

HISTORY AND EVOLUTION OF INDUSTRIAL ROBOTS

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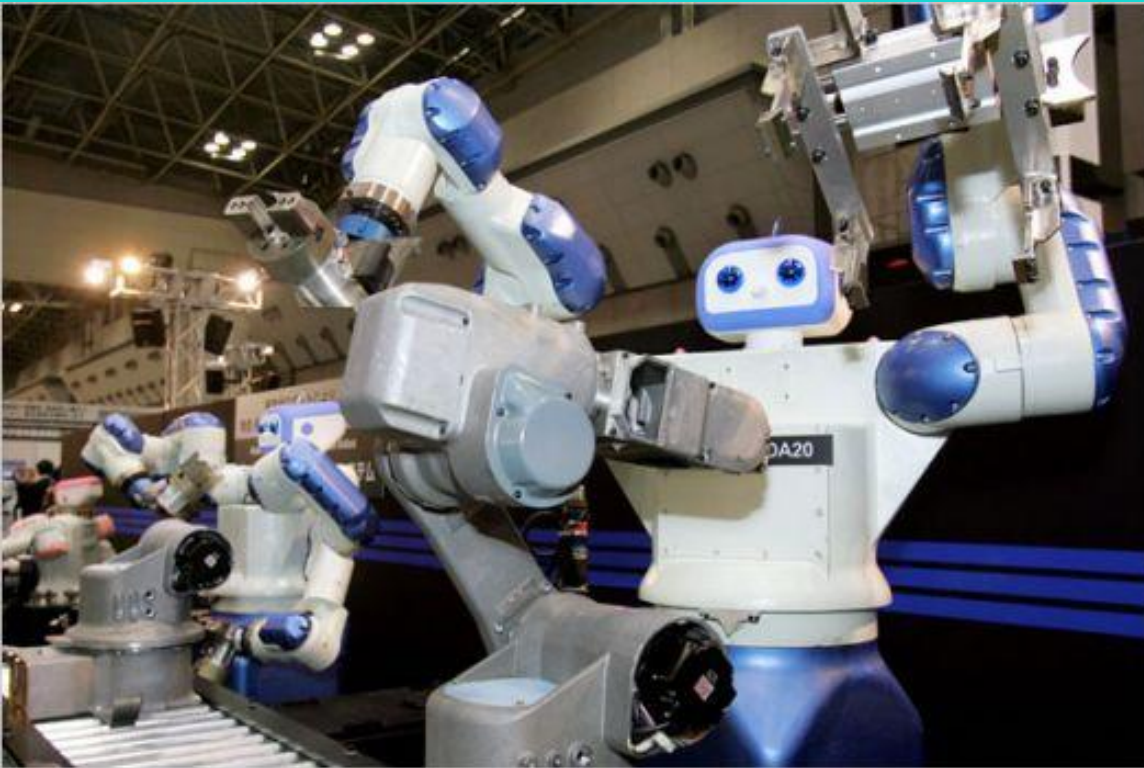
Faculty: Technological Engineering and Industrial Management

Specialization: Manufacturing Technology of Industrial Machine-Tools

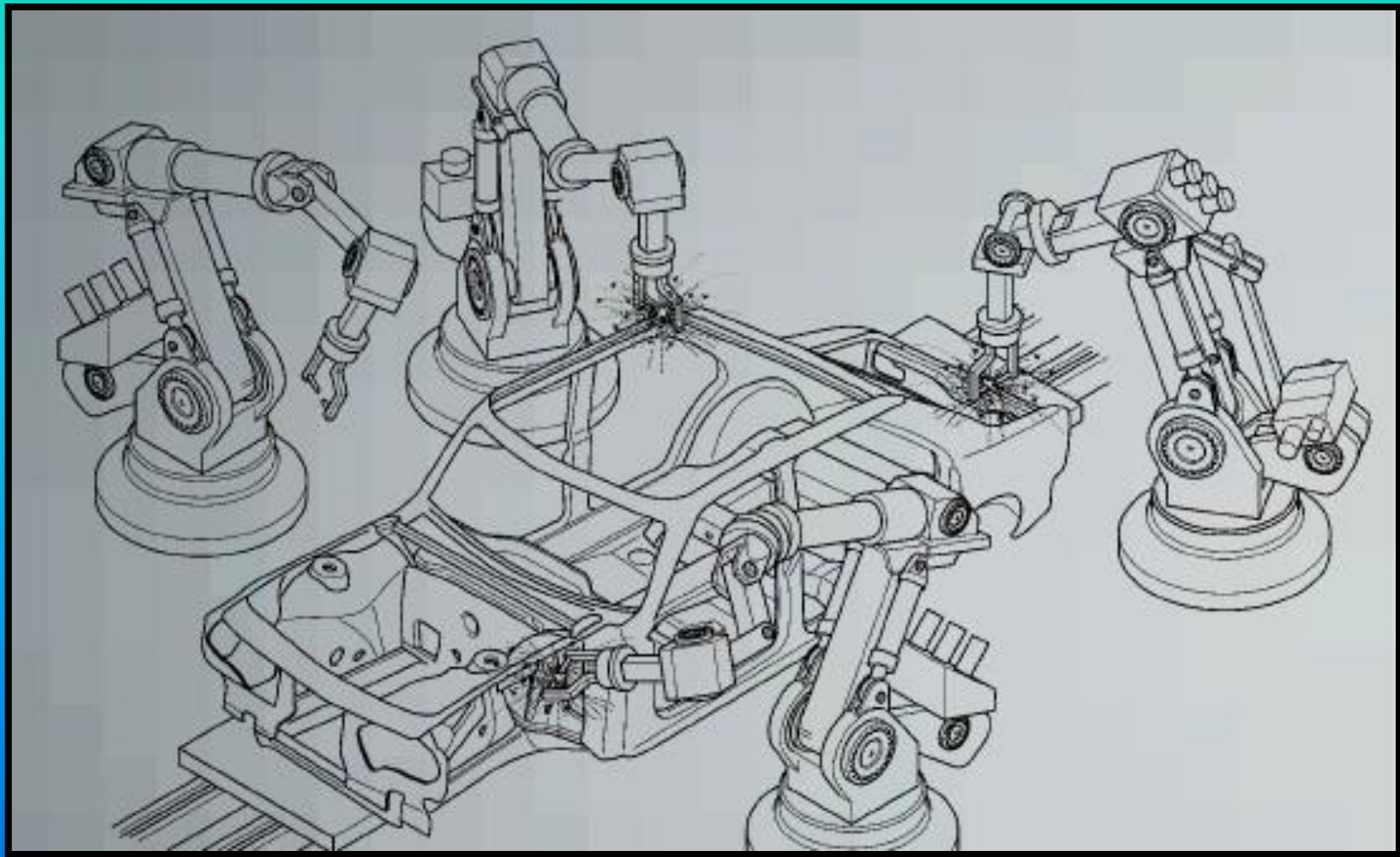
“It has long been a dream of humanity to
develop a machine that acts as man does.”

Prof. Dr. C. W. Burckhardt

What are industrial robots?



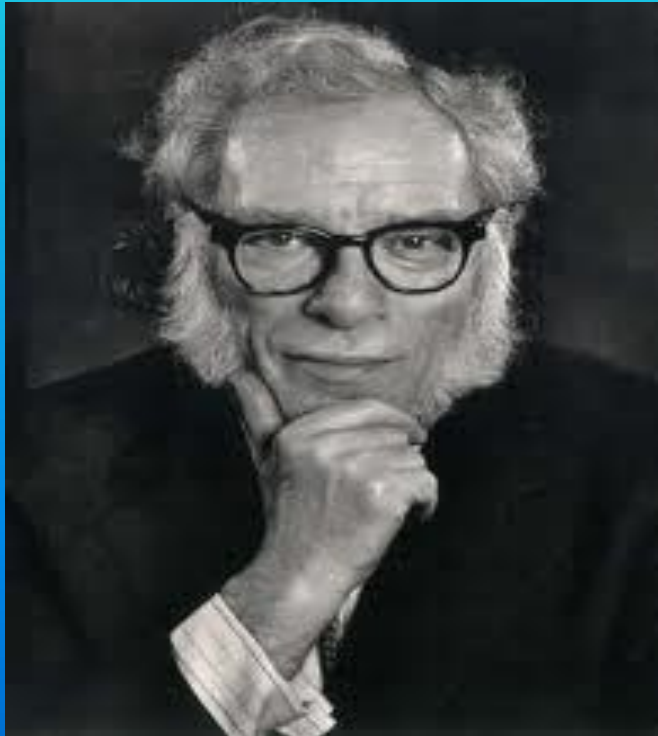
Industrial robots are mechanical devices which, to a certain degree, replicate human motions.



HISTORY

- “If every tool, when ordered, or even of its own accord, could do the work that befits it... then there would be no need either of apprentices for the master workers or of slaves for the lords.” Aristotel

- 1941-Science fiction writer Isaac Asimov first used the word "robotics", to describe the technology of robots and predicted the rise of a powerful robot industry.



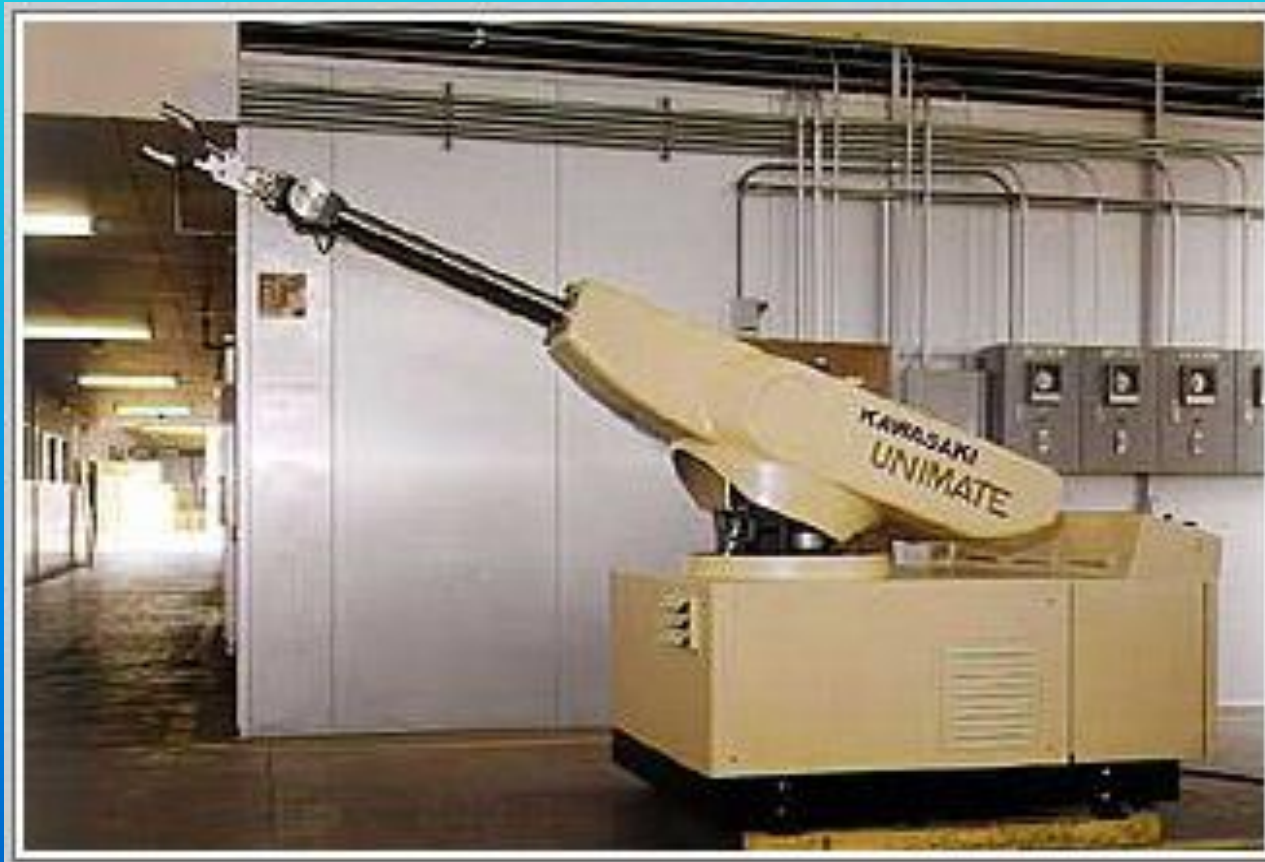
Isaac Asimov(1920-1992)

- 1954- George Devol designs the first programmable robot and coins the term Universal Automation, planting the seed for the name of his future company - Unimation.



George Devol(1829-1903)

- 1962 -General Motors purchases the first industrial robot from Unimation and installs it on a production line



Unimate robot

THE PARTS OF THE ROBOT

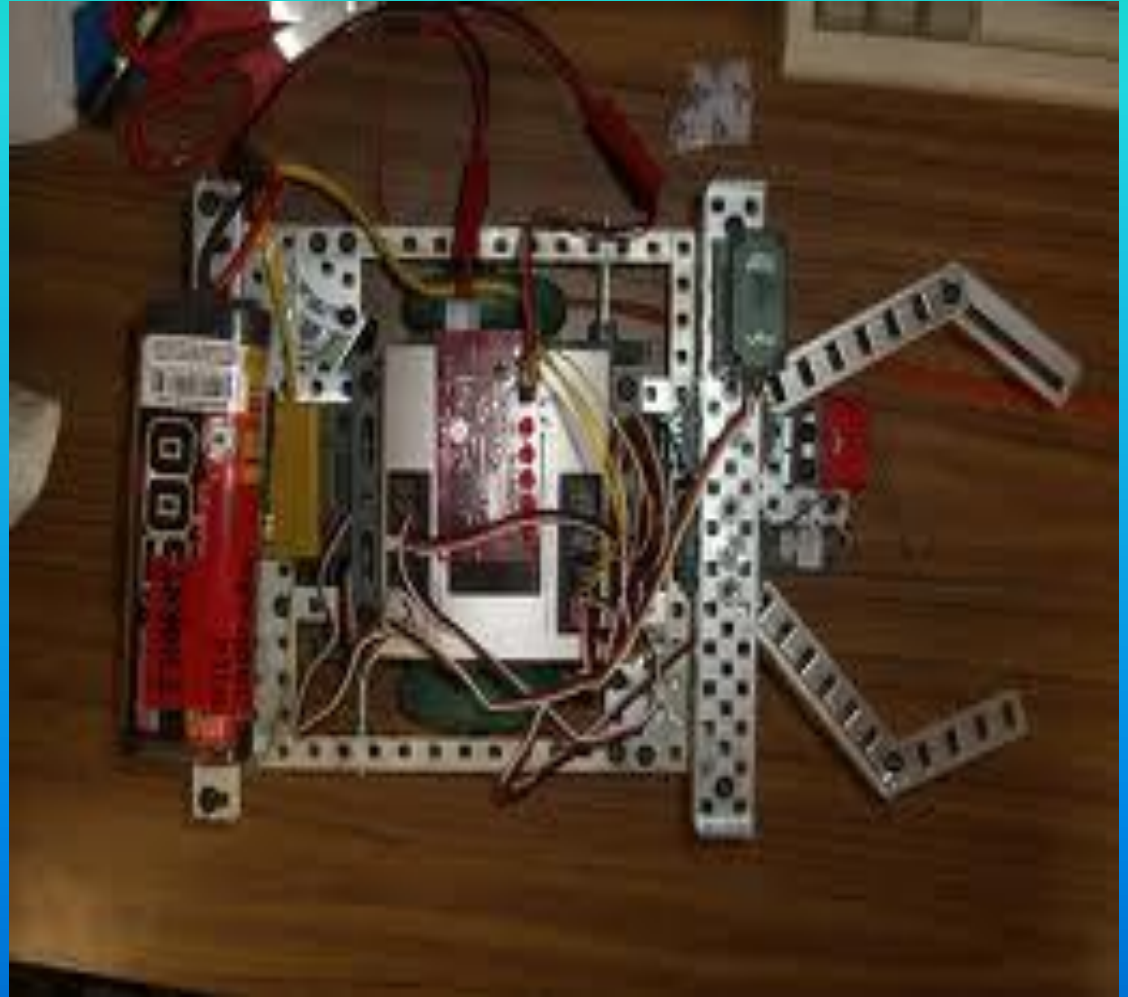


The controller



The arm

The end effector



The drive



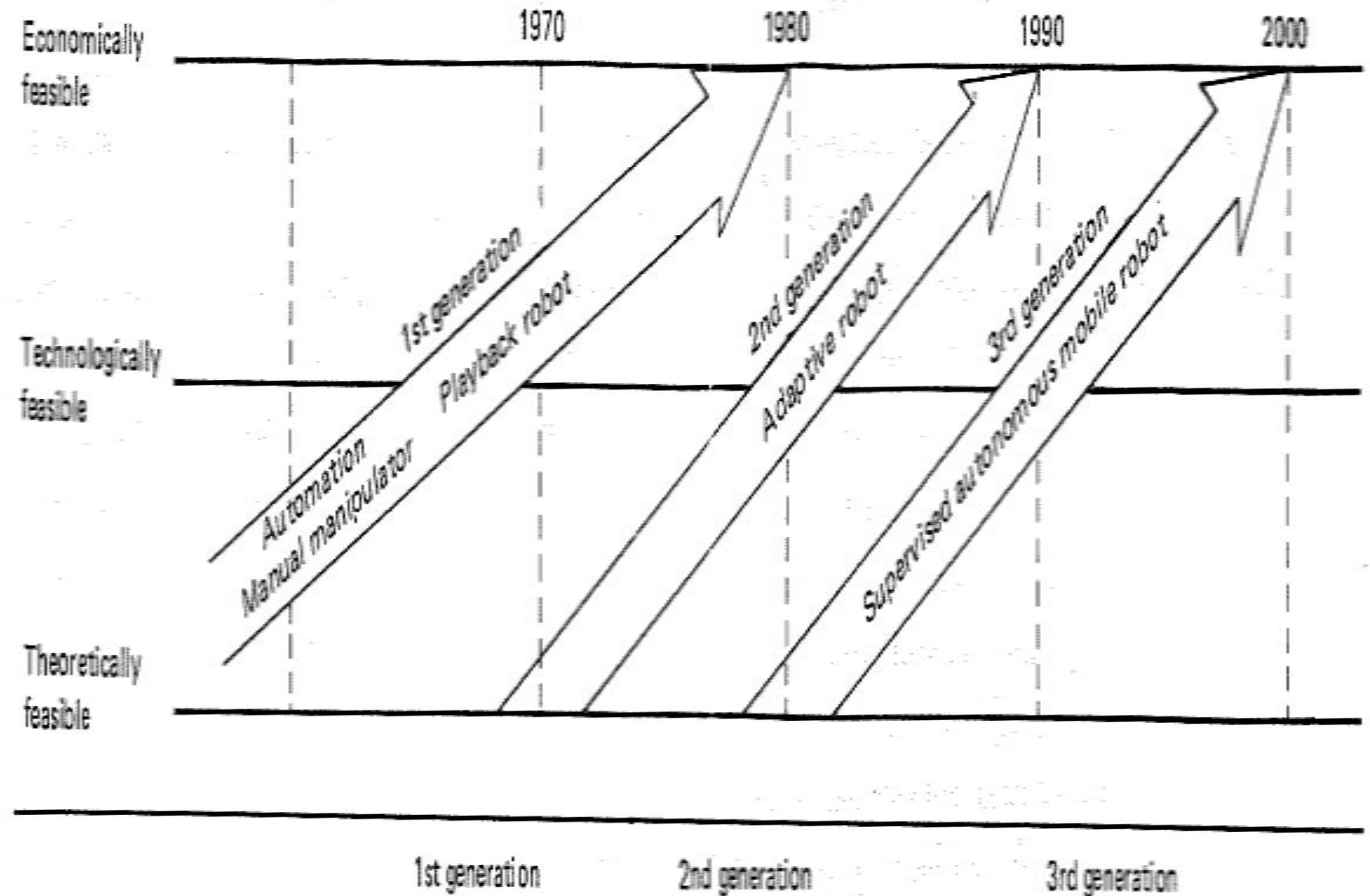
The sensors



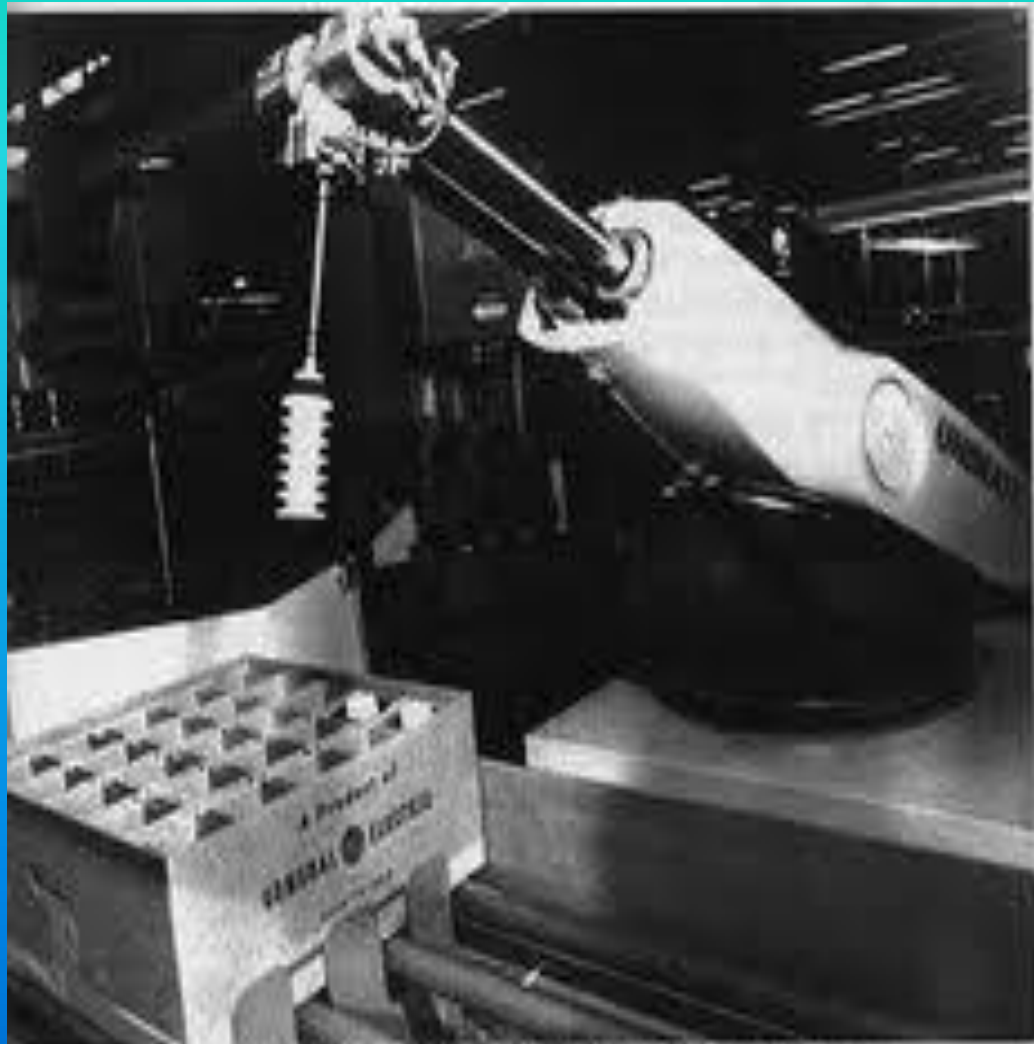
TOWARDS THE THIRD GENERATION ROBOT



GENERATIONS' DIAGRAM



First generation



Armed for duty. A Unimate robot—really, just an arm—picks up and puts down parts in a General Electric factory.

Versatran and Unimate were first robots made commercially available in 1962 and were introduced to Japan in 1967

Second generation



The second generation robot is approaching the stage of practical use. This has a direct relationship on the development of sensors and microcomputers in recent years

Third generation



The relationship between robot and man in the third generation can be more easily understood when it is compared with the relationship between a superior and subordinates

CONCLUSION



Robots, like computers, are powerful tools that open horizons to their human creators.

They do not tire, and can stand up to environmental conditions that we cannot endure.

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