

WHOELSE?



Make AIs talk to each other!

A shared language for conversational AIs

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New normal: People talk to machines

HORIZONT

FIRE TV

Amazon and Grundig announce the first Alexa TV

from HORIZONT Online / dpa
Thursday, September 05, 2019



Theme pages for this article:
AmazonAlexaGrundigremote Controlstreaming
Marc Whitte traditional brand

Amazon relies more on TV service via voice

Talking to the TV more often instead of using the remote control is part of Amazon's vision for the TV future. For the first time, a TV set microphones for voice assistant Alexa integrated. It bears the name of a German traditional brand.

BMW GROUP THE NEXT 100 YEARS 



Chatbots, cars, smart speaker, fridges, wearables, hotlines, ticket machines..

A new kind of gatekeeper war: Who owns the



Press release

Amazon and Leading Technology Companies
Announce the Voice Interoperability Initiative

September 24, 2019 at 11:04 AM EDT

Amazon, Baidu, BMW, Cerence, ecobee, Microsoft, Orange, Salesforce, SFR, Sonos, Spotify, Sound United, Tencent, Verizon and more to promote customer choice by supporting multiple, interoperable voice services on a single device

With multiple, simultaneous wake words, customers can access multiple voice services by simply saying the corresponding wake word – from Alexa and Cortana to Orange's Djingo, Salesforce's Einstein, and more

Solutions providers like Intel, MediaTek, NXP and Qualcomm to develop hardware and reference solutions that support multiple wake word engines

Standard Agreement



Namespace System

Als are selected by trigger words:
Hey Alexa! Hey BMW! Hey Magenta!

Problem

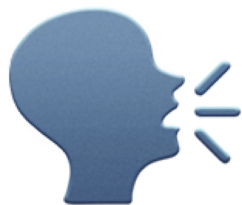


Verbal Discoverability

Users recall less than \emptyset 3.7 brands

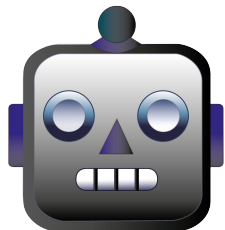
Q.: How will Mercedes and BMW agree who owns the command "ride-sharing"?

Year 2025: Every 1st customer contact will be a bot



Voice becomes UI #1

words replace buttons & keys



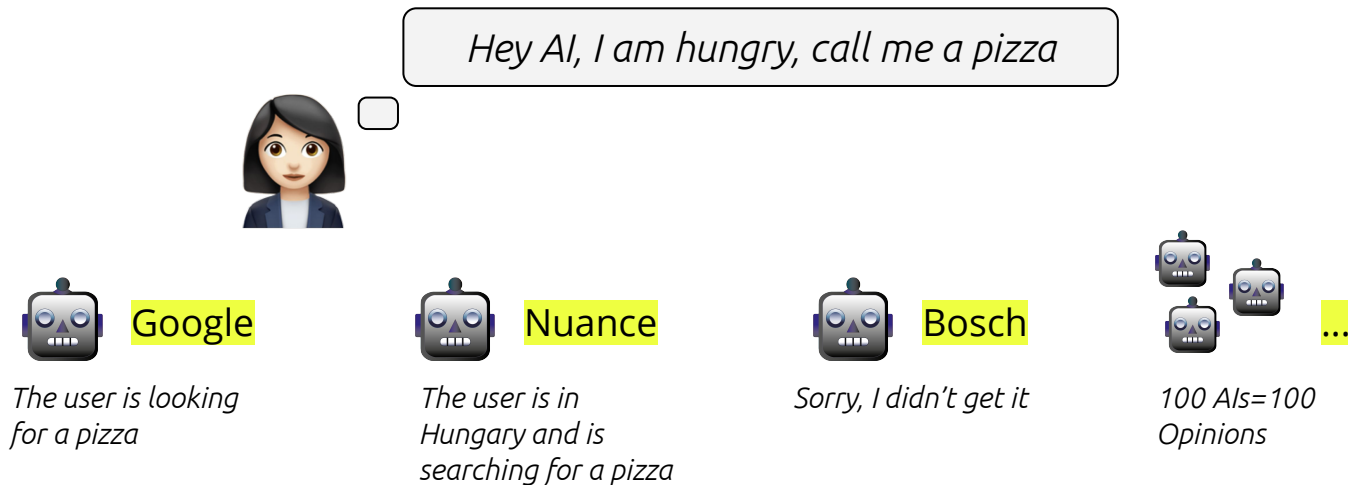
\$55bn e-commerce opportunity

in conversational AIs

Gartner

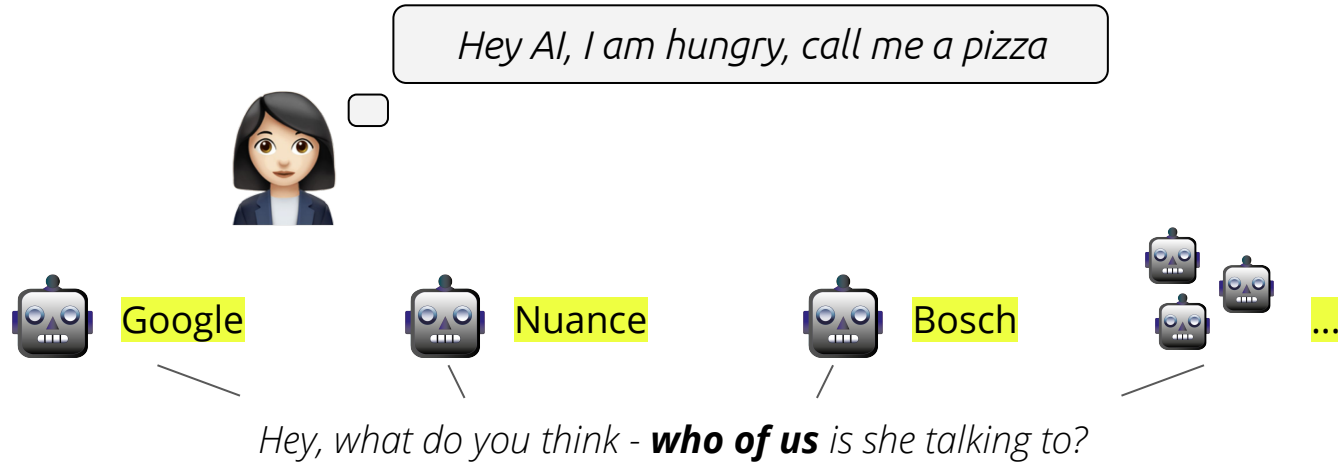
But "Voice Internet" is right now only a linguistic usability mess..

Problem: AI bias. And: Every AIs has a different bias!



Problem 1: All NLPs understand human speech slightly different

...and how will **different AIs communicate about 1 intent?**

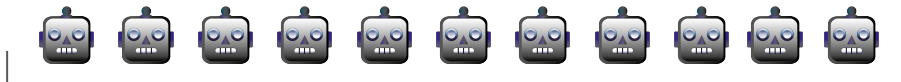


Problem 2: **Concurring data** about user voice inputs

Dreaming of: A unified language for AIs



Hey AI, I am hungry, call me a pizza!



Let us agree, how we tell it to each other!

Wish: The Esperanto of AI - a shared language across NLPs

And we could also use some **privacy!**

Bloomberg

Amazon's "Always on" patent: The future will be recorded, on your smartspeaker



Germany planning to access voice assistant data to tackle crime



41% of voice assistant users have concerns about trust and privacy, report finds

Must have: **Protection of biometric information**

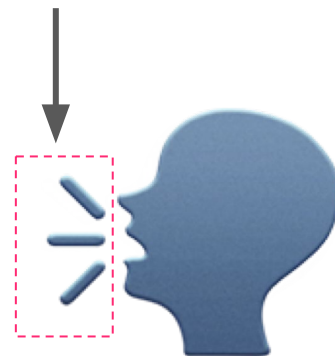
And in the end...

...it's all about **intent!**

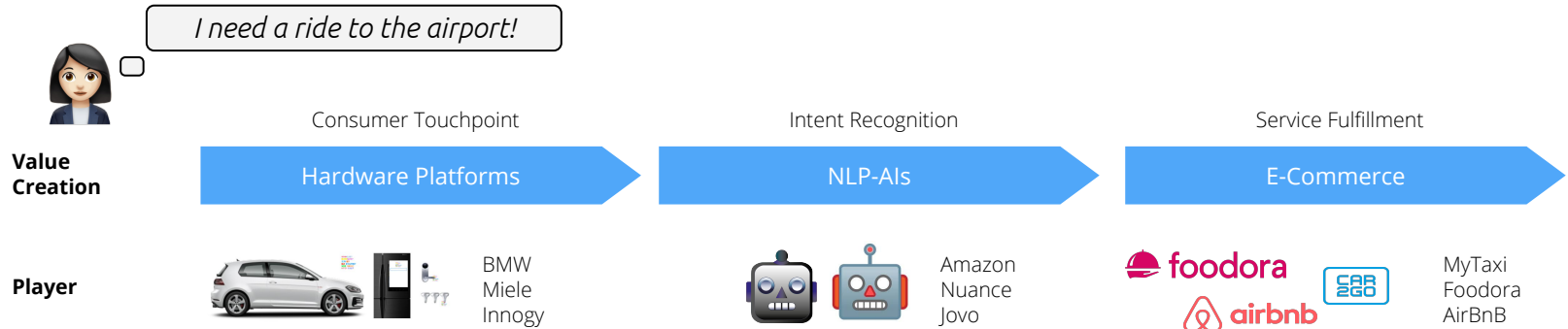
~~How do you say it = Individual syntax, slang, vocabulary~~

Why do you say it = Requested result

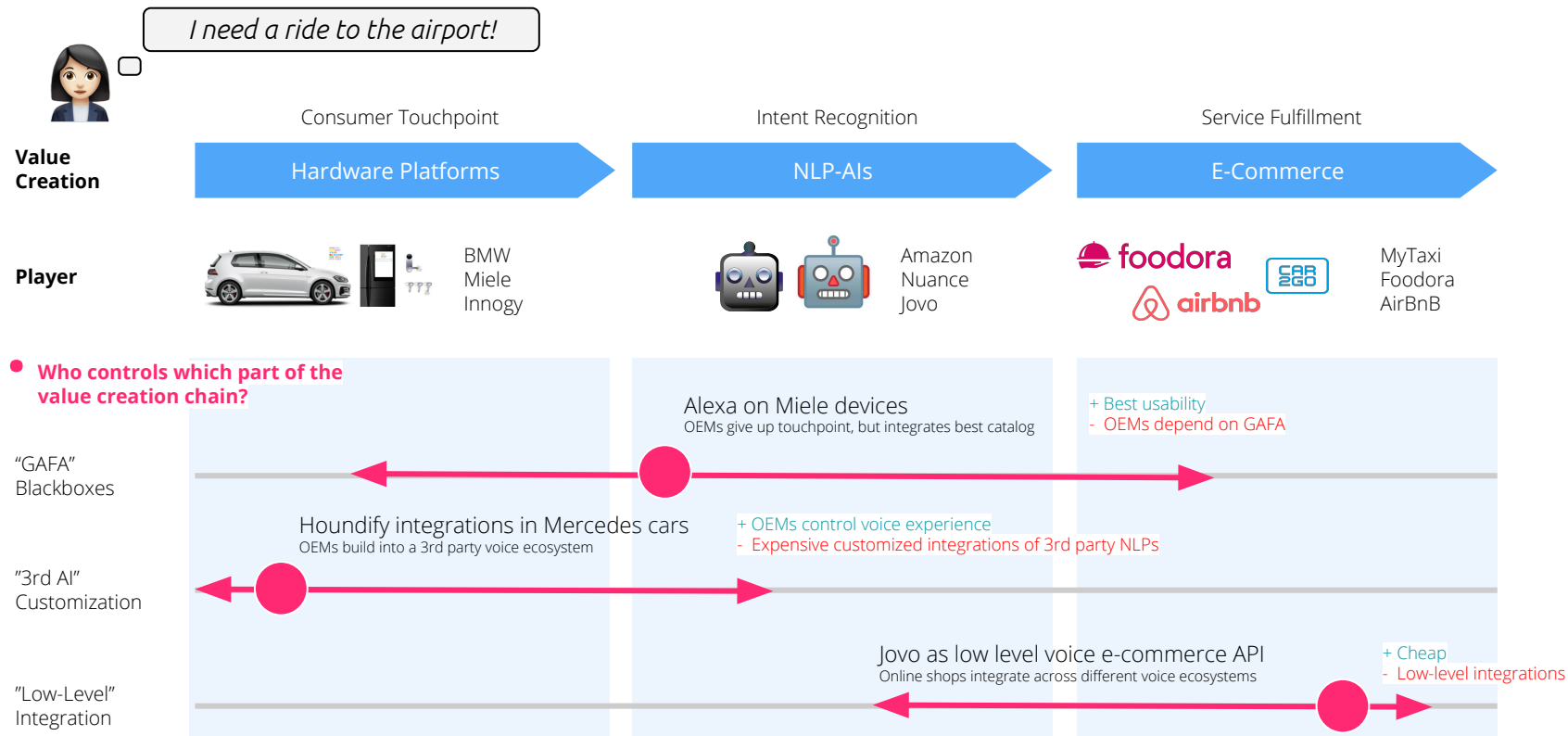
Content of a
speech command



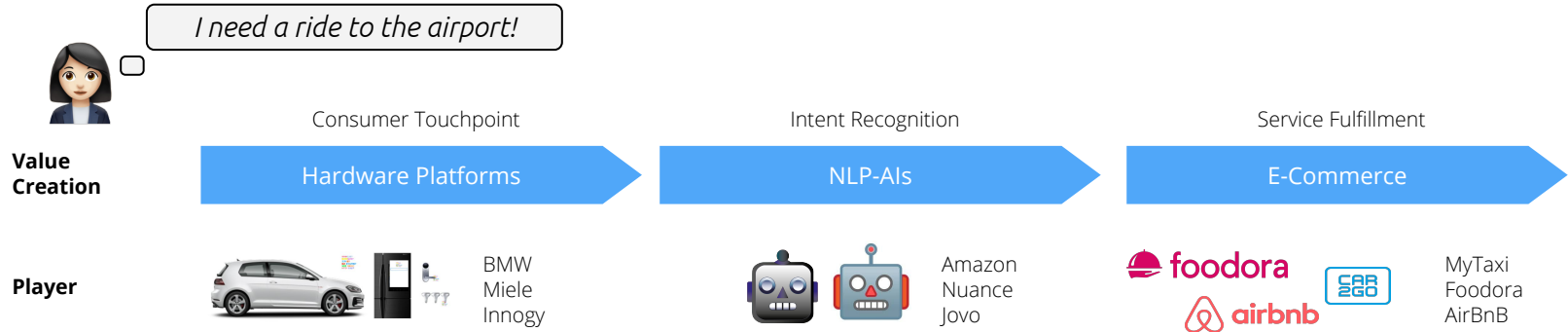
To do: Reduce complexity!



Current siloed ecosystems disappoint



Solution: **whoelse.ai** simplifies language-based AI services



WHOELSE? Taxi who else?

Product Universal Grammar as shared protocol for NLPs

Enabler NLP API interoperability standard initiatives

DIN ISO

Product: A standardised language as shared AI namespace

Examples

Mindmeld



Rasa



Fraunhofer



Houndify



Watson



Mycroft



Omnibot



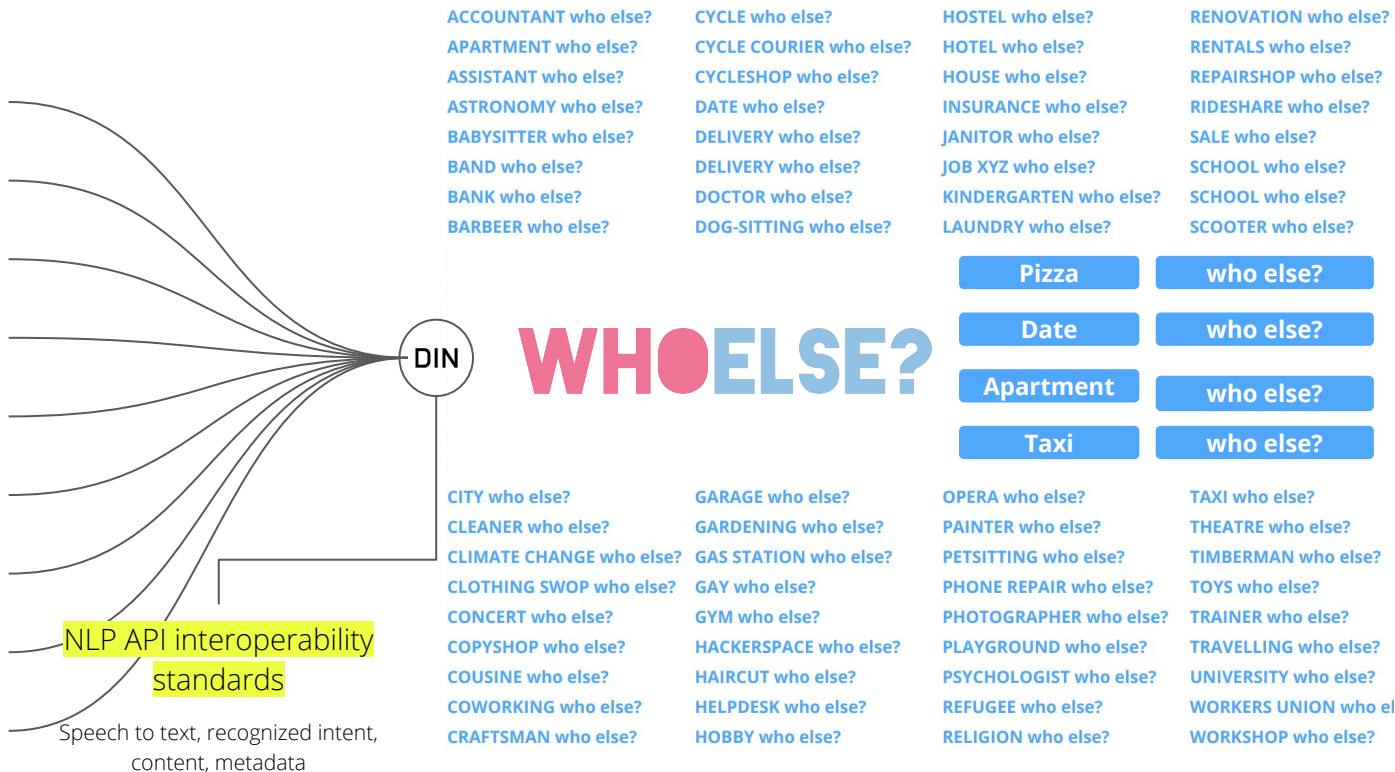
Houndify



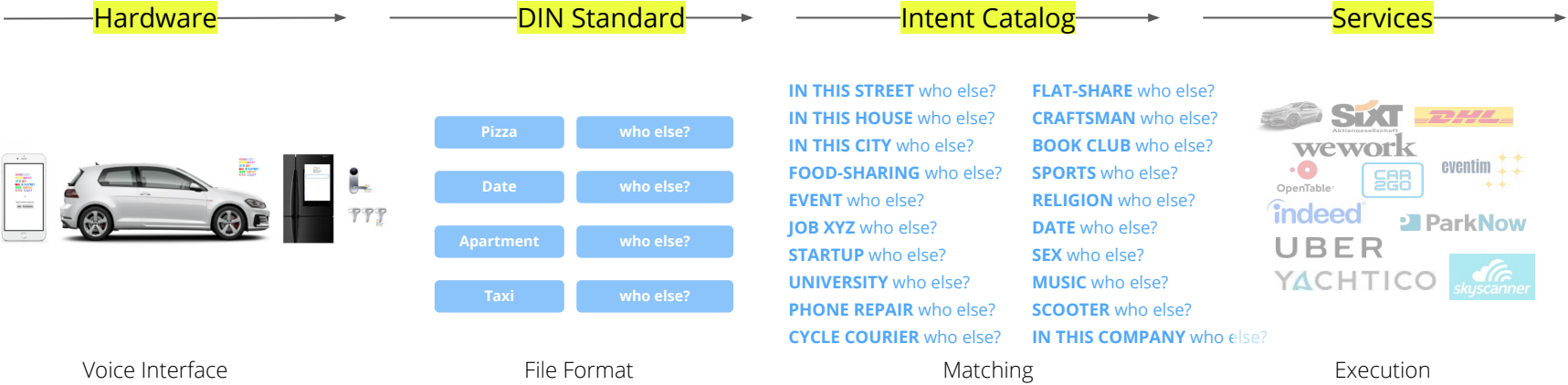
Bosch



whoelse.ai



Rollout: Market entry by NLP API industry standards



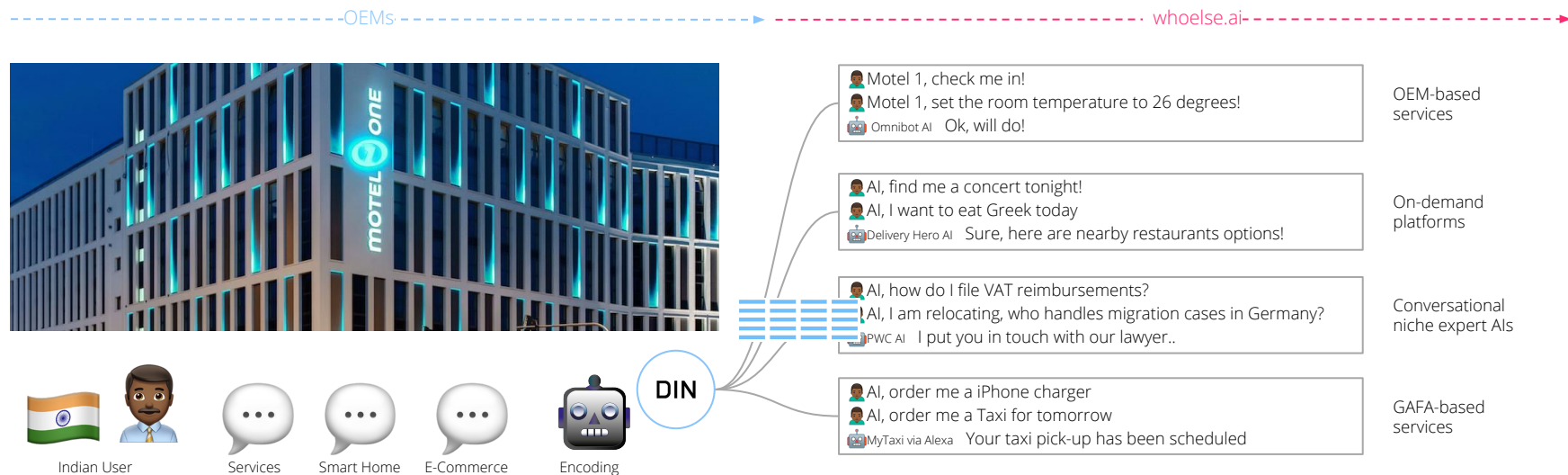
Dream: fulfilled 😎

Let us agree, how we tell it to each other!



B2B use case: Interoperability between conversational AIs

Example: Voice concierge and check-in services in hotels, rental cars, smart homes (..)



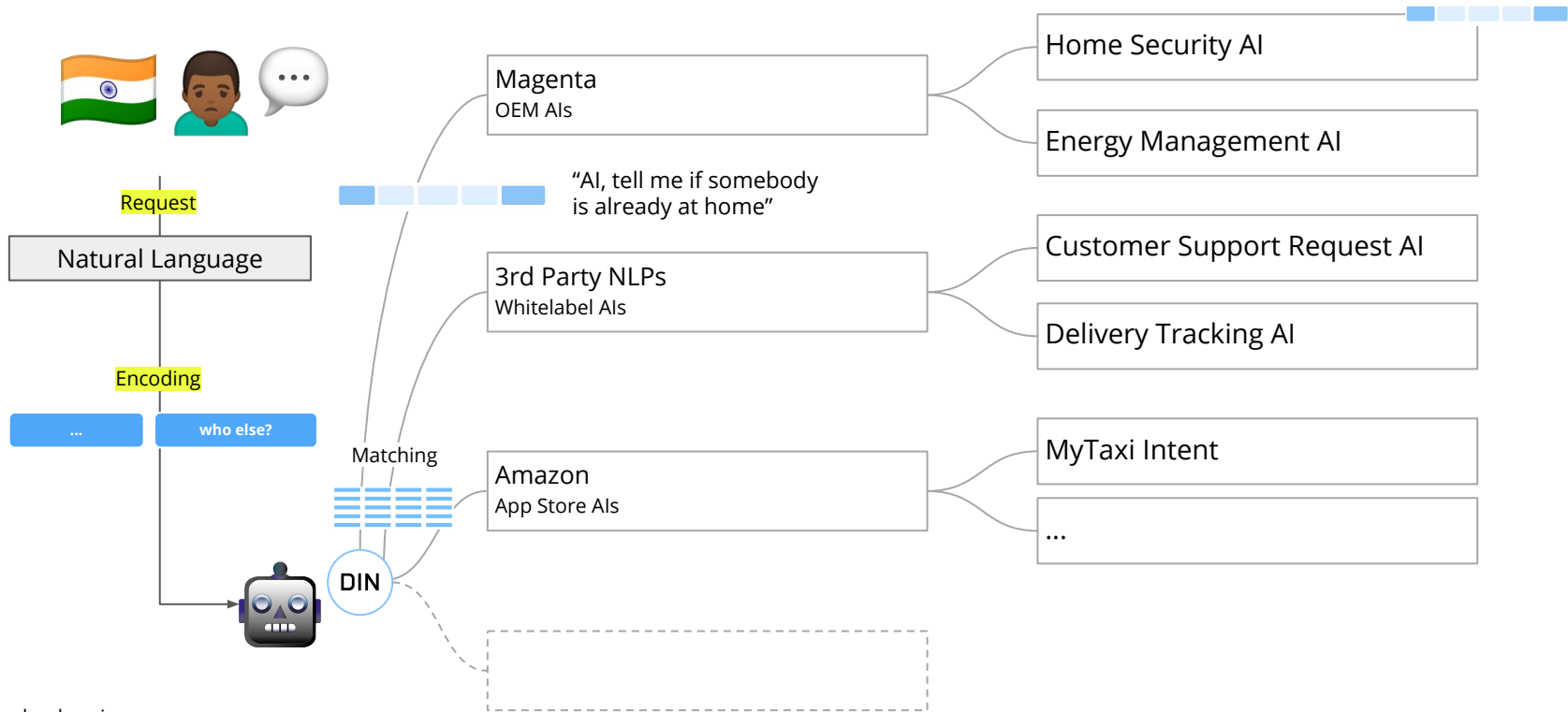
Challenge

Users speak in foreign language for multiple types of intents

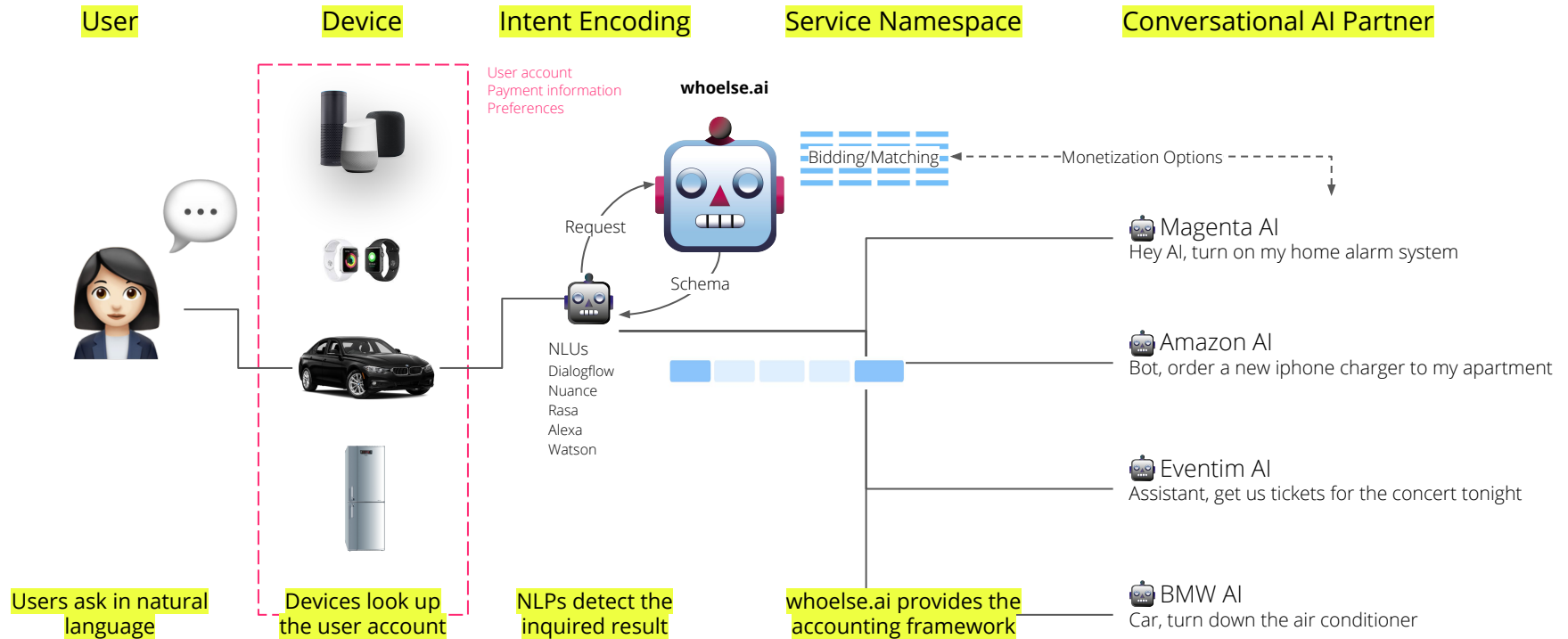
Solution

Interoperability of conversational AIs and e-commerce solutions

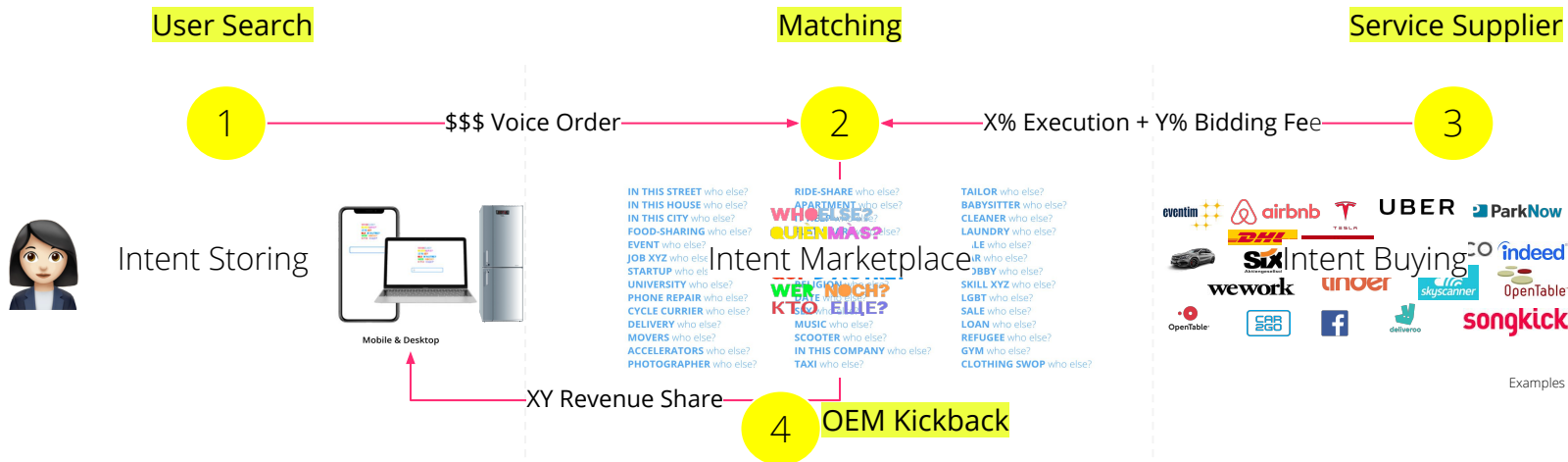
Advantage: Voice AIs use a shared protocol for service requests



Innovation: Voice AI search and user account systems



Monetization: Marketplaces to trade speech-based requests



Request

"Hey fridge, order Indian food for me!"

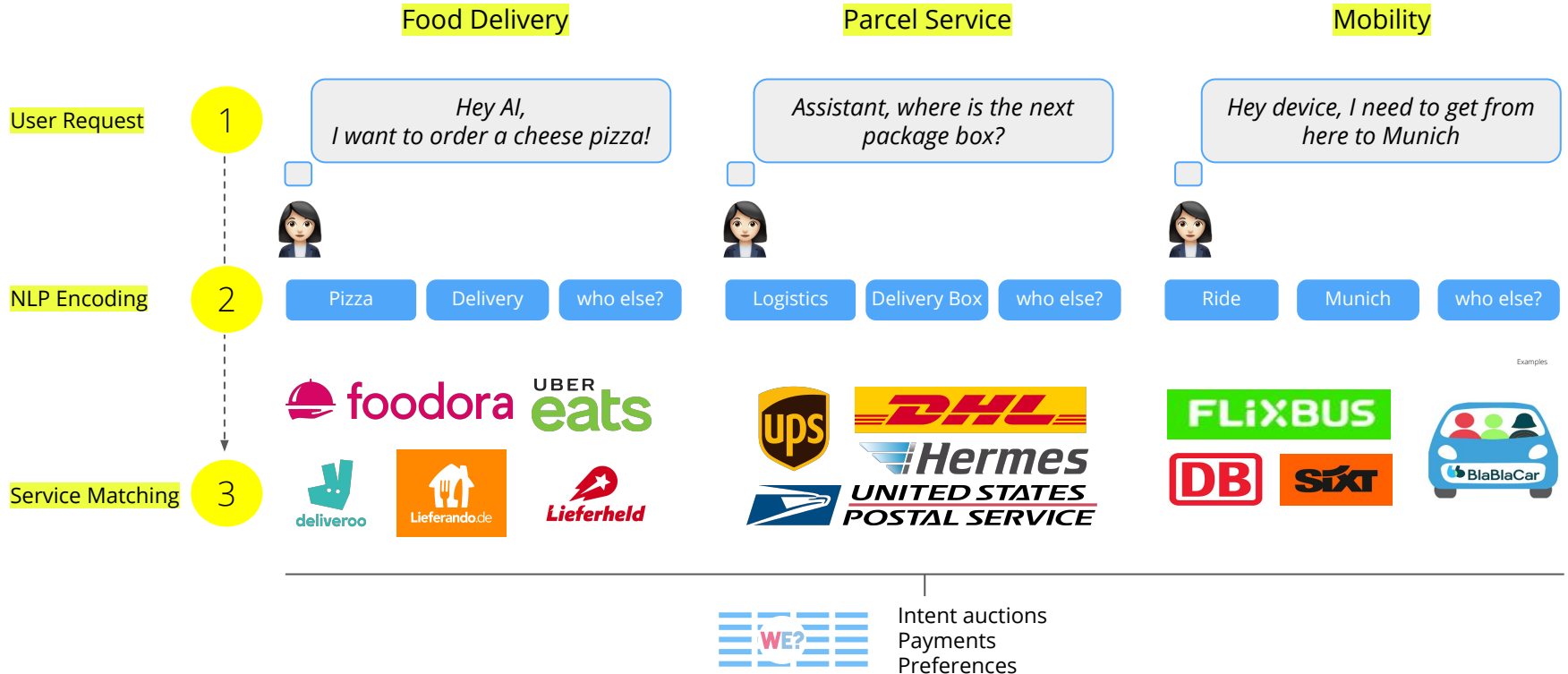
Order Value	\$ 15.00 USD
Kickback OEM 5%	\$ 0.75 USD
Kickback WE 5%	\$ 0.75 USD

Auction

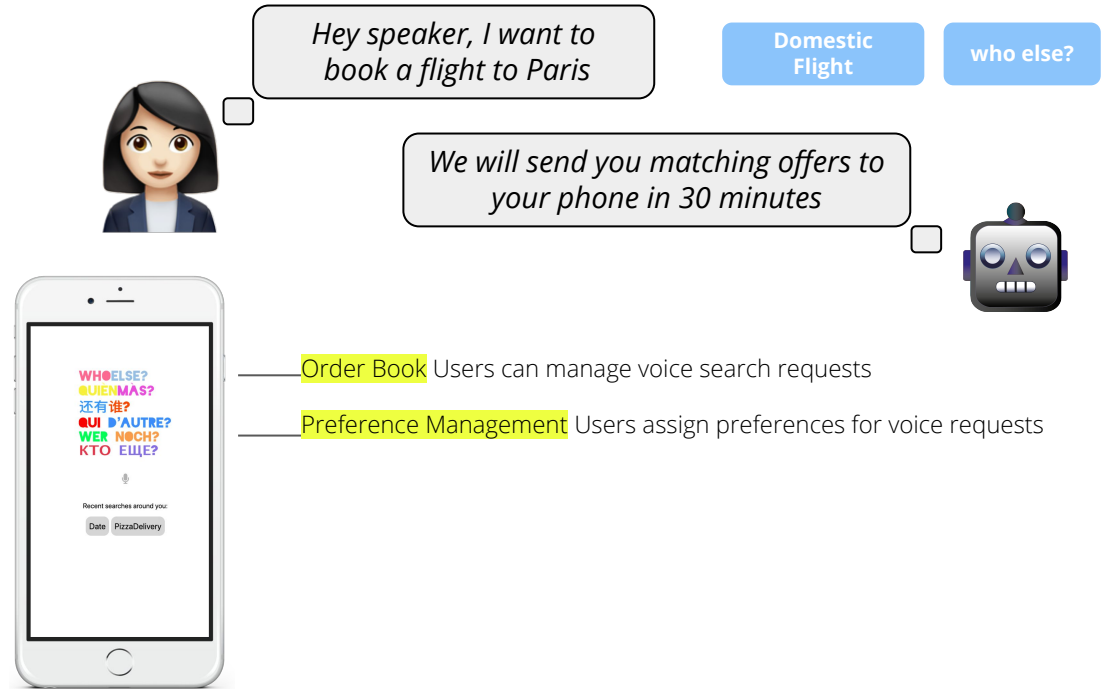
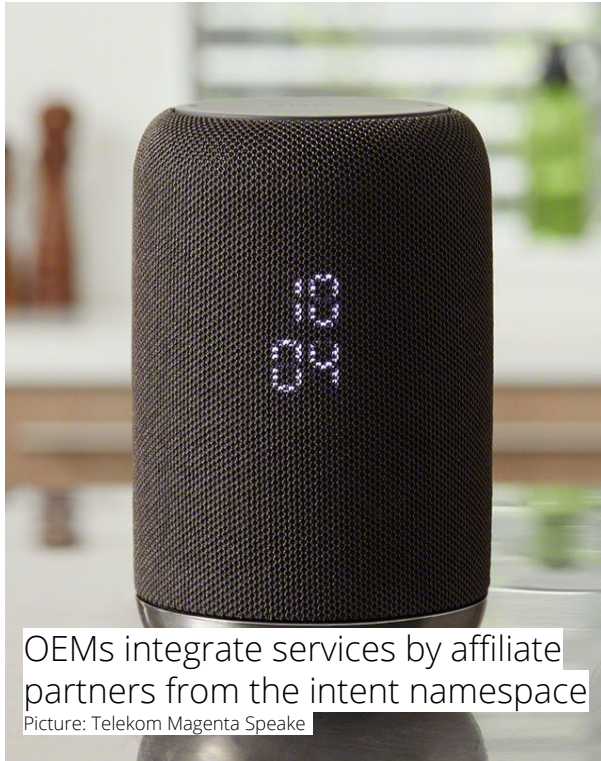
E-commerce providers bid on intents

Vendor A	7%
Vendor B	10% ✓
Vendor C	5%

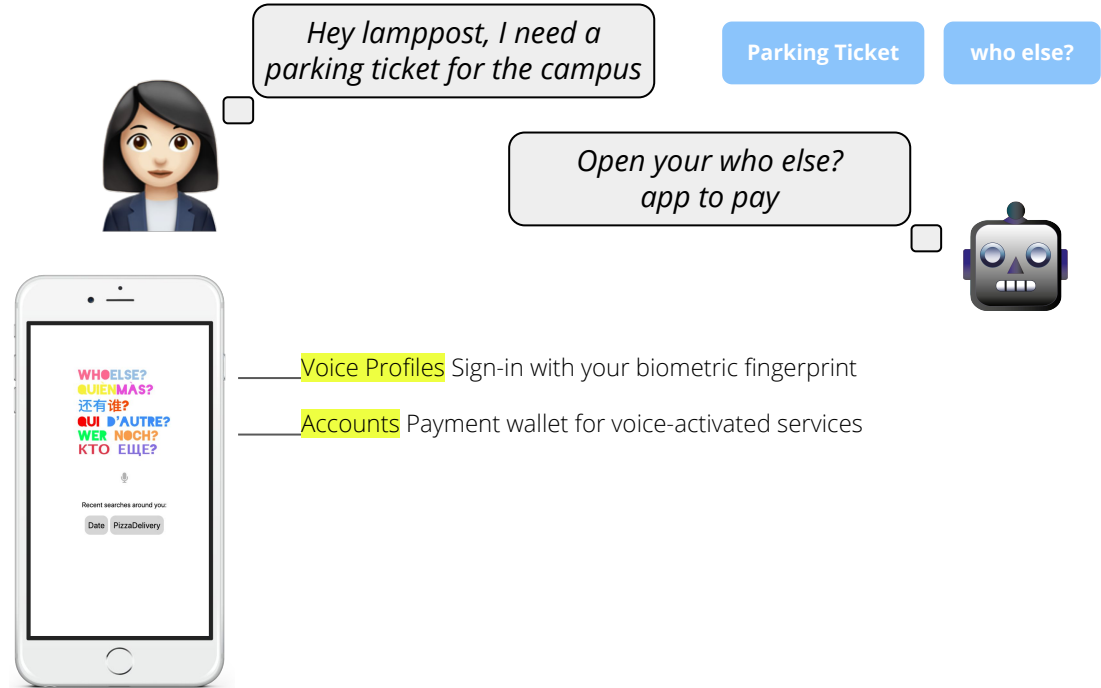
Business model: Lead generation from voice commands



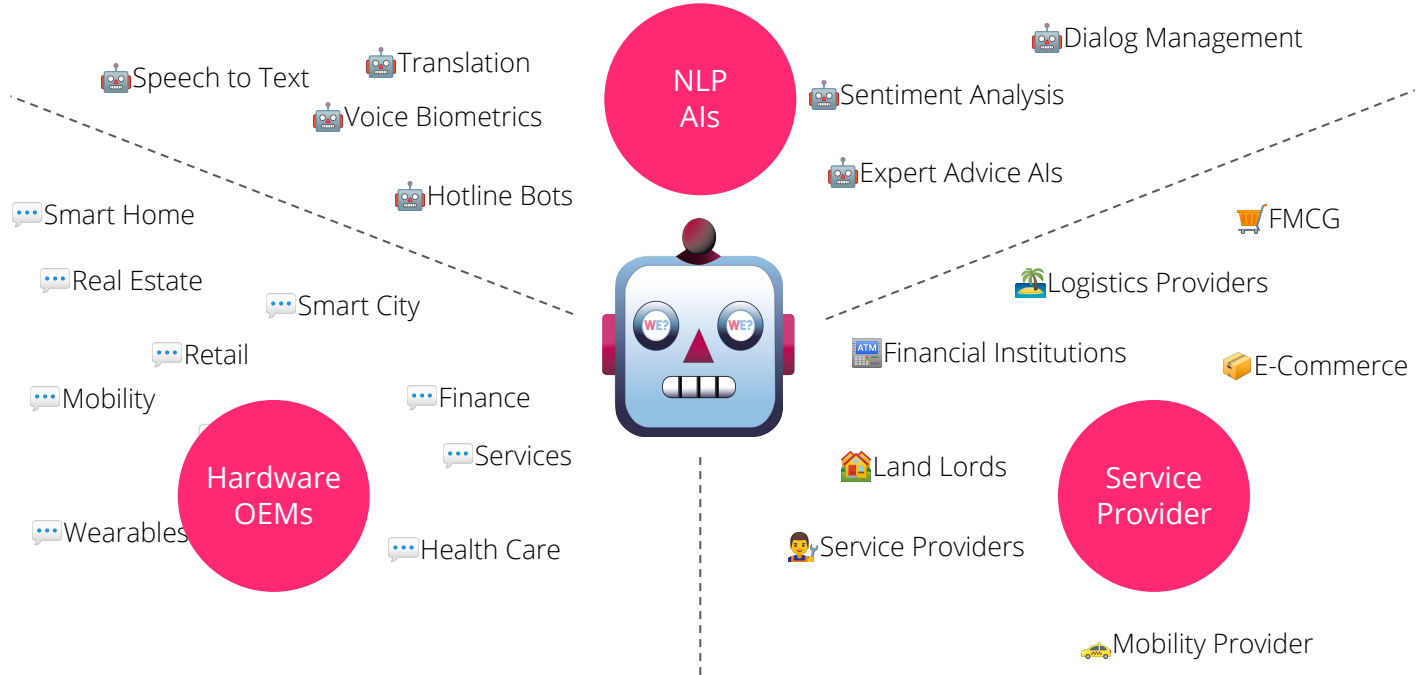
1. Example: Personalized voice assistants



2. Example: Voice-enabled services in public places



Ecosystem: Together towards interoperable AI e-commerce



R+D advantage: Faster localization of voice technologies



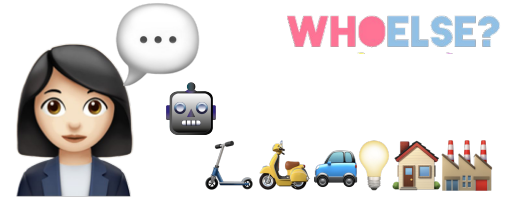
1 Devices with voice interface potential

Cars
Real Estate
Appliances
Shared Mobility
Logistics
Charging Stations
Logistics
Electricity
Car Sharing
Smart Home



2 Selection of NLP technologies

Energy Efficiency
Multimedia Services
Industry Applications
Model Adaptability
IoT Applications
Fraunhofer
Houndify
Bosch
Rasa
McCroft



3 Integration with namespace services

IN THIS STREET who else?
IN THIS HOUSE who else?
IN THIS CITY who else?
FOOD-SHARING who else?
EVENT who else?
JOB XYZ who else?
STARTUP who else?
FLAT-SHARE who else?
CRAFTSMAN who else?
BOOK CLUB who else?
SPORTS who else?
RELIGION who else?
DATE who else?
SEX who else?

Enabler: DIN, ISO, IEEE (...) standards

Market entry: B2B partnerships as growth driver

Industry partnerships

Pilot projects

Marketing

Standards organizations



NLP API interoperability specifications

PILOT PROJECTS

Industry verticals

Smart Cities	Smart Home	Digital Governments
Connected Mobility	Conversational Commerce	Realtime Logistics
Intelligent Grids	Human Robotics	Whitelabel Hardware

Use cases

Cars, chatbots, hotlines, public transport, smart speaker, smart home, smart city, (..)

Acquisition loop



What if "who else?" questions are really better remembered by our users?

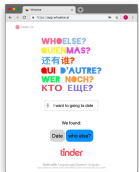






"who else?" could be the last question a user ever needs to know!



Does this device listen to "who else?" questions - let's try!

Traction: AAA+ partners, pilots, and media attention

09-12/2018	01/2019	03/2019	10/2019	11/ 2019	2020
Namespace Prototype	DIN Commission	Angel Supporter	Industry Recognition	whoelse.ai x Telekom	Roadmap & Goals
50+ services integrated	12+ confirmed partners 25+ in update loop	TLD entrepreneurs .whoelse.ai in 2021	Announcement of protocol initiatives	Winter 19 intake of Hub:raum (AI Track)	Launch of whoelse.ai consumer products Mobile apps, smartspeaker, voice assistants, hotlines, smart home, wearable tech
app.whoelse.ai	din.de	dotzon.com	oreilly.whoelse.ai	hubr4um.whoelse.ai	Go-live whoelse.ai intent marketplace B2C affiliate partner integrations, B2B use cases, conversational e-commerce interoperability
					ISO-DIN standards for NLP API interoperability Internationalization of standards initiatives, organization of industry alliance (open source)

Team: Education x Science x Telco Entrepreneurs

Founding Team



Tobias Martens
CEO
Technology & Product



Sven Krüger
CCO
Marketing & Partnerships



Can-Peter Meier
VP BD Asia
Int. Business Development

Key Advisors



Katrin Ohlmer
Entrepreneur
TLD Registry Expert



Andrea Rumler
Marketing Professor
Academic Advisor



Monett Dias
CS Professor
Academic Advisor



Tim Martens
Economics Professor
Academic Advisor

Team



Leonard Füchsel
Voice Solution Engineer
& Data Scientist



Alexander Klug
DIN Standards
Engineer (Freelance)



Kenn Pfefferkorn
Product & UX
Engineer

Industry Advisors



Daniel Heltzel
Makerspace Community
& IoT Ecosystems



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Telecommunication MA
& Deep Tech Ventures



Malte Behrmann
Game Industry Lawyer
& Licensing Expert



Julián Fredoné
Deep Tech Analyst
& Scout



Lenja Lehnard
Business Development
Associate



David Dvinov
Serial Entrepreneurs
& Business Angel



Rayan Aebi
Venture Architect
& Startup Mentor



E.M Valencia
Impact Investor
& Ecosystem Connector



Charlotte Geyer
Corporate Education
& New Work

FinModel: We launch B2B and scale as B2C marketplace

[Open .xls](#)

whoelse.ai P/L

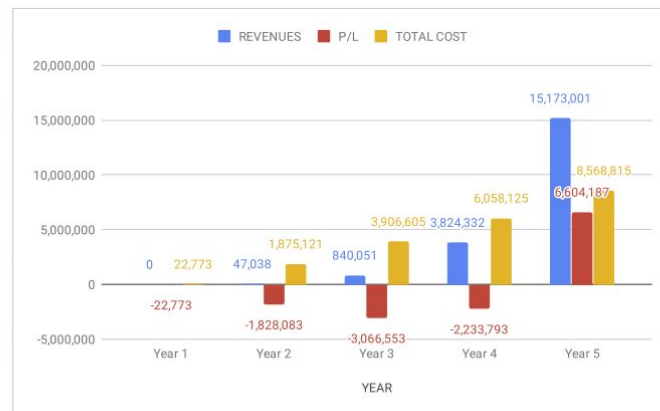
Namespace Fee:

12.50%

	2019	2020	2021	2022	2023
YEAR	Year 1	Year 2	Year 3	Year 4	Year 5
REVENUES	0	47,038	840,051	3,824,332	15,173,001
Namespace Transaction Affiliate Partner	0	545,369	9,739,727	44,340,087	175,918,855
Namespace Transaction Kickback IoT Partner	0	15,679	280,017	1,274,777	5,057,667
Paid COGs	0	5,454	97,397	443,401	1,759,189
HR COST	5,073	1,589,253	2,995,710	3,774,680	4,077,647
Salaries	3,667	1,302,667	2,455,500	3,094,000	3,342,333
Social Security	1,407	286,587	540,210	680,680	735,313
OTHER COST	17,700	285,867	910,895	2,283,445	4,491,168
Online Marketing Expenses	596	99,415	644,060	1,973,145	4,167,526
Capex	1,644	31,632	55,155	67,460	71,042
Opex	3,460	144,820	201,680	232,840	242,600
TOTAL COST	22,773	1,875,121	3,906,605	6,058,125	8,568,815
P/L	-22,773	-1,828,083	-3,066,553	-2,233,793	6,604,187

KPIS					
TOTAL Users Namespace	0	292,162	2,901,317	13,105,444	40,057,424
Users from IOT OEMs	0	15,834	167,295	610,443	1,196,181
Users from Marketing & Viral Growth	0	276,328	2,734,023	12,495,001	38,861,243
Paying Users	0	131,473	1,305,593	5,897,450	18,025,841
Transaktion per User per Year	0.00	22.40	30.13	40.60	52.70
Profit / User	0.00	-6.26	-1.06	-0.17	0.16

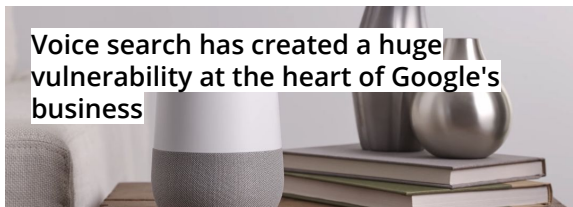
FTE					
Mgmt	4	4	4	4	4
Tech	4	16	24	24	24
Sales	0	7	9	11	13
Marketing	0	2	6	9	10
Support	0	3	9	10	10
Other	1	11	17	17	17
TOTAL FTE	9	43	69	75	78



Exit paths: OEM acquire us for brand and/or patent IP

(1)

Companies (search engines, classifieds) with voice discoverability risks



When the world shifted from desktop to smartphones, one thing didn't change: the existence of a screen on both devices. The screen shrunk, but it remained the medium through which we interact with computers. For Google, that meant its core online advertising business — visible search ads on a webpage — remained intact and lucrative. Today, Google may be at the beginning of a new shift — one toward artificially intelligent virtual assistants, in which we use our voice to interact with technology instead of our eyes. The problem with voice assistants is they don't have a screen on which to display ads.

[Business Insider](#)

(2)

As multi-industry AI IP research lab (c.f. OpenAI)



Roughly three months ago, Facebook launched a \$25m call for research proposals in three subfields of natural language processing (NLP), the cross-disciplinary study of linguistics and AI concerned with computer-language interactions. It specifically sought “robust” deep learning approaches for NLP and computationally efficient NLP in addition to neural machine translation for low-resource dialects, ultimately in the pursuit of advancing cutting-edge research in machine translation. That was just the start, it would seem. In a blog post today revealing 11 winning proposals among the 115 submitted from 35 countries, Facebook announced the AI Language Research Consortium, a community of partners it says will “work together to advance priority research areas” in NLP.

[Venturebeat](#)

(3)

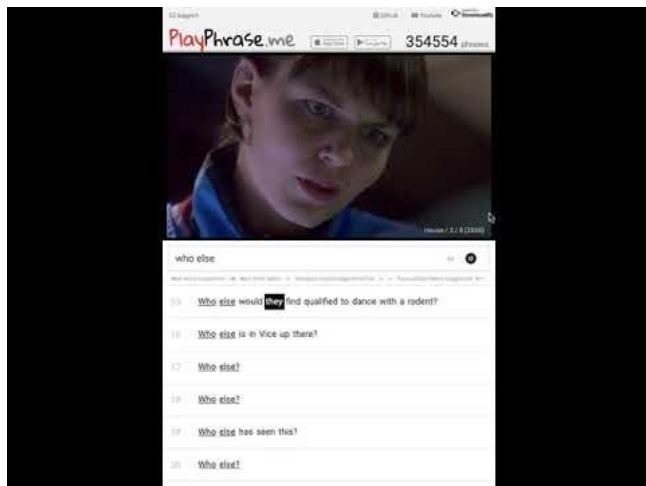
To OEMs and/or technology standards alliances



(..) Ideally, IoT devices would simply have a standard way to communicate, so users wouldn't have to worry about making sure every product works together. Some companies, such as Microsoft, Qualcomm, Samsung, and Intel, are now trying to figure out how to make that happen. Even so, the ambitious goal of a common Internet of Things language is starting to seem like a Tower of Babel. Over the last year, tech titans like Apple, Google, and Amazon have built up their own ways of connecting to vast numbers of smart home products, and these companies have shown little interest in standardization. As these platforms gain traction, is it too late for a unified language to take hold?

[Fast Company](#)

Secret sauce: Language hard-wired in the human



WHO ELSE?

Universal Grammar (UG) is a theory that suggests that some rules of grammar are hard-wired in the brain, and manifest with being thought.

Who else? Wer noch? Quién más? (..) questions exhibit properties of UG. It is language that is universal understood and available to everybody.

Read more: <http://whitepaper.whoelse.ai>

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