
Camera, television monitoring, color or black-and-white	5	Cutter, cloth, electric	10
Camera, videotape, color or black-and-white	5	Cutter, food	10
Can opener, electric	10	Dish sterilizer	10
Capsule machine	10	Dishwasher	10
		Disinfectant	15

Continued opposite

Table 9: Support Departments (continued)

Item	Years	Item	Years
Dispenser		Lint collector	15
Butter, refrigerated	10	Loom	15
Milk or cream	10	Lowerator	10
Drill press	20	Mannequin	10
Dryer		Marking machine	10
Clothes	10	Meat chopper	10
Hair	5	Mixer, commercial	10
Drying oven, paint shop	10	Nourishment ice station	8
Enlarger	10	Oven	
Extractor, laundry	15	Baking	10
Floor-buffing and polishing machine	5	Microwave	5
Floor-scrubbing machine	5	Roasting	10
Floor-waxing machine	5	Packaging machine	10
Folder, flatwork	15	Platform	12
Food chopper	10	Paint spray booth	15
Freezer, ultracold	10	Paint-spraying machine	10
Fryer, deep-fat	10	Paper baler	15
Garbage disposal, commercial	5	Parking lot sweeper	5
Glassware washer	8	Pipe cutter-threader	10
Griddle	10	Planer and shaper, electric	10
Grinder, food waste	10	Plate-bending press	10
Helicopter	4	Platemaker	
Hoist, chain or cable	15	Computerized	5
Hot-food box	15	Noncomputerized	10
Hotplate	5	Popcorn machine	8
Humidifier	8	Power supply	10
Ice cream freezer	10	Press, laundry	15
Ice cream (soft) machine	10	Printing press	10
Ice cream storage cabinet	10	Range, domestic	10
Ice cube-making equipment	10	Refrigerator	
Indicator, remote	10	Domestic	8
Intercom	10	Commercial	10
Ironer, flatwork	15	Undercounter	10
Kettle, steam-jacketed	15	Remote control receiver	10
Key machine	10	Rotary tiller	10
Laminator	10	Sanitizer	10
Lathe	15	Saw	
Lawn mower, power	3	Band	10
Linen press	15	Bench, electric	10
Linen table	15	Meat-cutting	10
Linen washer	15	Scaffold	10
		Scale, laundry	
		Movable	10
		Platform	15

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Table 9: Support Departments (continued)

Item	Years	Item	Years
Sewing machine	15	Truck (hand)	
Shears, squaring, floor	12	Hot-food	10
Shoulder wheel	20	Tray	12
Simulator	5	Ultrasonic cleaner	10
Slicer		Urn, coffee	10
Bread	10	Vacuum cleaner	8
Meat	10	Vegetable peeler, electric	10
Snowblower	5	Vending machine	10
Steamer, vegetable	10	Vise, large bench	20
Telephone, cordless	5	Warmer	
Telephone equipment for deaf	5	Dish	10
Telephone monitors	10	Food	10
Telephone system	10	Washing machine	
Television monitor	5	Commercial, small	10
Television receiver	5	Domestic	10
Toaster, commercial	10	Linen, large	15
Tractor	10	Welder	10
Truck (automotive)		Wire tightener-twister	10
Forklift	10		
Multipurpose filling	15		
Pickup	4		
Van	4		

LIST 2: The GTZ (German Government Technical Aid Agency)

Source: Halbwachs, H (GTZ), 2000, 'Maintenance and the Life Expectancy of Healthcare Equipment in Developing Economies', in Health Estate Journal, March 2000, pp 26-31

The GTZ list contains estimates for fewer equipment items, but it more closely reflects the realities in developing countries.

The GTZ used a particular research method (a Delphi survey – see source paper) to obtain and analyze feedback from 23 experts from 16 different country backgrounds. The experts were made up of hospital engineers, bio-medical engineers, a public health doctor/manager, health physicists, and a health economist. Rather than providing exact lifetimes, this approach provides a range for the lifetime that depends on the quality of the initial equipment and how well it has been maintained.

Reproduced here is a table containing a summary of their findings.

Table Summarizing GTZ's Findings

Equipment type	Lifetime in years			
	Poor quality makes		Good quality makes	
	Poorly maintained	Well maintained	Poorly maintained	Well maintained
Air-conditioner (window type)	3	5 – 7	5 – 6	10 – 12
Anaesthetic machine (Boyles)	2 – 5	5 – 10	5 – 10	10 – 15
Centrifuge	3 – 4	7 – 8	6 – 9	10 – 12
Generator (diesel)	3 – 6	9 – 10	10 – 12	18 – 20
Generator (petrol)	2 – 5	5 – 10	6 – 15	10 – 20
Microscope	3 – 6	5 – 10	6 – 10	10 – 20
Oven, hot air (laboratory)	2 – 6	5 – 8	6 – 10	10 – 15
Refrigerator (electrical)	3 – 5	5 – 8	5 – 8	10 – 15
Refrigerator (kerosene)	4	4 – 8	5 – 10	10 – 17
Sphygmomanometer (aneroid)	1 – 3	2 – 3	2 – 5	5 – 10
Sphygmomanometer (mercury)	1 – 2	3 – 5	3 – 5	8 – 10
Sterilizer, bench-top (horizontal)	3 – 5	5 – 8	6 – 10	10 – 14
Sterilizer, floor-standing (vertical)	3 – 6	5 – 12	8	14 – 15
Suction pump (electrical)	1 – 3	5 – 7	5 – 8	10 – 15
Truck, pick-up	2 – 4	3 – 6	4 – 8	7 – 12
Washing machine (electrical)	2 – 4	5	6	8 – 11