



Information society, technology and innovations



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INFORMATION SOCIETY

Marshall McLuhan – "global village"

Daniel Bell – "post-industrial society"

Alvin Toffler – "third wave society"

Peter Drucker – "society of knowledge"

Manuel Castells – "network society"

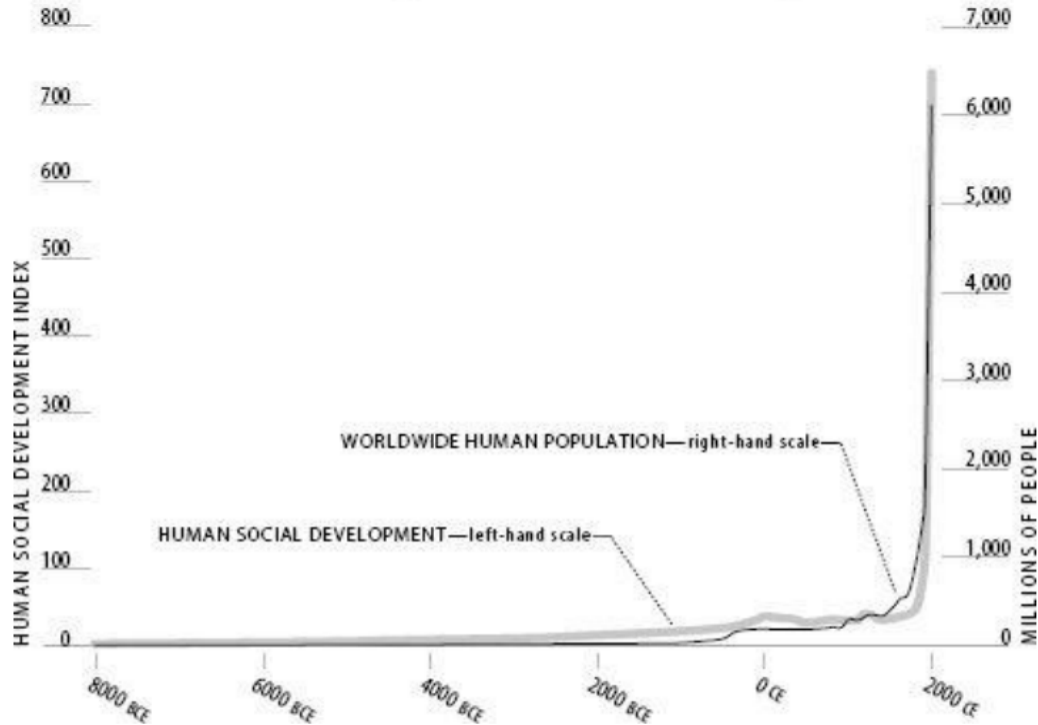


► The Future of Information Society

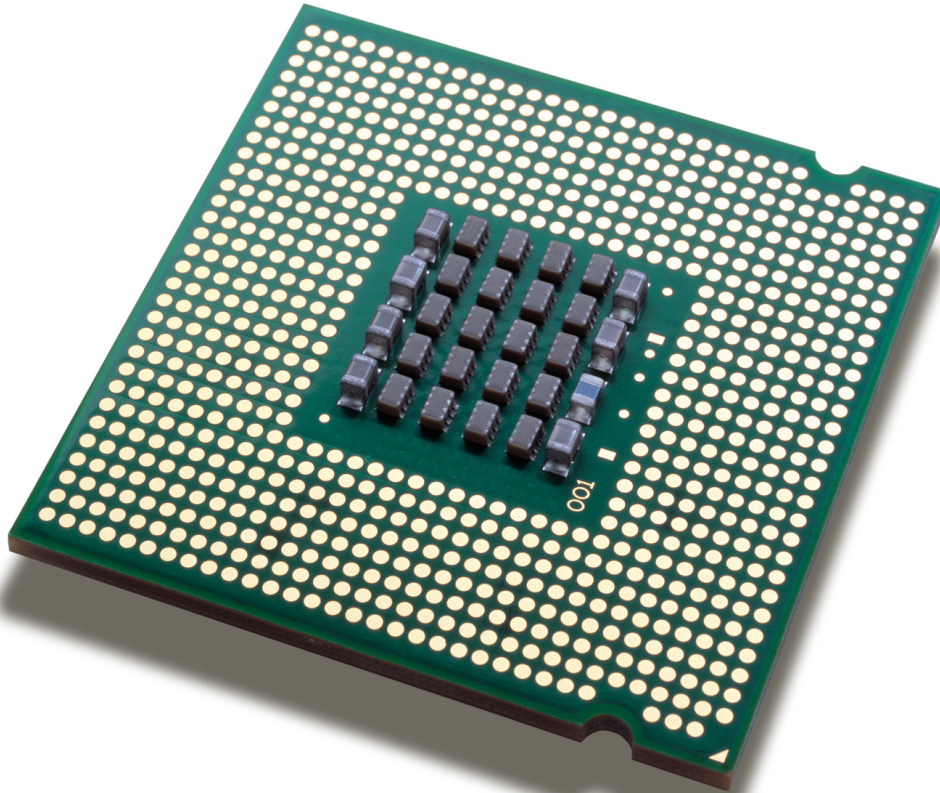
There are **4.3 billion**
Internet users in the
world as at March 2019.

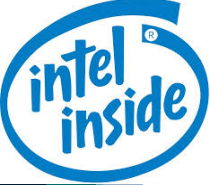
The History of Humanity in One Graph

FIGURE 1.1 Numerically Speaking, Most of Human History Is Boring.



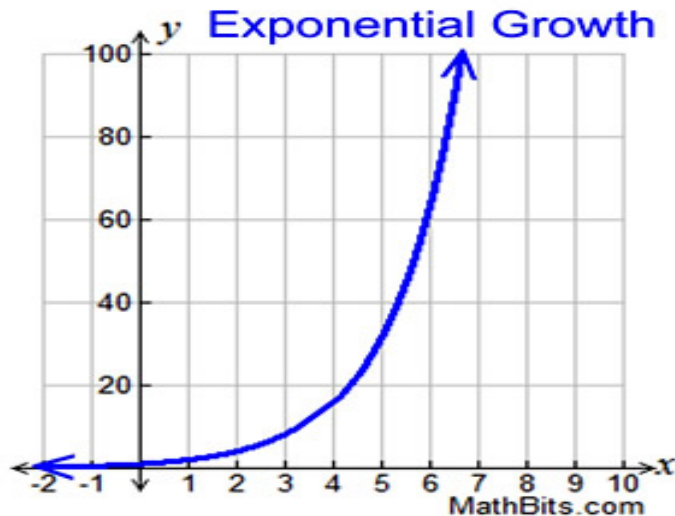
Microprocessor Invention





Microprocessor	Year of production	Number of transistors
4004	1971	2.300
8008	1972	2.500
8080	1974	5.000
8086	1978	29.000
286	1982	120.000
Intel 386™ processor	1985	275.000
Intel 486™ processor	1989	1.180.000
Intel® Pentium® processor	1993	4.100.000
Intel® Pentium® II processor	1995	10.500.000
Intel® Pentium® III processor	1999	40.000.000
Intel® Pentium® 4 processor	2000	42.000.000
Intel® Itanium® 2 processor	2003	170.000.000
Intel® Core i7	2015	1.700.000.000

The Second Machine Age



Microprocessors = the engines of the digital age

Disruptive technologies

Disruptive technology is an innovation which can replace an existing technology or an innovation which has the ability to create a brand new market by exploring a new set of customers.

DISRUPTIVE TECHNOLOGIES: WINNERS AND LOSERS

TECHNOLOGY	DESCRIPTION	WINNERS AND LOSERS
Microprocessor chips (1971)	Thousands and eventually millions of transistors on a silicon chip	Microprocessor firms win (Intel, Texas Instruments) while transistor firms (GE) decline.
Personal computers (1975)	Small, inexpensive, but fully functional desktop computers	PC manufacturers (HP, Apple, IBM), and chip manufacturers prosper (Intel), while mainframe (IBM) and minicomputer (DEC) firms lose.
Digital photography (1975)	Using CCD (charge-coupled device) image sensor chips to record images	CCD manufacturers and traditional camera companies win, manufacturers of film products lose.

DISRUPTIVE TECHNOLOGIES: WINNERS AND LOSERS

TECHNOLOGY	DESCRIPTION	WINNERS AND LOSERS
World Wide Web (1989)	A global database of digital files and “pages” instantly available	Owners of online content, news benefit while traditional publishers (newspapers, magazines, and broadcast television) lose.
Internet music, video, TV services (1998)	Repositories of downloadable music, video, TV broadcasts on the Web	Owners of Internet platforms, telecommunications providers, local Internet service providers win, while content owners and physical retailers lose (Tower Records, Blockbuster).
PageRank algorithm	A method for ranking Web pages in terms of their popularity to supplement Web search by key terms	Google is the winner (they own the patent), while traditional key word search engines (Alta Vista) lose.
Software as Web service	Using the Internet to provide remote access to online software	Online software services companies (Salesforce.com) win, while traditional “boxed” software companies (Microsoft, SAP, Oracle) lose.

Picture source:<https://medium.com/>



In an age of computers and networks,

“Information is costly to produce
but cheap to reproduce.”

"Data is a new oil."

"There are unusually valuable and
completely useless information
next to each other."

IoT and Big Data , facts need to know

1. Every 2 days we create as much information as we did from the beginning of time until 2003.
2. Over 90% of all the data in the world was created in the past 2 years.
3. It is expected that by 2020 the amount of digital information in existence will have grown from 3.2 zettabytes today to 40 zettabytes.
4. Every minute we send 204 million emails, generate 1,8 million Facebook likes, send 278 thousand Tweets, and upload 200,000 photos to Facebook.
5. Google alone processes on average over 40 thousand search queries per second, making it over 3.5 billion in a single day.

"Thick" Data fills the gap



LEAPFROGGING

The "leapfrogging" concept defines as the process whereby some developing countries can jump over several stages to move rapidly from standard-modern to highly-modern technologies.

Armenia – Information Technology

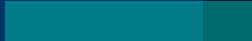
\$765.1 million

TURNOVER

Exports \$338.6 million



**15,000 ICT
professionals**



6% of GDP

of GDP
number of players
800



WCIT 2019 ARMENIA

2000+
Delegate

World IT community

70+
Countries

Tech in Armenia

80+
Speakers

Global Networking

