HYVE – the innovation company

How Emotion AI drives Innovation - a new era of how humans live together with machines

2018/09/07, I4L 2018, Dr. Marco Maier

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DIGITAL

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SMART

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EMPATHIC

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A NEW ERA
OF HOW
HUMANS
INTERACT WITH
MACHINES

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A NEW ERA
OF HOW

HUMANS
COOPERATE WITH
MACHINES

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A NEW ERA

OF HOW

HUMANS

LIVE TOGETHER WITH

MACHINES

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Imagine a world with emotionally intelligent machines, a world where products and robots know how you feel.

Emotion AI researchers and companies aim to build a living environment that responds to human emotions and affective states in order to improve and facilitate people's life.

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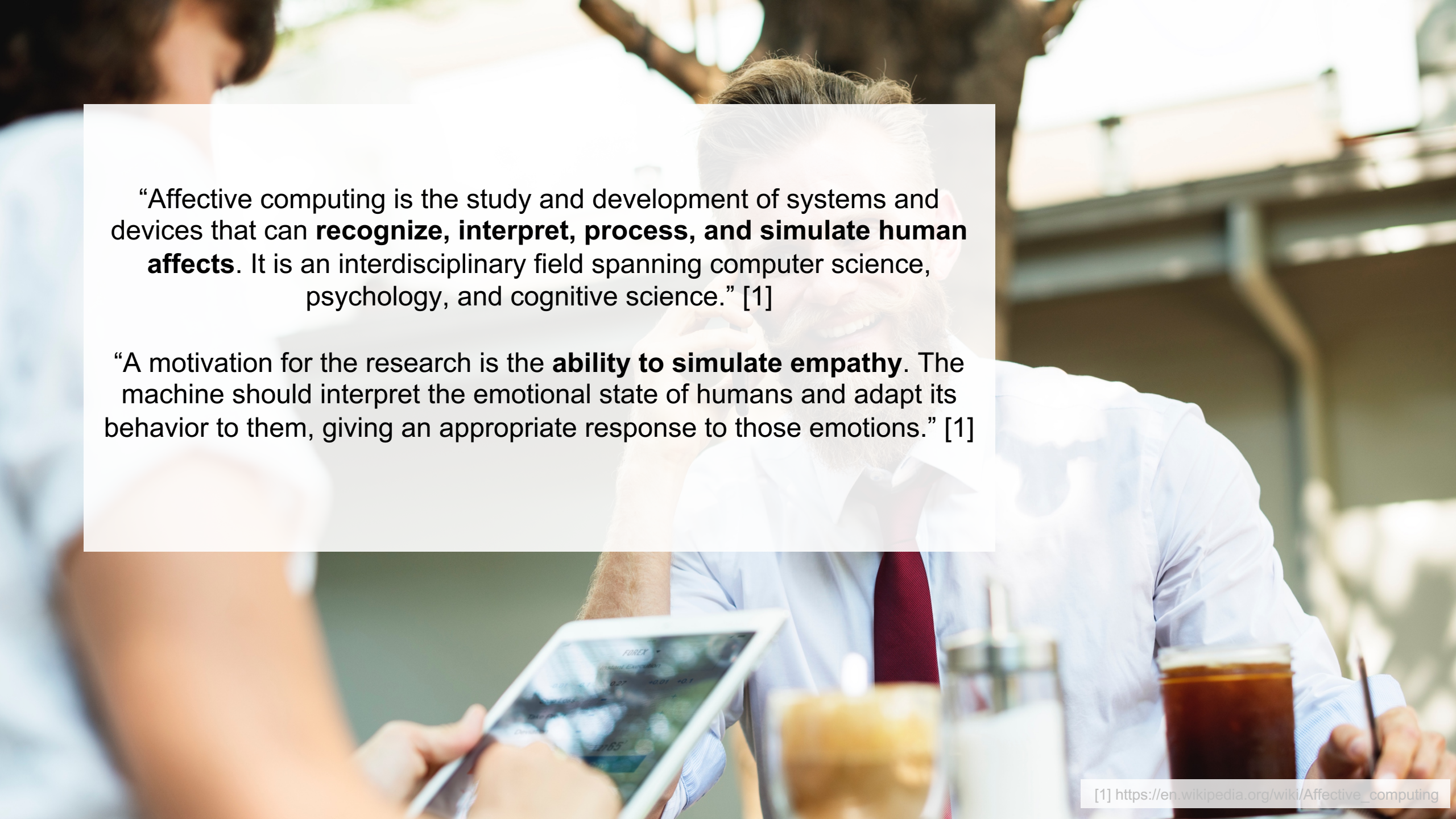
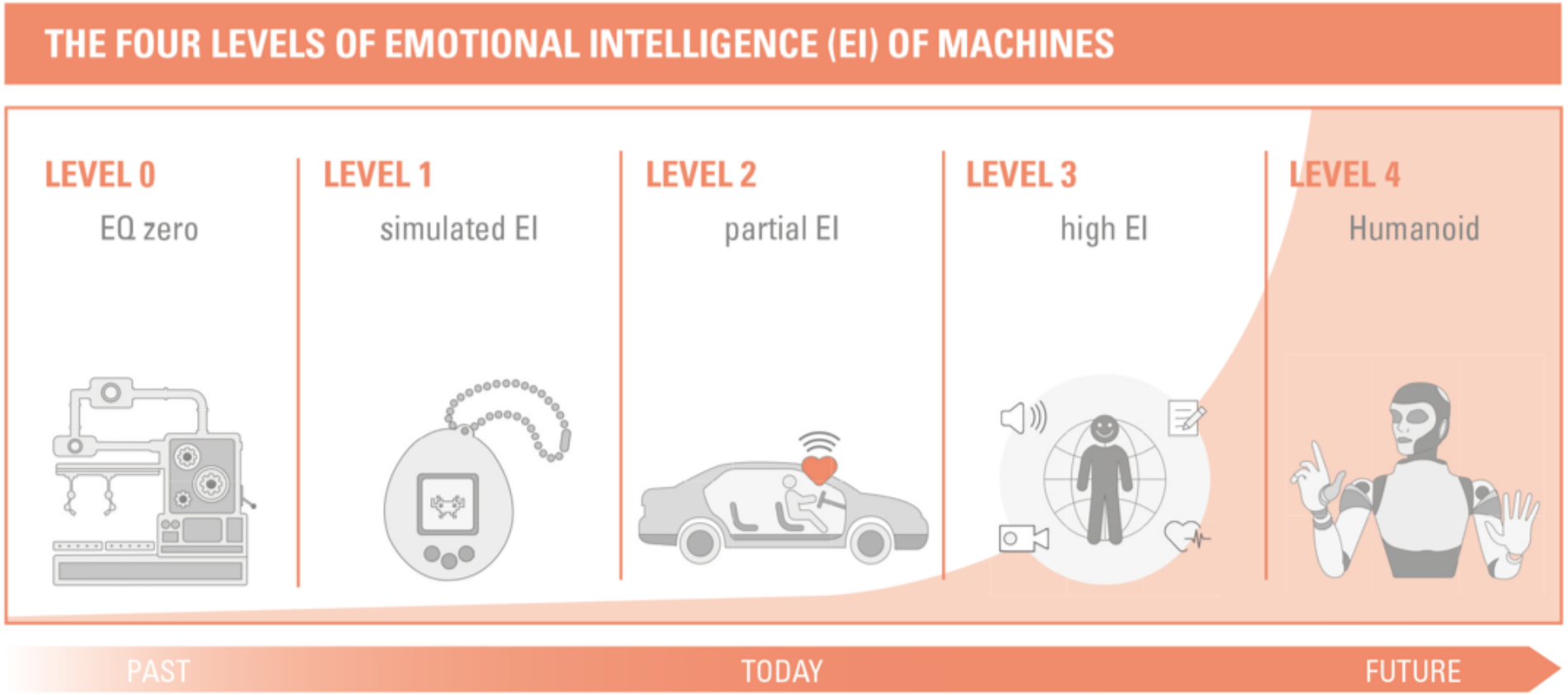


“Affective computing is the study and development of systems and devices that can **recognize, interpret, process, and simulate human affects**. It is an interdisciplinary field spanning computer science, psychology, and cognitive science.” [1]

“A motivation for the research is the **ability to simulate empathy**. The machine should interpret the emotional state of humans and adapt its behavior to them, giving an appropriate response to those emotions.” [1]

[1] https://en.wikipedia.org/wiki/Affective_computing

We are entering the age of emotion tracking and affective computing



AI will contribute **12.8 Trillion EUR** to the global economy by 2030 (**14% increase** on today's **global GDP**).*
Expected revenue in the emotion detection and recognition (EDR) market to grow from **USD 6.72 Billion** in **2016** to **USD 36.07 Billion** by **2021**.**

* PwC Sizing the price – what's the real value of AI for your business, June 2017.
** Emotion Detection and Recognition Market by Technology (Bio-Sensor, NLP, Machine Learning), Software Tool (Facial Expression, Voice Recognition), Service, Application Area, End User, And Region - Global Forecast to 2021", published by MarketsandMarkets.

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Human Data

Various kinds and sources of data,
e.g. physiological, video, text

Emotion AI

Emotion detection and recognition
algorithms powered by affective computing

Empathic Environment

Products, services & experiences
enabled to be empathic

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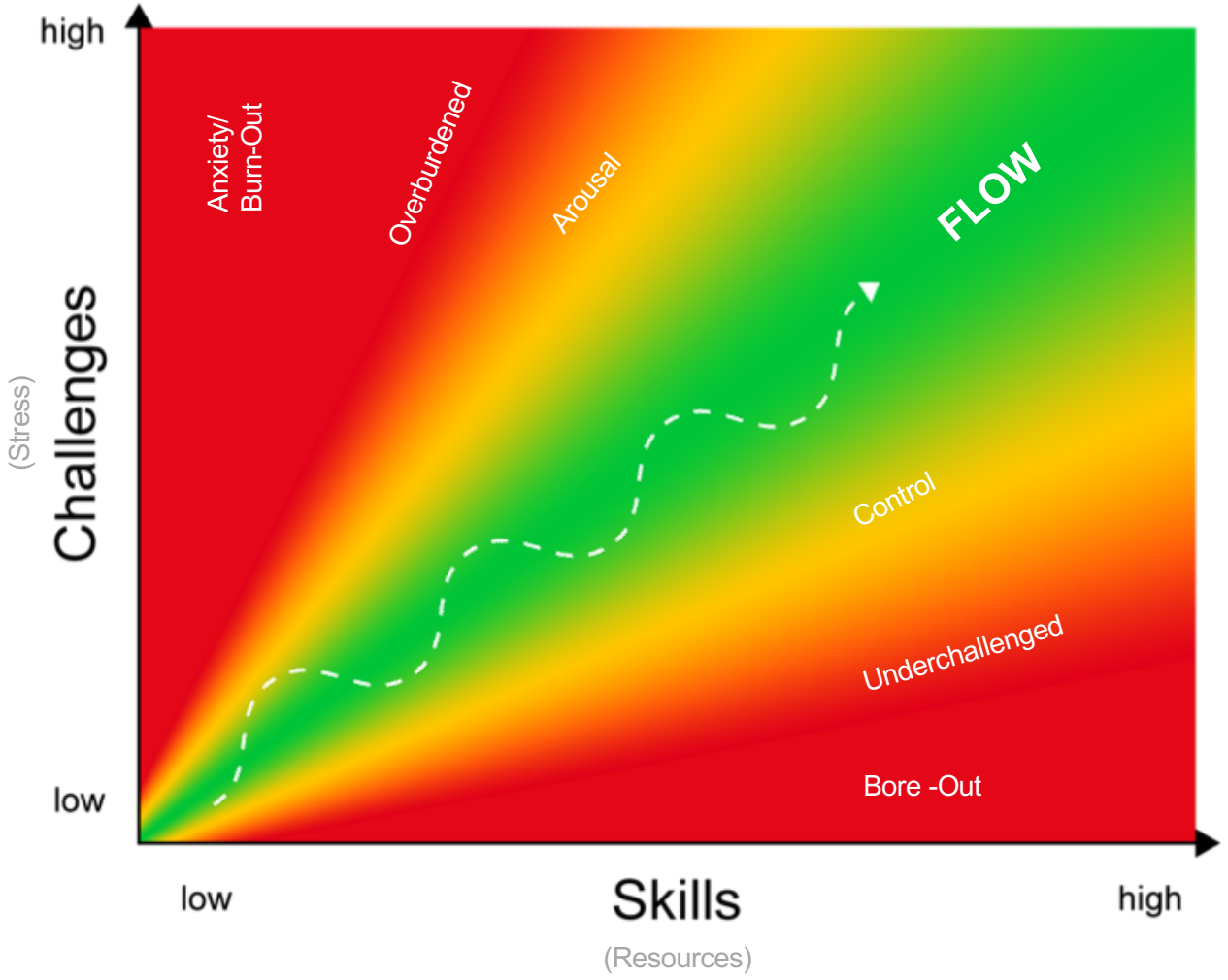
EDA [uS]
time [min]
heartrate [bpm]
time [min]
heartbeat intervals
time [min]
rMSSD
time [min]
labels
mood: excited
emotion: 4
tension: 4
control: 3
time [min]
band contact
true
false
time [min]
Whitmans Chat
Nice! I definitely feel like surfing this afternoon
Anyone who wants to tag along is more than welcome
0:03
slide to cancel

ENGAGEMENT
INTERPRETATION
CONFUSION

There's more than "happy" and "sad"…



The more **FLOW** the better the…

…evaluation of an **experience**

…**health status** and **physical performance**

…**working** and **mental productivity**

Flow is the mental state in which a person performs an activity in a feeling of energized focus, full involvement, and enjoyment in the process of the activity. It is the "optimal experience" in that one gets to a level of high gratification from the experience. (Csikszentmihalyi, Mihaly (1990). Flow: The Psychology of Optimal Experience. New York: Harper and Row.)

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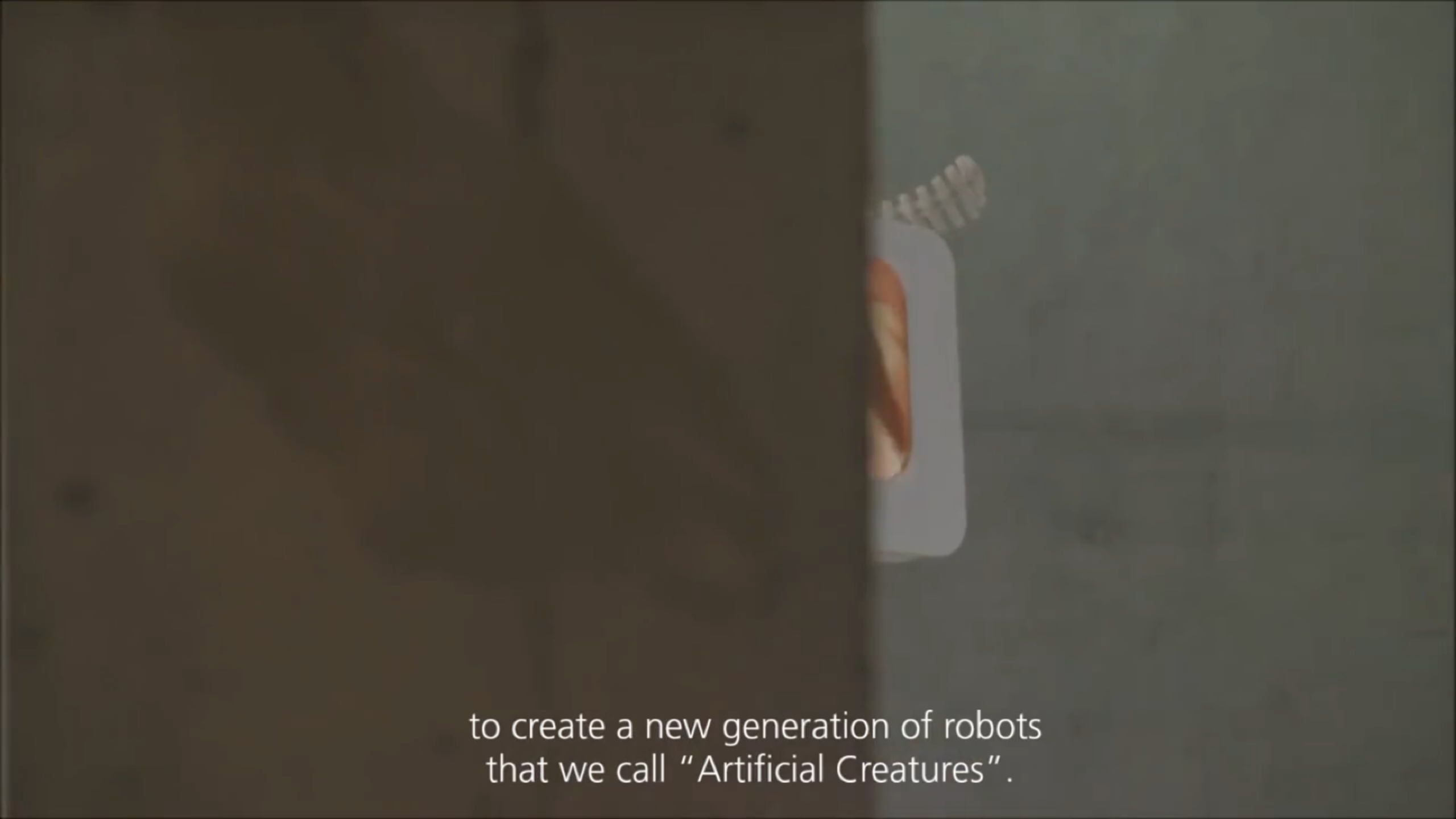
LENZERHEIDE

TAWNY


to create a new generation of robots
that we call “Artificial Creatures”.

Who to contact

If you have any questions regarding TAWNY or AI at HYVE in general, do not hesitate to ask!

Dr. Marco Maier
Head of AI at HYVE
Managing Director at TAWNY

+49 (0)89 189 081 - 430
marco.maier@hyve.net

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Haus der Innovation
Schellingstraße 45, 80799 Munich, Germany
www.hyve.net

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