



Introduction

1839

First mention of Robot to reference a 'central European system of serfdom, by which a tenant's rent was paid in forced labour or service'. This word came to English via the German, though the word ultimately derives from the Czech *robota*

1920 [Czech writer Karel Čapek](#).

The play, titled *R. U. R. (Rossum's Universal Robots)*, begins in a factory which manufactures artificial people, the 'universal robots' of the play's title. The robots are designed to serve humans and work for them, He originally called them *labori*, from the Latin for 'work', but it was his brother, Josef Čapek, who suggested *roboti*.





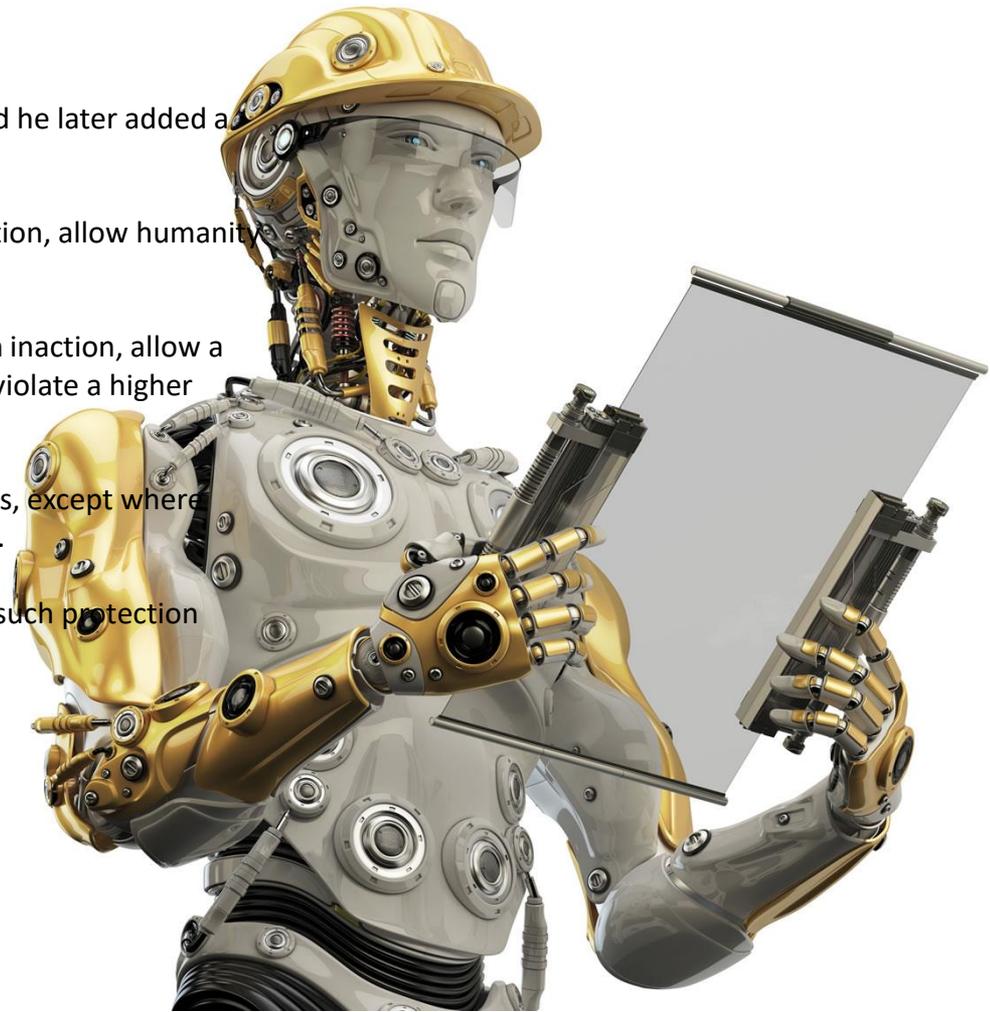
Robotics

1942

Isaac Asimov first used the word 'robotics' .

Asimov also proposed his three "Laws of Robotics", and he later added a 'zeroth law'.

- A robot may not injure humanity, or, through inaction, allow humanity to come to harm.
- A robot may not injure a human being, or, through inaction, allow a human being to come to harm, unless this would violate a higher order law.
- A robot must obey orders given it by human beings, except where such orders would conflict with a higher order law.
- A robot must protect its own existence as long as such protection does not conflict with a higher order law.





Smart tools

Unimate



1961

The first industrial robot, Unimate, joined the assembly line at a General Motors plant to work with heated die-casting machines. Unimate took die castings from machines and performed welding on auto bodies; tasks that are unpleasant and **dangerous** for people. Obeying step-by-step commands stored on a magnetic drum, the 4,000-pound arm is versatile enough to perform a variety of tasks. The never tired Unimate improves productivity and **efficiency**.



2017 Industry case





Innovatie

Versterking van onderzoek, technologische ontwikkeling en innovatie.

- ▶ IA. Stimuleren van onderzoek en ontwikkeling door uitbreiding van infrastructuur en samenwerking tussen kennisinstellingen.
- ▶ IB. Valorisatie van kennis en innovatie door industrieel onderzoek en experimentele ontwikkeling, via samenwerking tussen bedrijven onderling en met kennis- en onderwijsinstellingen

LEES MEER →



Smart Tooling Promo Event

- 27 Organisaties – Onderhouds bedrijven, Asset Owners, MKB technologie ontwikkelaars, Kennis Instellingen.
- 7 Projecten
- Autonome SMART Tools voor maximale veiligheid en efficiency 2017 – ??
Robot 1838 – 2017 (179 jaar)