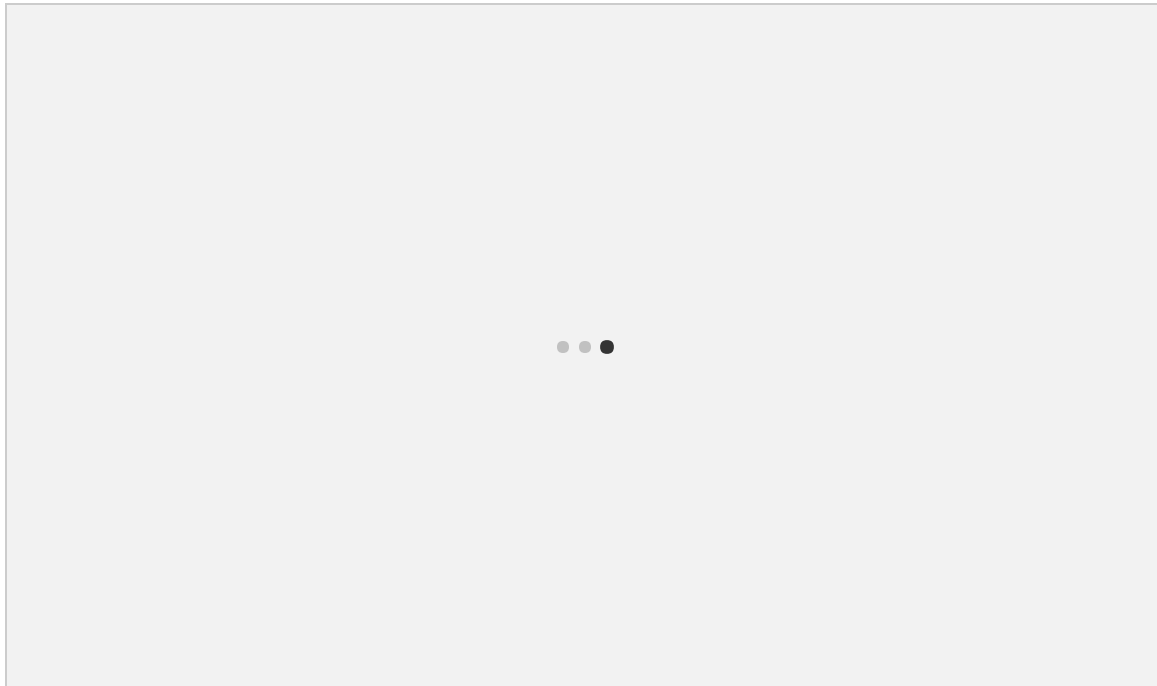# Preliminary Group Project Presentations

Due: start of class on Wednesday 2/15/17

In class on Thursday, each group will present a preliminary proposal for their research project. Include a link to the slides (google presentation, .pdf, .ppx, etc.) as a forum post below. These presentations are expected to last ~5-10 minutes each, with ~3 minutes allotted for the class to ask questions following each presentation. These presentations should outline your groups' current thinking regarding the first three phases of the research process outlined in *Methodological Fit in Management Field Research:*

- Identifying target of interest
- Read the literature
- Develop research question

Remember that this process is iterative - you might change your research question as we continue working this semester (especially as we begin designing our studies) - that's OK! However, you need to specify a question now, even if it changes later. The things I'm looking for are:

- Does the group have a specific research question articulated at this time (even if it might change later)
- Has the group started looking into related literature? I don't expect you to have read everything related to your target of interest yet, but you should identify a few papers that seem highly relevant. Places to look include:
  - Conferences: HRI, CHI, RSS, AAAI, ICRA, RO-MAN, IROS
  - Journals: IJRR, JHRI, TOCHI, IEEE T-RO
  - The readings we have done in class (& see their references)
  - Social science / communication journals (e.g., see the Journal of Linguistic Anthropology we used in the brainstorming session)

- - Youtube (yes, there are many good robot demos on youtube from research labs that might be inspiring)
    - The videos (many of which come from research labs) shown in class
    - Try to find work that has been highly cited. However, if you are looking at something particularly novel, this may be impossible.
  - Do all group members seem to be more or less on the same page? Make sure that everyone gives some part of the presentation
  - Was the group able to clearly communicate their ideas?

You can structure the presentation however you'd like, although my recommendation is something along the lines of:

- Introduction: Re-introduce all members of the group
- Topic Introduction: What is your domain of interest? Why is the group interested in this? Think about the **substantive** domain of research.
- Overview of related work: what is currently known about the phenomena or constructs? Is the area nascent, intermediate, or mature? Think about the **conceptual** domain of research. I'd spend several slides addressing this.
- What is your specific research question (i.e., in one sentence)? Why is this question novel? Why is it interesting? What do you hope to discover by answering it?
  - See Table 1 in **Methodological Fit** regarding the description of a research question
- Any thoughts on how you will answer this question? We will cover experimental design in detail over the next few lectures, but even before this, how do you think you might answer your question (e.g., refer to research strategies we have covered in class, choosing a methodology that fits the current state of prior theory, etc.)? What sort of data do you think you need to collect? Think about the **methodological** domain of research. How will you ensure high methodological fit?
- What limitations might arise (e.g., what is out of scope due to your research question, methodology, etc.)?
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- What robot platform(s) do you plan on using? What sensors might you use? What are the essential resources you will need to answer your question? (if we don't have these available, we should order them asap!)
- How will you ensure validity? What threats to validity are you currently thinking about?
- What contribution can you make by carrying out this project?
- Have you thought about how you might allocate work across team-members?
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Overall, remember that "The research process, like a three-legged stool, always depends on materials from all three domains — **content, ideas,** and **techniques.**" The point of this preliminary proposal is to start outlining each of these domains. Right now, this is a preliminary proposal - it is not essential that you have all the **right** answers to these questions (for some, there may be no **right** or **best** answer). What is important is that you have started thinking about these things and are making **reasoned decisions** about your research plan. The key is that we follow a **systematic process** so that when we report (i.e., write our papers) we can document each of the decisions that were made, which presumably influence our ultimate findings.

Also, please include visuals to help convey your ideas. I'd encourage everyone to attend and complete the Carnegie Mellon Open Learning Initiative Free Course on Visual Communication

Design to improve your presentation abilities (an essential skill for a graduate student). I highly recommend sketching ideas as a group (see ***Design-oriented Research in Human-Computer Interaction***) - this will help both generate and refine ideas - feel free to take pictures of these sketches and walk through them in the presentation.