

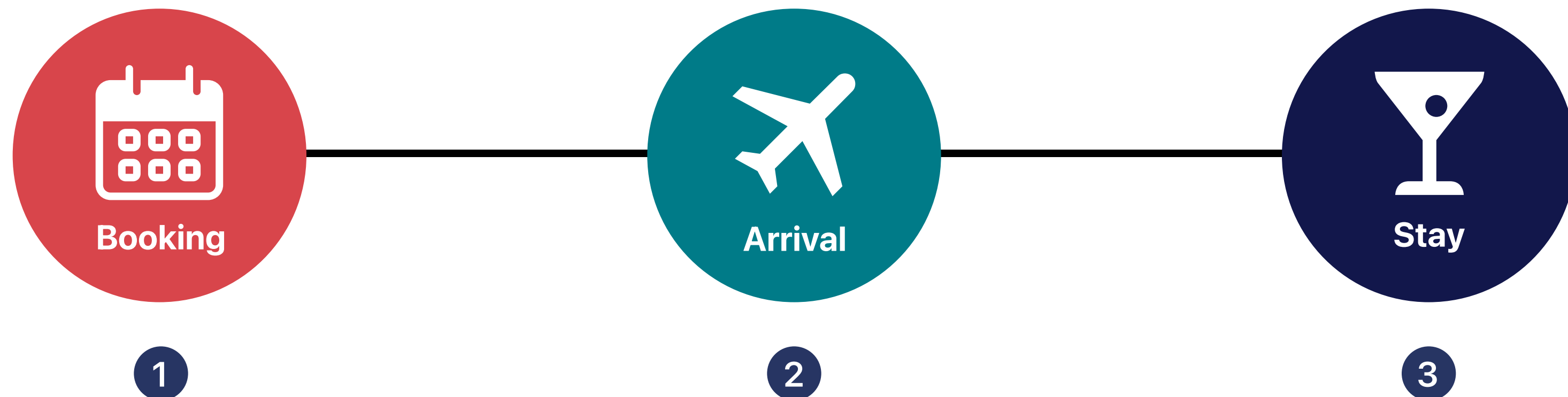
Alea for AirBnB

A virtual agent to enhance the hospitality experience using AirBnB as an example platform. This project was developed with Google's PALM 2 Language model.



Guest Experience


Conducting comprehensive research with dozens of diverse users and consolidated online reviews, we developed a thorough understanding of guests' needs and challenges on their AirBnB journey.





 Usability


 Communication

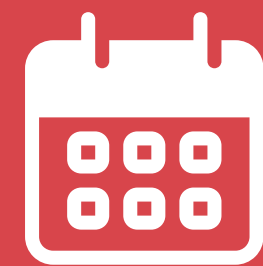
 Travel information

 Sometimes the information and photos are not clear.


 I contact the host for information but they do not respond.


 No, I have never heard of "AirBnB experiences".

 I wish I could know how safe the neighborhood is.




Booking

 I thought I had a good deal till the extra charges showed up.

 I have to manually browse through each link & their images and reviews.

 I can't sort by price or cancellation window on the website.

 I look for cool destinations and stays on TikTok. Then I check hotels reviews and recommendation from friends.

Usability

Communication

Travel information

i The cost of getting to the Airbnb was more than I anticipated.

i There's no clear sign to show where the Airbnb is.

= The host did not share the front-door code in time

☐ ...drained from traveling, juggling luggage and managing restless kids.



i The public transport directions to the place are confusing.

i I wish I had more information on local taxi services or car rentals.

= I often need early check-in due to my travel plans.

i The location was wrong on the map.

- Usability
- Communication
- Travel information

i The place isn't clean and does not look like the pictures.

= I had a hard time communicating with the host because he didn't speak english.

= I tried contacting the host about the issue but got no response.

i The plumbing or wifi isn't working properly.



i I am nervous about the local customs, language barrier and tourist scams.

i I always seek local recommendations and activities in a new place

= Sometimes the appliances and bathroom facilities are difficult to operate



An AirBnB host marked the place with labels and instructions

Identifying the main pain-points and scope to improve the guest experience.



Usability

The inherent nature of a digital app involves navigating and browsing through the interface to obtain the pertinent information. Many of our user's frustrations involved finding the relevant information when working on the app, before and during travel.

Alea creates a handsfree, seamless experience to perform common tasks without having to navigate the app.



Communication

AirBnb users reported that they would often struggle to contact the host and customer support during critical stages of their journey, such as finding listing information, reporting an issue, or getting help during the stay.

Alea provides instant support, built on past knowledge and listing details, to provide a variety of support.



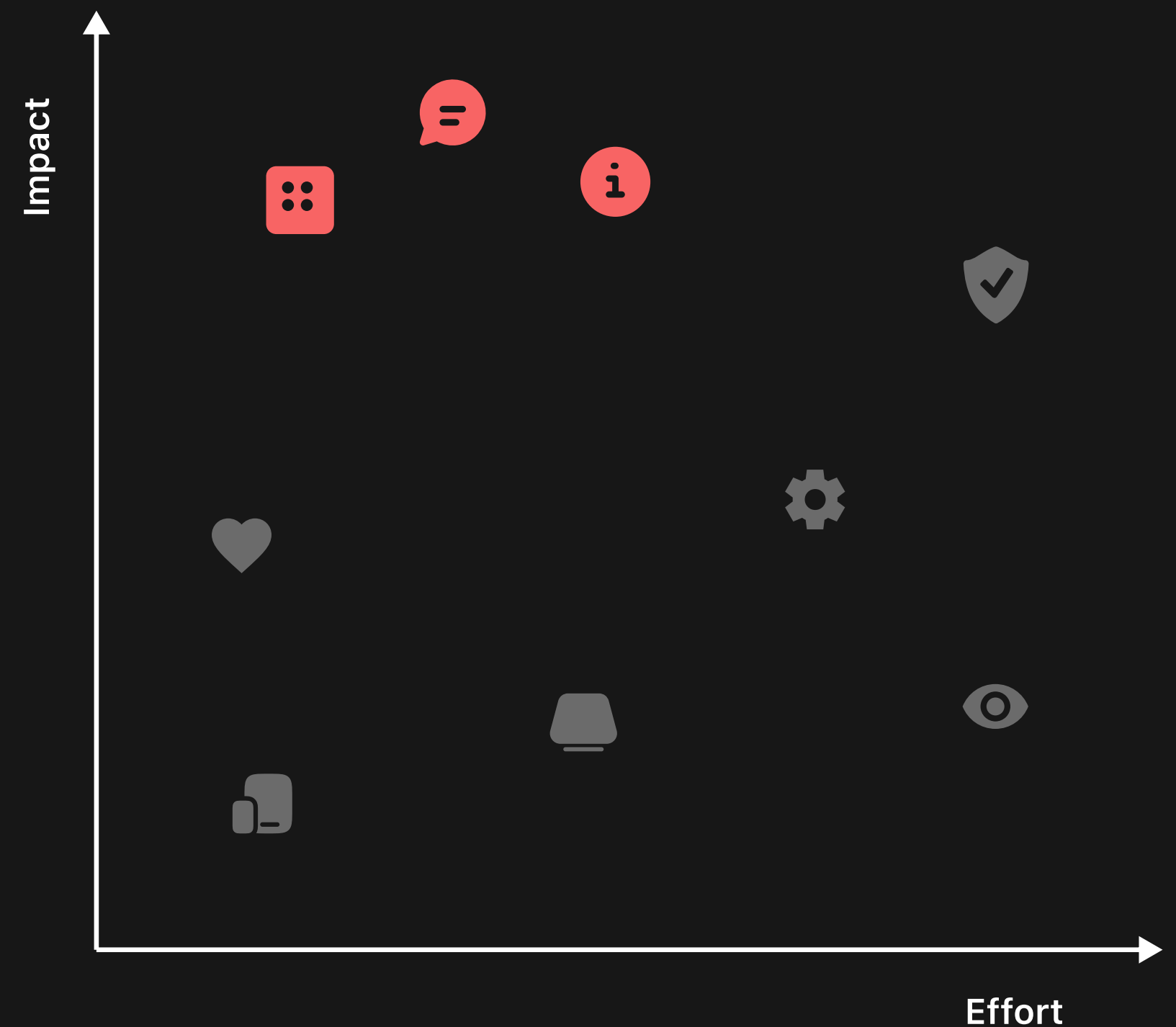
Travel Information

Users expressed the need for getting travel-related information to ensure a smooth trip. This involves details about local and seasonal attractions and experiences, as well as support for navigating a new location.

Trained on a Google PALM's general LLM, Alea can provide travel related information on demand.

Setting our design principles, we developed the strategy and development of Alea, our conversational agent, to mitigate guest issues and enhance their overall experience.

We designed user-centered conversational happy paths and edge cases, and implemented with Voiceflow and Google PALM 2.



Guest Experience



Watch Concept Video

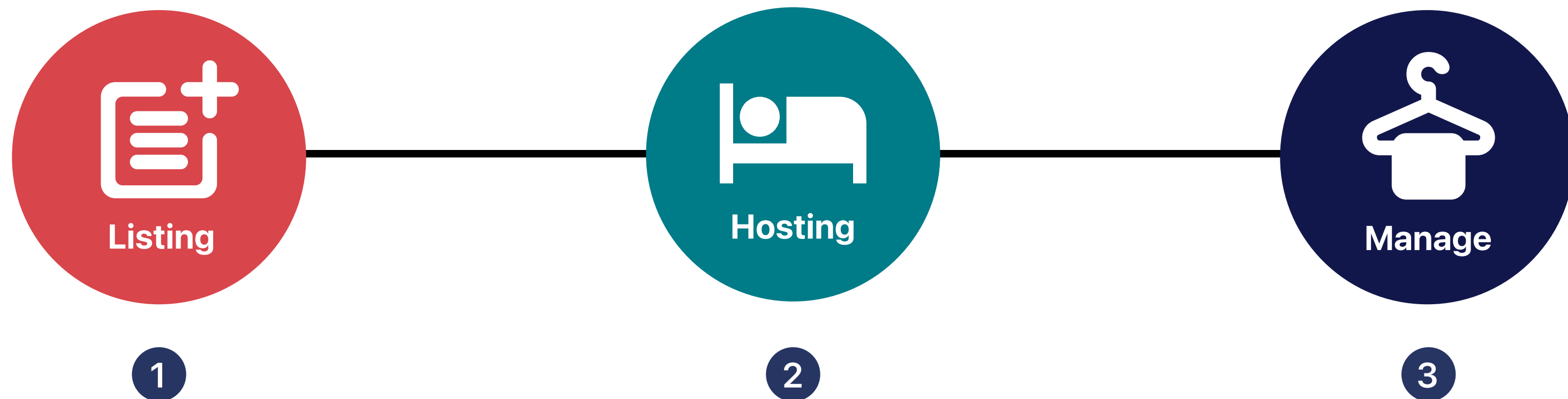



Open Prototype

The gCloud auth token expires every 60 minutes. We are regenerating the token every hour to keep the prototype functioning. Please contact the team in case there is an issue.

Host Experience


Following a similar user-centered approach, we conducted research with real AirBnB hosts and studied their stories and reviews online, to identify their challenges and scope of improvements.




 Listing resources


 Hosting support

 Communication

 I'm not sure what information I need to include in the listing.


 Getting good photos of my place is harder than I thought.


 I didn't realize there would be so many additional fees to list


 I'm unsure what rules to set for my guests



Listing

 Creating a listing takes so much time.

 I'm unsure how to price my listing competitively.

 It's hard to navigate the local regulations for short-term rentals

 Listing resources


 Hosting support


 Communication

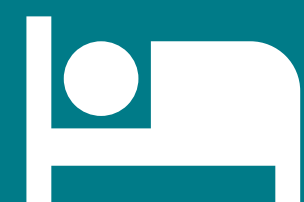
 My guest is very demanding and hard to please

 My guest isn't respecting the house rules I set


 It's hard to get in touch with my guest.
They're not responding to messages


 My guest left a review that's
inaccurate or unfair.

 My guest just cancelled.
Now I have an empty unit




Hosting

 I'm constantly worried that a
guest will damage something

 Aligning my schedule with my guest's
for check-in and check-out is tricky


 One bad review could ruin my
chances of future bookings


 Listing resources


 Hosting support

 Communication

 Getting the place cleaned between guests is a huge challenge

 Maintaining the property is costing more than I anticipated

 There's been a delay in receiving my payment from Airbnb

 Understanding my tax obligations as a host is complex



Manage

 Keeping my listing updated with new photos and info is time-consuming

 Coordinating repairs and improvements is a headache

 Managing my booking calendar can get confusing

 I'm worried about the security of my property with constant guests

Identifying the main pain-points and scope to improve the hosting experience.



Listing Resources

Many new users expressed the challenges of listing their space on the app. The process is quite complex, involving photography, content writing, listing amenities, setting rules & prices, and more. Creating an attractive listing is crucial to the success of the host.

Living in the app, Alea provides real-time walkthrough during the listing process, utilizing its knowledgebase of AirBnB listings, as well as host's pictures, seasonal and local information and listing details.



Communication

AirBnB hosts raise concerns about the barriers in communication with AirBnB support and hosts. Prompt and clear communication is crucial during many critical phases of the host, including raising grievances, co-ordinating with guests, and availing services like AirCover and AirBnB events.

Alea provides instant support for common problems, acting as a liaison between the guest, host and AirBnB.



Hosting support

Hosting a place can be a daunting and multifaceted challenge involving maintenance, managing bookings, creating guest experiences etc. AirBnB has a host of resources, but they are quite scattered in the form of videos, guides, blogs and superhost support- causing confusion and challenges for the host.

Alea can provide relevant information and support seamlessly in the app, consolidating various resources from AirBnB.

Host Experience



Watch Concept Video



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How It Works

Powered by Google PALM LLM, Alea, your ultimate travel companion, is trained on vast AirBnB and travel resources. It has been designed to seamlessly assume the role of a virtual support executive, offering swift solutions to common challenges faced by both guests and hosts. Equipped with an extensive database encompassing booking and listing details from thousands of unique properties, as well as invaluable insights derived from performance and booking data, Alea possesses the ability to deliver personalized and instantaneous assistance to address any BnB-related issues.

Harnessing the power of its comprehensive knowledge base, Alea effortlessly combines her expertise in the intricacies of the AirBnB ecosystem with her understanding of the diverse needs and preferences of travelers and hosts alike. With its remarkable ability to assimilate information from various sources, she skillfully provides tailored recommendations, insightful advice, and practical solutions, transforming the experience of all AirBnB users.

The Team

We are students of Human-Computer Interaction at Carnegie Mellon University



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