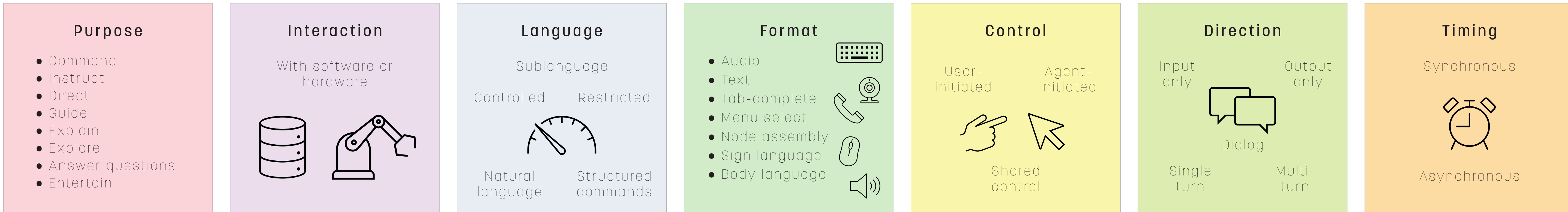


NATURAL LANGUAGE INTERFACES

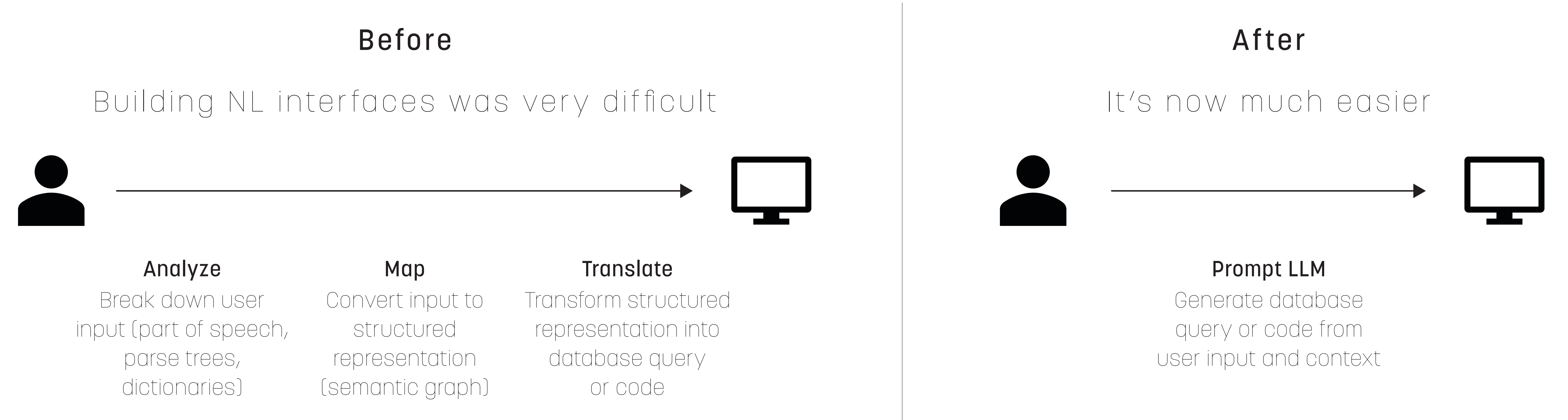
POWERED BY LARGE LANGUAGE MODELS

Definition

A natural language interface enables a user to achieve goals by interacting with systems in natural language in a variety of formats. Initiated by the user or the system, an interaction might flow like a conversation or be simple input or output, in real time or delayed.



Impact of large language models



Simple, intuitive approach for software applications

Approach

1. Build GUI elements as usual (eg. buttons, sliders)
2. Add NL input method (eg. speech or text)
3. Implement NL interaction for each GUI element (eg. "Submit my choice" == **Submit** button click)

Benefits

- GUI elements give users cues about functionality and related interaction. For example, seeing a submit button tells users they control when data is submitted.
- If your GUI design has captured users' needs, an NL interface based on those GUI elements will too.

Sample GUI elements



Sample metadata

```
[
  { "element_name" : "Accept terms checkbox",
    "dom_id" : "accept_terms_cb",
    "task_description" : "Indicates terms are accepted",
    "actions_arr" : []
  },
  { "element_name" : "Submit button",
    "dom_id" : "submit_btn",
    "task_description" : "Submits terms acceptance",
    "actions_arr" : [
      { "function" : "submitTermsChoice" }
    ]
  }
]
```

Sample prompt

```
A web interface has the following elements:

Element: accept_terms_cb
Description: Accept terms checkbox.
Indicates terms are accepted.

Element: submit_btn
Description: Submit button. Submits terms acceptance.

Which element is the following message about?
Submit my choice
Element:
```