WE EMPOWER HUMANITY WITH TECHNOLOGY

UNITED ROBOTICS GROUP
the **CobiotX** company

OUTLINE
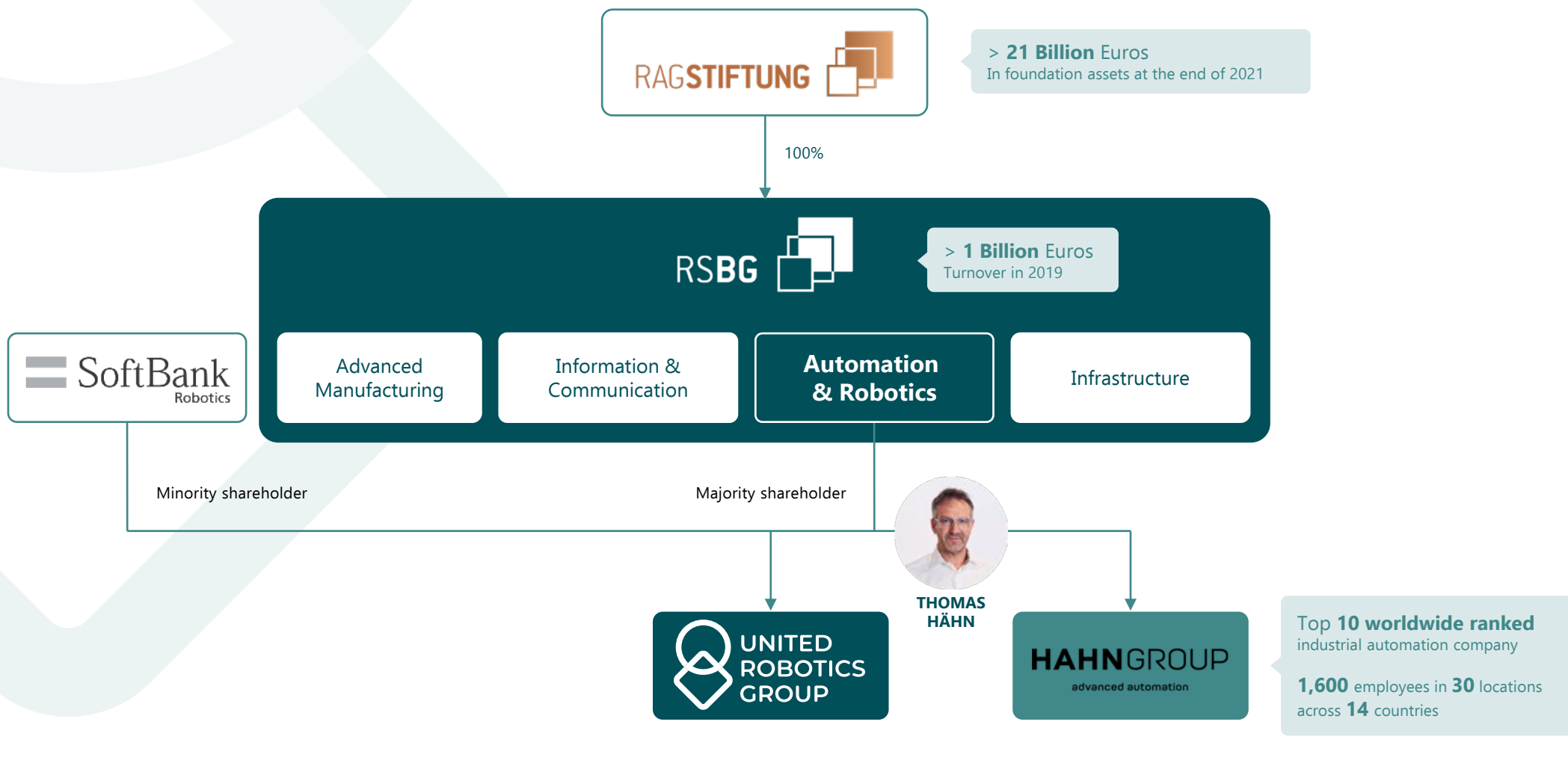
- **UNITED ROBOTICS GROUP – INTRO & COBIOTX**
- **NAO**
- **CONTACT**

OUTLINE

UNITED ROBOTICS GROUP, WE COME FROM A RECOGNIZED & VISIONARY FUND: RAG STIFTUNG, AND WE ARE PART OF RSBG AUTOMATION & ROBOTICS.
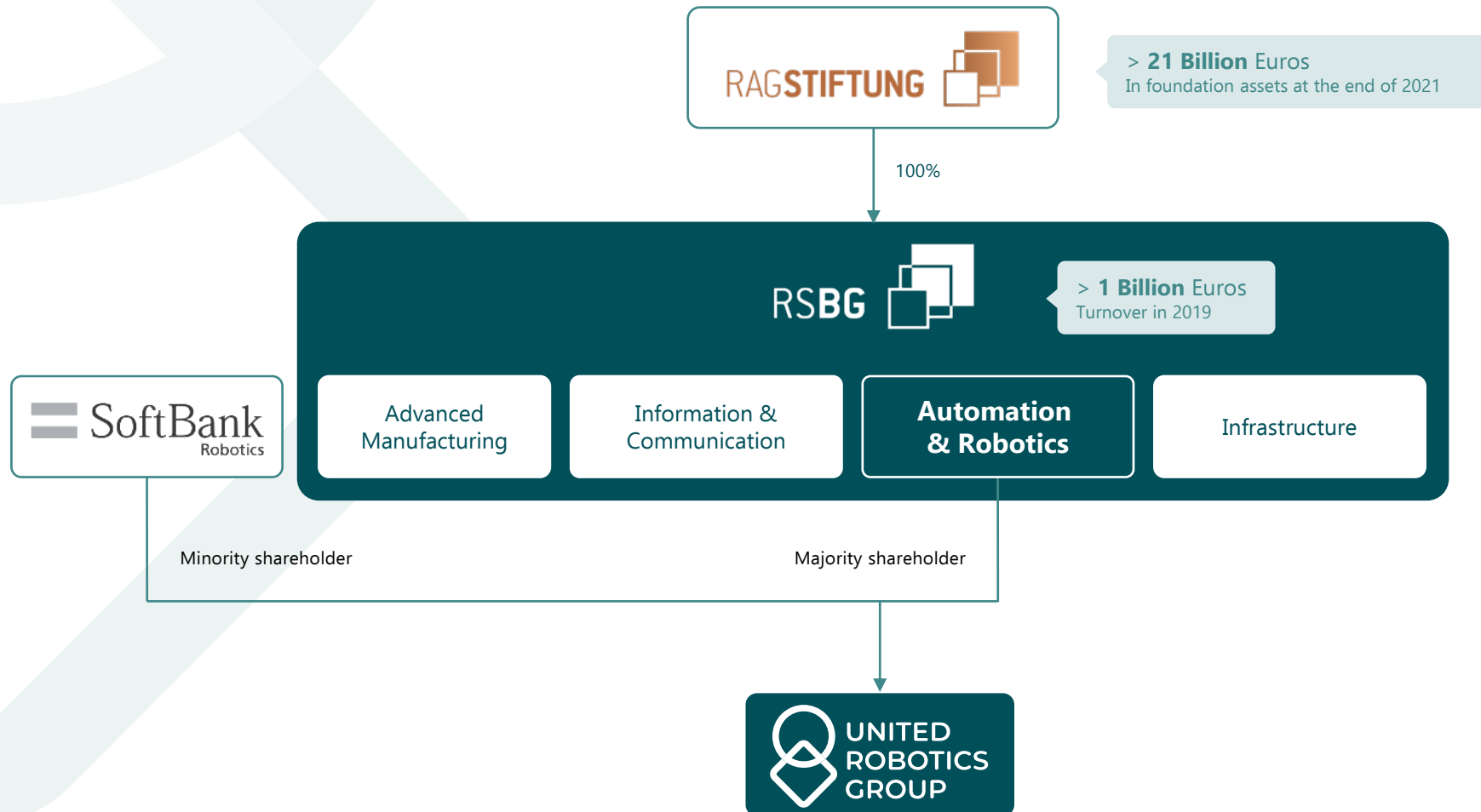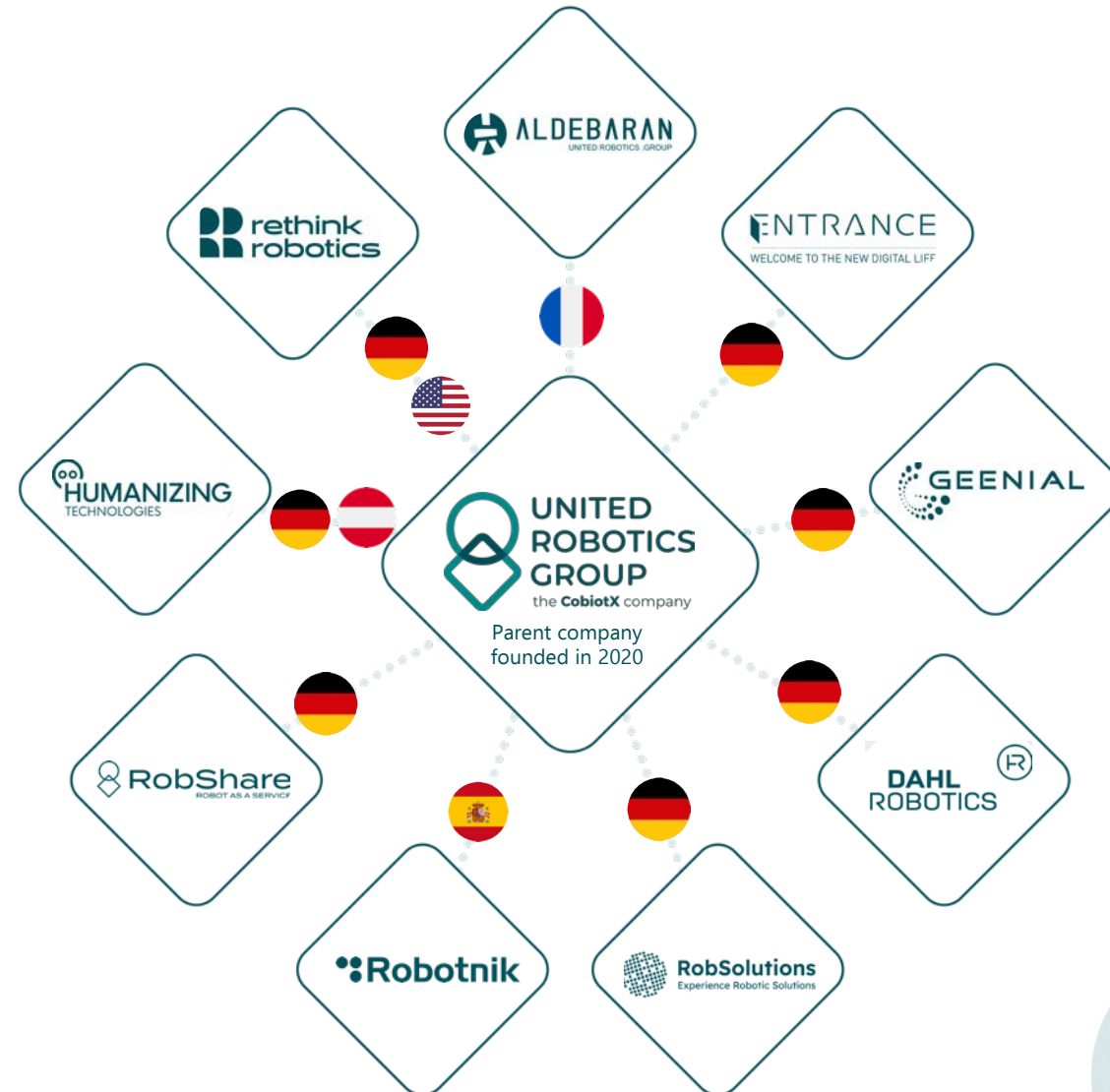
URG – WE ARE SISTER COMPANIES WITH HAHN GROUP, WE SHARE THE SAME ORIGIN AND SAME FOUNDER: THOMAS HÄHN, WHO IS ALSO THE CEO OF RSBG AUTOMATION & ROBOTICS

RAGSTIFTUNG

> **21 Billion** Euros
In foundation assets at the end of 2021

100%

RSBG

> **1 Billion** Euros
Turnover in 2019

| SoftBank Robotics | Advanced Manufacturing | Information & Communication | **Automation & Robotics** | Infrastructure |

Minority shareholder

Majority shareholder

THOMAS HÄHN

UNITED ROBOTICS GROUP

HAHNGROUP advanced automation

Top **10 worldwide ranked** industrial automation company

1,600 employees in **30** locations across **14** countries

UNITED ROBOTICS GROUP the CobiotX company

...NOW WE ARE FORMED OF ONE UNITED GROUP OF 9 ROBOTIC COMPANIES.

WE ARE A EUROPEAN ROBOTICS CHAMPION...

>450
employees

European corporation with American and Japanese roots

>40.000
Robots in the field

Stands for European, human-centric values in relation to privacy, security, safety & sustainability

Works with
>1.000 universities and research institutes

>10.000
existing customers

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Expression & Attractivity

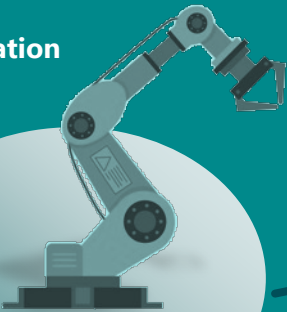Perception & Communication

Contextual Interaction

Autonomy & Mobility

Physical Interaction

WE ARE THE **UNIFIER & PIONNER** OF
ROBOTS-FOR-HUMANS EXPERIENCE...
WE UNIFY **SOCIAL & INDUSTIRAL** ROBOTS

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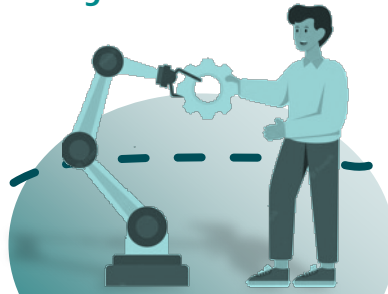**WE ARE CREATING A NEW ERA OF ROBOT: COBIOTX**

1st generation
Robots
Designed to
Work independently
FROM people

2nd generation
Cobots
Designed to
Work side by side
WITH people

3rd generation
CobiotX
Designed to
Work hand in hand
FOR people

UNITED ROBOTICS GROUP
the **CobiotX** company

What does Cobiot X by united robotics group stand for?

Co — Collaboration

bio — Life, Emotion, Sustainability

bot — Technology, Automation, Efficiency

iot — Connection, Exchange, Perception

X — Diversity, Versatility, eXperience

THE TIME HAS COME TO COBIOTX : UNITE THE BEST OF ROBOTICS, AI AND PEOPLE FOR A MORE HUMAN WORLD.

Designed for & controlled by humans

Respectful of data privacy and human safety

Agile, versatile, and flexible between missions

Dynamically adapts to existing human environments

Work hand in hand **FOR** people

Socially responsible for nature and humanity

CobiotX
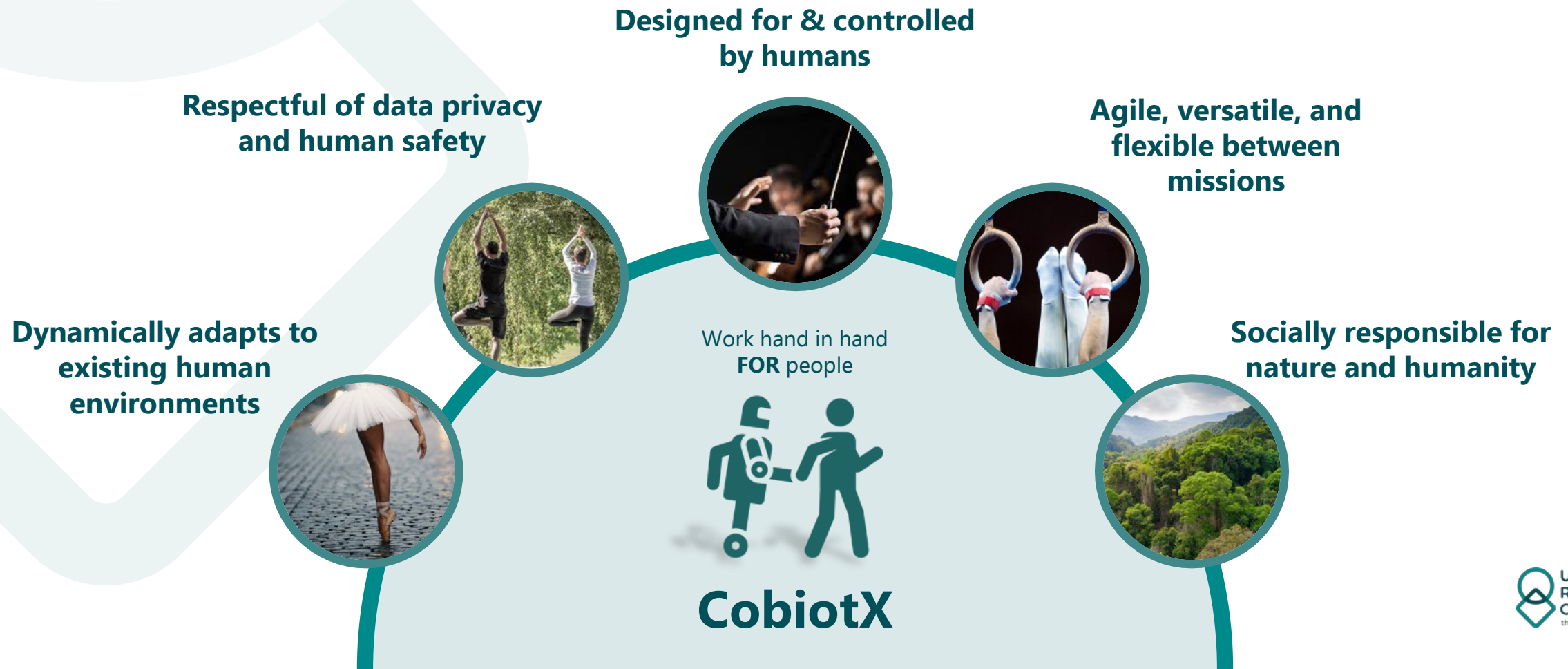
WE ARE DEDICATED TO DESIGN AND CREATE
ROBOTS FOR HUMANS...

Sawyer

The smart collaborative robot, born in MIT

plato

The first serving Cobiot

NAO 6

The most well-known humanoid robot for education

uMobileLAB
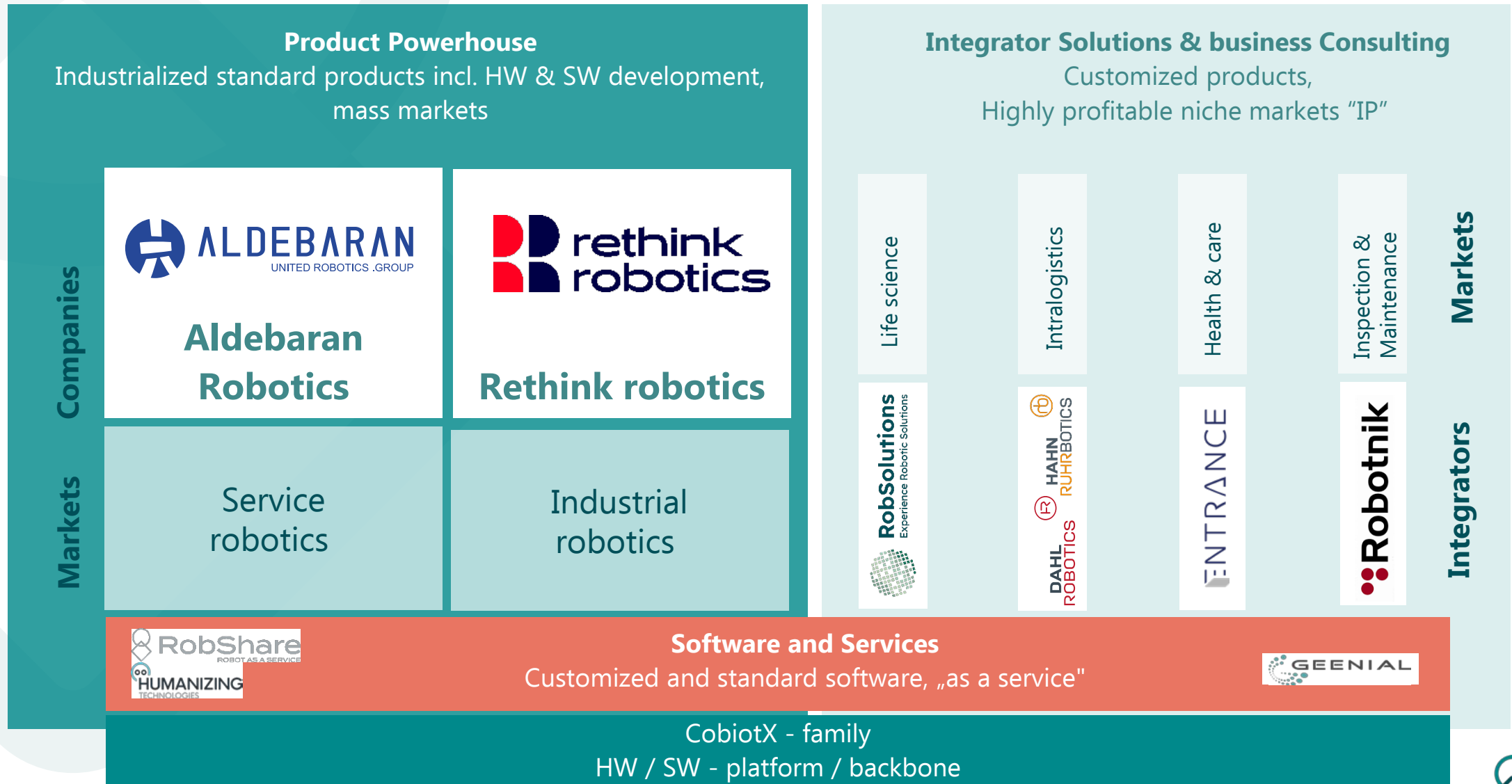
The agile mobile robot for Lab Automation*
*Powered by RobSolutions, part of United Robotics Group

pepper

The world first emotional robot

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WITH OUR OWN ECOSYSTEM OF ROBOTICS EXPERTS...

Product Powerhouse
Industrialized standard products incl. HW & SW development,
mass markets

Integrator Solutions & business Consulting
Customized products,
Highly profitable niche markets "IP"

Companies

ALDEBARAN UNITED ROBOTICS .GROUP	rethink robotics
Aldebaran Robotics	**Rethink robotics**

Markets

Service robotics	Industrial robotics

Markets

- Life science
- Intralogistics
- Health & care
- Inspection & Maintenance

Integrators

- RobSolutions — Experience Robotic Solutions
- DAHL ROBOTICS / HAHN RUHRBOTICS
- ENTRANCE
- Robotnik

Software and Services
Customized and standard software, „as a service"

RobShare ROBOT AS A SERVICE
HUMANIZING TECHNOLOGIES
GEENIAL

CobiotX - family
HW / SW - platform / backbone

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...WE PROVIDE INTELLIGENT SERVICES AND STANDARDIZED, CUSTOMIZED & END-TO-END ROBOTIC SOLUTIONS

uMobileLog & uMobileLab

'The Box' for Lab Automation

Industrial inspecting

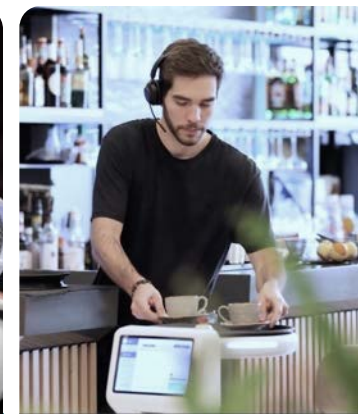Workstation delivering

Intralogistics automation

Serving drinks

Greeting

Learning

Helping

Carrying & delivering

Some examples, not limited.

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...TO FULFILL DIFFERENT NEEDS OF BOTH PUBLIC LIFE AND INDUSTRIAL ENVIRONMENTS

LIFE SCIENCE

HEALTHCARE

EDUCATION

HOSPITALITY

INDUSTRY & INTRALOGISTICS

INSPECTION & MAINTENANCE

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WE ARE TRUSTED BY OUR CUSTOMERS.

WE WORK CLOSELY WITH OUR PARTNERS AND CONTINUOUSLY LOOKING FOR RELIABLE & VALUE-PROOFED BRANDS TO COLLABORATE WITH.

OUTLINE

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EMPOWERING EDUCATION, INSPIRING MINDS - NAO, YOUR BUDDY IN LEARNING

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WHY HUMANOID ROBOTS?

ATTRACTIVE APPEARANCE

Designed without ambiguity, the eye-catching outlook attracts undivided attention

EMOTIONAL EMPATHY

Build empathic & emotional relationship between human & robot

NATURAL BODY LANGUAGE

Fluid and expressive body language together with voice & visual images, which enhance the communication

PROACTIVE ENGAGEMENT

Being perceived as 'no danger', 'no judgement' & 'in-control'
Proactively engage in icebreaking conversations

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WE DESIGN BEST-IN-CLASS ROBOTS TO MEET THE HIGHEST HUMAN ACCEPTANCE

Uncanny valley – A hypothesized relationship between the degree of an object's resemblance to a human being and the emotional response to it.

Before reaching this point, the objects became more human-like, people would find them to be **more acceptable and appealing than** their **mechanical counterparts**.

When human-likeness increases below this point, when they are close to, but not quite, human, people **develop a sense of unease and discomfort** until it close to a real health human beings.
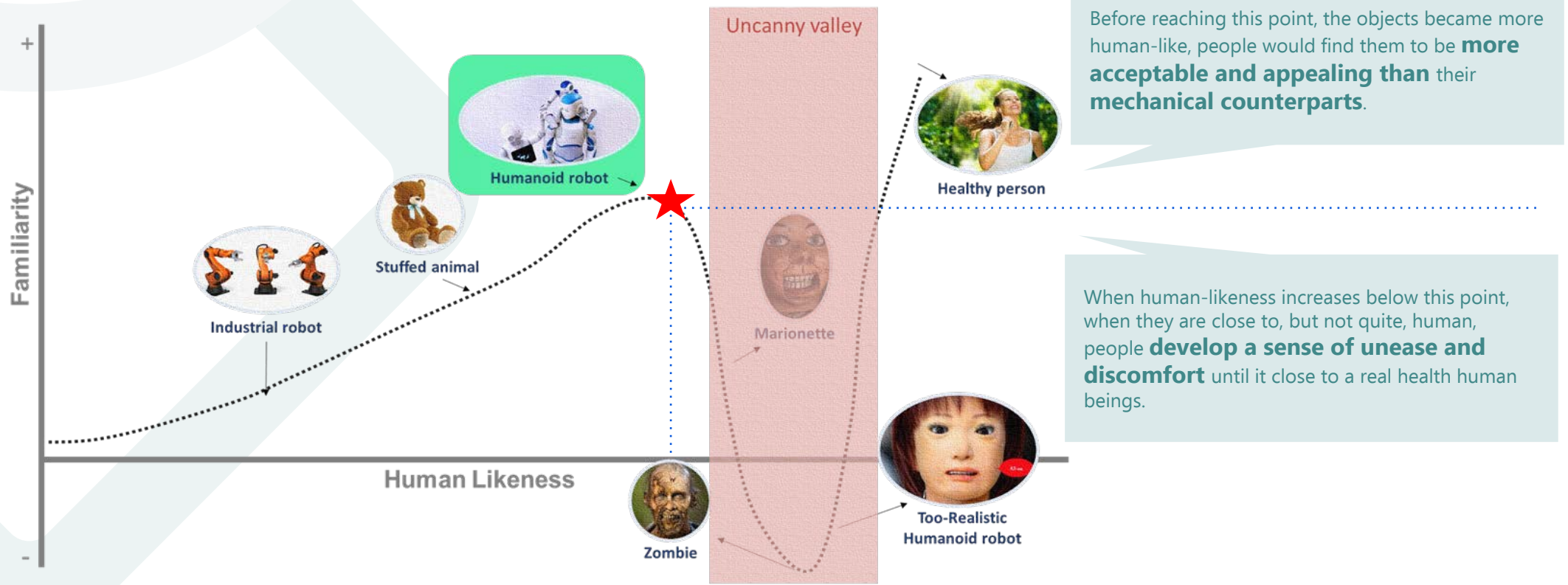
NAO, AN **ATTRACTIVE & PROGRAMMABLE** PLATFORM FOR **UNIQUE** AND **ENGAGING EDUCATIONAL** HUMAN-ROBOT INTERACTION, TAKING ROBOTICS TO THE NEXT LEVEL

DETECTION
2 5-megapixels cameras

ACOUSTIC
4 omnidirectional microphones
2 loudspeakers

COMPUTING
CPU ATOM E3845
Quad core 1.91 GHz
4 GB DDR3 RAM
32 GB SSD

58 cm

CONNECTIVITY
Bluetooth – Ethernet - Wi-Fi

GRACEFUL BODY MOVEMENTS
25 degrees of freedom

EXPLORATION
4 sonars to detect obstacles

ADAPTIVE WALK
8x Force Sensitive Resistors

5,5 kg
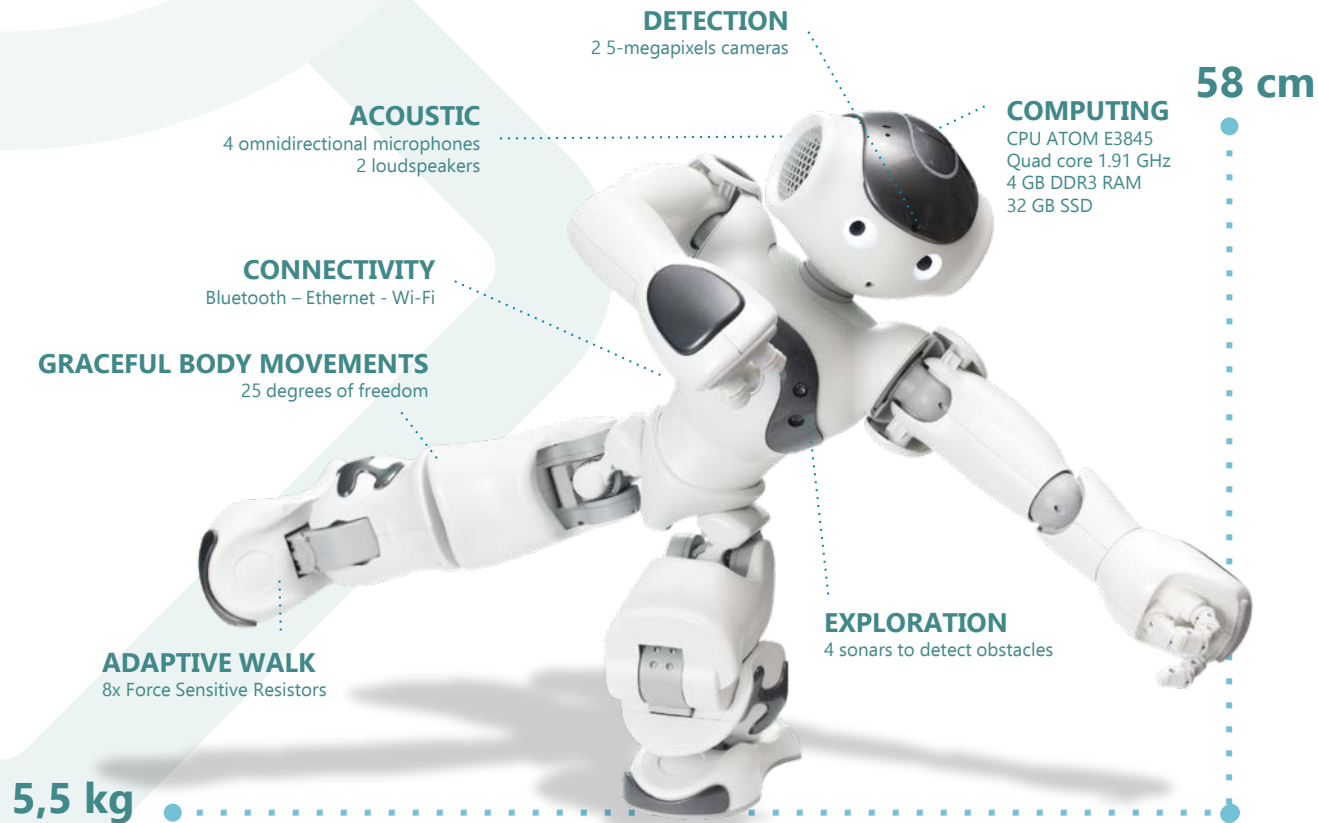
NAO⁶

SPEECH RECOGNITION
More than 20 Languages

FALL MANAGER
Detects falls & trigger the protection

FALL RECOVERY
Able to stand up alone

PREHENSIBLE HANDS
Powerful motors & robust fingers

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NAO IS EQUIPPED WITH **ADVANCED SENSORS, CUSTOMIZABLE PROGRAMMING PLATFORMS,** AND **INTERACTIVE CAPABILITIES** FOR HUMAN-ROBOT INTERACTION AND EDUCATION.

PROACTIVE ENGAGMENT
Detect & attract people with animated expression

OPENNESS
Allow integration & implementation of embedded & external APIs

COGNITIVE COMPUTING
Capture demographic data & emotions of the user

REAL-TIME COMMUNICATION
Update speech & deliver messages with real-time content

LIVELY & FRIENDLY
Adapted robot behavior & perfect ergonomic size -> Embraced-by-all

EASINESS
Easy to use, develop and deploy with its Qi SDK

MULTI -LANGUAGE
Easily speak & switch languages

ROBUSTNESS
coding in a secured environment with resistance & avoidance

IDENTIY RECONGITION
Identify people and objects through code scanning, tablet inputs, and even facial recognition with consent

CUSTOMISED INTERACTION
Adapt the interaction content based on contextualized information

RESPECTS DATA OWNERSHIP
and acts according to GDPR standards

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NAO ROBOTS HAVE NUMEROUS **USE CASES**, INCLUDING TEACHING ASSISTANCE, SPECIALIZED EDUCATION, PROGRAMMING AND ROBOTICS EDUCATION, LANGUAGE LEARNING, RESEARCH, DISTANCE LEARNING AND ELDERLY CARE.

Assist teachers in classrooms by providing engaging and interactive educational activities.

Provide specialized assistance to students with disabilities, such as helping with communication and socialization skills

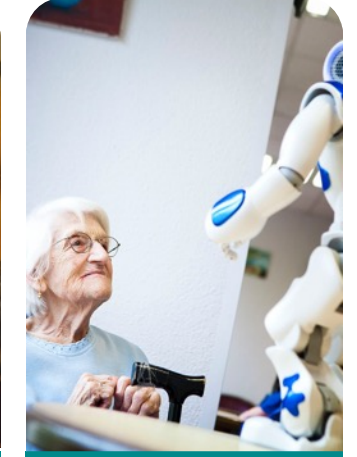Serve as a platform for students to learn programming and robotics skills.

Facilitate language learning through interactive practice and personalized feedback.

Can be used in research areas related to AI and robotics

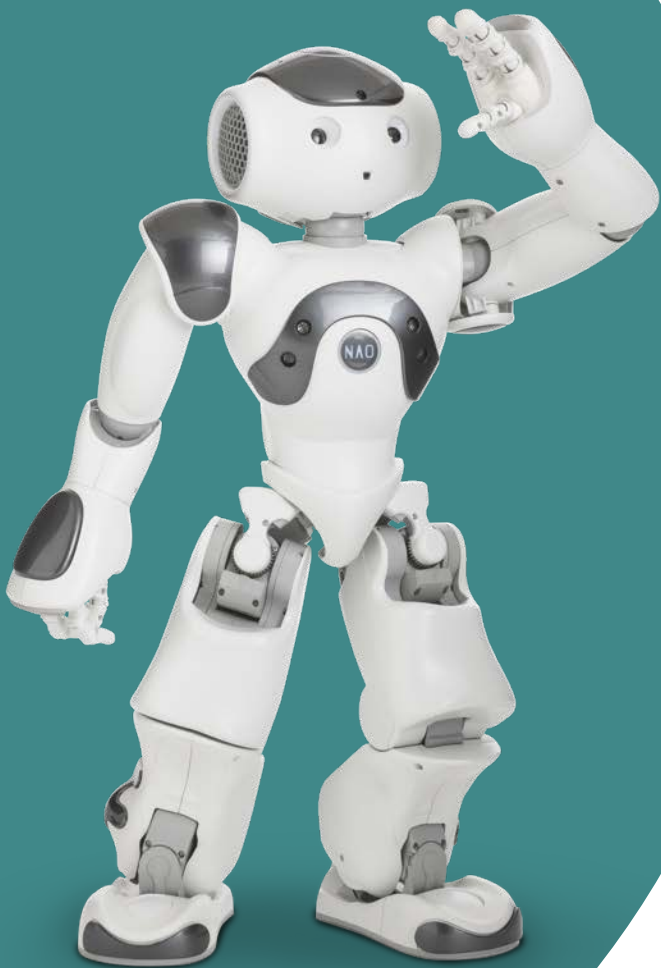Facilitate remote learning experiences by providing 'avatar' interactions with teachers and classmates.

provide companionship, and entertainment to elderlies

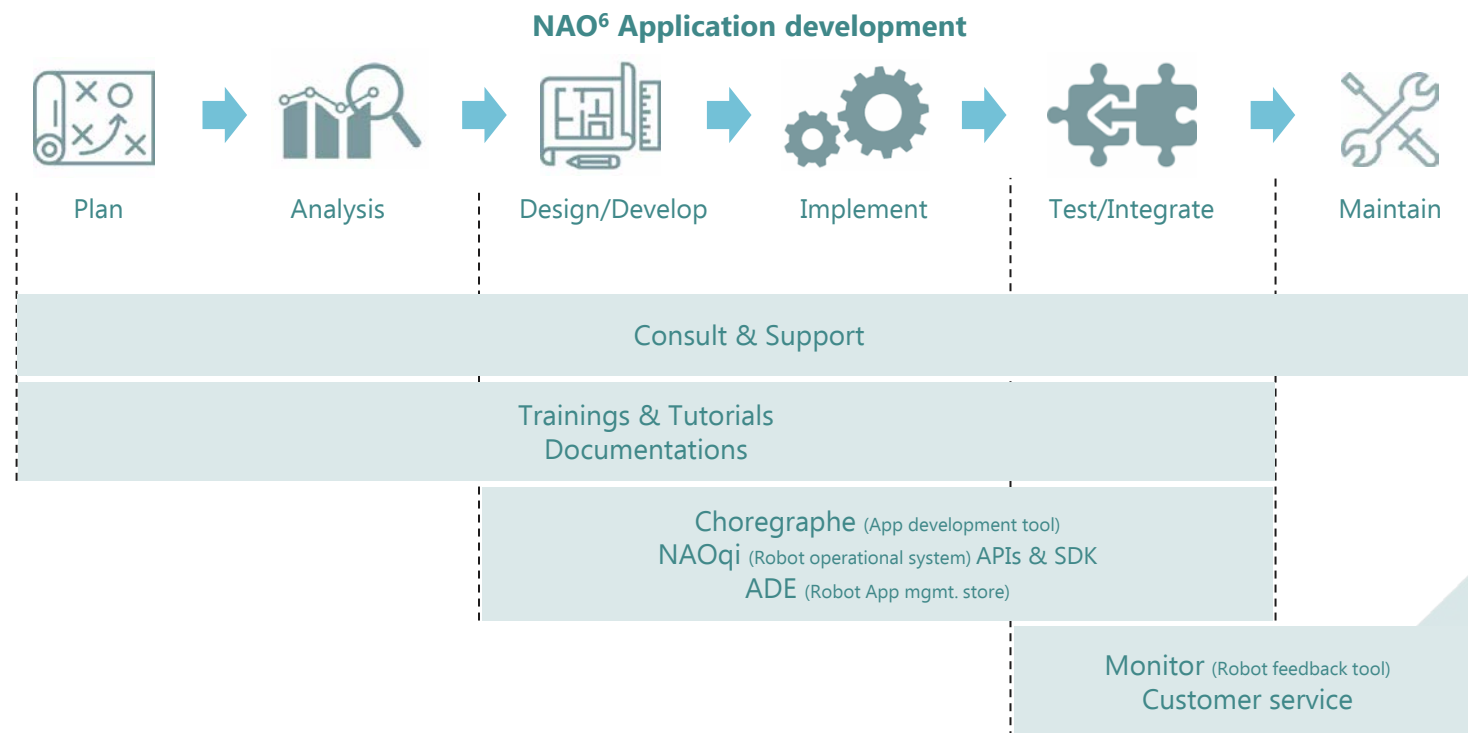UNITED ROBOTICS GROUP
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NAO FOR EDUCATION: DESIGNED TO PROVIDE AN INTERACTIVE AND ENGAGING LEARNING EXPERIENCE WHILE ALSO FACILITATING THE DEVELOPMENT OF PROGRAMMING AND SOCIAL SKILLS.
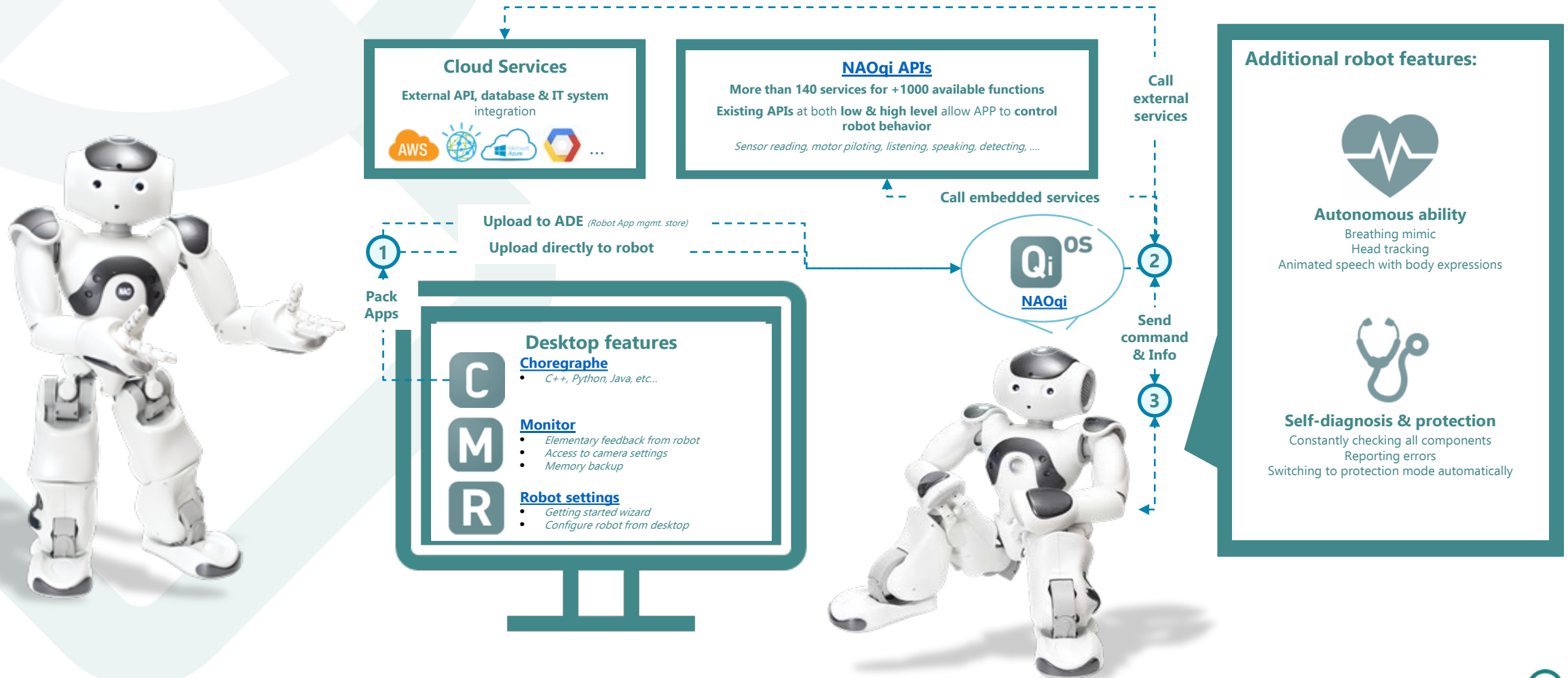
Benefits with NAO

Engaging and interactive learning: provide an engaging and interactive platform for learning, making it more interesting and fun for students.

Personalized learning experience: customize the learning experience to each student's abilities and preferences, providing a personalized and adaptive approach to education.

Improved communication and social skills: help students with communication and socialization skills, especially those with autism or other disabilities.

Programming and robotics education: can serve as a platform for students to learn programming and robotics skills, preparing them for future careers in technology.

Research and innovation: facilitate research and innovation in the field of educational robotics, exploring new possibilities and applications for human-robot interaction and education.

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WHAT DO WE OFFER?

NAO⁶ Application development

Plan	Analysis	Design/Develop	Implement	Test/Integrate	Maintain

Consult & Support

Trainings & Tutorials
Documentations

Choregraphe (App development tool)
NAOqi (Robot operational system) APIs & SDK
ADE (Robot App mgmt. store)

Monitor (Robot feedback tool)
Customer service

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NAO, WITH OPEN AND DEDICATED SOFTWARE & RESOURCES.

Cloud Services

External API, database & IT system integration

AWS · Microsoft Azure · ...

NAOqi APIs

More than 140 services for +1000 available functions

Existing APIs at both **low & high level** allow APP to **control robot behavior**

Sensor reading, motor piloting, listening, speaking, detecting, ...

Call external services

Call embedded services

Upload to ADE *(Robot App mgmt. store)*

Upload directly to robot

1

Pack Apps

Qi **OS**

NAOqi

2

Send command & Info

3

Desktop features

Choregraphe
- *C++, Python, Java, etc...*

Monitor
- *Elementary feedback from robot*
- *Access to camera settings*
- *Memory backup*

Robot settings
- *Getting started wizard*
- *Configure robot from desktop*

Additional robot features:

Autonomous ability
Breathing mimic
Head tracking
Animated speech with body expressions

Self-diagnosis & protection
Constantly checking all components
Reporting errors
Switching to protection mode automatically

THANK YOU

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✉ hello@unitedrobotics.group

in United-Robotics-Group

🖱 https://www.unitedrobotics.group/