Furhat Robotics

The World's Most
Sociable Robots

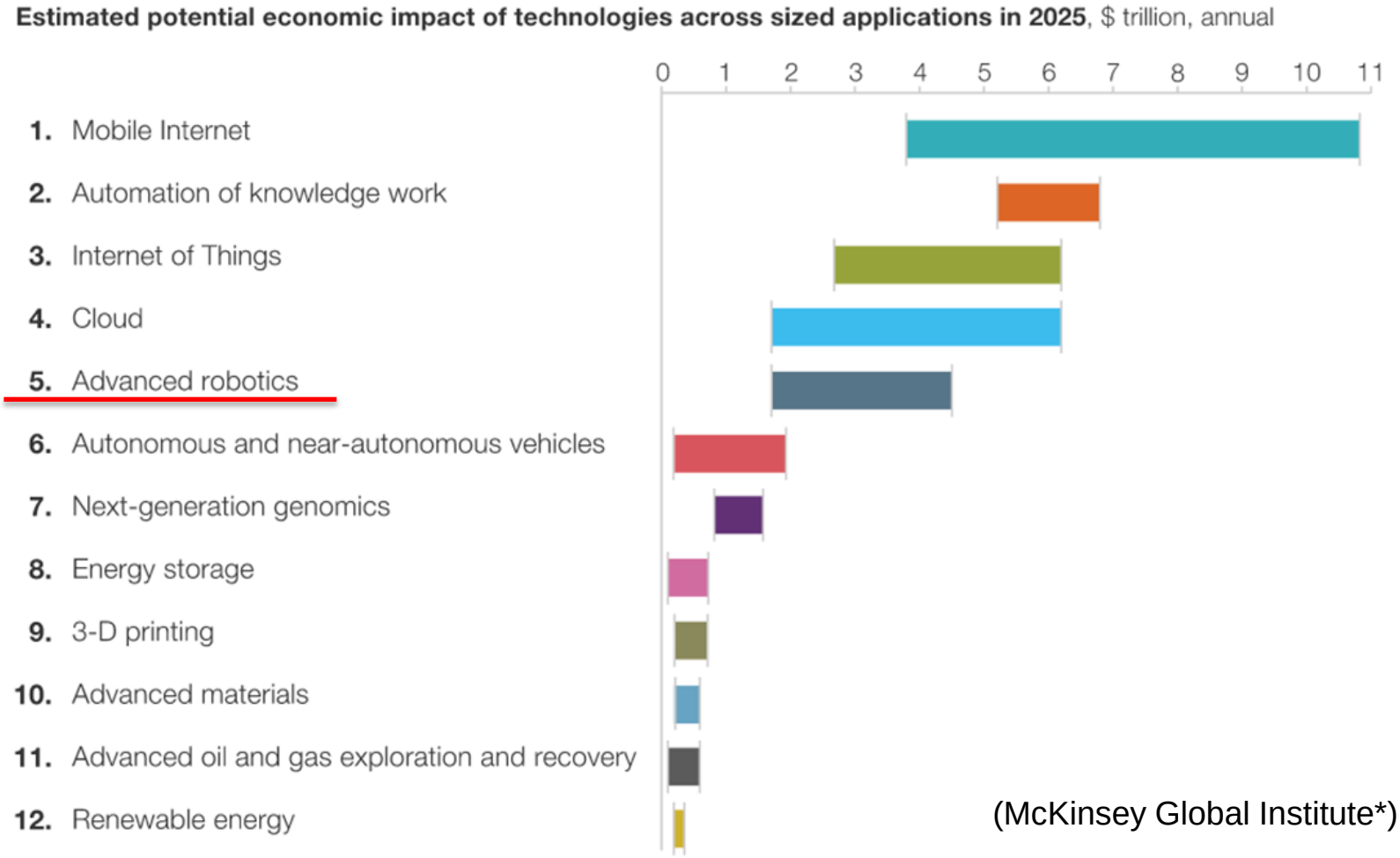
Hi, My Name Is Furhat!

- Video too large, can be found on our website* www.furhatrobotics.com

(*soon…)

Disruptive technologies…

Advances that will transform life, business, and the global economy



(McKinsey Global Institute*)

Personal Robotics

- We are witnessing the beginning of a revolution..
  - Not the robots that build your cars
  - Not the robots that will drive them

Personal Robotics

- Companions that spend time and interact in close proximity with humans.
  - They need to:
    - Talk and understand human language.
    - See, and understand the environment around them.
    - Understand human activities, intentions, emotions, personality, and ways of communication.

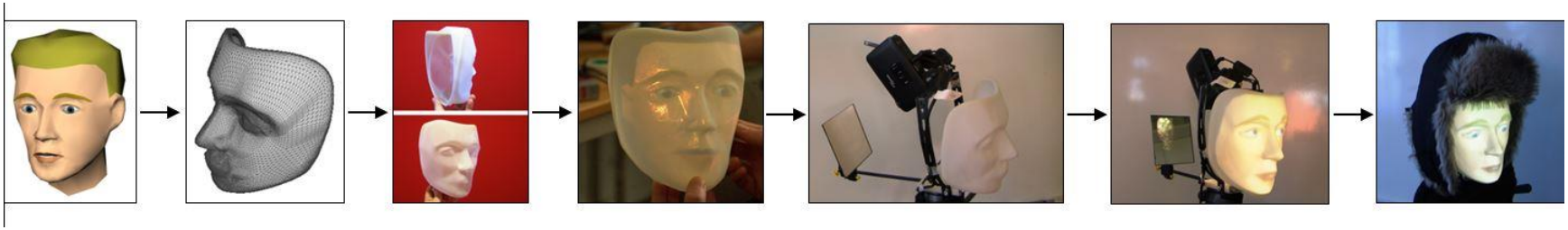
Furhat ROBOTICS

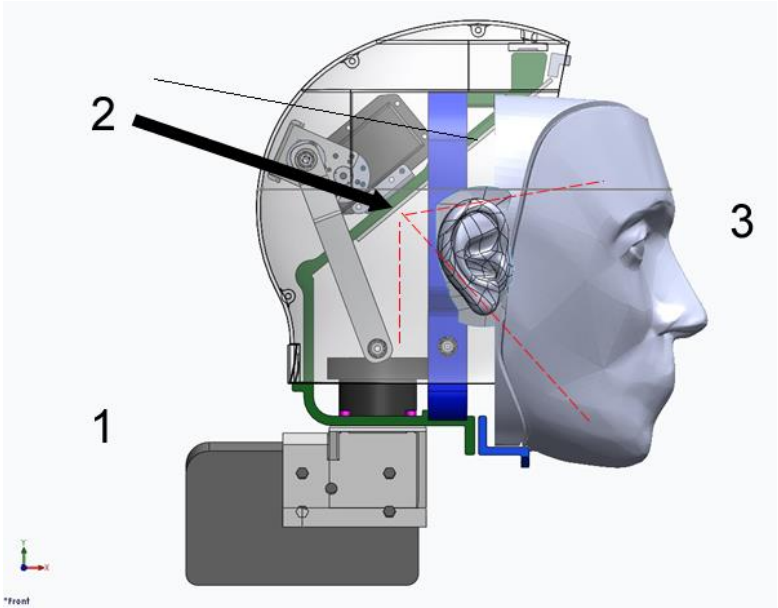
Is at the core of the research and development demanded by this vision.

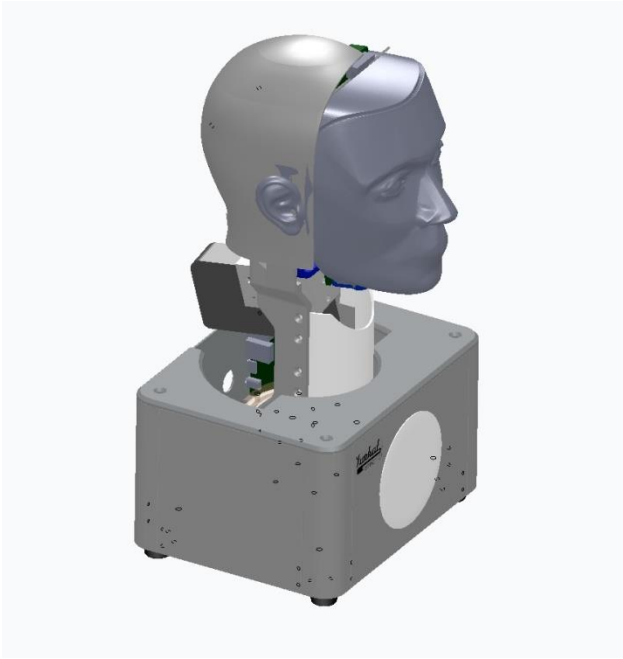
Under The Hood…

- Hardware
  - Mask, Mirror, Projector, Servos, PC…
- Software
  - irisTK, 3D animation, Lip-sync…

Hardware







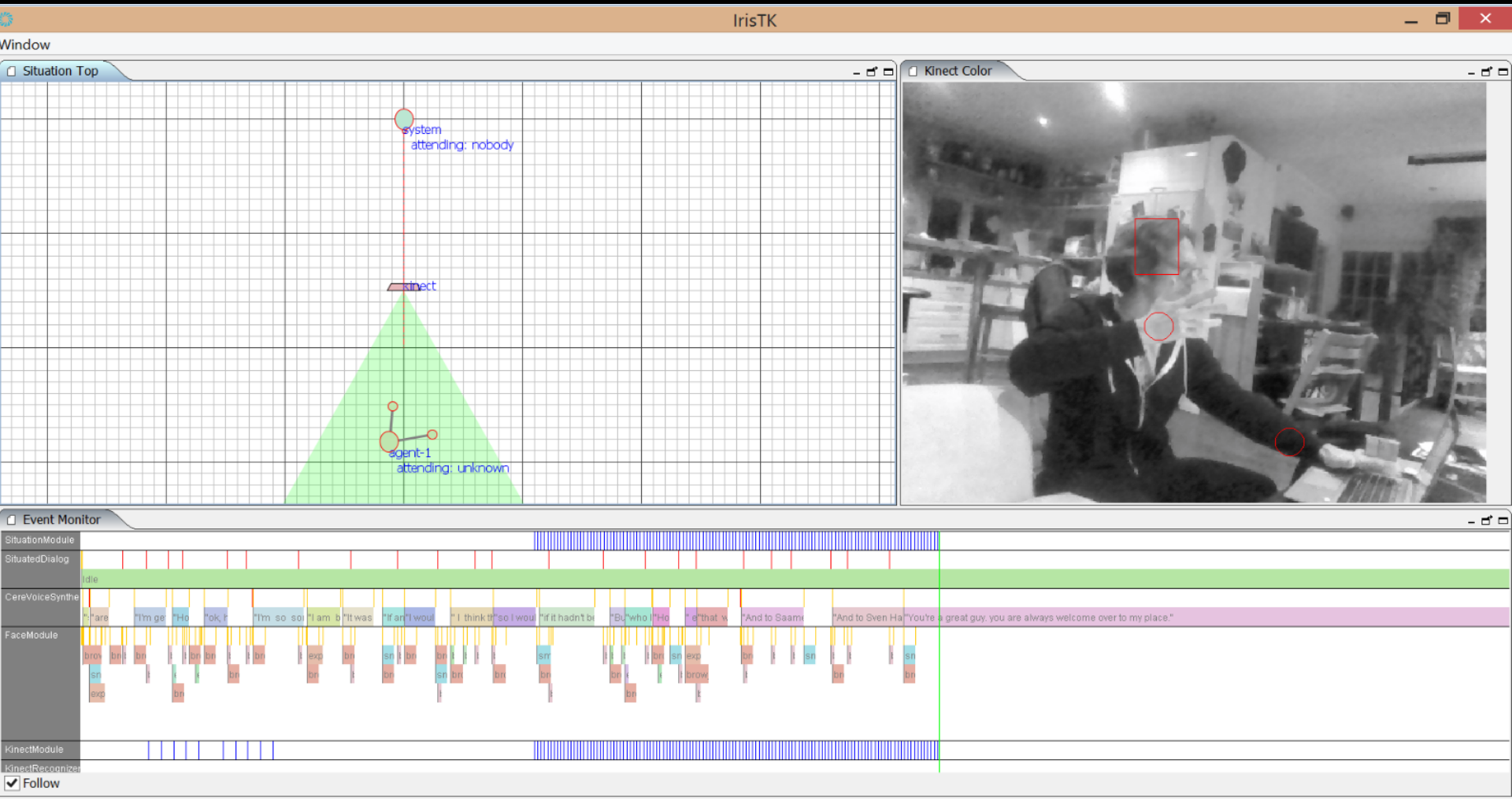
Benefits compared to a mechatronic solution:

- High resolution facial animation
- Low maintenance
- Customizable
- Expressive
- Inexpensive
- Low weight
- Quiet

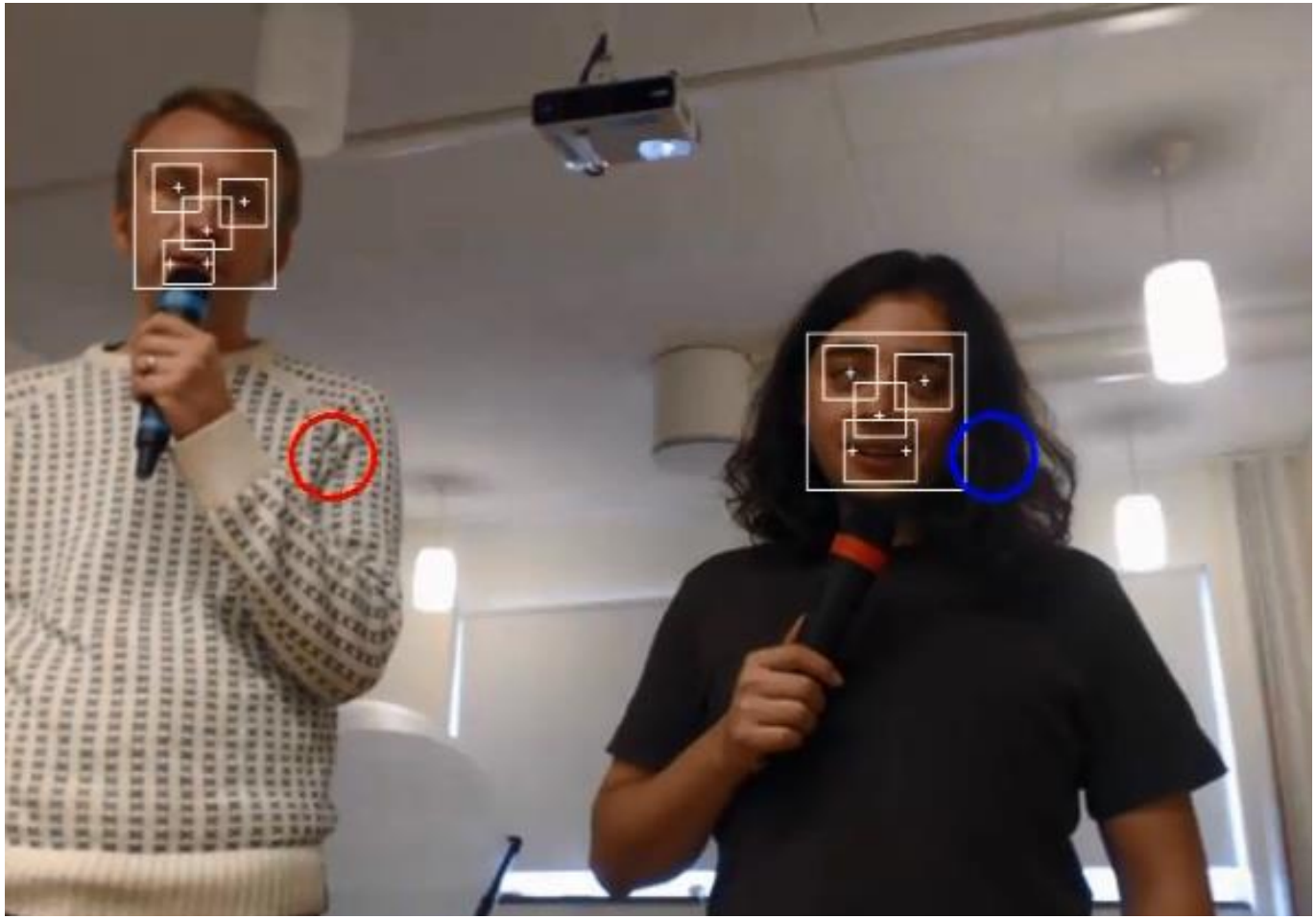
Software - IrisTK

IrisTK

Software - IrisTK



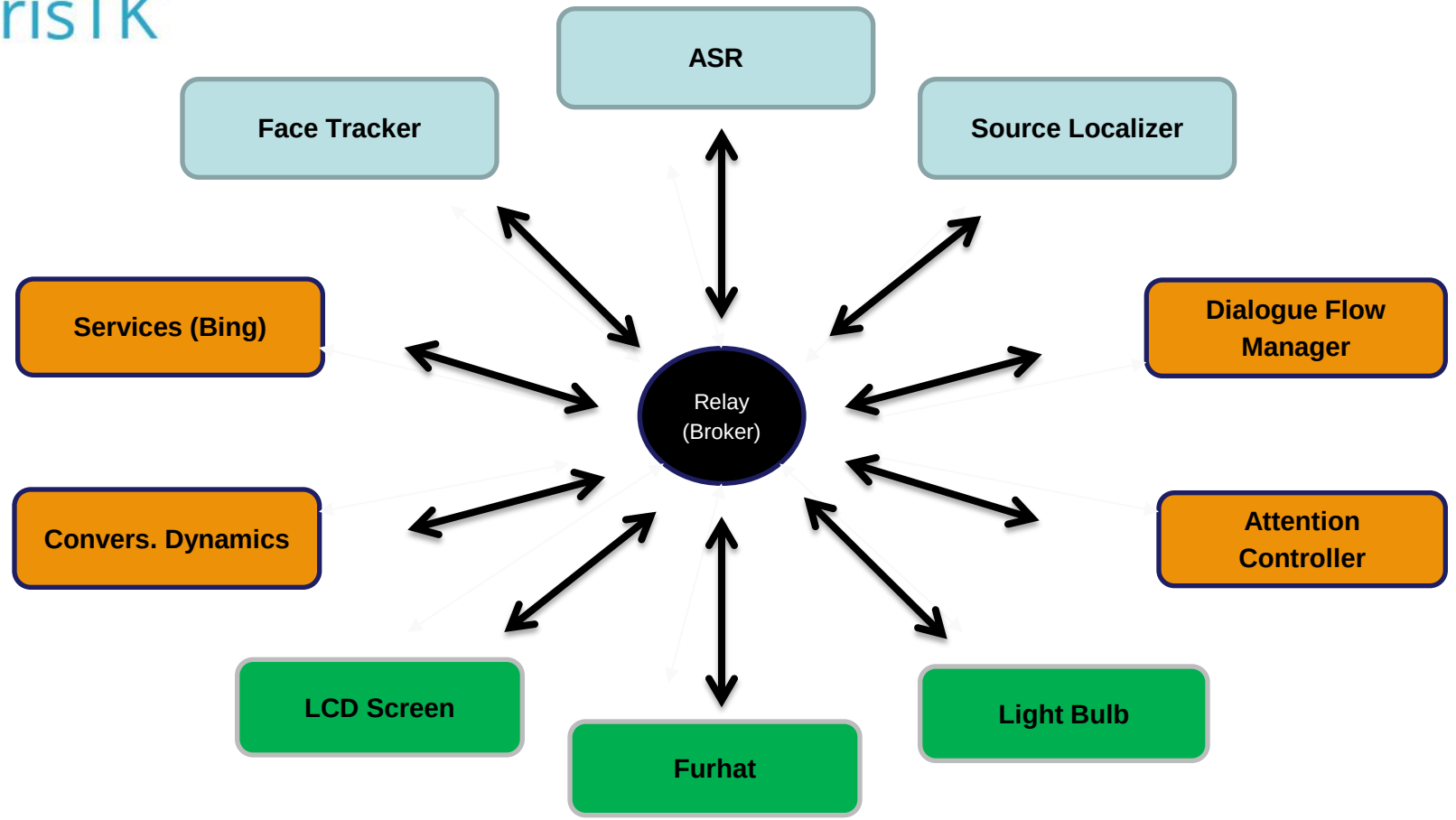
Fraunhofer SHORE/Microsoft Kinect



IrisTK

- Event-based
  - Distributed
    - Broker (relays events to connected systems)
- Modules
  - manage input (such as speech recognition)
  - output (such as speech synthesis)
  - control (mapping input to output).
- Packages
  - Core package, Addons (reusable), Applications (App)
- FlowModules
  - XML-based statechart orchestrates the interaction

IrisTK


ASR
Face Tracker
Source Localizer
Services (Bing)
Dialogue Flow Manager
Relay (Broker)
Convers. Dynamics
Attention Controller
LCD Screen
Furhat
Light Bulb

- App-store?

Social personal robotics has to

– create and invest into nonexistent markets.
  - Classrooms and homes - kids for education
  - Shopping malls, giving guidance
  - Marketing and advertisement
  - Hospitals and health care
  - Entertainment parks
  - Waiting rooms
  - At the bus station, and the airport
  - ….

Thank You
For Your Attention!