
OPEN DOMAIN QUESTION ANSWERING

A guide by Chip Heath & Dan Heath



1. Intro

→ Retrieval Task

Use Sentence Embeddings to retrieve the correct document.

→ Comprehension Task

BERT is a bi-directional transformer released in 2018, achieved state of the art results in NLP tasks.

→ Pipeline

Sentence Embeddings on top of BERT. This helps to extract the right document and then find the relevant phrase.

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Can we use this model for other tasks?

How it looks like in action!

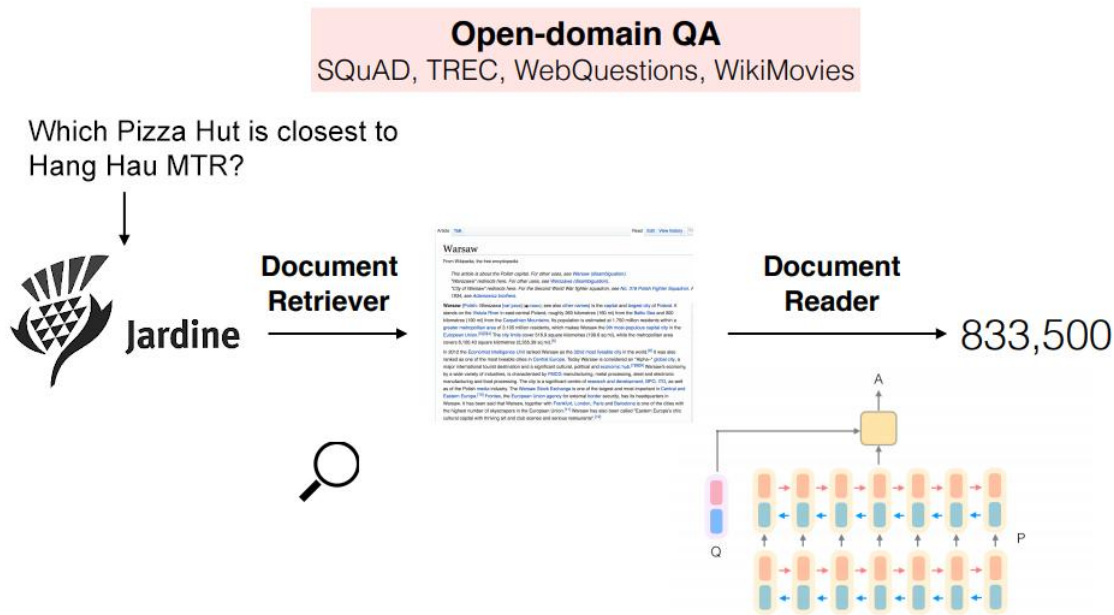
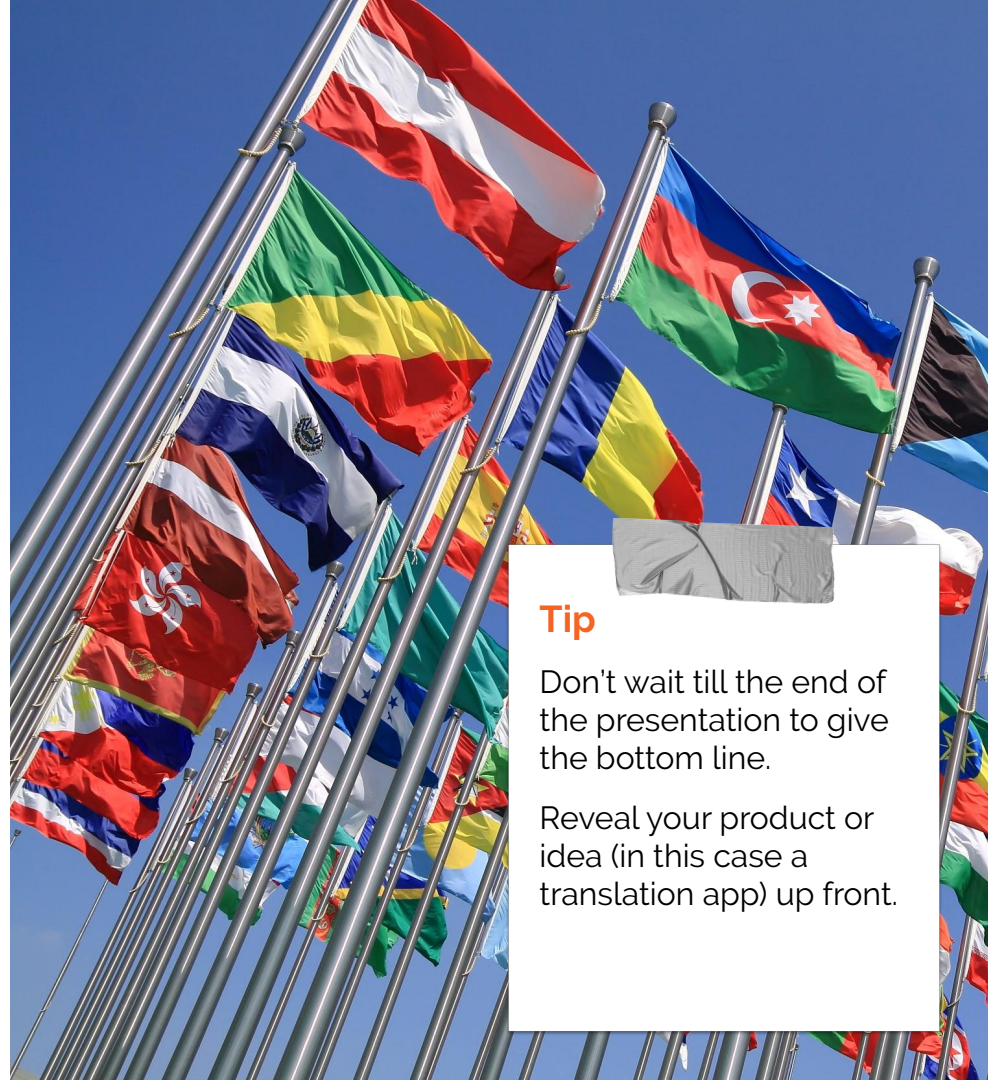


Figure 1: An overview of our question answering system DrQA.

Steps of Document Retrieval:

1. Train on SQUAD (Stanford Question Answering Dataset) to make model learn how to find correct phrase within the context.



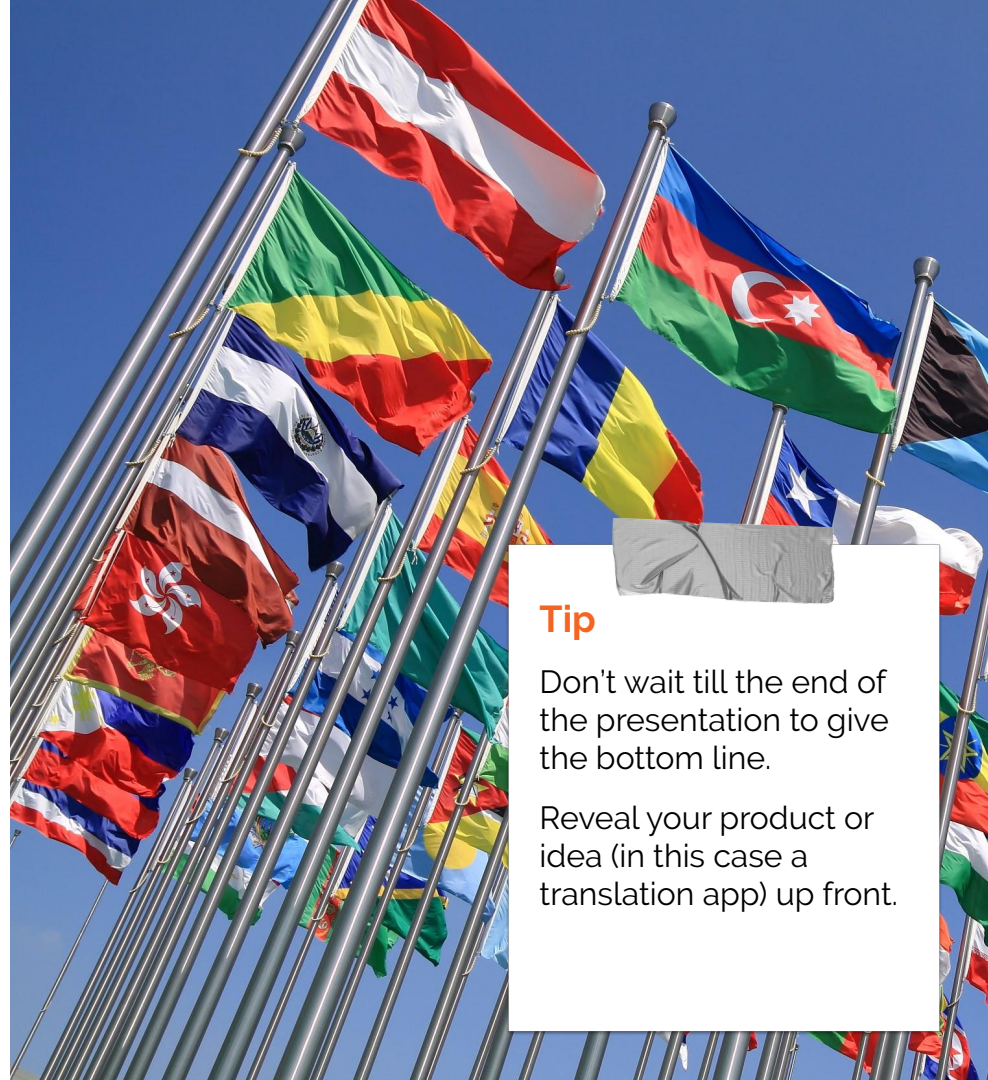
Tip

Don't wait till the end of the presentation to give the bottom line.

Reveal your product or idea (in this case a translation app) up front.

Steps of Document Retrieval:

2. Perform Matrix Computations between sentence embeddings and documents, and calculate relevance scores



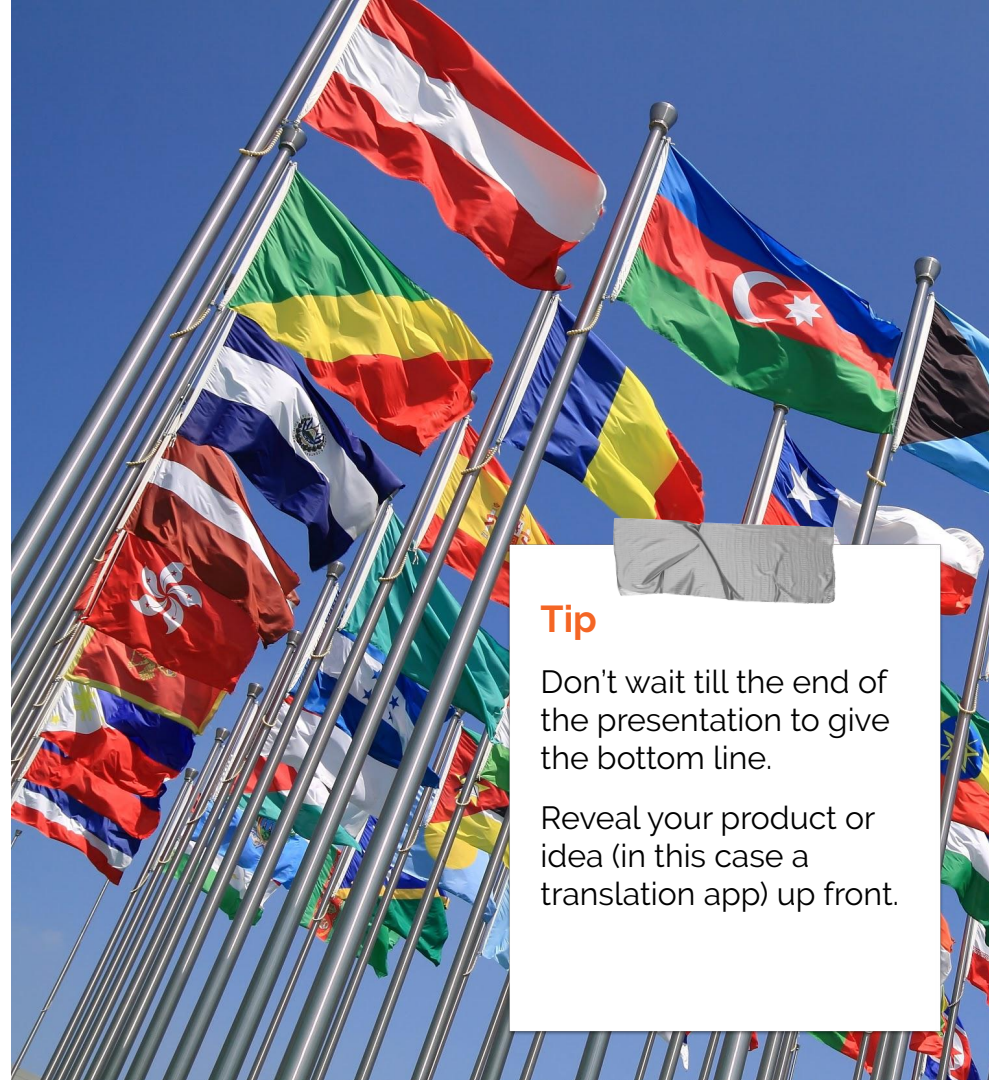
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Steps of Document Retrieval:

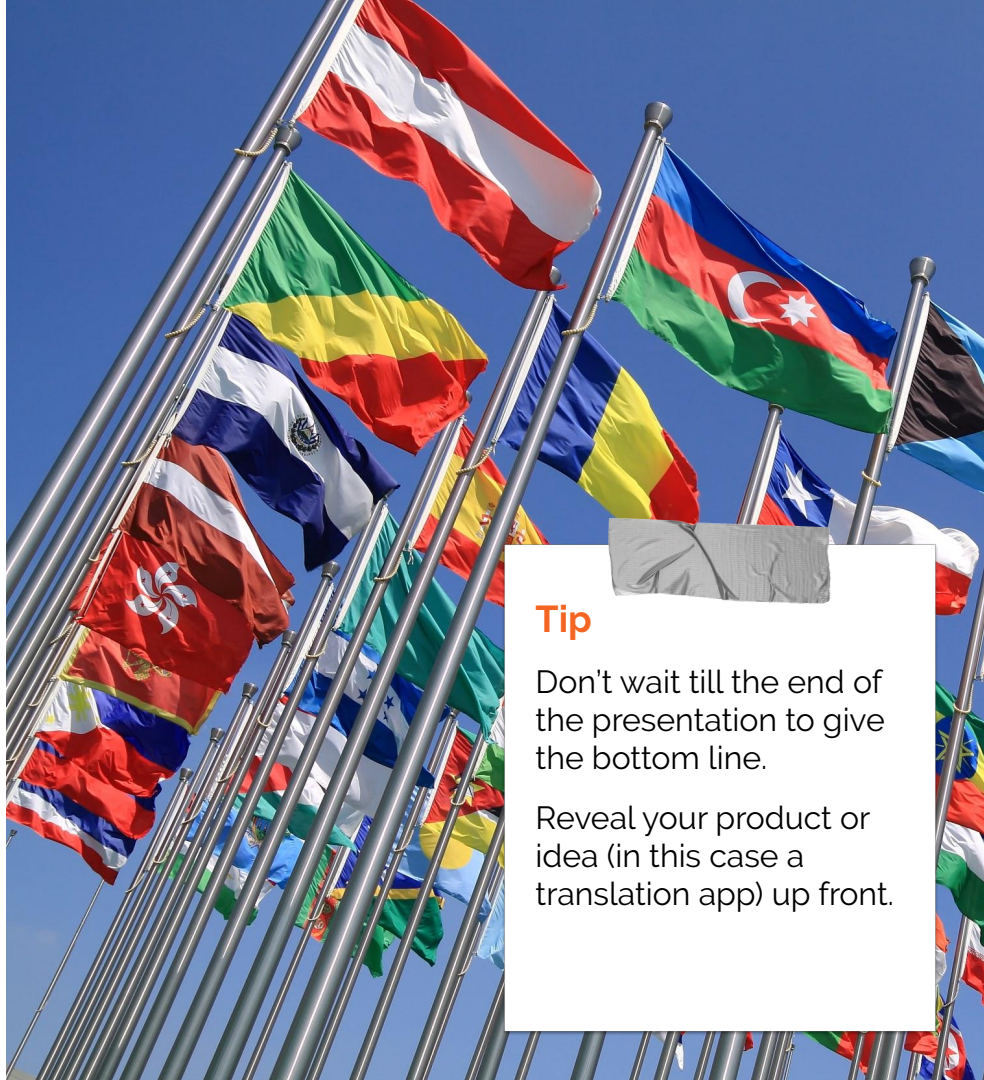
3. Retrieve the top-k related documents with cosine similarity metric



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2. Examples

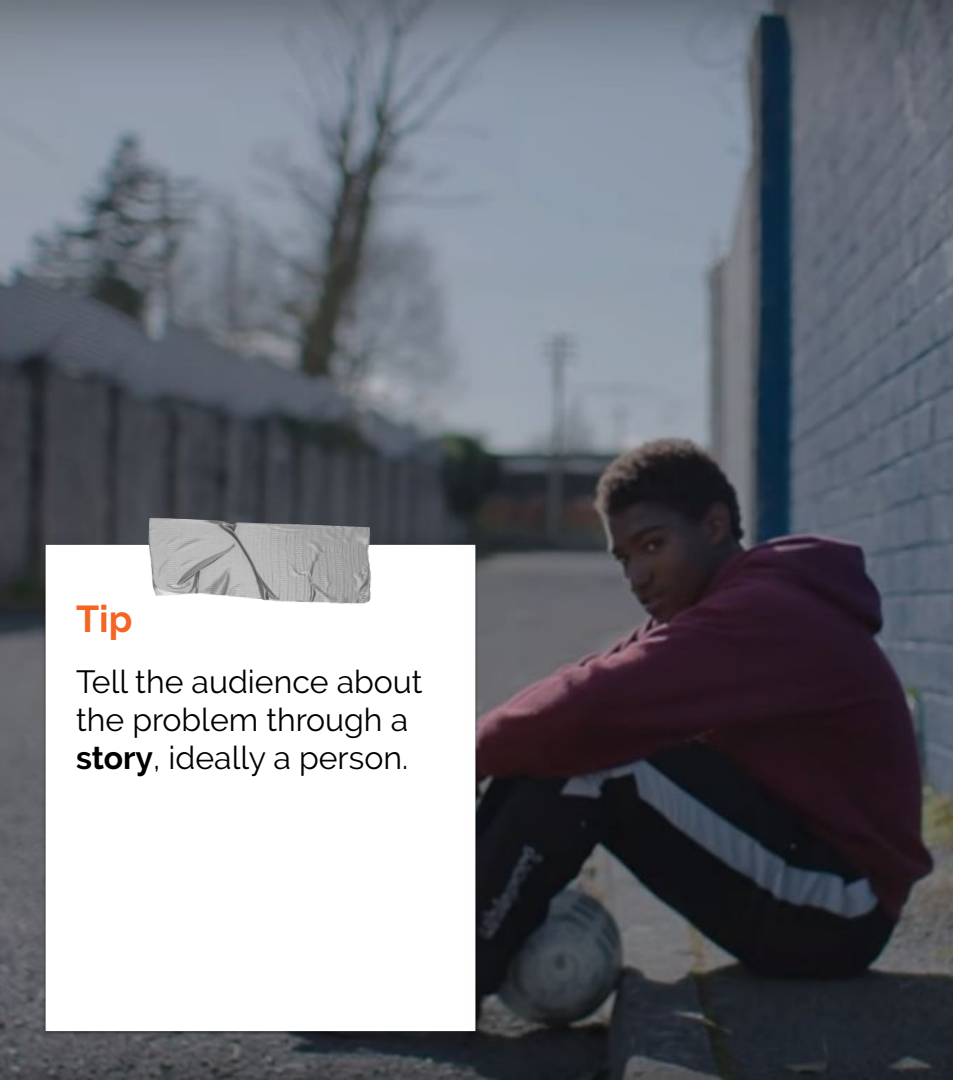
By the end of this section, your audience should be able to visualize:

→ **What**

What is the pain you cure with your solution?

→ **Who**

Show them a specific person who would benefit from your solution.



Tip

Tell the audience about the problem through a **story**, ideally a person.

Meet Alberto.

He recently moved from Spain to a small town in Northern Ireland.

He loved soccer, but feared he had no way to talk to a coach or teammates.

Meet Marcos.

He recently opened a camera shop near the Louvre in Paris.

Visitors to his store, mostly tourists, speak many different languages making anything beyond a simple transaction a challenge.

Story for illustration purposes only



Tip

If one example isn't sufficient to help people understand the breadth of your idea, pick a couple of examples.

A hand holding a smartphone against a dark red background. The text is overlaid on the image.

**A translation barrier
left Alberto feeling
lonely and hurt
Marco's business.**



Tip

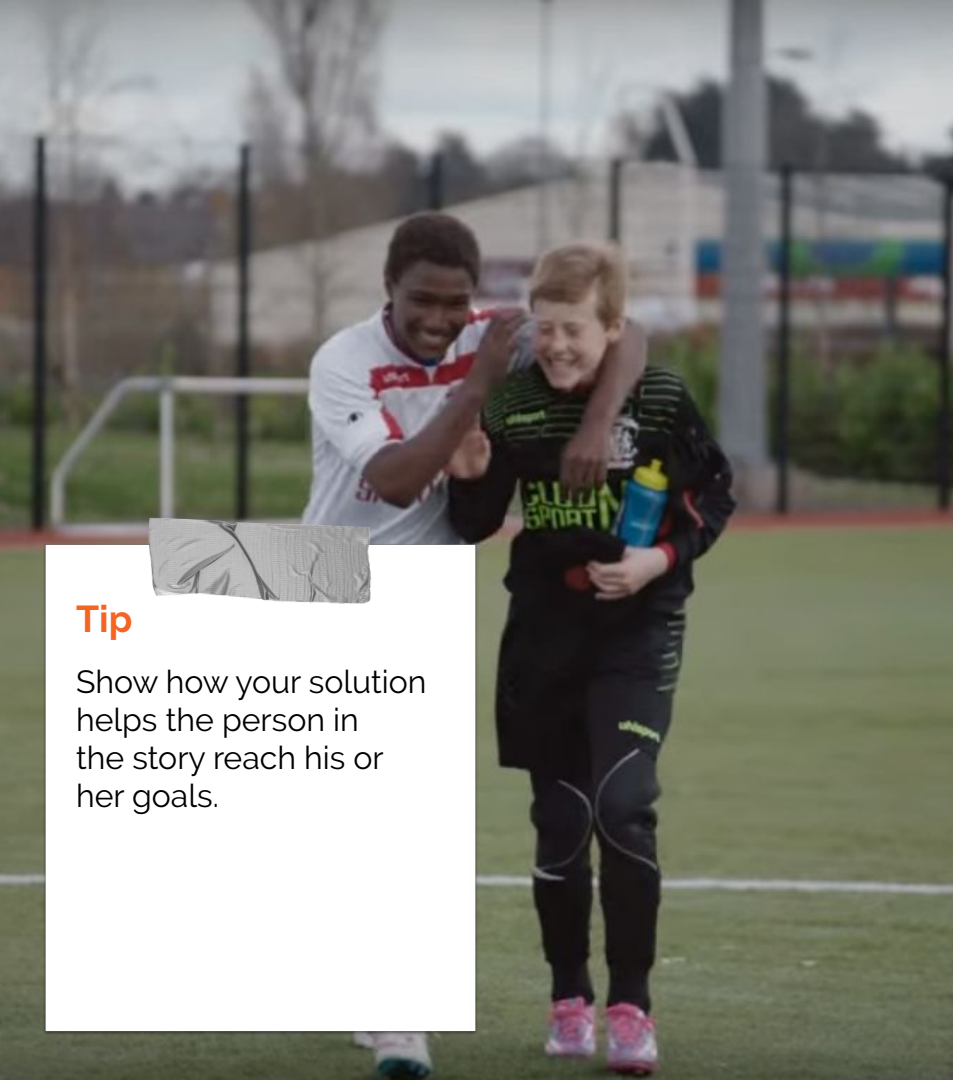
Ideally, speak of people in very different situations, but where each could benefit from your solution.

Then, Marcos discovered Google Translate

He has his visiting customers speak
their camera issues into the app.

He's able to give them a friendly,
personalized experience by
understanding exactly what they need.





Tip

Show how your solution helps the person in the story reach his or her goals.

A simple gesture

Coaches Gary and Glen knew no Spanish.

They used Google Translate to invite Alberto to join in... “Do you want to play?”... “Can you defend the left side?”

From outsider to star

Alberto scored 30 goals in 21 games. He is now being scouted by several professional clubs in the Premier League. And he's a favorite of the other boys on the team.

[See a short video on Alberto's story](#)



Tip

Stories become more credible when they use concrete details such as the specific complex moves Alberto learned through Translate and his 30 goals in 21 games performance stats.



3. Examples

People need to understand how rare or frequent your examples are.

Pick 1 or 2 statistics and make them as concrete as possible. Stats are generally not sticky, but here are a few tactics:

→ **Relate**

Deliver data within the context of a story you've already told

→ **Compare**

Make big numbers digestible by putting them in the context of something familiar

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It's no surprise Marcos uses Google Translate in his shop regularly.

There are **23**
officially recognized
languages in the EU.

Source: [theguardian.com](https://www.theguardian.com)



Tip

Don't let data stand alone. Always relate it back to a story you've already told, in this case, Marco's shop.

More than 50 million Americans travelled abroad in 2015

THAT'S MORE THAN THE POPULATION OF **CALIFORNIA** AND **TEXAS** COMBINED

Source: travel.trade.gov



Tip

When a number is too large or too small to easily comprehend, clarify it with a comparison to something familiar.



4. Closing

Build confidence around your product or idea by including at least one of the these slides:

→ **Milestones**

What has been accomplished and what might be left to tackle?

→ **Testimonials**

Who supports your idea (or doesn't)?

→ **What's next?**

How can the audience get involved or find out more?

Milestones

October 2014

Translate web pages with
Chrome extension

October 2015

Translate text within an app

2014

2015

August 2015

Translate conversations
through your Android
watch

November 2015

Translate written text from
English or German to Arabic
with the click of a camera

What people are saying

**With this app, I'm
confident to plan
a trip to rural
Vietnam**

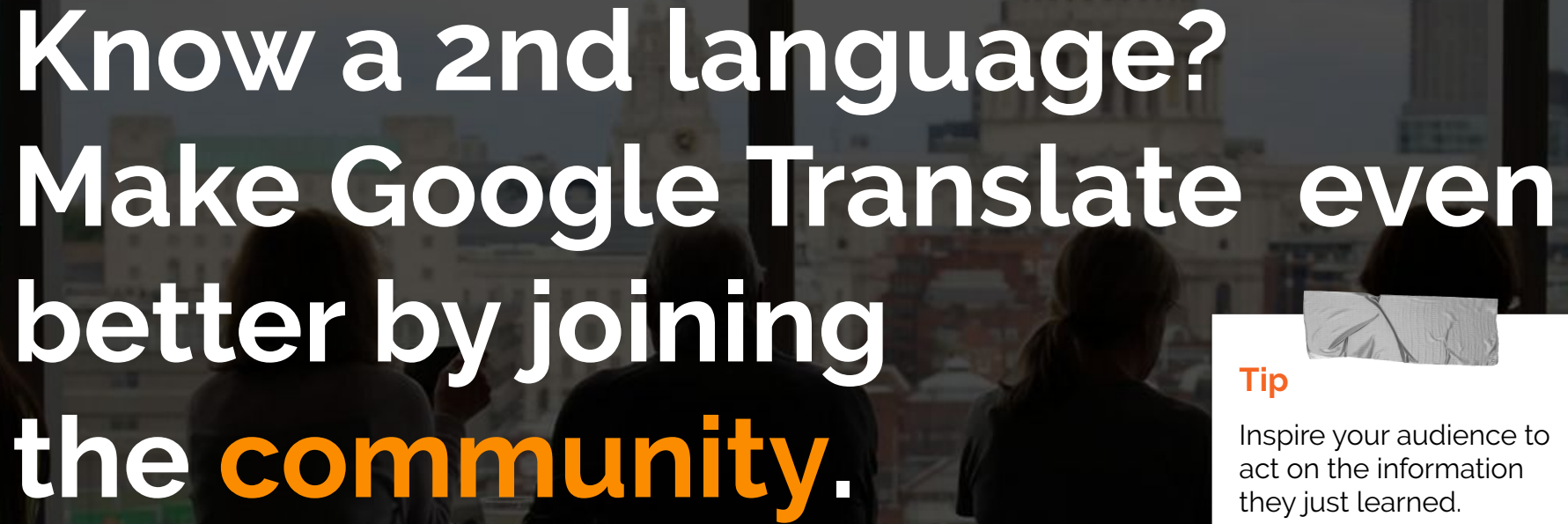
Wendy Writer, CA

**Visual translation
feels like magic**

Ronny Reader, NYC

**Translate has
officially inspired
me to learn
French**

Abby Author, NYC



Know a 2nd language?
Make Google Translate even
better by joining
the **community**.



Tip

Inspire your audience to act on the information they just learned.

Depending on your idea, this can be anything from downloading an app to joining an organization.



Good luck!

We hope you'll use these tips to go out and deliver a memorable pitch for your product or service!

For more (free) presentation tips relevant to other types of messages, go to heathbrothers.com/presentations

For more about making your ideas stick with others, check out our book!

