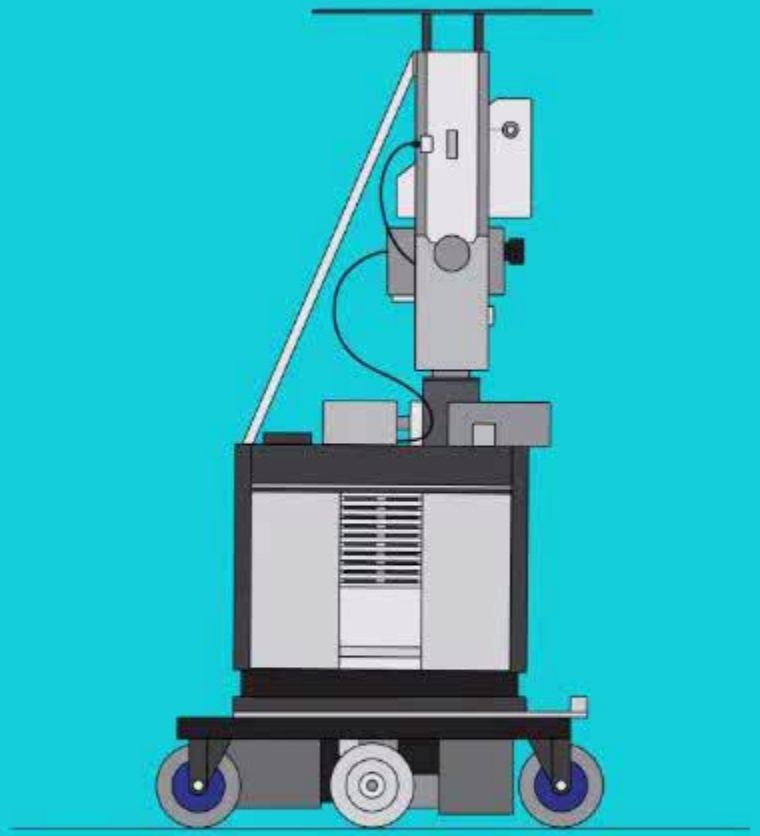


DUGA
Thai Digital Technology User Group Association
สมาคมผู้ใช้ดิจิทัลไทย

The Revolution of Robotics: Unleashing the Power of Diverse Robotic Systems

THAI ROBOTICS SOCIETY

ROBOTICS SUMMIT

25 September 2025

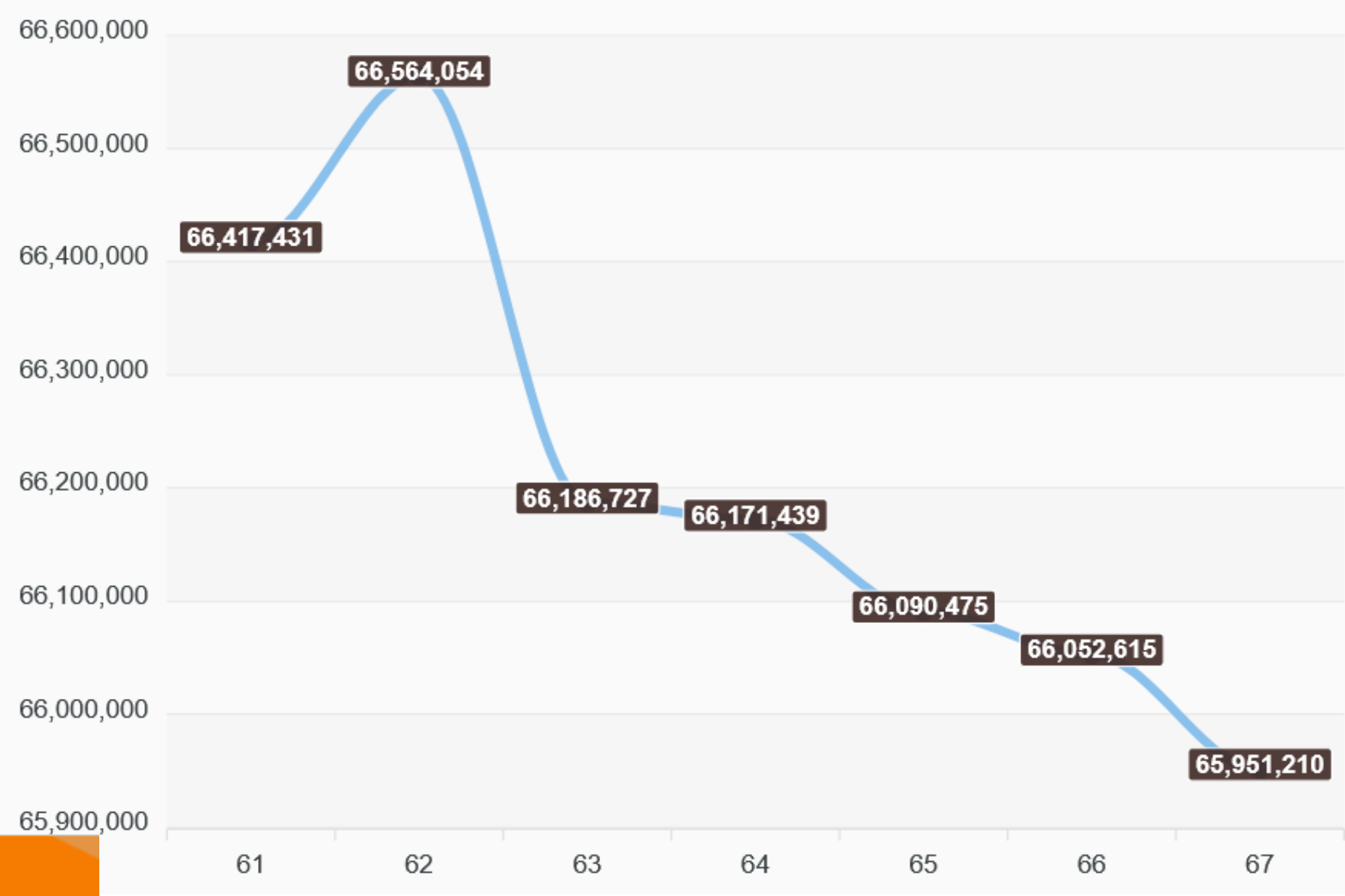
DUGA
Thai Digital Technology User Group Association
สมาคมผู้ใช้ดิจิทัลไทย

ยุคใหม่ของหุ่นยนต์ไม่ได้มีเพียงรูปแบบเดียวอีกต่อไป
การปฏิวัติวิวัฒนาการของหุ่นยนต์หลากหลายประเภท
สร้างโอกาสสำหรับนวัตกรรมใหม่

Why robot is important right now?

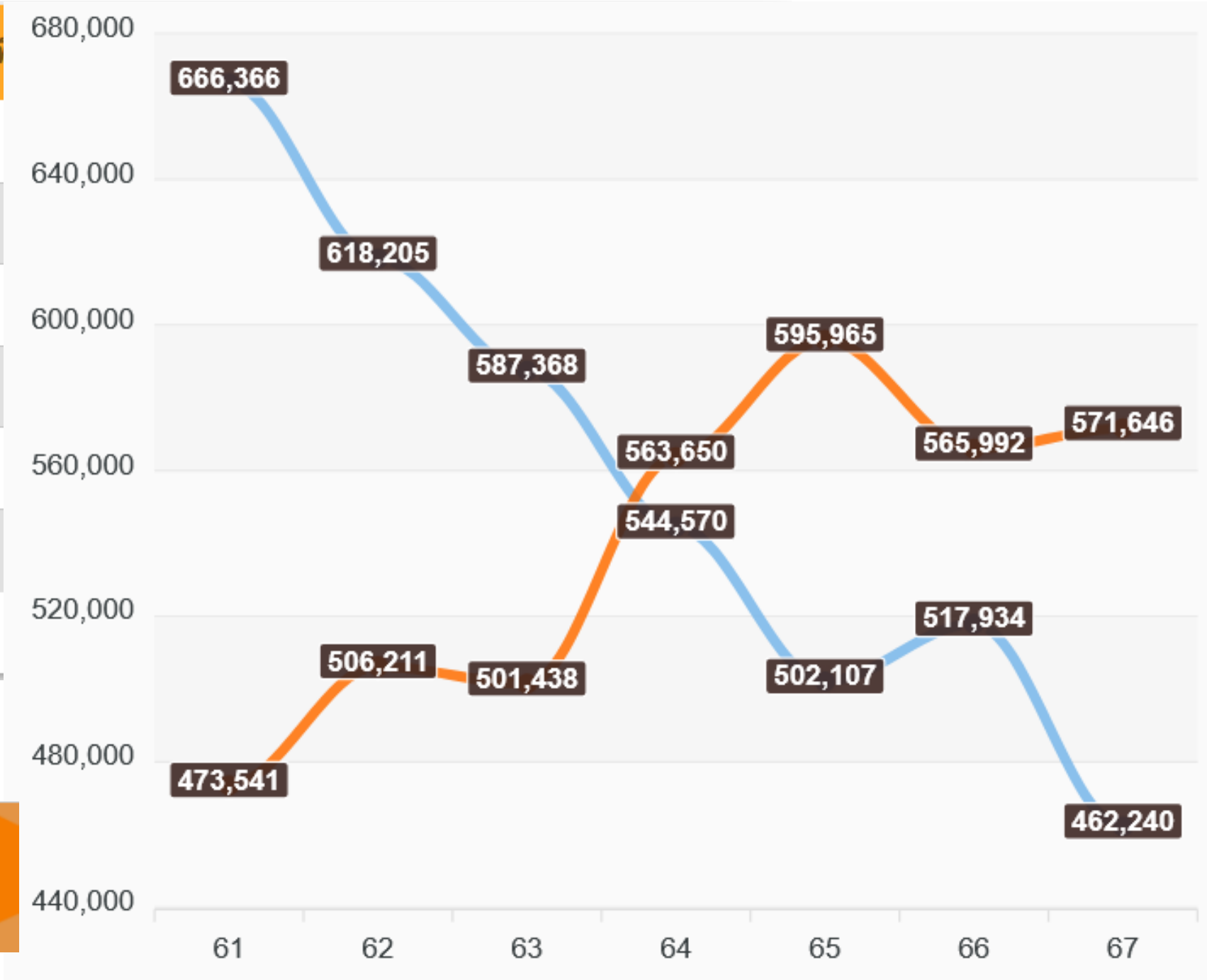
Robots are important because they increase productivity, ensure safety by performing dangerous tasks, improve product quality through precision and consistency, and offer cost savings. They also enhance healthcare with precise surgical procedures, enable advances in transportation, and can create new, more challenging jobs while reducing tedious work

ปี พ.ศ.	จำนวน
61	
62	
63	
64	
65	
66	
67	



สำนักบริหารการทะเบียน
กรมการปกครอง
The Bureau Of Registration Administration

ปี พ.ศ.	จำนวนคนเกิด (คน)	อัตราการเ
61	666,366	
62	618,205	
63	587,368	
64	544,570	
65	502,107	
66	517,934	
67	462,240	



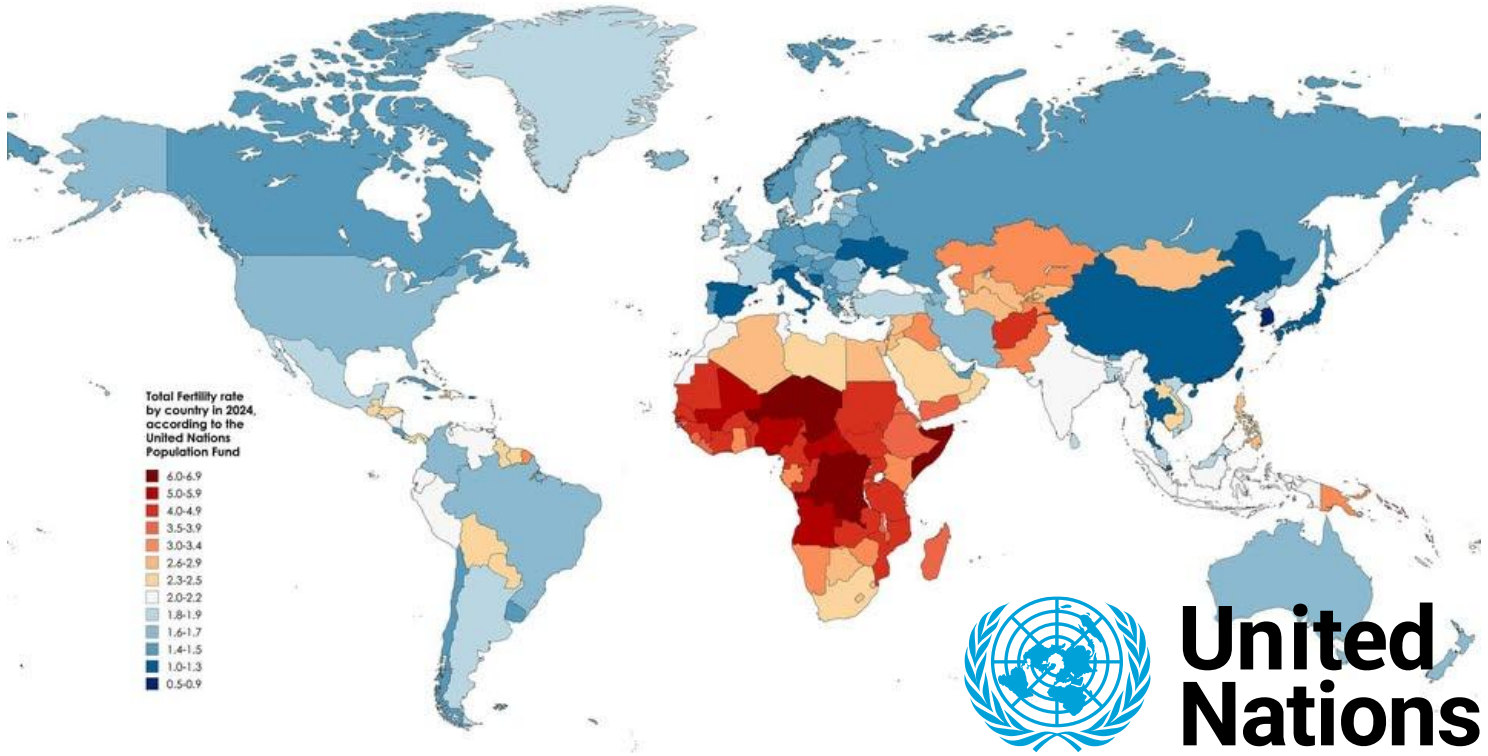
สำนักบริหารการทะเบียน
กรมการปกครอง
The Bureau Of Registration Administration

seasia
stats

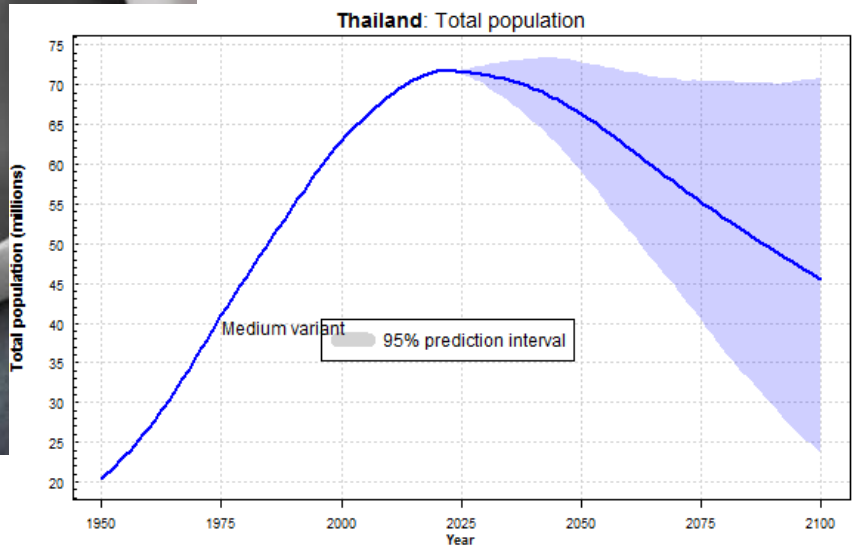
TOP 10 COUNTRIES WITH LOWEST BIRTH RATES

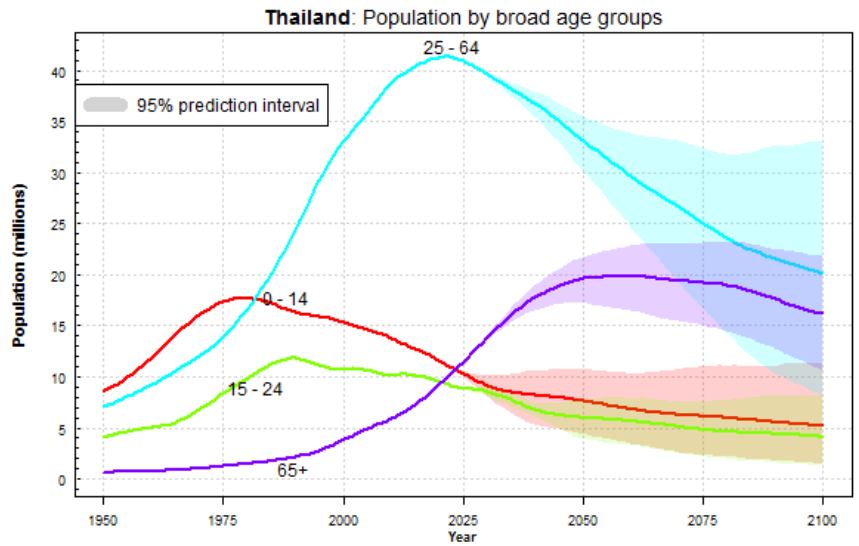
According to The United Nations World Fertility Report 2024

1	Macau	0.68
2	Hong Kong	0.73
3	South Korea	0.73
4	Taiwan	0.86
5	Singapore	0.95
6	Ukraine	0.99
7	China	1.01
8	Malta	1.11
9	Thailand	1.20
10	Italy	1.21

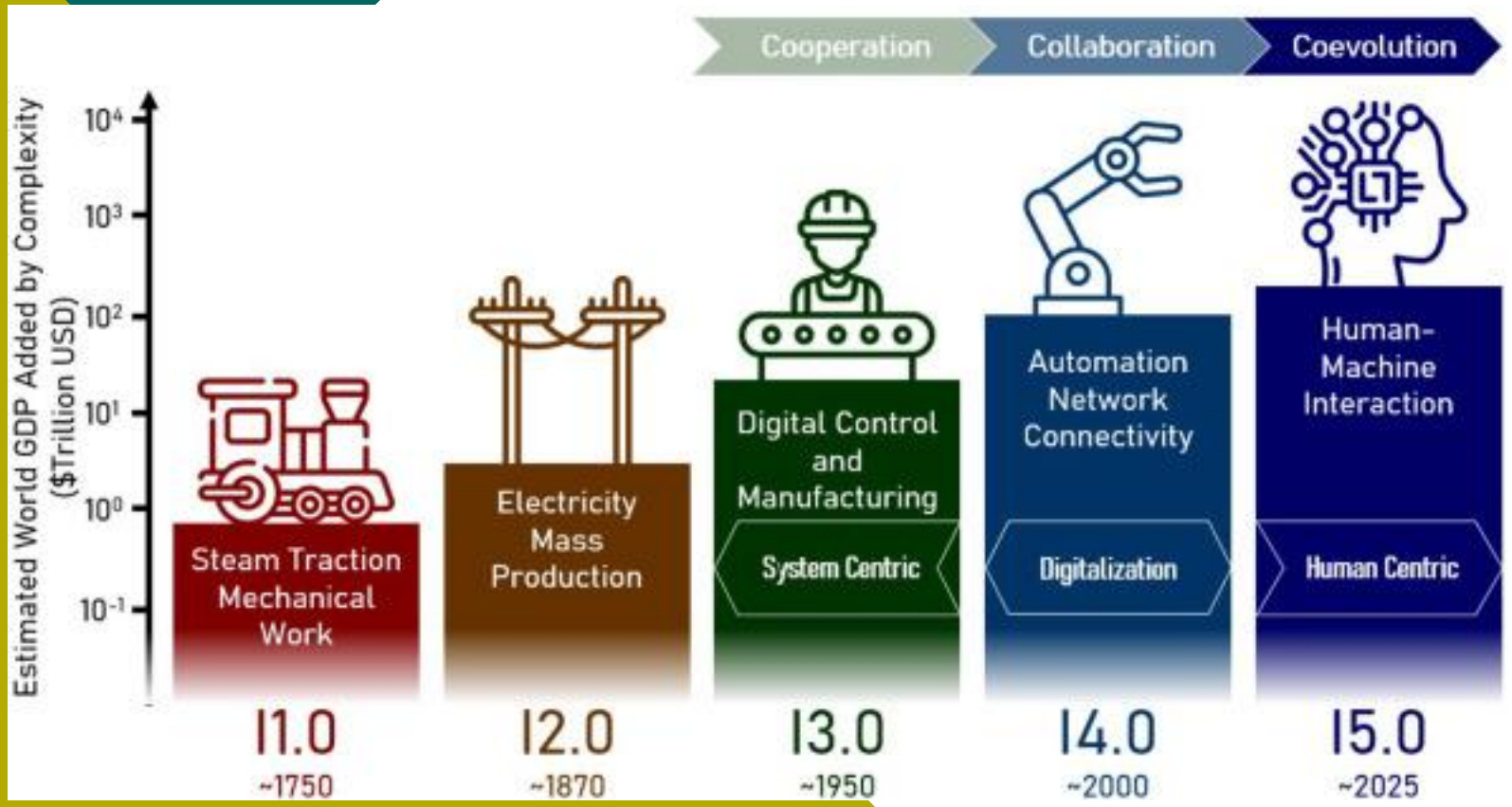


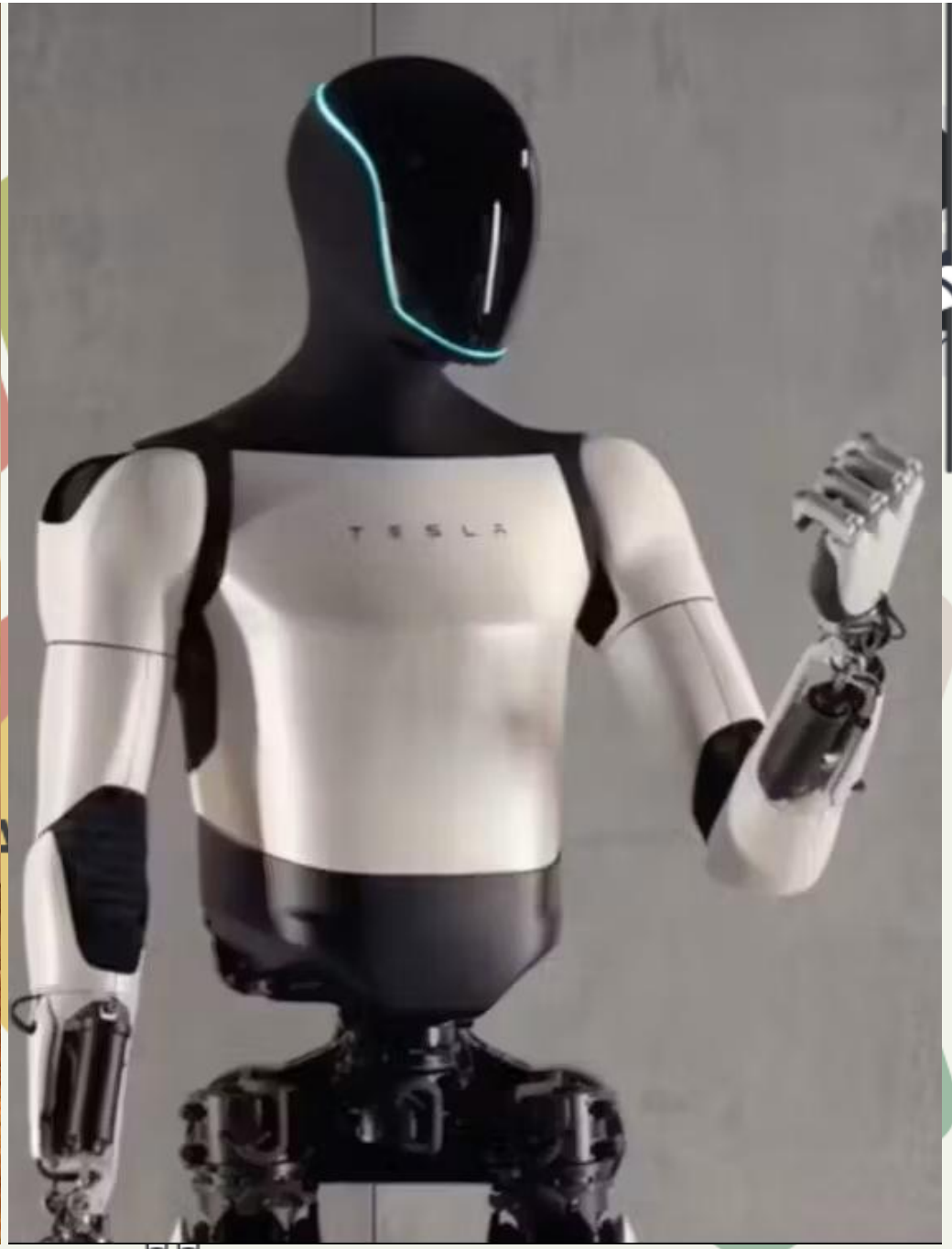
United Nations



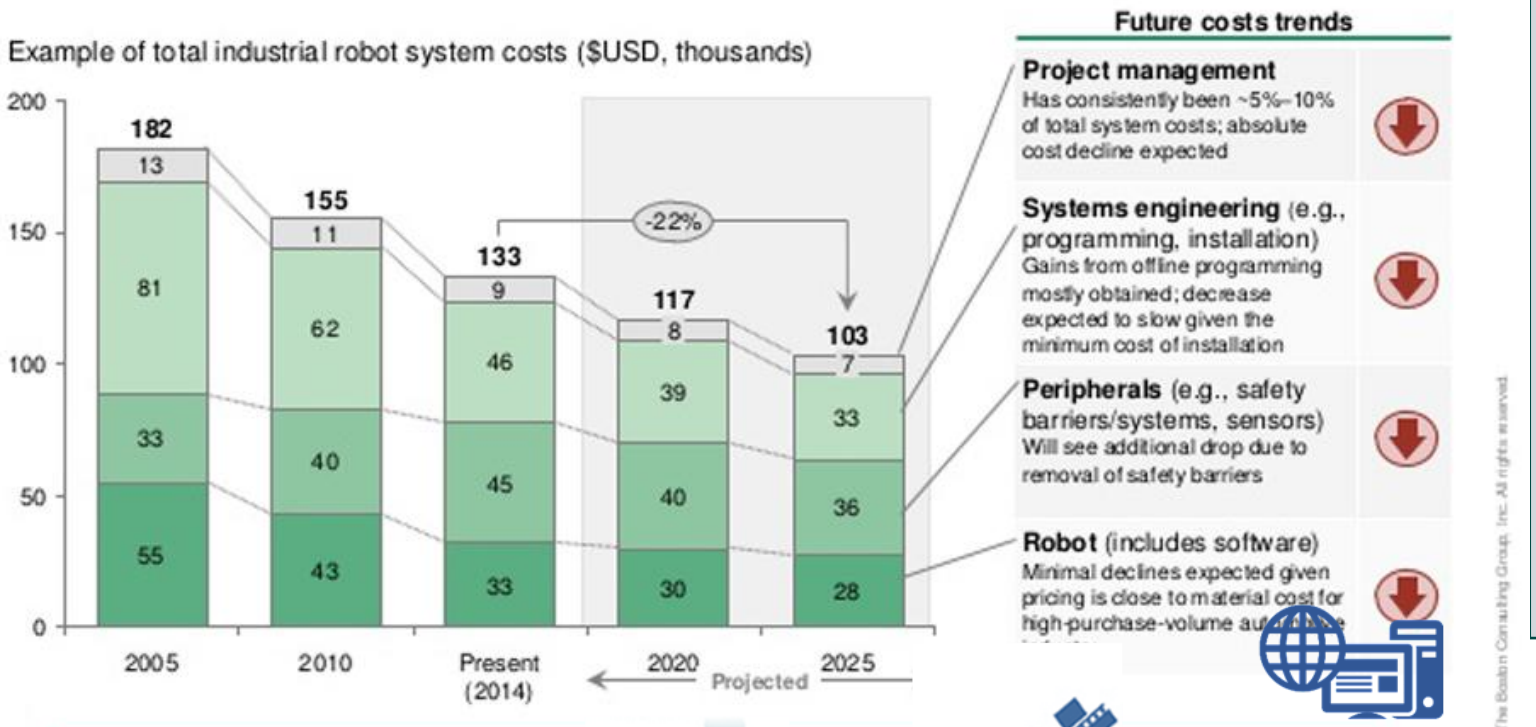


จากหุ่นยนต์แบบดั้งเดิมสู่ความหลากหลายในปัจจุบัน




TESLA

Advanced industrial robots are increasing in performance while costs continue to fall steadily



What industries involved

1. Faster
2. More Productive
3. Safer
4. Real time

4th Industrial Revolution
(2nd Information Revolution)
Early 21st Century~

Artificial Intelligence
Information Technology

Intelligence
A.I. SW

+

Information
Big Data
IoT
Cloud

3rd Industrial Revolution
(1st Information Revolution)
Late 20th Century

Computer and Internet-based Knowledge

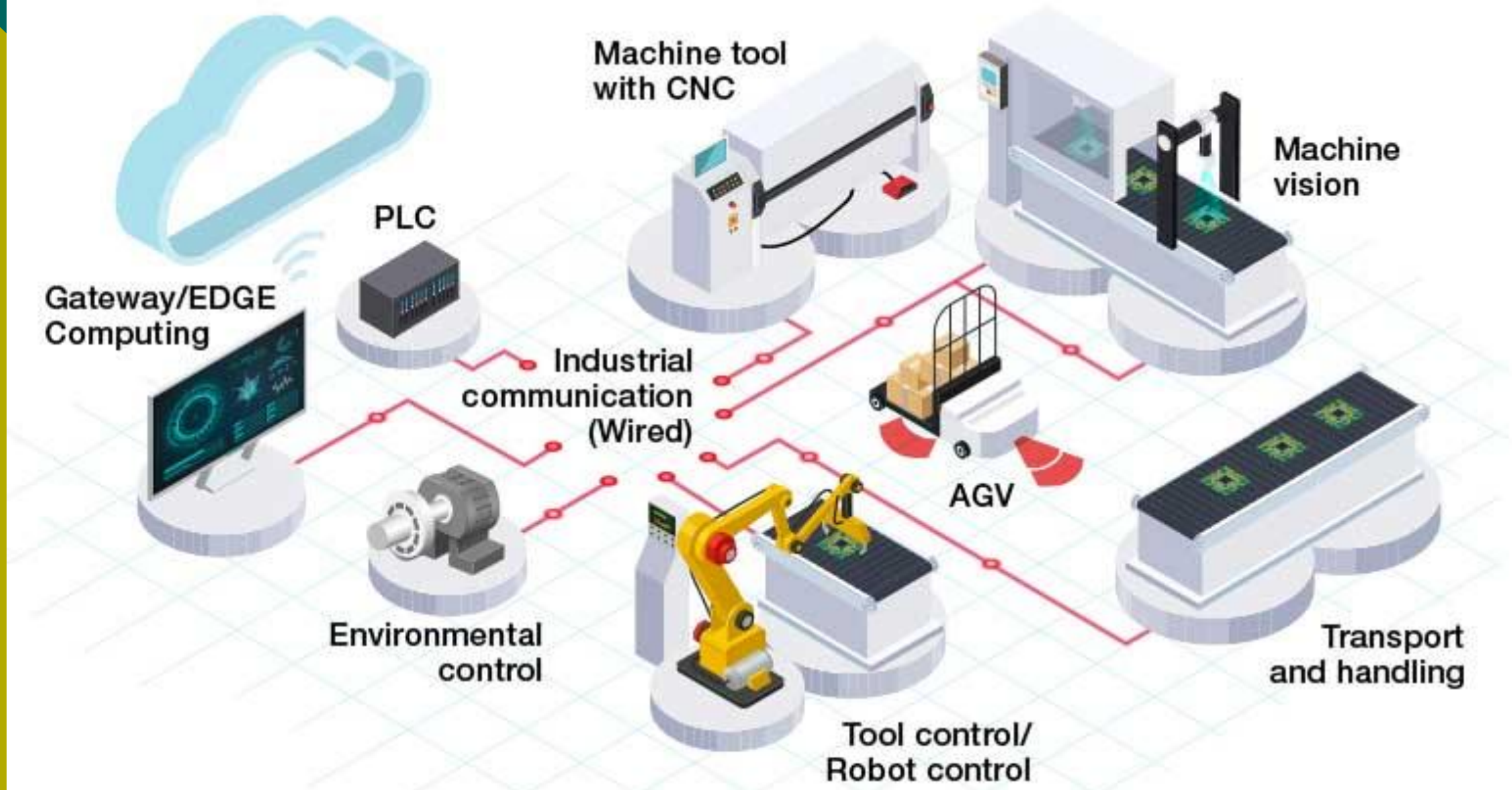
2nd Industrial Revolution
19th~20th Century

Electrical Energy-based Mass Production

1st Industrial Revolution
18thCentury

Steam-based Machines

Industrial Robots

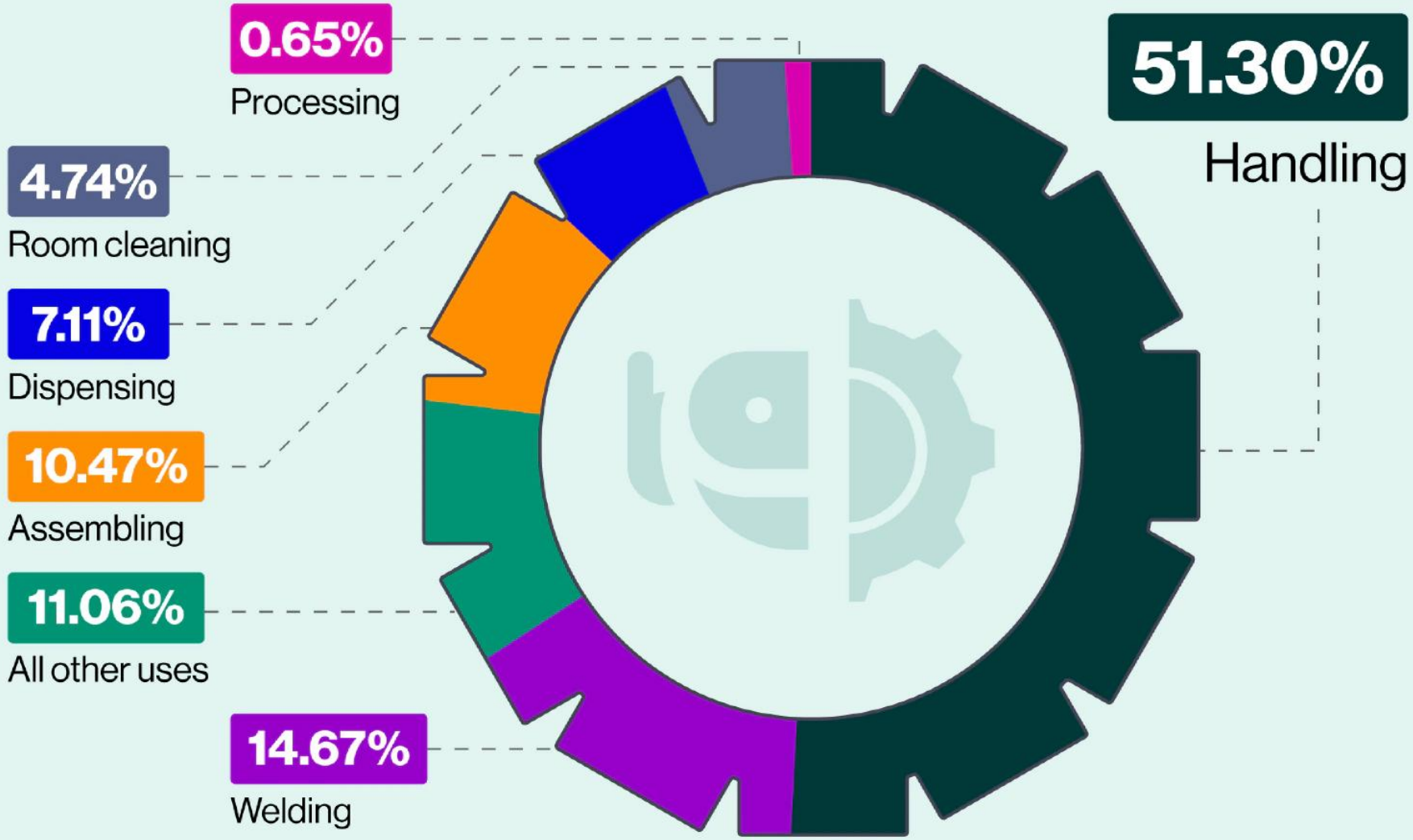


Industrial Robots

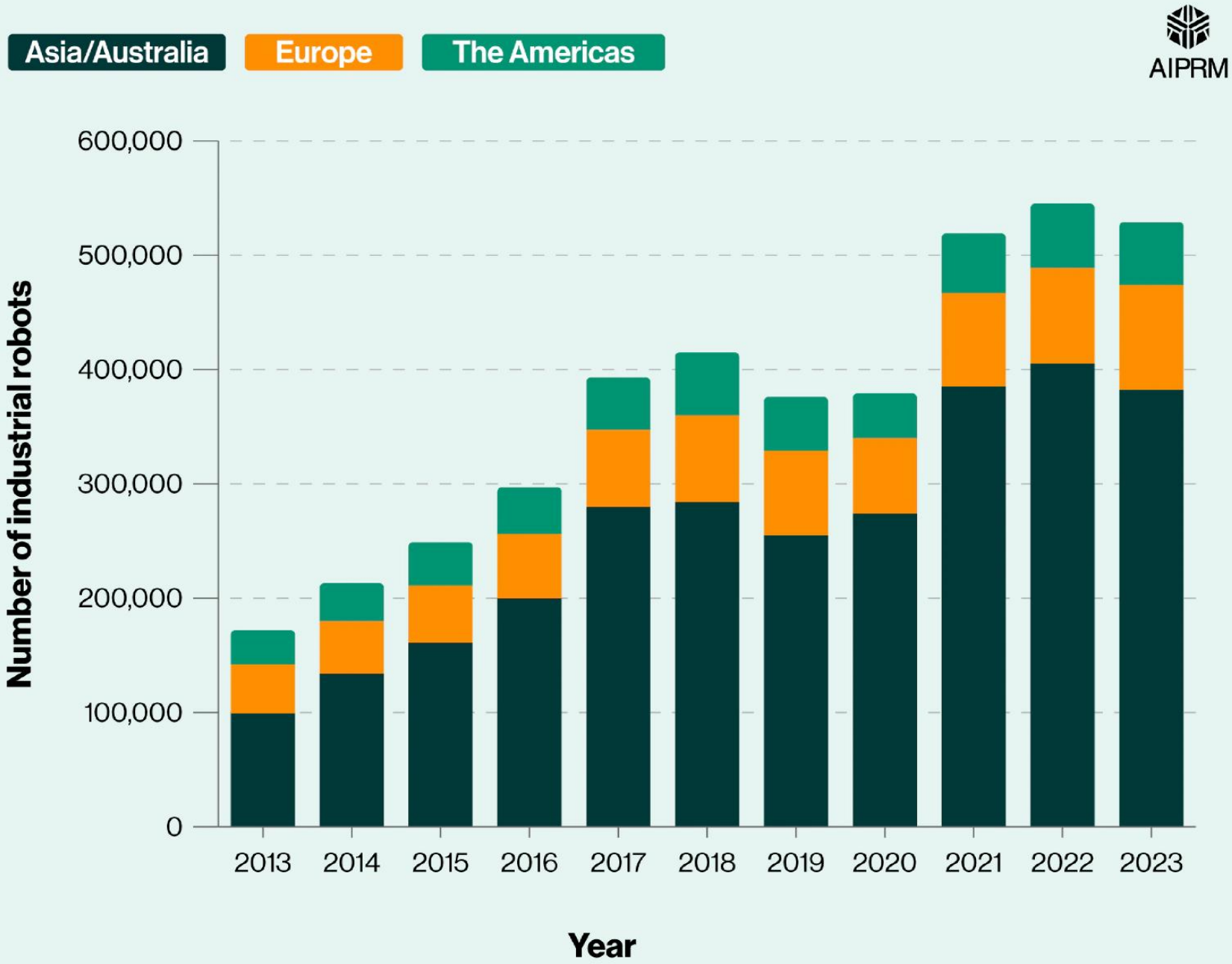
Percentage of global industrial robots by application (%)

Application

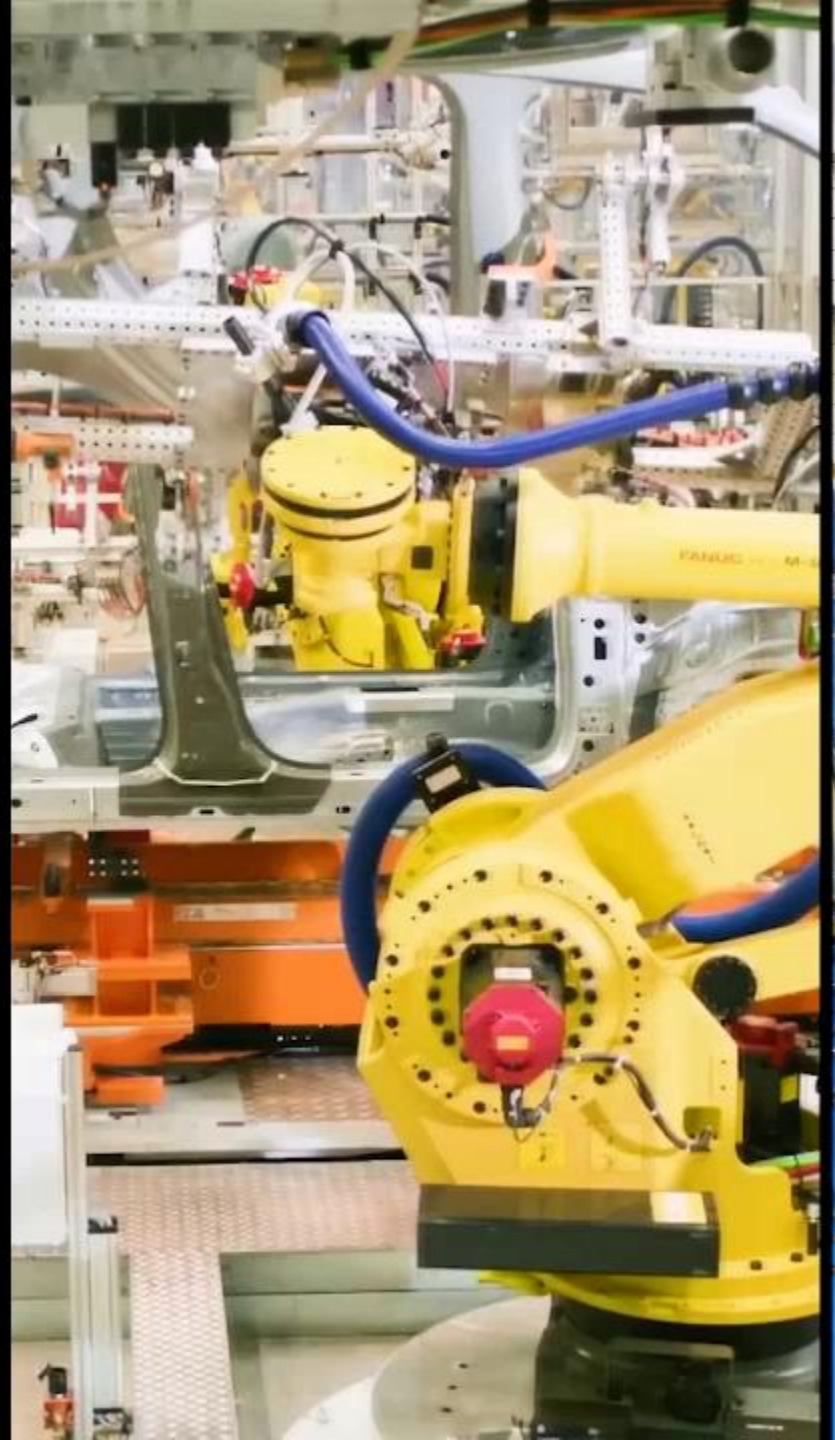
AIPRM



Source: Statista

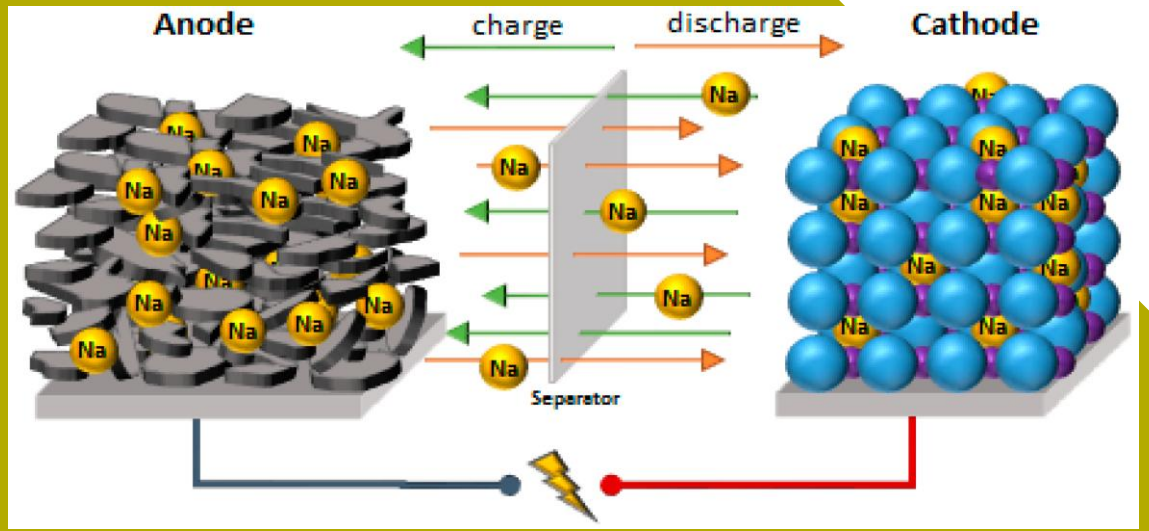


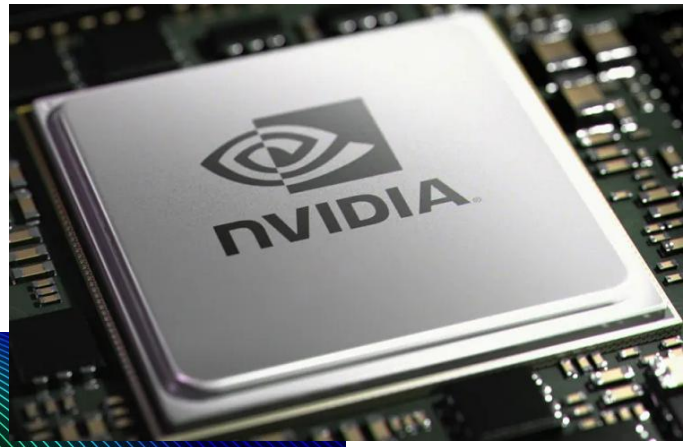
Source: IFR.org

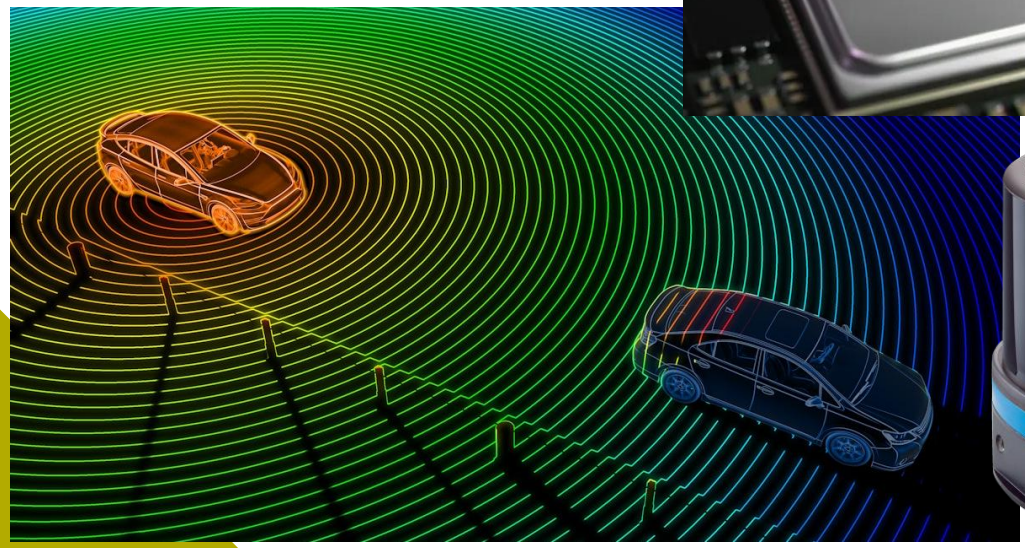



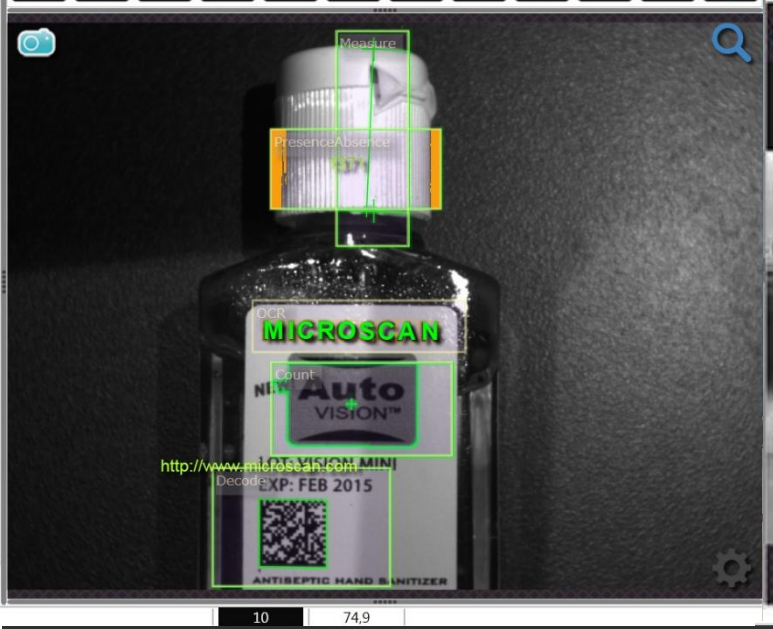

การเปลี่ยนแปลงครั้งสำคัญ: (ก้าวข้าม)

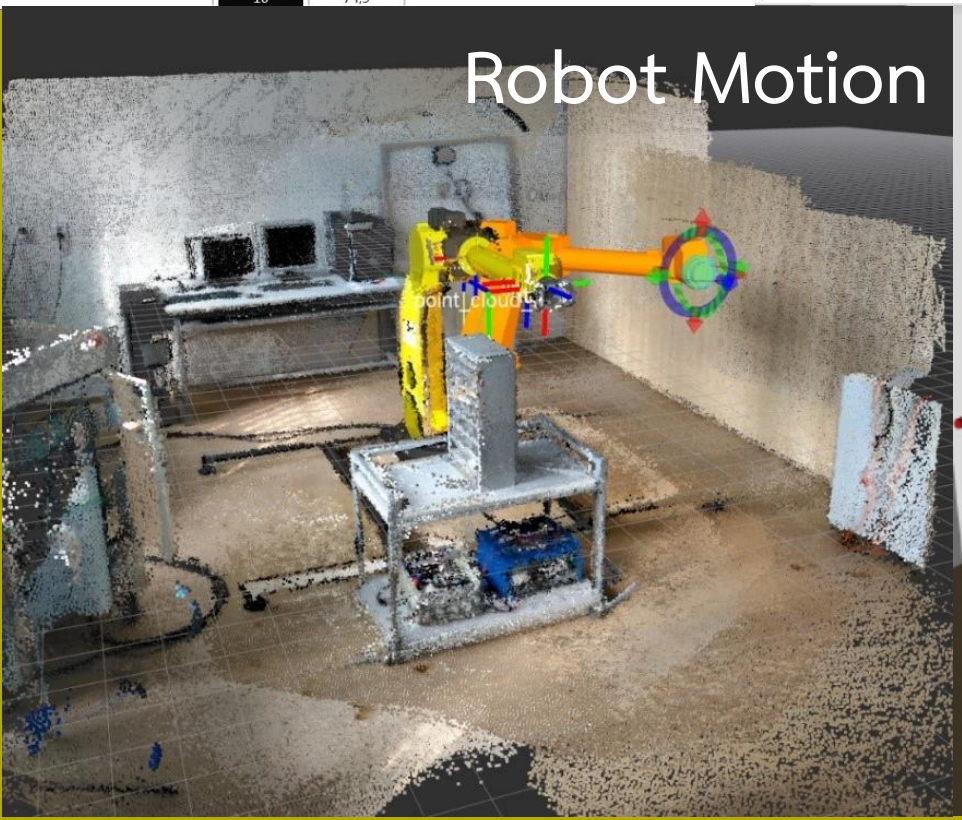
เทคโนโลยีที่ก้าวหน้าขึ้น ไม่ว่าจะเป็น **เซ็นเซอร์ที่ฉลาดขึ้น, AI, IoT, แบตเตอรี่ที่มีประสิทธิภาพสูง** ทำให้หุ่นยนต์สามารถหลุดพ้นจากข้อจำกัดเดิม ๆ

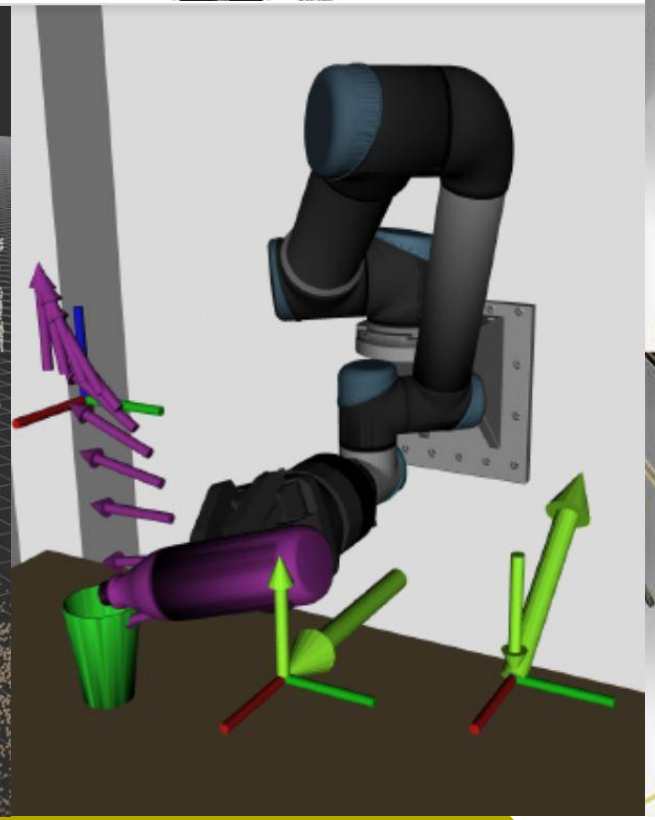


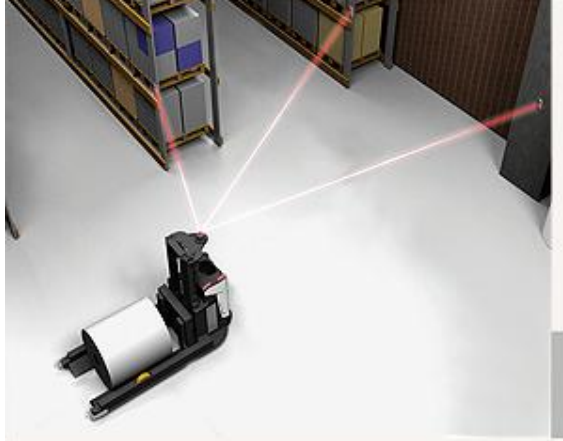


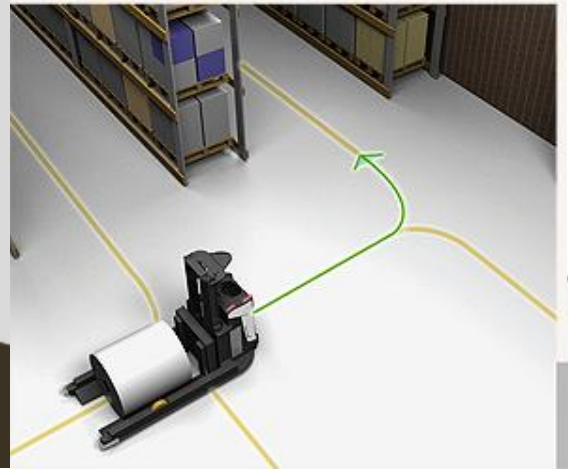










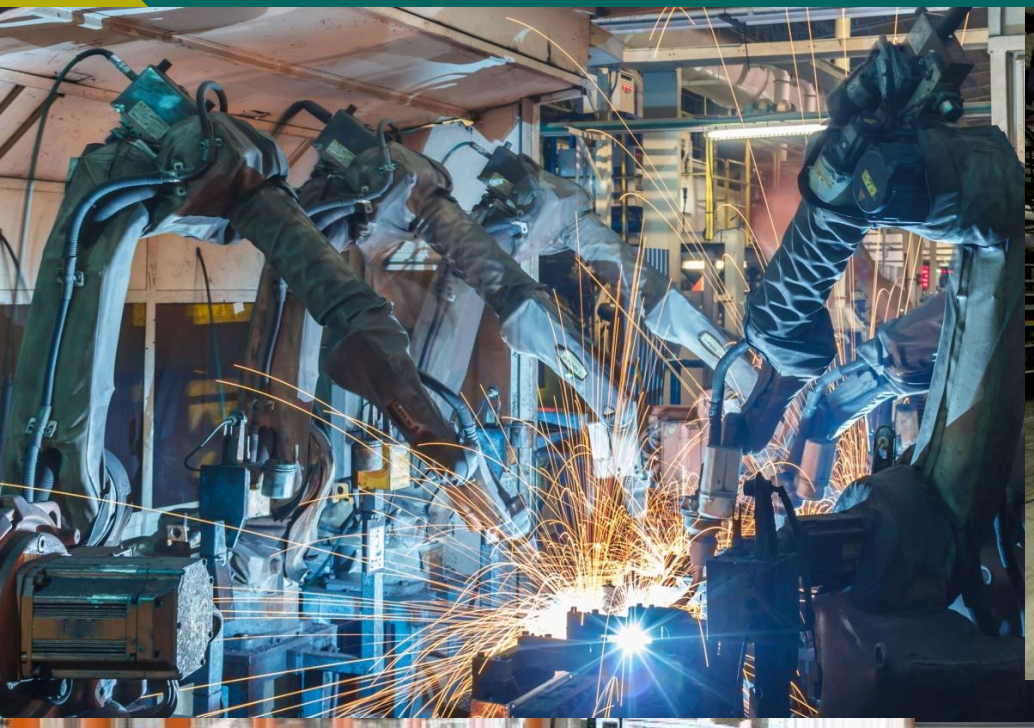


Robot Naviga

Laser triangulation
(the most common)

Floor wire
(for special applications)

Industrial Robots + Automation system



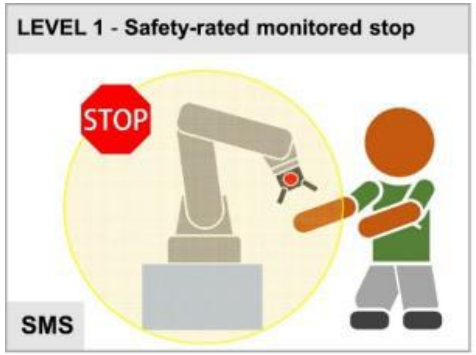

Quicktron
快仓
AUTOMATED
WAREHOUSE ROBOT

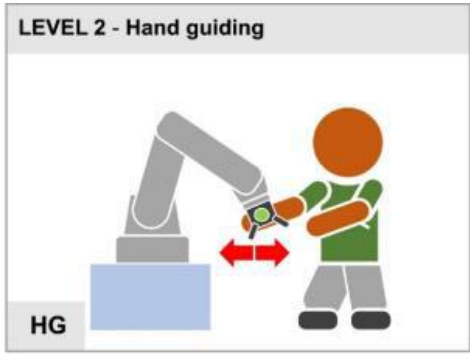

Line 1
Line 2
Line 3
Line 4

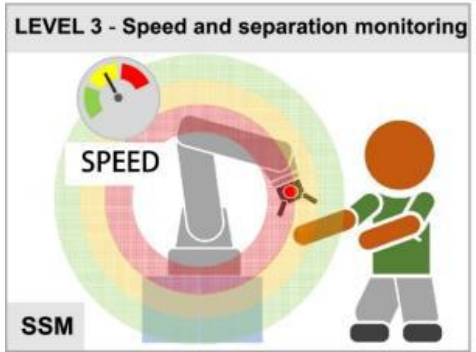

5
DBT Corporation

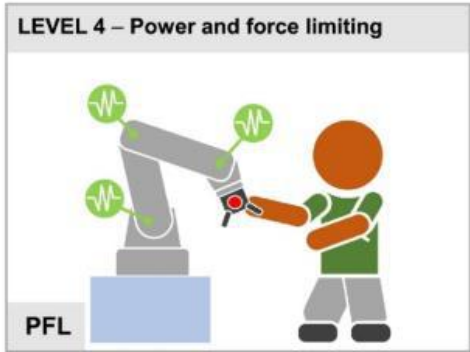

The Feed.


Wearables
Industrial augmented reality
Unmanned aerial vehicle
Computer vision
Cobot
Machine anlaytics
Unmanned truck
IoT sensors for supply chain management
Smart packaging


LEVEL 1 - Safety-rated monitored stop
STOP
SMS


LEVEL 2 - Hand guiding
HG

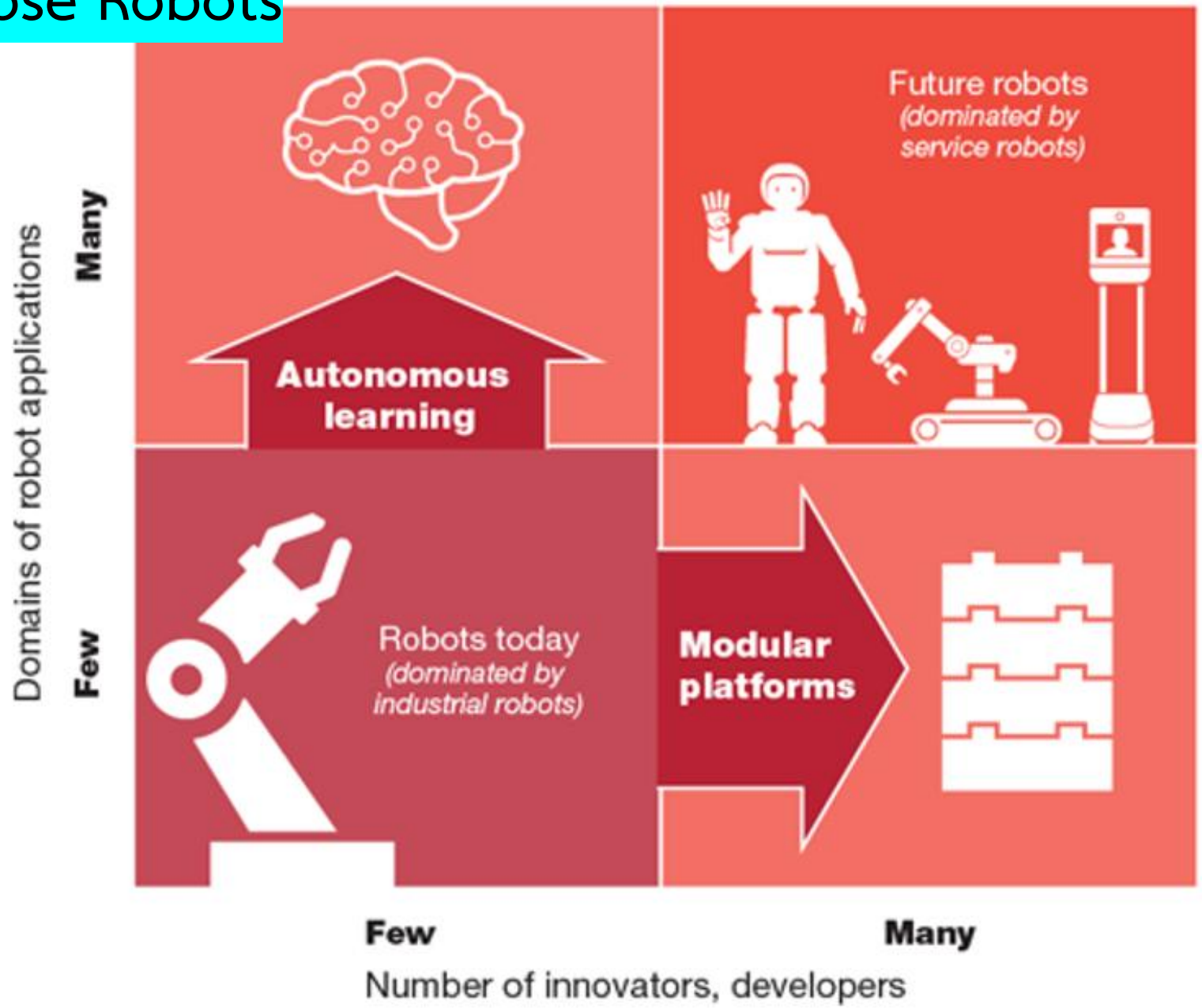

LEVEL 3 - Speed and separation monitoring
SPEED
SSM


LEVEL 4 – Power and force limiting
PFL

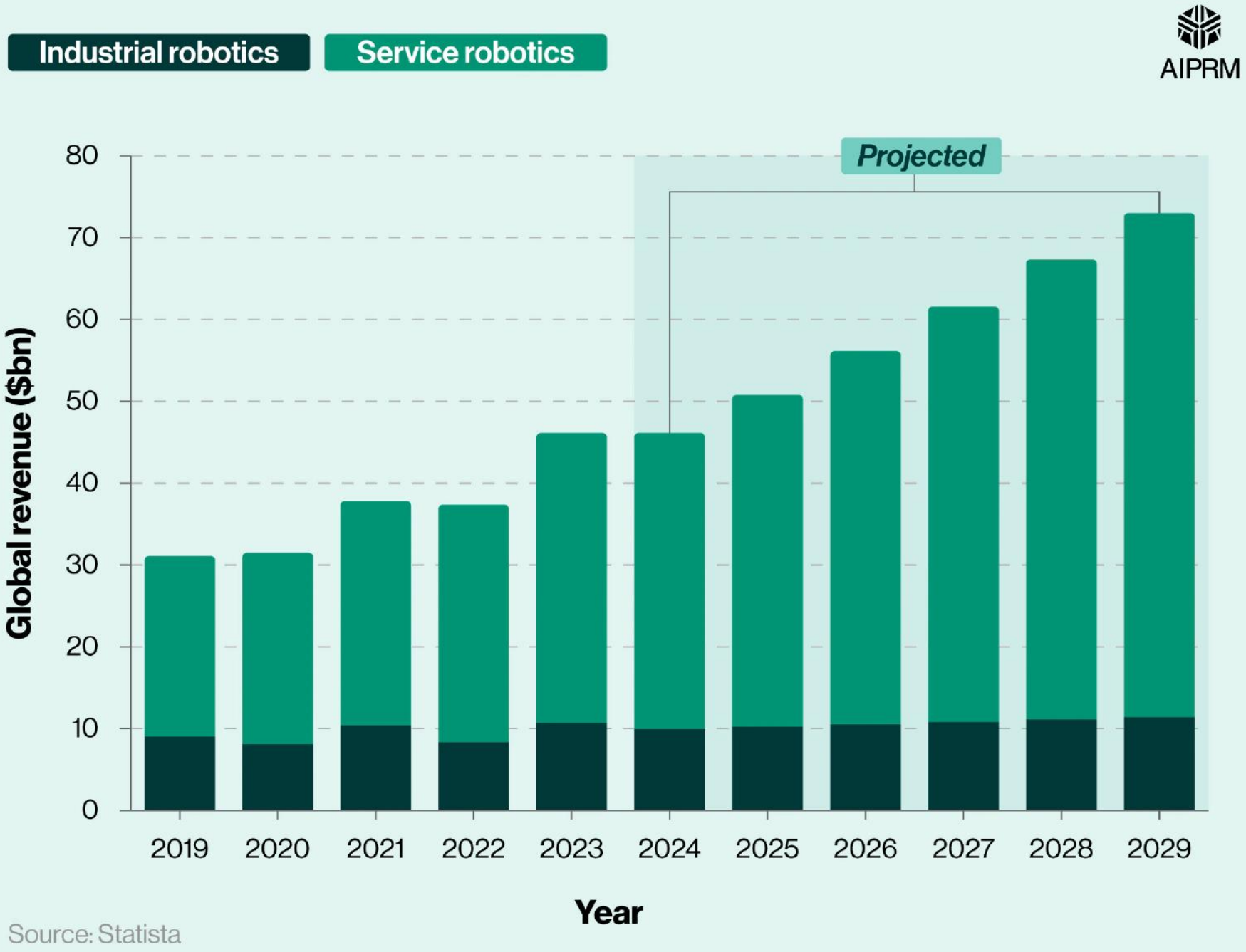

B06

ก้าวสู่ยุคใหม่: ยุคใหม่ของหุ่นยนต์ไม่ได้มีเพียงรูปแบบเดียวอีกต่อไป แต่เป็นยุคของ **"ความหลากหลาย" (Diversity)** ที่หุ่นยนต์ถูกออกแบบมาเพื่อภารกิจที่เฉพาะเจาะจงมากขึ้น

Industrial to General Propose Robots



Global revenue from industrial and service robotics (2019-29)



Commercial Consumer

AIPRM

Service robotics market share by region (2023)

Region	Market share (%)
Asia Pacific	36%
North America	30%
Europe	26%
Latin America	4%
Middle East and Africa	2%

(Source: Precedence Research)

Source: Statista

Service Robots everywhere in the Near Future



$ =$10m

Year

2023	$ $ $ $ $	
2024	$ $ $ $ $ $	
Projected		
2025	$ $ $ $ $ $ $	
2026	$ $ $ $ $ $ $ $	
2027	$ $ $ $ $ $ $ $ $	
2028	$ $ $ $ $ $ $ $ $ $	
2029	$ $ $ $ $ $ $ $ $ $ $	
2030	$ $ $ $ $ $ $ $ $ $ $ $ $	$128.06bn
2031	$ $ $ $ $ $ $ $ $ $ $ $ $ $	$147.65bn
2032	$ $ $ $ $ $ $ $ $ $ $ $ $ $ $	$170.25bn
2033	$ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $	$190.84bn
2034	$ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $	$212.77bn

Market size ($bn)

Source: Precedence Research

Service Robotics Market

Trends, by Region, 2024 - 2030

GRAND VIEW RESEARCH

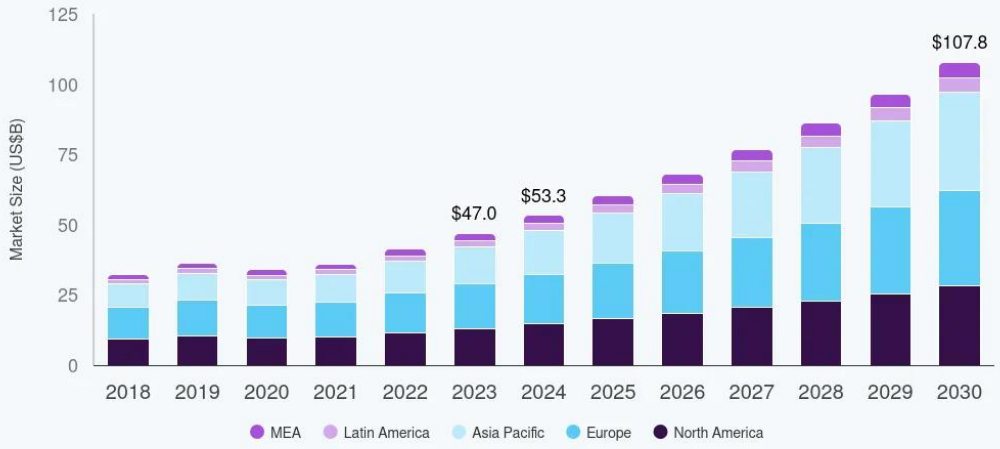
33.7%

Europe Market Revenue Share, 2023

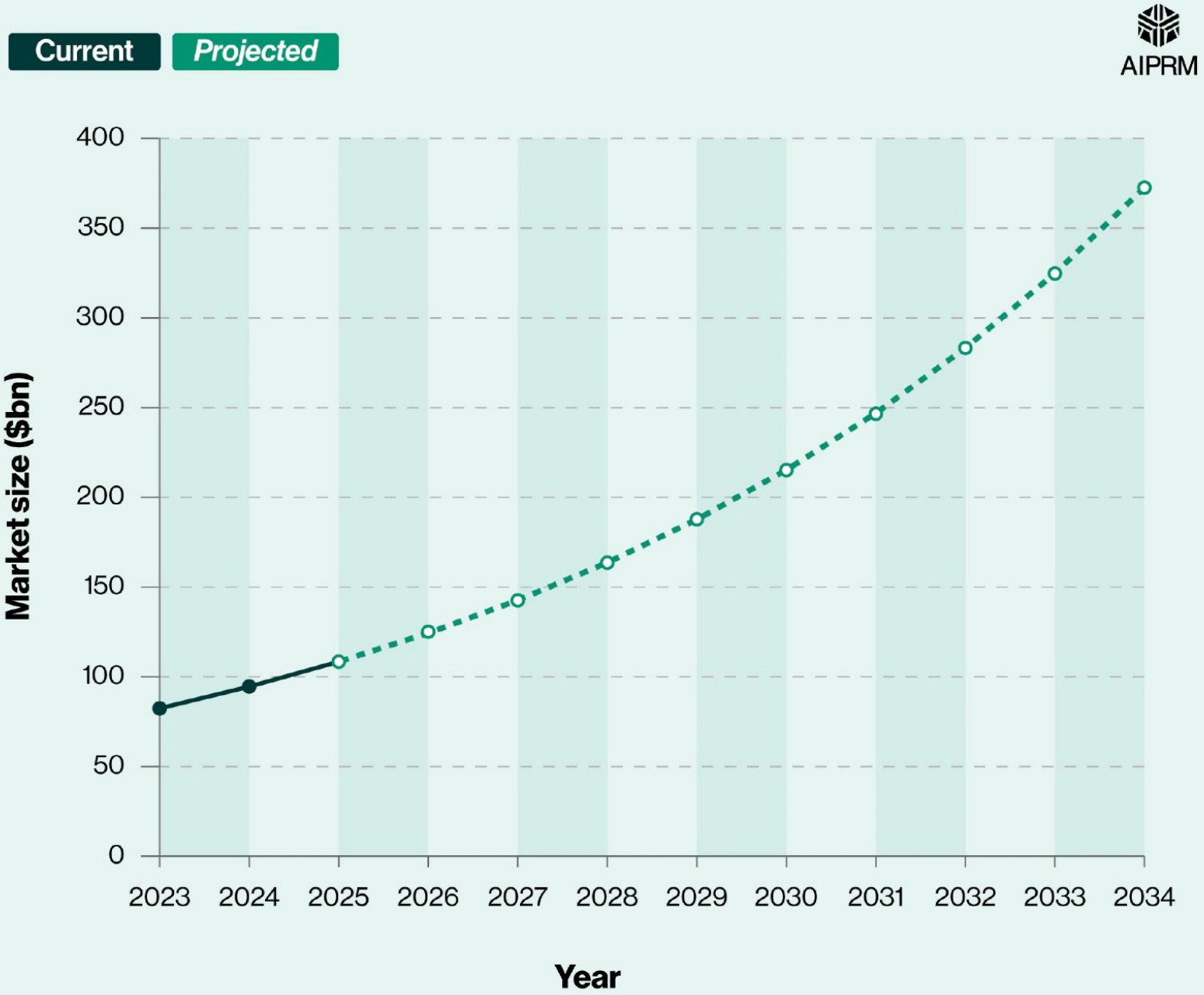
Source: www.grandviewresearch.com

Service Robotics Market

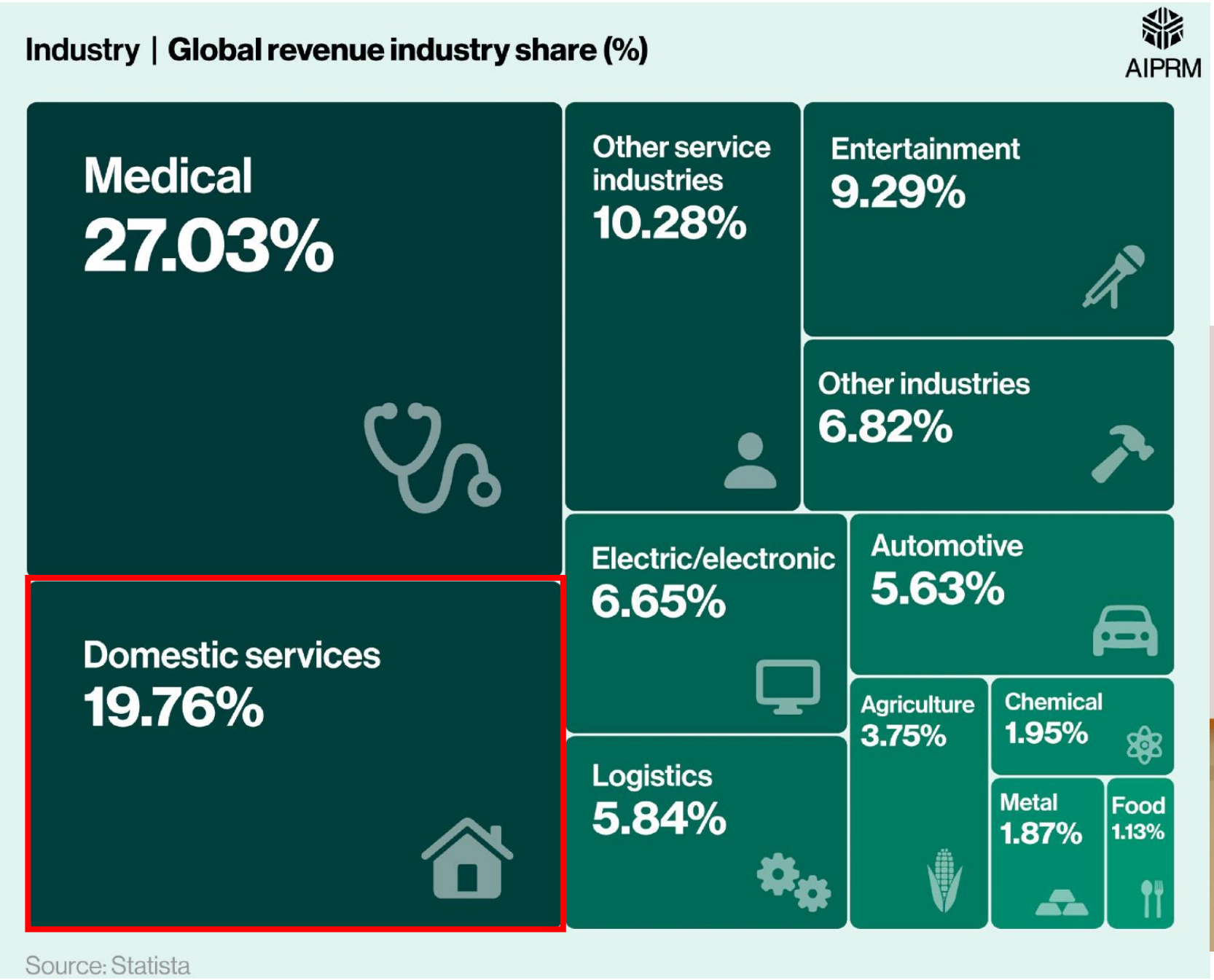
Size, by Region, 2018 - 2030



Robotics technology market size (2023-34)



Source: Precedence Research



Global revenue industry share for robotics (2025)

Sensor/Hardware

Force sensor

Microphone (array)

Wheels or Legs

Hardware/Arms

2D & 3D cameras

Speech to Text

Text to Voice

Sensor/Hardware

Software

Navigation / Path Planning

Object avoidance

Sound direction

Human-Robot Interface

Emotion display

Chat Bot !

AI / NLP / Finite SM

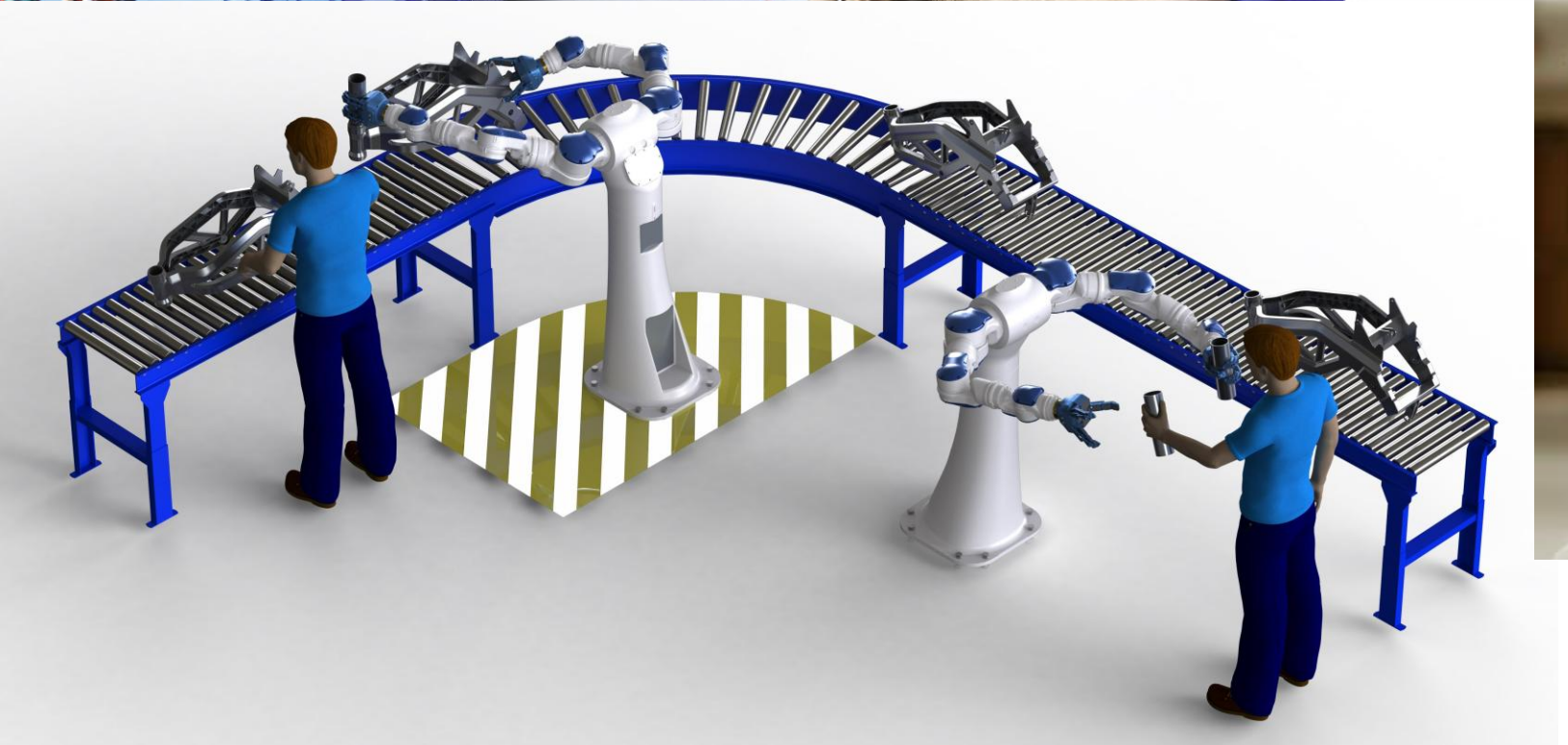
Algorithms

Recognition system

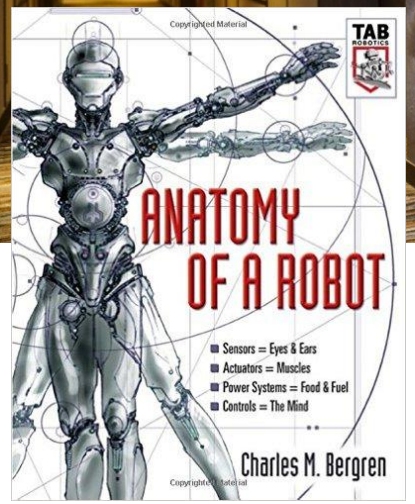
Machine Learning

Machine Vision

Software



Collaborative Robots



Service Robots are everywhere

Robot can be simple

As long as it can help people

Need Service Robots

Social Distancing

โอกาสใหม่ ๆ และการข้ามภาคส่วน (Cross-Sector Opportunities)
โอกาสสำหรับบริษัท และ นักวิจัยไทย

MOLEY

ROBOTICS


MCOT HD 30
LIVE
ยาแก้ไอ
อาปากเช่
9 ข่าวเที่ยง
สายตรงชาวไทย

พลายเอจีวี พาเลตสแตคเกอร์ หุ่นยนต์รถโฟล์คลิฟท์อัตโนมัติ สำหรับคลังสินค้าและไลน์การผลิตโรงงาน

GENSURV ROBOTICS


ข่าวไทย
MCOT HD
LIVE

Where Can We go from Here ?

Industry 1.0

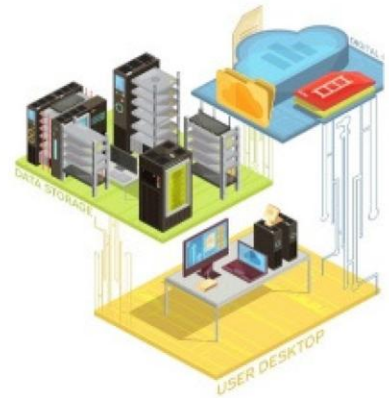
Steam Engine
Mass Production
Mechanisation

Industry 2.0

Assembly Lines
Mass Production

Industry 3.0

Automation
IT Systems
Electronics

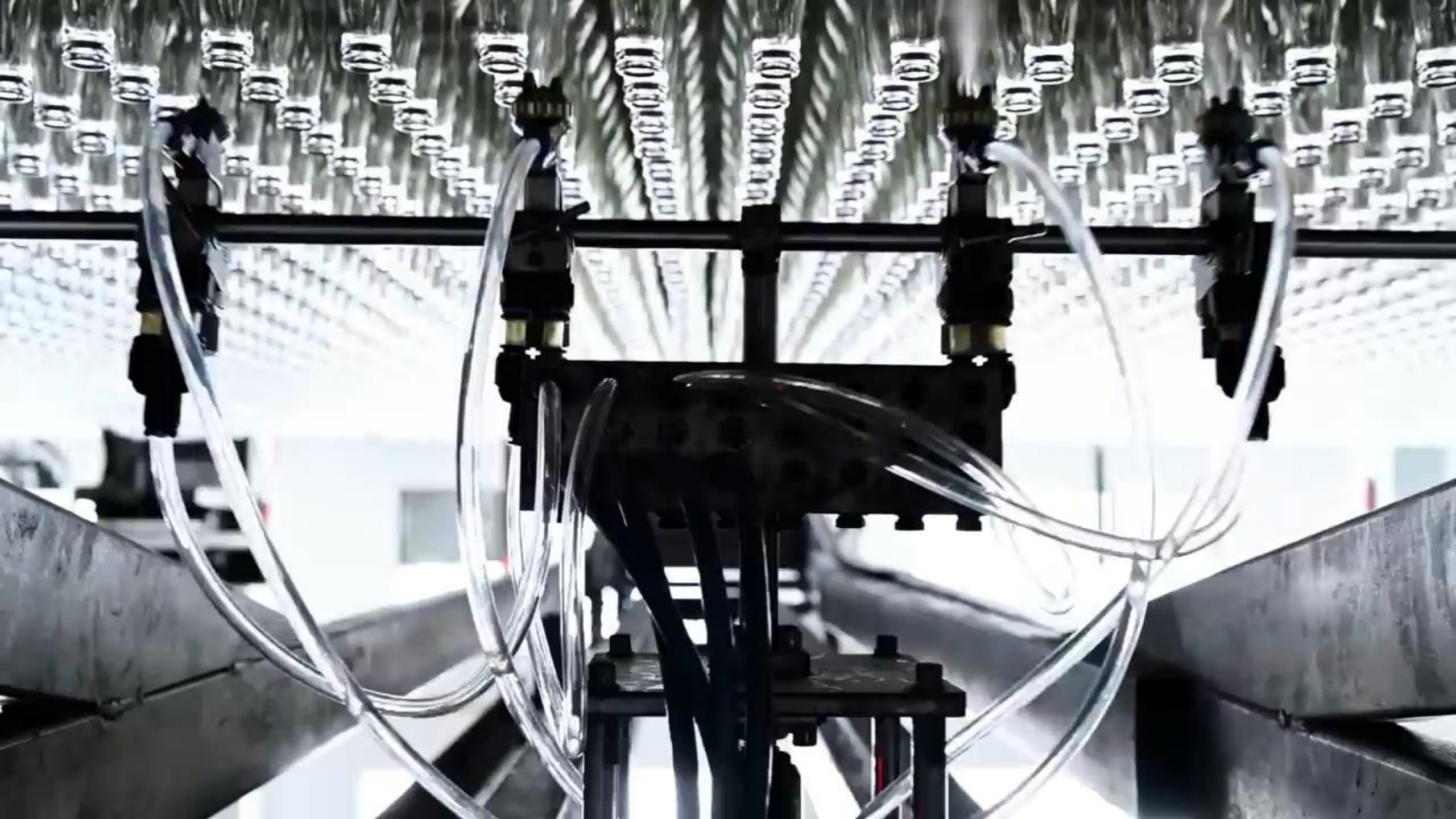


Industry 4.0

Cyber-Physical
Systems, Cloud
Computing, and
Internet of Things

Industry 5.0

Human-Robot
Collaboration, Mass
Customisation



Humanoid Robots 2025

Made Visual Daily
MADEVISUAL.CO

	x1	Figure	Sanctuary AI	Aptronik	Agility	Boston Dynamics	Unitree	Tesla
	Gamma	02	Phoenix	Apollo	Digit	Atlas	H1	Optimus
	5'6" / 167cm	5'6" / 168cm	5'7" / 170cm	5'8" / 167cm	5'9" / 175cm	5'9" / 175cm	5'11" / 180cm	5'11" / 180cm
Weight*	66 lb / 30 kg	154 lb / 70 kg	155 lb / 70 kg	160 lb / 72.5 kg	143 lb / 65 kg	165 lb / 75 kg	104 lb / 47 kg	103 lb / 47 kg
Speed*	1.1–1.5 m/s (est.)	1.2 m/s	1.34 m/s	1.52 m/s	1.5 m/s	1.5 m/s	3.3 m/s	1.5 m/s
Strength*	44+ lb / 20+ kg	44 lb / 20 kg	55 lb / 25 kg	55 lb / 25 kg	35 lb / 16 kg	Not specified	Not specified	45 lb / 20 kg

*Reported


UNITREE
CNET

หุ่นยนต์ในยุคใหม่นี้ไม่ได้ถูกสร้างมาเพื่อแทนที่มนุษย์ แต่ถูกสร้างมาเพื่อ **ทำงานร่วมกับมนุษย์ (Augment Human Capabilities)** ทำให้เรามีเวลาไปทำสิ่งที่สำคัญกว่า และเป็นการสร้าง **“โอกาสสำหรับนวัตกรรมใหม่ๆ”** ในทุกภาคส่วนของสังคม

KASETSART UNIVERSITY

Experience in Robotic industry

Ex-CTO in AI & Robot Companies

Lecturer in Government Upskill / Reskill Program

External Expert in Software and Robot Development Project

AI & Robotic in Medical

Lecturer in AI and Robotic Classes

Assoc. Prof. Dr. Kanjanapan Sukvichai

EE Department, Faculty of Electrical Engineering, Kasetsart University, Thailand
Email: fengkpsc@ku.ac.th

Acting President of Thai Robotics Society

Head of RobotCitizens research group

Deputy Director of the integrated innovation and artificial intelligence center

DUGA
Thai Digital Technology User Group Association
สมาคมผู้ใช้ดิจิทัลไทย

ROBOTICS SUMMIT

TRS
THAI ROBOTICS SOCIETY

KU

THANK YOU