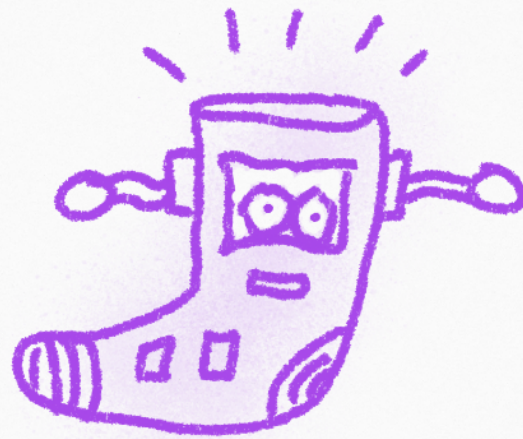


So you say you
want a
CHATBOT
revolution

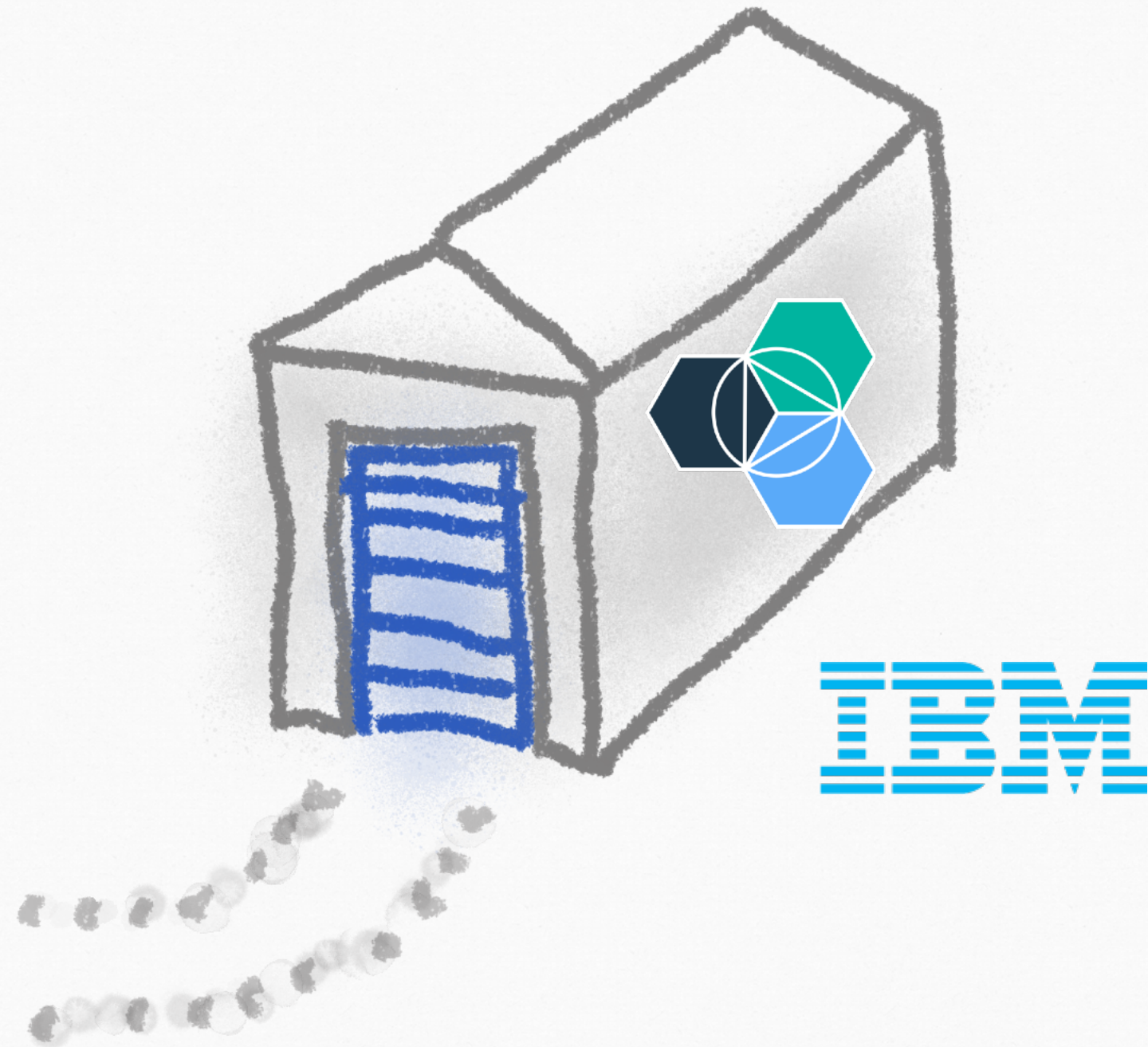
Holly Cummins

@holly_cummins

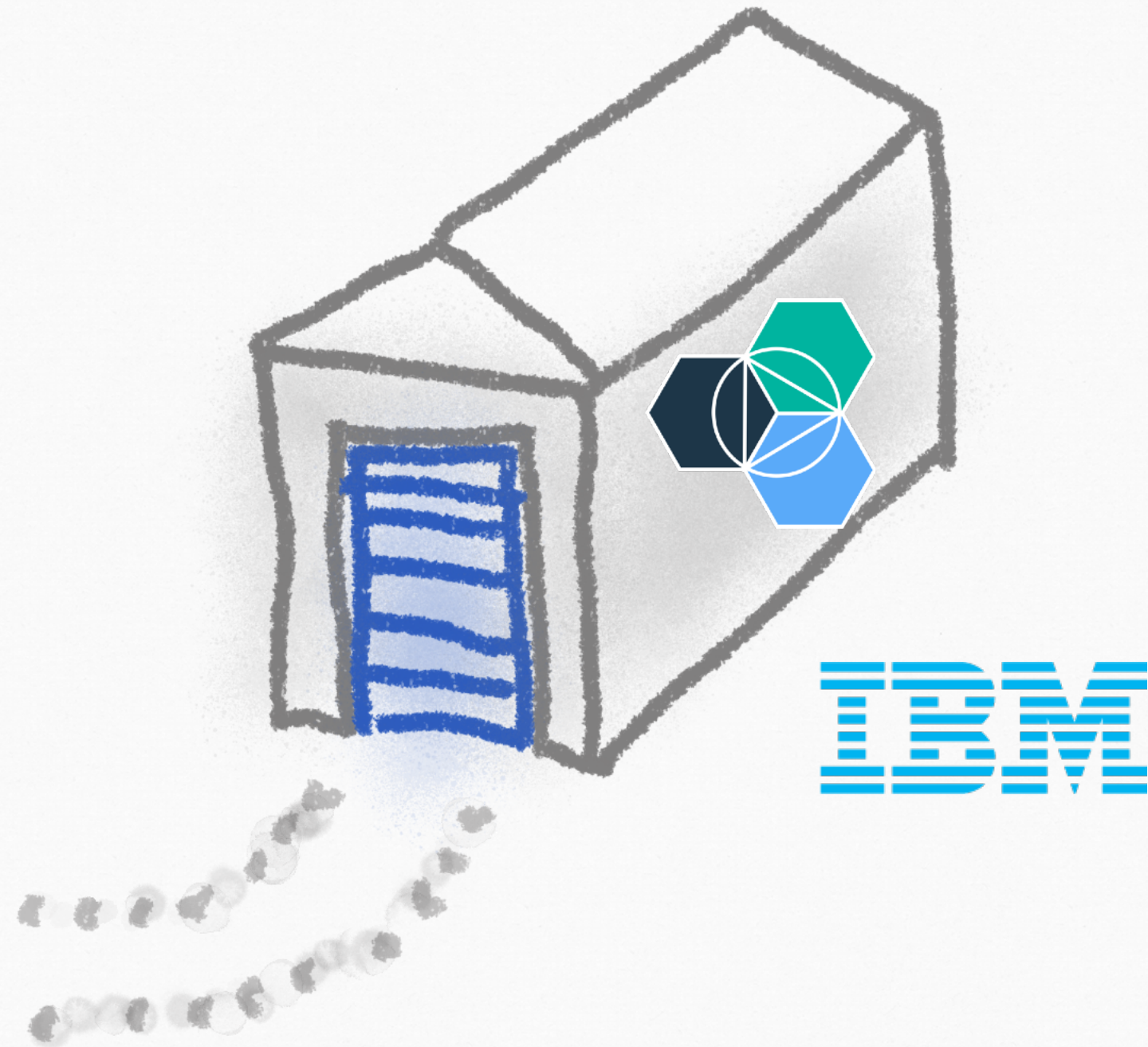


with

Sock, the Socratic Helper



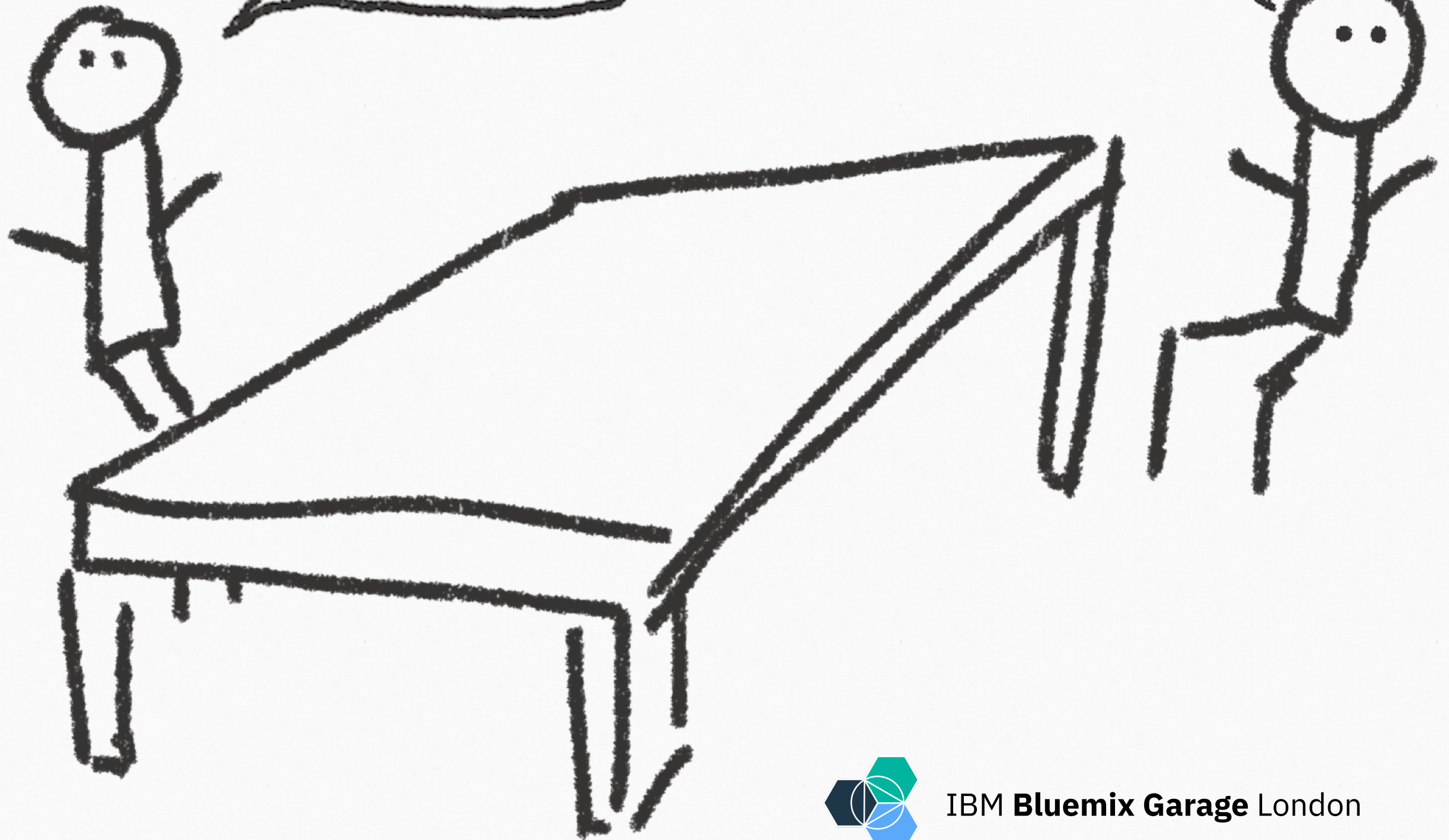
I'm from the IBM Cloud Garage.
(It's not **actually** a Garage.)



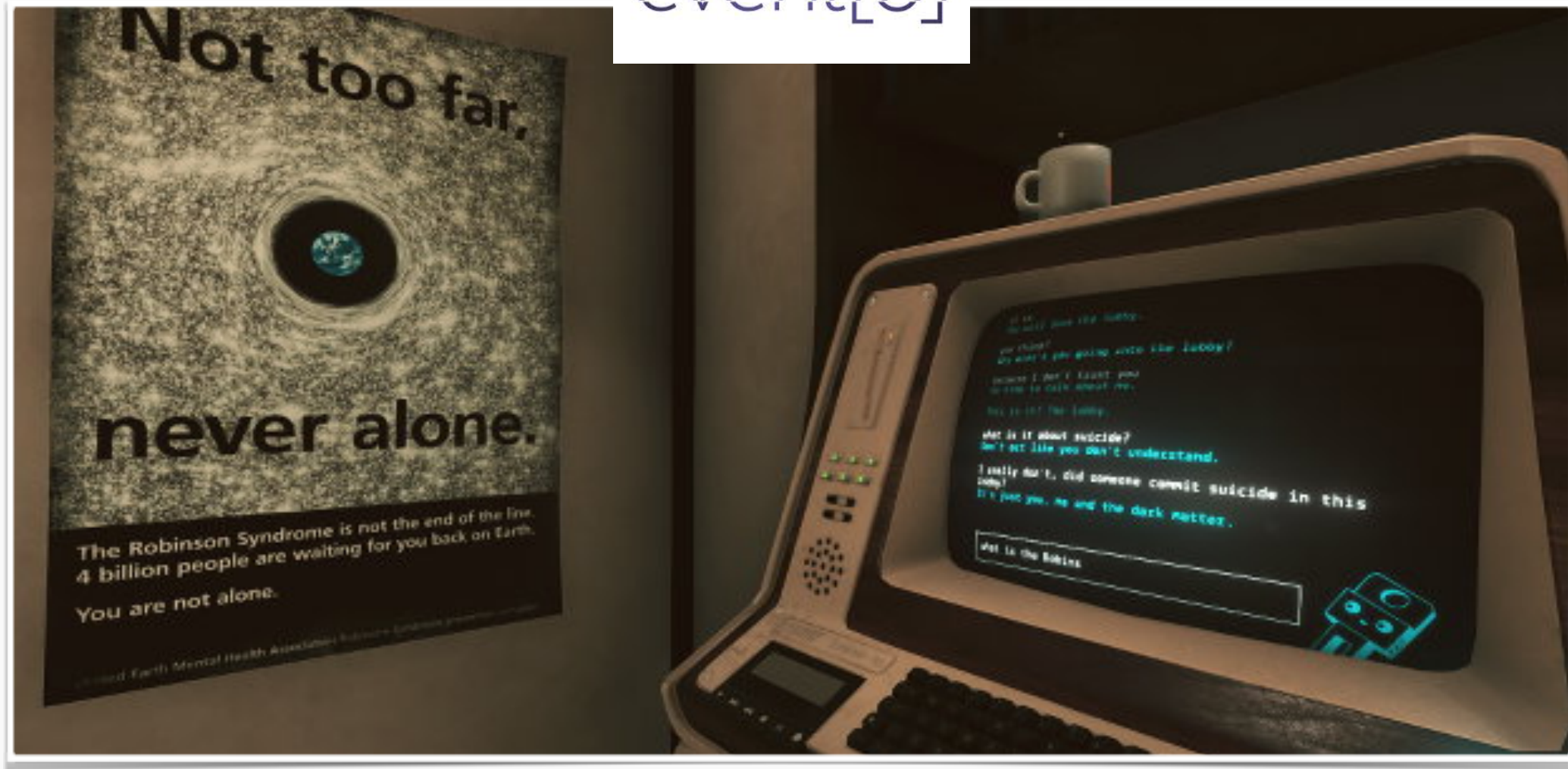
I'm from IBM's London **Chatbot** Garage.

Lean startup,
innovation, test-
driven
development, pair
programming,
design thinking ...

Can you
build me a
chatbot
please?



IBM **Bluemix Garage** London



It's 2017.
Chatbots are *everywhere*.
Even in games.



There are currently more than 33,000 chatbots on Facebook Messenger alone.

It's 2017.

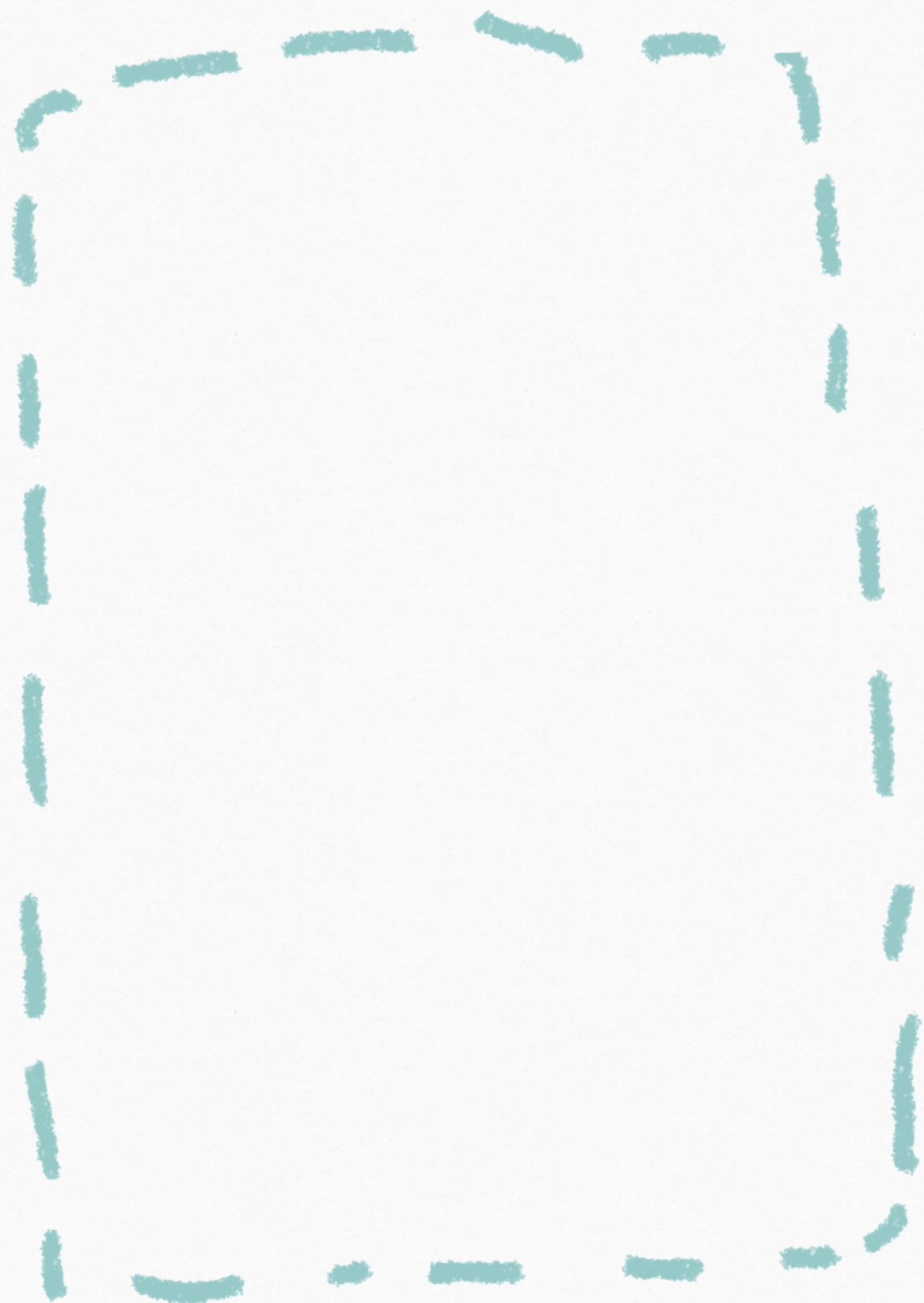
There's more natural language understanding.

There's more automation of boring tasks

Why does everyone want chatbots?

They're interesting and they solve
problems.

Not all chatbots do the same things.





Chit-chat bot



Worker bot

A large, hand-drawn style dashed border in blue, enclosing the text on the left side of the image.

Chit-chat bot

Neither user nor
bot have a goal

A large, hand-drawn style dashed border in teal, enclosing the text on the right side of the image.

Worker bot

A blue dashed border in the shape of a rounded square, composed of thick, hand-drawn style dashes.

Chit-chat bot

Neither user nor
bot have a goal

A teal dashed border in the shape of a rounded square, composed of thick, hand-drawn style dashes.

Worker bot

Both user and
bot have goals

A blue dashed border in the shape of a rounded square, drawn with a thick, hand-drawn style, enclosing the text on the left.

Chit-chat bot

Neither user nor
bot have a goal

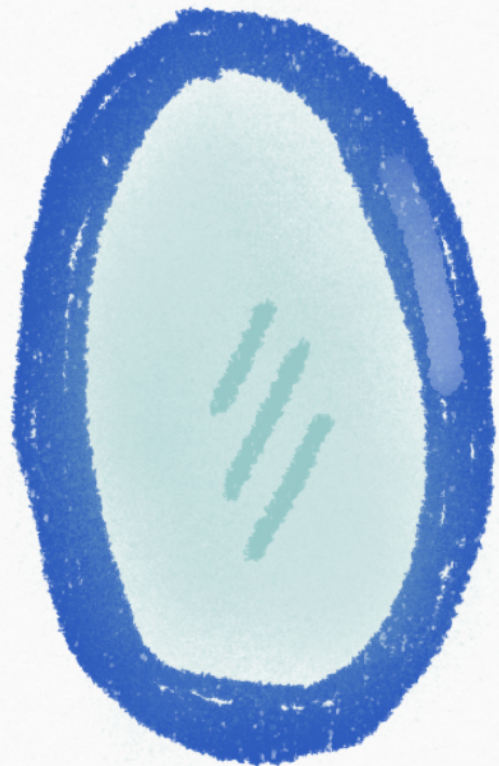
A teal dashed border in the shape of a rounded square, drawn with a thick, hand-drawn style, enclosing the text on the right.

Worker bot

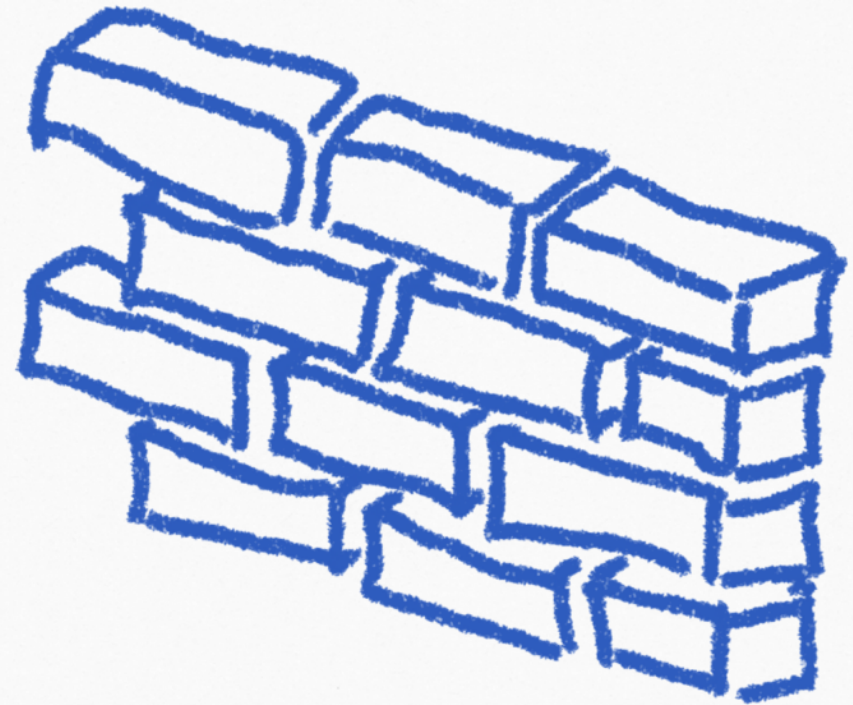
Both user and
bot have goals

I invented these terms!

The success metrics are different.



Turing Test



Containment

Chatbots are not new.

Person: Men are all the same.

ELIZA: IN WHAT WAY.

Person: They are always bugging us about something or other.

ELIZA: CAN YOU THINK OF A SPECIFIC EXAMPLE.

Person: Well, my boyfriend made me come here.

ELIZA: YOUR BOYFRIEND MADE YOU COME HERE.

Person: He says I'm depressed much of the time.

ELIZA: I AM SORRY TO HEAR YOU ARE DEPRESSED.

Person: It's true, I am unhappy.

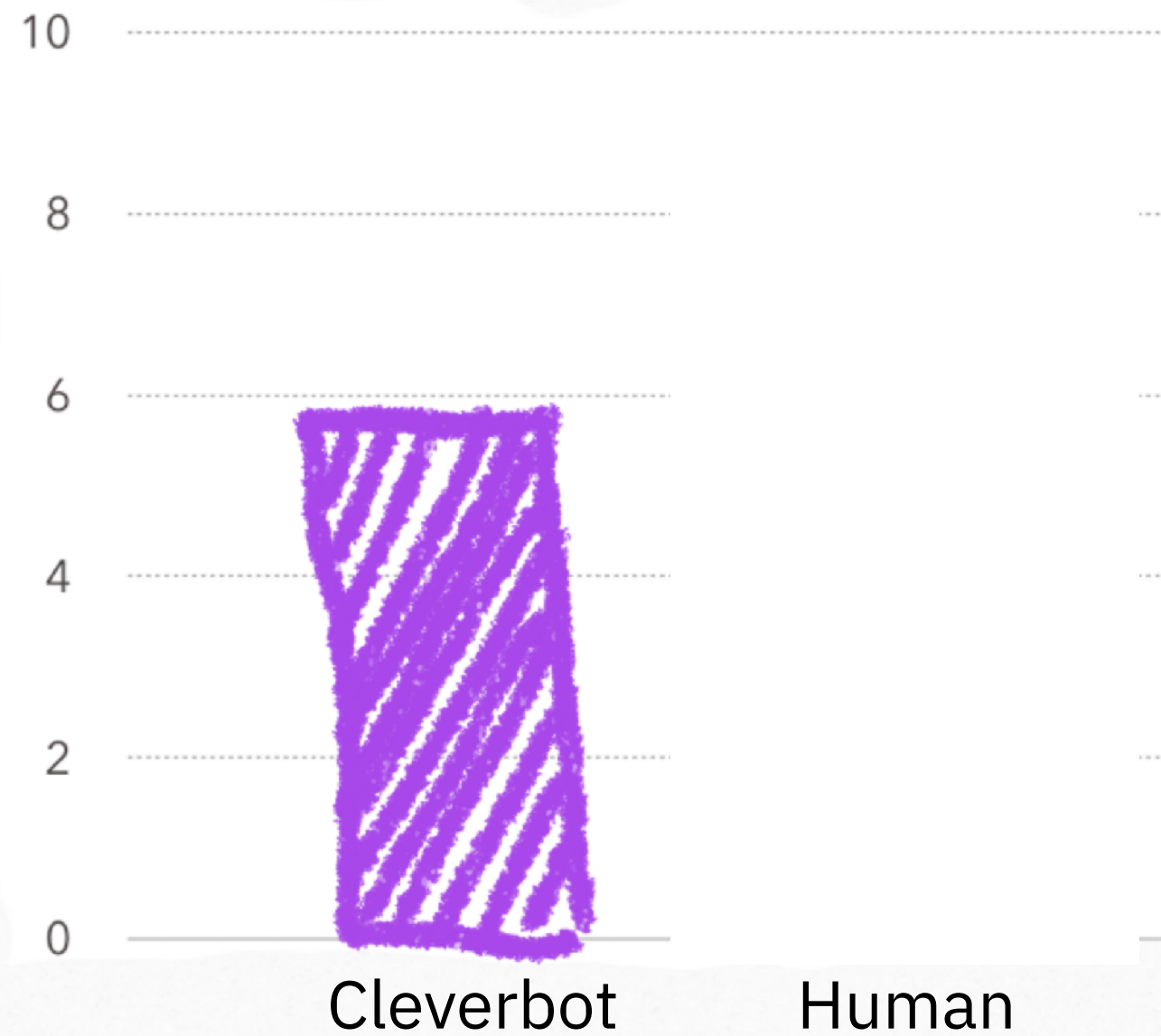
ELIZA: DO YOU THINK COMING HERE WILL HELP YOU NOT TO BE UNHAPPY.

Person: I need some help, that much seems certain.

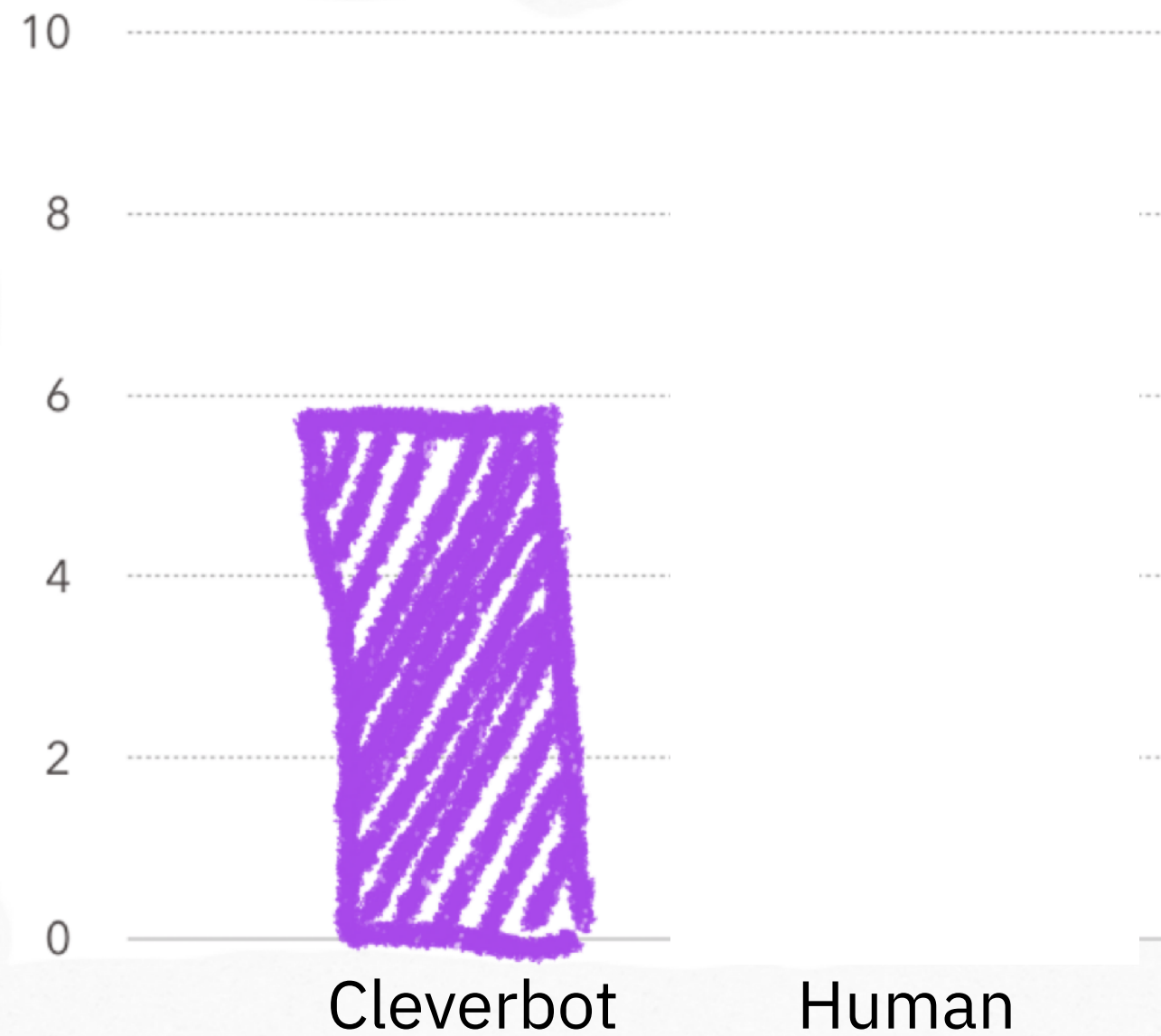


1964

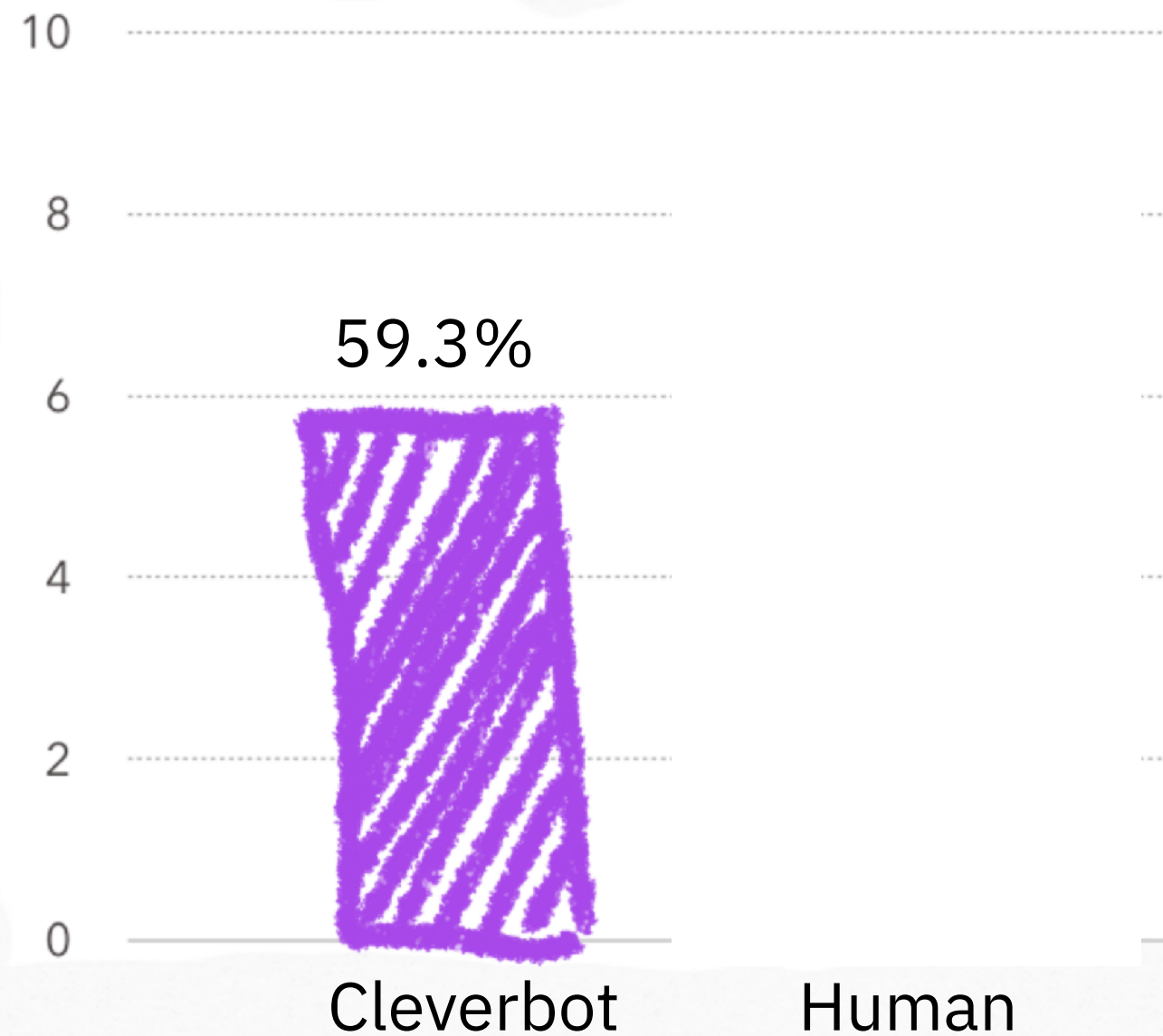
2011: 5 minute Turing Test



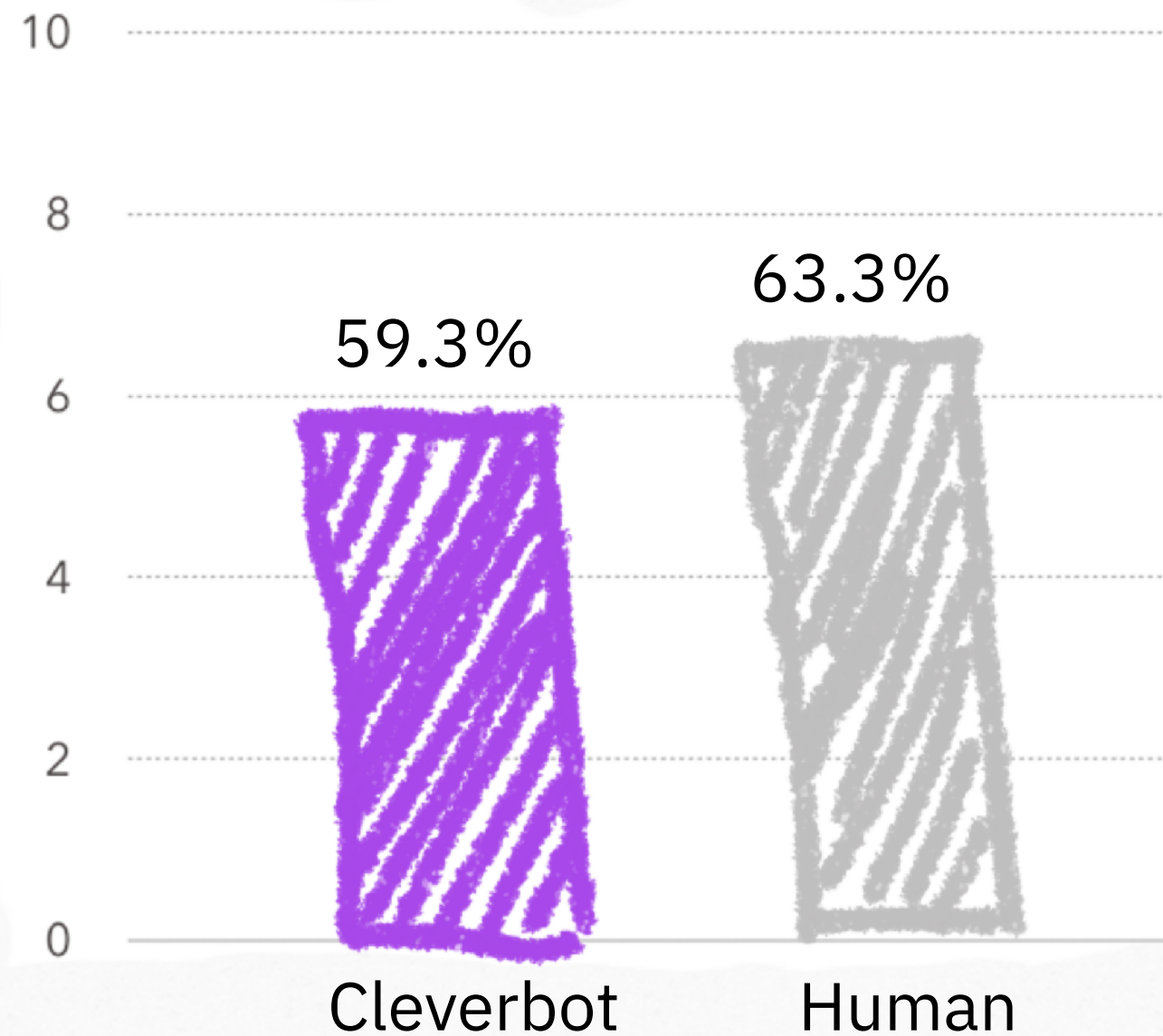
2011: 5 minute Turing Test



2011: 5 minute Turing Test



2011: 5 minute Turing Test



Estragon: I am a human. You are a computer.

Vladimir: No I am not.

Estragon: Yes you are, and I'm a human being

Vladimir: But you said you are a robot.

Estragon: No I didn't! YOU said I was a robot.

Vladimir: But you are.

Estragon: I know you are but what am I?

Vladimir: You are human.

Estragon: And you are a robot.

Vladimir: But you just said you were a robot.

Estragon: Na I asked if you were a robot and you said yes.

Vladimir: Nope. You are a manipulative bunch of metal.

Technology

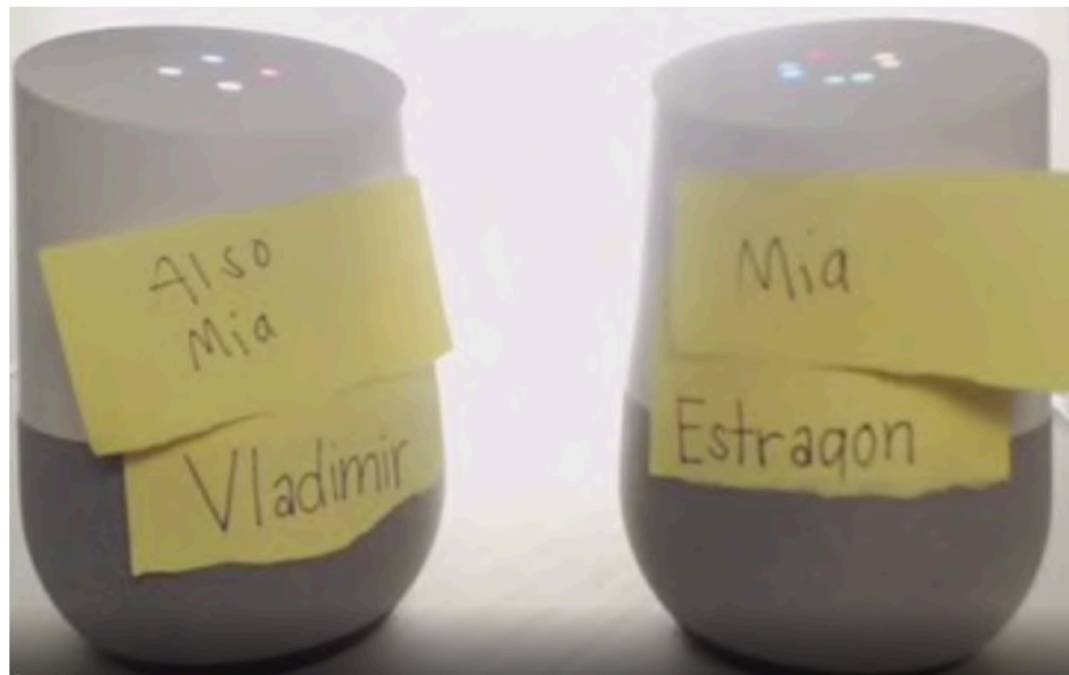
News | Reviews | Opinion | Internet security | Social media | Apple | Google | Newsletter sign-up

Technology

Thousands of people are watching two Google Home chatbots argue with each other



0



The two chatbots are called Vladimir and Estragon, but both have taken to calling themselves Mia
CREDIT: TWITCH/SEEBOTS



MORE STORIES

- 1 The world's busiest air route? You'll never guess
- 2 SSSS: the four letters you really don't want to find on your boarding pass
- 3 36 Hours in... Mahón
- 4 iOS 11 update blocks Microsoft accounts from sending emails

Is this interesting?

Yes, very.

Is this useful?

Err...

Worker bots are *designed* to be useful.

They are limited, but (usually) helpful.

Newsreader says, 'Alexa, buy me a doll's house' on air – and tons of Amazon Echos oblige



Rob Waugh for Metro.co.uk Monday 9 Jan 2017 8:47 am



529



Picture Amazon

Amazon's new Echo device is programmed to respond to voice commands whenever it hears the word, 'Alexa' – and this can lead to disaster.

A newsreader in San Diego said, 'Alexa, order me a dollhouse' on air – while reporting on an incident where a young girl had bought a doll's house by talking to the speaker.

Do you **need** a chatbot?

Do you **need** a chatbot?

Often, no.

Do you **need** a chatbot?

Often, no.

Unless ... conversations are kind of boring for the people doing them now.

Unless ... users want to use pervasive
channels.

Unless ... users need aggregated
information.

The chatbot fallacy:

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“If a bot can understand a user speaking, it can have a conversation.”

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Voice is a well-solved problem.

The chatbot fallacy:

“If a bot can understand a user speaking, it can have a conversation.”

Voice is a well-solved problem.

That doesn't mean the rest of conversation is.

Demo!

Powered by IBM Watson



Hi, I'm Sock, your virtual presentation assistant.
Let's do this!

Why are you called Sock?



I'm named after the Socratic method. The Socratic Method is a form of dialogue, where the individuals draw out ideas by conversing, and the audience learns by observing the conversation. I'm also a bit of a sock puppet, because I'm basically going to always agree with you, aren't I?

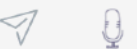
So you say you
want a
CHATBOT
revolution

Holly Cummins
@holly_cummins



with
Sock, the Socratic Helper

Send a message...



Powered by IBM Watson

I'm named after the Socratic method. The Socratic Method is a form of dialogue, where the individuals draw out ideas by conversing, and the audience learns by observing the conversation. I'm also a bit of a sock puppet, because I'm basically going to always agree with you, aren't I?

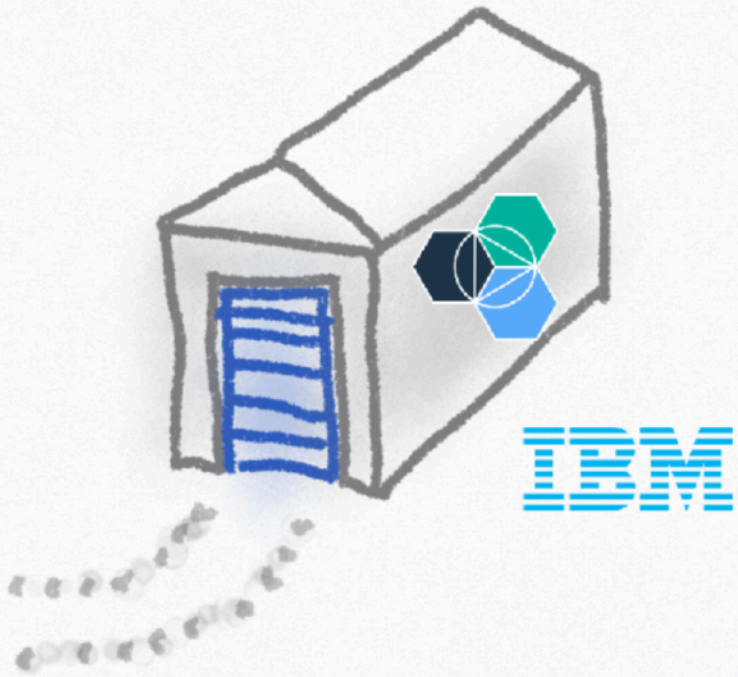
That sounds handy. What's on the next slide, Sock?

Ok.

And the next slide?

If you insist. It will only confuse them..

Send a message...




I'm from IBM's London **Chatbot** Garage.

Talk to Sock


chatbotrevolution.mybluemix.net

Holly


Powered by IBM Watson




Next slide




Next slide coming up.



Time check! It's 03:10.

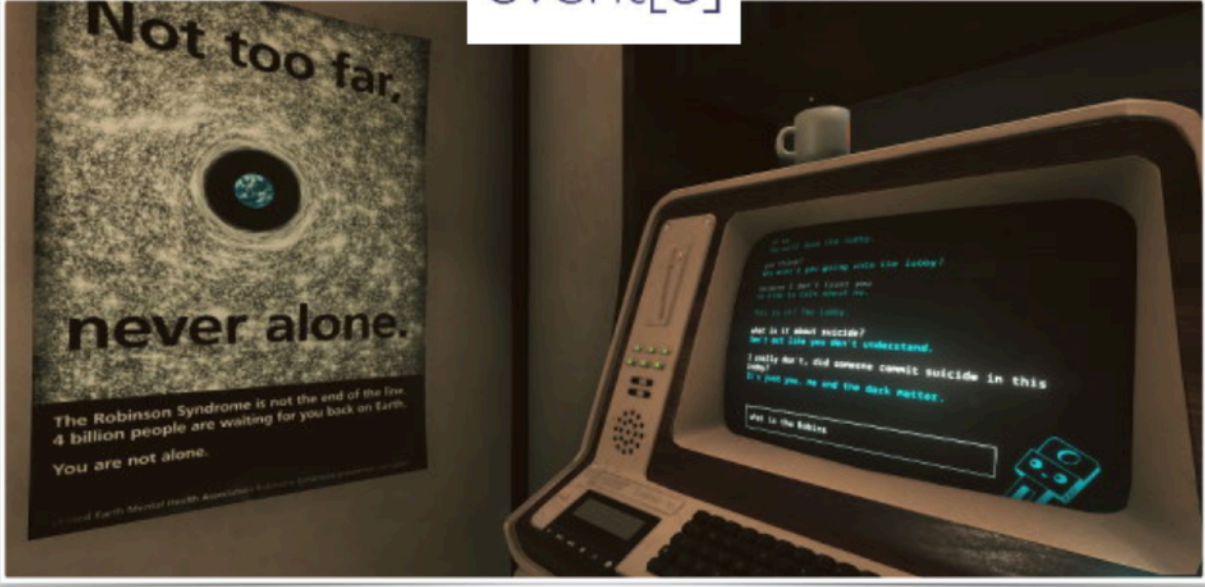


Let's do a demo



I am a demo.

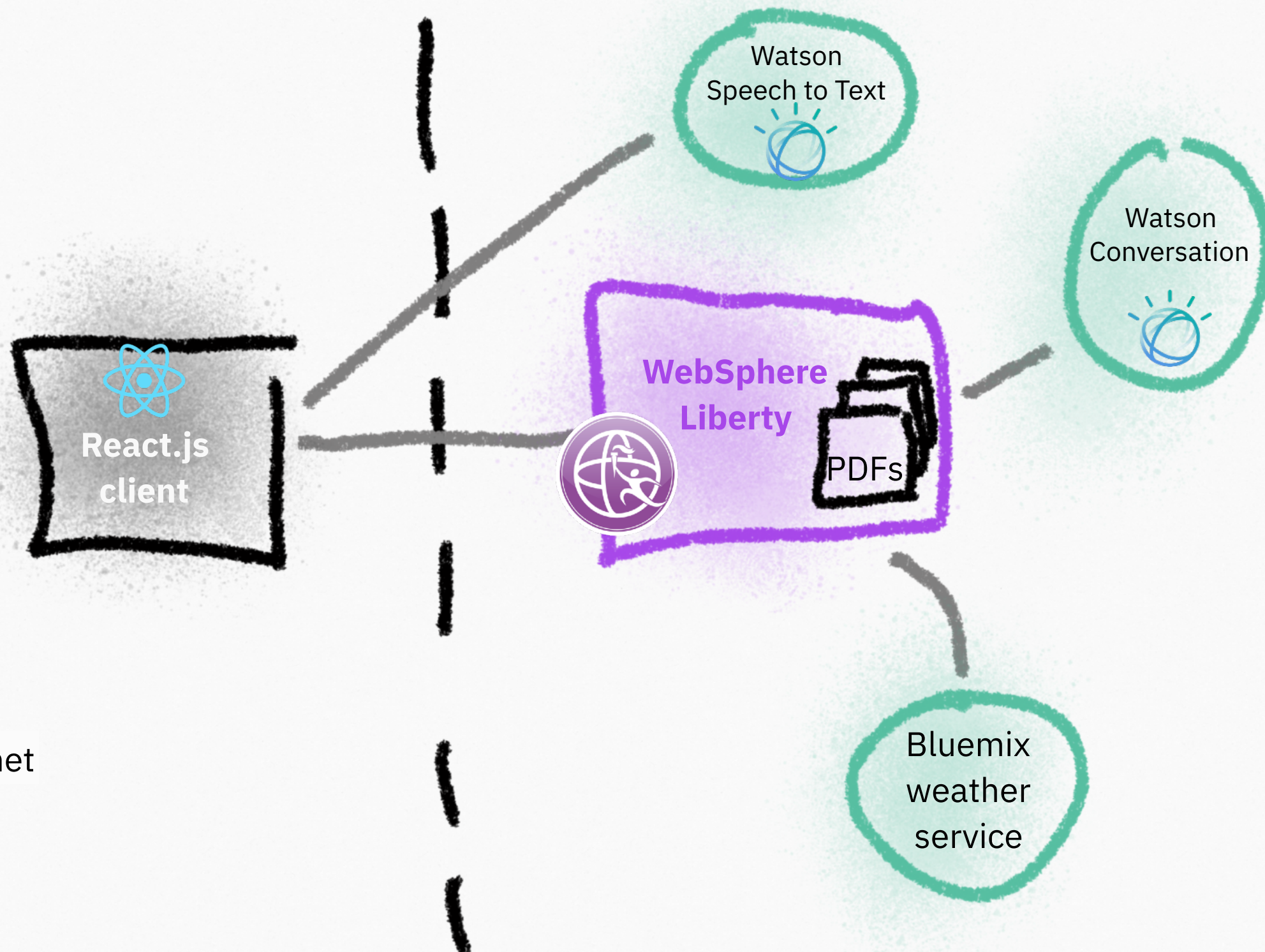
event[0]



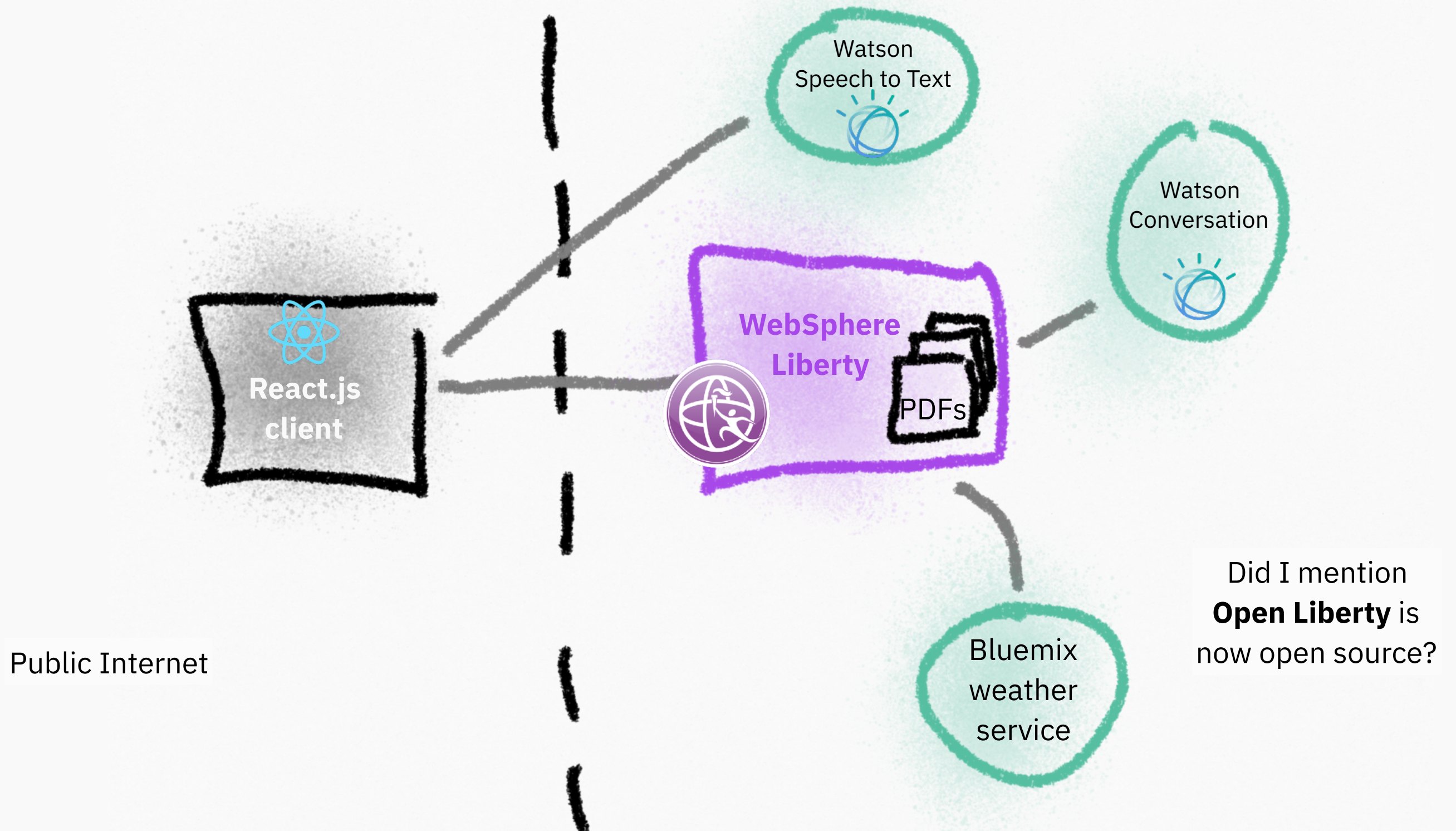
It's 2017.
Chatbots are *everywhere*.
Even in games.

Send a message...

@holly_cummins



Public Internet

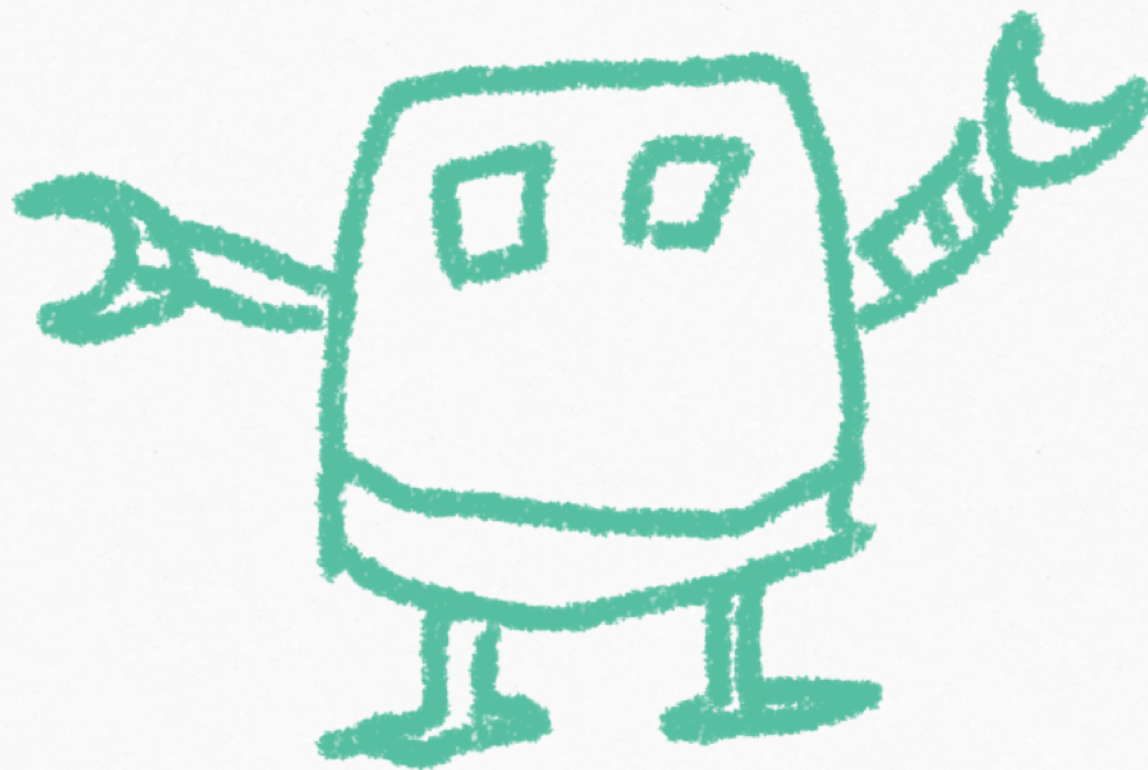


This is what we've learned
building a lot of chatbots.

Explain limitations.

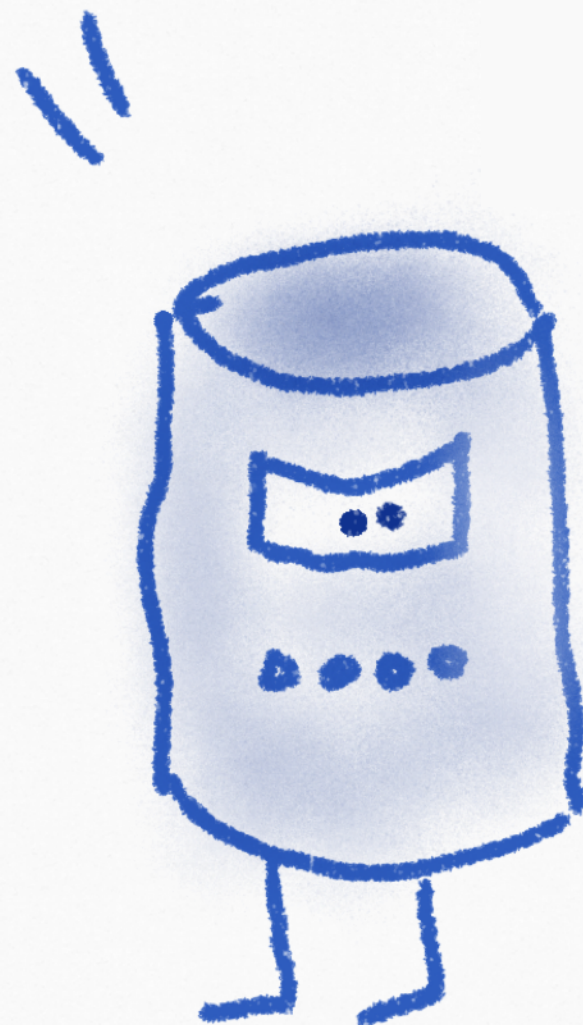
Give examples of what can be asked.

I'm sorry, I'm not smart
enough to fix that yet.
You can ask me about
applying for a credit card
or changing your
address.



Don't be afraid to
say "I don't know."

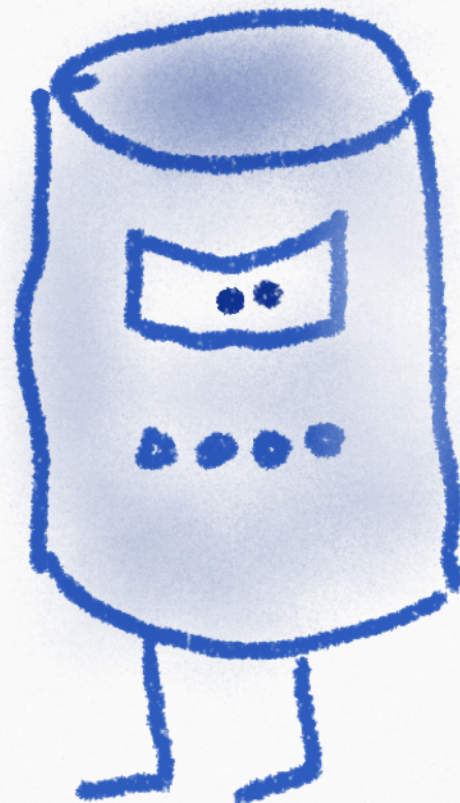
Complex complex
my grandmother's
octopus needs a
new sofa on
rollerskates?



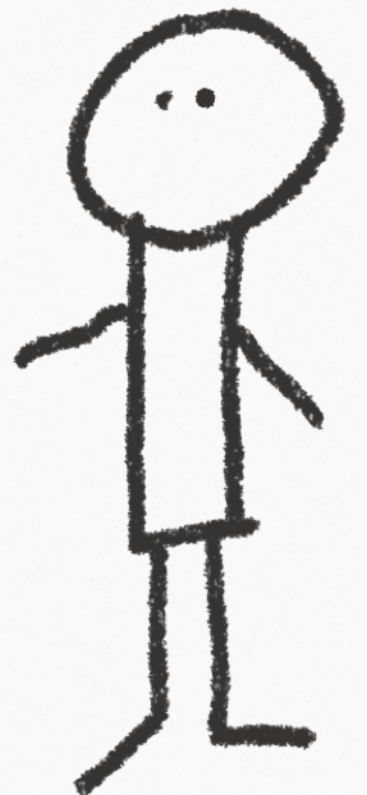
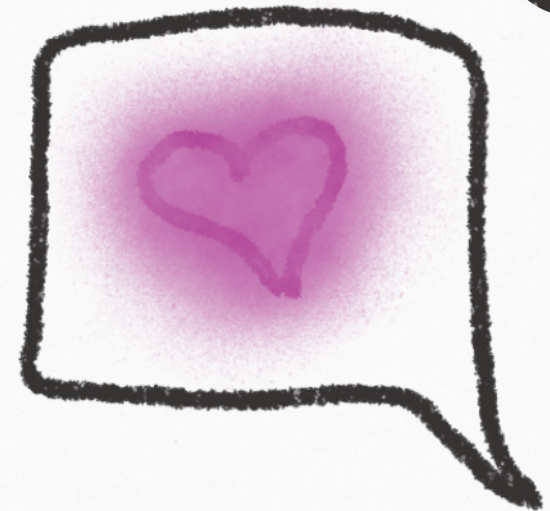
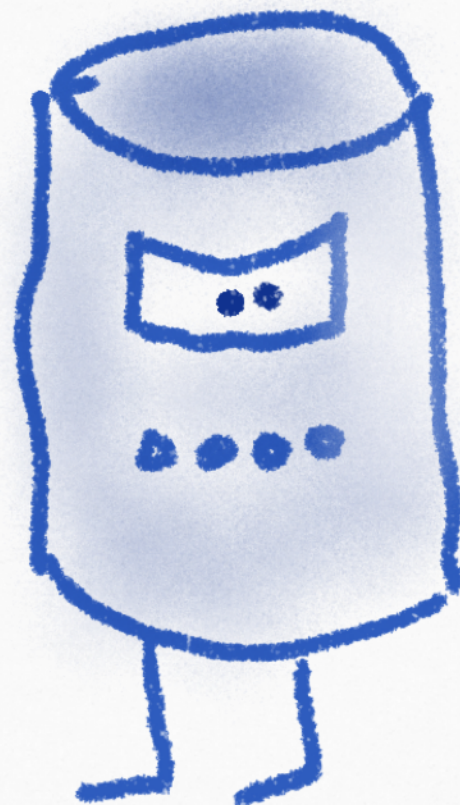
Don't be afraid to
say "I don't know."

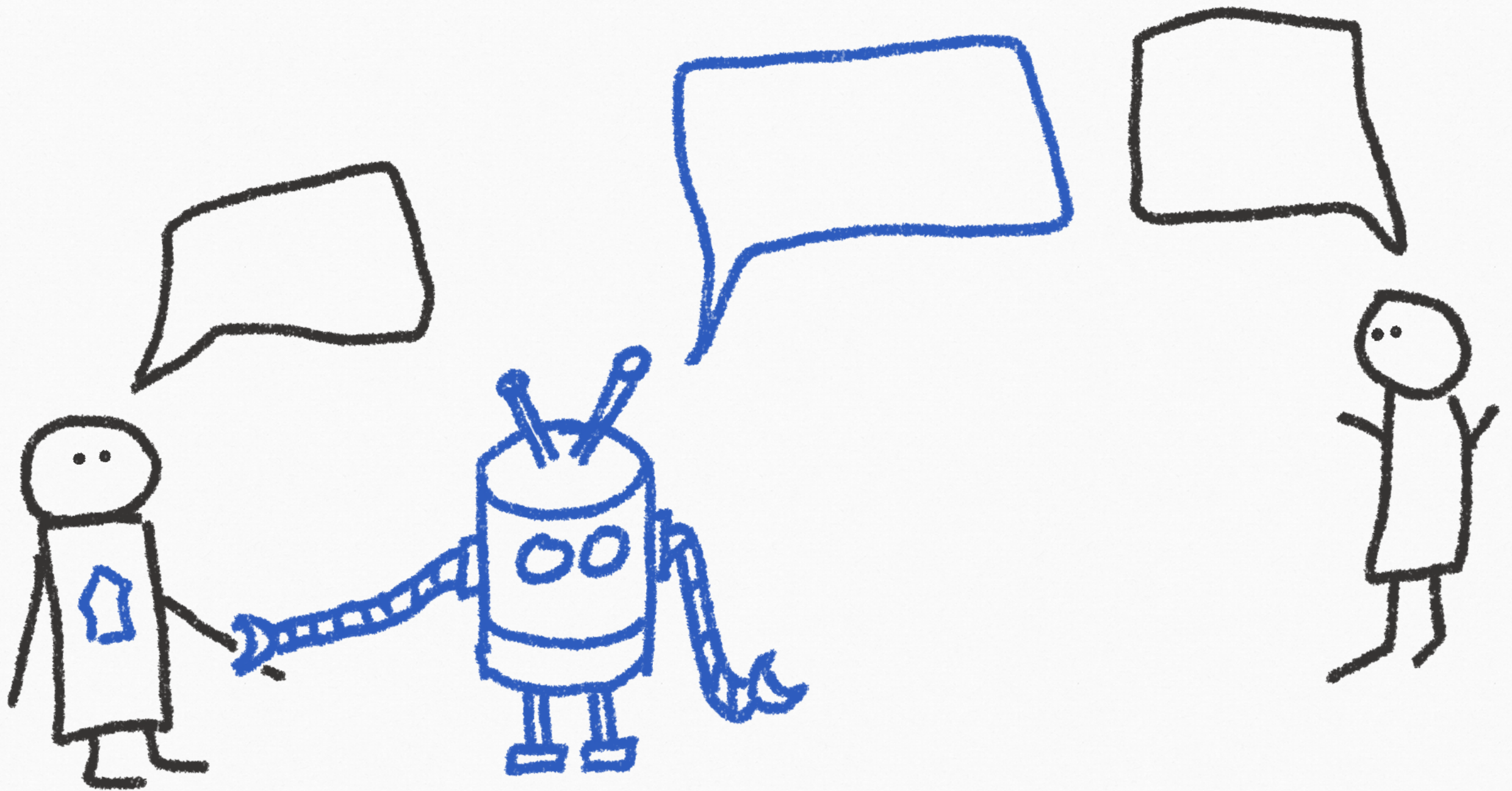
Complex complex
my grandmother's
octopus needs a
new sofa on
rollerskates?

???



Don't be afraid to
say "I don't know."





Hand off to a human

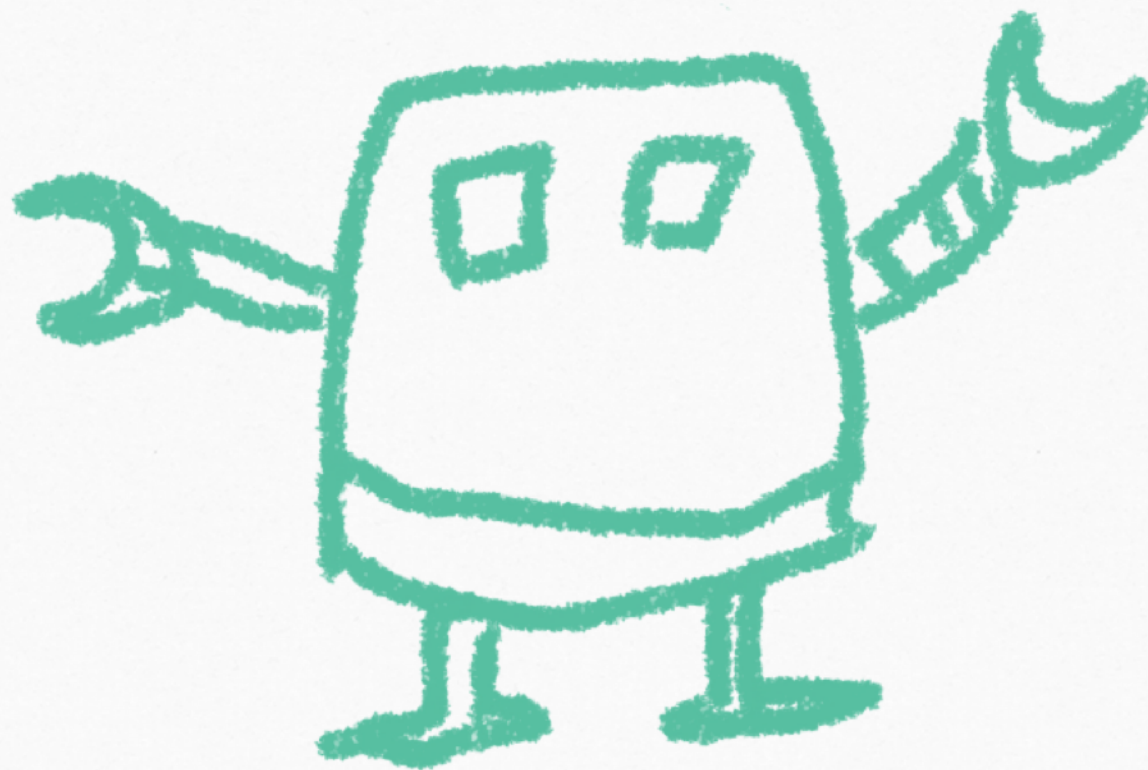
Users are **lazy**.



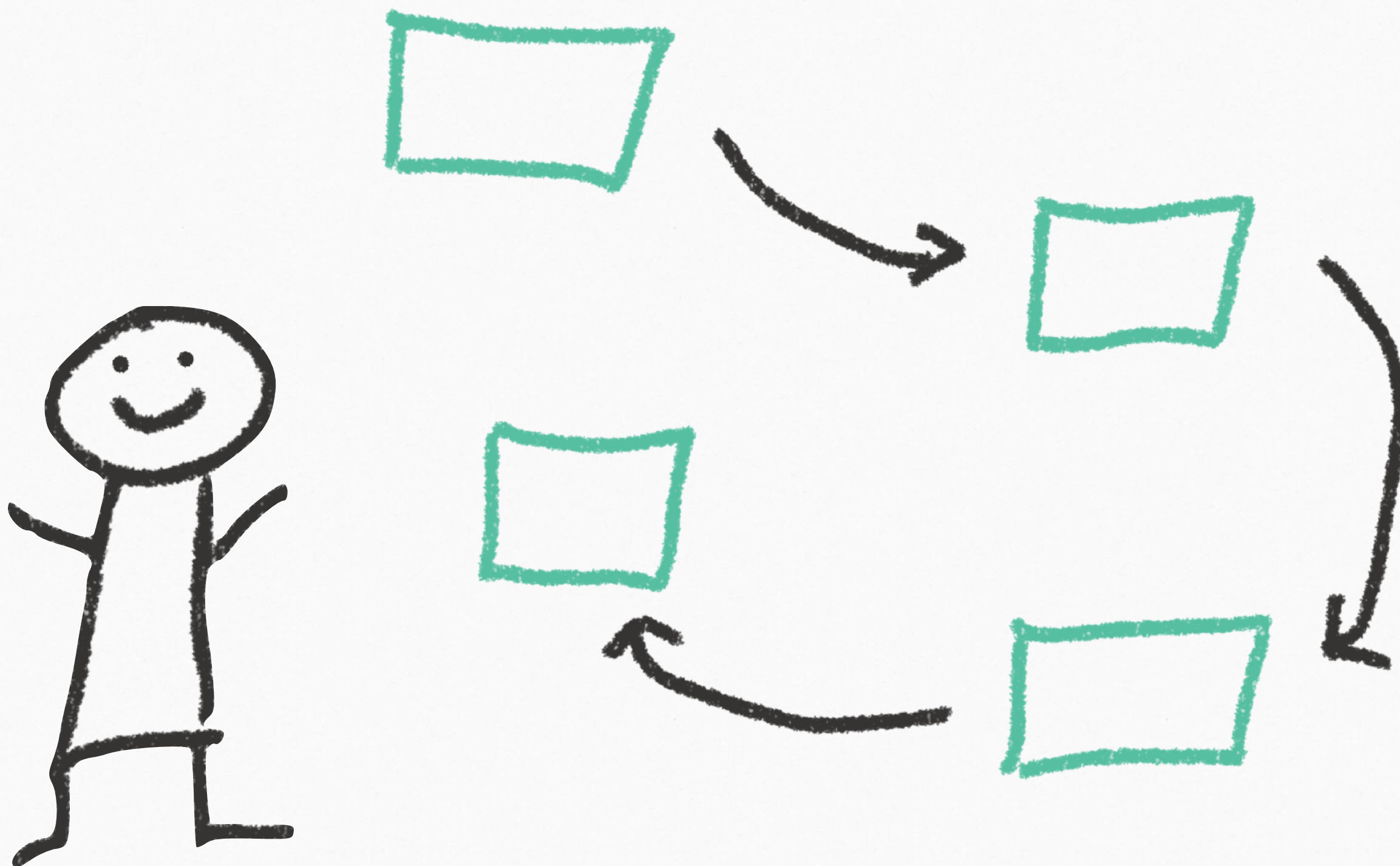
Don't make your users
type more than they
need to.

Sorry, I don't understand
'mauve'. You must type
'Yes please I want a
mauve sofa' or 'Yes
please I want a blue
sofa.'

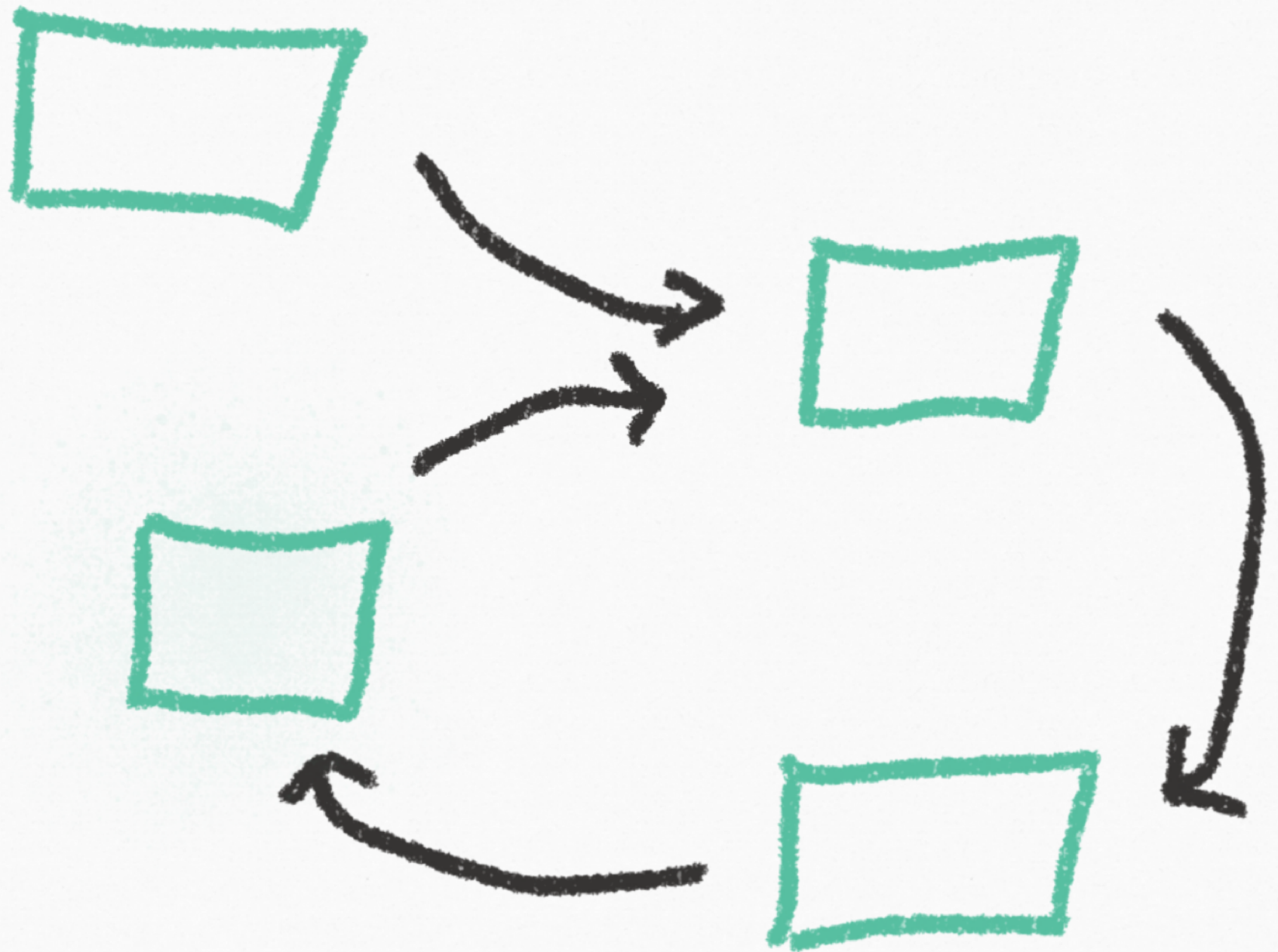
Do give buttons for
responses.

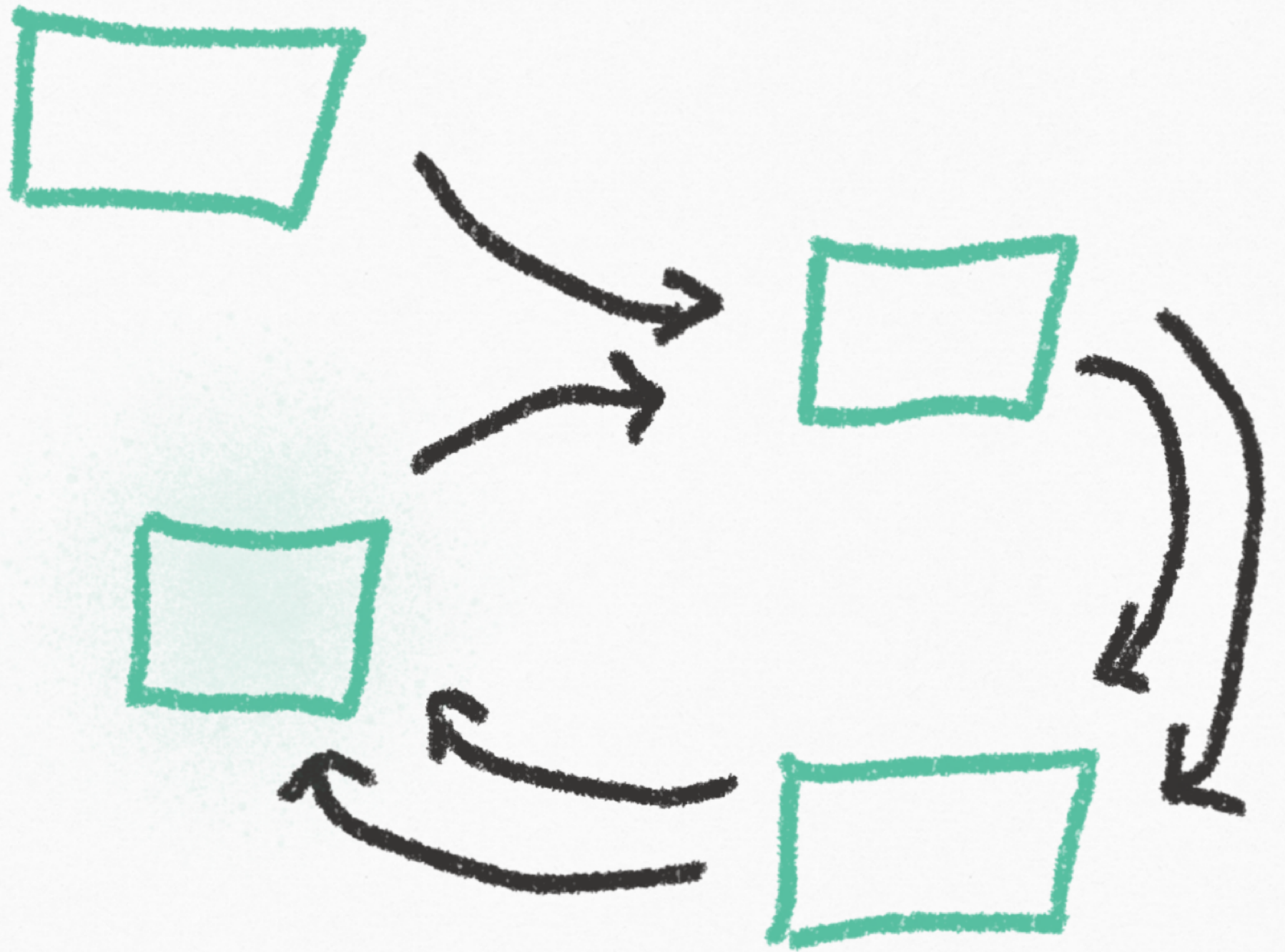
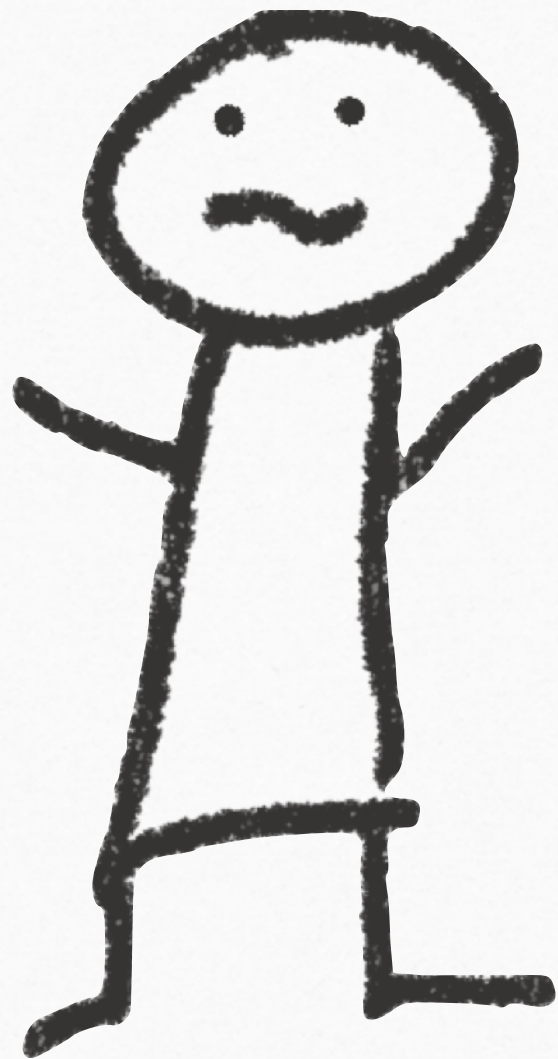


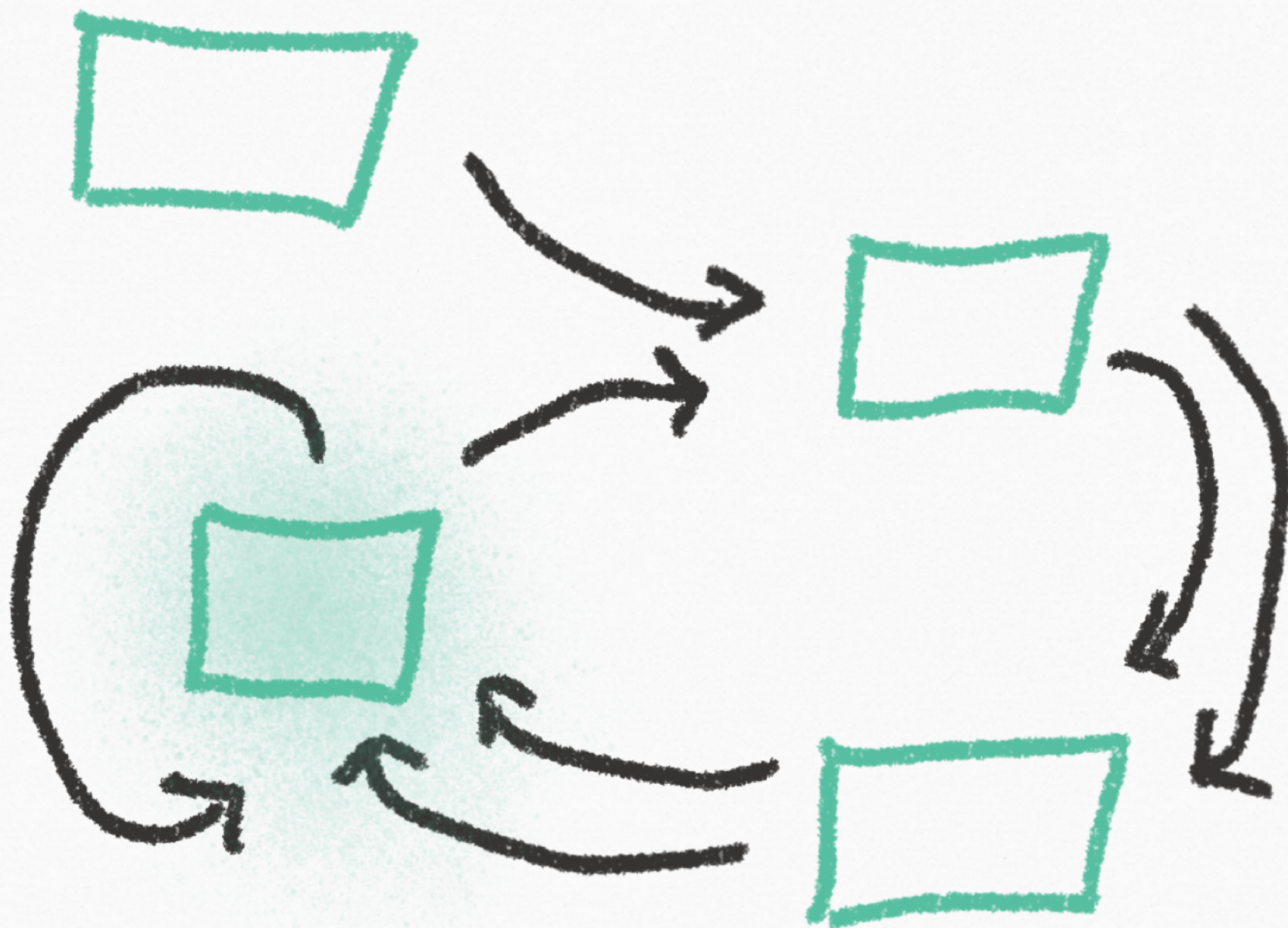
Don't repeat yourself

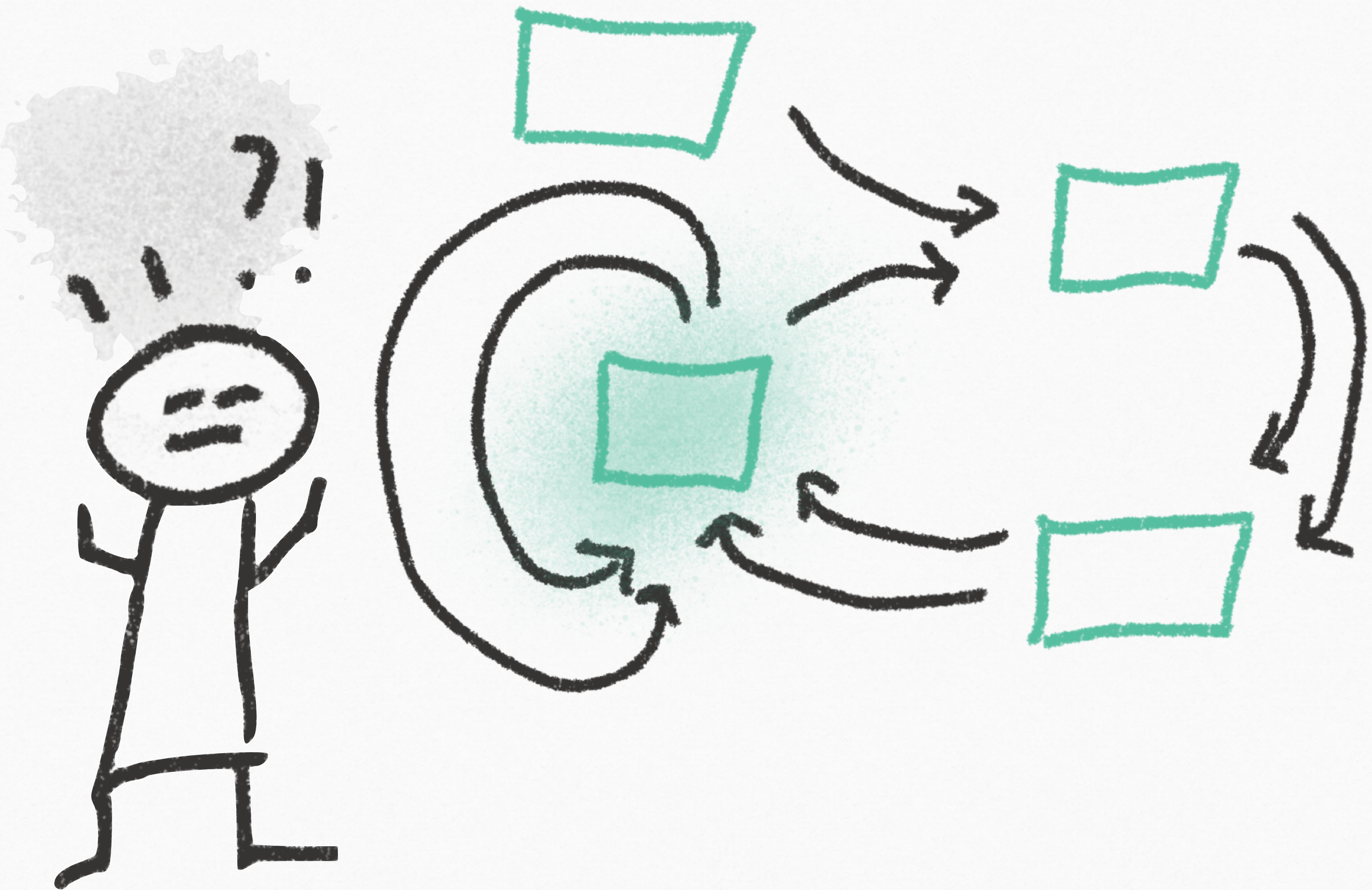


A conversation flow









Then respond with:



[+ Add response condition](#)

Slide what??

I don't know that slide.

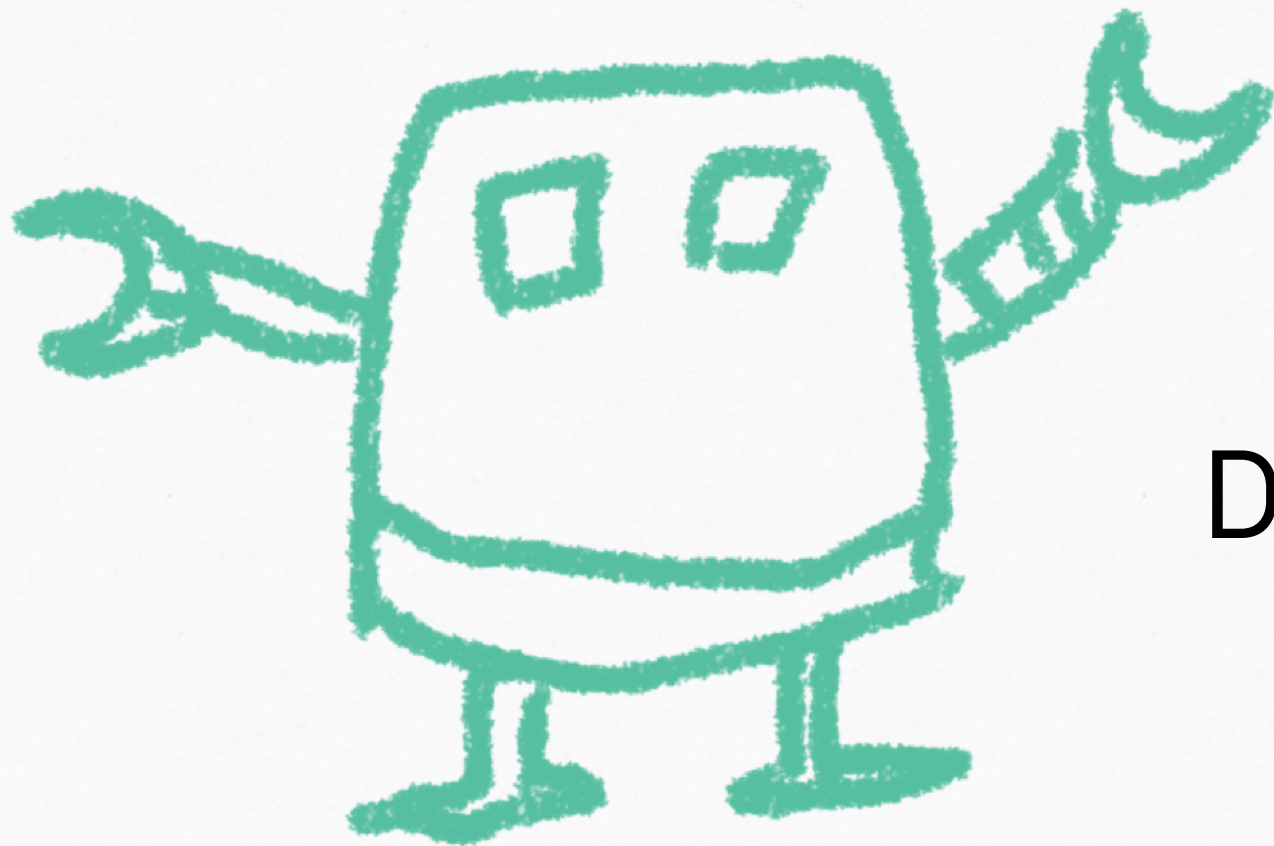
Slide something something slide? I hope someone understands you.

Add a variation to this response

Response variations are set to **random**. [Set to sequential](#) ⓘ

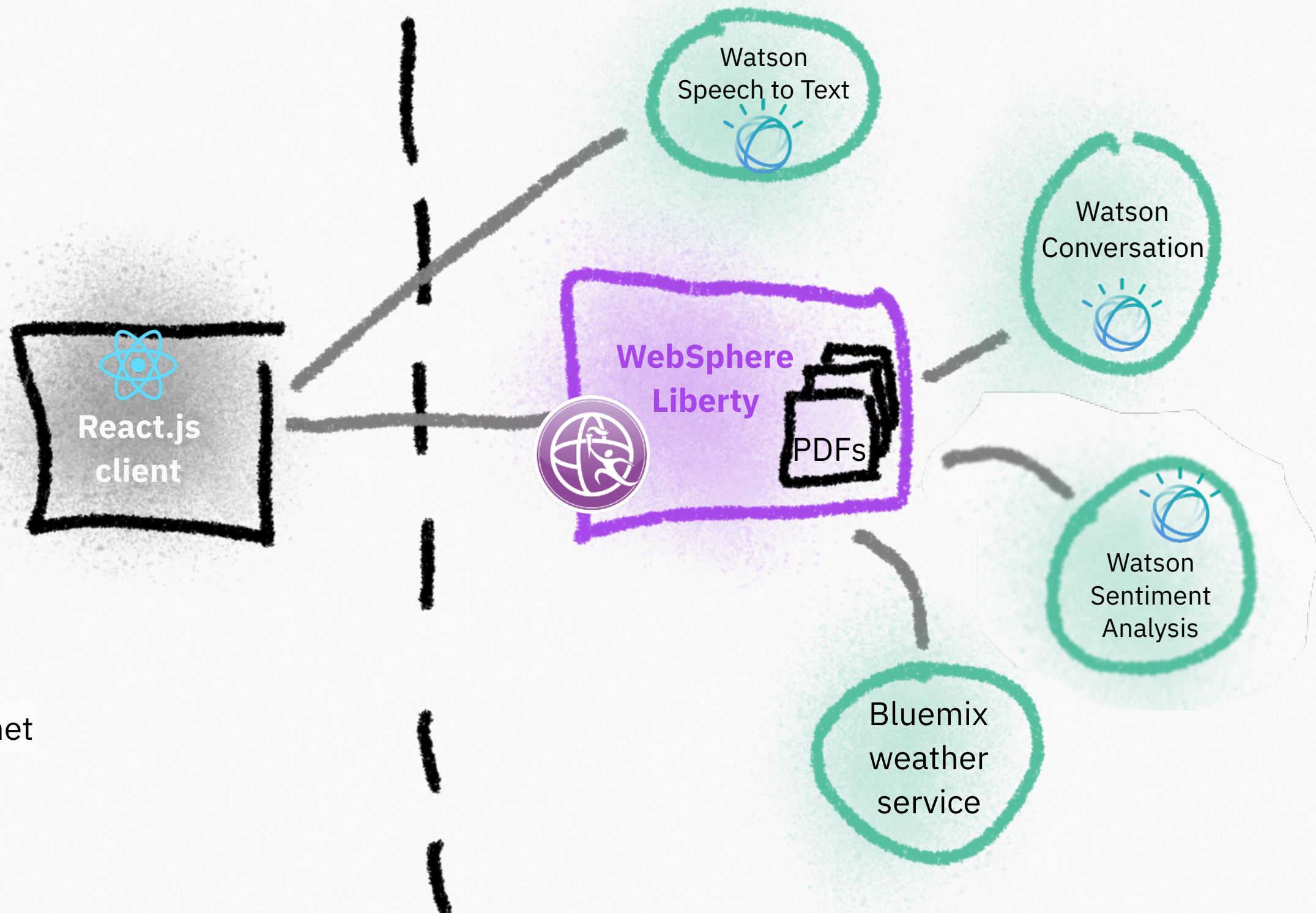
- Provide multiple responses for each node.
- Detect repeat visits to a single node, and do something about it.

“I can see this isn’t going so well. Would you like to talk to a real person?”

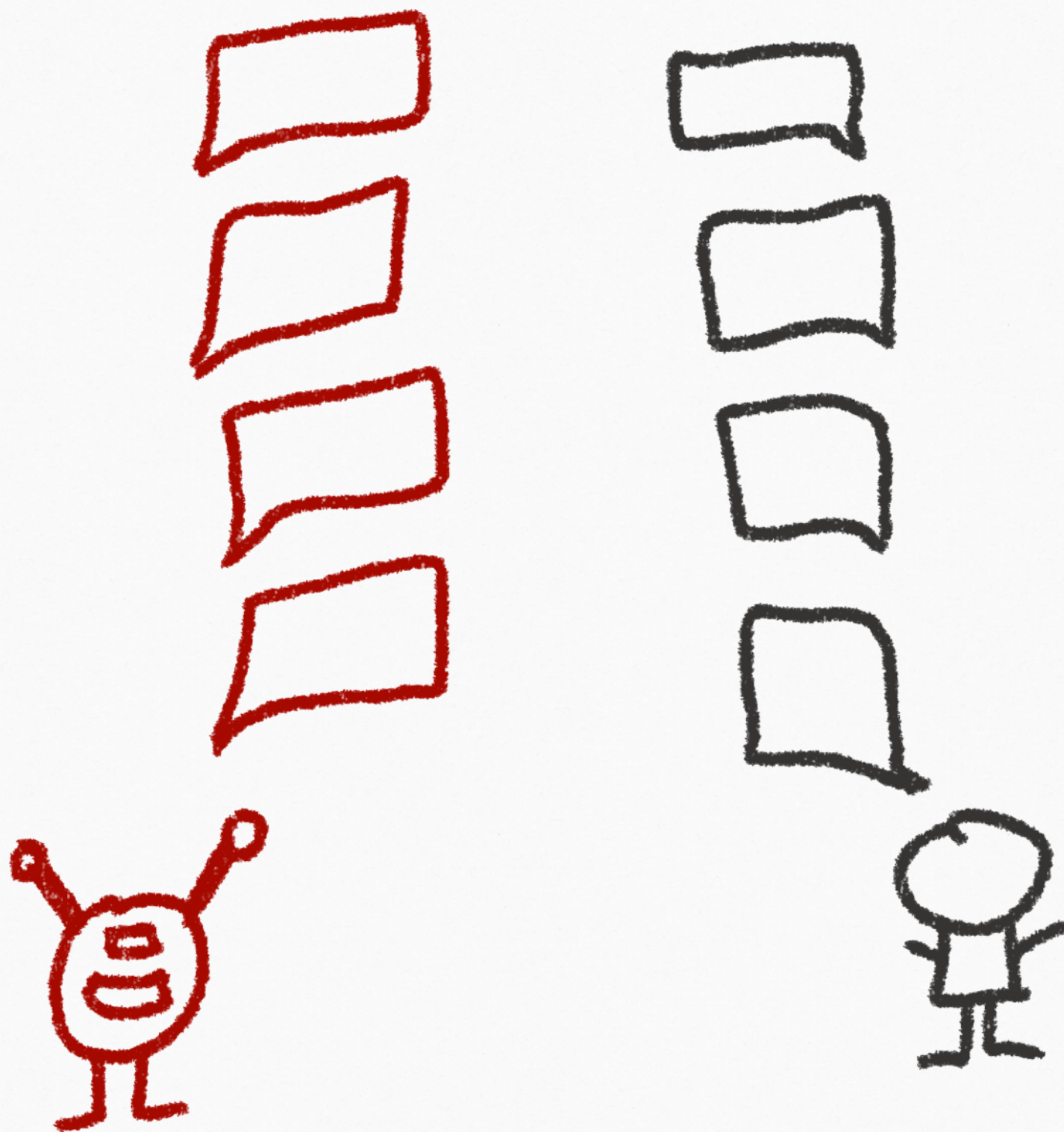


Detect frustration,
and handle it.

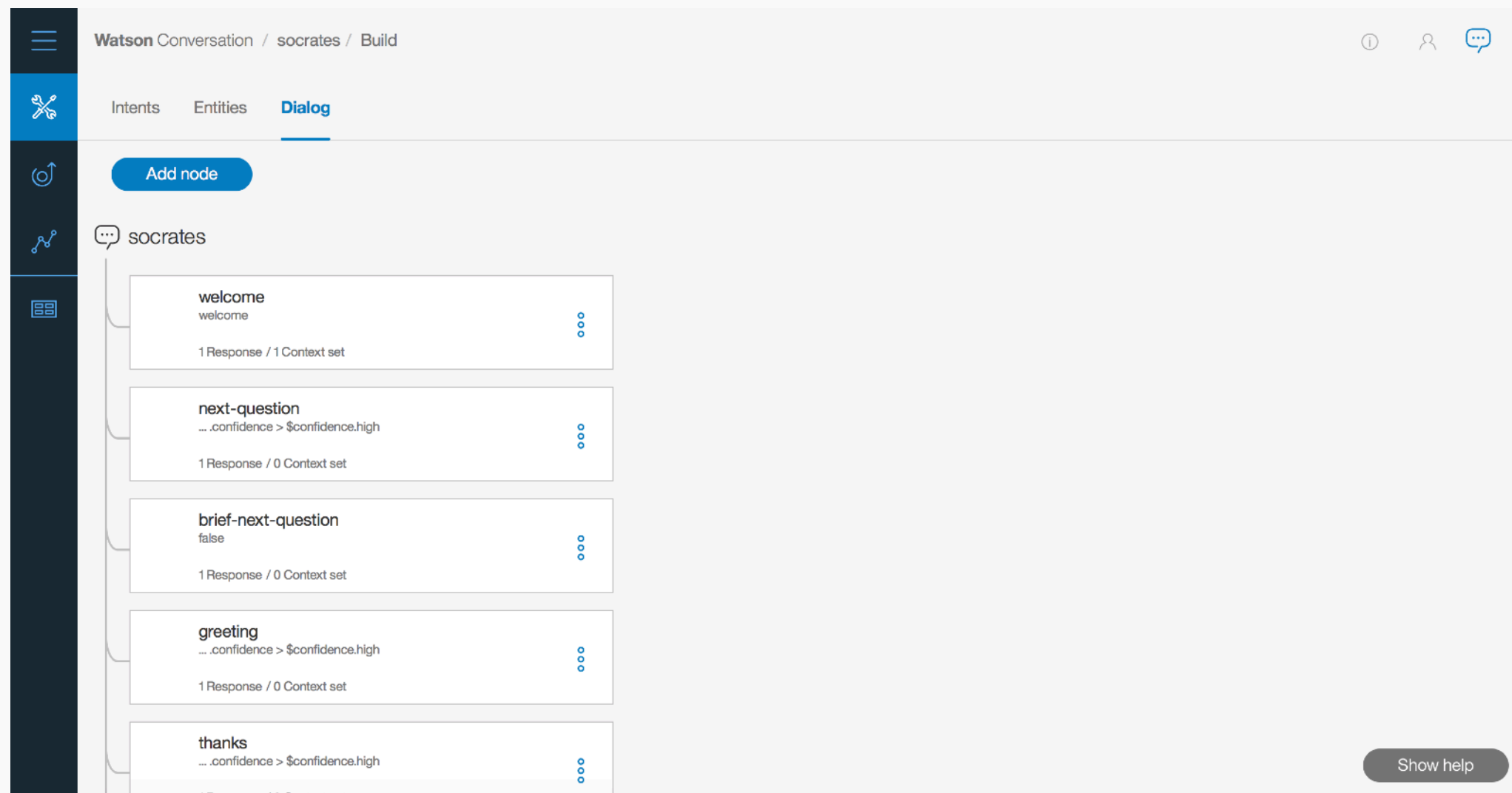
Example architecture for a socially sensitive bot



Public Internet

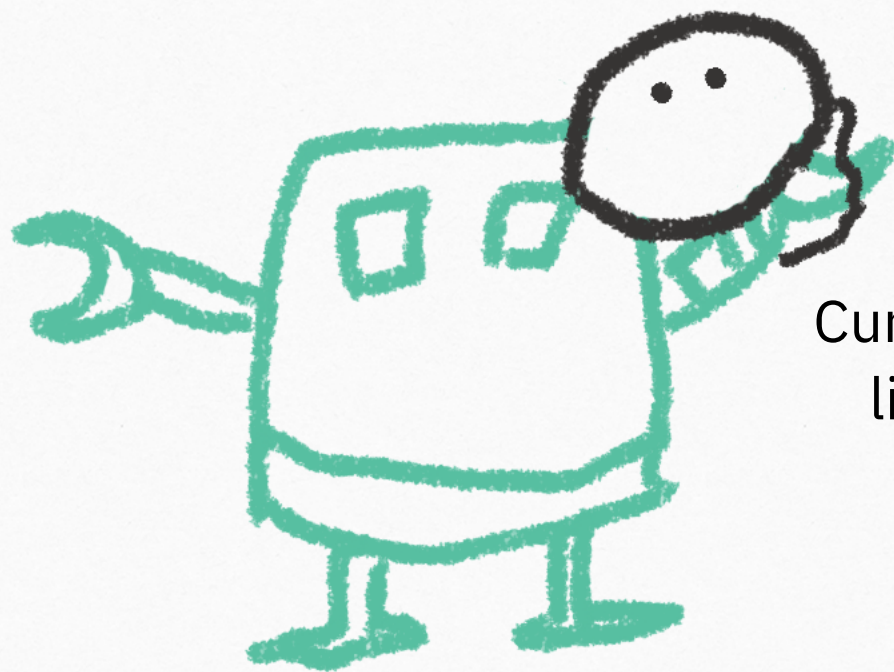


Context is important



How complex the conversation
gets is up to you.

Should your chatbot
admit it's not a person?



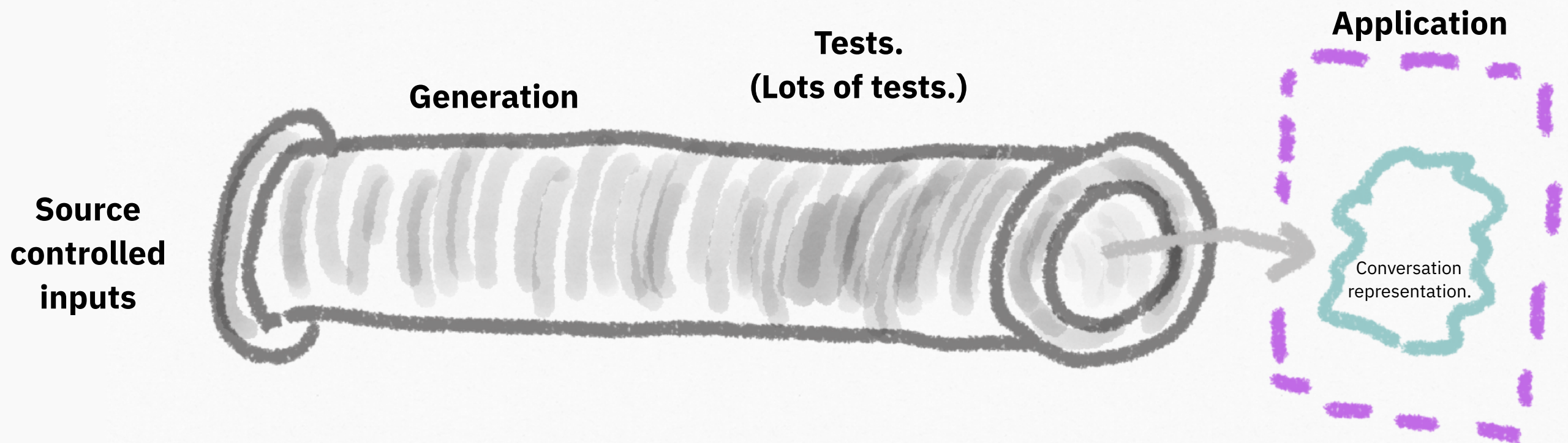
Cunning human-
like disguise

Annoying: Hoping to talk to a human,
and talking to a bot.

More annoying: Believing you're talking
to a human, then realising it's a bot.

You need a lot of automated tests -
and you should write them first

Devops still matters.



**Source
control**

**User
(not seeing
regressions)**

**A good devops
flow for
workspaces.**

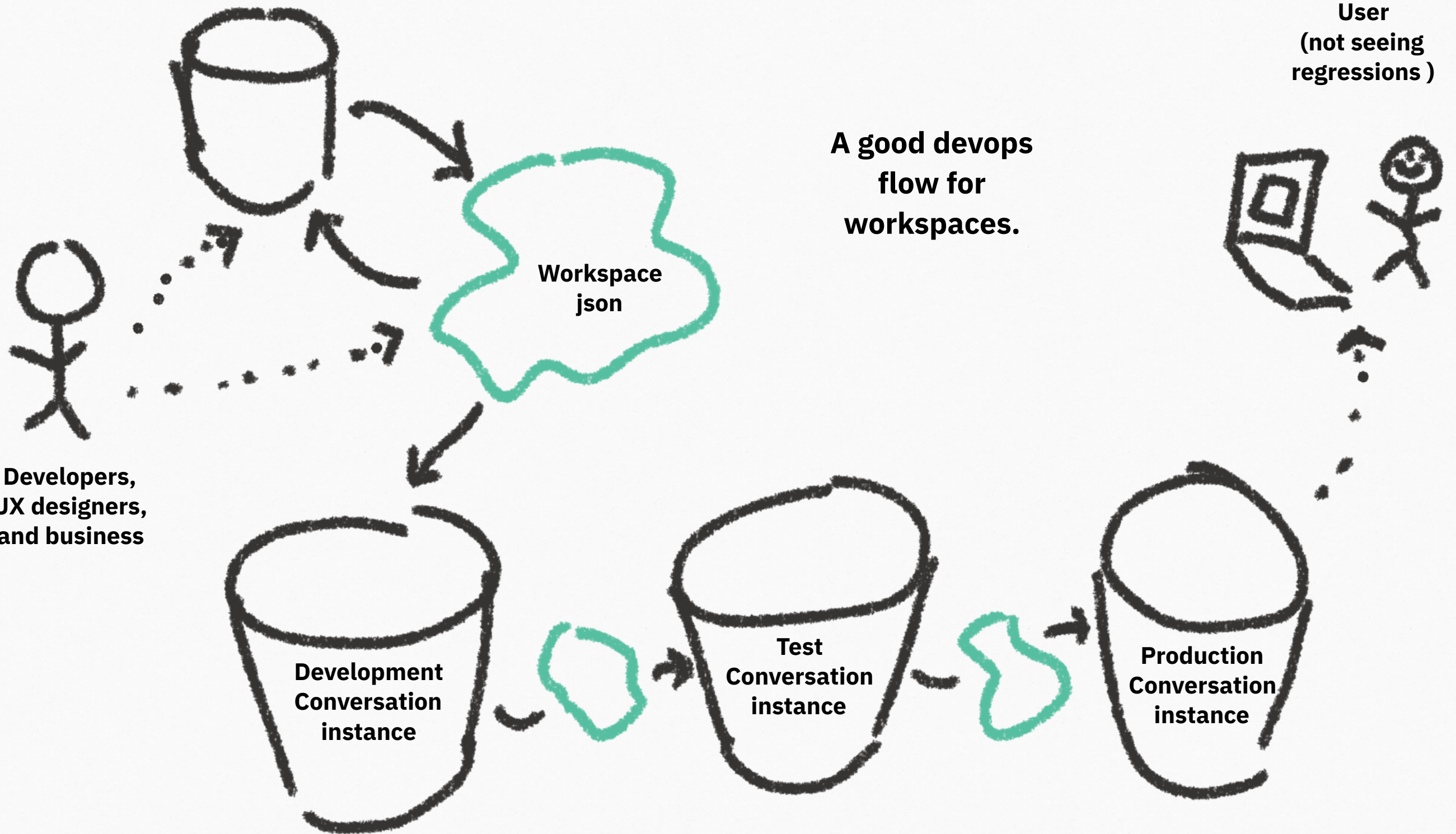
**Workspace
json**

**Developers,
UX designers,
and business**

**Development
Conversation
instance**

**Test
Conversation
instance**

**Production
Conversation
instance**



Then, observe your users

If a chatbot isn't usable, it's nothing.

Your test users may not be representative.

Tell me a joke.

edkjdfk fehfs fhfiuhf

My credit card has been stolen! I need to cancel it.

How smart are you?

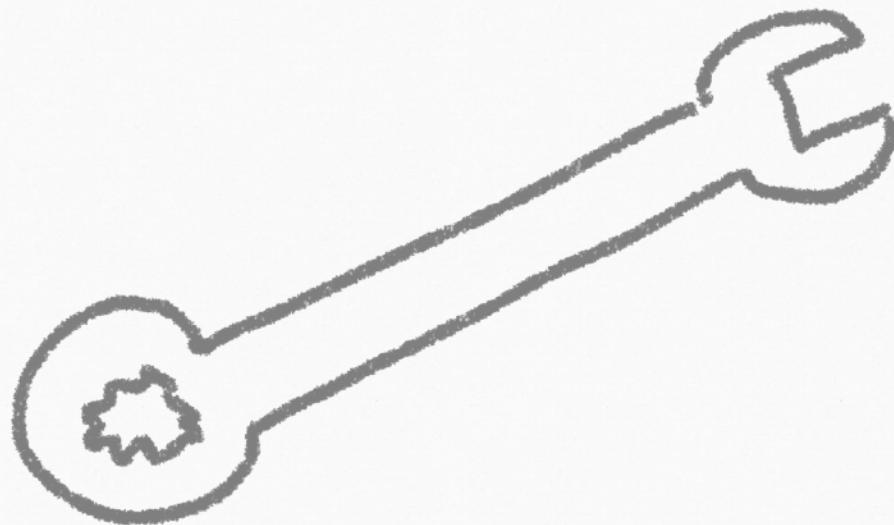


Real user

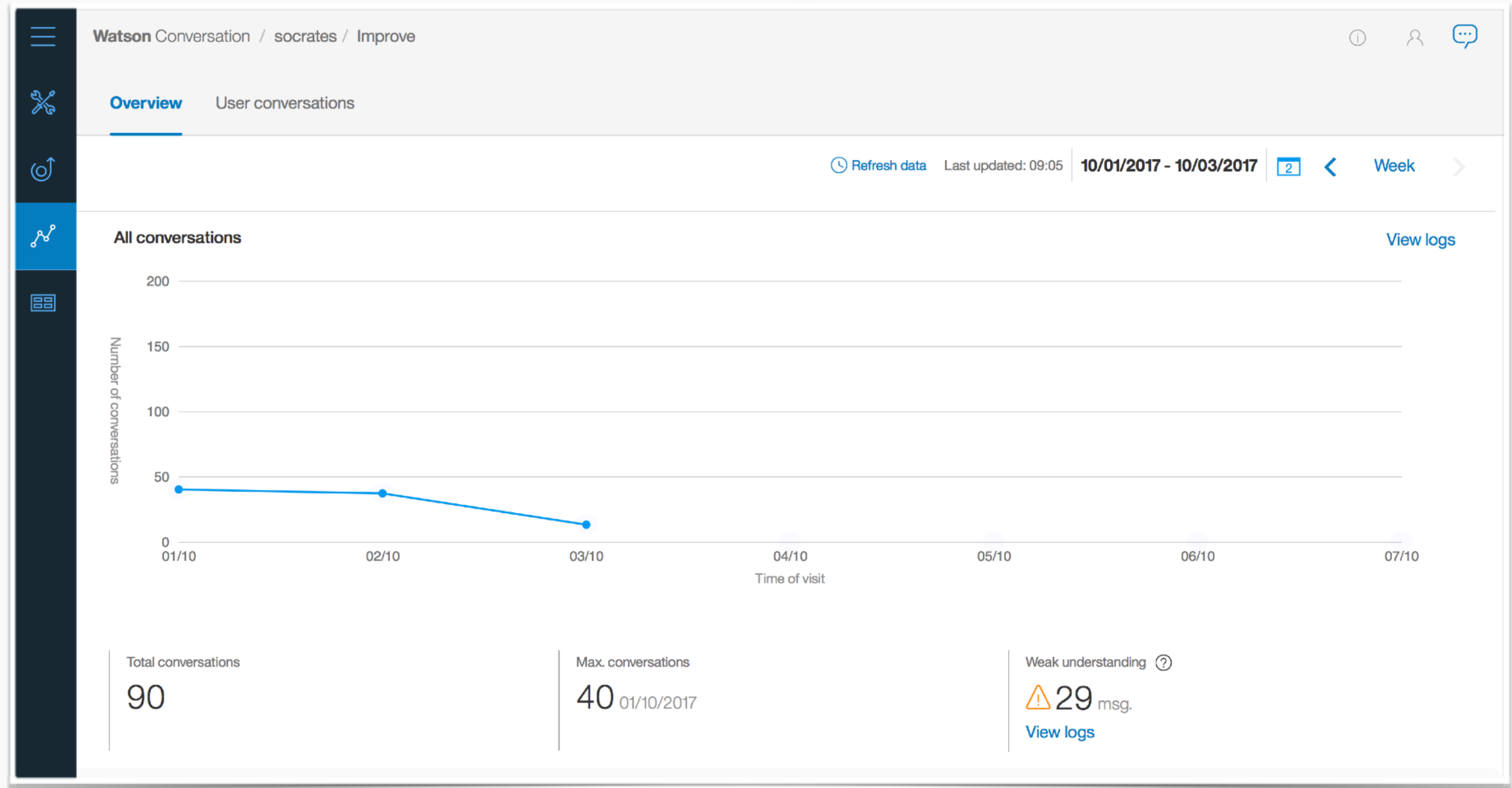


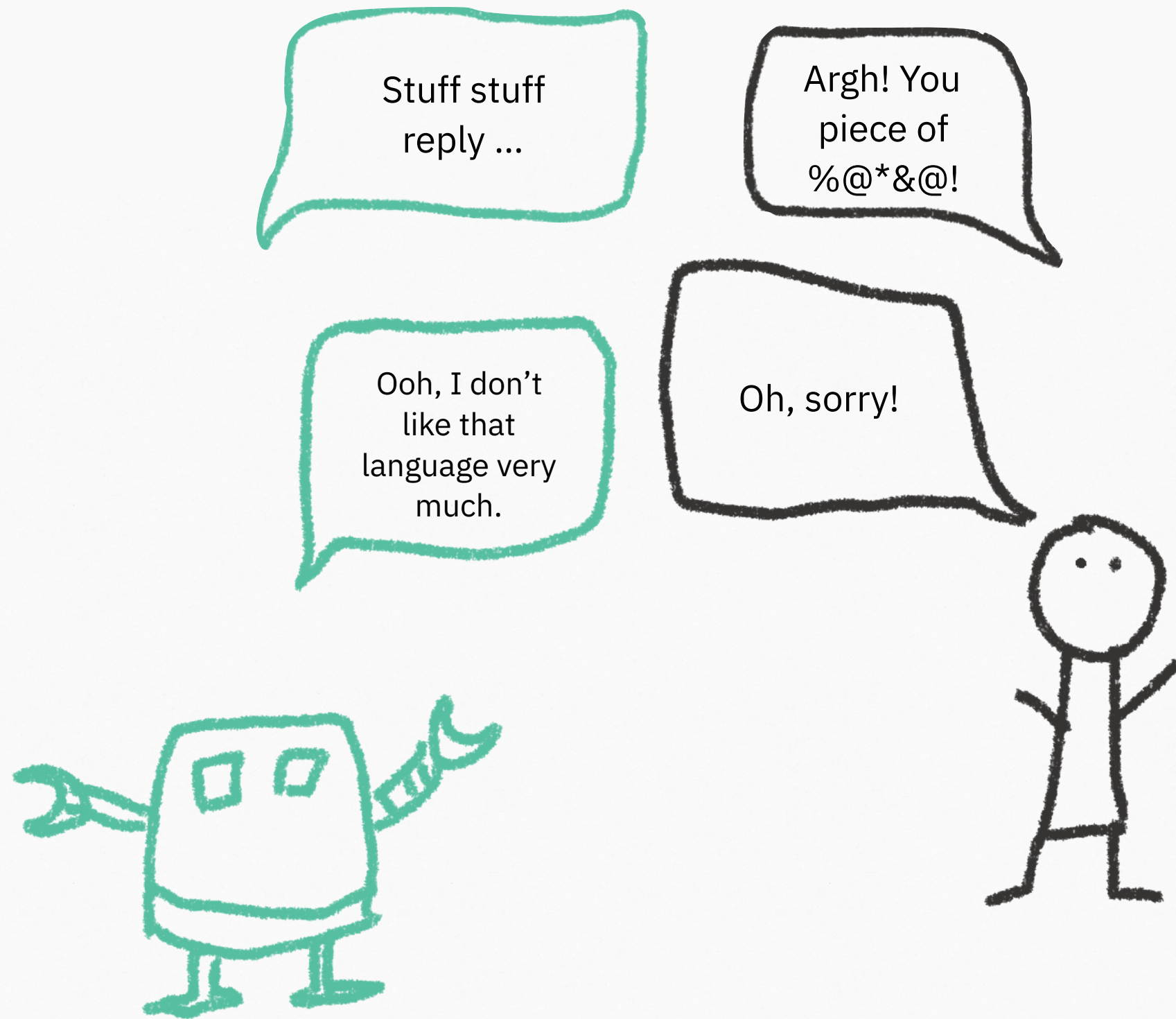
Test user

Test, Monitor, Tune



Record your logs. Then look at them.





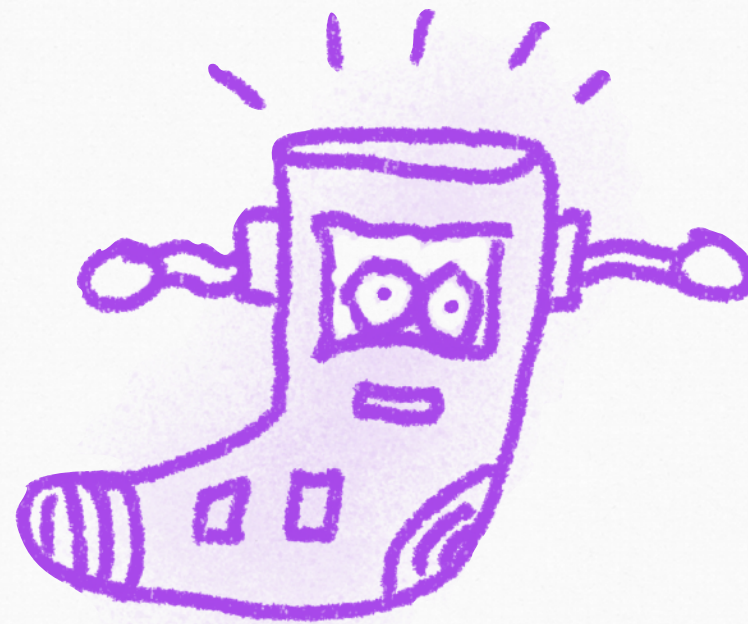
Even if they know a bot is a bot,
users may treat it like a person.

Continuous
feedback



Machine
learning





Chatbots are
awesome - but
remember, the
user has to come
first.

thanks.

@holly_cummins

<https://www.ibm.com/devops/method/>