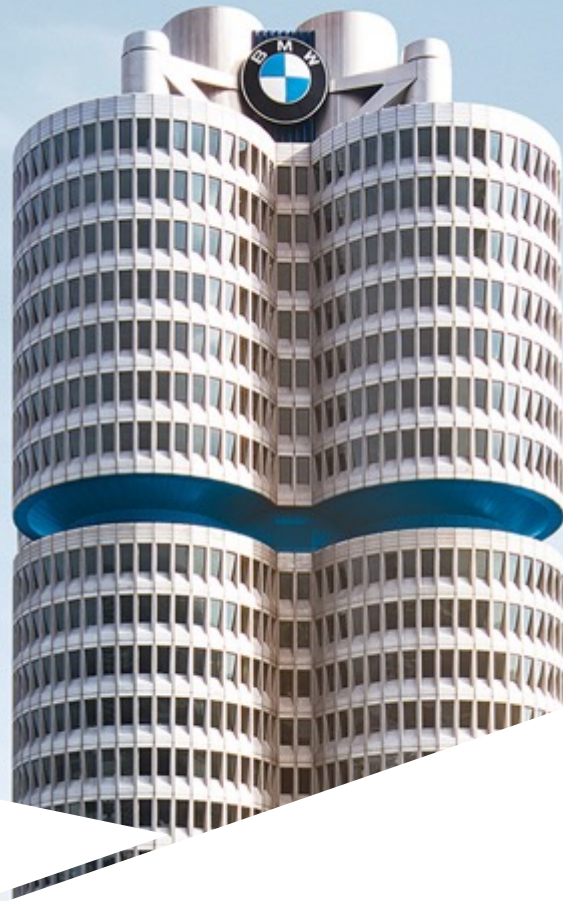# EMOTIONALLY INTELLIGENT SYSTEMS.

A BMW OVERVIEW & INNOVATION WORKSHOP

FG-AM-7 & LT-7 | 15.10.2019

Sean Batir & Thomas Gerstl

BMW GROUP

THE NEXT 100 YEARS

01

INTRODUCTORY VIDEO

02

BMW AND AFFECTIVE COMPUTING

THE VISION BEHIND EMOTIONALLY INTELLIGENT SYSTEMS

IoT enabled sensor data

Emotionally 'aware' system for X use case

Gartner.

"By 2022, your personal device will know more about your emotional state than your own family."

accenture

Rumman Chowdhury, who leads work on responsible AI at Accenture, says the hype about the power of AI has led many people inside and outside the tech industry to be overconfident about what computers can do.
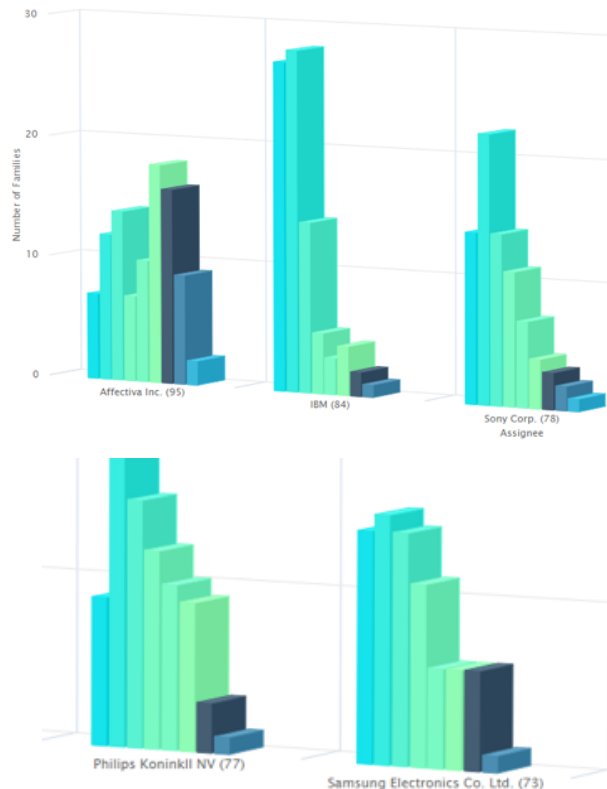
VentureBeat

"Mood tracking will change the way robots and AI assistants like Alexa interact with humans. Emotional intelligence is key to allowing devices with a voice interface to react to user responses and have a meaningful conversation", Affectiva CEO Rana el Kaliouby said.

EMOTIONAL INTELLIGENT SYSTEMS.

IRIS

EYE MOVEMENT

VOICE FREQUENCY

SPEECH /
USE OF WORDS

BRAINWAVE / EEG

THOUGHTS

FACIAL

HEART RATE / ECG

BREATH

SKIN / SWEAT

VEINS / OXYGEN

THE CURRENT LANDSCAPE

Patent analysis reveals the top 5 players, focus areas, and hints at technologies that hope to be monetized

Who	What	Why

POSSIBLE APPLICATIONS FOR BMW

A variety of solutions exist in credit generation and marketplace use cases

In the Vehicle	Outside the Vehicle

Intelligent, in car personal assistants

Improved market research execution

Enhanced autonomous driving experiences

Enhanced trust and user experience during Retail and sales transactions

New business models for vehicle transactions

Improved onboarding and training academies For internal, professional development

03

INNOVATION WORKSHOP

THE ONLY RULE

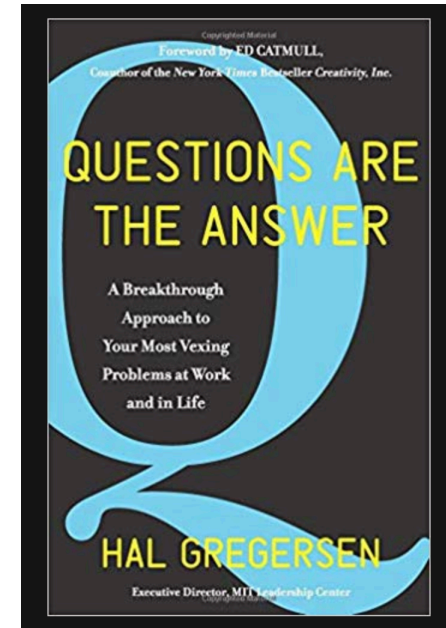**You can only answer a question with another, related question!**

Theory
- Questions force you to arrive at your fundamental "beliefs" that surround the topic you arrive.
- Often, the chain of questions forces us to realize both our unique constellation of thoughts and overlapping thought-forms

Practice
- Break into 5 groups with the seed questions
- Introductions (5 min)
- Self-Exercise (5 min)
- Group (10 min)

INNOVATION WORKSHOP

There is a power behind questions that unlocks the truth...

Relevant questions for this report:

- After an emotion is detected, which actions / reactions are appropriate?
  Should or can the emotional state be influenced at all?

- Can we learn long term traits of our users through emotion detection?

- How can emotion states transform manufacturing/ my own industry?

- How will emotion detection transform the future of how you work and play?

- How will emotion detection transform your driving experience?