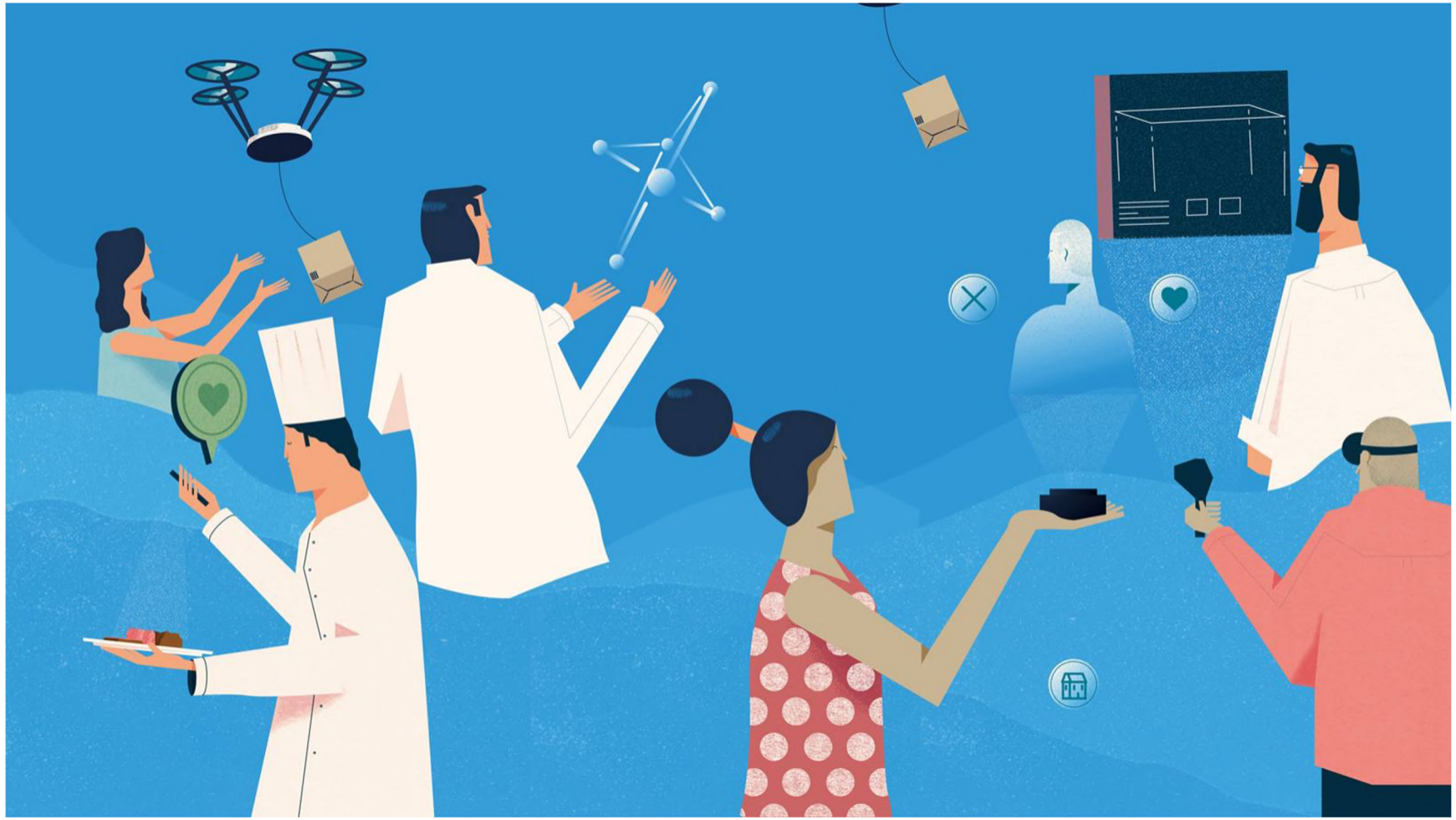
Building AI for the next 5 billion

Vasudha Khare

Innovation Fellow,
Wadhwani AI



AI is everywhere

Ordering from e-comm platforms

amazon.com

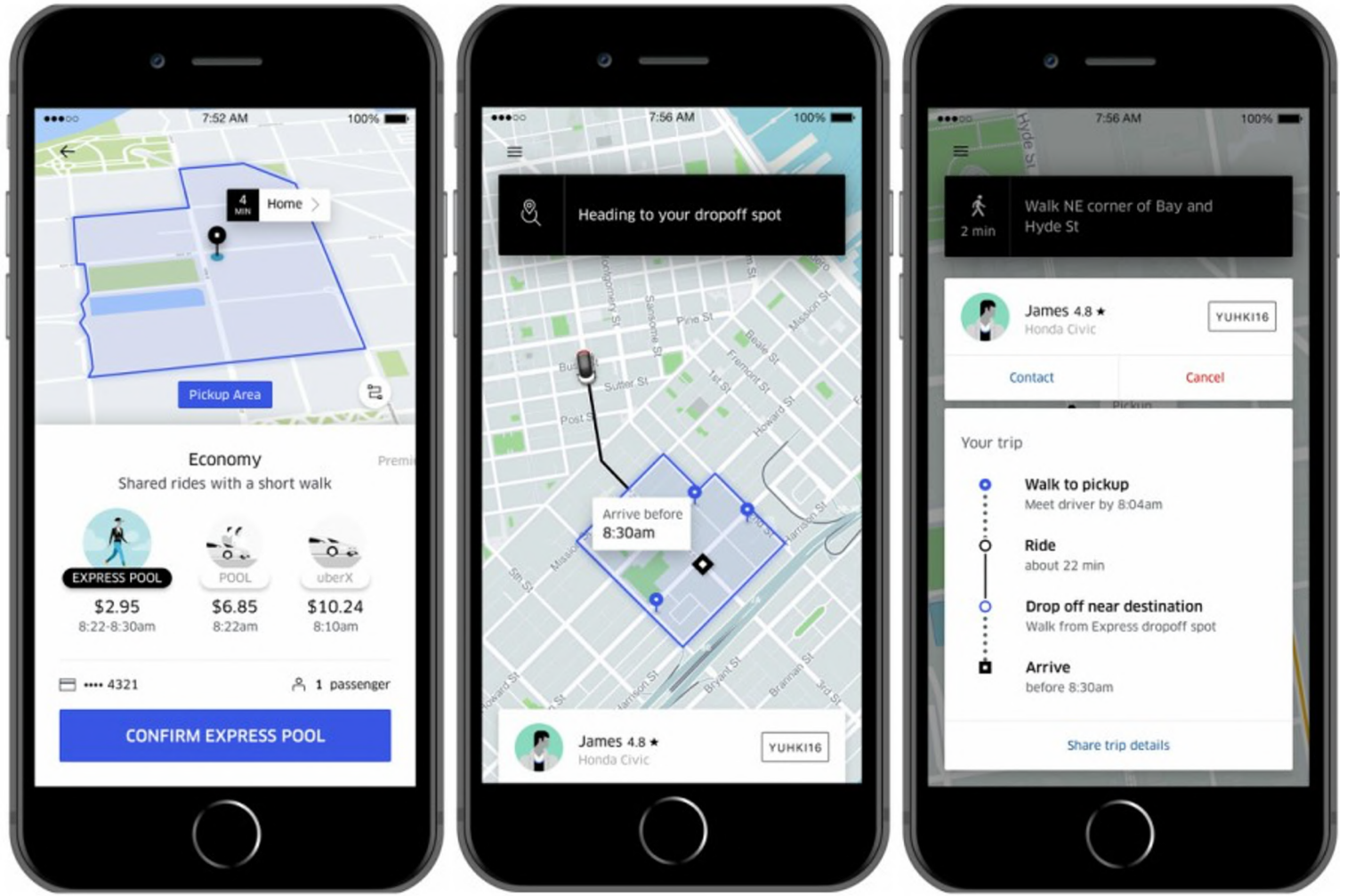
Recommended

Amazon.com has new recommendations for you based on items you purc
told us you own.

Google Apps Deciphered: Compute in the Cloud to Streamline Your Desktop

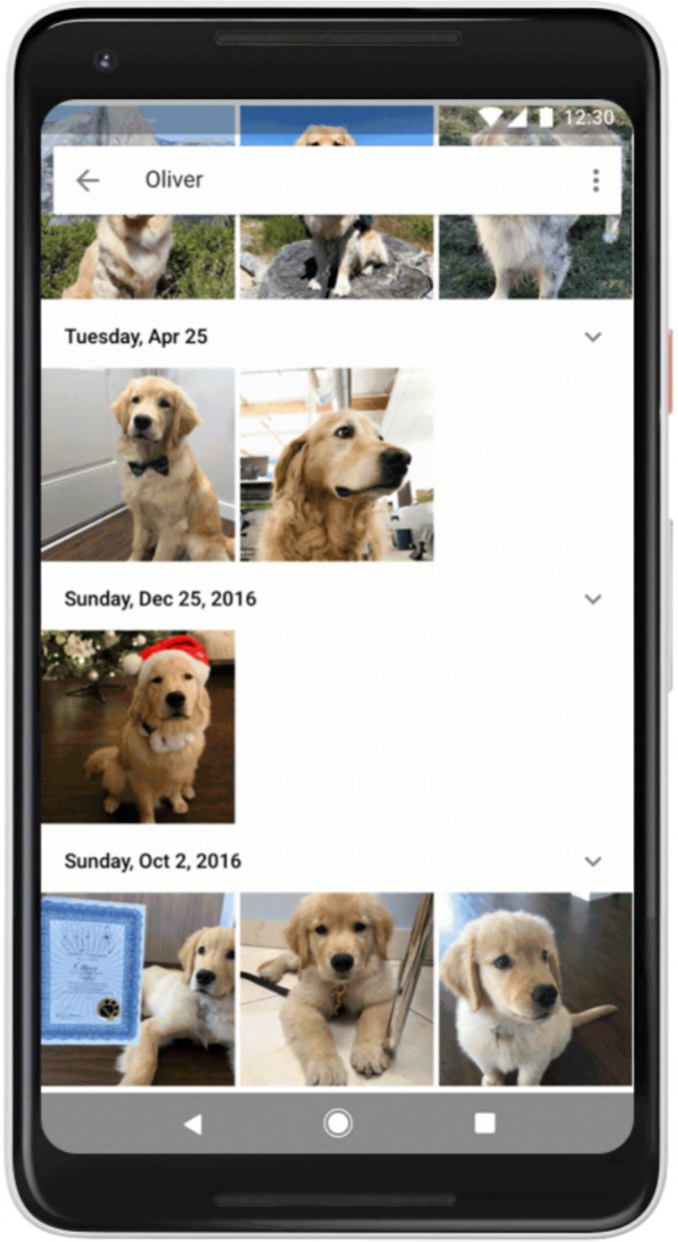
Google Apps Administrator Guide: A Private-Label Web Workspace

Googlepedia: T
Ultimate Goog
Resource (3rd Ec

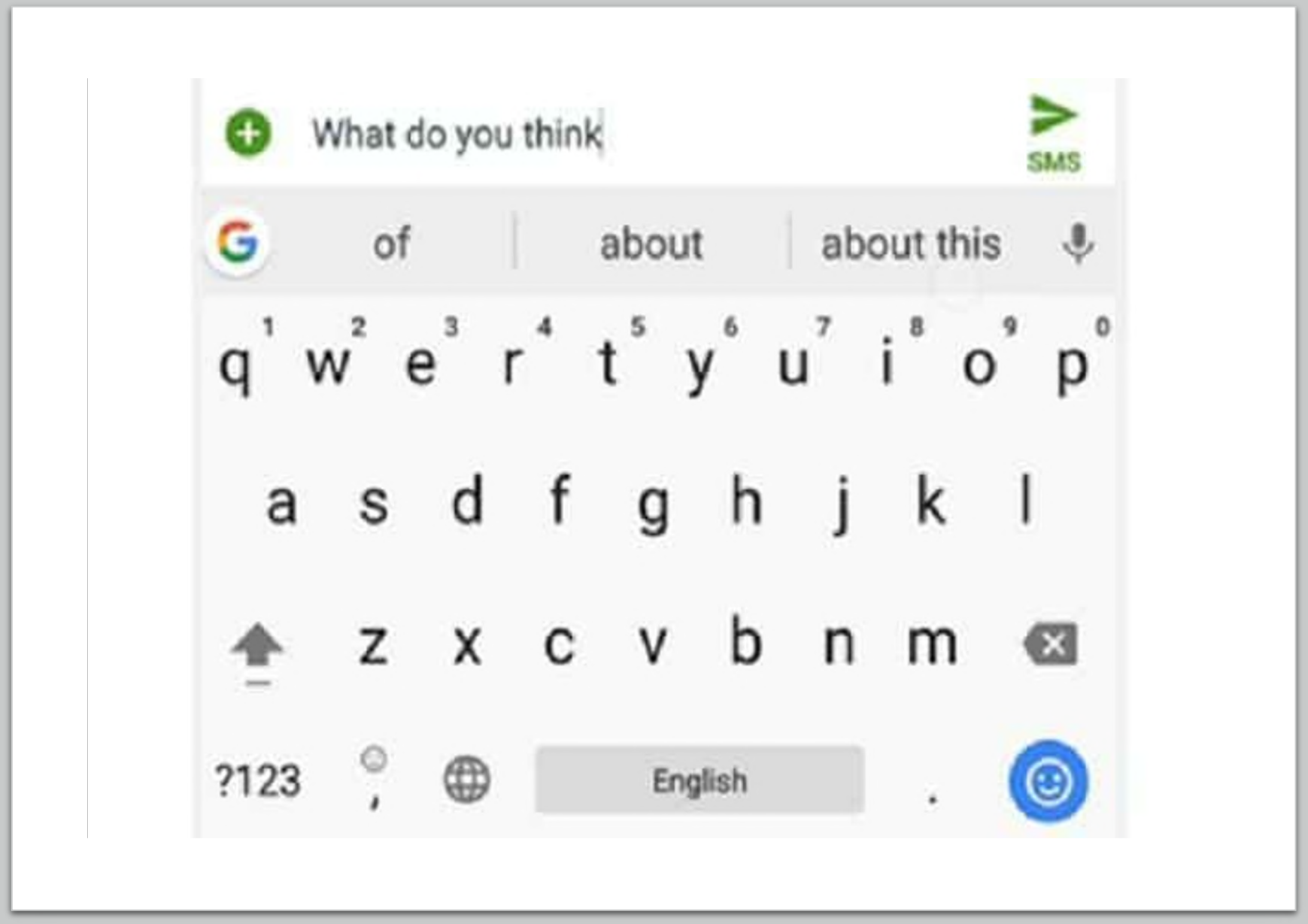

7:52 AM
100%
4 MIN
Home
Pickup Area
Economy
Shared rides with a short walk
EXPRESS POOL
$2.95
8:22-8:30am
POOL
$6.85
8:22am
uberX
$10.24
8:10am
•••• 4321
1 passenger
CONFIRM EXPRESS POOL
7:56 AM
100%
Heading to your dropoff spot
Arrive before
8:30am
James 4.8 ★
Honda Civic
YUHKI16
7:56 AM
100%
2 min
Walk NE corner of Bay and
Hyde St
James 4.8 ★
Honda Civic
YUHKI16
Contact
Cancel
Your trip
Walk to pickup
Meet driver by 8:04am
Ride
about 22 min
Drop off near destination
Walk from Express dropoff spot
Arrive
before 8:30am
Share trip details

Riding a cab

Finding a person in your gallery

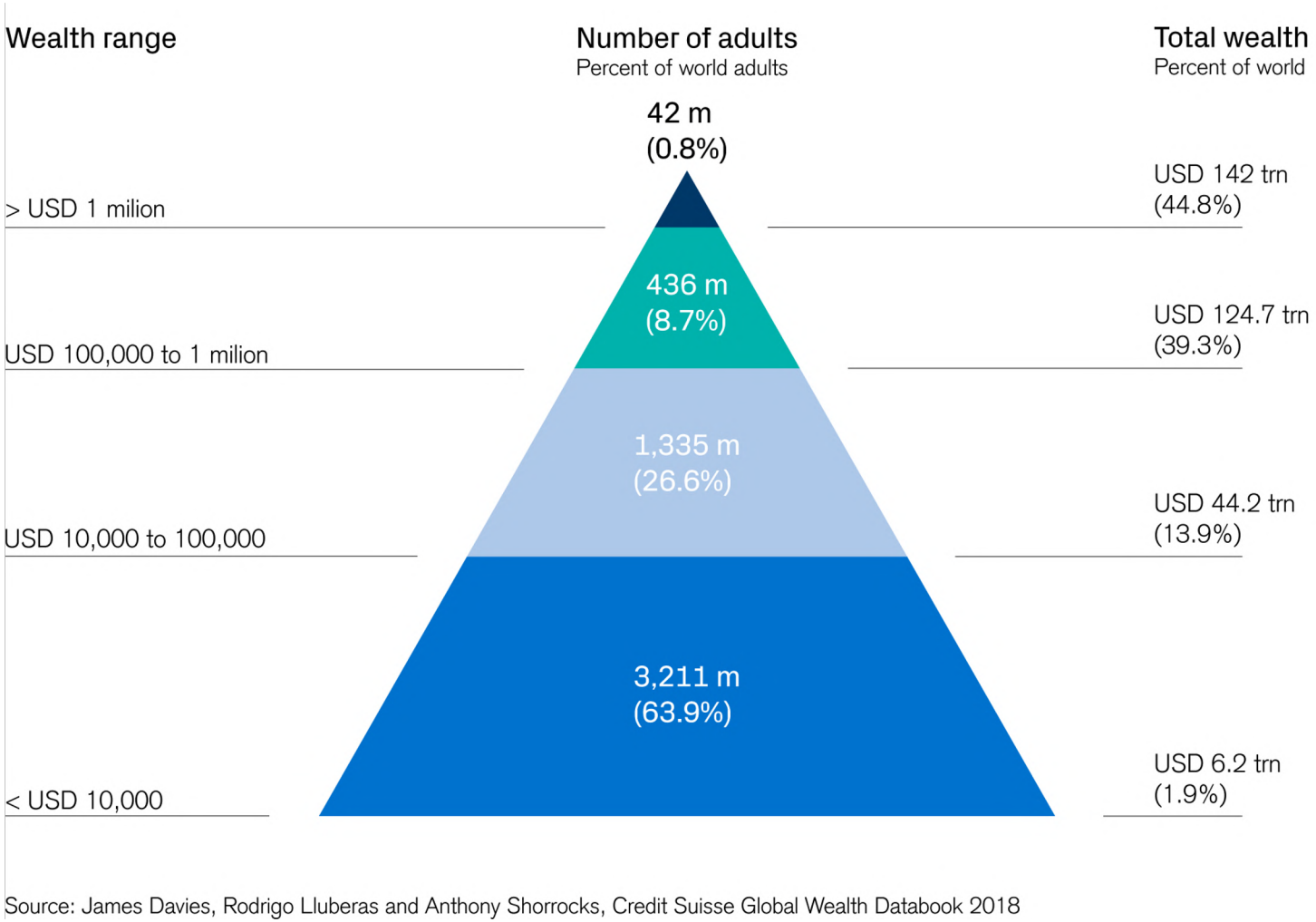


Typing a message



Is it, really?
Is it everywhere?

AI has reached only 2 out of 7 billion people on this planet



Why?

- High paying job
- Consumers pay for it (clicks, rides, orders etc)

The rest of the world’s problems are not directly being addressed by AI

Most cotton farmers lose 30% of crop to pests

Building AI

Farmers consuming AI

Delivering impact

Challenges in Pest Management

Lack of access to timely and accurate agricultural practices

Ineffective extension services

Retailer influence on information

Pest traps

Scientific approach to pest management

- ETL (Economic threshold limit): Level of pest population that can be tolerated
- ETL needs to be monitored actively for each pest
- Control measures need to be taken when ETL is reached
  - Control measures before ETL crossing can be harmful
  - Control measures long after ETL crossing can lead to significant yield loss
- Human monitoring of ETL is impractical
  - Requires training; difficult to practice; generally ignored by farmers

Our solution

- Empty pest trap on a paper
- Click image, upload to app
- AI detects and counts pest, compares it to ETL, and gives pesticide recommendation

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Building AI

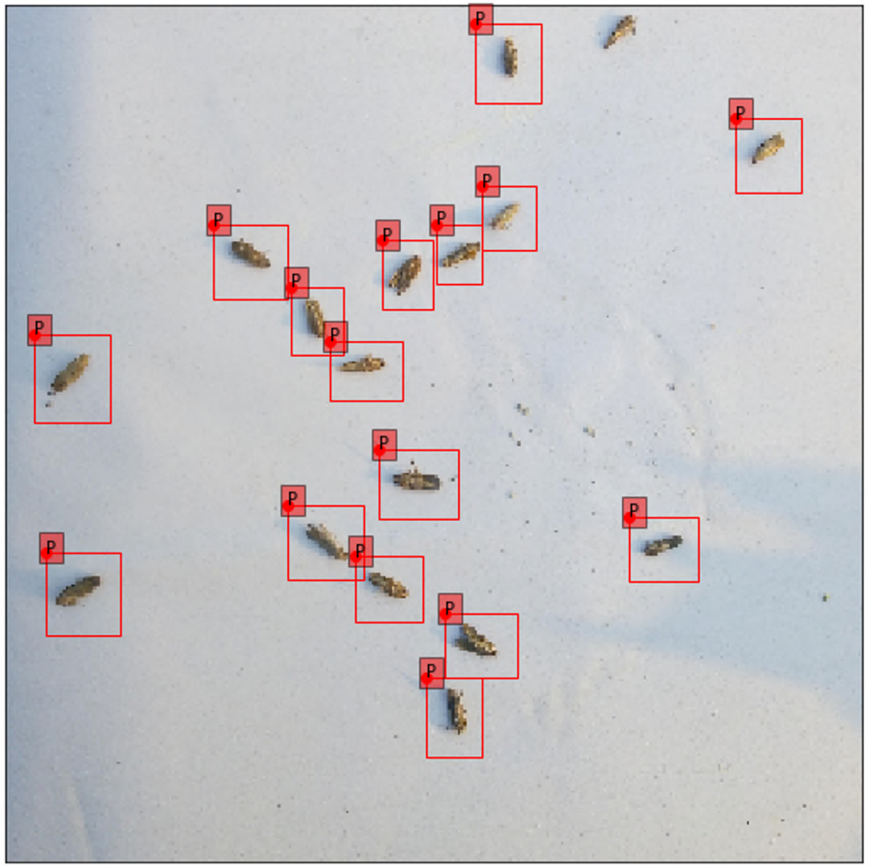
1. Data availability

Lack of data

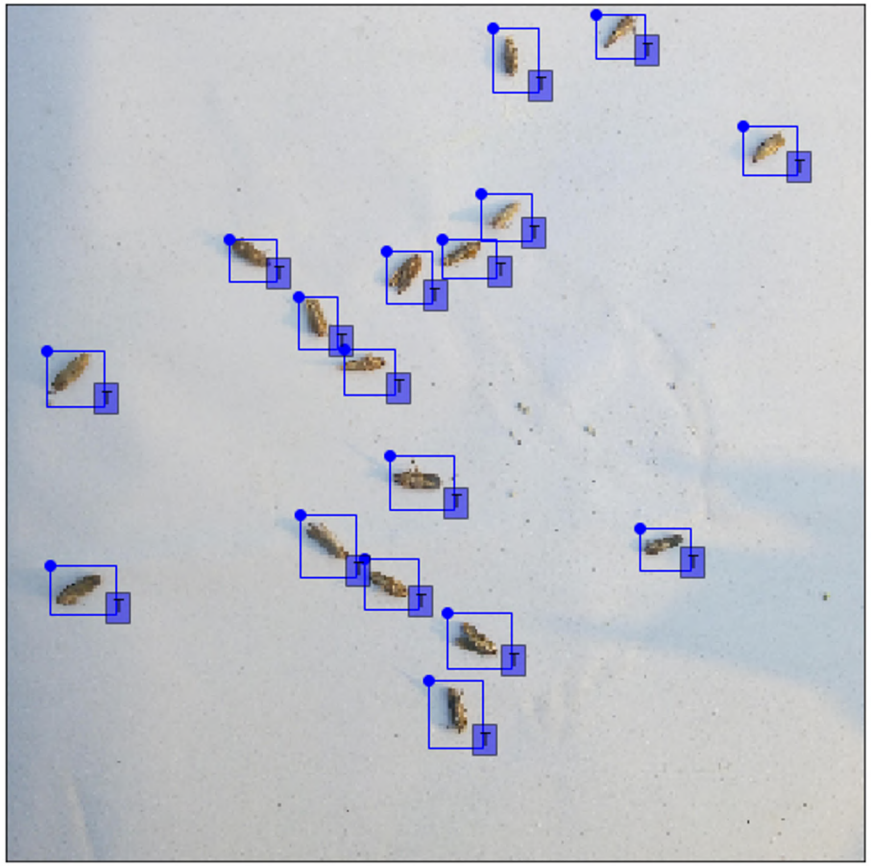
Data collection is time consuming, ops heavy

Building AI
2. Data quality

Building AI
3. Annotation



Human expert



AI

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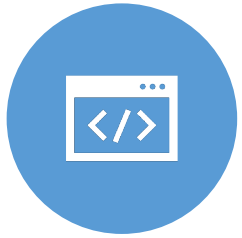
MEDIUM OF REACH (SMARTPHONES/ SMS/ COMMUNITY)

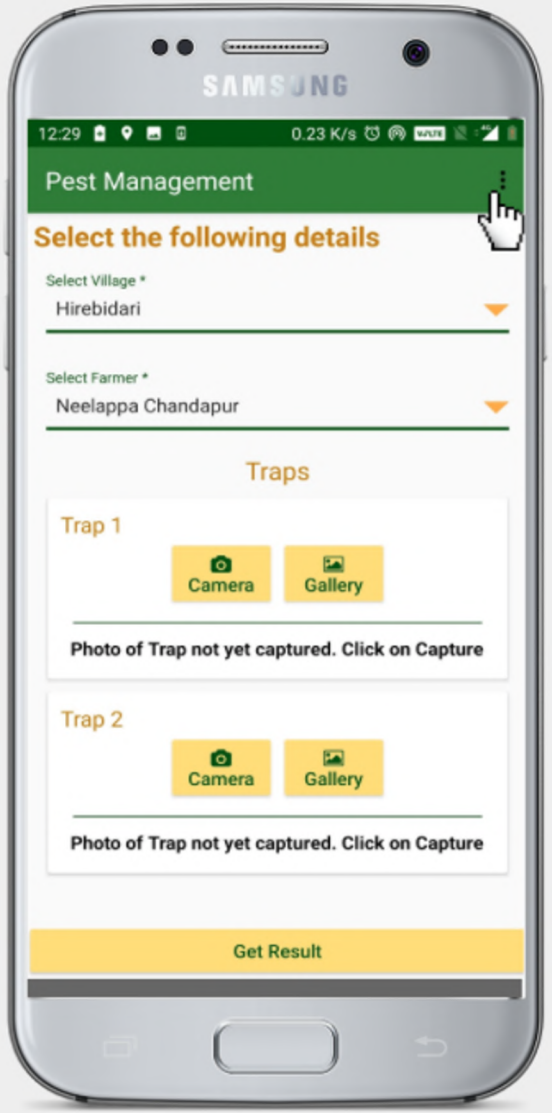
INTERNET CONNECTIVITY (AI ON EDGE)

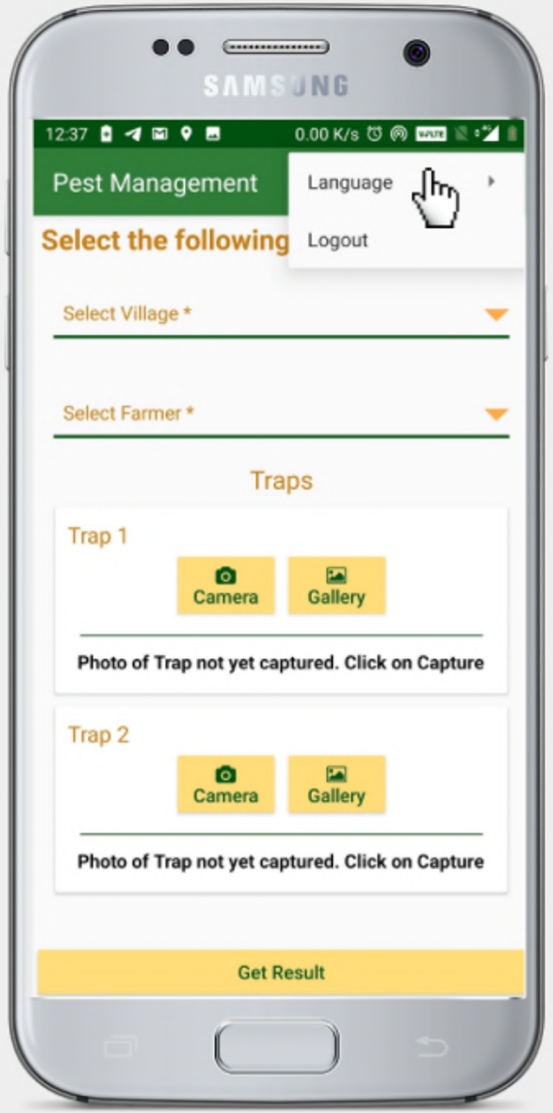
LANGUAGE (TRANSLATION AI, SPEECH AI)

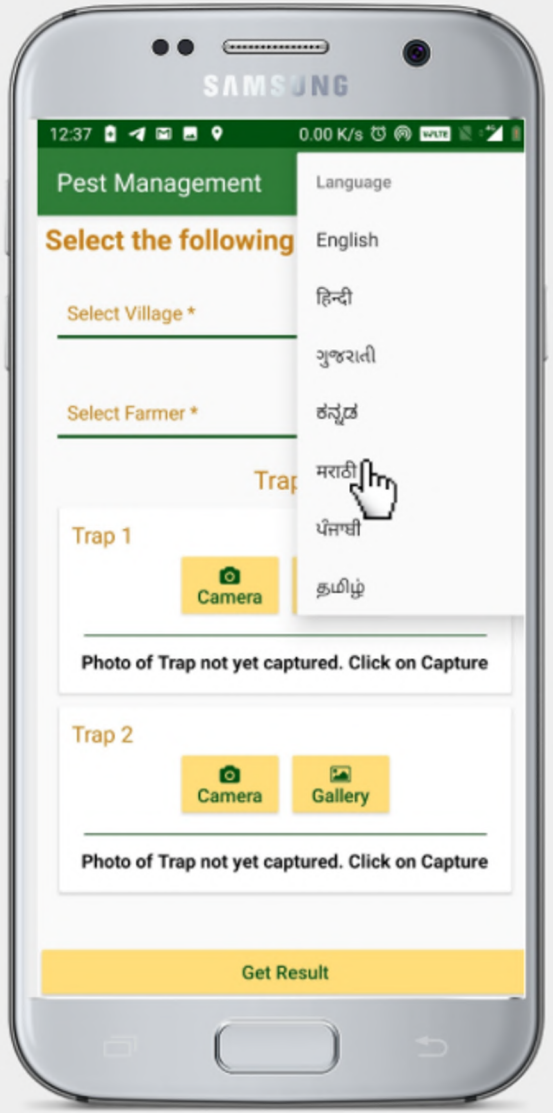


DIGITAL LITERACY (UI DESIGNS)

TRUST


SAMSUNG
12:29
0.23 K/s
Pest Management
Select the following details
Select Village *
Hirebidari
Select Farmer *
Neelappa Chandapur
Traps
Trap 1
Camera
Gallery
Photo of Trap not yet captured. Click on Capture
Trap 2
Camera
Gallery
Photo of Trap not yet captured. Click on Capture
Get Result


SAMSUNG
12:37
0.00 K/s
Pest Management
Language
Logout
Select the following
Select Village *
Select Farmer *
Traps
Trap 1
Camera
Gallery
Photo of Trap not yet captured. Click on Capture
Trap 2
Camera
Gallery
Photo of Trap not yet captured. Click on Capture
Get Result


SAMSUNG
12:37
0.00 K/s
Pest Management
Language
English
हिन्दी
ગુજરાતી
ಕನ್ನಡ
मराठी
ਪੰਜਾਬੀ
தமிழ்
Select the following
Select Village *
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Trap 1
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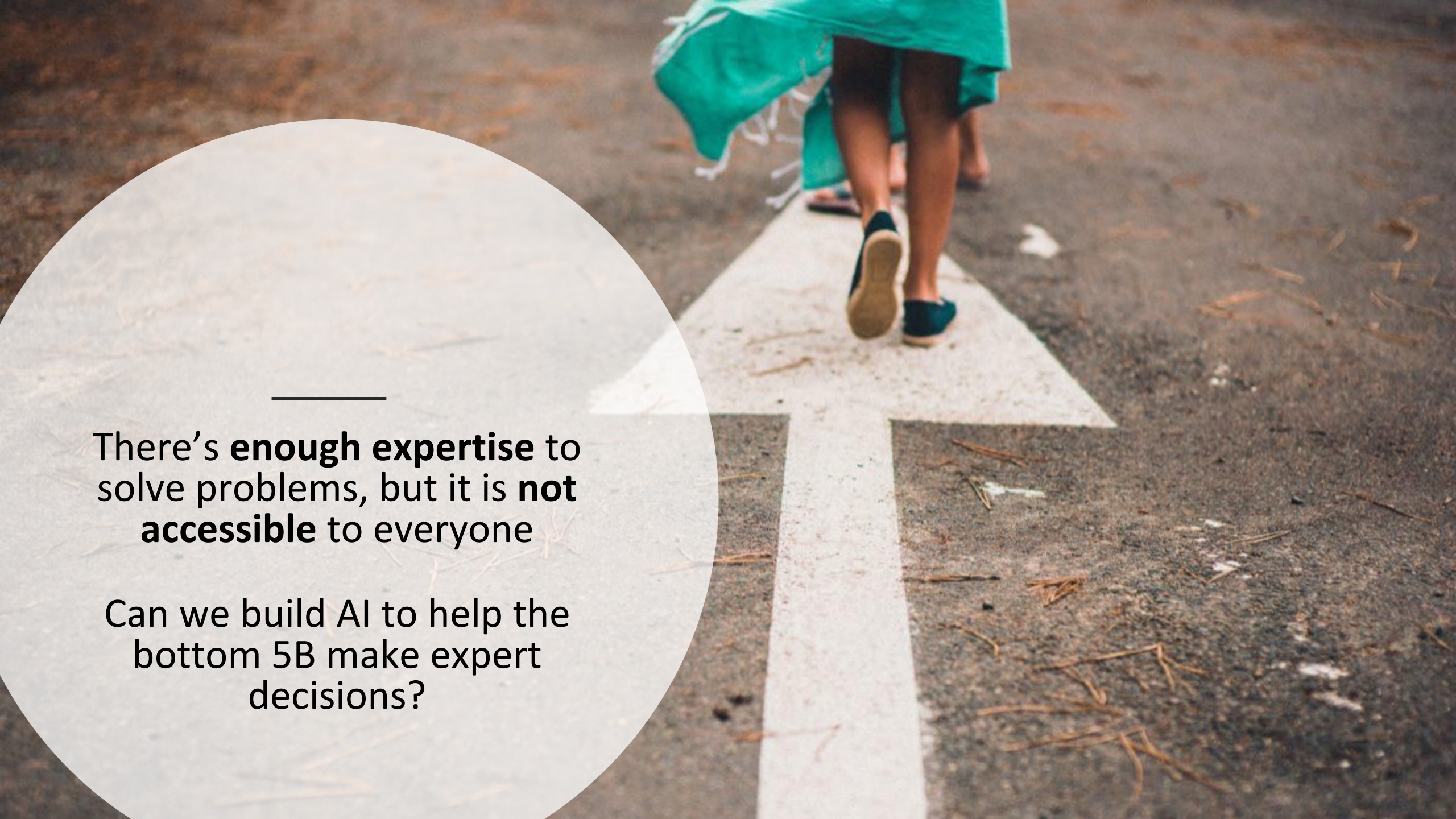
Making an impact

- Risk of error: tradeoffs

If we recommend x% less or more quantity that what is needed, how would it impact crop loss?

- Measuring impact takes time



There’s **enough expertise** to solve problems, but it is **not accessible** to everyone

Can we build AI to help the bottom 5B make expert decisions?