



Riding the AI Wave

Travel & Accommodation Exec
Breakfast

July 19th 2023



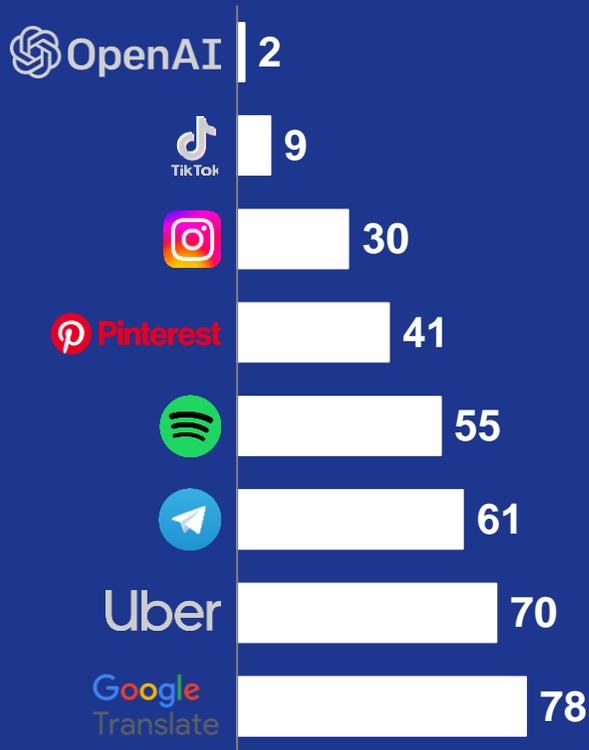
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1

LLMs, led by ChatGPT, have grown at an unprecedented pace

Months Taken To Reach 100m Global Monthly Active Users



But today's iterations still have limitations (which are being rapidly addressed)

Difference vs. Traditional Search

- LLMs use **generative** search and creates new content based on patterns recognised from its training data
- Traditional search engines use **discriminatory** search and make inferences based on indexed data

Capabilities Today

- **Use cases include text, image and code generation, use cases in travel** including writing travel content, planning holidays, communicating to customers etc

Limitations Today

- **Hallucinations** – LLMs confidently output false information
- **Outdated** – models are calibrated on fixed datasets, with limited 'real-time' input
- **Speed / cost** – limited by resource required and cost to deliver

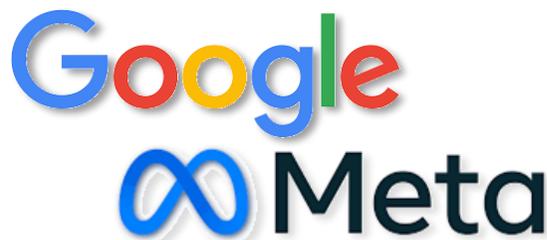
Numerous different actors are rapidly developing LLMs

**ChatGPT has made
Generative AI mainstream**



- OpenAI's ChatGPT is by far the **most popular LLM today in terms of customer adoption**

**Big Tech is
investing heavily**



- Google has released its **upgraded model**, PaLM-2, which is **integrated across its suite of products** (incl. advertiser usability) and represents the base for Google's Chatbot Bard
- Meta's **LLaMa model integrated in content discovery of Meta apps**

**Start-ups are receiving
extensive backing**



- Anthropic, founded by former OpenAI employees, **recently raised c. \$300m** in venture funding
- **Inflection AI plans largest AI cluster after \$1.8bn funding.**
- AI21's Jurassic-2 model **cites internet-based sources** to reduce hallucinations

Cost and computing resource are currently significant barriers to widespread adoption, though areas of intense developmental focus

ChatGPT queries are currently significantly more expensive than Google

Chat GPT cost per query (Dec 2022)

\$0.01–\$0.09



Google cost per query

\$0.00005

=

\$0.17 per kWh
(US, May 2023)

*

0.0003 kWh
per query

c. 200–2000x difference

This will fall – albeit not immediately

- Most solutions to this problem focus on **software improvements to reduce the size of the models**
- There is **general optimism of improvement** in this area

“You have some of the smartest people in the world working on this I see it coming down – it’s just going to get faster and cheaper”

Former Research Team Leader, OpenAI

- But the **extent to which costs will fall is unclear**

“To scale to Google levels right now is completely unfeasible. To what extent it will be feasible is unclear”

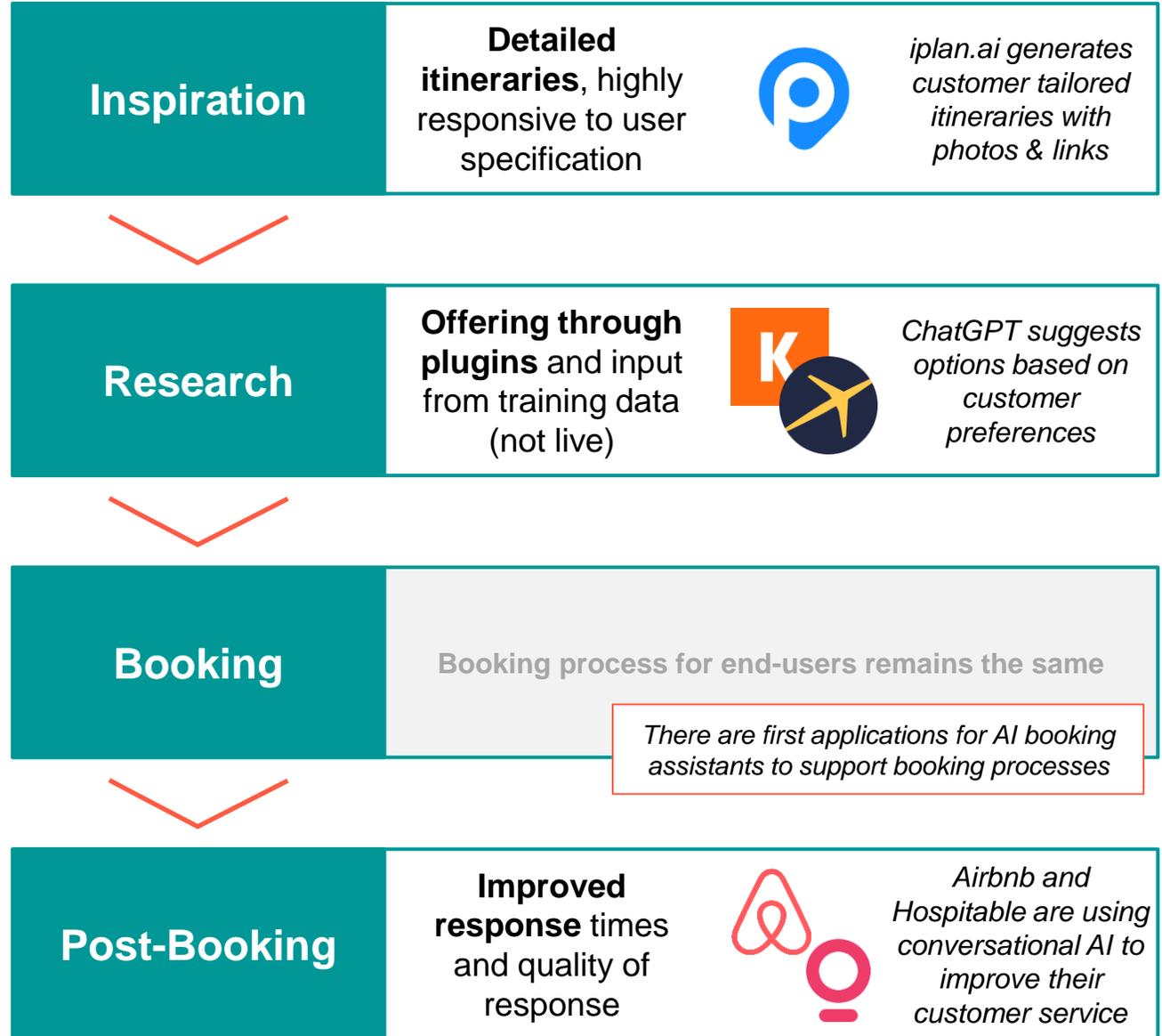
AI Research Scientist, Meta

- ...On this basis we should assume some queries remain served by ‘traditional’ indexed search

2

Inspiration and post-booking customer service have readily usable LLM solutions

AI quickly making headways into the travel journey, though it's not yet directly changing booking ...



A clear consumer use case for LLMs is for travel exploration and inspiration – various businesses facilitate this, eg iPlan.ai



iPlan.ai uses ChatGPT to produce itineraries filled with photos and handy links to maps

SU can you plan a trip to Scotland for my family? Our interests are whisky and architecture and we also want it to be fun for our kids aged 7 and 10

Absolutely! Here's a suggested itinerary for a family trip to Scotland that includes whisky, architecture, and fun activities for kids:

Day 1: Edinburgh

- Arrive in Edinburgh and spend the day exploring the city's architecture. Visit Edinburgh Castle, St Giles' Cathedral, and the Palace of Holyroodhouse.
- In the evening, enjoy a whisky tasting at the Scotch Whisky Experience. This interactive tour is perfect for both adults and kids and includes a ride in a whisky barrel and a chance to sample different whiskies.

Day 2: Glasgow

- Take a train or drive to Glasgow and spend the day exploring the city's architecture. Visit the Glasgow School of Art, the Glasgow Cathedral, and the Kelvingrove Art Gallery and Museum.
- In the afternoon, visit the Glengoyne Distillery for a whisky tour and tasting. Kids can enjoy a special "soft" tour that includes a visit to the barrel room and a chance to try non-alcoholic whisky.

Day 3: Loch Lomond and Trossachs National Park

8:19

Barcelona

Barcelona, Spain

4 days With family, 2023

04 Aug 05 Aug 06 Aug 07 Aug

1 10:00 - 12:00

Park Güell

138,388 review

People typically spend 120m here

View on google map

~ 5 Minutes

12:00 - 13:00

Travel recommendations of LLMs such as ChatGPT are still generic; this will evolve, but trust will take longer to build



Origin: London, UK
 Destination: South Africa
 Number of Travellers: 2 Adults, 3 Children (16, 13 & 10 y/o)
 Duration: 2 weeks
 Travel Dates: 25.11.–09.12.2023

We are a family (2 adults + 3 children) and would like to spend 2 weeks at the end of November / beginning of December in South Africa for our summer vacation. Our travel budget is roughly £9,000 and should include flights, accommodation and if possible, fees for e.g., national parks.

Would it be possible for you to suggest us options for such a trip?

ChatGPT suggests a very generic travel route, with little differentiation for a different group mix...

Family Vacation Suggestion

- Day 1-3: Cape Town
- Day 4-6: Garden Route
- Day 7-9: Kruger National Park
- Day 10-12: Durban and the Drakensberg Mountains
- Day 13-14: Johannesburg

Friend Group Trip Suggestion

- Day 1-3: Cape Town
- Day 5-8: Kruger National Park
- Day 9-11: Garden Route
- Day 12-14: Johannesburg

We should assume **rapid advancement** in recommendation and trip planning through ‘trained AIs’

However, **building trust** may take longer – especially on complex / ‘important’ (eg family vacation) trips

Booking capabilities in LLMs are already supported through plugins – Expedia & Kayak were early releases – requires click out to book

Live data pulled in from Expedia / Kayak and presented in text format

ChatGPT surfaces link to book on the website

Consumer able to request more information about the options provided

Does not show as wide a range of options as on Expedia website

JE first, are there any non-stop flights from seattle on Alaska?

T Used Expedia

I found a non-stop flight from Seattle (SEA) to Puerto Vallarta (PVR) on Alaska Airlines for you. Here are the details:

- Airline: Alaska Airlines
- Flight number: 1410
- Departure date: April 21, 2023
- Departure time: 08:45 AM
- Arrival time: 02:20 PM
- Flight duration: 4h 35m
- Price per ticket: \$635.06 (USD)

[Book this flight on Expedia](#)

Please note that I assumed a departure date of April 21

Expedia ChatGPT Plugin

Used KAYAK

Great! I found a flight from San Diego to Tokyo for your specified dates, as well as a list of places to stay in Tokyo. Here are the details:

Flight:

- Departure: San Diego to Tokyo
- Departure Date: May 1, 2023
- Return Date: May 8, 2023
- Prices start at \$809
- Shortest total trip duration: 27h 17m
- To see more flights and book, please visit [this link](#)

Stays in Tokyo (May 1, 2023 - May 8, 2023):

1. Sotetsu Fresa Inn Kanda-Otemachi (3 stars) - \$94/night - [Booking URL](#)
2. Hotel Chinzanso Tokyo (5 stars) - \$300/night - [Booking URL](#)
3. Hotel Mystays Higashi Ikebukuro (3 stars) - \$70/night - [Booking URL](#)
4. Apa Hotel Asakusabashi Ekimae (3 stars) - \$95/night - [Booking URL](#)
5. The Prince Park Tower Tokyo (5 stars) - \$383/night - [Booking URL](#)

Please note that the prices listed above are subject to change and availability. You can find more options for stays in Tokyo on [this page](#).

Let me know if there's anything else I can assist you with!



SAN to TYO, 5/1 — 5/8
kayak.com

Sotetsu Fresa Inn Kanda-Otemachi, Tokyo
kayak.com

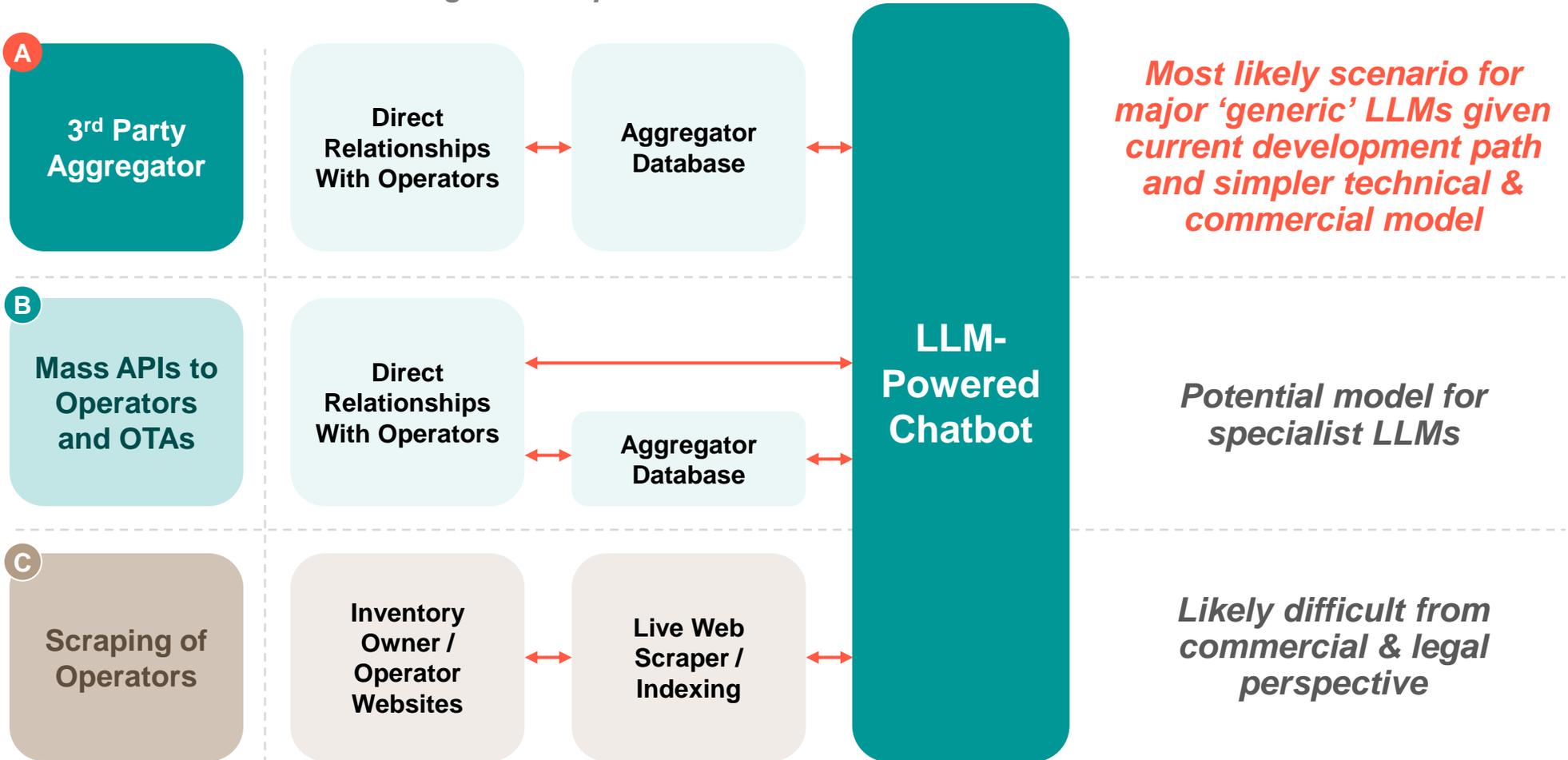
Hotel Chinzanso Tokyo, Tokyo
kayak.com

Kayak ChatGPT Plugin

2

Intermediated booking solutions will likely persist as a way of presenting real-time inventory to users

Potential Connections Powering LLM Responses



... with click through to transact likely retained as means to commercialise traffic for generalist LLMs

Click-through model provides clear advantages for LLMs vs. self-performing of booking...

...with consumers being used to similar models...

...and travel distributors & operators most likely to play along

Rational for Click-Through to Complete Booking

<p>Proven Business Model</p>	<ul style="list-style-type: none"> • Commercialization of links strongly accepted both on consumer and travel distributor side • Likely result in shift of marketing budgets from Google to broader array of LLMs
<p>Customer Data & GDPR</p>	<ul style="list-style-type: none"> • Direct booking through LLM would require handling of personal data of customers – and compliance with GDPR etc
<p>Broad Connectivity</p>	<ul style="list-style-type: none"> • Integration of booking requires broad set of APIs across all operator types • Coding effort unlikely to be fully covered by LLM-developers
<p>High-touch Service</p>	<ul style="list-style-type: none"> • Performing bookings through LLMs would require set-up of responsive customer service

Chat LLMs are also showing the potential to augment Customer Service and content creation functions – improving speed, quality and cost

LLMs can **generate content** required across multiple digital channels including web content, google text ads, social medial posts etc

They can also **handle customer service requests via chat or email** either responding directly or providing an initial response for an agent to review

Can also **'read' complex Terms & Conditions** to improve accuracy of responses

Major travel businesses **expect LLMs to significantly improve** their customer service



"We have 72 user policies - some of them are 100+ pages long. AI can do much better than an agent in reading the policies and responding to customers"

Brian Chesky, CEO at Airbnb



"The representative sends the context — listing, reservation and conversation history — to ChatGPT, which generates a reply. Nearly half the time, those responses are sent "as is" to the guest. Many others require only small adjustments.

Pierre Hamana, CEO at Hospitable

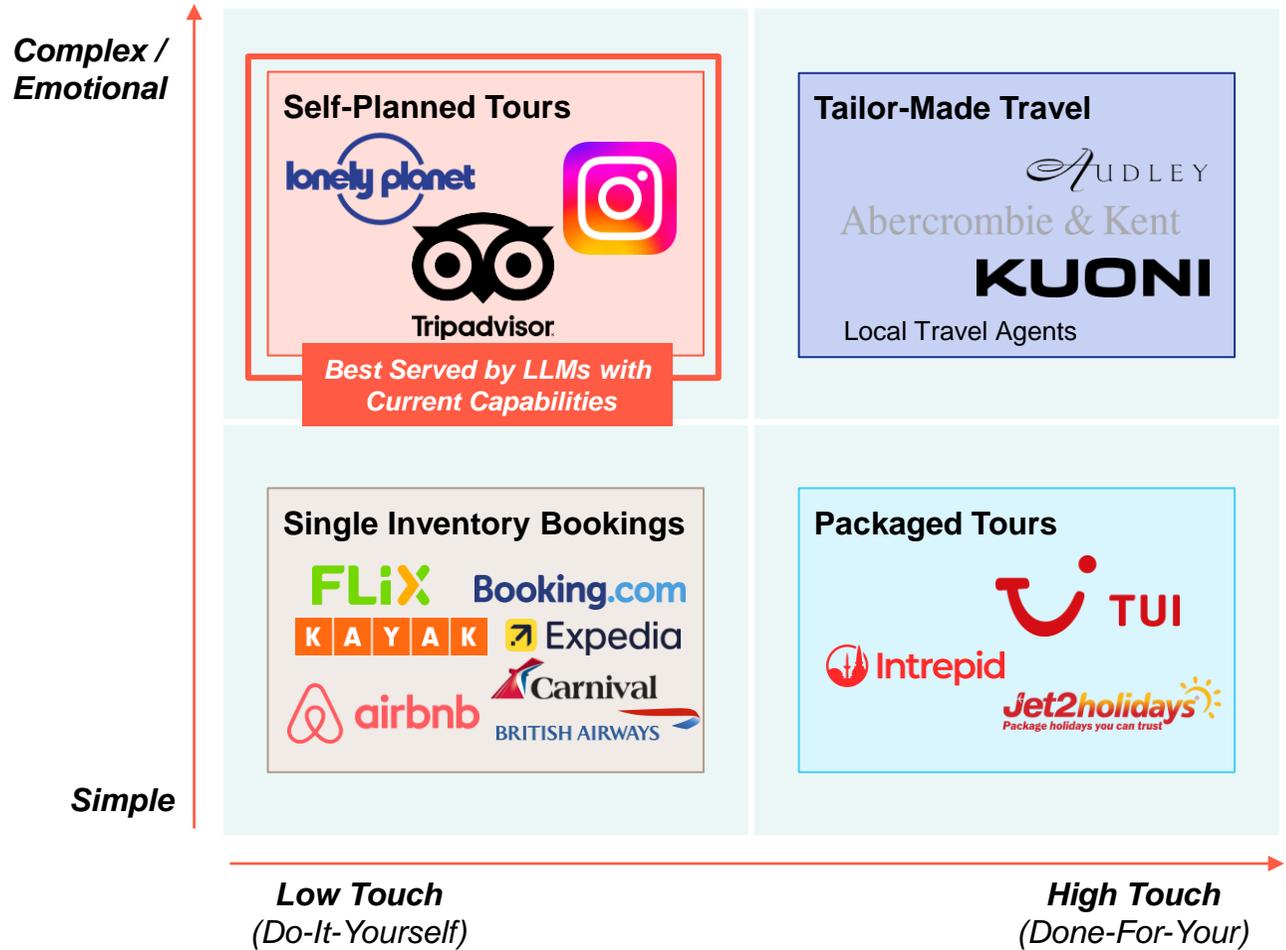


MyTrip.ai is a writing assistant that uses AI to improve customer communications and travel content including itineraries, social media posts, google text ads, web content etc

3

Currently, LLMs are best suited to 'do it yourself', complex missions...

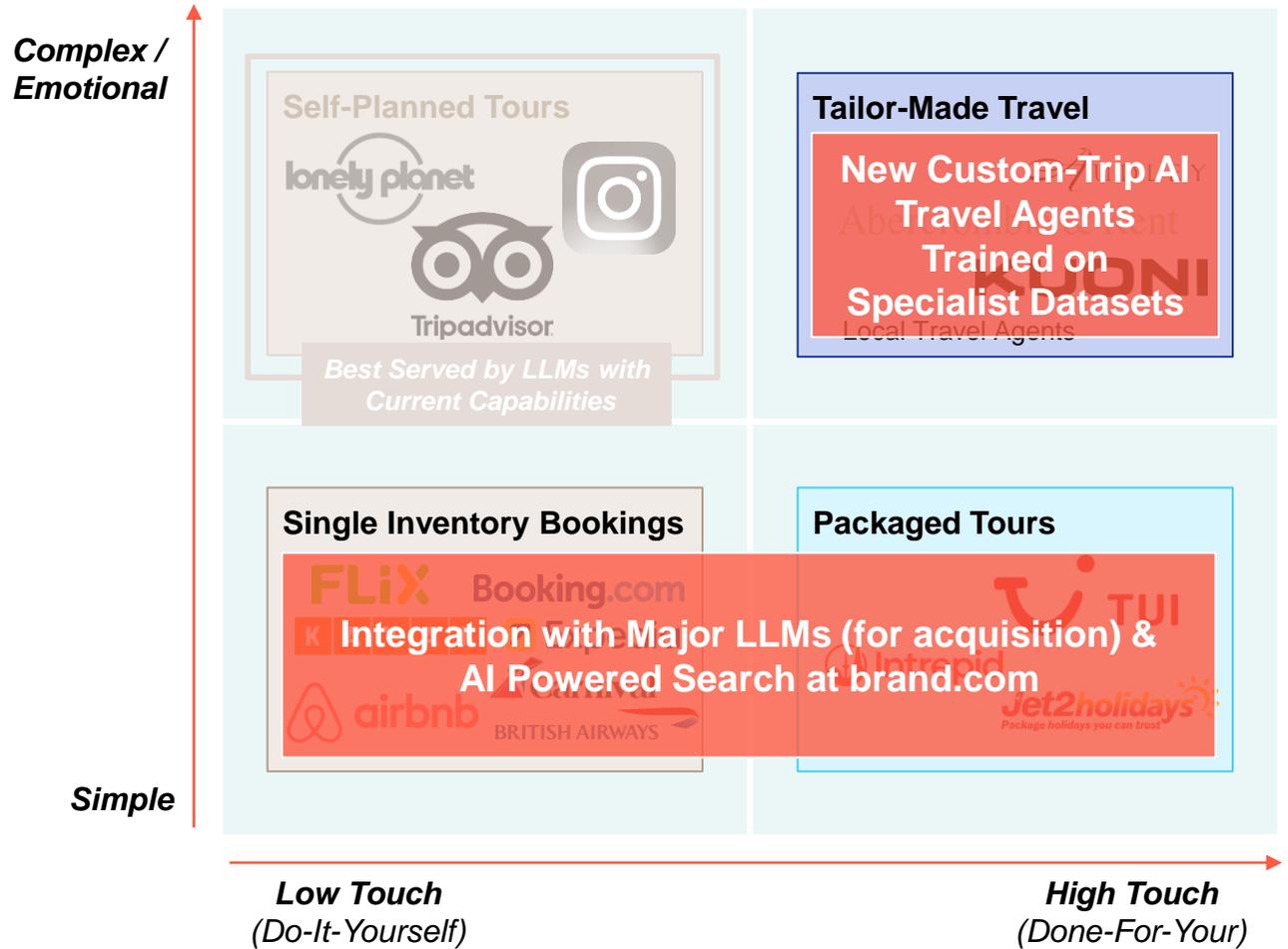
...yet ongoing improvements & model innovation will make it more relevant for other journey types



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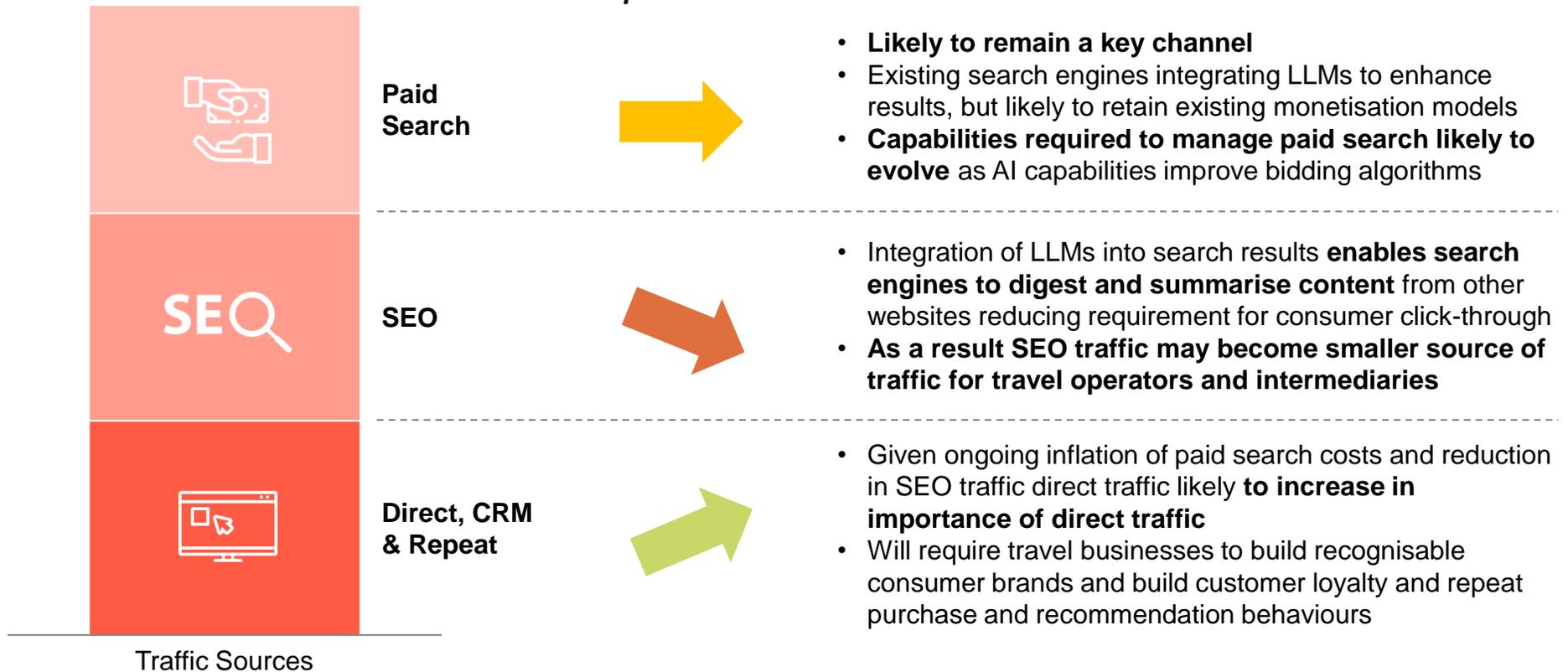
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LLMs may impact the mix of different distribution channels – as may evolve as search engines incorporating LLMs

Potential Impact of LLMs on Channel Importance



Leverage AI Tools to Accelerate Content

AI tools can accelerate the creation of web-content, social media posts, google text ads etc in order to improve web presence

Develop AI-Supported Customer Service

Beyond 'static' content, conversational can AI will support customers service models including customer service chatbots

Explore Interfaces to LLMs

LLMs are developing rapidly, leading travel intermediaries including Expedia and Kayak have already developed plugins for ChatGPT

Work Beyond Google SEO and Strengthen Other Channels

Google SEO may become a less relevant source of traffic over time – creating defensibility to this trend requires strengthening other channels

Brand Awareness

Building brand awareness can support direct customer acquisition, supporting resilience against decline in SEO

Customer Loyalty and Repeat

Driving customer loyalty, repeat behaviour (and recommendations) supports improved customer economics

Distinctive Proposition

Being clear on the distinctiveness of the customer proposition, leveraging unique inventory and proprietary data and expertise will ensure continued relevance

3

Near term there are a range of priorities to 'learn fast' as well as building resilience into the proposition

