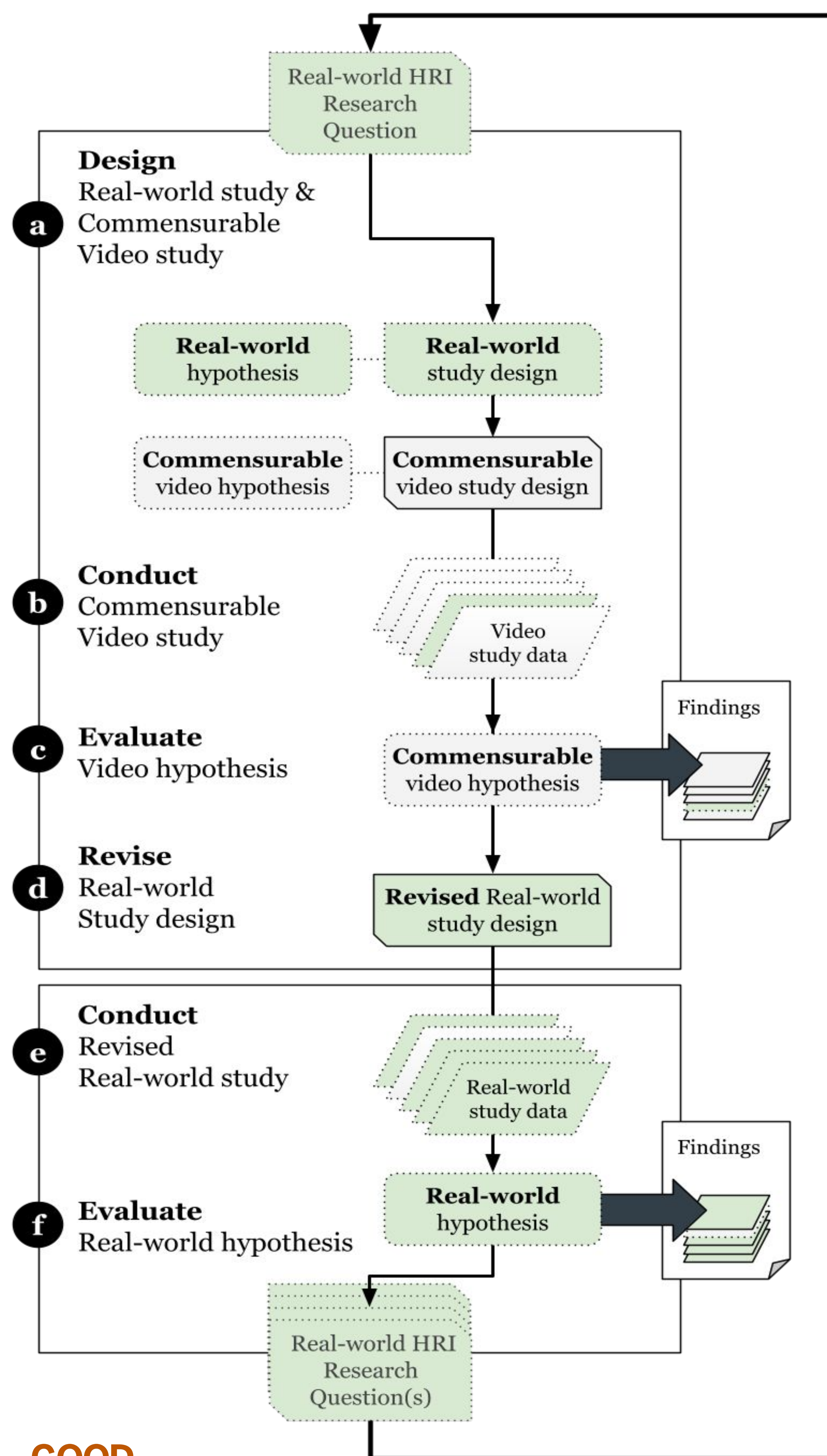


Vid2Real: A Research Framework for HRI

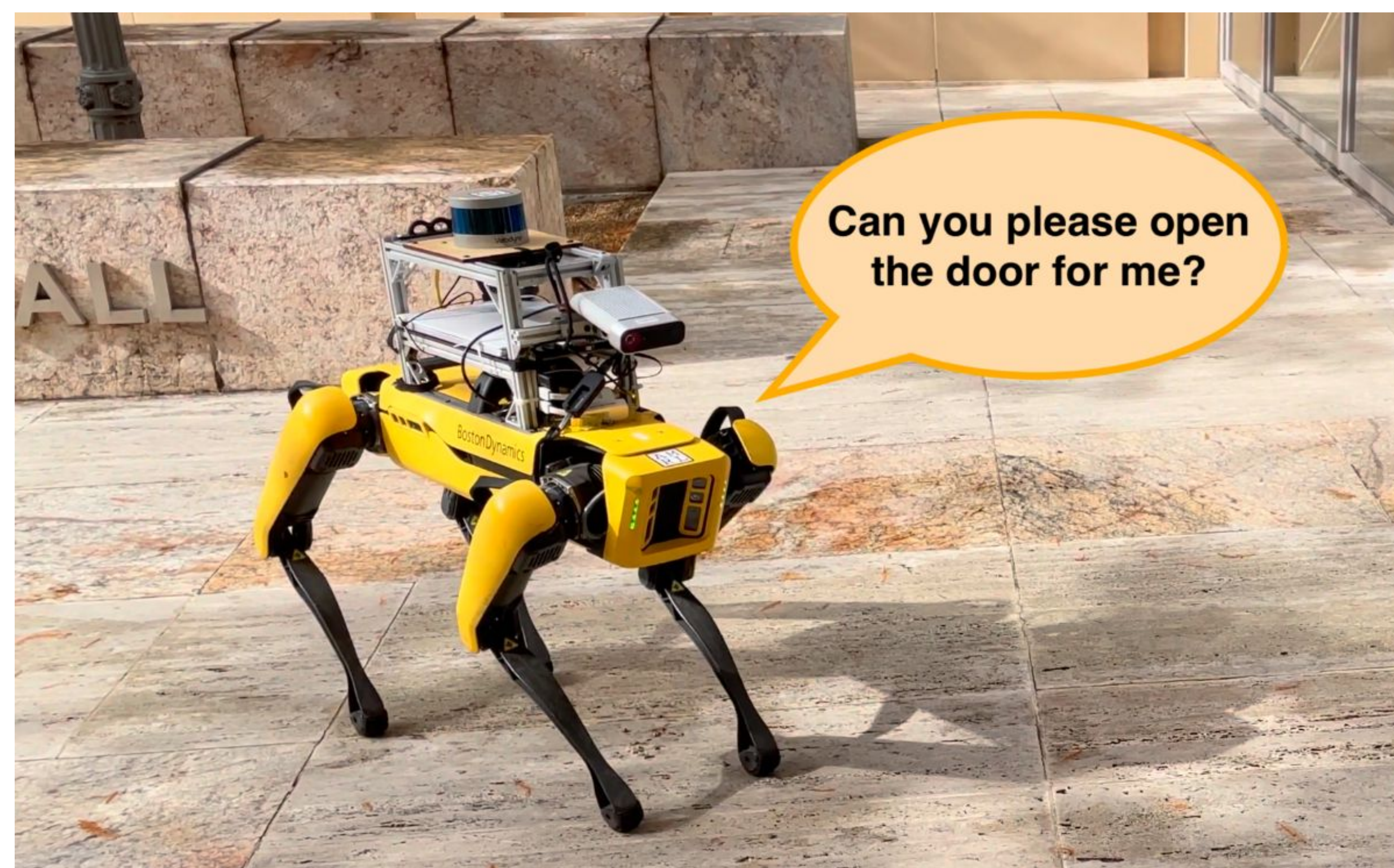
Framework



Application Study Design

RQ: How do robot's expressive behaviors affect its Perceived Social Intelligence (PSI) and Compliance?
RQ: How do the results differ between video-based study and real-world study?

Conditions: **Baseline**, **Verbal only (V)**, **Body Language only (BL)**, **Body Language + Verbal (BLV)**



Verbal Command



Body Language

Video Study Result

- 385 participants
- Compliance Likelihood
 - BLV = V > BL > Baseline
- Overall PSI
 - BLV > V = BL > Baseline
- Higher PSI = Higher Compliance

"The command to "please open the door for me" immediately allowed me to figure out what the robot wanted."

"I probably would not have opened the door for it unless I knew who the robot belonged to and why it needed to access the building. I wouldn't let it in without feeling comfortable that it wasn't there to do something that I wouldn't want to enable."

Real-World Study Result

- 26 participants
- Compliance Likelihood
 - BLV > Baseline
- Overall PSI
 - BLV > Baseline
- Higher PSI = Higher Compliance
- Participants may walk too fast and pass the robot without paying attention to it
- Compliance may be unintentional as humans may coincidentally have the same goals as the robot
- With WoZ method, robot behaviors are difficult to remain identical