# Interaction challenges

▶ **INTERACTION STARTS AT INADEQUATE MOMENT**

Because it's **user-driven** and not device-driven

▶ **DEVICE BEHAVIOR NOT ADAPTED TO USER REACTIONS**
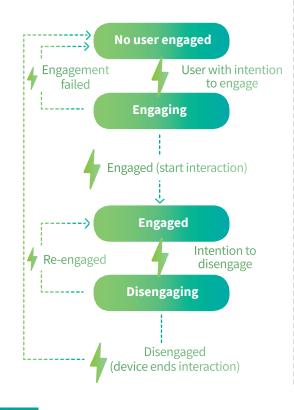
Because user reaction is not detected

▶ **LINEAR CONVERSATIONAL TURN-TAKING**

Because the device doesn't know when to let the user speak

▶ **INTERACTION ENDS AT INADEQUATE MOMENT**

Because disengagement of user is not detected

# Engagement module

**No user engaged**

Engagement failed ⟵ ⟶ User with intention to engage

**Engaging**

Engaged (start interaction)

**Engaged**

Re-engaged ⟵ ⟶ Intention to disengage

**Disengaging**

Disengaged (device ends interaction)

# Benefits for user

▶ **INTERACTION BEGINS AT RIGHT TIME**

Because it's now **device-driven**

▶ **DEVICE BEHAVIOR IS PROACTIVE**
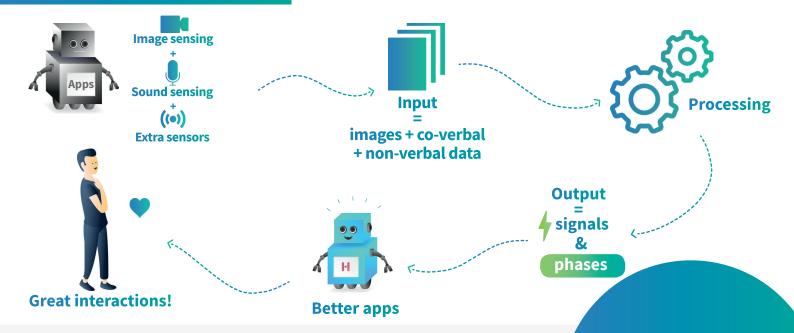
Because user reaction is evaluated

▶ **DYNAMIC CONVERSATIONAL TURN-TAKING**

Because the device knows when the user has intention to speak

▶ **INTERACTION ENDS AT RIGHT TIME**

Because user disengagement is detected

# How does it work ?

**Apps**

**Image sensing**
+
**Sound sensing**
+
**Extra sensors**

**Input**
**=**
**images + co-verbal + non-verbal data**

**Processing**

**Output**
**=**
**signals**
**&**
**phases**

**Great interactions!**

**Better apps**

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Hoomano Company

**Ask us to watch a demo!**

HOOMANO™

— **Our goal is to create endearing autonomous personalities for interactive robots or devices**

**European leader** for apps on Pepper

**Very clear understanding of end-user's needs** in retail, offices ,tourism, transports, elderly care, hospitality…

**More than a million interactions** on social robots and interactive devices already powered by our technology

SOCIAL BRAIN

EMPATHY

AWARENESS

ENGAGEMENT

HOOMANO A.I

WE ARE LOOKING FOR **PARTNERSHIPS** WITH INTERACTIVE DEVICES MANUFACTURERS

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Ask us to watch a demo!