1. What is the motivation for the project?
2. What is the state of the art?
3. What will you do?
4. What do you think you will learn at the end?
5. What will be your demo?
6. What will each of you do at each step?
Human-machine dialogues today: single-domain

What are some good hotels in the Palo Alto area?

I found the Homewood Suites by Hilton Palo Alto. It’s at 4329 El Camino Real.
Human-human dialogues today: multi-domain

What are some good hotels in the Palo Alto area?

I found the Homewood Suites by Hilton Palo Alto. It’s at 4329 El Camino Real.

Great. Any recommendations for restaurants around there?

...
Our Motivation
1. What is the motivation for the project?
2. **What is the state of the art?**
3. What will you do?
4. What do you think you will learn at the end?
5. What will be your demo?
6. What will each of you do at each step?
The State of the Art

Campagna et al. 2020, “Zero-Shot Transfer Learning with Synthesized Data for Multi-Domain Dialogue State Tracking”

Alexa Conversations
1. What is the motivation for the project?
2. What is the state of the art?
3. **What will you do?**
4. What do you think you will learn at the end?
5. What will be your demo?
6. What will each of you do at each step?
What we’ll do

➢ Extend multi-domain dialogue state tracking to compound ontologies
➢ Avoid annotated dialogues in training; rely instead on the domain schema
➢ Construct domain-independent, reusable dialogue models
➢ Use executable representations
➢ Compute state transitions & agent responses from the current state, not the full dialogue history
1. What is the motivation for the project?
2. What is the state of the art?
3. What will you do?
4. **What do you think you will learn at the end?**
5. What will be your demo?
6. What will each of you do at each step?
What we expect to learn

- Almond
  - ThingTalk, Schemas, Skills
- Virtual Assistants
  - Dialogue states, templates
- Research
  - Error analysis, question-answering within a structured project context
1. What is the motivation for the project?
2. What is the state of the art?
3. What will you do?
4. What do you think you will learn at the end?
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What each of us will do

<table>
<thead>
<tr>
<th>Wk</th>
<th>Goal by end of week</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Hotel skill; some annotation for dev/test for Hotel</td>
</tr>
<tr>
<td>6</td>
<td>More annotation; some domain-switch dialogue templates</td>
</tr>
<tr>
<td>7</td>
<td>Experiments; more domain-switch dialogue templates; paper writing</td>
</tr>
<tr>
<td>8</td>
<td>More of the above, focus on paper (EMNLP submission Monday week 9)</td>
</tr>
<tr>
<td>9</td>
<td>Refine; presentation</td>
</tr>
<tr>
<td>10</td>
<td>Refine; project report</td>
</tr>
</tbody>
</table>
Thank you!