

JULY 2021

Robotics & the SDGs



DIANA VOUTYRAKOU

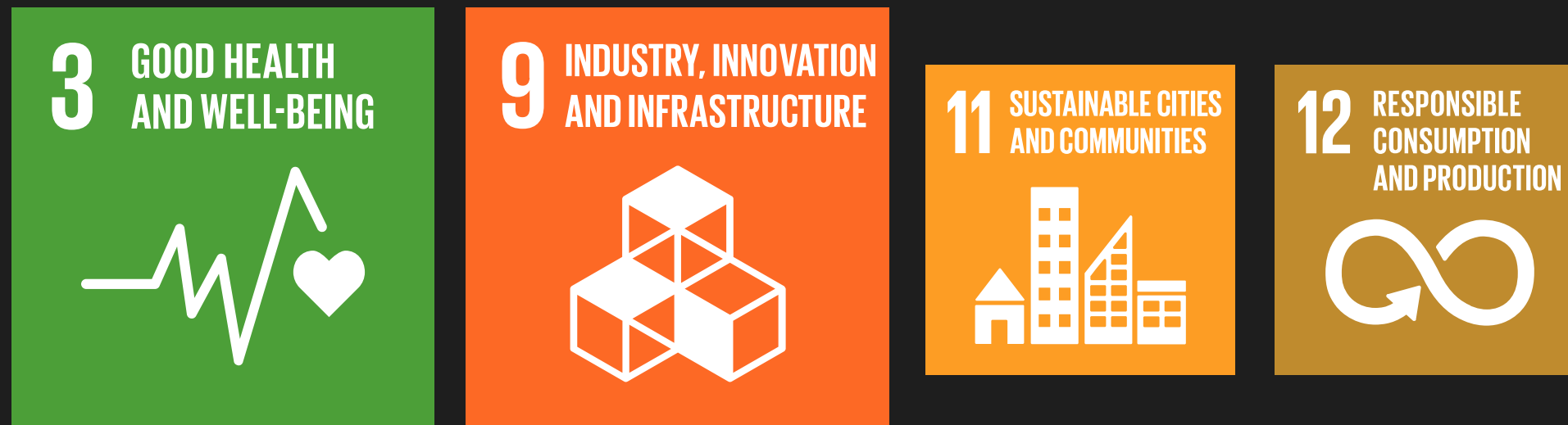
Electrical & Computer Engineer,
Educational Robotics Instructor

The **17** Sustainable Development Goals



THE GLOBAL GOALS

Main contributions



Healthcare, Industry, Smart Cities,
IoT, Circular Economy

Diana Voutyrakou ~ Robotics & the SDGs

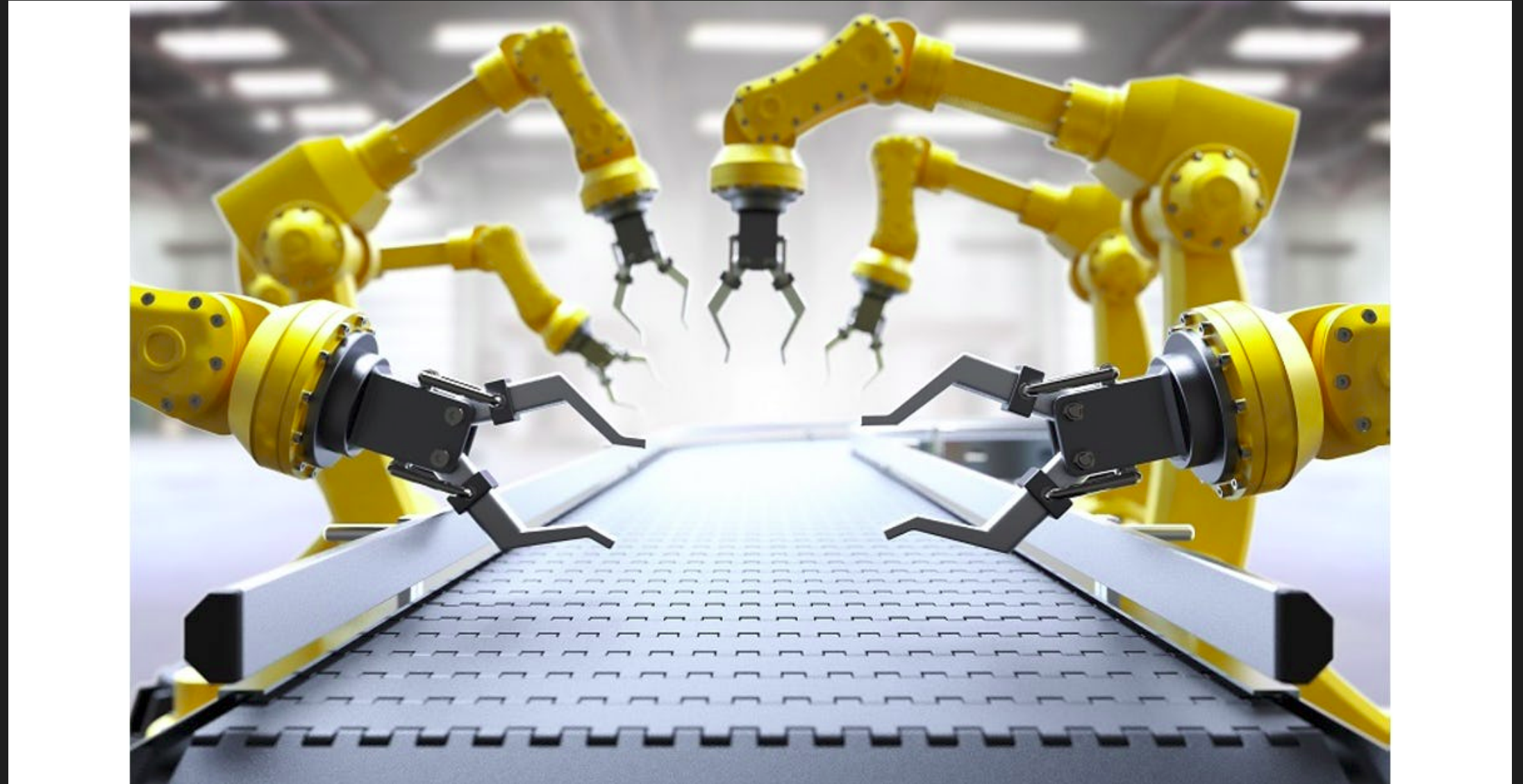
Concerns



Industrial Robots

USA, 1962

- Assembly & Disassembly
- Pick & Place
- Packaging

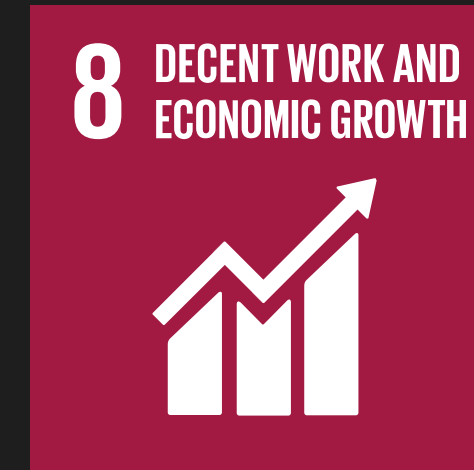


Source: <https://www.idtechex.com>

Industrial Robots



- Repeatability & efficiency
- Speed & Precision
- Longer working hours
- Safer Workplace
- Promote innovation



- Does More Technology Create Unemployment?
- Less working hours -> decreased salary
- Inequalities for non tech educated

Robots in Healthcare

Da Vinci Surgical System: FDA Approval 2000
1700 systems
(1.243.000 in 2020)

- Robotic surgery
- Supporting recovery
- Training Purposes



Source: www.southtees.nhs.uk , www.automate.org

Robots in Healthcare



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- Shorter Hospitalization
 - Reduced Pain & Scarring
 - Faster Recovery

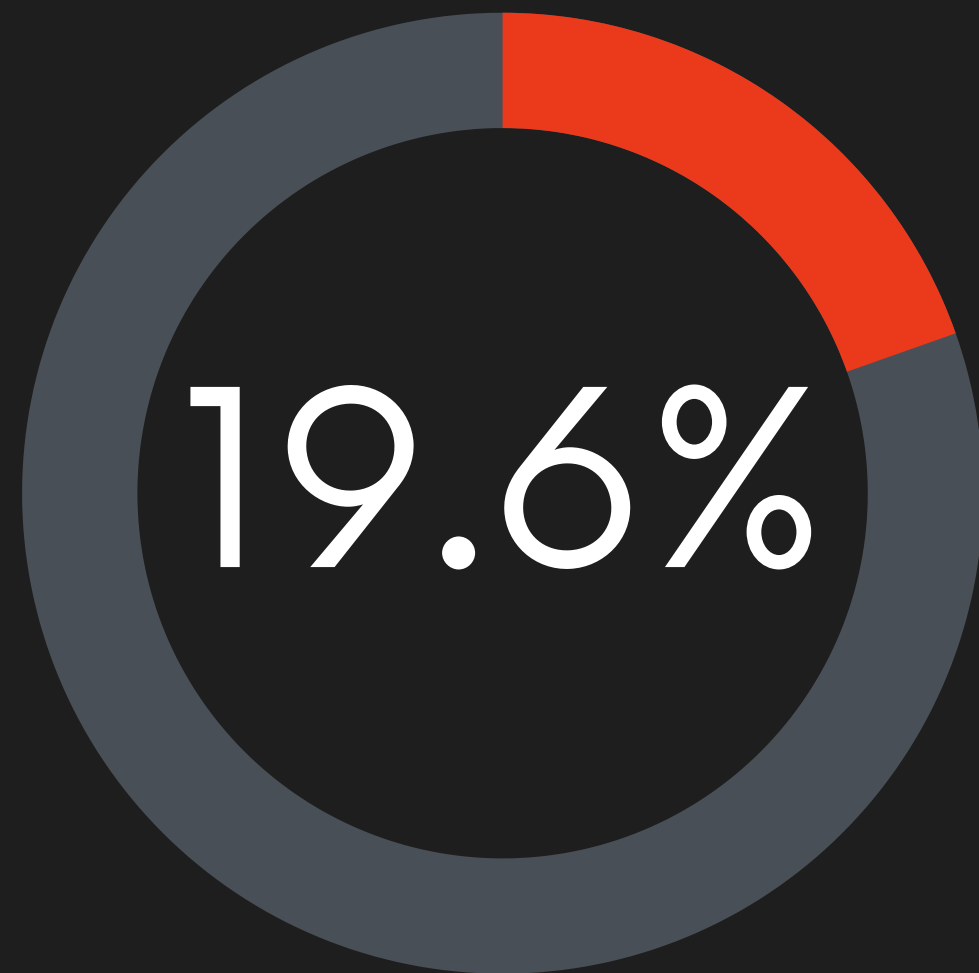
Future Goals:

Personalized, Reduced in size,
Cheaper, User Friendly,
Accurate & Repeatable



Ethical & Social Risks:

- Who has the responsibility for potential errors?
- Level of trust patients-surgeons-hospital administrators
- Inattention blindness
- Not available for most of the developing countries



No Internet access



1 in 3

Technologically Illiterate

% of women

