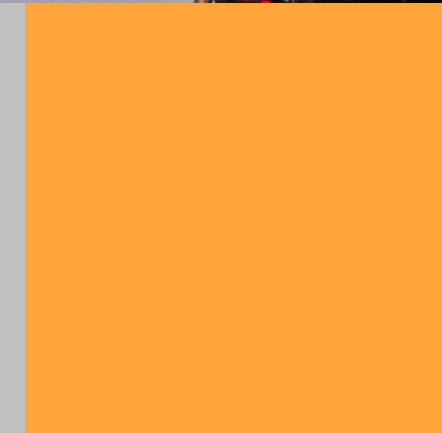
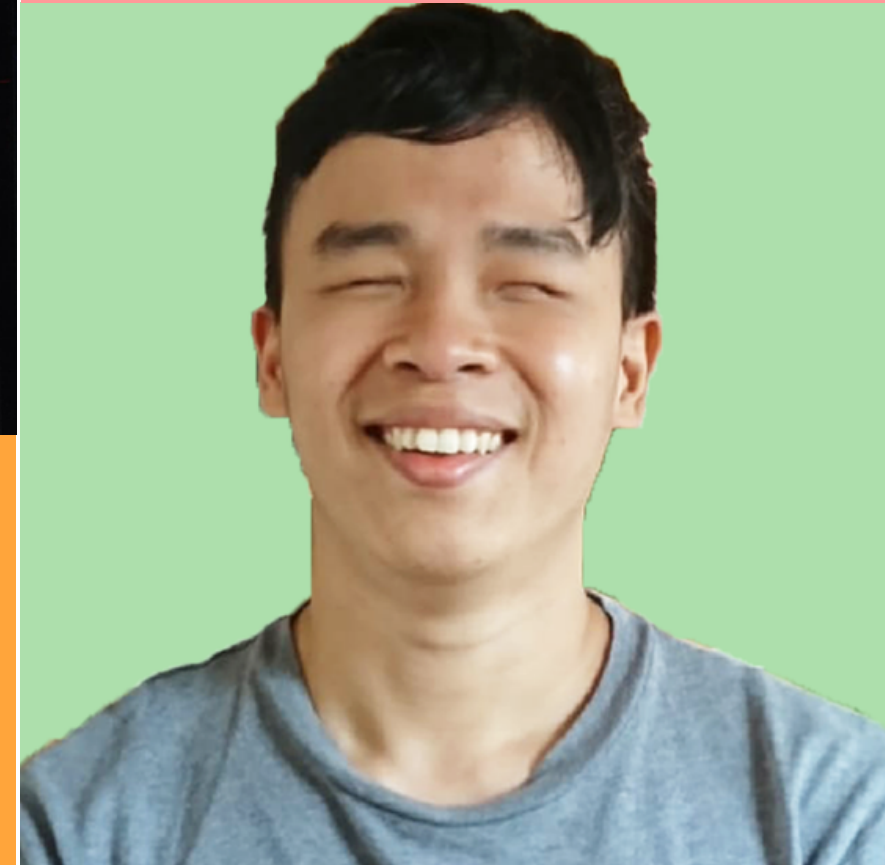
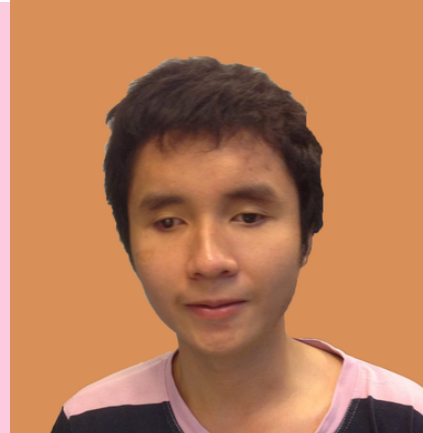
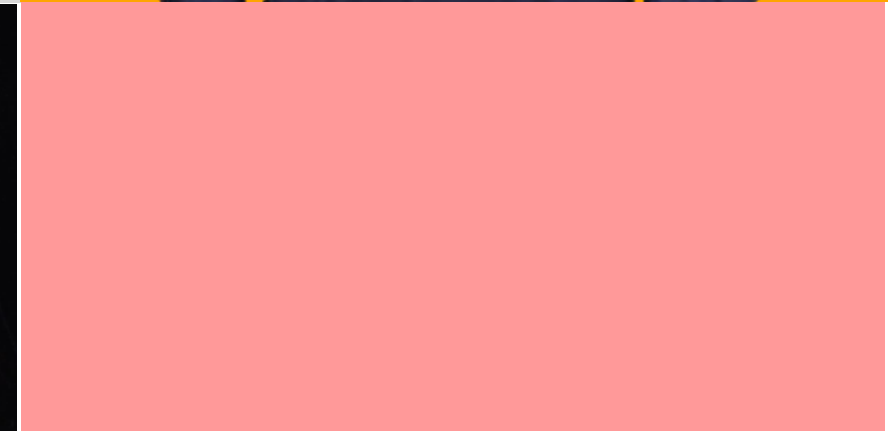


Rayo

Empowering 462 million people with disabilities with equal digital accessibility.



PROBLEM

Poor online accessibility causes difficulties for people with disabilities

98%

websites are
inaccessible

59%

more job opportunity loss
compared to non-disabled

462 Mn

underserved people
worldwide

Source: [ICT Solutions & Education](#), 2020
[TechCentral.ie](#), 2022
[World report on disability](#), 2011

Diverse Abilities and Barriers

Visual impairment

- Keyboard support
- Color combinations
- Text alternatives

Physical

- Keyboard support
- Text alternatives
- Navigation

Cognitive, learning & neurological

- Navigation & page layout
- Texts
- Flickering content

Speech & Auditory

- Voice-only interactions
- Audio content
- Texts

SOLUTION



First and only **AI-powered** browser to
make websites accessible.

Unique selling points

INCLUSIVITY

make websites barrier-free for various forms of disabilities.

EXPERIENCE

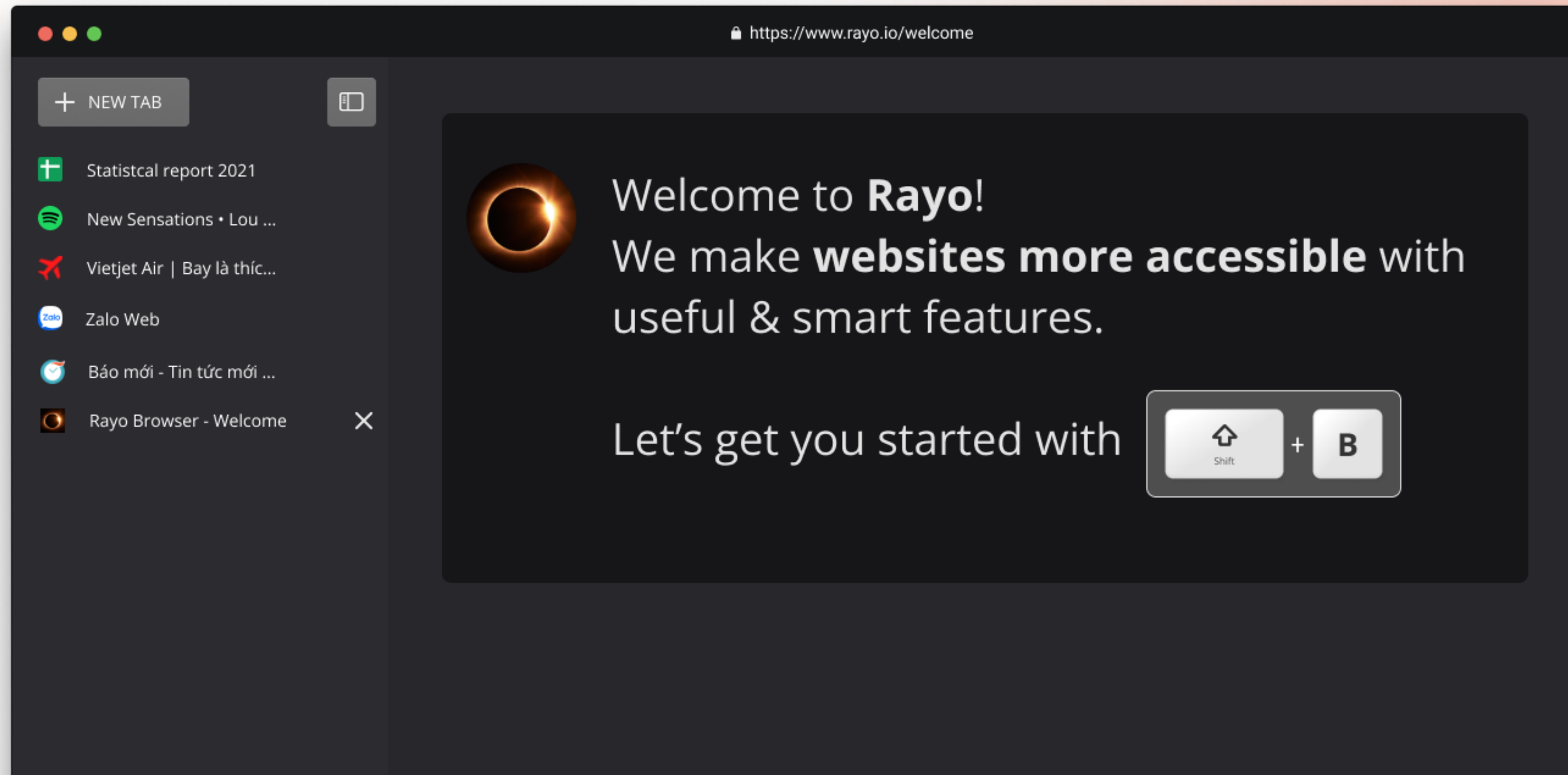
make web browsing hassle-free, fast & fun with AI task assistant.

PERSONALIZATION

designed just for YOU with highly customizable interface.

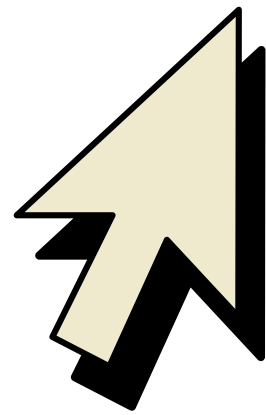
Keyboard-centric interface

Make it fast & straightforward for people with disabilities



Change web layout & appearance

Easier to navigate websites



Change font to Open Dylexic

Increase font size

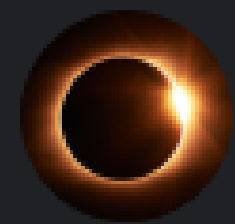
Bigger cursor

Change to monochrome mode



Describe graphics

Read charts, images, fill in missing alt-texts



The stacked vertical bar graph depicts Sales in the Dress Store.

The graph is plot between **Units sold** y axis over **Days of the week** x axis for Shirts, Skirts, Trousers, Accessories.

https://www.rayo.io/welcome

+ NEW TAB

1812.10636.pdf

8 / 12

110%

+ |

Download Print

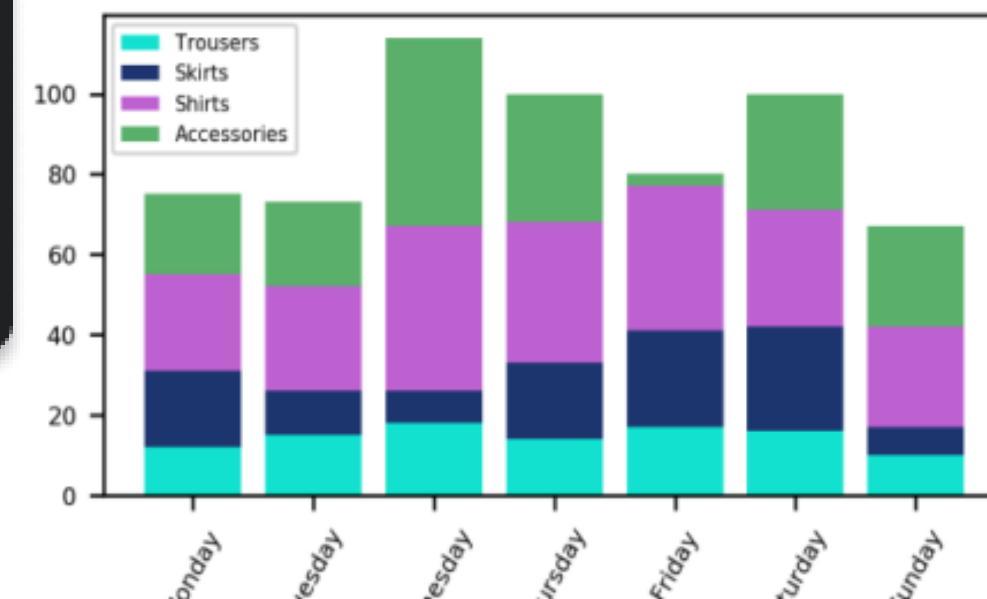
well on the procedurally generated dataset, the performance on data from web and other sources primarily because most charts from other sources are graphically typeset for better visual presentation. Our investigations on improving

The ultimate goal of Chart-Text is to act as an end-to-end fully automatic system that extracts information from charts to create complete textual description of it so that the chart images become more accessible to people with vision impairments.

a few Alt-Texts generated by our Chart-Text system. These example input images are from matplotlib.

Stacked Vertical Bar Chart

Sales in the Dress Store



Smart & helpful

Get jobs done with built-in assistant



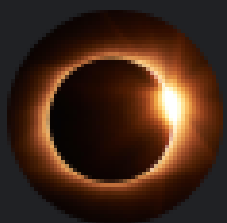
What this website is about?



This website allows users to select and book a seat on the flight. There are **40 rows** in total, with seats labeled **A through F**.



Book me seat 14C



Seat 14C is booked 

<https://www.rayo.io/welcome>

MY BOOKING CHECK-IN ONLINE

BOOK YOUR SEAT

Departure flight

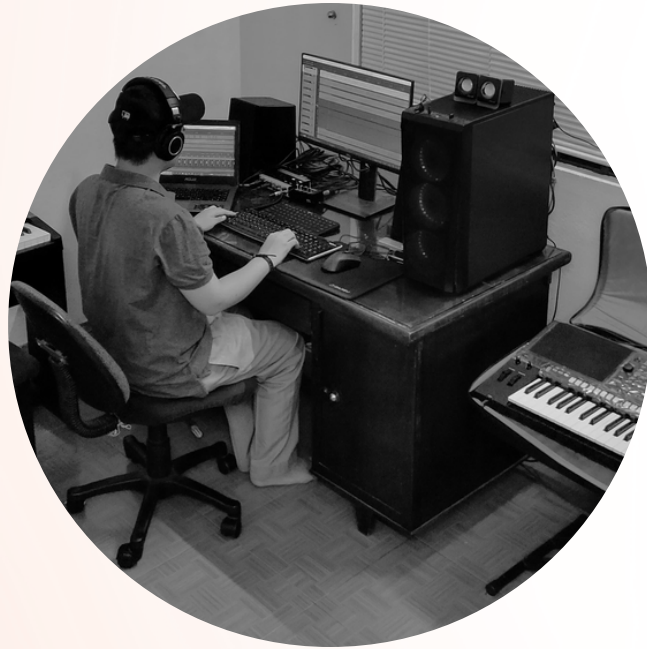
Return flight

Adult
ASD ASD

SGN - HAN
5 - D

A	B	C		D	E	F
			/			
			8			
			9			
			10			
			11			
			12			
			14			
			15			
			16			
			17			
			18			
			19			
			20			
			21			

Hear from our testers



"I've spent on digital products, like **\$200 on Reaper** and **\$60-ish on products to improve UI**. I'm willing to spend, as long as the system is accurate."

Nhat Vo, Blind
Music Producer @Nhat Organ Studio

"**I like the summary feature** because I don't need to click on the website but understand the content."

Giang Nguyen, Blind
Technical Lead @Apple





"I liked the spatial audio cue. I think it'd be great to include it in the browser."

Nhan Hoai, Blind
Musician @Hoai Nhan Studio, Tester @DRD

"I liked the experience. It's great! I think it'll be very convenient to have features helping me to do simple tasks."

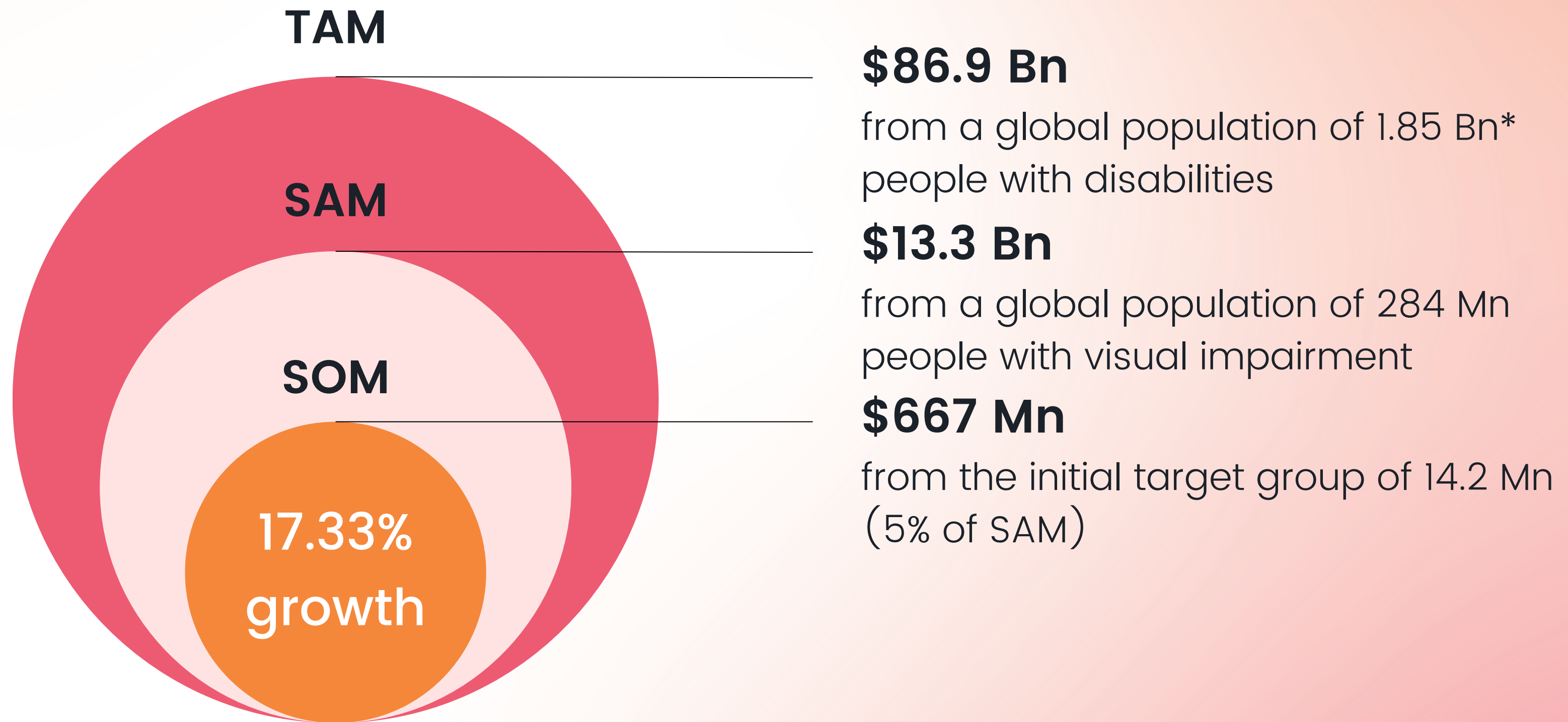
Tu Phan, Blind
Online Travel Agent @CaCao, Tester @DRD



Business Model

Tiers	Free	Paid \$3.99/mo or \$46.99/yr
Must-haves		
Performance (excl. chart reader)		
Read charts & images	up to 20 times	unlimited
Summarize websites	up to 3 times	unlimited
Assist tasks	up to 10 times	unlimited

Opportunity



Source: Return on Disability, 2020
BlindLook, 2021

Competition



Traction

(1 week since pivot)

106

waitlist signups



56

willing to pay



3

partners



Traction

(1 week since pivot)

56
potential
paid users

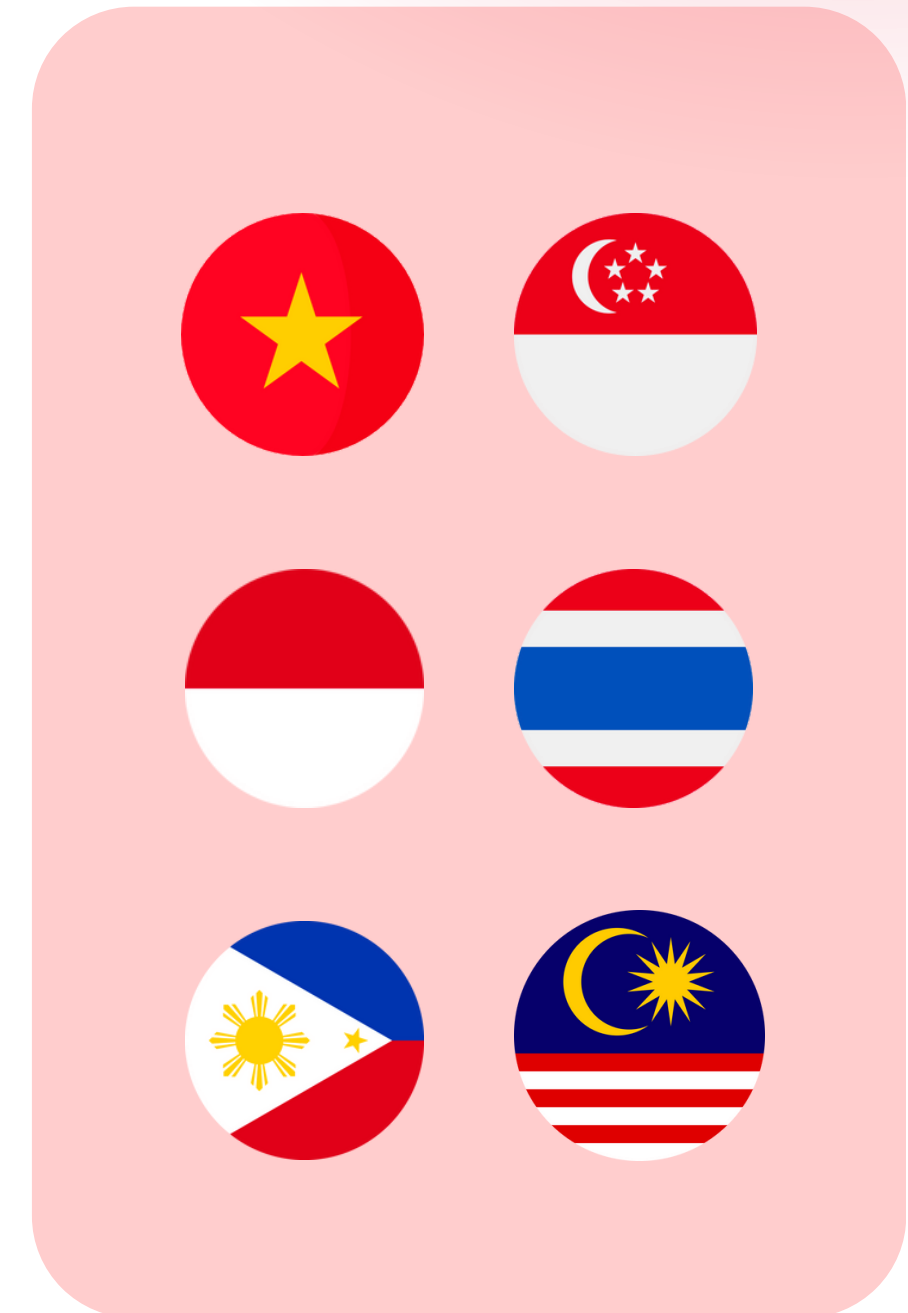
\$3.99 = **\$223.44**
ARPU potential
MRR

\$46.99 = **\$2,631.44**
yearly potential
ARPU ARR

6-month Growth trajectory

$$\begin{array}{ccccc} \mathbf{101K} & \mathbf{\$3.99} & = & \mathbf{\$404K} \\ \text{paid users} & \text{ARPU} & & \text{potential MRR} \end{array}$$

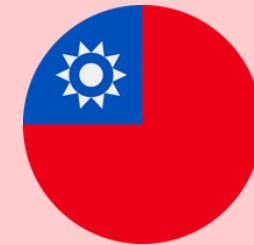
$$\begin{array}{ccccc} \mathbf{\$46.99} & = & \mathbf{\$4.7M} \\ \text{yearly ARPU} & & \text{potential ARR} \end{array}$$



12-month Growth trajectory

$$\begin{array}{ccccc} \mathbf{8M} & & \mathbf{\$3.99} & = & \mathbf{\$33M} \\ \text{paid users} & & \text{ARPU} & & \text{potential} \\ & & & & \text{MRR} \end{array}$$

$$\begin{array}{ccccc} \mathbf{\$46.99} & = & \mathbf{\$392M} \\ \text{yearly} & & \text{potential} \\ \text{ARPU} & & \text{ARR} \end{array}$$



Scalable Unit Economics

Average monthly revenue per premium user **\$3.99**

CAC per user **(\$0.7)**

Variable costs **(\$2.0)**

Unit contribution margin as dollar **\$1.29**

Unit contribution margin as ratio **32.33%**

Growth Hacks

Channel

Offline: vocational school & university events

Online: 100k-member communities on social media, Product Hunt

Key purchase

Door-to-door setup for early adopters

Network effect via incentives and referrals

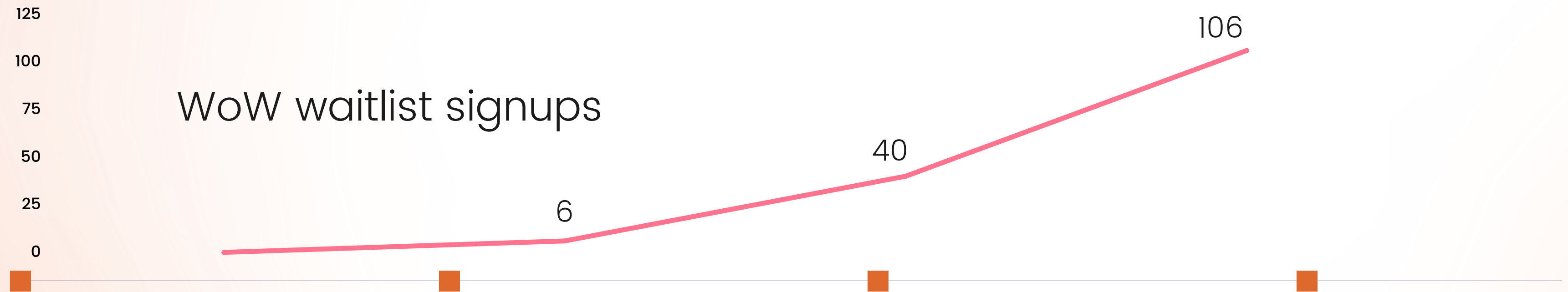
Partnership

Non-profit organizations &
micro-influencers

1-year product roadmap

	Q1 2023	Q2 2023	Q3 2023	Q4 2023
Feature	Support popular screen readers & features for the visually impaired	Summarize content, read graphics & generate text/email	Automate actions, ie: booking seats, sending email, saving to Notion	Develop mobile browser
Integration	Allow migration from other browsers	Support Chrome extensions	Rayo for Student	Be My Eyes integration

WoW Progress



Week 6

- Idea validation
- **Pivot (target market)**

Week 7

- Value proposition
- **Pivot (business model)**

Week 8

- **Onboard CTO**
- **Pivot (everything from solution)**
- Features & UX
- **Onboard advisors**

Week 9

- **IC**
- Key feature testing
- Traction

Behind Rayo



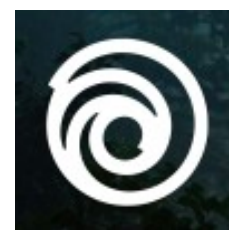
Dung, CEO

3+ years with proven track records in tech startups across Vietnam, Singapore, Australia, the UK & US.



Tri, CTO

Developer specialized in AI research across Vietnam and Australia. 1st Prize in International Data Science Competitions.



Anh, Coach



Nick, Advisor



Giang, Advisor



Why **us**. Why **now**.

Product

Breakthrough
assistive
technologies

Market

Underserved
market

Price

Affordable for
anyone,
anywhere

Founder

Global team with
strong expertises

Network

Ready customer
base

APPENDIX



More problems of website accessibility

Web accessibility harm employment for people with disabilities

[news.bloomberglaw.com/daily-labor-report/lack-of-internet-web-accessibility-harm-employment-for-disabled](#)

Lack of Internet, Web Accessibility Harm Employment for Disabled

June 17, 2022, 4:33 PM

[Listen](#) [Print](#) [Email](#) [Facebook](#) [LinkedIn](#) [Twitter](#)

- People with disabilities less likely to have internet, DOL report finds
- Poverty, web accessibility contribute to employment disparity

Disparities in access to the internet and accessible websites is driving a gap in employment rates for people with disabilities, even as the prevalence of remote working opportunities has opened the door for them.

While the Covid-19 pandemic made the digital world more vital for day-to-day activities—including work—web accessibility for those with disabilities isn't guaranteed in the same way physical commercial spaces are.

Disabled workers are 13% less likely to have internet access at home and 11% less likely to own a computing device, according to a [recent report](#) from the Department of Labor's Office of Disability Employment Policy, which further narrows their opportunities for employment. At the same time, as the unemployment rate doubled between late 2019 and late 2020, workers with disabilities became unemployed and stayed unemployed at higher rates than workers without disabilities.

Workers with disabilities who did have internet access were more likely to stay employed, the report found. Meanwhile, there was no correlation between internet access and employment retention among workers without disabilities.

The primary barrier to internet access for those with disabilities was cost.

Poverty is the root of the issue, according to [Charles Catherine](#), director of corporate

**J. Edward Moreno** [Email](#)

Related Articles

[Disability Bias in AI Hiring Tools Targeted in US Guidance \(1\)](#)
May 12, 2022, 11:33 PM

[Company to Pay Disabled Worker, Provide ADA Training in EEOC Settlement](#)
Jan. 9, 2013, 12:00 PM

[Disabled Worker Not Entitled to Preferred ADA Accommodation: A Transfer From Boss](#)
Dec. 23, 2014, 12:00 PM

[Over Long Haul, ADA Boosted Wages Of Workers With Disabilities, Study Finds](#)
Dec. 9, 2013, 12:00 PM

Law Firms

Bloomberg Law, 2022

More problems of website accessibility

Engagement in education

1 in 10

(10%) school students
aged 5–18 have disability

9 in 10

(89%) school students
aged 5–18 with disability
go to a mainstream
school and 12% go to a
special school

9.1% of people

aged 15–64 with disability
are studying for a
non-school qualification
(15% without disability)

Global companies with disability inclusion

Bloomberg



accenture



CATERPILLAR®



**Boston
Scientific**



amazon

Deloitte.



BCT Partners, 2022

Flexjobs, 2022

CNBC, 2022

Demo video

The screenshot displays the Vietjet Air website's booking interface. At the top, the browser address bar shows 'Vietjet Air | Enjoy flying | Official website'. The website header includes the 'vietjetair.com' logo, navigation links for 'MY BOOKING', 'CHECK-IN ONLINE', 'FLIGHT EXTRAS', and 'FINANCIAL SERVICES', and user options for 'Sign up', 'Sign in', and 'English'. A secondary navigation bar offers 'Buy baggage, meals, select seat and more...' and 'Express shipping'. The main content area features a large promotional banner for 'skyBOSS Business' with the tagline 'The best in the sky, just for leaders'. The banner includes an image of a couple in a private cabin and lists benefits: 'Private cabin, flat - bed', 'Premium organic cuisine', and 'Top priority services'. A 'Let's go' button is prominently displayed. To the right, a booking form allows users to select between 'Return' and 'One-way' flights, set the currency to 'VND', and input departure and return dates. It also includes fields for the number of passengers (currently set to 1 adult) and a promotion code. A 'Find lowest fare' checkbox is present. The bottom of the page features a decorative cloud border and a small cartoon character.

Activities Rayo Dec 28 13:37 0:00 en 10

< Vietjet Air | Enjoy flying | Official website

Sign up | Sign in English

MY BOOKING CHECK-IN ONLINE FLIGHT EXTRAS FINANCIAL SERVICES

Buy baggage, meals, select seat and more... Express shipping

☒ Return ☐ One-way VND

From Departure date

To Return Date

Passenger 1 adult

Promotion code

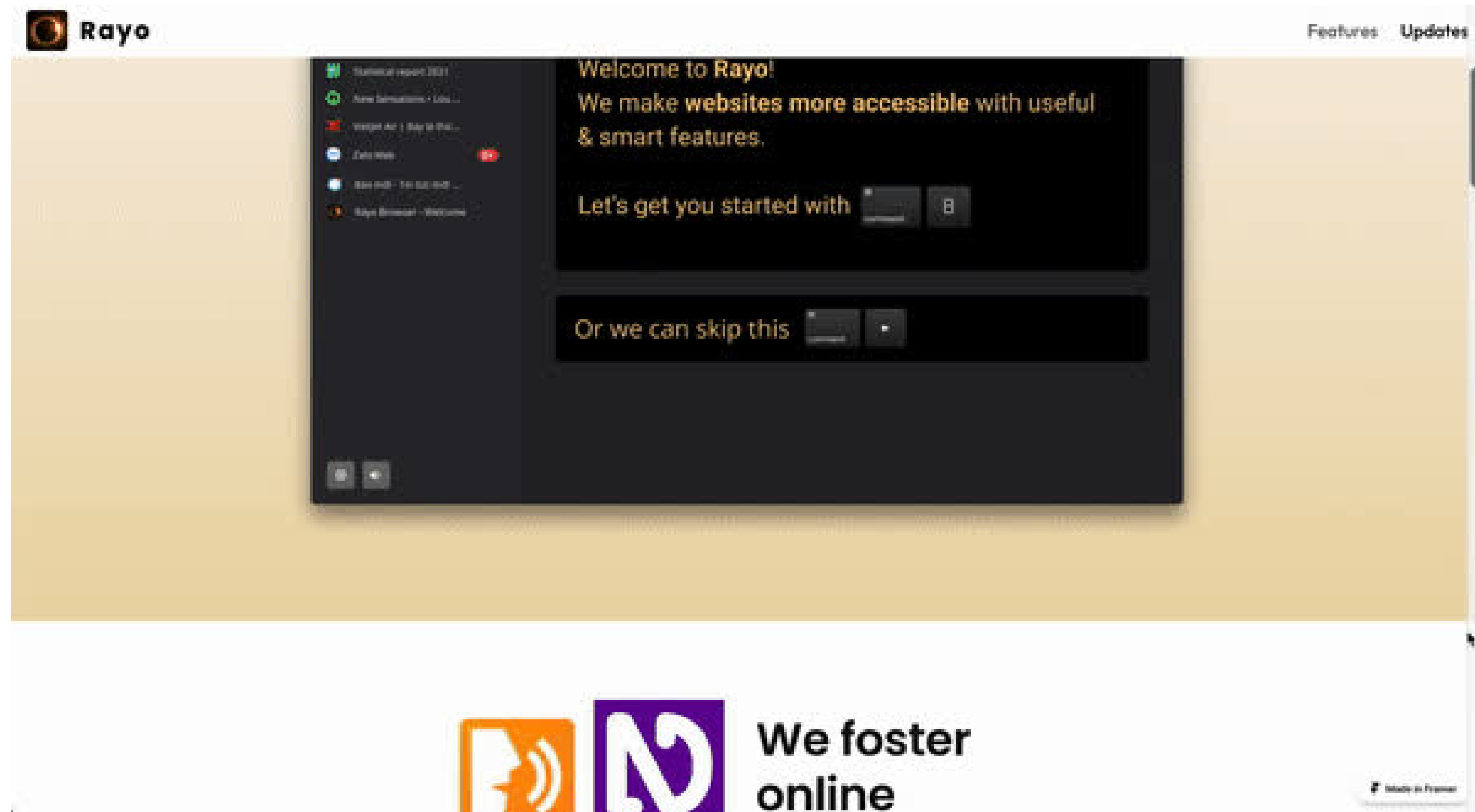
☐ Find lowest fare

Let's go

Terms & Conditions

YouTube, 2022

Landing Page



Rayo landing page

	Chrome	Edge	Firefox	SigmaOS	RAYO
Must haves					
UI adjustment (content, lighting, etc.)	w. Extension	w. Extension	w. Extension	Yes	Yes
Screen reader accessibility	Yes	Yes	Yes	Yes	Yes
Page structure showcase	w. Extension	w. Extension	w. Extension	No	Yes
Alt text auto. generator	Yes	Yes	No	No	Yes
Keyboard accessibility	Yes	Yes	Yes	Yes	Yes
Mobile	Yes	Yes	Yes	Yes	Yes
Performance					
Chart and formula reader	Medium	Medium	Low	Low	High
Detailed error alerts	Low	Low	Low	Low	High
Reader mode	Low	Medium	Medium	Low	High
Data migration from other browsers	High	High	High	High	High
Chrome extension compatibility	High	High	Low	High	High
Captcha solver	Medium	Medium	Low	Low	High
Ads & pop-ups remover	Medium	Medium	Medium	High	High
Delighters					
Action bar	No	No	No	Yes	Yes
Assisted navigation (AI)	No	No	No	No	Yes
Search result summarizer (AI)	No	No	No	No	Yes
Task assistance (AI)	No	No	No	No	Yes
Spatial audio cue	No	No	No	No	Yes
Tabs organizer	No	No	No	Yes	Yes

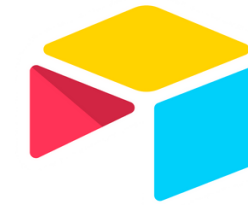
Proven model

Company	Focus	Founding year	Revenue model	Revenue	Last funding round
Arc by The Browser Company	Productivity	2019	\$12/mo subscription	\$1-5M	\$13M Series A May 25, 2021
SigmaOS	Productivity	2021	\$10/mo subscription \$15 enterprise license	<\$5M	\$4M Seed Nov 16, 2022
SideKick	Productivity	2019	\$8/mo subscription	<\$5M	\$2M Seed Mar 22, 2021

Source: [Tech.eu](#), 2022
[Bloomberg](#), 2022

More on Revenue model

1. Rayo for teams



2. Affiliate commission



3. Add-on products



4. Marketplace commission



Source: [FourWeekMBA](#), 2022
[Unique Business Model](#), 2020
[YouTube](#), 2022

Income Statement

		Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Revenue	USD	439	3,192	23,940	143,640	335,160	404,985	809,970	1,851,360	3,702,720	7,405,440	16,662,240	33,324,480
Download		1,000	4,000	20,000	120,000	240,000	290,000	580,000	1,160,000	2,320,000	4,640,000	9,280,000	18,560,000
CVR to Premium	%	11%	20.00%	30.00%	30.00%	35.00%	35.00%	35.00%	40.00%	40.00%	40.00%	45.00%	45.00%
Premium users		110	800	6,000	36,000	84,000	101,500	203,000	464,000	928,000	1,856,000	4,176,000	8,352,000
Revenue	USD	439	3,192	23,940	143,640	335,160	404,985	809,970	1,851,360	3,702,720	7,405,440	16,662,240	33,324,480
COGS	USD	670	3,234	19,258	115,548	249,612	301,615	603,229	1,295,952	2,591,904	5,183,808	11,083,568	22,167,136
Server/Infrastructure Costs	USD	670	3,234	19,258	115,548	249,612	301,615	603,229	1,295,952	2,591,904	5,183,808	11,083,568	22,167,136
Gross Profit	USD	(231)	(42)	4,682	28,092	85,548	103,371	206,741	555,408	1,110,816	2,221,632	5,578,672	11,157,344
Gross margin	%	-52.6%	-1.3%	19.6%	19.6%	25.5%	25.5%	25.5%	30.0%	30.0%	30.0%	33.5%	33.5%
SG&A	USD	6,511	3,031	3,531	4,071	4,311	4,591	4,919	5,304	5,759	6,297	6,934	7,690
Payroll	USD	600	1,941	1,941	1,941	1,941	1,941	1,941	1,941	1,941	1,941	1,941	1,941
Marketing & Growth	USD	258	458	958	1,498	1,738	2,018	2,346	2,732	3,186	3,724	4,361	5,118
Tech Support & Services	USD	193	172	172	172	172	172	172	172	172	172	172	172
Development	USD	5,300	300	300	300	300	300	300	300	300	300	300	300
Other Expenses	USD	160	160	160	160	160	160	160	160	160	160	160	160
EBITDA	USD	(6,742)	(3,073)	1,151	24,021	81,237	98,780	201,822	550,104	1,105,057	2,215,335	5,571,738	11,149,654
EBITDA margin	%	0.0%	0.0%	4.8%	16.7%	24.2%	24.4%	24.9%	29.7%	29.8%	29.9%	33.4%	33.5%
D&A	USD	0	0	0	0	0	0	0	0	0	0	0	0
EBIT	USD	(6,742)	(3,073)	1,151	24,021	81,237	98,780	201,822	550,104	1,105,057	2,215,335	5,571,738	11,149,654
EBIT margin		0.0%	0.0%	4.8%	16.7%	24.2%	24.4%	24.9%	29.7%	29.8%	29.9%	33.4%	33.5%
Interest expense	USD	292	292	292	292	292	292	292	292	292	292	292	292
Net income (without Taxes)	USD	(7,033)	(3,365)	860	23,730	80,946	98,488	201,531	549,812	1,104,765	2,215,044	5,571,447	11,149,362
Net margin		0.0%	0.0%	3.6%	16.5%	24.2%	24.3%	24.9%	29.7%	29.8%	29.9%	33.4%	33.5%

Growth Plan

		Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Users													
Total Download		1,000	4,000	20,000	120,000	240,000	290,000	580,000	1,160,000	2,320,000	4,640,000	9,280,000	18,560,000
CVR to Premium %		11.00%	20.00%	30.00%	30.00%	35.00%	35.00%	35.00%	40.00%	40.00%	40.00%	45.00%	45.00%
Total Premium Users		110	800	6,000	36,000	84,000	101,500	203,000	464,000	928,000	1,856,000	4,176,000	8,352,000
New Monthly Users		1,000	3,000	16,000	100,000	120,000	50,000	290,000	580,000	1,160,000	2,320,000	4,640,000	9,280,000
Organic		400	400	500	1,000	2,000	4,000	8,000	16,000	32,000	64,000	128,000	256,000
Paid		100	100	15,500	99,000	118,000	46,000	282,000	564,000	1,128,000	2,256,000	4,512,000	9,024,000
New Monthly Premium Users		110	690	5,200	30,000	48,000	17,500	101,500	261,000	464,000	928,000	2,320,000	4,176,000
ARPU	USD	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99
MRR	USD	439	2,753	20,748	119,700	191,520	69,825	404,985	1,041,390	1,851,360	3,702,720	9,256,800	16,662,240
Customer Acquisition Cost (CAC)													
Marketing & Growth expenses	USD	258	458	958	1,498	1,738	2,018	2,346	2,732	3,186	3,724	4,361	5,118
New user acquired		1,000	3,000	16,000	100,000	120,000	50,000	290,000	580,000	1,160,000	2,320,000	4,640,000	9,280,000
CAC	USD	0.26	0.15	0.06	0.01	0.01	0.04	0.01	0.00	0.00	0.00	0.00	0.00
CAC (Premium Users)	USD	2.35	0.66	0.18	0.05	0.04	0.12	0.02	0.01	0.01	0.00	0.00	0.00
Customer Gross Margin													
Subscription Revenue	USD	439	3,192	23,940	143,640	335,160	404,985	809,970	1,851,360	3,702,720	7,405,440	16,662,240	33,324,480
Gross margin %		-52.59%	-1.33%	19.56%	19.56%	25.52%	25.52%	25.52%	30.00%	30.00%	30.00%	33.48%	33.48%
Gross margin	USD	-230.83	-42.40	4,682.00	28,092.00	85,548.00	103,370.50	206,741.00	555,408.00	1,110,816.00	2,221,632.00	5,578,672.00	11,157,344.00
Lifetime Value													
Churn %		5.00%	5.00%	5.00%	5.00%	4.50%	4.50%	4.50%	4.50%	4.30%	4.30%	4.30%	4.30%
Lifetime value (LTV)		80	80	80	80	89	89	89	89	93	93	93	93
CAC Ratios													
LTV/CAC		309	523	1,333	5,327	6,122	2,197	10,961	18,827	33,781	57,808	98,723	168,255

Engineering cost

	A	B	C	D	E	F	G	
1	User usage for each feature	num usage per day	unit per usage: unit is ima	unit per user per day	unit per user per month	unit cost	user cost per month	
2	summarization	0.3	75000	22500	675000	0.000002	1.35	
3	code gen	0.6	500	300	9000	0.000002	0.018	
4	object detection for missing alt text images	10	1	10	300	0.00225	0.675	
5	word commands	100	1	100	3000	0	0	
6	Total						2.043	
7								
8								
9	Freemium usage for each feature		unit per usage: unit is ima	max user usage per month	unit per user per month	unit cost	user cost per month	
10	summarization		75000	3	225000	0.000002	0.45	
11	code gen		500	10	5000	0.000002	0.01	
12	object detection for missing alt text images		1	20	20	0.00225	0.045	
13	word commands		1	0	0	0	0	
14	Total						0.505	
15								
16								
17	Website Hosting & Domain	per month	6 months	yearly				
18	Hosting	15	90					
19	Email domain (e.g. claire@rayobrowser.cor	12	72					
20	Domain (e.g rayobrowser.com)			21				
21	TLS, etc			8				
22	Total	27	162					
23								
24								
25	Production (Server/ Infrastructure)	per month	6 months					
26	Supabase	25	150					
27	Computing	60	360					
28	Other costs	60	360					
29	Total	145	870					
30								
31								
32	Cost of development	fixed	per month	months			total	
33	Browser	2000						2000
34	AI - in-house hardware for testing	2000						2000
35	AI - cloud NVIDIA RTX 6000 for production		300	6				1800
36	AI - possible cluster		1000	3				3000
37	Data crawling + cleaning	1000						1000
38	Total							9800
39								
40	Cost of developer							
41	Num part-time developer	2						
42	Salary per month	500						
43	Number of months	6						
44	Total salary	6000						
45								
46	Total cost after 6 months	16832						
47								

Go to market

What

- Key purchase: invite-only, door-to-door setup for early-adopters in HCMC, easy data migration from other browsers
- Message: hassle-free and fun web browsing, simple tasks with AI

Who

- First market: Vietnam
- Age: 18 - 54
- Forms of disabilities: visual impairment and blindness
- Household monthly income: \$714 and upper

How

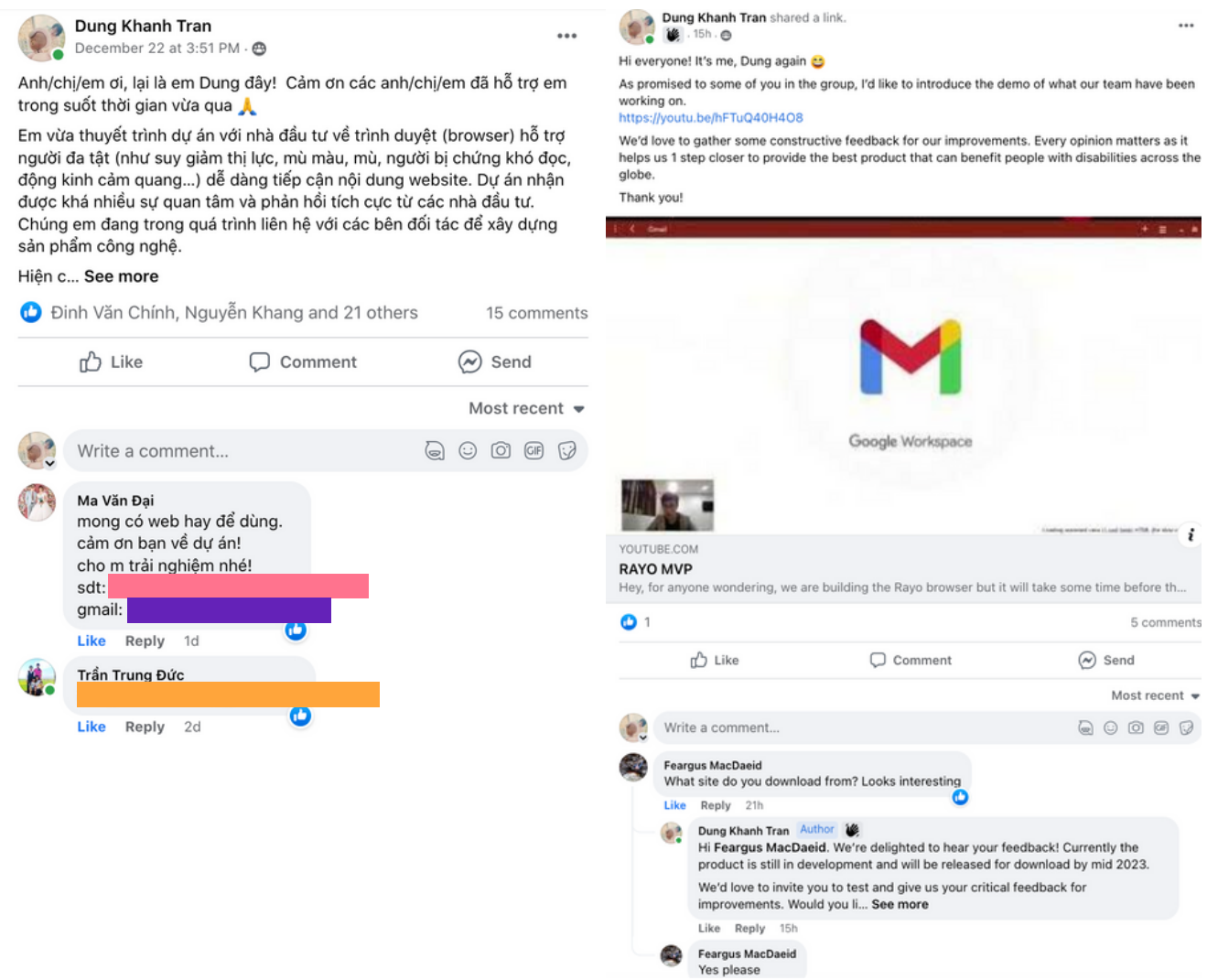
- Pilot: 31-day freemium with setup assistance
- 3 months after pilot: \$50 credit score, referral program, UGC

Where

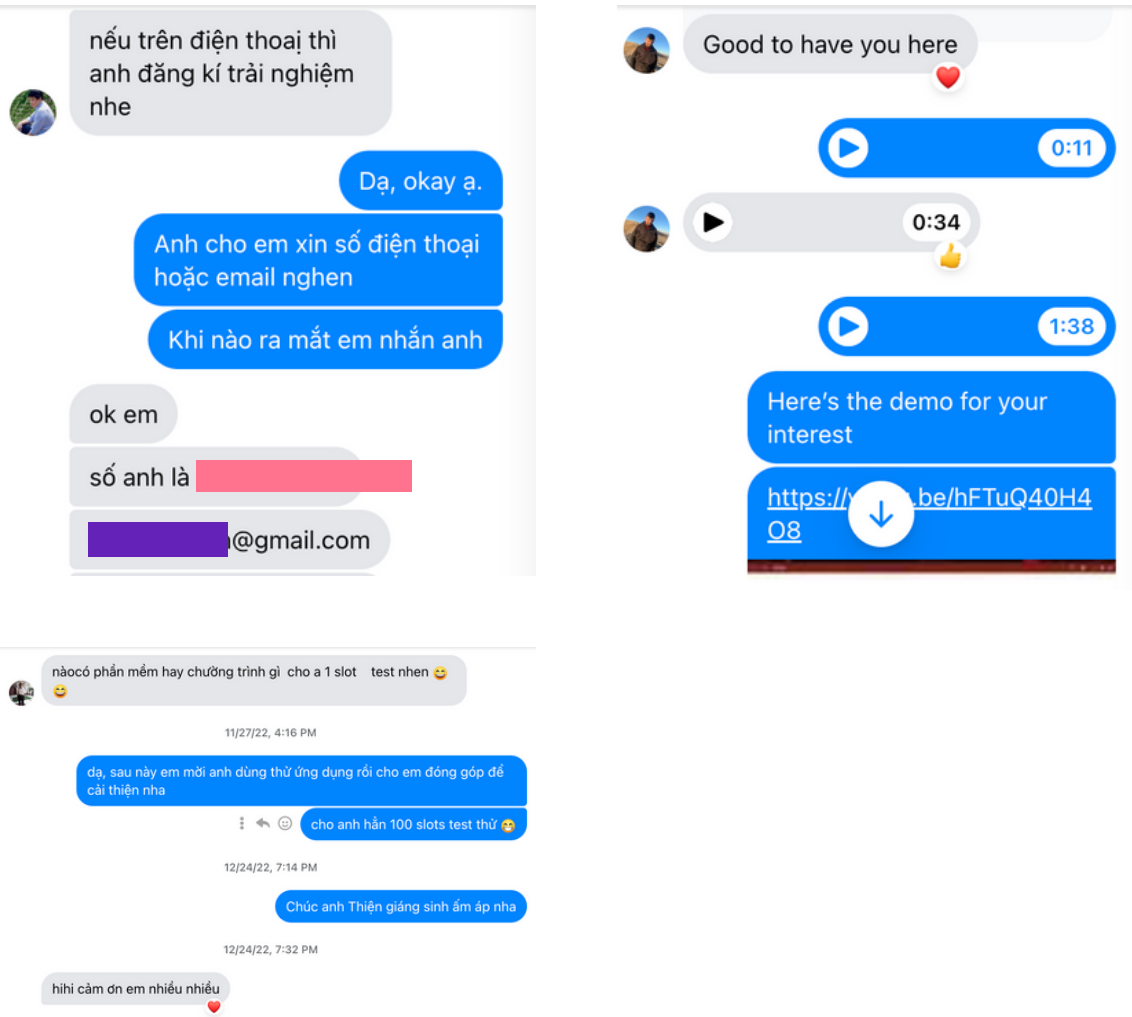
- Offline: local events, educational programs, vocational school & university events
- Online: FB communities, Product Hunt, SMM, SEO, Earned channels (guest blogs, press)
- Distribution partners: NGOs for PWDs, micro-influencers

How we went to market

We bombarded FB groups



We chatted with strangers on Messenger



How we went to market

We blackmailed NGOs

The image shows two screenshots of WhatsApp messages. The top screenshot is a message from Dung Claire Tran to Nguyễn Văn Cử, dated Thu, Dec 29, 2022, 3:00 PM. The message content is in Vietnamese, starting with 'Chào anh Cử,' and mentioning 'Nhà khởi nghiệp Antler'. It includes contact information for Trần Khánh Dung, such as email 'trankhanhdung1003@gmail.com' and a LinkedIn profile. The bottom screenshot is a message from Nguyễn Văn Cử to Dung Claire Tran, dated Mon, Dec 12, 2022, 4:34 PM. The message starts with 'Dear chị Dung' and mentions 'DRD' (Disability Research and Capacity Development Center), stating they are happy to provide information to people with disabilities and listing steps to follow. Both screenshots show the 'Detect language' and 'Translate message' options at the top of the chat interface.

D

Dang Hoai Phuc

to me ▾

Thu, Dec 29, 2022, 1:09 PM (5 days ago) ☆ ↶ ⋮

Chào

Về cơ bản

Dung

Mến,

Phúc

⋮

from:

to:

date:

subject:

signed-by:

security:

> :

Dang Hoai Phuc <phuc@saomaicenter.org>

Dung Claire Tran <trankhanhdung1003@gmail.com>

Dec 29, 2022, 1:09 PM

Re: [SAO MAI x RAYO] Lời mời hợp tác

saomaicenter.org

🔒 Standard encryption (TLS) [Learn more](#)

Important mainly because you often read messages with this label.

Dung Claire Tran

Thu, Dec 29, 2022, 1:11 PM (5 days ago) ☆

Dạ, vậy ổn rồi! Trong BGN có sẵn chữ kí của em rồi. Anh Phúc chỉ cần kí thôi ạ. Tụi em chấp nhận chữ kí online nghe anh ơi. Anh cần hỗ trợ gì...
Anh Phúc ơi, Anh sao rồi? Chúng em mong nhận được BGN có chữ kí của anh ạ!

D

Dang Hoai Phuc

to me ▾

10:11 AM (4 hours ago) ☆ ↶ ⋮

Hi Dung,

Mai mình đi làm lại rồi in ký gửi bản scan lại nha.

Phúc

How we went to market

We met people offline



Upcoming: hijack people at events



Customer persona



Lan Anh, 26 years old, blind

- An elementary school teacher in Long An
- English learner at night
- Had difficulties reading resources on websites, as her screen readers keep reading unimportant information, instead of the main content.

Hoang Kiem, 33 years old, blind

- A masseur at night and music producer during the day
- Had difficulties using music composing software on desktop, due to unlabelled icons



Customer persona



Le Kim, 23 years old, blind

- A student at a vocational school in Ho Chi Minh
- Had difficulties in using online exam websites, as most of them are not well-structured for screen readers.

Giang Nguyen, 28 years old, blind

- A software developer at Apple Singapore
- Is taking an MBA on Coursera
- Faced trouble accessing websites not supporting keyboard shortcuts, which impacted his study and work performance.



Food for thoughts



Who are they?

Superhuman is the fastest email experience ever made.

What's cool about them?

Paid email service, price ranging from **\$30 to \$285 per month**.

Who are they?

Kagi Search is a privacy-focused, user-centric search engine.

What's cool about them?

Pro plan with ad blocks & private search costs **\$10 per month**.



Who are they?

You.com is an AI-powered search engine for developers.

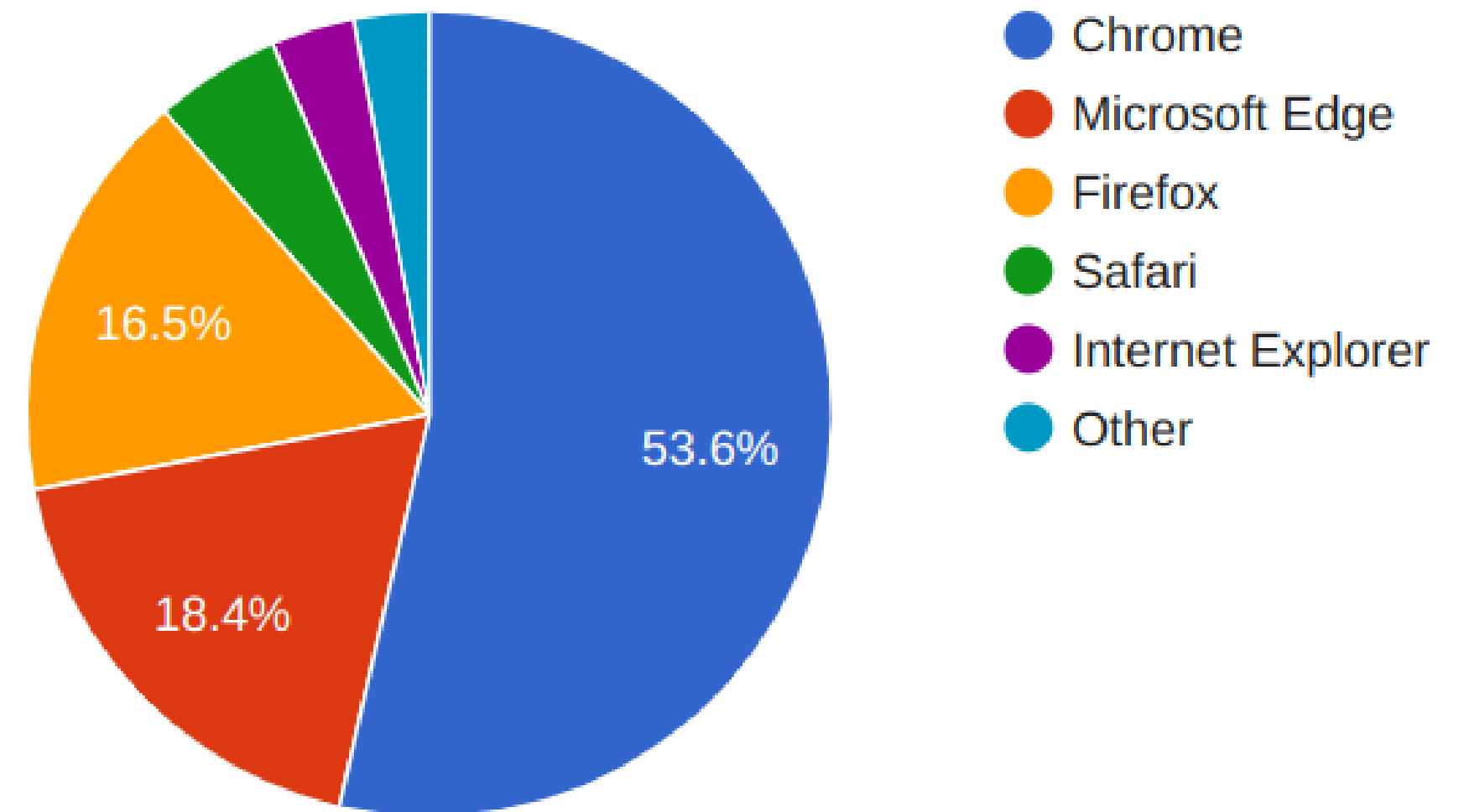
What's cool about them?

People simply **love** them.

Internet browser market



Global market size, CAGR = 17.33%



Browser usage by PwD

Source: [MarketResearch](#), 2020
[WebAIM](#), 2021

Assistive Technologies for Visually Impaired Market Worldwide

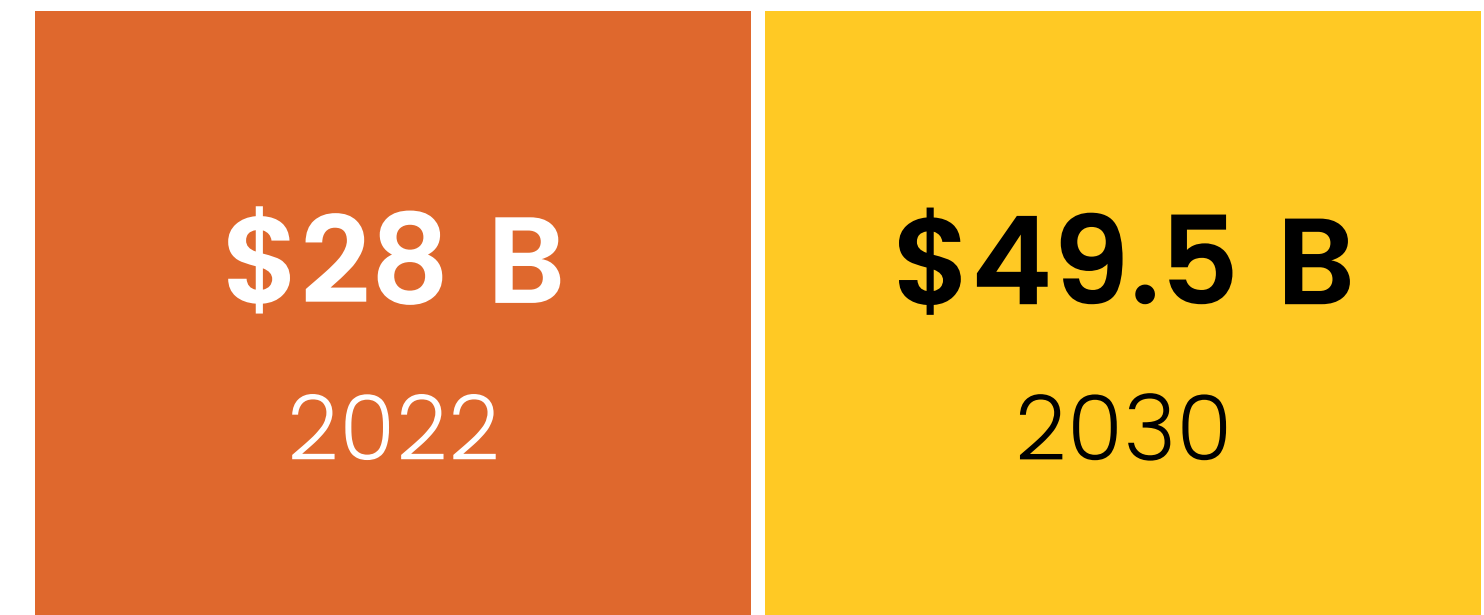
Source: [ResearchAndMarkets](#), 2021



Global market size, CAGR = 7.8%

Size of the Disabled and Elderly Assistive Technologies Market Worldwide

Source: [Statista](#), 2022



Global market size, CAGR = 7.52%

We chatted with 20 people with disabilities in Vietnam

20 /20

found it hard to access content online

4 /5

office workers said inaccessibility affected their work performance

20 /20

owned at least 1 device

8h /day

was the lowest amount of time spent on-screen

12 /20

spent on online shopping

11 /20

were paid users of premium apps/ services

\$310 /mo

was the highest purchase

\$338 /mo

was the average income



Giang Nguyen
Software Engineer @Apple



Nam Duong
Software Engineer @FPT



Cuong Dang
Tech Lead @Sao Mai

Top apps/ websites that cause trouble



We chatted with 7 people
with disabilities worldwide



1



1



1



1



1



1



1

6 /7

found it hard to
access content online

3 /7

viewed themselves as proficient
Internet users

7 /7

owned at least 1 device

5h /day

was the lowest amount of
time spent on-screen

3 /7

were paid users of
premium apps/ services

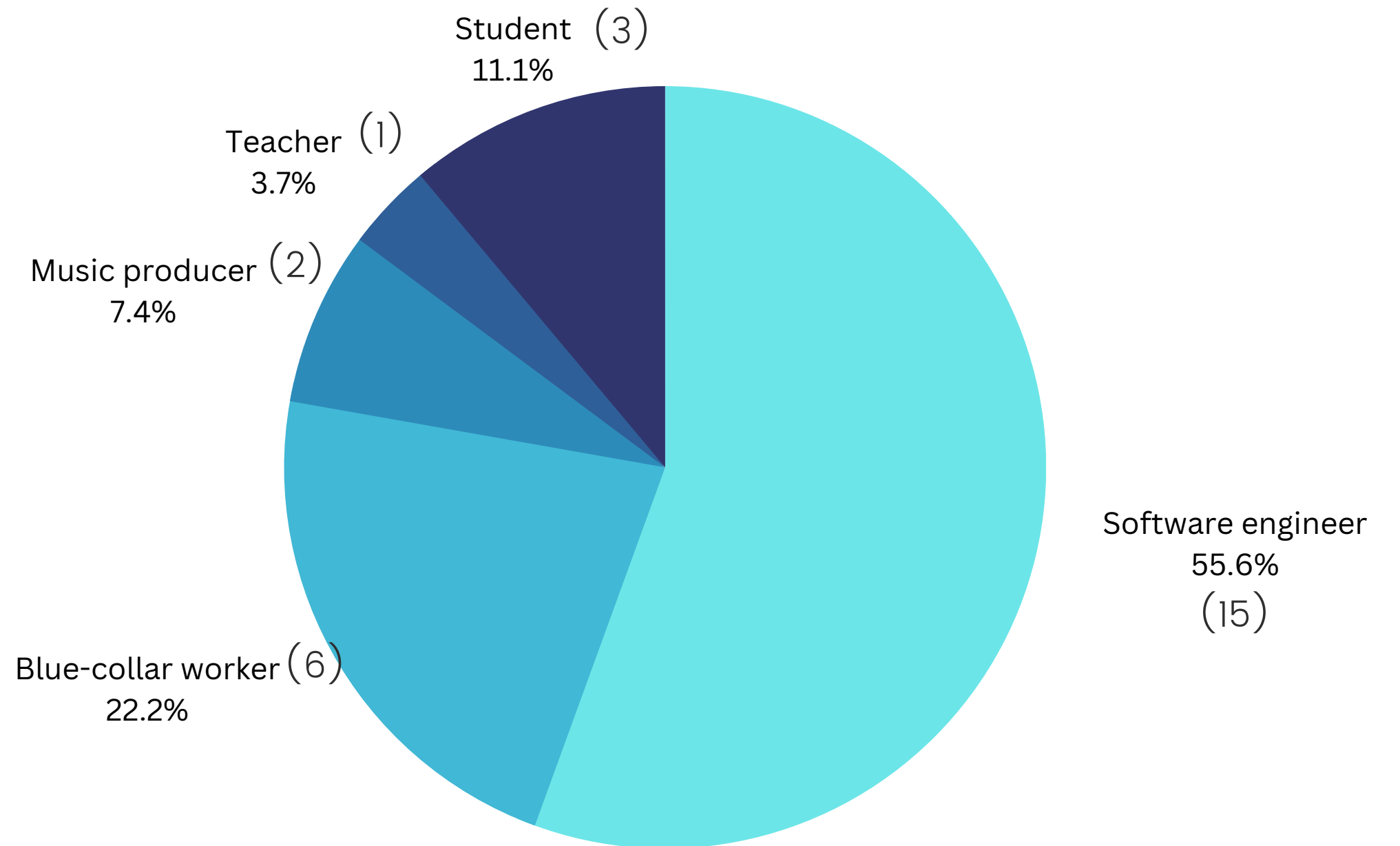
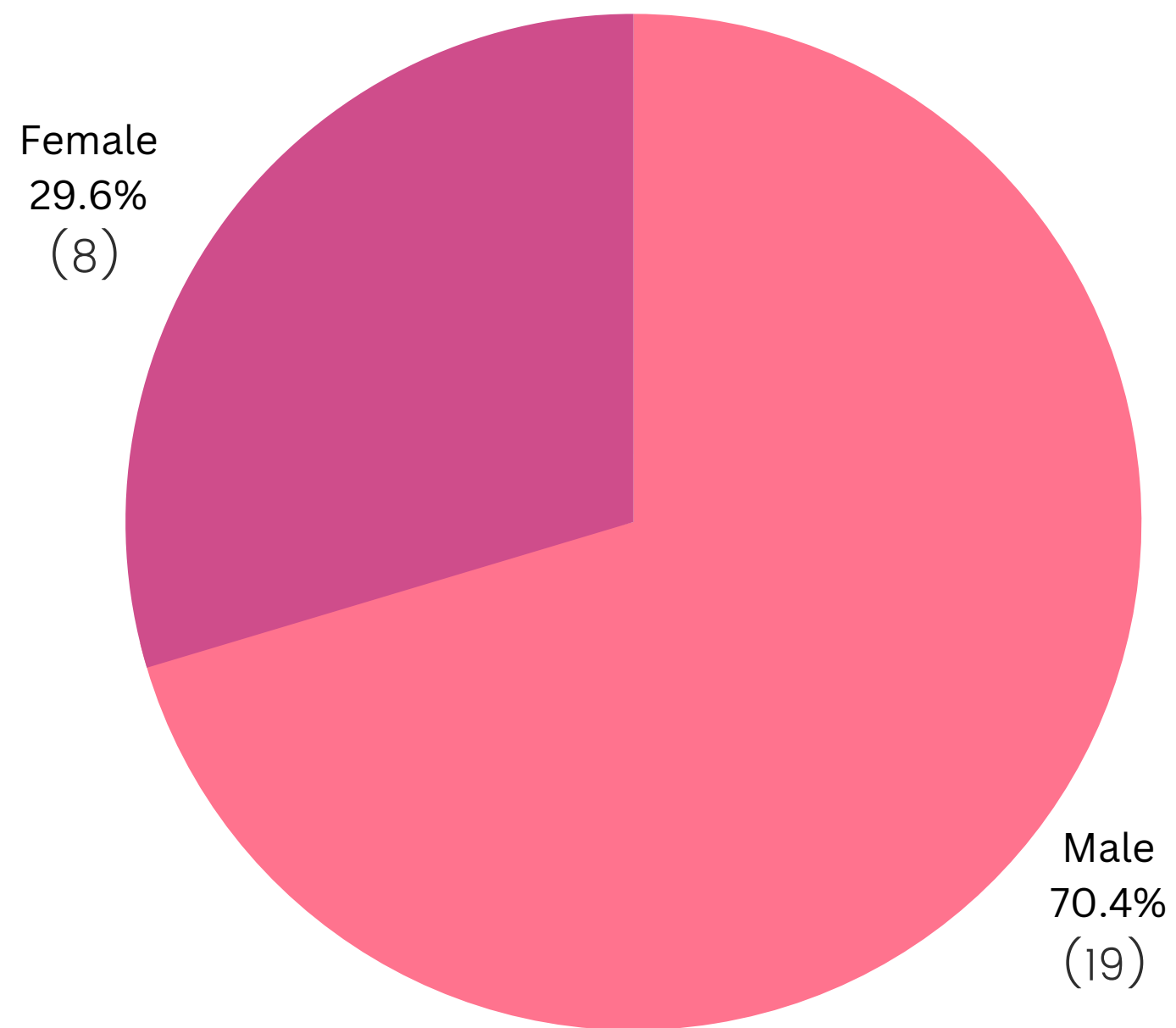
\$150 /mo

was the highest
purchase

\$810 /mo

was the average
income

Demographics of our testers



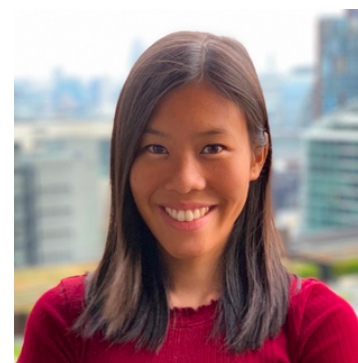
We discussed with 8 experts



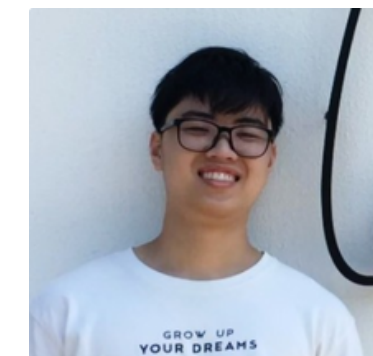
Minh Anh
Senior Applied
Scientist @Speechify



Giang Nguyen
Software Engineer
@Apple



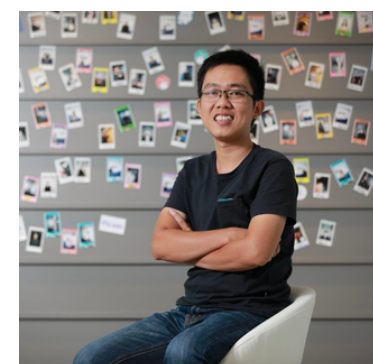
Mai Vo
ex-Digital Responsibility
Lead @Google



Quang Cáp
Software Engineer
@Netcompany



Ann Tran
UX Design
Consultant @Slalom



Son Trinh
Product Manager
@iKala



Mai Trinh
UX Researcher
@Glints



Linh Phung
Machine Learning Engineer
@OneMount

“Inclusive designs do not only help the extreme cases but also **help the majority** where over ¼ of the world's population has eye disorders, such as color blindness.”

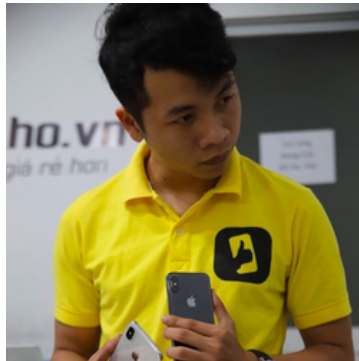


Khoa Nguyen

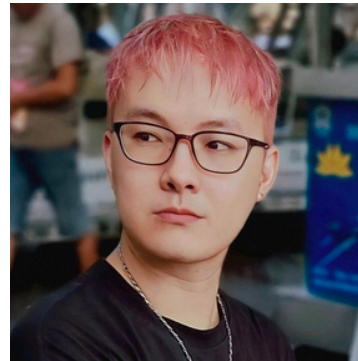
Founder @Vietnam Design Thinkers



We discussed with 9 brands



Tuan Anh
CEO & Founder
@Gia Kho Group



Kenz Tran
Regional Performance
Manager @MediaCom



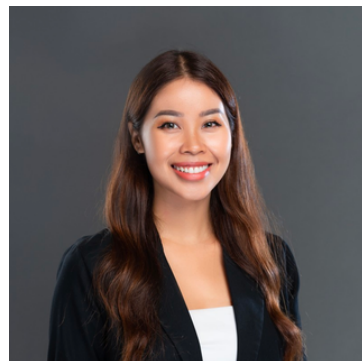
Nguyen Tran
ex-Marketing Manager
@Tiki



Gurpreet Wadhwa
ex-VP of Marketing
@Lazada



Vi Hoang
General Manager
@Dai Viet group



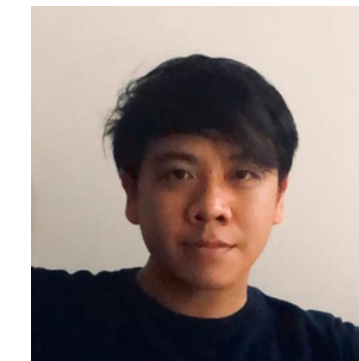
Huong Nghiem
Customer Success
Manager @MoEngage



Phuong Hoang
Brand Manager
@Nestle



Duy Nguyen
CEO & Founder
@mia.vn



Nam Vo
CTO & Founder
@Fundiin

People with Disabilities

1.85B people in the world are living with disabilities

5.2M Vietnamese are living with disabilities (5.8%)

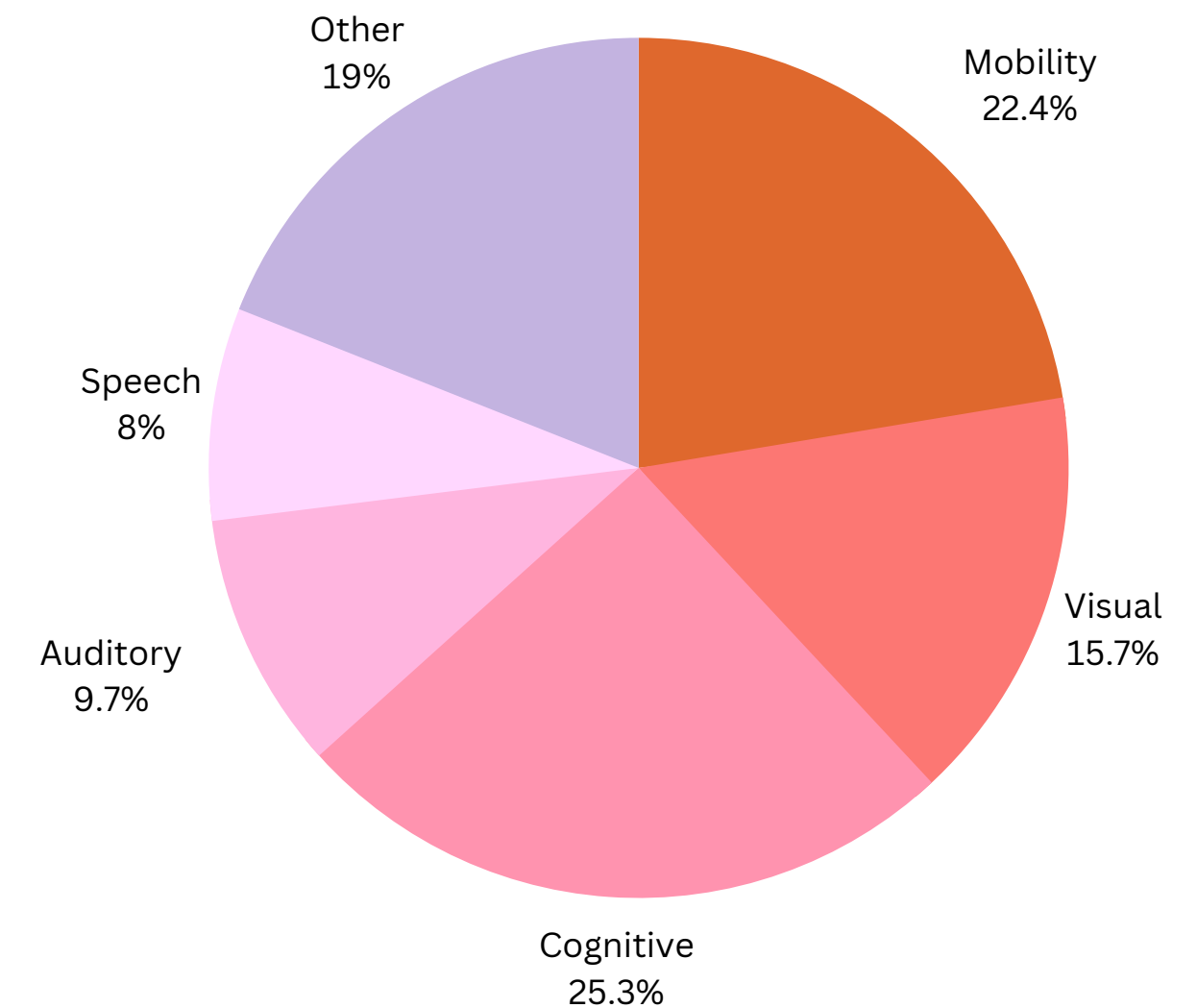
4.4M are employed (86.0%)

\$3T+ is the income of the global population with disabilities

1.5M age 20–39 yo (28.9%)

1.14B Asian people are living with disabilities (62%)

2.6M are females (50.5%)



Source: Global Economics of Disability, 2020
MIUSA.org, 2016

People with Disabilities

80% disabilities acquired between 18 - 64



Source: Inclusive City Maker, 2021

Internet usage

61M American adults with disabilities

3 in 4 Americans with disabilities use the internet on a daily basis

37.82M Americans with disabilities own a computer (62%)

41.1M people with disabilities rate themselves as Internet proficient (41.1%)

43.92M Americans with disabilities own a smartphone (72%)

9.15M Americans with disabilities never go online (15%)

28.67M Americans with disabilities own a tablet computer (47%)

Source: Center for Disease Control and Prevention, 2022
Pew Research Center Survey, 2021
WebAIM Screen Reader User Survey #9 Results, 2021

Tools & techniques

Perception

- Audio descriptions
- Text-to-speech

Understanding

- Easy-to-understand content
- Alternative presentation

Input

- Keyboard accessibility
- Speech-to-command

Interaction

- Keyword search & navigation
- Page maps

Proofs of Traction



Dung Khanh Tran

December 22 at 3:51 PM · 🌐

Anh/chị/em ơi, lại là em Dung đây! Cảm ơn các anh/chị/em đã hỗ trợ em trong suốt thời gian vừa qua 🙏

Em vừa thuyết trình dự án với nhà đầu tư về trình duyệt (browser) hỗ trợ người đa tật (như suy giảm thị lực, mù màu, mù, người bị chứng khó đọc, động kinh cảm quang...) dễ dàng tiếp cận nội dung website. Dự án nhận được khá nhiều sự quan tâm và phản hồi tích cực từ các nhà đầu tư. Chúng em đang trong quá trình liên hệ với các bên đối tác để xây dựng sản phẩm công nghệ.

Hiện c... [See more](#)

 Đình Văn Chính, Nguyễn Khang and 21 others

15 comments

 Like

 Comment

 Send

Most recent ▾



Write a comment...





Ma Văn Đại

mong có web hay để dùng.
cảm ơn bạn về dự án!
cho m trải nghiệm nhé!
sdt: 09
gmail: [REDACTED]

Like

Reply

1d





Trần Trung Đức

[REDACTED]

Like

Reply

2d



Name	Email	Phone	Source
Đình Văn Chính			Messenger
Ma Văn Đại			Facebook group
Lê Minh Thành			Facebook group
Nguyễn Nhật Phúc			Facebook group
Phúc Đặng			Partner
Dải Ngân Hà			Facebook group
Nguyễn Minh Trí			Facebook group
Trần Trung Đức			Facebook group
Diệp Vũ Văn			Facebook group
Võ Văn Nhật			Messenger
Võ Minh Vũ			Facebook group
Gia Phú Trần			Facebook group
Tư Văn Vũ			Facebook group
Lệ Kim			Messenger
Nguyễn Khang			Messenger
Hoàng Kiêm			Messenger
Thiện Võ			Messenger
Giang Nguyễn			Partner
Vinh			Messenger
Hồ Đình Nhuận			Messenger
Huỳnh Minh Khang			Messenger
Dương Tuấn Nam			Messenger
Phùng Minh Tuan			Sao Mai
Ly Van Hoang			Sao Mai
Nguyen Manh Hung			Sao Mai

Proofs of Partnership

6. Quyền hạn

BGN này sẽ được điều chỉnh và giải thích theo luật pháp Việt Nam.

Để làm bằng chứng, các Bên đã từng thực hiện BGN này bằng chữ ký của đại diện được ủy quyền của họ kể từ ngày được viết ở trên.

TRẦN KHÁNH DUNG



Trần Khánh Dung
Đồng sáng lập & Giám đốc Điều hành, Rayo

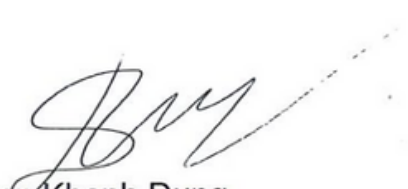
TRUNG TÂM HƯỚNG NGHIỆP VÀ
CÔNG NGHỆ TRỢ GIÚP CHO NGƯỜI
MÙ SAO MAI



Đặng Hoài Phúc
Giám đốc Điều hành, Sao Mai



TRAN KHANH DUNG



Trần Khanh Dung
Rayo, Co-Founder & Chief Executive Officer

NGUYEN HOANG GIANG



Nguyen Hoang Giang
Technical Lead

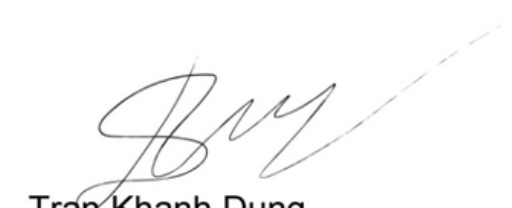
Proofs of Partnership

6. Jurisdiction

This MOU shall be governed by and interpreted in accordance with the laws of Vietnam.

In witness whereof, the Parties have each executed this MOU by signature of their authorized representatives as of the date written above.

TRAN KHANH DUNG



Tran Khanh Dung
Rayo, Co-Founder & Chief Executive Officer

**IT X SERVICES COMPANY LIMITED
(ALLXONE)**



Ha Ngoc Hieu
AllXone, Legal Representative

Proofs of Partnership

Trả lời: Trả lời: [DRD x RAYO] Lời mời hợp tác Inbox x



Minh-Hao Nguyen

to me, Nguyễn, nguyenvantri2820@gmail.com ▼

Thu, Jan 5, 11:39 AM (18 hours ago)



🗣️ Vietnamese ▼ > English ▼ [Translate message](#)

[Turn off for: Vietnamese](#) x

Anh cảm ơn Dung và Trí rất nhiều,
Anh xem qua và tham khảo anh Cử rồi báo lại hai em nha
Hy vọng được hợp tác với MOU để ra sản phẩm hỗ trợ NKT
Chúc 2 em một ngày tốt lành
Anh Hào

Mr. Nguyễn Minh Hào

Nhân viên IT/ IT Officer

TRUNG TÂM KHUYẾT TẬT VÀ PHÁT TRIỂN

Disability Research and Capacity Development (DRD)

311K8 KHU TÁI ĐỊNH CƯ THỦ THIÊM, ĐƯỜNG SỐ 7, PHƯỜNG AN PHÚ, QUẬN 2, TP.HCM

311K8 Street 7, Thu Thiem Resettlement, An Phu Ward, District 2, Ho Chi Minh City, Vietnam ([View Map](#))

Email: minhhao@drdvietsam.org

Web: www.drdvietnam.org - 1forchange.vn

Tel:(+84) 28 - 62 67 99 11 - 62 67 99 22 (Ext 142)

Tel: (+84) 989 001100



Đời rất đẹp khi trái tim đến với trái tim
Life is very beautiful when hearts open

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- 💡 "What Are the Best Accessibility Tools for People With Disabilities?", Fresh Business Thinking, 2022
- 💡 "Diverse abilities and barriers?", W3, 2017
- 💡 "Web content accessibility guidelines", W3, 2018
- 💡 All user interviews here and here
- 💡 Rayo MVP here