

AI conversational design

A practical framework for building systems that are good conversational partners — not just accurate ones.

The Cooperation Model

Conversations work because both parties follow implicit rules — linguists call these Gricean maxims. These are the invisible contracts that make dialogue feel natural and productive.

Be Relevant

Stay on topic and respond to what was actually asked.

Be Clear

Communicate in a way the other party can readily understand.

Don't Overshare

Say no more than what is needed for the exchange.

Be Truthful

Don't assert things you believe to be false or unsupported.

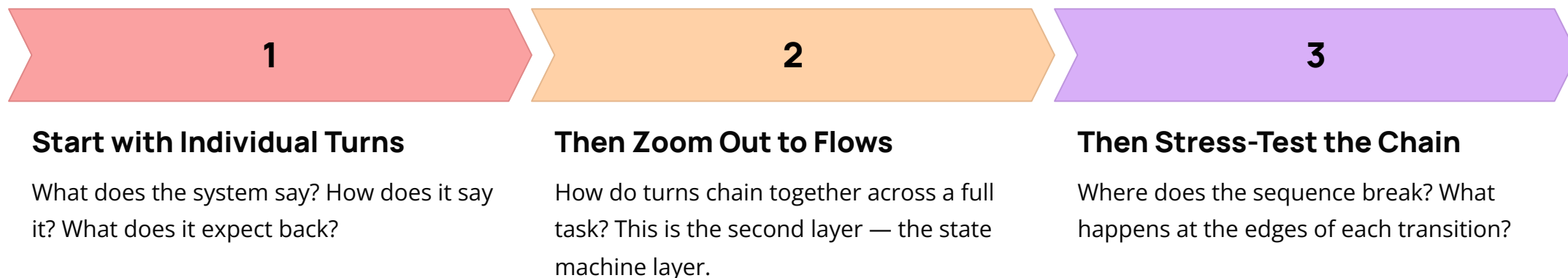
The Core Insight

When a system violates these maxims — like giving a wall of text when someone asked a yes/no question — it **feels broken** even if the information is technically correct.

Your job is to make the system a good conversational partner, not just an accurate one.

Turn Design vs. Flow Design

Most people jump straight to mapping out dialogue flows — the equivalent of wireframing before you understand the problem. There's a better order of operations.



i The state machine work on the TMS project was exactly this second layer — chaining well-designed individual turns into a coherent task flow.

Error & Repair as a First-Class Concern

30–40%

Of Conversational Turns

involve some form of repair, clarification, or renegotiation — in real human dialogue.

In GUI design, error states are edge cases. In conversation, **misunderstanding is the norm.**

Where the Work Actually Lives

Designing the "happy path" dialogue is maybe a third of the work. The rest is everything else:

- What happens when the system **doesn't understand** the user's input?
- What happens when the user **changes their mind mid-task**?
- What happens when **context shifts** unexpectedly?
- What happens when **confidence is low** on the system's end?

✓ The confidence-ranked approach in BOBOT was already playing in this space — surfacing uncertainty rather than hiding it.

Persona & Register

The system's voice isn't just branding. It's a **functional decision** that sets user expectations about capability — and mismatches are where trust breaks down fast.

Casual, Friendly Tone

Implies **flexibility and forgiveness**. Users expect the system to handle ambiguity, recover gracefully, and tolerate imprecise input.

Clinical, Precise Tone

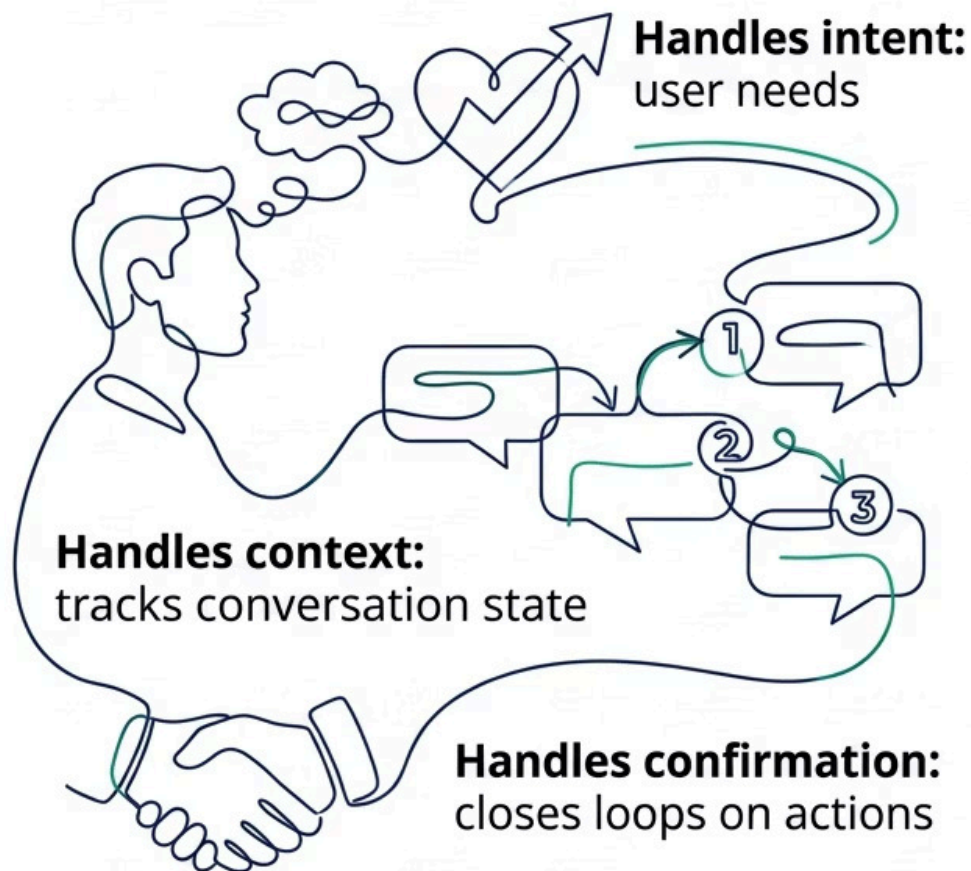
Implies **reliability and narrow scope**. Users expect accuracy and consistency, but also accept that the system has hard limits.

Mismatch between tone and actual capability is where trust breaks down fast. A friendly voice that can't handle follow-up questions feels deceptive. A clinical voice that makes casual small talk feels uncanny.

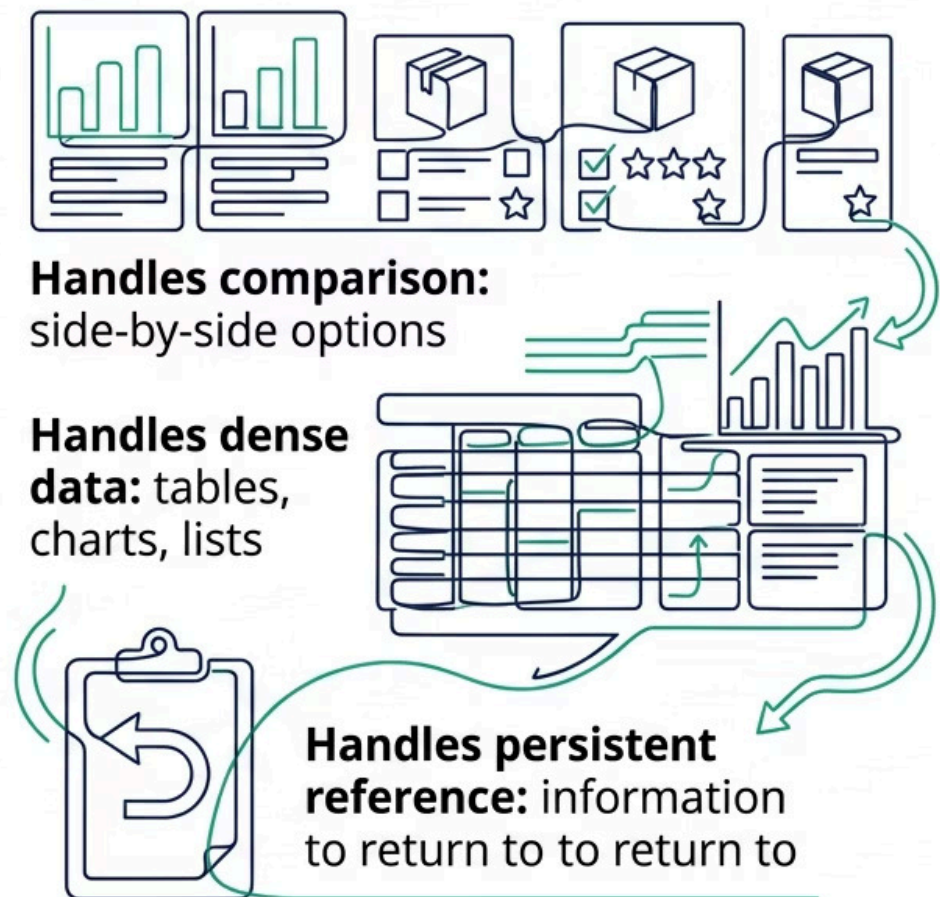
Multimodal Awareness

Conversational design almost never exists in a voice-only or text-only vacuum anymore. The real design question is always: **what belongs in the conversation, and what belongs in the visual layer?**

Conversation Layer



Visual UI Layer



- ❑ This is where your VUI channel map work comes in — mapping which modality carries which part of the interaction, and designing the handoffs between them deliberately.

A Practical Starting Framework

When you sit down with a new conversational design problem, work through these seven steps in order. Skipping ahead is where most designs go wrong.



Inventory the User Intents

What are people actually trying to do? Not what you think they want — what do they actually ask for?



Map the System's Domain Knowledge

What can it actually answer or act on? Be honest about the boundaries.



Identify the Gap

The space between user intents and system capability is exactly where your error strategy lives.



Design Individual Turns Before Flows

Get each exchange right before you worry about how they chain together.



Define the Persona as a Functional Spec

Not a creative exercise — a set of constraints that governs tone, scope, and recovery behavior.



Build Your State Model and Recovery Paths

Map the transitions, the fallbacks, and the graceful exits.



Test with Real Language, Not Idealized Scripts

Real users will surprise you. Design for the messy, ambiguous, interrupted reality of actual conversation.