A Brief Outline of the History of Technology

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Summarized primarily from B. Bunch and A. Hellemans, eds., *The Timetables of Technology* (New York: Simon & Schuster, 1993).

The stone ages (2,400,000 BC - 4,000 BC)

Overview

- natural, easily obtainable materials
- simple processes (e.g. chipping)
- earliest artifacts made of stone, but biological materials probably used earlier (no record)
  - *nonce* tools: used once and discarded (probably)
  - main tool was *biface* (hand axe)
- evidence of aesthetic sensibilities: cave (and probably body) painting, jewelry, sculpture

General

1,000,000 BC	South Africa	First clear evidence of **fire**.

Architecture & Construction

1,900,000 BC	Tanzania	"**Living floors**" used as camps or home bases.
400,000 BC	France	Oval **huts** provide shelter.

Communications/Transportation

30,000 BC	Europe	**Tallies** on bone, ivory used as records.
12,000 BC	Spain	**Paintings** made in caves.
8,000 BC	Syria, Iran	Fired clay **tokens** used as agricultural records.
7,000 BC		**Sledges** (sleds) used.
4,300 BC	France	Oak **canoes** used on the Seine.
4,000 BC	Egypt	**Boats** made from planks.

Food & Agriculture

18,000 BC	Europe	**Cat** domesticated.
10,000 BC	Switzerland	**Flax** harvested, possibly for food.
9,000 BC	Persia	**Goats and sheep** domesticated.
8,750 BC	Mexico	**Pumpkin** domesticated**.**
4,000 BC	China	**Ard** (primitive plow) used.

Tools/Materials

2,400,000 BC	Tanzania	**Pebble tools** manufactured.
1,500,000 BC	Africa	**Bifaces** (hand axes) made.
300,000 BC	England	**Spears** made.
15,000 BC	Japan	**Pottery** made.
15,000 BC	Jordan	**Brick** used to build houses.
6,400 BC	Turkey	**Copper** melted and cast.

The metal ages (4,000 BC - 1,000 AD)

Overview

- More complex processes
- New sources of energy

- Lots of developments besides metals: construction, writing, irrigation, ceramics, the wheel, sails
- Emergence of *civilization* in several locations (apparently independently)
- Occupational specialization: soldiers, merchants, traders, manufactureres, accountants, etc.
- Large projects: pyramids, temples, canals, roads (possible due to large numbers of people ordered by kings)
- Military technology often at the forefront of change: war chariots -> carts, battle axes -> plows
- Long periods of inactivity punctuated by short periods of rapid progress (e.g., more progress after fall of Roman empire than during it)

General

3,500 BC	Mesopotamia	Sumer, the first **civilization**, established.
3,000 BC	Orient	Early form of **abacus** developed.
350 AD	Turkey	**Public lighting** used in Antioch.

Architecture & Construction

3,500 BC	Iraq	**Ziggurats** built with domes, arches, and vaults.
2,600 BC	Egypt	**Pyramids** built as tombs.
2,500 BC	Egypt	**Dam** built to catch rainwater.
2,300 BC	India	**Fired brick** used for public buildings.
1,000 BC	Jordan	**Aqueducts** built to supply city of Karcho.
850 BC	Turkey	**Arched bridge** built.
700 BC	Israel	**Tunnel** built as part of Jerusalem's waterworks.
450 BC	Greece	**Parthenon** built in Athens.
690 AD	China	Pagoda built of **cast iron**.

Communication & Transportation

3,500 BC	Egypt	**Sailing ships** used.
3,500 BC	Uruk	**Wheeled vehicles** begin to replace sledges.
3,300 BC	Egypt	**Hieroglyphics** written on papyrus.
3,100 BC	Uruk	Traders use **numbers**.
2,400 BC	Mesopotamia	**Maps** used for taxation.
2,000 BC	Crete	**Paved roads** appear.
2,000 BC	Egypt	**Canal** connects Lake Timsaeh to Red Sea.
500 BC	Greece	**Optical telegraph** used for communication.
300 BC	Egypt	**Library** of Alexandria established.
170 BC	Rome	First **paved roads** built in Rome.
700 AD	Asia	Earliest **printed text**, a Buddhist charm scroll, printed.

Food & Agriculture

3,000 BC	Egypt	**Bag press** used for extracting oil from olives, juice from grapes.
3,000 BC	Egypt	**Wooden plow** used.
2,300 BC	Syria	**Horse** domesticated.
2,000 BC		**Seed drills** made.
1,900 BC	Egypt	Enormous **irrigation** project in the Fayum desert region.
1,100 BC		**Rotary hand mill** invented for grinding grain.
1,000 BC	China	Several **food preservation** techniques used, including salting.
500 BC	China	**Farming practices** include row planting, hoeing, fertilization.
40 AD	Rome	Lake **drained** to make new farmland.
60 AD		**Harvesting machine** described by Pliny the Elder.
100 AD	China	**Insecticide** made from powdered chrysanthemum flowers.

Materials/Medical Technology

3,700 BC	Egypt	**Bronze** used.

3,500 BC	Mesopotamia	**Bricks** fired in kilns.
3,500 BC	Egypt	**Iron** used for ornamental and ceremonial purposes.
3,300 BC	Italy	Clear evidence of everyday use of **leather, wood, grass, etc.**
2,700 BC	Egypt	Bodies **embalmed**.
2,500 BC	Egypt	**Surgery** practiced.
2,000 BC	Mesopotamia	**Perfumes** developed.
2,000 BC	Egypt	**Glass** produced, probably by accident at first.
1,700 BC	Egypt	At least 700 **medicines** in use.
600 BC	Greece	**Marble** used by sculptors.
300 BC	China	**Cast iron** invented.
250 BC	Turkey	**Parchment** invented.
200 BC	Italy	**Concrete** used in the Roman town of Palestrina.
140 BC	China	**Paper** used for clothing, packing material, personal hygiene.
10 AD	Italy	**Alcohol** used for medical purposes.
170 AD	Italy	Galen uses **pulse** as a diagnostic aid.
400 AD	China	**Steel** made.
850 AD	China	**Gunpowder** made.

Tools & Devices

3,500 BC	Zambia	**Bow and arrow** in use.
3,500 BC	Mesopotamia	**Potter's wheel** invented.
2,500 BC		**Masonry tools** developed.
2,000 BC	Egypt	**Bow drill** used to drill stone.
2,000 BC	Egypt	**Balance scales** used.
2,000 BC	Assyria	**Looms** used.
1,600 BC	Vietnam	**True plows** made of bronze.
1,500 BC	Egypt	**Sundial** developed.
1,400 BC	Egypt	**Water clock** developed.
1,050 BC	China	**Magnetic compass** developed.
500 BC	Persepolis	**Lathe** in use.
400 BC		**Catapults** used.
300 BC		**Screw** invented (made by hand).
250 BC	Sicily	Archimedes invents **lever, other simple machines**.
250 BC	Iraq	**Batteries** used for electroplating.
200 BC		**Gears** developed.
100 BC	Yugoslavia	**Water-powered mills** used for grinding grain.
60 AD	Egypt	**Steam engine** developed but not used for practical purposes.

The age of water and wind (1000 - 1732)

Overview

- Fall of Roman Empire led to deterioration of infrastructure: roads, bridges, aqueducts, postal services, currency, agricultural production
- Standard of living returned to pre-Empire days: poverty, war, piracy, famine, epidemics
- Technology began to re-emerge (technologies re-discovered): crop rotation, paved roads, steerable carriage, horse collars, horse shoes, waterwheel (becamse most important source of power in N. Europe)
- Christianty played major role in reintroductions of technology:
    - Christian monasteries played important role in revival: land clearing and cultivation, re-introduction of waterwheels to drive mills and other machines

    - Christian philosophy that labor was not degrading opened way to reintroduction of machines to help laborers
    - Christian rejection of slavery necessitated investment in labor-saving machines
    - Much artistic work done is service of Church: organs, bells, stained-glass windows, cathedrals
- Artisans formed guilds: protected rights, established trade rules, trained apprentices (who later traveled and spread technology), but sometimes also discouraged innovation
- Time of exploration and some innovation (Viking rudders)
- Center of technology started in East (Chinese printing and gunpowder, Arab medicine, chemistry, and astronomy), spread to west
- Gradual emergence of science as driver of technology
- Hints of things to come: some pre-industrial factories, earliest assembly lines and interchangeable parts, patent laws, stock markets, printed books, knitting machines, experiments with steam

General

1087	England	**Survey** taken to determine population (1.5 million)
1436	Italy	**Interchangeable parts**, **assembly line** used to build ships.
1623	England	**Patent system** established.

Architecture & Construction

1030	France	**Cathedral** of Notre Dame built in Chartres.
1129	France	**Flying buttresses** used in Abbey Church of St. Denis.
1200	England	**Trusses** used to support roofs.

Communication

1048	China	**Movable type** invented.
1440	Germany	**Movable type** re-invented by Gutenberg.
1490	Europe	First **globe** made.
1513	Europe	**Atlas** containing 200 maps published.
1560	Switzerland	**Pencil** in use.
1590	England	**Newspaper** published in London.
1640	Germany	**Magic lantern** invented.
1727	Europe	Reaction of **silver salts** to light discovered.

Energy

1100	Europe	**Windmills** in use.
1200	Scotland	**Coal mines** in operation.
1582	England	**Water turbine** powers pumps to supply London with water.
1629	Europe	**Steam turbine** in existence.
1690	England	**Steam-powered machine** pumps water from coal mines.

Food & Agriculture

1070	Europe	**Horses** used to pull farm equipment.
1580	Europe	**Roller mill** used to grind grain.
1640	Europe	**Crop rotation** practiced.
1720	England	**Moldboard plow** patented.

Materials

1340	Belgium	**Blast furnace** developed.
1380	Europe	**Cast iron** becomes generally available.
1660	England	**Natural gas** discovered.

Medical Technology

1260	Europe	**Spectacles** used to correct farsightedness.
1660	England	**Opium** used to relieve pain.
1701	Turkey	**Innoculation** used to prevent smallpox.

Tools & Devices

1035	China	**Spinning wheel** in use.
1050	India (?)	Construction of **automata** described.
1280	Europe	First **mechanical clocks** in use.
1288	China	First **gun**, a small cannon, made.
1335		**Compound crank** invented.
1400		**Suction pump** invented.
1430	Europe	**Drive belt** used to turn grindstone.
1590	Italy	Thermoscope, first primitive **thermometer**, developed.
1630	England	**Micrometer** developed.

Transportation

1020	Turkey	**Improved shipbuilding practices** (keel, frame, planks) in use.
1086	China	**Magnetic compass** in use for navigation.
1396	Europe	Steerable, four-wheeled **cart** in use.
1500	China	Scientist killed testing rocket-propelled **flying machine**.
1620	England	**Submarine** operated in the Thames.
1630	England	Wooden cart **rails** used in coal mines.

The industrial revolution (1733-1878)

Overview

- appearance of factories led to significant social change
- new sources of energy: coal-gas, steam, electricity
- coal-gas lighting allowed large indoor factories, second and third shifts
- emergence of engineering profession (civil engineering first)
- appearance of engineering school
- organized resistance to technological change: Luddites

General

1733	Hungary	First **technical college** established.
1748	France	***L'homme machine*** by de la Mettrie, describes man as machine.
1758	England	Commission sets **standards** for length, weight, etc.
1771	England	Spinning **factory** built by Arkwright.
1781	England	**Stopwatch** timing used in effort to increase production.
1809	Europe	**Arc light** developed.
1811	Germany	Freiberg first city to be illuminated by **gas light**.
1812	England	Organized gangs called **Luddites** smash looms.
1829	United States	Term ***technology*** coined by Bigelow.

Architecture & Construction

1779	England	Famous **iron bridge** built over Severn river.
1792	United States	First modern **truss bridge** built.
1796	United States	First modern **suspension bridge** built.

Communication

1774	Switzerland	Electric **telegraph** built.

1780		**Fountain pen** invented.
1784	England	First **mail coach** goes into service.
1822	United States	**Typesetting machine** invented.
1824	France	**Braille** invented.
1835	Europe	**Photography** invented.
1843		Ada Lovelace describes Babbage's Analytical Engine.
1866		**Transatlantic telegraph cable** laid.
1868	United States	First successful **typewriter** patented.
1876	United States	Bell patents **telephone**.
1877	United States	First **phonograph** built.

Energy

1831	Europe	Direct current **generator** developed.
1836	England	First reliable **battery** developed.
1855	United States	**Gasoline** and other substances distilled from oil.
1859	United States	First commercial **oil well** drilled.
1859	Europe	First important **internal combustion engine** developed.
1859	France	First rechargeable **storage battery** invented.

Food & Agriculture

1784	Scotland	**Threshing machine** invented.
1793	United States	**Cotton gin** invented.
1800		Copper sulfate, other **chemicals** used to treat plant diseases.
1804	France	**Canning** used to preserve foods.
1837	United States	**Steel plow** invented.
1857	France	**Refrigeration** invented.
1863	France	**Pasteurization** invented.

Materials

1735	England	**Coke** used to produce cast iron.
1739	Europe	**Coal gas** produced.
1746	England	**Sulfuric acid** produced.
1839	United States	**Vulcanization** of rubber discovered.
1846	Italy	**Nitroglycerine** discovered.
1850		**Rubber cement** invented.
1856	England	**Bessemer process** for producing steel invented.
1862	England	**Celluloid** used to make items.

Medical Technology

1736		First **appendectomy** performed.
1751	England	First **mental institution** opened.
1756	Germany	Cast models used to make **false teeth**.
1774	Germany	**Hypnotism** used to treat disease.
1790	United States	**Dental drill** invented.
1800	England	**Chlorine** used to purify water.
1816	France	**Stethoscope** invented.
1842	United States	Ether first used as a **general anesthetic** in surgery.
1850	Germany	**Thermometer** used as a diagnostic device.
1865	England	**Phenol** used as a surgical disinfectant.

Tools & Devices

1733	England	**Flying shuttle** invented.
1757		**Hydraulic machine** to power bellows patented.

1766	Switzerland	**Electrometer** invented to measure electric potential.
1774		Commercially successful **mechanical calculator** invented.
1787		**Governor** used to control speed of steam engines.
1797	England	**Lathe slide rest** developed.
1803		**Safety valves** used in high-pressure boilers.
1805	Europe	Punch-card **programmable loom** invented.
1818	United States	**Milling machine** invented.
1822	England	Babbage invents his **difference engine**.
1832	England	Babbage invents his **analytical engine**.
1835	United States	Colt patents the **revolver**.
1849	United States	**Safety pin** patented.
1851	United States	**Sewing machine** patented.

Transportation

1759	England	Shipboard **chronometer** developed to find longitude.
1769	France	**Steam carriage** built.
1779	France	First **bicycle** appears.
1781	France	**Steamboat** successfully tested.
1783	France	**Hot-air balloon** demonstrated.
1797	England	**Iron rails** used to carry horse-drawn wagons.
1804	England	**Steam locomotive** hauls 10 tons of iron on iron rails.
1808	England	**Heavier-than-air machine** carries human passenger.
1815	Scotland	**Crushed rock** used to pave roads.
1838		**Steamship** crosses Atlantic.
1845	Scotland	**Rubber tire** invented.
1854	United States	**Freight elevator** demonstrated.
1863	Europe	**"Horseless carriage"** invented.

The electric age (1879-1946)

Overview

- technology not confined only to large enterprises
- major advances in transportation
- new materials (plastics)
- growth of automotive industry accelerated spread of technology
- some new technologies not initially accepted (automobile, truck, farm tractor)
- large electric networks (made possible by transformer) caused profound changes in workplace (smaller faster machines, thermostats, servomechanisms, automatic control, factories anywhere, numerous small workshops)
- industrial research laboratories established (GE, Du Pont, Bell Telephone)
- many advances due to WWII
- technology became major part of everyday life

General

1896	United States	Taylor uses **time-and-motion** studies to improve efficiency.
1913	United States	Ford introduces first true **assembly line** to manufacture cars.
1945	United States	First **atomic bomb** exploded.
1946	Japan	**Statistical quality control** used to revive Japanese industry.

Communications

1884	United States	**Linotype** typesetting machine invented.
1888	United States	Sound **motion picture** patented.
1888	United States	Roll-film **camera** introduced.

1893	Denmark	First **magnetic sound recorder** developed.
1894	Italy	First **radio equipment** developed.
1902	Germany	**Fax** machine invented.
1928	United States	First **television** programs broadcast.
1937	United States	**Xerography** invented.

Electronics & Computers

1890	United States	Punched card, electrically driven **census system** used.
1904	England	**Vacuum tube** patented.
1927	United States	Electromechanical **analog computer** developed.
1937	England	**Turing machine** conceived.
1941	Germany	First working, universal, programmable **computer** developed.
1946	United States	First all-purpose, all-electronic **computer** developed.

Energy

1882	United States	First **hydroelectric plant** goes into operation.
1892	France	**Diesel engine** developed.
1942	United States	First **nuclear reactor** operates.

Food & Shelter

1879	United States	First **skyscraper** built.
1889	France	**Eiffel tower** completed.
1896	France	Selective **weed killers** used.
1897	United States	Grape Nuts **breakfast cereal** introduced.
1901	United States	Internal combustion engine **tractor** introduced.
1909	United States	**Electric toaster** marketed.
1913	Sweden	Vacuum **milking machine** invented.
1918	United States	Home **refrigerator** introduced.
1933	United States	Construction starts on Grand Coulee **Dam**.
1938	United States	Self-propelled **combine** introduced.
1939	Switzerland	DDT used as **insecticide**.
1945		2, 4-D used as **herbicide**.

Materials

1880		Para red, the first **azo dye**, invented.
1898	United States	**High-speed steel** developed.
1906		**Bakelite plastic** invented.
1927		**Artificial rubber** developed.
1935	United States	**Nylon** patented.

Medical Technology

1896	United States	First diagnostic **X-rays** taken.
1923	France	Tuberculosis **vaccine** developed.
1935	Germany	First **sulfa drug** used.
1940	England	**Penicillin** used as antibiotic.

Tools & Devices

1896	United States	**Grinding wheels** with artificial emery go on the market.
1904		**Vacuum cleaners** introduced.
1916	United States	First modern **washing machine** developed.
1933	Germany	**Electron microscope** built.
1937	England	**Radar** used to detect airplanes.

Transportation

1903	United States	First successful **airplane** flies.
1905	Germany	First U-boat **submarine** launched.
1908	United States	**Model T automobile** goes into production.
1914	Panama	**Panama canal** completed.
1914	United States	**Autopilot** invented.
1915	Germany	First **all-metal airplane** built.
1926	United States	First liquid-fuel **rocket** launched.
1927		First **non-stop, solo, trans-Atlantic flight** completed.
1934	England	**Steamship** *Queen Mary* launched.
1935	United States	**DC-3 airplane** introduced.
1936	Germany	First practical **helicopter** built.
1939	Germany	First **jet aircraft** flies.

The electronic age (1947-1972)

Overview

- nuclear weapons caused fear that end of life on earth was possible and imminent
- development of WWII inventions: materials (synthetic rubber, plastics, synthetic fuels), jet engines, rockets, missiles
- rise of the automobile, decrease in rail passenger service, emergence of the suburb
- increasing automation
- split in workforce: specialize worker vs. unskilled worker
- environmental problems: air, water, soil pollution
- growing concern about society's future due to environmental problems (*Limits to Growth*)
- rise of the military-industrial complex

General

1948	United States	20 killed, 14,000 injured in Donora, PA from **smog**.
1949		**Murphy's Law** conceived.
1952	United States	First **thermonuclear device** exploded.
1957	United States	US Atomic Energy Commission launches **Project Plowshare**.
1972	United States	Club of Rome publishes *Limits to Growth*.

Communications & Computer Software

1953	United States	Commercial **color television** broadcasting begins.
1955		Precursor of the **video terminal** developed.
1956		First **transatlantic telephone cable** goes into operation.
1956	United States	**FORTRAN** computer programming language developed.
1906	United States	First **communications satellite** launched.
1970	United States	**Unix operating system** developed.
1970	United States	**MYCIN medical expert system** developed.
1972		International **computer network** established.
1972		**Word processing** introduced.

Electronics & Computer Hardware

1948	United States	**Transistor** developed.
1950	United States	SAGE **computerized air defense system** established.
1951	United States	**Magnetic tape** used to store computer data.
1956	United States	**Magnetic disk** used to store computer data.
1958	United States	**Integrated circuit** developed.
1960	United States	First **transistorized large computer** developed.

1964	United States	First successful **supercomputer** introduced.
1965	United States	First **minicomputer** introduced.
1968	United States	First **integrated circuit-based computer** introduced.
1971	United States	First **microprocessor** developed.
1971	United States	First **pocket electronic calculator** introduced.

Energy

1954	United States	**Photovoltaic cell** developed.
1954	Soviet Union	First **generation of electric power by nuclear reactor**.

Food & Shelter

1953	United States	**Microwave oven** developed.
1955	United States	**Tractors** outnumber horses for the first time.
1958	United States	First **glass-walled skyscraper** built.
1972	United States	**DDT** use restricted due to environmental problems.

Materials

1949	England	Yarn produced from **Dacron**.

Medical Technology

1952	United States	**Polio vaccine** developed.
1955	United States	**Tetracycline** (antibiotic) developed.
1956	United States	**Birth control pills** used.
1958	United States	**Pacemaker** developed.
1967	United States	First (partially) successful human **heart transplant** performed.
1969	United States	First **artificial human heart** implanted.
1972	England	First **computerized axial tomography** scan introduced.

Tools & Devices

1948	United States	First **transfer lines** used to manufacture engine blocks.
1952	United States	First **numerically controlled machine tool** developed.
1960	United States	First **laser** developed.
1962	United States	General Motors installs first **industrial robots**.
1964	United States	IBM develops first **computer aided design** system.
1969		**Scanning electron microscope** used.
1970		Carbon dioxide **lasers** used for industrial cutting & welding.

Transportation

1947	United States	Bell X-1 is the first **supersonic aircraft**.
1949	England	The Comet, the first **commercial jet aircraft**, flies.
1954	United States	First **nuclear submarine** commissioned.
1957	Soviet Union	First **artificial satellite** launched.
1961	United States	Alan Shepard, Jr. is first **astronaut**.
1961	Soviet Union	Yuri Gagarin is first human to **orbit** the earth.
1962	United States	Mariner 2 becomes first space probe to reach another planet.
1967	Great Britain	*Torrey Canyon* runs aground & spills 119,000 tons of oil.
1969	United States	First humans on the **moon**.
1970	United States	Boeing 747 **jumbo jet** carries 400 passengers.
1971	Soviet Union	*Salyut 1* becomes the first **space station**.

The information age and beyond (1973-)

Overview

- major developments related to information (computers, communication, genetic engineering, etc.)
- information became new metaphor for reality
- inherent belief that technology (especially information technology) will solve even the most difficult problems
- information entrepeneurs (Jobs, Cray, Gates)
- structure of organization reflected in its information systems
- proliferation of computers (geographical and functional)
- emergence of genetic engineering (new medicines, new organisms, altered organisms)
- increased awareness of and response to environmental problems
- environmental disasters: Three-Mile Island, Chernobyl, Bhopal
- growing concerns about technology (Ellul, Postman, etc.)

General

1973	United States	Field of **genetic engineering** born.
1983	United States	**Strategic Defense Initiative** started.
1983	United States	**Nuclear winter** predicted.
1988	United States	**Genetically engineered animals** patented.
1989	United States	**Computer** beats human chess master.

Communications & Computer Software

1973	United States	**Graphical User Interface** developed for computers.
1973		**Voice recognition system** developed.
1973	United States	**Laser scanners** used in a few supermarkets.
1975	United States	**Laser printer** introduced.
1975	Great Britain	**Liquid crystal displays** marketed.
1977	United States	**Microsoft** founded.
1978	United States	**Speech synthesizer** developed.
1979	United States	First **spreadsheet program** for microcomputers developed.
1980	United States	**Relational database program** for microcomputers developed.
1981	United States	MS-DOS **operating system** developed.
1983	United States	First **computer virus** developed.
1984	United States	MacPaint **graphic program** developed.
1985	United States	First **desktop publishing** program developed.
1986	United States	**Neural network computer** developed.
1990		**World Wide Web** created[1].
2004		**YouTube** invented[2].

Electronics & Computer Hardware

1975	United States	Altair 8800 microcomputer introduced in kit form.
1976	United States	First **supercomputer** with vector architecture introduced.
1977	United States	Apple II **personal computer** introduced.
1981	United States	IBM PC **personal computer introduced**.
1984	United States	Apple Macintosh **personal computer** introduced.
1985	United States	**Massively parallel computer** (16,536 processors) developed.
1993	United States	First **all-optical** computer developed.

Energy

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[1]Anonymous, "Timeline of historic inventions," Wikipedia, http://en.wikipedia.org/wiki/Timeline_of_historic_inventions.

[2] Mary Bellis, "Modern Inventions," About.com, http://inventors.about.com/od/timelines/a/ModernInvention.htm.

1973	World	**Oil embargo** imposed by OPEC.
1979	United States	Three Mile Island Unit 2 **nuclear accident** occurs.
1981	United States	10 MW **Solar power station** completed.
1986	Soviet Union	Chernobyl **nuclear accident** occurs.
1986	United States	4 MW **geothermal power station** completed.
1993	United States	Trojan **nuclear power plant** shut down rather than repaired.

Food & Shelter

1975	United States	McDonald's replaces paper **packaging** with polystyrene.
1988	United States	**Low-cholesterol eggs** achieved.
1990	United States	McDonald's replaces plastic **packaging** with paper.
1993	United States	**Genetically engineered tomato** introduced.
2004	Hungary	**Translucent concrete** invented[1].

Materials

1978	United States	**Chlorofluorocarbons** banned for their role in ozone depletion.
1984	India	Thousands die from toxic gas release in Bhopal.
1986	Switzerland	**Superconducting material** discovered.
1991		Diamond made from **buckminsterfullerene** at room temperature.

Medical Technology

1973	Scotland	**Magnetic resonance imaging** developed.
1978	Great Britain	First ***in vitro* conceived baby** born.
1980	United States	**Genetically engineered** human insulin tested.
1984	United States	First successful **fetal surgery** performed.
1986	United States	**Gene** for Duchenne muscular dystrophy discovered.
1988	France	RU-486 **abortion pill** introduced.
1993	United States	**Virtual reality** software for human body dissection announced.
1997	United State	**Viagra** introduced[2].
2001		**Self-contained artificial heart** developed[†].
2001		**Artificial liver** invented[*].
2002		**Birth control patch** invented[*].
2003	Singapore	**Infrared fever screening system** developed[*].

Tools & Devices

1981		**Scanning tunneling microscope** detects individual atoms.
1985		**Lasers** used to manipulate individual atoms.
1988	United States	**Micromotor** developed.

Transportation

1976	Europe	**Supersonic airliner** service begins.
1979	Europe	**Human-powered airplane** flies across English Channel.
1981	United States	Reusable **Space Shuttle** launched.
1981	France	Regular **high speed train** passenger service begins.
1985	United States	Remote control **submersible** explore wreck of *Titanic*.
1986	United States	**Space Shuttle *Challenger*** explodes after launch.
1986	France	First **fly-by-wire commercial aircraft** flies.
1993	United State	**Global Positioning System** created[*].
2003	Japan	Toyota Prius **hybrid car** introduced[†].

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[1] Mary Bellis, “Modern Inventions,” About.com, http://inventors.about.com/od/timelines/a/ModernInvention.htm.

[2] Anonymous, *op. cit.*

Some More Recent Developments (in no particular order)

- Google Gmail, Drive, Docs, Glass, Books, ...
- Social media
- 3D printing
- Molecular manufacturing
- Automated agriculture
- Smartphones
- Immersive visualization
- Brain-machine interfaces
- Autonomous vehicles
- Human genome
- Automated DNA sequencing
- Gene therapy
- Genetically engineered foods
- Human-like robots
- Transhumanism
- etc.