

ROBOTS - THE 3RD GEN OF PERSONAL DEVICES



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CEO of Cyberselves

TECH PREDICTIONS THROUGHOUT THE YEARS - 1ST GEN PERSONAL DEVICES

Personal Computers a.k.a Desktop Computers

"I think there is a world market for maybe 5 computers"

Chairman of IBM, 1943

"There is no reason anyone would want a computer in their home"

President of Digital Equipment, 1977

Laptop Computers

"... the computer industry has assumed that everyone wants a keyboard as an extension of their fingers"

The New York Times, 1985

"Laptop computers will remain in specialised niche markets no matter how inexpensive they become"

The New York Times, 1985



TECH PREDICTIONS THROUGHOUT THE YEARS - 2ND GEN PERSONAL DEVICES

"cellular telephony would be a niche market with less than a million users in the US by 2000" - 109M users by 2000

**McKinsey & Company, 1980 commissioned
by AT&T to predict mobile phone usage**

"there's no chance that the iPhone is going to get any significant market share"

CEO of Microsoft, 2007



TECH PREDICTIONS TODAY - ROBOTS



Too expensive



Doesn't have
what I need



Who wants a
robot in their
house?



Replacing jobs

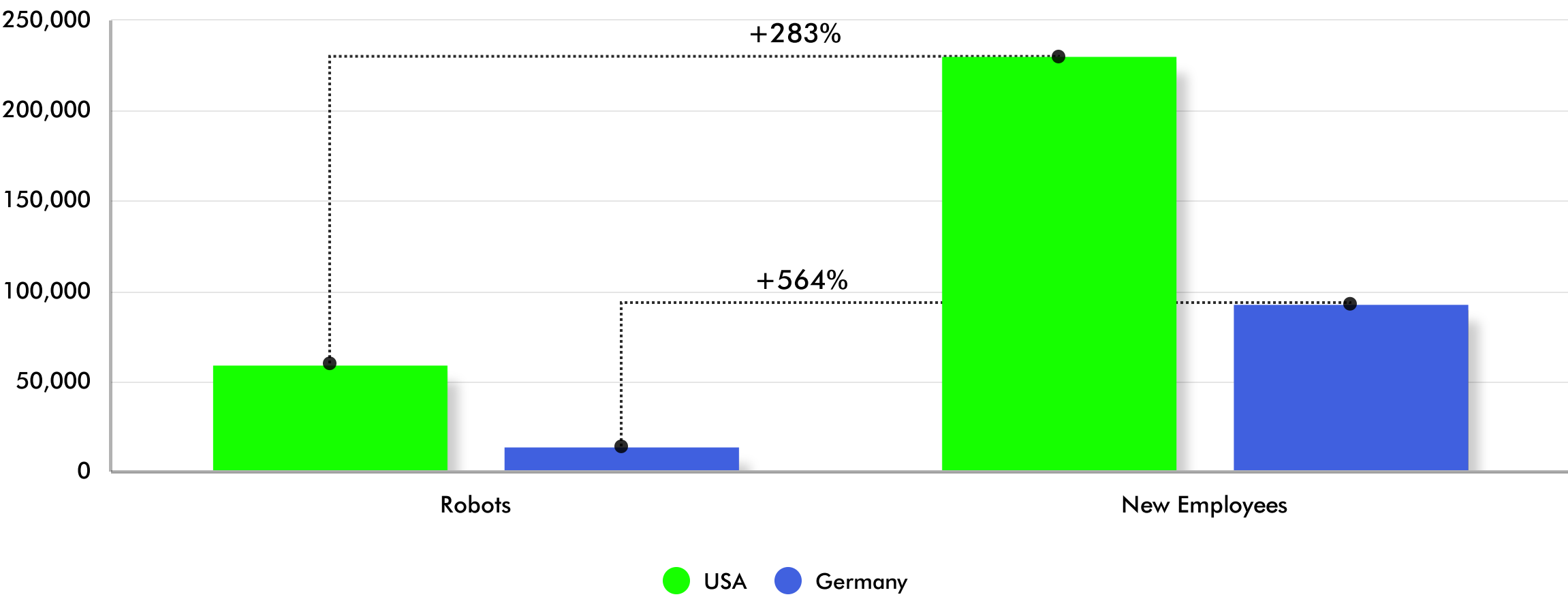


ROBOTS WILL DISPLACE 20 MILLION JOBS BY 2030

How Robots Change the World, Oxford Economics, 2030

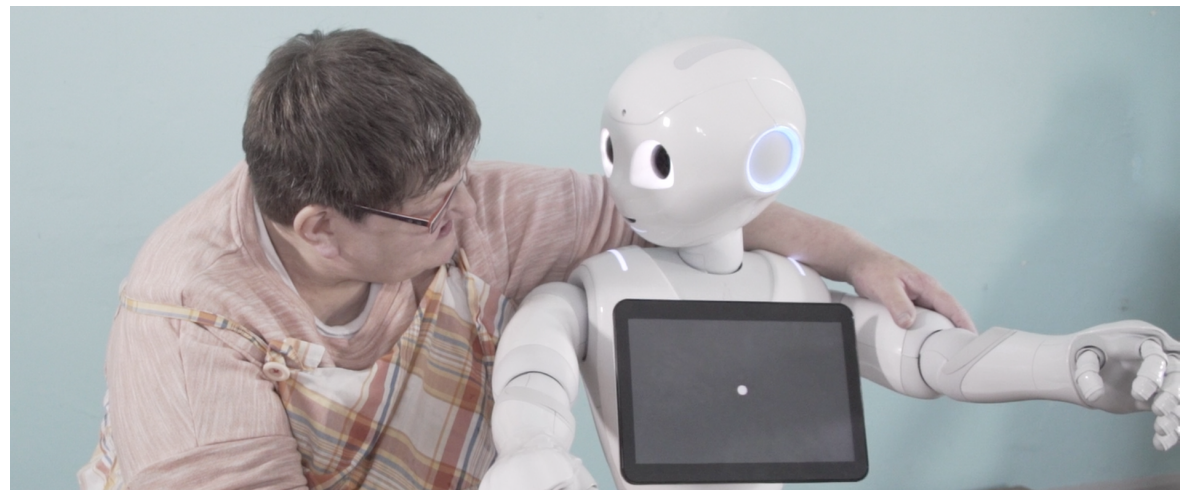
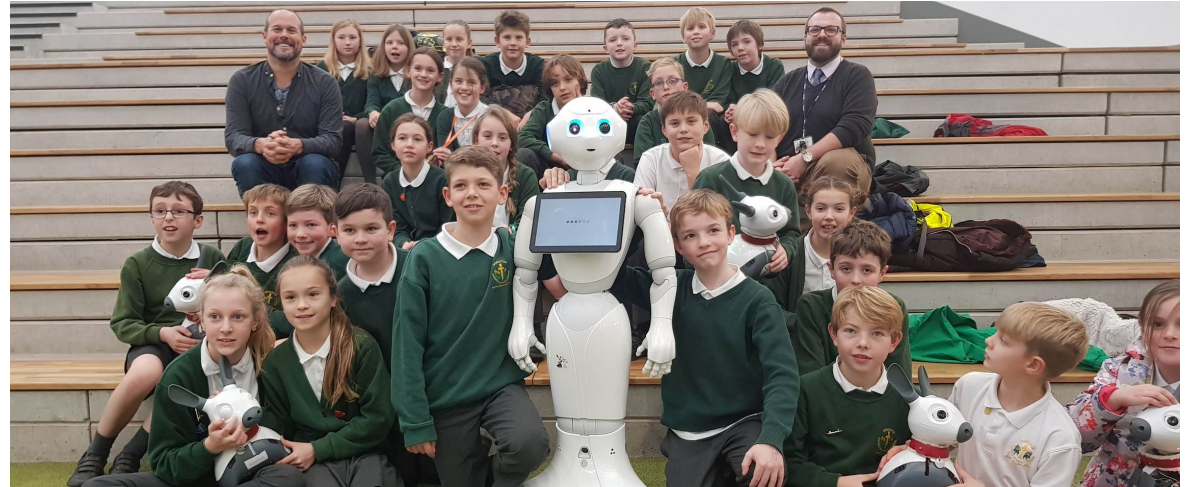
**HOW DO WE EFFECTIVELY TRAIN THOSE 20 MILLION
DISPLACED EMPLOYEES TO SUPPLEMENT THE REQUIRED
WORKFORCE BEING FORECAST BY THE ROBOTICS
INDUSTRY?**

CAR AUTOMATION INDUSTRY BETWEEN 2010 AND 2015

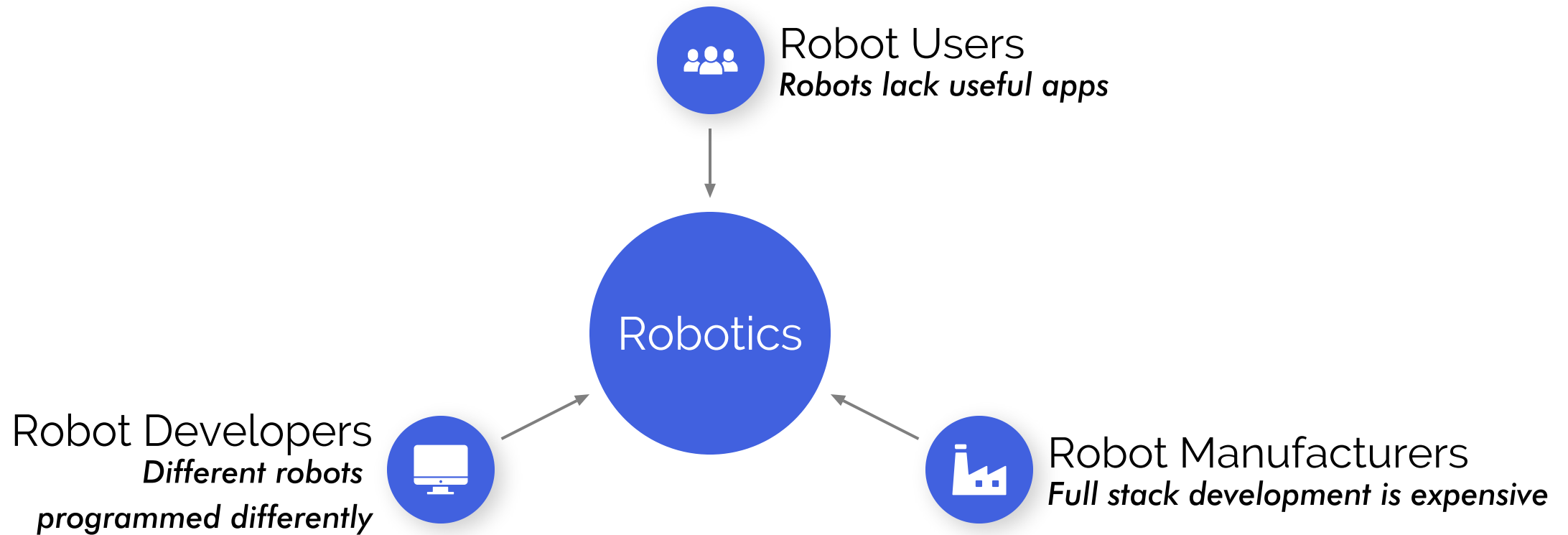


- How do we incentivise students of today and of the future to learn robotics?
- How can we facilitate the growth of the robotics industry in order to sustain the re-employment of all the displaced workers?

OUR VISION - TO REALISE THE TRUE POTENTIAL OF ROBOTICS



ROADBLOCKS IN ROBOTICS



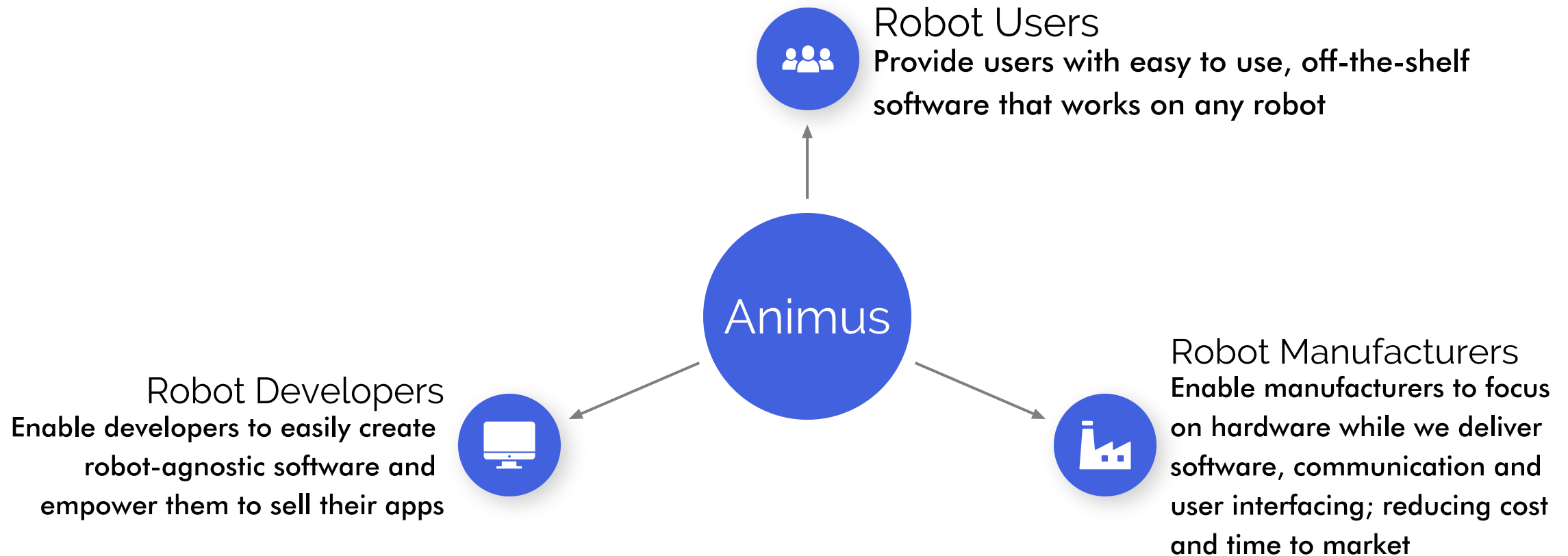
Our Solution:

ANIMUS

A UNIVERSAL PROGRAMMING LANGUAGE FOR ROBOTICS

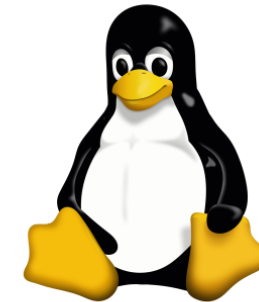


OUR MISSION - A UNIVERSAL LANGUAGE FOR ROBOTICS



WHAT MAKES ANIMUS UNIQUE?

- UP TO 4X FASTER FOR NEAR REAL-TIME CONTROL
- END TO END ENCRYPTED FOR MAXIMUM SECURITY



5 Programming Languages and more in progress

All Major Platforms



ANIMUS-COMPATIBLE ROBOTS



Robots Already Working with Animus



ANIMUS CAPABILITIES



Internet-Enabled

Instantly internet enable your robots with the ability to remotely launch apps on your robot from anywhere. We take care of secure connectivity so you don't have to.



Simplify Development

Prospective developers can easily develop and run Animus apps from any operating system (desktop or mobile) and any programming language.



Lightweight and Portable

A 30MB software library that does not interfere with your robot's on-board software but works alongside it



Cyberselves Apps

All of our apps are instantly available to run on your robot providing the functionality that end users are looking for



How do we make Animus robot-agnostic?



GUIDING PRINCIPLE

A robot nervous system: a universal layer
between brains and bodies

Solution: Grouping robot I/O into sensory modalities

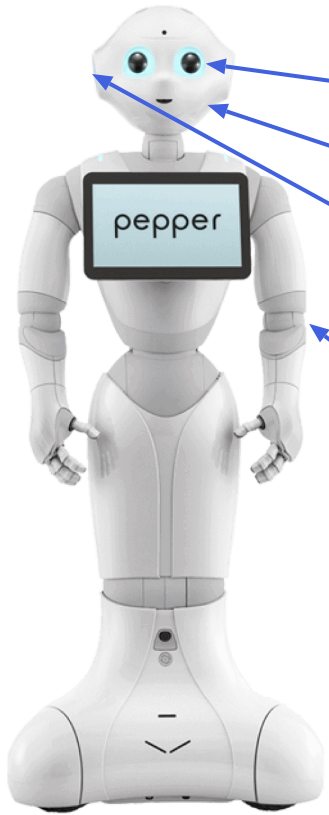


SENSORY MODALITIES

- Group perceptions, stimuli and actions into named categories
- Are directional : Output or Input
- Have a direction relative to a brain
e.g. Vision = input, Motor = output



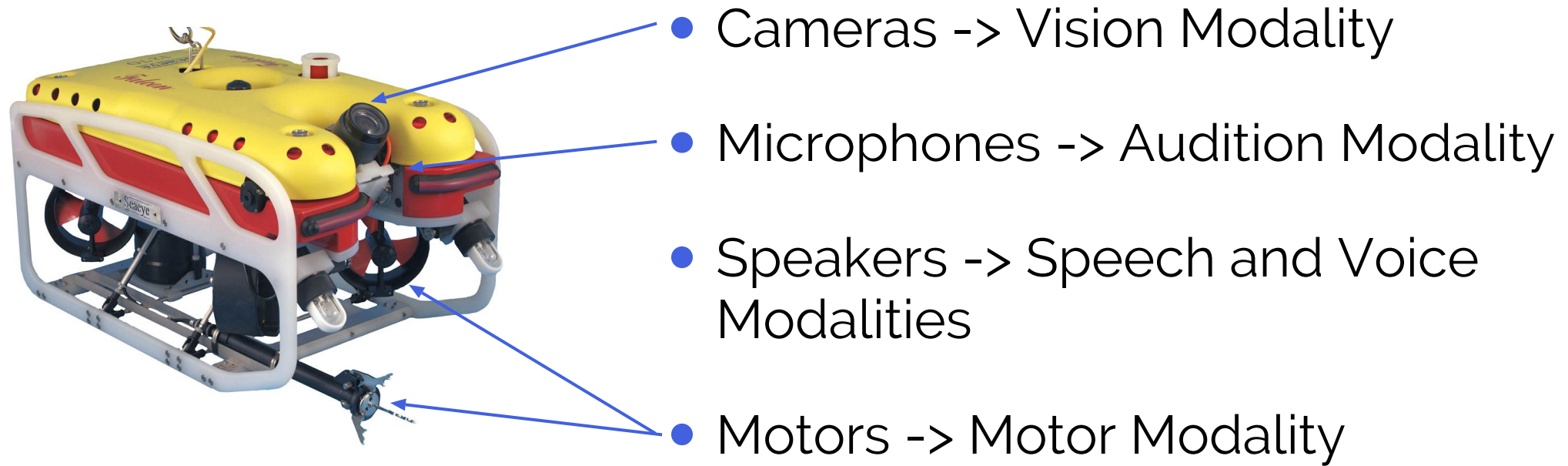
ROBOT TO HUMAN MAPPING



- Cameras -> Vision Modality
- Microphones -> Audition Modality
- Speakers -> Speech and Voice Modalities
- Motors -> Motor Modality



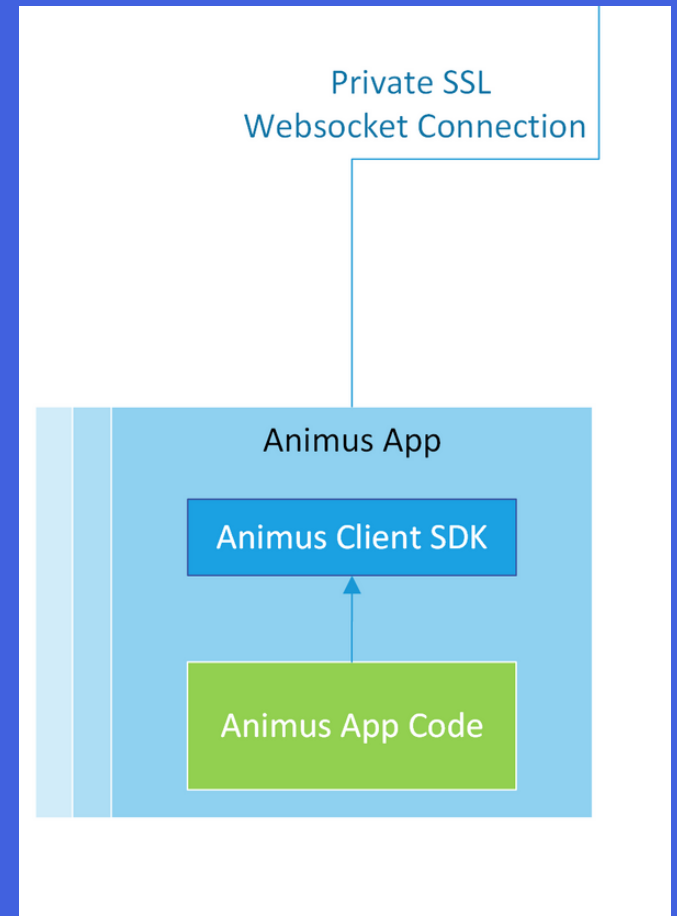
ROBOT TO HUMAN MAPPING

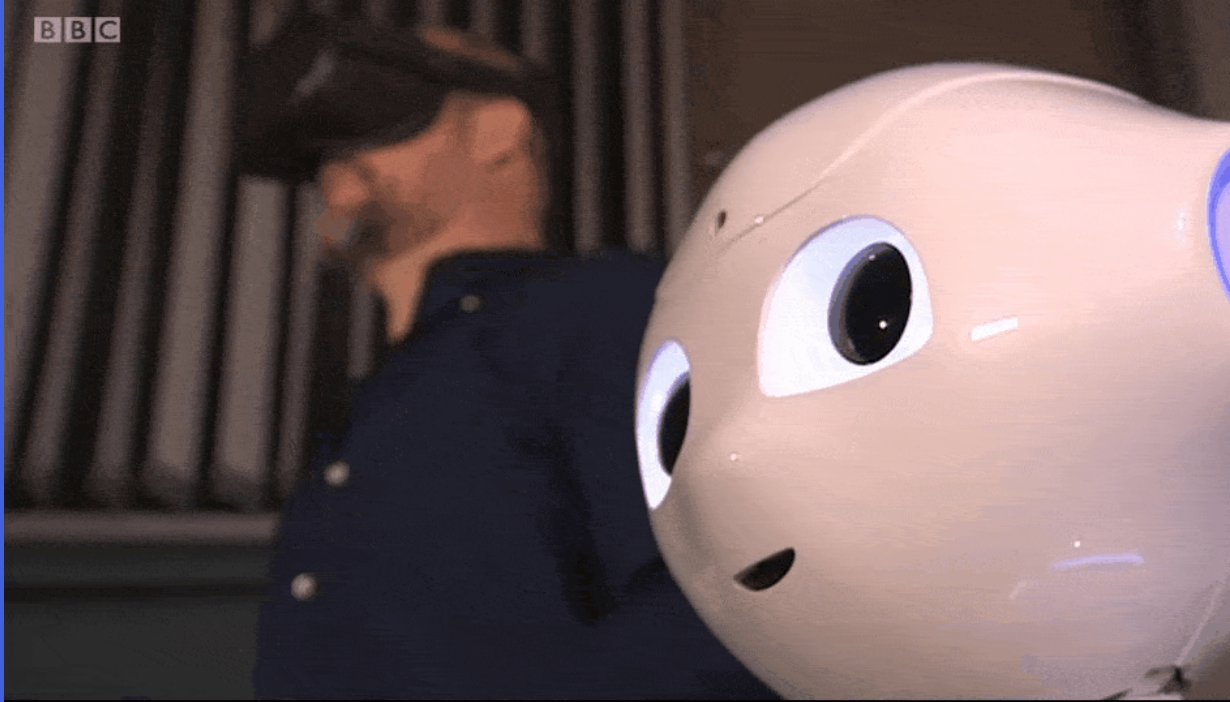


ANATOMY OF AN ANIMUS APPLICATION

An Animus Application follows this programming pattern:

- 1 User Login
- 2 Get Robots
- 3 Connect to 1 or more available robots
- 4 Call OpenModality for the set of required modalities
- 5 App Logic using
GetModality(modalityName) to receive data /
Set Modality(modalityName, sample) to send data
- 6 Disconnect from 1 or more connected robots
- 7 CloseClientInterface to disconnect all robots and close the app





OUR FIRST ANIMUS APPLICATION

TELEPORT

TELEPRESENCE APPLICATION BUILT USING ANIMUS

Multi-Robot and Multi-Sensory

Full-Body Immersive Telepresence



OFFICIAL ANA AVATAR XPRIZE TEAM



- \$10M Prize, 4 Year Competition
- 900 starting competitors - 38 left
- Semifinals in September



REMOTE TOURISM - MALTA

In collaboration with 



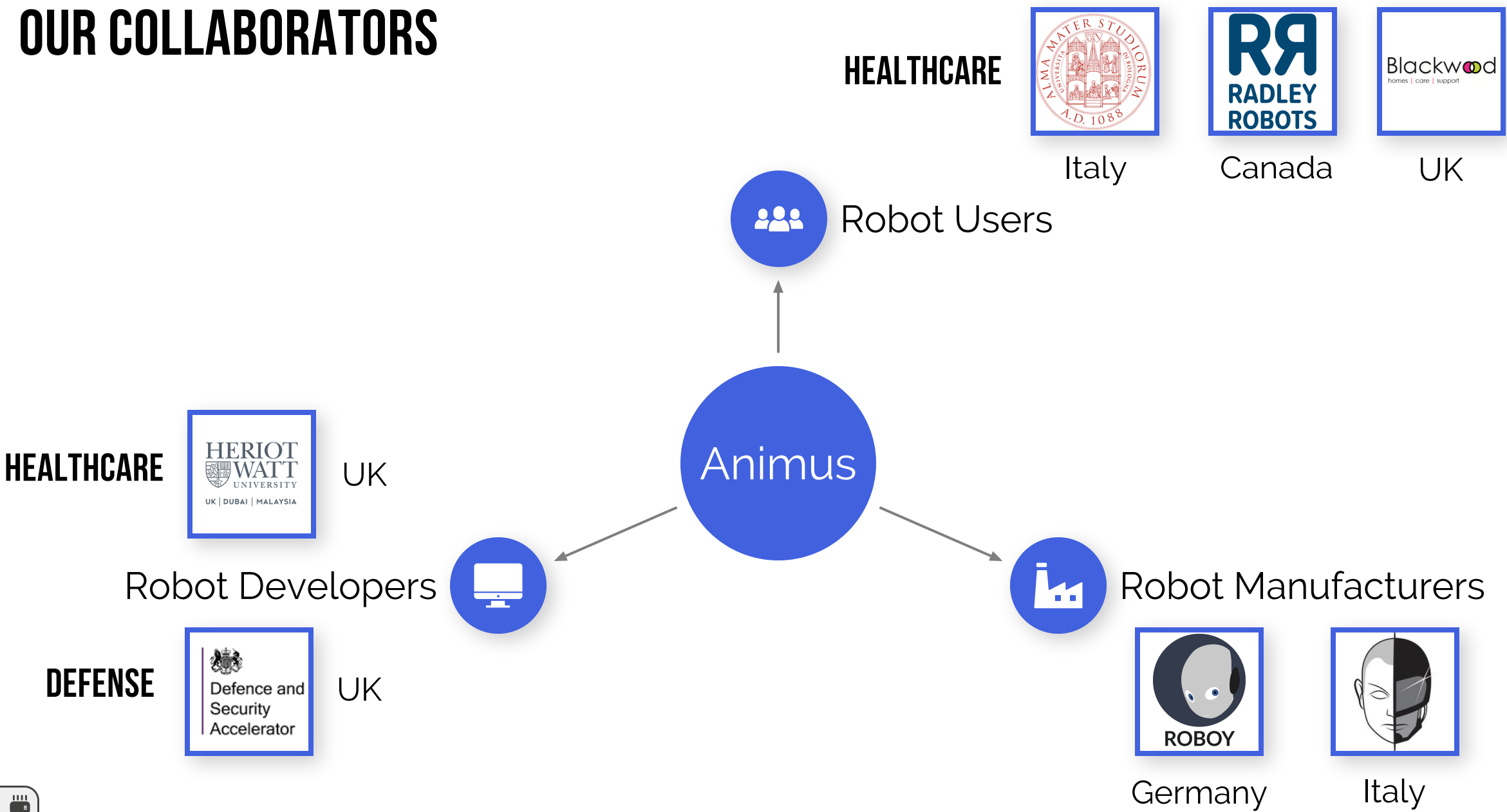
Pepper overlooking the Grand Harbour in Malta



Fleet of ROVs remotely exploring the Mediterranean

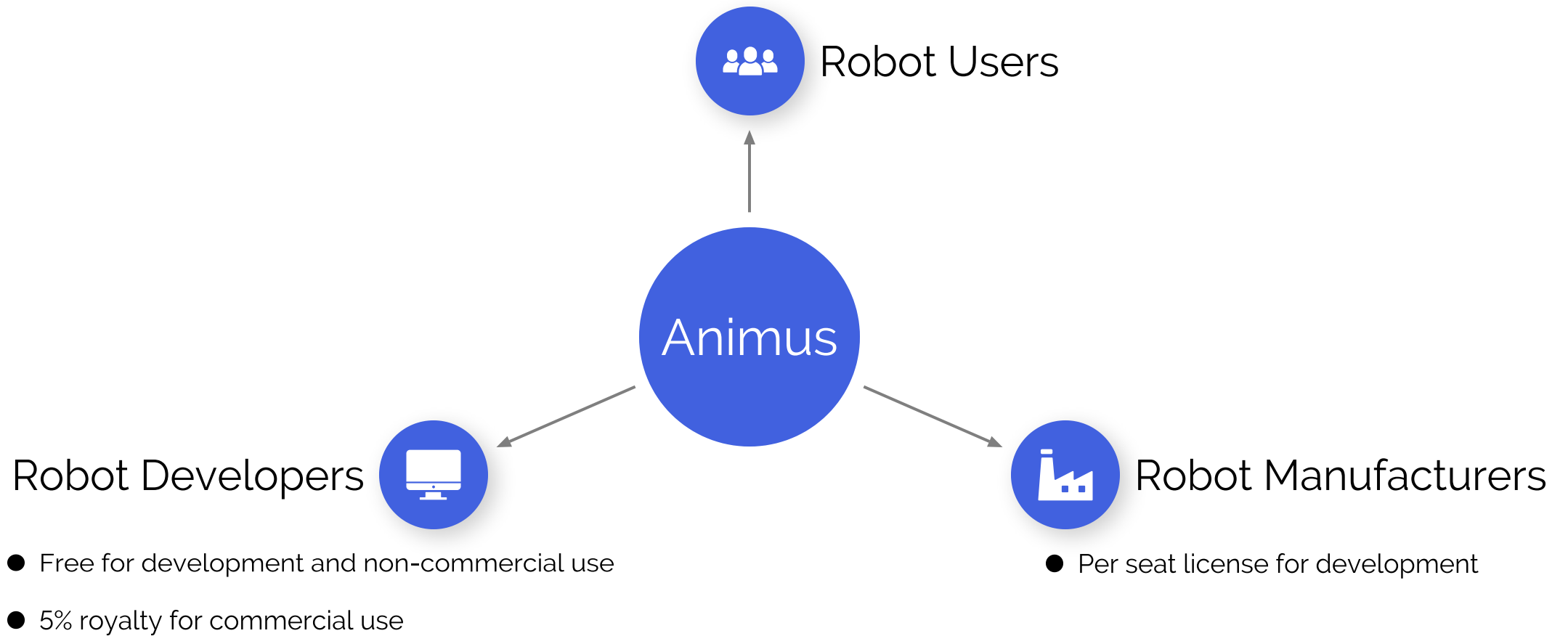


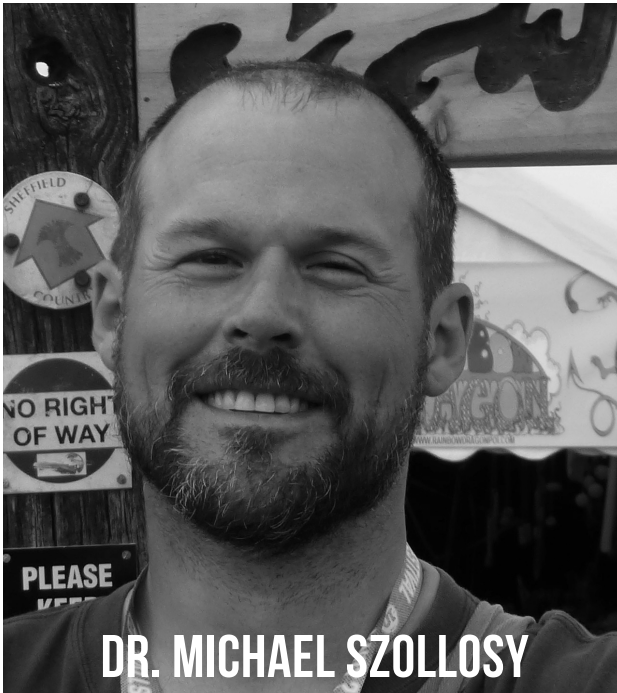
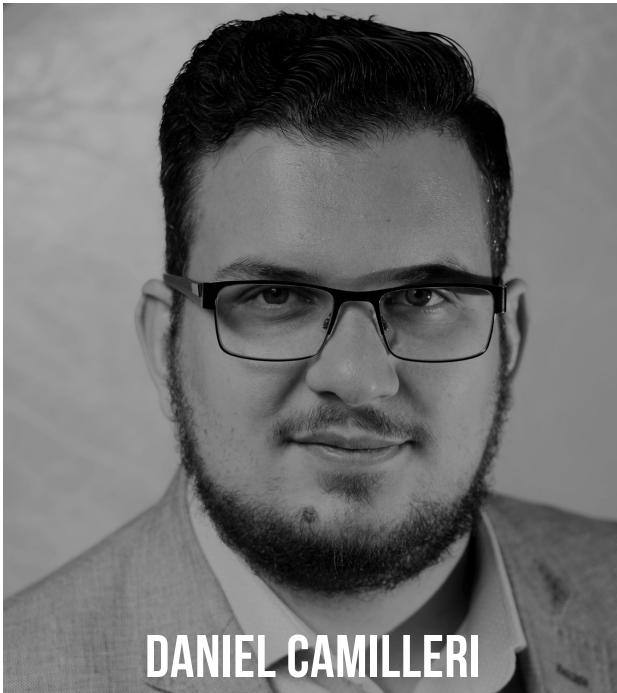
OUR COLLABORATORS



OUR SERVICES

- Yearly subscription to a robot driver per robot
- Support packages to manage robots





Cyberselves

*Realising the
True Potential of Robotics*



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