

A young man with dark hair, wearing large black headphones, is seated at a desk. He is wearing a blue and white plaid button-down shirt. He is looking down at an open book in his hands, holding a blue pen over it. To his left is a black laptop. On the desk in front of him are several other books and a white mug with a blue pattern. The background is a blurred indoor setting, possibly a home office or library, with shelves and various items. The overall lighting is dim, with a cool blue-green tint.

# PROSUS

## Edtech: Transforming Education through Technology

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Larry Illg | CEO Edtech and Food

# Disclaimer - Forward looking statements

Shareholders and noteholders are advised that the information, including the constant currency and pro forma financial information in this presentation has not been reviewed and reported on by the Company's external auditors and does not constitute a profit forecast.

This report contains forward-looking statements as defined in the United States Private Securities Litigation Reform Act of 1995 concerning our financial condition, results of operations and businesses.

These forward-looking statements are subject to a number of risks and uncertainties, many of which are beyond our control and all of which are based on our current beliefs and expectations about future events. Forward-looking statements are typically identified by the use of forward-looking terminology such as "believes", "expects", "may", "will", "could", "should", "intends", "estimates", "plans", "assumes" or "anticipates", or the negative thereof, or other variations thereon or comparable terminology, or by discussions of strategy that involve risks and uncertainties.

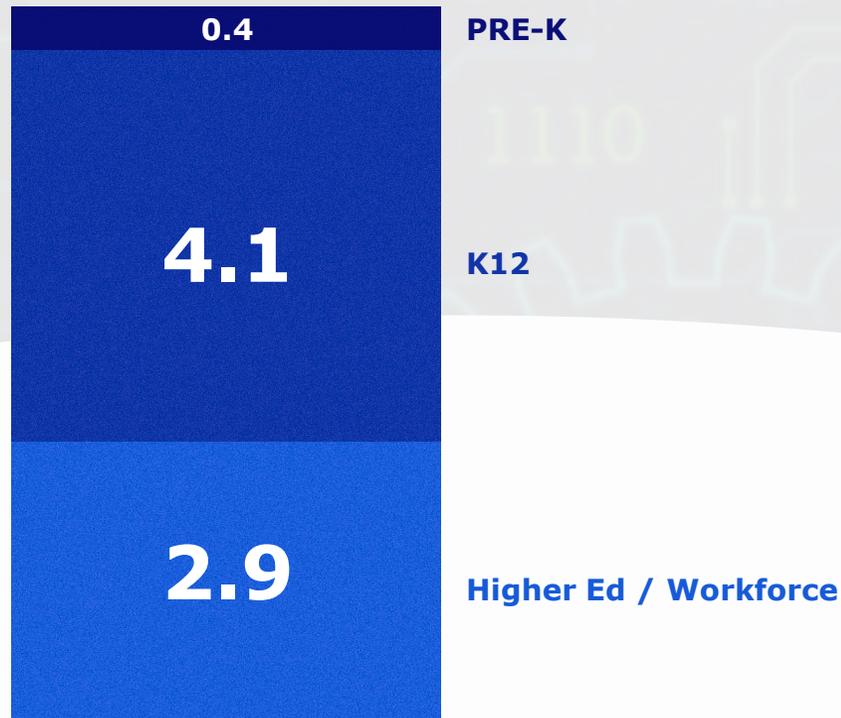
By their nature, forward-looking statements involve known and unknown risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. Prosus cautions that forward-looking statements are not guarantees of future performance. These forward-looking statements and other statements contained in this report regarding matters that are not historical facts involve predictions. No assurance can be given that such future results will be achieved. Actual events or results may differ materially as a result of risks and uncertainties facing us and our subsidiaries. Such risks and uncertainties could cause actual results to vary materially from the future results indicated, expressed or implied in such forward-looking statements.

There are a number of factors that could affect our future operations and could cause those results to differ materially from those expressed in the forward-looking statements including (without limitation): (a) changes to IFRS and associated interpretations, applications and practices as they apply to past, present and future periods; (b) ongoing and future acquisitions, changes to domestic and international business and market conditions such as exchange rate and interest rate movements; (c) changes in domestic and international regulatory and legislative environments; (d) changes to domestic and international operational, social, economic and political conditions; (f) labour disruptions and industrial action; and (g) the effects of both current and future litigation.

The forward-looking statements contained in the report speak only as of the date of the report. We are not under any obligation to (and expressly disclaim any such obligation to) revise or update any forward-looking statements to reflect events or circumstances after the date of the report or to reflect the occurrence of unanticipated events. We cannot give any assurance that forward-looking statements will prove correct and investors are cautioned not to place undue reliance on any forward-looking statements.

# Global education spend is massive and we are in the early days of Edtech adoption

~US\$7.4tn



2025F Global Spend



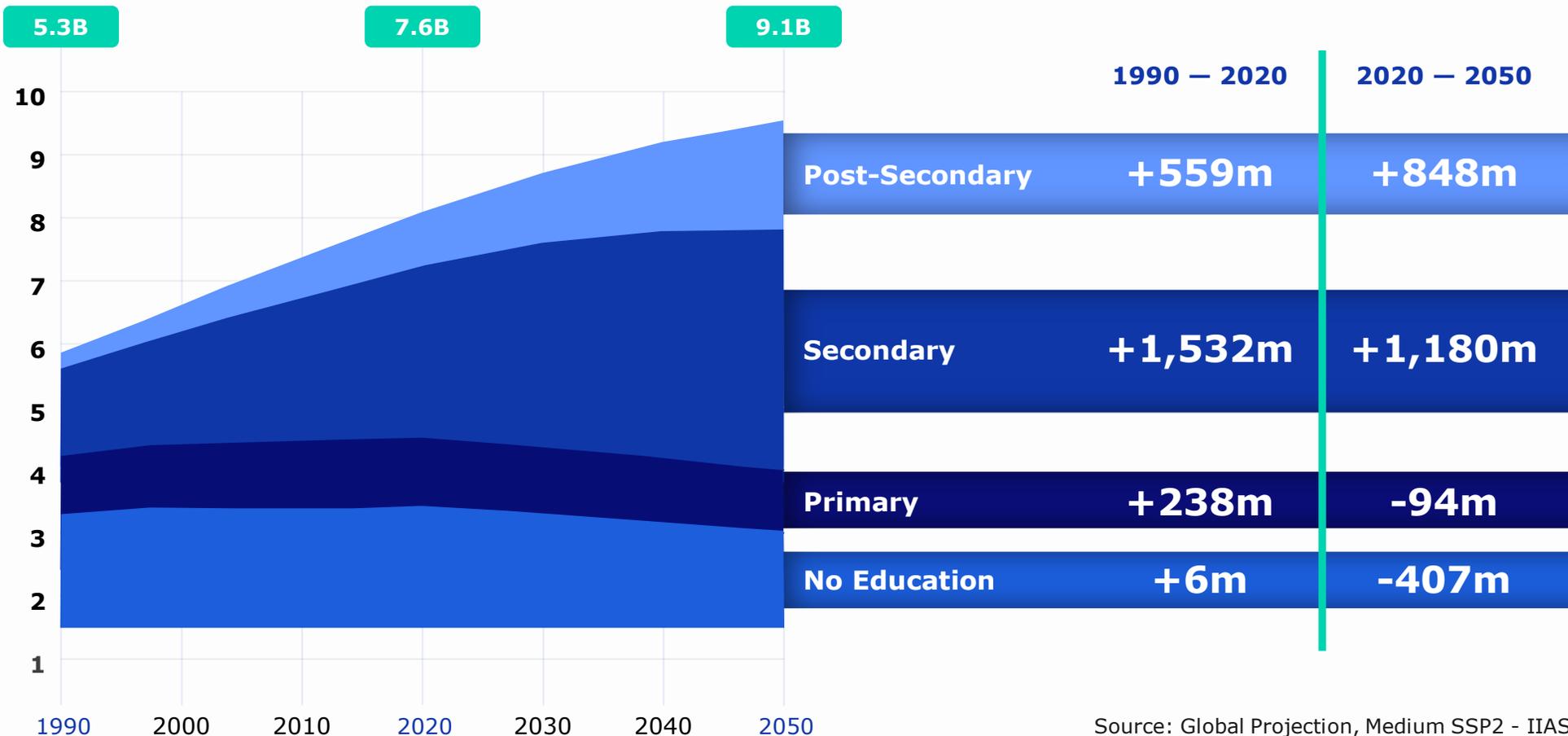
Education accounts for a large chunk of global DSP...



...and digital penetration is very low

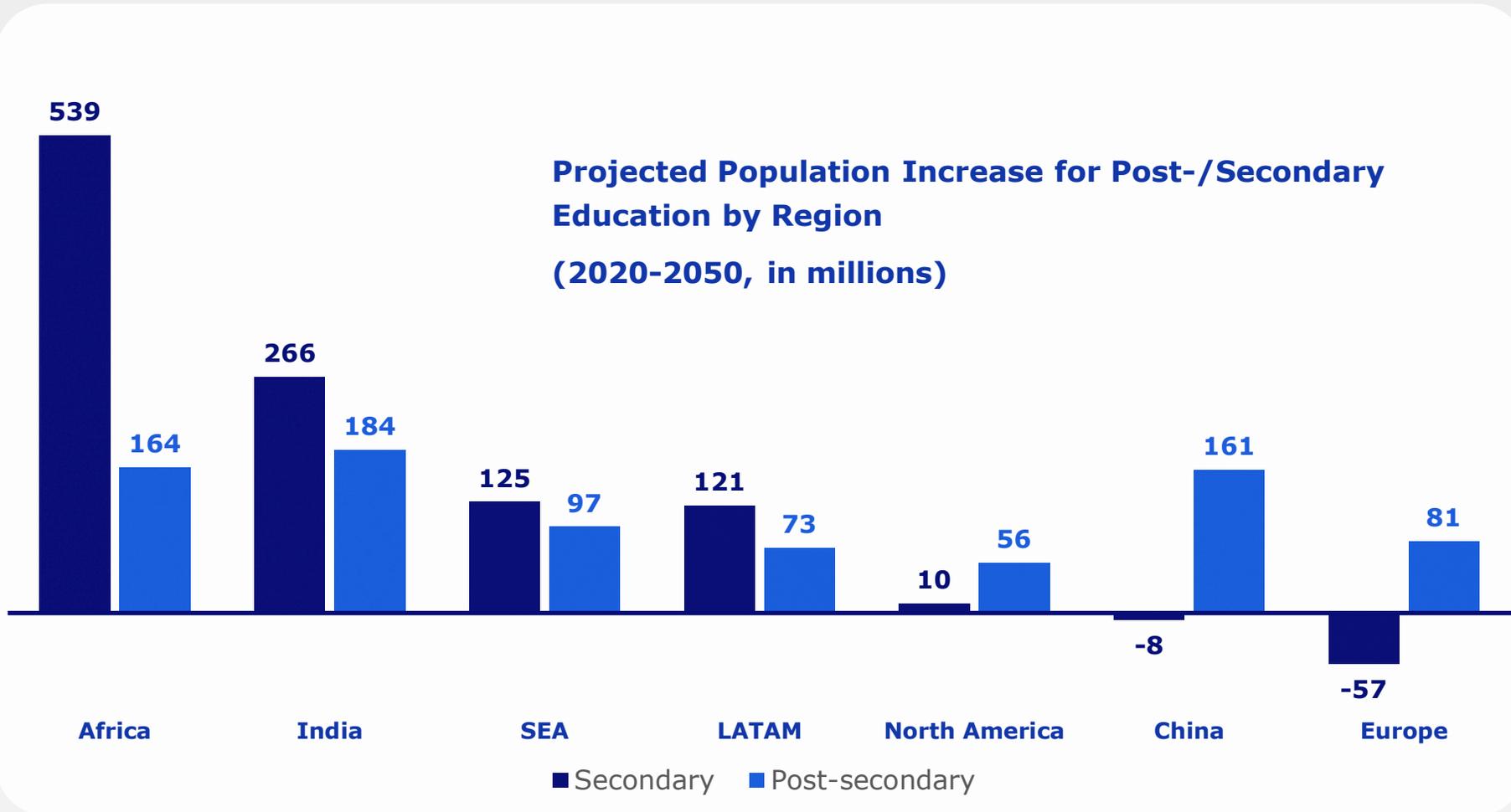
# Two billion new learners

Over the next 30 years, traditional education will not serve demand



Source: Global Projection, Medium SSP2 - IIASA

# Secondary/post-secondary education in high-growth markets will not replicate the institutions of the West

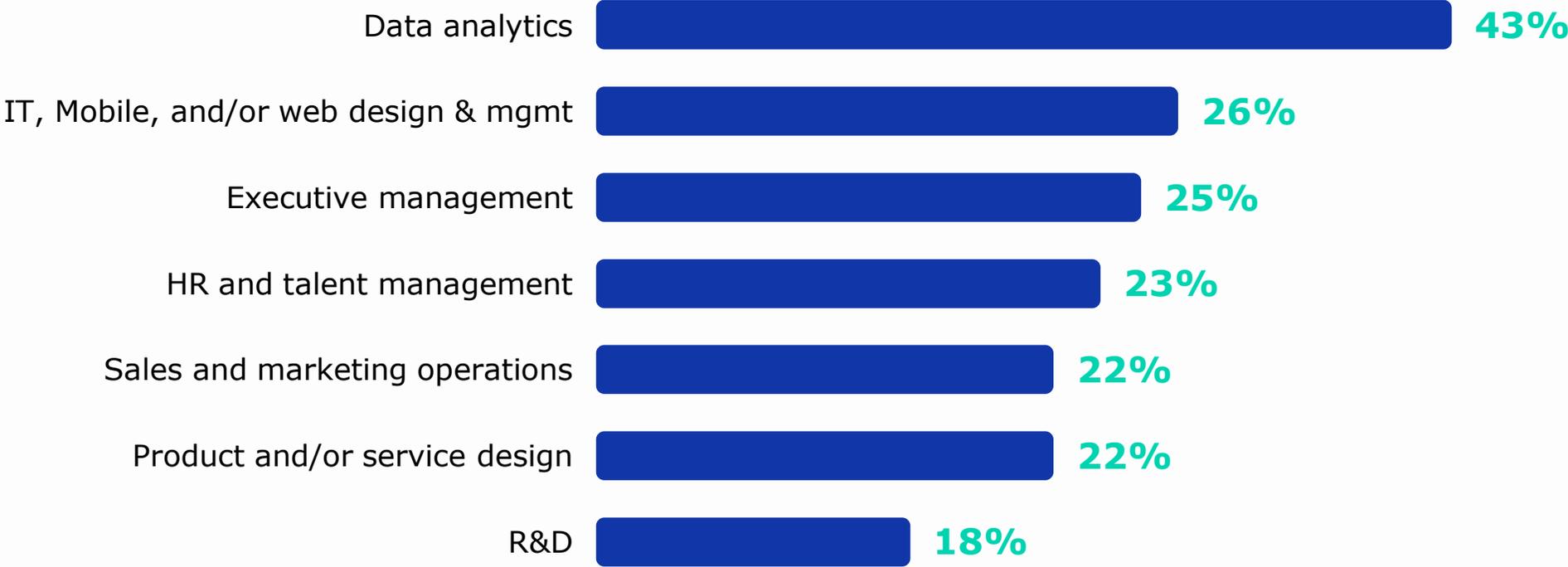


Economics and demographics alone mean the physical institutions and education products from the West cannot reasonably be scaled to serve global needs

# Lack of access will fuel a massive talent shortage, especially in tech



## Business areas with greatest need to address potential skill gaps



# The foundations of education have been slowly changing as a result

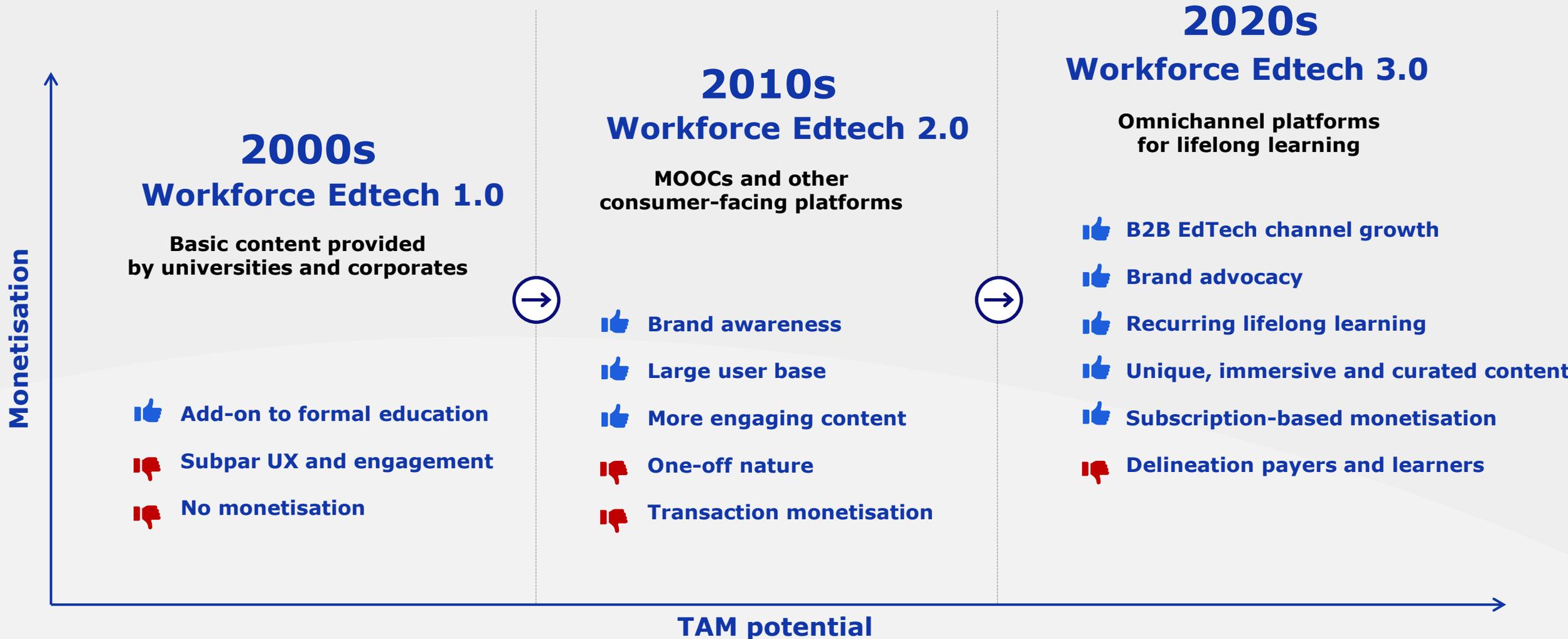
## Learning model

Theoretical	→	Practical
On-campus	→	Online
Group	→	Personalised
Instructor-led	→	Self-paced

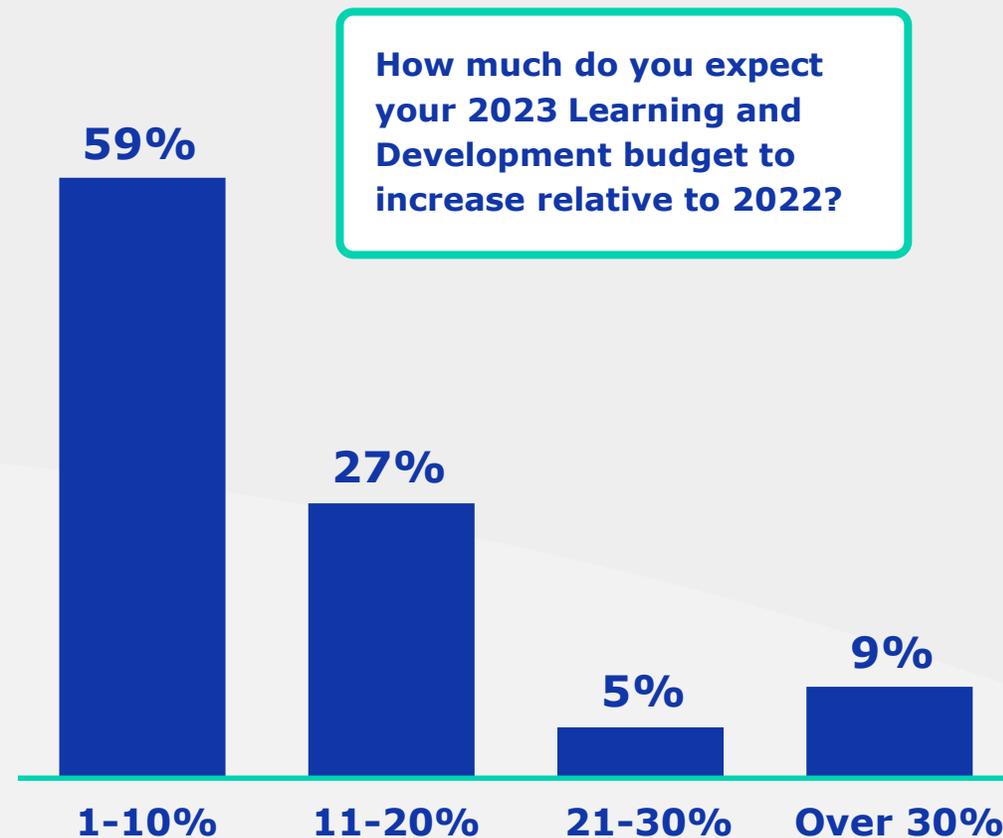
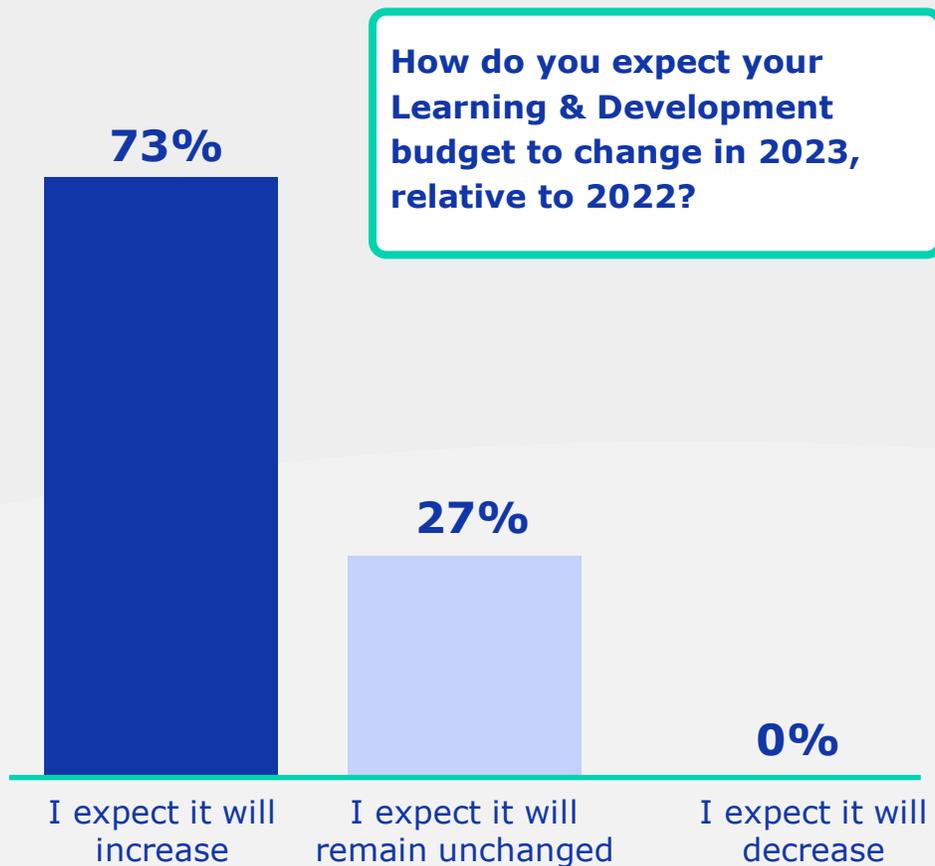
## Economics

Gov't investment	→	Private spend
Fixed cost	→	Variable cost
Luxury good	→	Mass access
Local	→	Global

# Workforce education has evolved over the past 20 years to address needs & increase monetisation



# Companies continue to increase spending in Learning & Development



# We have built a comprehensive Edtech portfolio, focusing on Workforce and Higher Education



## Workforce/Higher Education



## K12 education

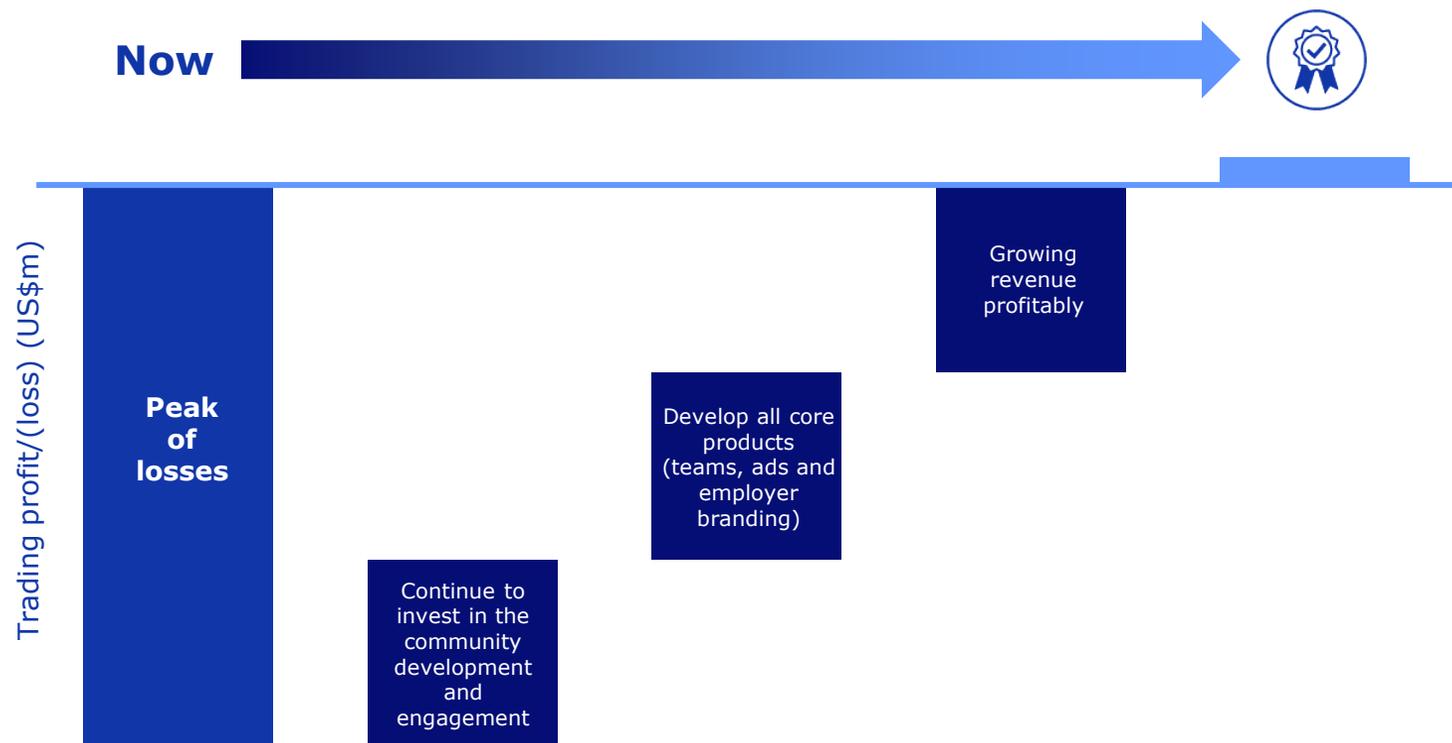


**US\$3.8bn+ invested in a portfolio of 12 companies\* across the globe**

\*Codecademy included in total invested; Codecademy was acquired by Skillsoft in April 2022

# Our path to profitability and then healthy margins...

## Path to profitability for Stack



## Margin ambition<sup>1</sup>



<sup>1</sup> Adj. EBITDA Margin as percentage of Net Revenue. Long-term and steady state margin ambition.

# ...which should lead to significant value creation

## Current Stack valuation

Net asset valuation (US\$bn)<sup>1</sup>

1.5

Nov-22

## 5-year valuation ambition

4 - 6x

### Fast growth of Teams' product

Focus on the developers' experience boosting productivity and collaboration

Expand the product outside US

Enterprise GTM expansion

Alliances & Partnerships

### Ads Value Drivers

Build employer branding on the largest developers' platform

Integrate additional value-added content (e.g., key Edtech content)

<sup>1</sup> The estimated market valuation is based on revenue growth and profitability internal estimations



stackoverflow.co

**Prashanth Chandrasekar**  
**CEO**





# stack overflow

## by the numbers

**~100m+**

monthly visitors to  
StackOverflow.com

**Top 200**

website in the world

**14s**

every time a new  
question is asked

**52m+**

questions and answers  
to-date

**81%**

of developers surveyed  
visit Stack Overflow weekly

**50bn+**

times Stack Overflow  
content has been accessed



Our community is based in  
**179 countries**  
across the world



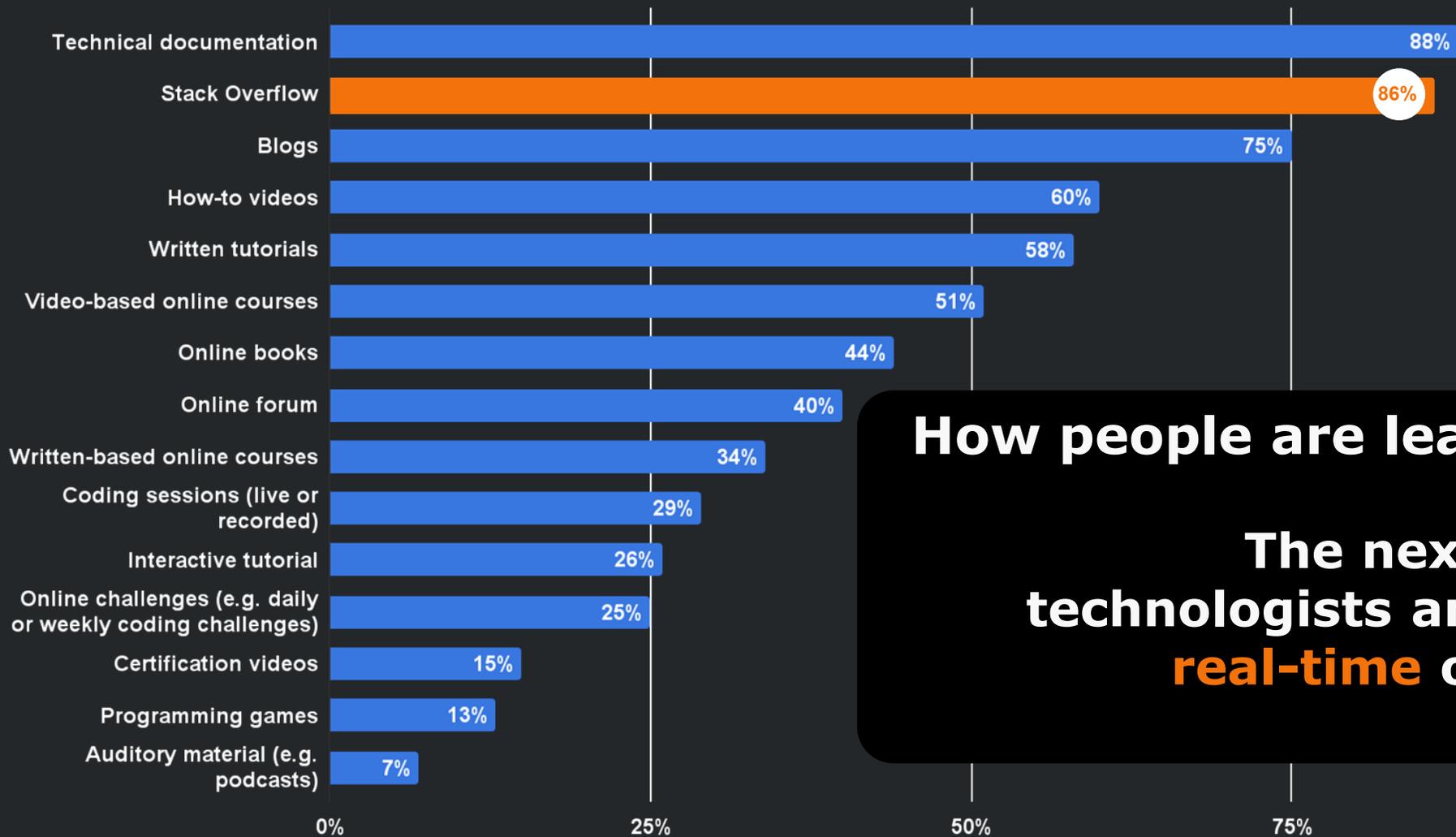
Number of users  
Less  More





Today, around 70% of developers **learn to code** from online resources.





**How people are learning to code:**

**The next generation of technologists are defaulting to **real-time** online learning.**



The **problem.**



# Core challenges for tech leaders



**Hiring, onboarding,  
reskilling & retention**



**Executing big  
technology transformations**

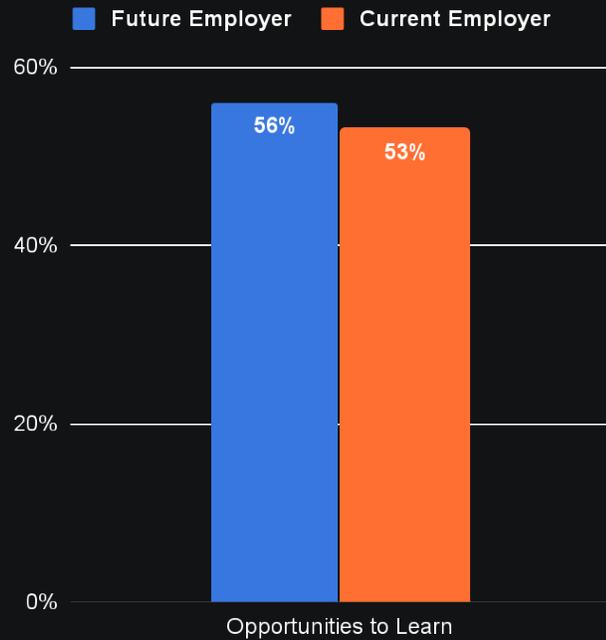


**Managing distributed  
team environments**

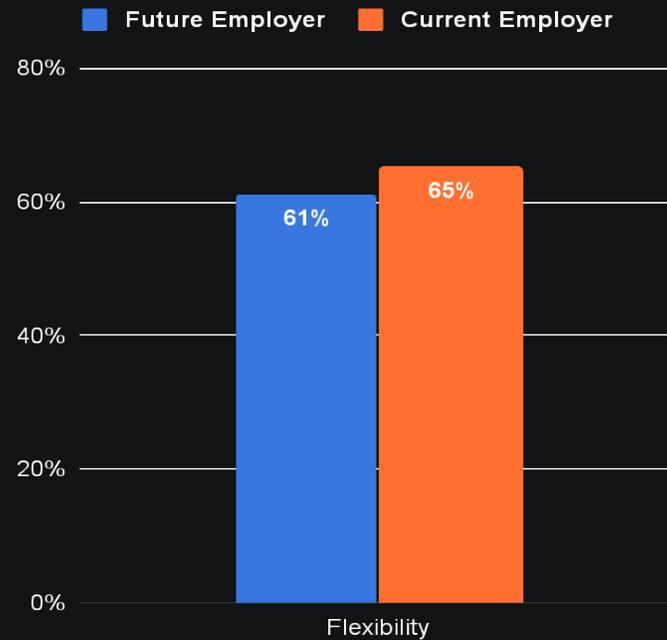


## Core challenges for tech leaders

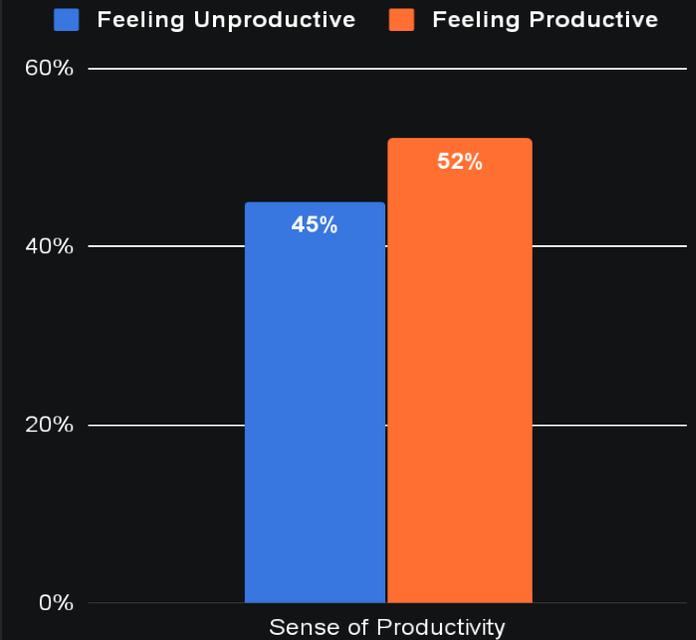
### Hiring, onboarding, reskilling & retention



Over 50% of developers say **opportunities to learn** are important to them.



Over 60% of developers say **flexibility** is important when evaluating current and future employers.



Around 50% of developers say **productivity** contributes to happiness at work.



# Core challenges for tech leaders



**Hiring, onboarding,  
reskilling & retention**



**Executing big  
technology transformations**



**Managing distributed  
team environments**



Core challenges for tech leaders  
Executing big technology transformations

Enterprises are  
executing large,  
multi-year  
technology  
transformations.

*ML & AI*

*Security*

*Cloud transformation*

*Dev Ops*



# Core challenges for tech leaders



**Hiring, onboarding,  
reskilling & retention**



**Executing big  
technology transformations**



**Managing distributed  
team environments**



## Core challenges for tech leaders Managing distributed team environments

**62%**

of devs spend  
over 8 hours a  
month  
searching for  
answers.



**46%**

of devs spend  
over 8 hours a  
month answering  
others'  
questions.

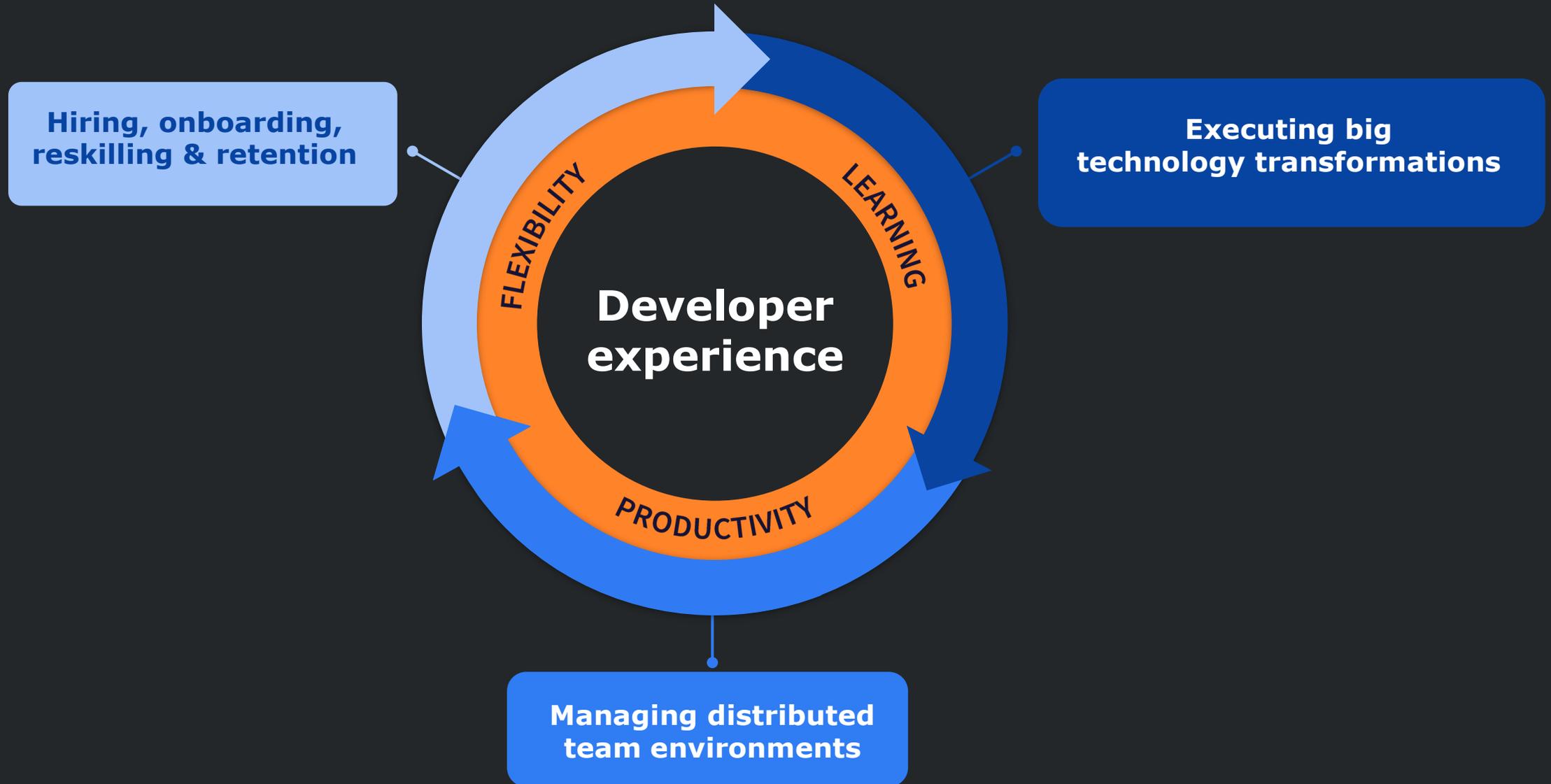


**Over 50%**  
of devs encounter  
knowledge silos  
every week.

Staying in the FLOW STATE...



# The answer: focusing on the developer experience



# Stack Overflow's products

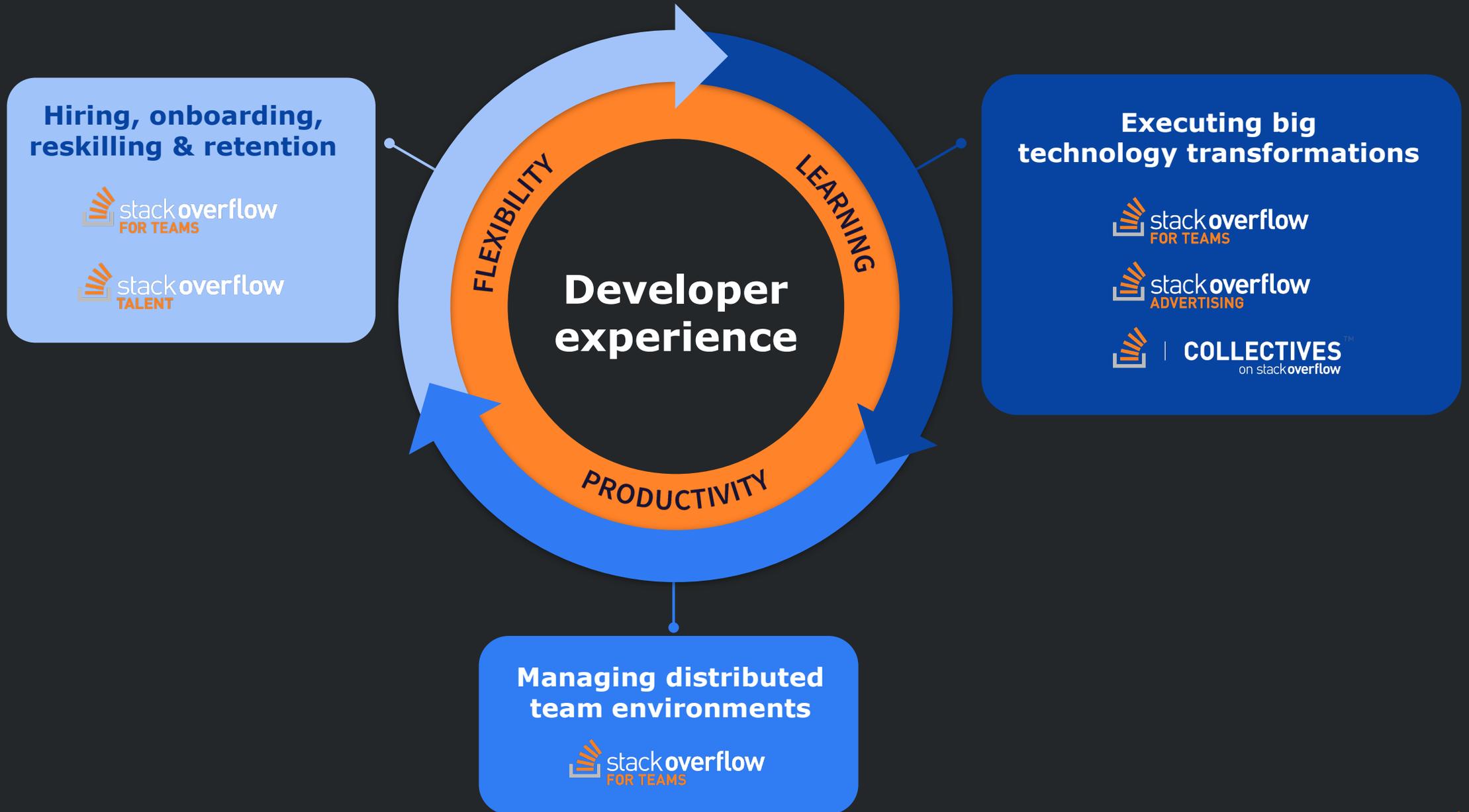


A woman with long dark hair and a man with glasses are looking at a computer monitor in a dimly lit office. The woman is leaning over the man, who is sitting at the desk. The office has a brick wall and a desk lamp. The text "OUR VISION" is overlaid in orange.

## OUR VISION

**To become the most valuable destination for the world's current and next generation of technologists.**

# Stack Overflow's products hyper focus on the developer experience



## 180+ free sites

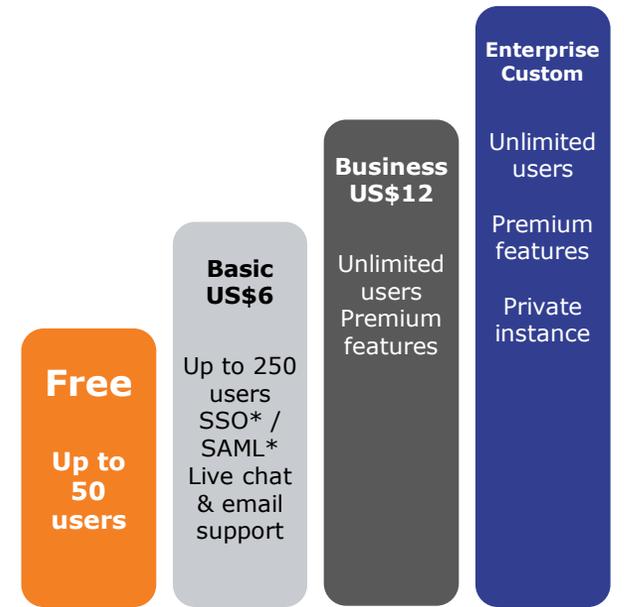
~100m+  
Monthly Visitors



## Advertising business model



## SaaS business model



Product tiers / Monthly price per seat



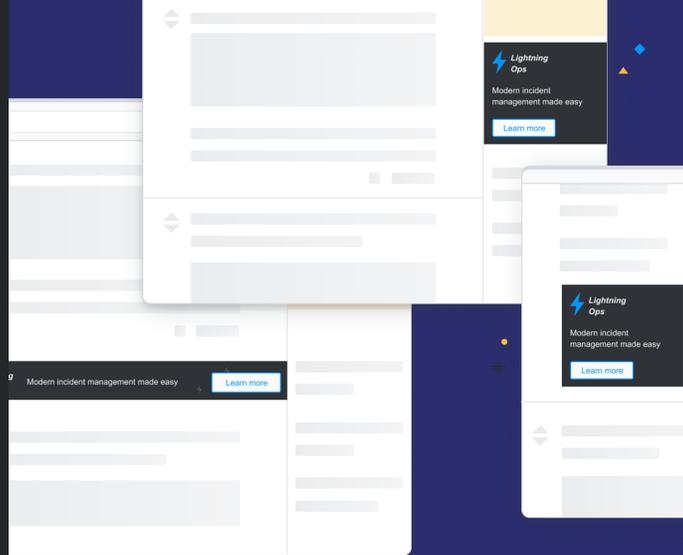
Sub-communities within the public platform that centralise content around technologies and connect developers directly with the maintainers.



~668k total questions and answers



- 186 tags associated
- 308.3k questions in collective
- 8.5k answers recommended
- 111 Google Cloud Recognized Members
- Created May 12, 2021



- Banner advertising
- Direct-to-developers
- Topic tag sponsorships
- Site sponsorships
- Newsletter advertising
- Podcast advertising
- Sponsored podcasts
- Sponsored blog posts



- ✓ Build a community through company stories
- ✓ Post links to new content on company pages
- ✓ Enable users to discover companies to work for

Ford Motor Company  
4 weeks ago

Dr. Debbie Mielewski is building a better world for all of us with her pioneering work on sustainability. Now she's widening the world for those with Autism Spectrum Disorder (ASD) with her idea for a customized driving school.

Autism Spectrum Disorder Driving School  
videosat.ford.com

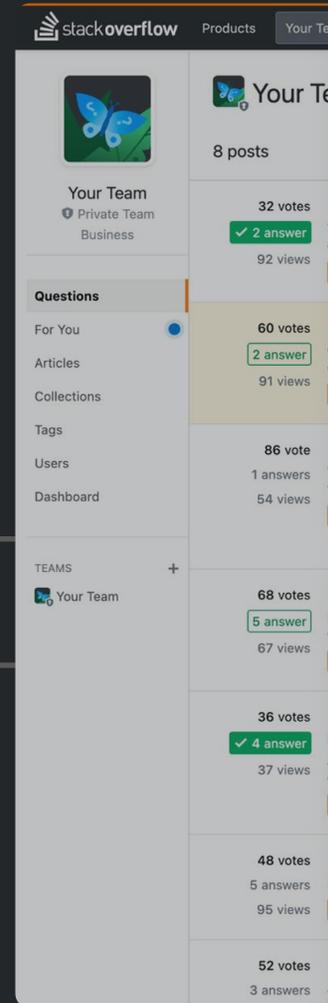
Ford Motor Company  
4 weeks ago

We are a leader in water reduction in manufacturing processes, and our ultimate goal is



# We support and enable the key value drivers for developers and technologists

- ✓ Attract, onboard and retain top talent
- ✓ Boost team productivity and collaboration
- ✓ Accelerate innovation within your teams



## How to install PowerShell on a MacOS machine?

Asked 2 months ago Active today Viewed 4k times

25 We primarily use the Microsoft stack so PowerShell is usually the scripting language of choice, is there a way to write and/or test PowerShell scripts on a Mac?

People asked

Crystal Najera Team Engineering

Tags

engineering macos linux

Share Edit Follow

asked Apr 7 '22 at 9:05

Phoebe Newman  
385 ● 2 ● 13

5 Good news: installing Powershell on Mac is a fairly straightforward process via homebrew, as also recommended by [official Microsoft documentation](#) -

```
brew cask install powershell
```

✓ (it may prompt you for your password during this process)

Verify it installed successfully by looking at the output, and you should now be able to open a PowerShell with `pwsh`, and run the script with previously provided instructions. You can exit PowerShell with `exit` when done.

Share Edit Follow

answered Apr 12 '22 at 18:32

Heike Ackerman  
5,485 ● 8 ● 20



# The **new tech stack** is enabling big transformations and needs robust knowledge sharing

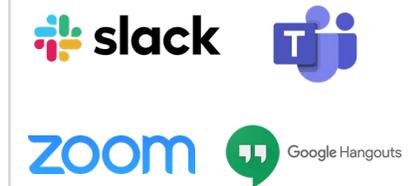
Cloud

Code hosting

Developer tools + ops

Project management

Real time chat ops



Collaborative knowledge sharing & internal communities



Office 365



ATlassian Confluence

**68%**

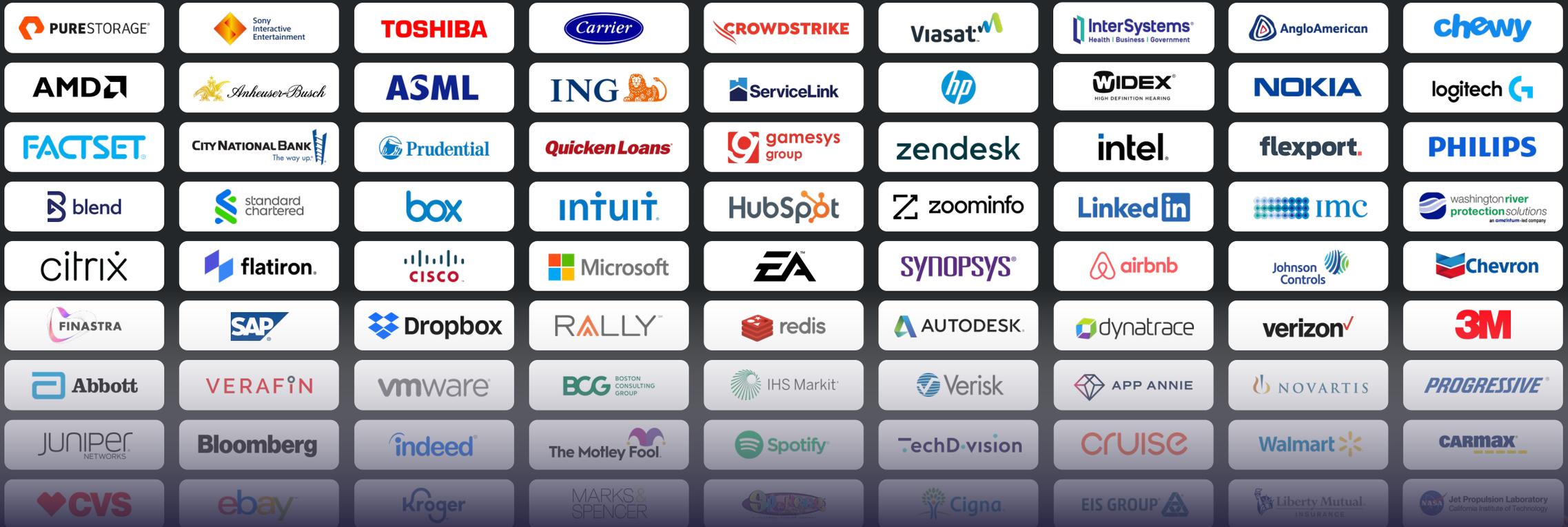
FY22 Bookings growth

**115%**

FY22 enterprise NRR

**US\$289k**

Q4 FY22 enterprise ASP



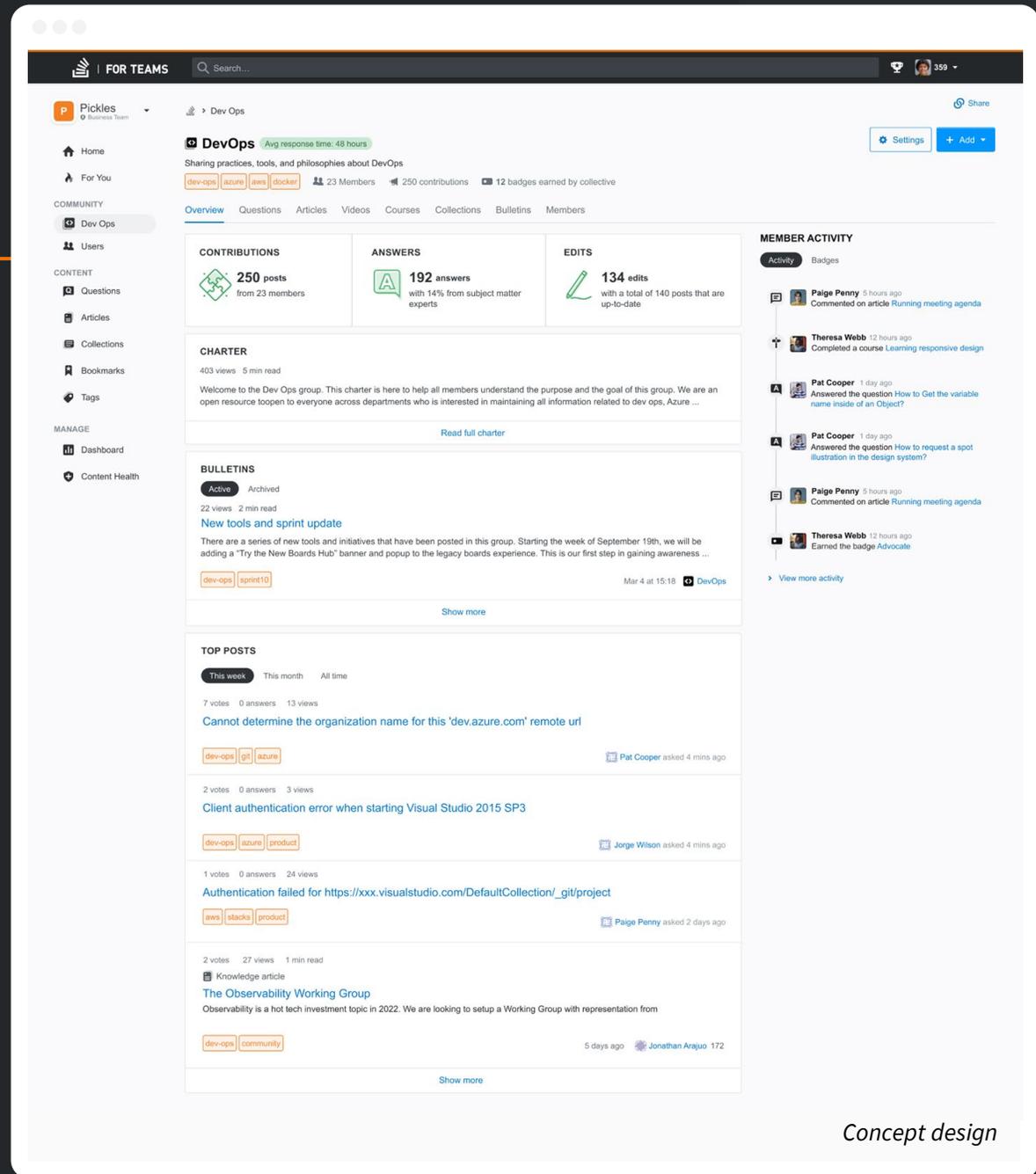
What's **next**?



# Communities within Stack Overflow for Teams

A home for your guilds, chapters, communities of practice

- Establishes horizontal sub-communities at companies
- Breaks down silos across orgs. and promotes collaboration
- Enables curation of relevant content
- Drives higher adoption and NRR



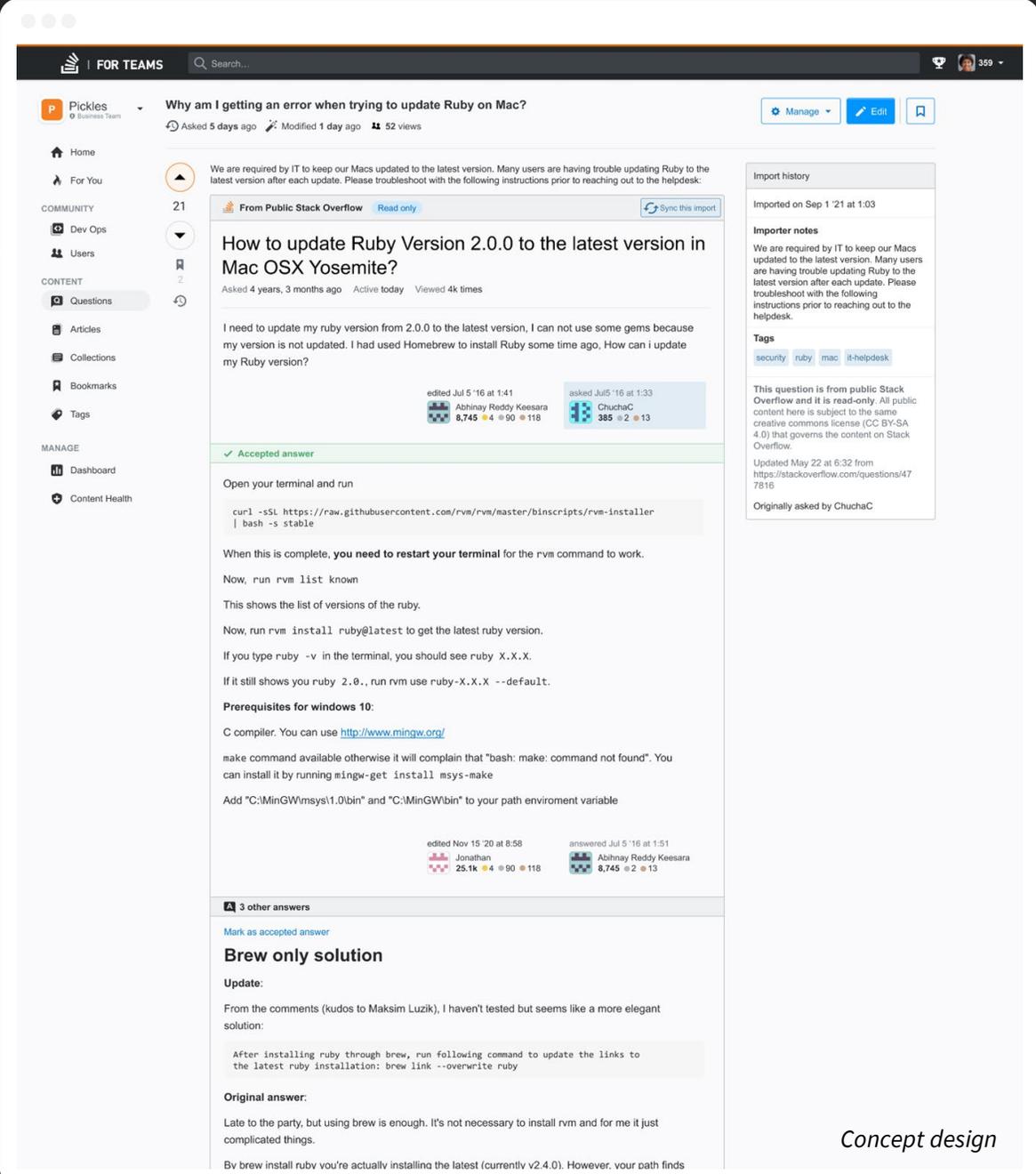
Concept design



# Curating outside content for Teams

Starting with bringing in relevant Stack Overflow content

- Bridges public Stack Overflow and Stack Overflow for Teams
- Drives immediate value to customer by lowering time to build internal Stack community
- Promotes faster user adoption and ARR



The screenshot shows a Microsoft Teams interface with a Stack Overflow question imported. The question is titled "How to update Ruby Version 2.0.0 to the latest version in Mac OSX Yosemite?" and is marked as an "Accepted answer". The answer is titled "Brew only solution" and provides instructions for updating Ruby on Mac OS X Yosemite using Homebrew. The interface includes a sidebar with navigation options like Home, For You, and Questions, and a top navigation bar with the "FOR TEAMS" logo and a search bar.

**Why am I getting an error when trying to update Ruby on Mac?**

Asked 5 days ago Modified 1 day ago 52 views

21

From Public Stack Overflow Read only Sync this import

**How to update Ruby Version 2.0.0 to the latest version in Mac OSX Yosemite?**

Asked 4 years, 3 months ago Active today Viewed 4k times

I need to update my ruby version from 2.0.0 to the latest version, I can not use some gems because my version is not updated. I had used Homebrew to install Ruby some time ago. How can i update my Ruby version?

edited Jul 5 '16 at 1:41 asked Jul 5 '16 at 1:33  
Abhinay Reddy Keesara 8,745 4 90 118 ChuchaC 385 2 13

Accepted answer

Open your terminal and run

```
curl -sSL https://raw.githubusercontent.com/rvm/rvm/master/binscripts/rvm-installer | bash -s stable
```

When this is complete, **you need to restart your terminal** for the `rvm` command to work.

Now, run `rvm list known`

This shows the list of versions of the ruby.

Now, run `rvm install ruby@latest` to get the latest ruby version.

If you type `ruby -v` in the terminal, you should see `ruby X.X.X`.

If it still shows you `ruby 2.0.0`, run `rvm use ruby-X.X.X --default`.

**Prerequisites for windows 10:**

C compiler. You can use <http://www.mingw.org/>

make command available otherwise it will complain that "bash: make: command not found". You can install it by running `mingw-get install msys-make`

Add `~\MinGW\msys1.0\bin` and `~\MinGW\bin` to your path environment variable

edited Nov 15 '20 at 8:58 answered Jul 5 '16 at 1:51  
Jonathan 25.1k 4 90 118 Abhinay Reddy Keesara 8,745 2 13

3 other answers

Mark as accepted answer

**Brew only solution**

**Update:**

From the comments (kudos to Maksim Luzik), I haven't tested but seems like a more elegant solution:

```
After installing ruby through brew, run following command to update the links to the latest ruby installation: brew link --overwrite ruby
```

**Original answer:**

Late to the party, but using brew is enough. It's not necessary to install rvm and for me it just complicated things.

By brew install `rbv` you're actually installing the latest (currently v2.4.0). However, your path finds

Import history

Imported on Sep 1 '21 at 1:03

**Importer notes**

We are required by IT to keep our Macs updated to the latest version. Many users are having trouble updating Ruby to the latest version after each update. Please troubleshoot with the following instructions prior to reaching out to the helpdesk.

**Tags**

security ruby mac it-helpdesk

This question is from public Stack Overflow and it is read-only. All public content here is subject to the same creative commons license (CC BY-SA 4.0) that governs the content on Stack Overflow.

Updated May 22 at 6:32 from <https://stackoverflow.com/questions/477816>

Originally asked by ChuchaC





**COLLECTIVES**<sup>TM</sup>  
on stackoverflow

## Topic Collectives

Content created and curated by the community

- Brings together related technologies and users based on a macro tech topic
- Provides additional advertising / sponsorship opportunities
- Drives up engagement, sponsorship ads opportunities and renewal rates

The screenshot shows a Stack Overflow challenge page for "Build a text adventure game using Python". The page is part of the "Python Collective" and is a "Beginner's challenge". It features a progress bar at 80% completion and a "Submit your game" button. Below the challenge, there are sections for "Courses that can help towards this challenge:" and "Answers that helped others with the same challenge:". The courses section lists three courses: "Learn Python basics" by Udemy (4.8 stars, 93,100 reviews), "Python Programming for the Absolute Beginner" by Coursera (4.6 stars, 80,100 reviews), and "Building a Text-Based Game in Python" by Pluralsight (4.6 stars, 82,500 reviews). The answers section shows two questions: "What is the difference between list and tuples in Python?" (3 answers, 30 views) and "What are decorators in Python?" (2 answers, 70 views). The page also includes a sidebar with navigation options, a "Collectives on Stack Overflow" section, and a "Live Stream" for "How to land your first job as a new Python developer" by Naya Walker.

Concept design



# Financials



# Massive market opportunity: users

We have <2% of developers on Teams

**Stack Overflow is driving the growth of technologists around the world**

**US\$10bn collaboration market**

According to Grandview Research

**US\$9.4bn DevOps market**

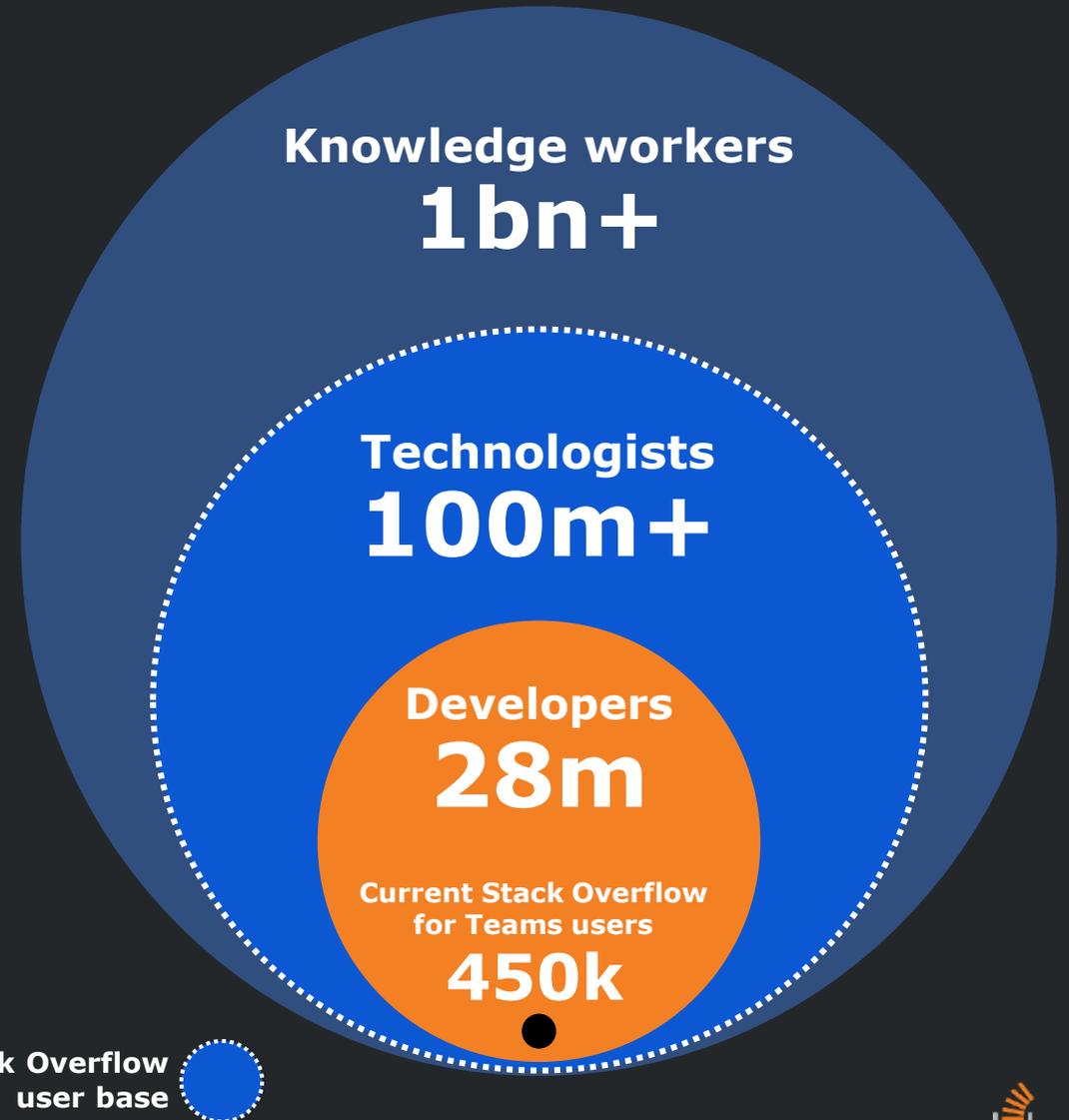
According to Allied Market Research by 2023

**2x growth** in workstream collaboration market

Over next 4 years, according to Gartner

**2x growth** in number of worldwide developers

Over next 10 years, according to Slashdata



# Massive market opportunity: customers

We have <3% of Enterprise on Teams

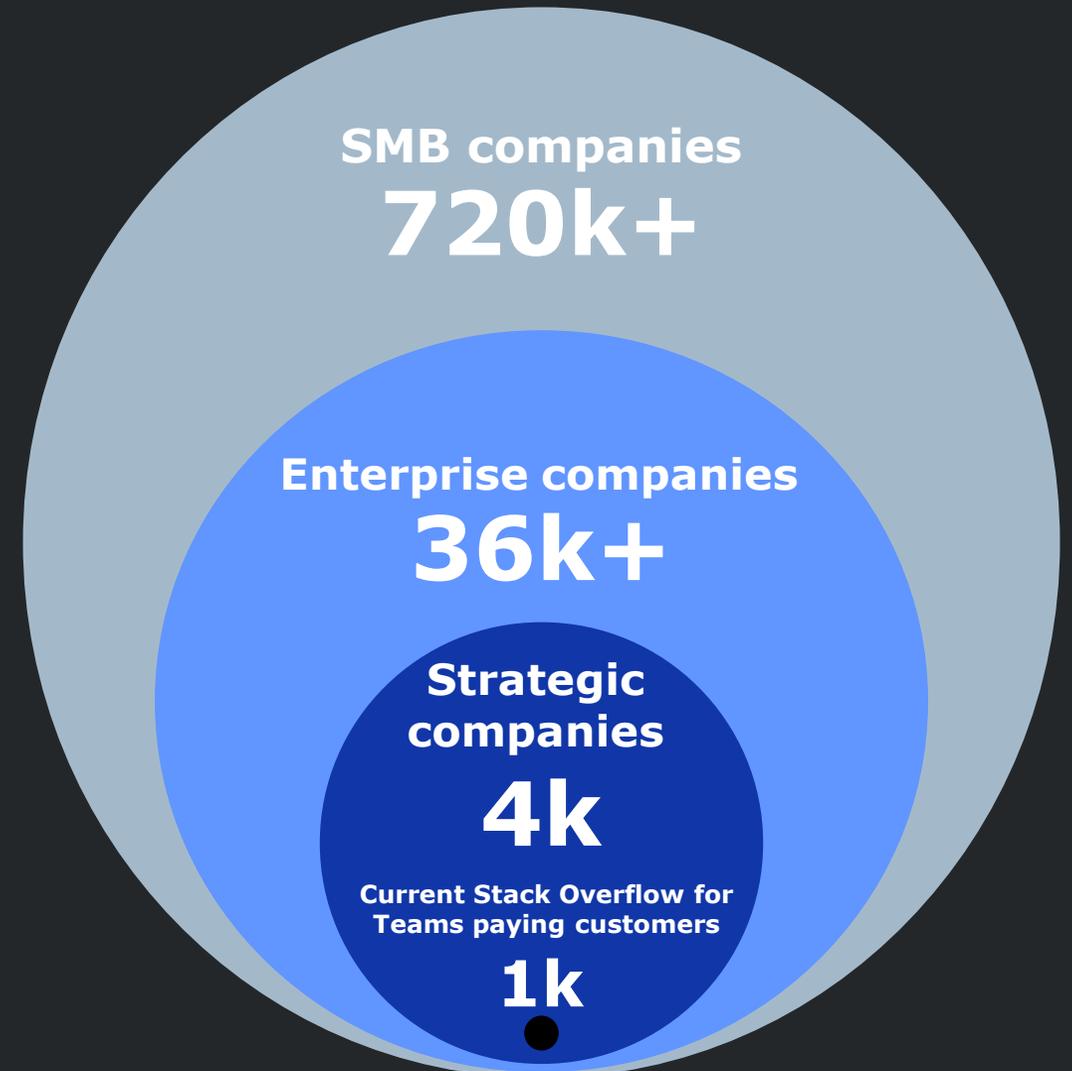
**Stack Overflow is enabling knowledge management at organisations across the world**

**US\$24bn market**

Based on current average seat count and ASP

**US\$2bn+ revenue opportunity**

Based on conservative penetration rates



# Growth in Teams users within key customers exemplifies Land and Expand sales strategy

## Global financial institution



## Global software provider



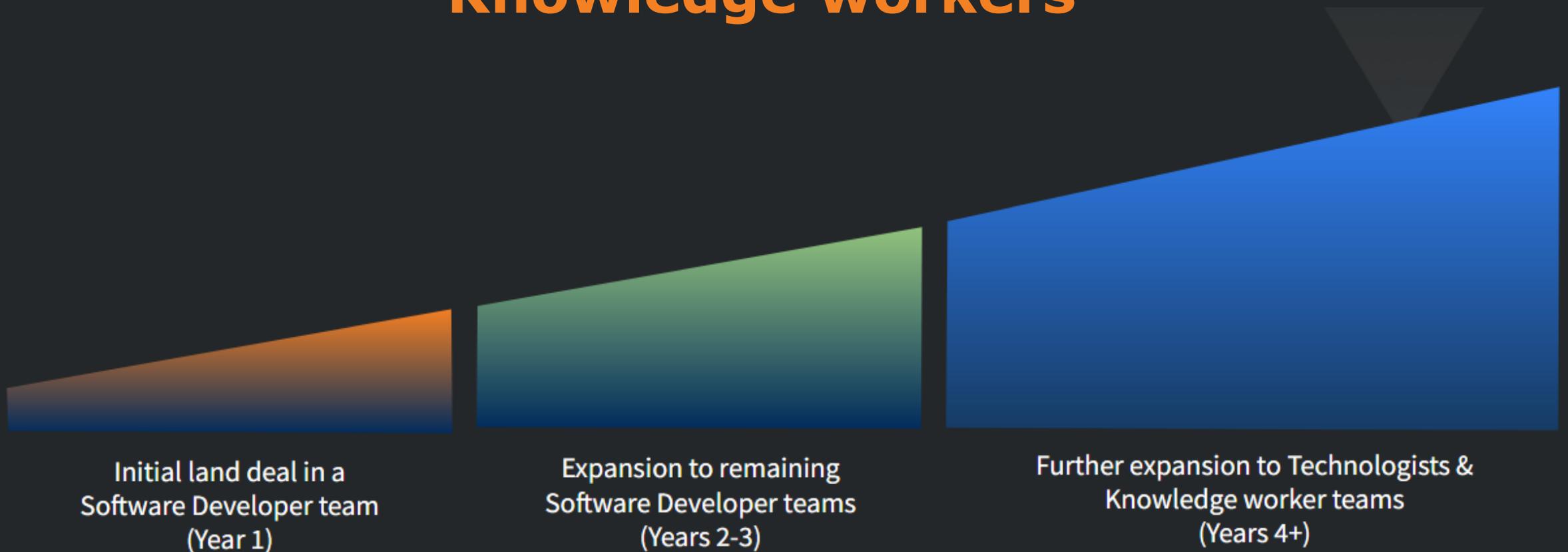
## Global telecom provider



## Consumer financial services



# Land & Expand motion from Developers -> Technologists -> Knowledge workers

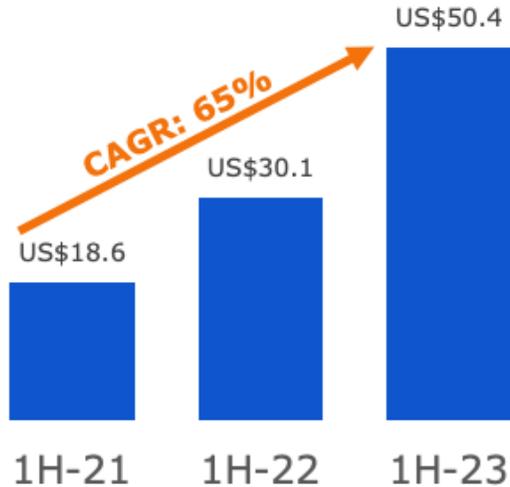


# Compelling financial model

## 3x LTV: CAC



## Rapid ARR growth (US\$m)



## Investing for continued growth while planning for sustainable leverage

**20%**  
Rule of 40

Long-term  
model

**>40%**  
Rule of 40

## Strong community of engaged users and B2B monetisation opportunity

A strong community

**~100m+**

Total Monthly Visitors

We have increasing willingness to pay

**450k+ 1k+**

Total Teams Users

Total Teams Customers

We have a large opportunity to go after via our  
Land & Expand GTM motion

**US\$24bn+**

Market (based on current average seat count and ASP)

**US\$2bn+**

Revenue (based on conservative penetration rates)



**Prashanth Chandrasekar**  
CEO

@pchandrasekar



stackoverflow.co



🔍 All learning starts with **one question.**

You're sitting on **the answers.**



6



share edit follow



8

