

# Data and Language Innovation at Skype

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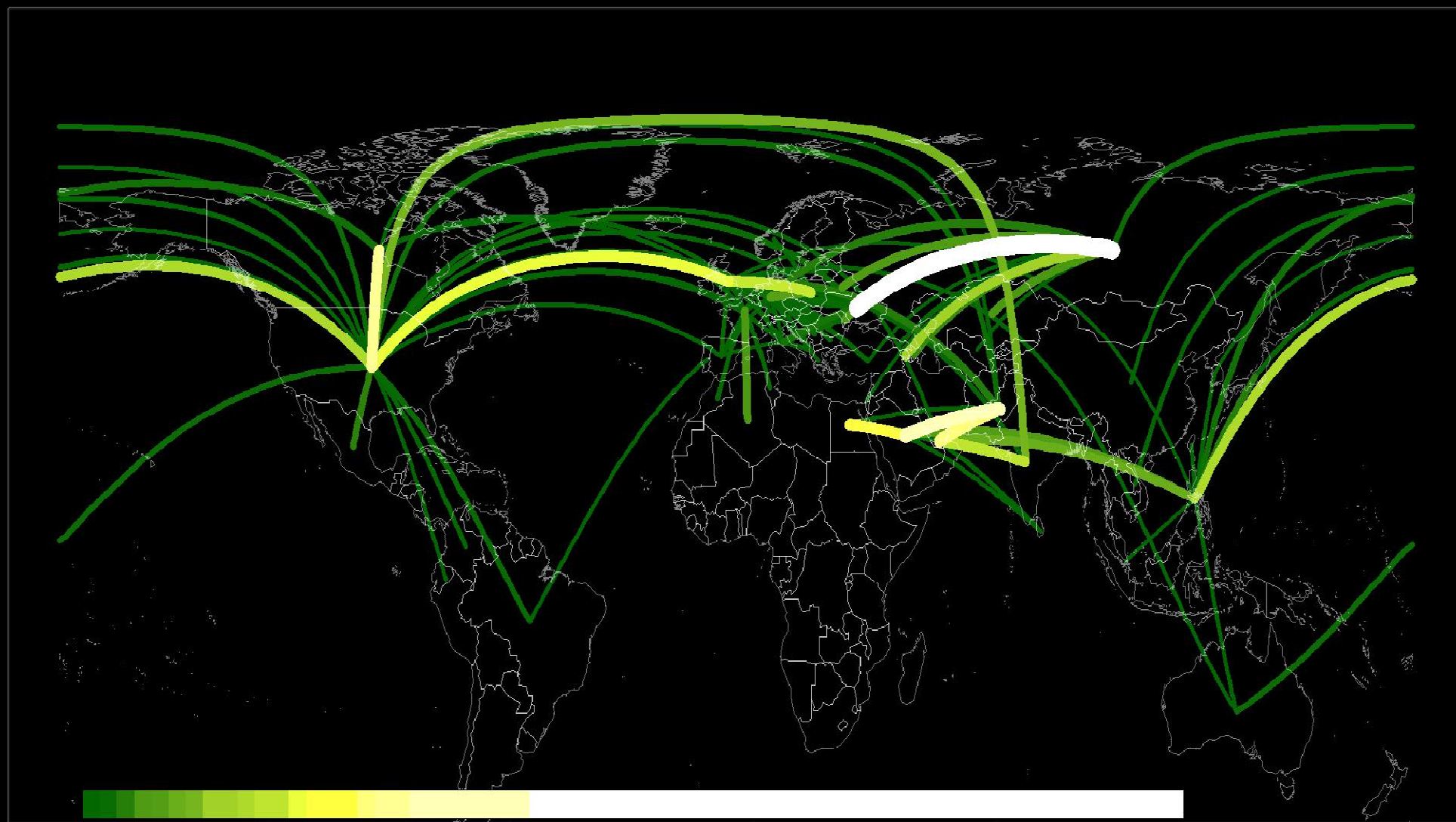
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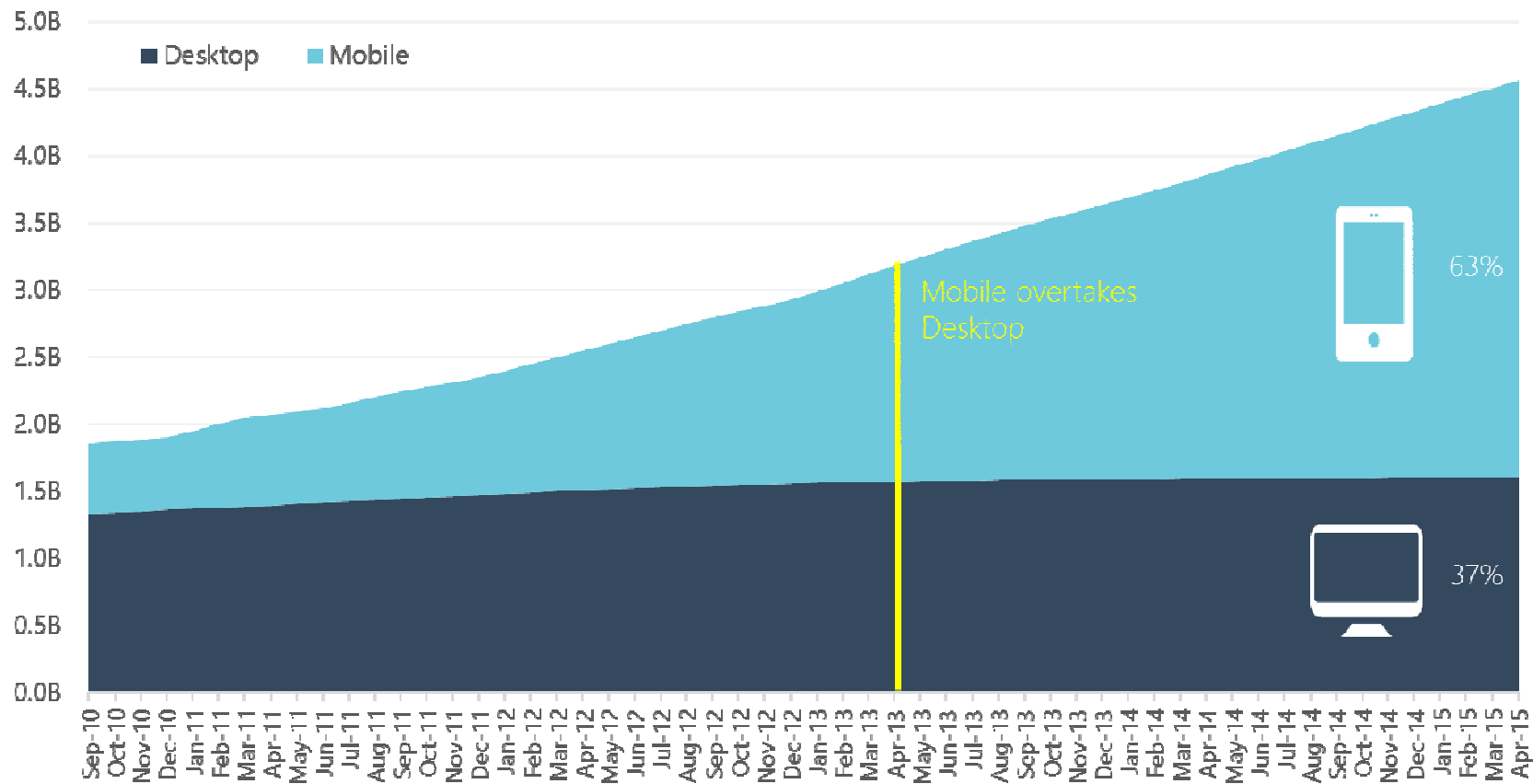
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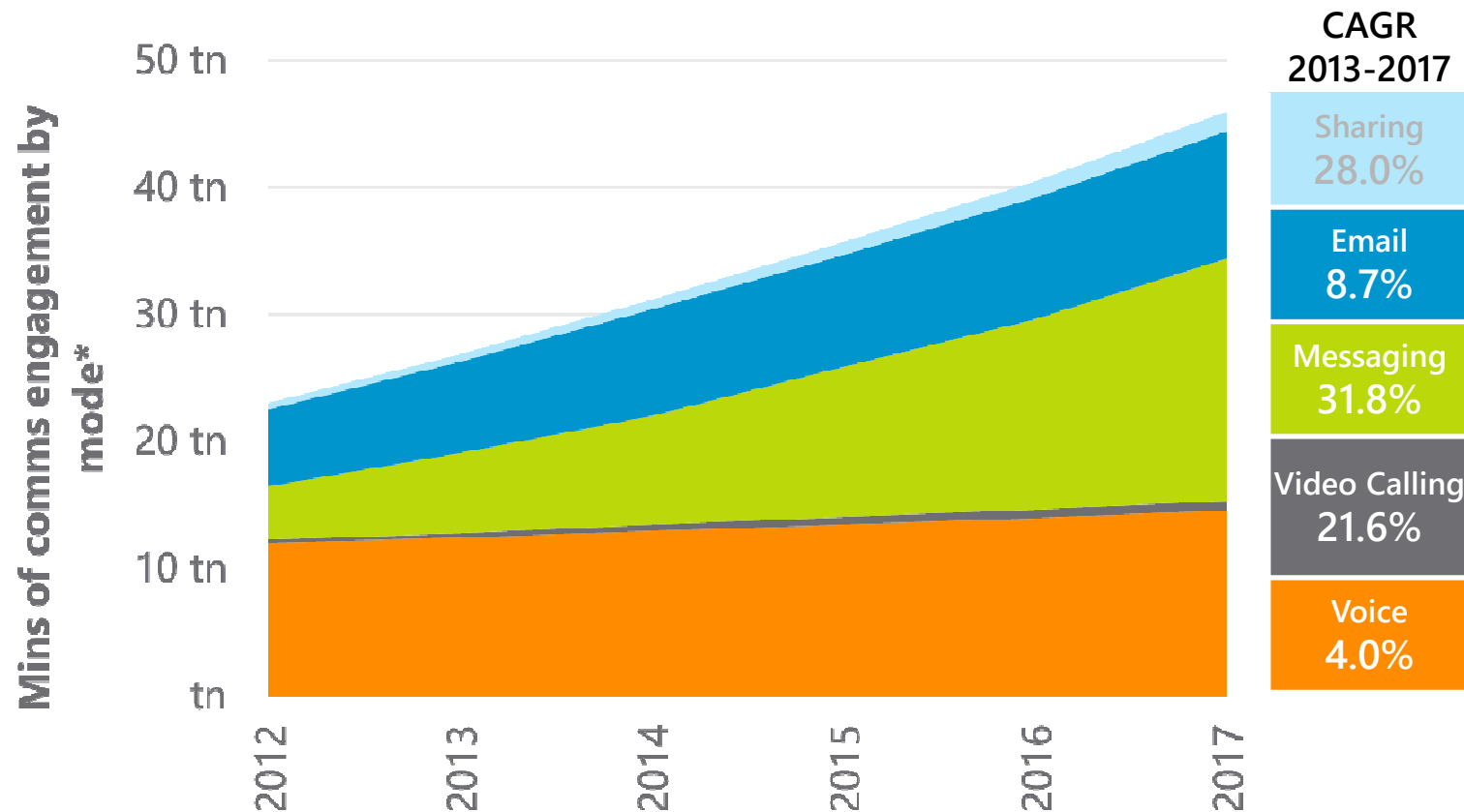


# The Internet is changing



vs. 7Bn  
global  
population

# Communication is changing

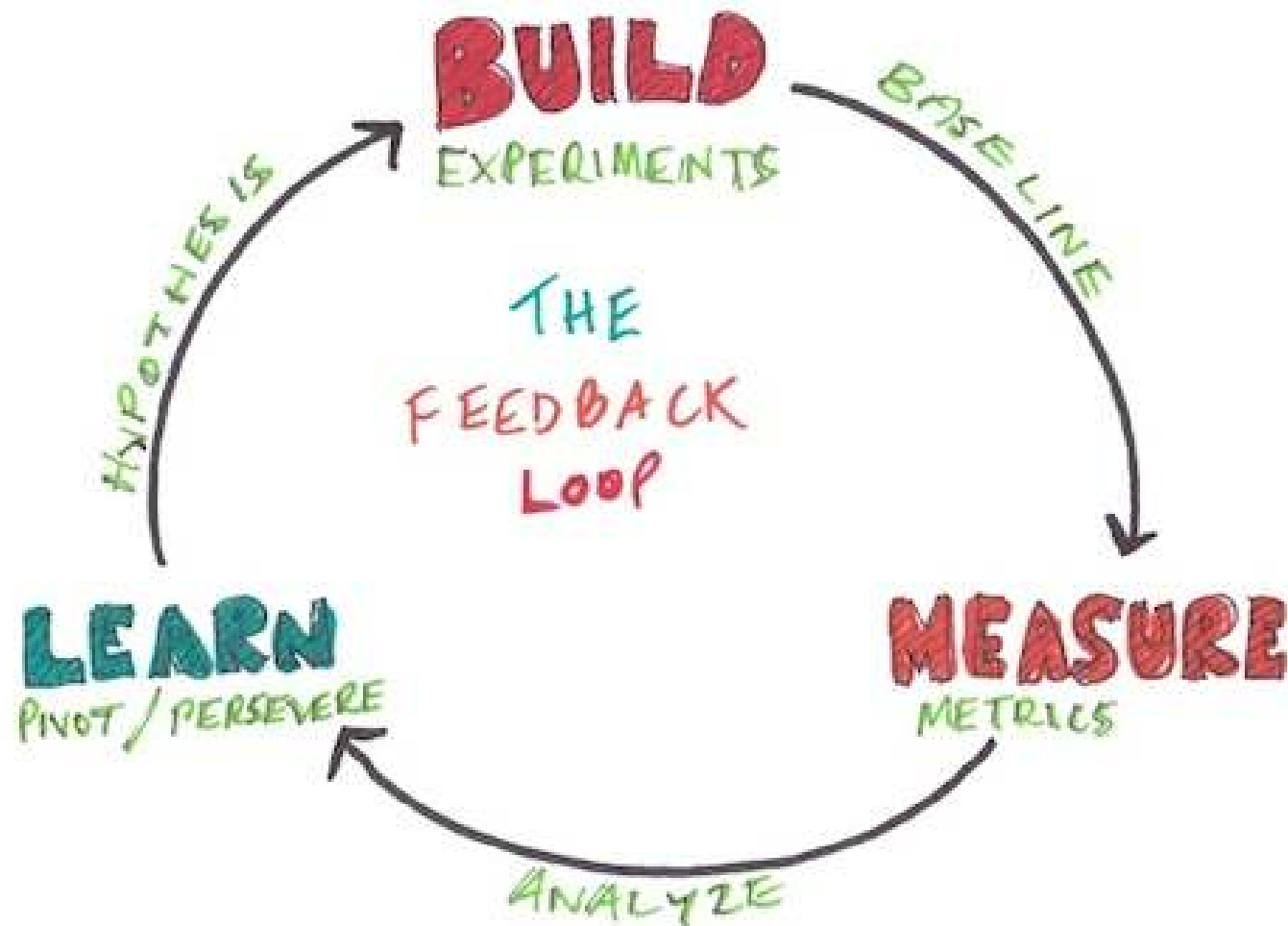




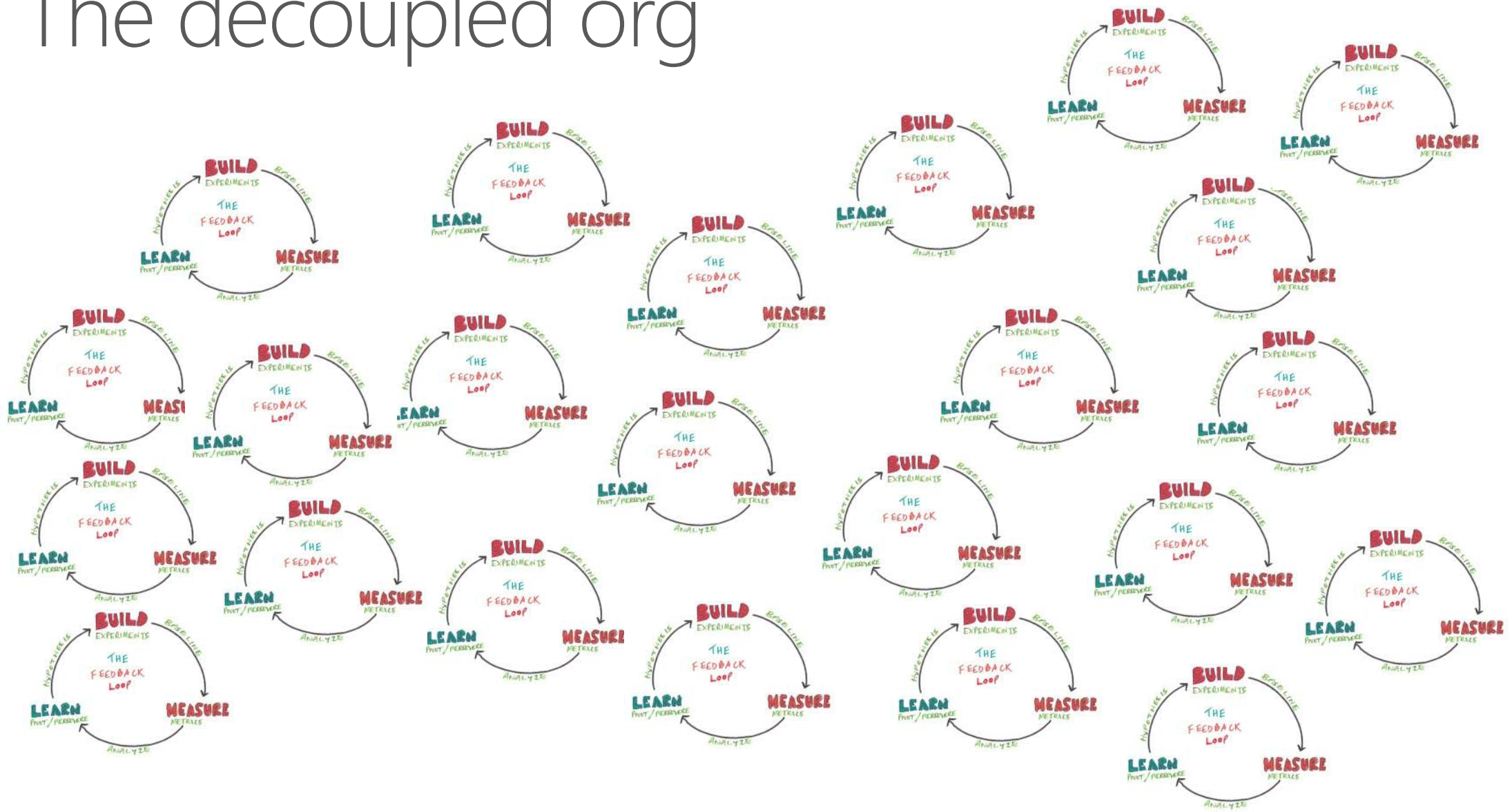
# The competition is changing



# The Agile and Lean approach



# The decoupled org





# Scaling the data strategy

## 1. Data management

- Do you have a scalable data platform?
- Do you have good rigour and quality?
- Do you support rapid innovation?

## 2. People

- What skills do you need in the core team versus the whole org?
- Centralisation vs distribution

## 3. Culture

- How do you drive a performance focus with accountability of results?
- How do you create an environment which is open to learning?

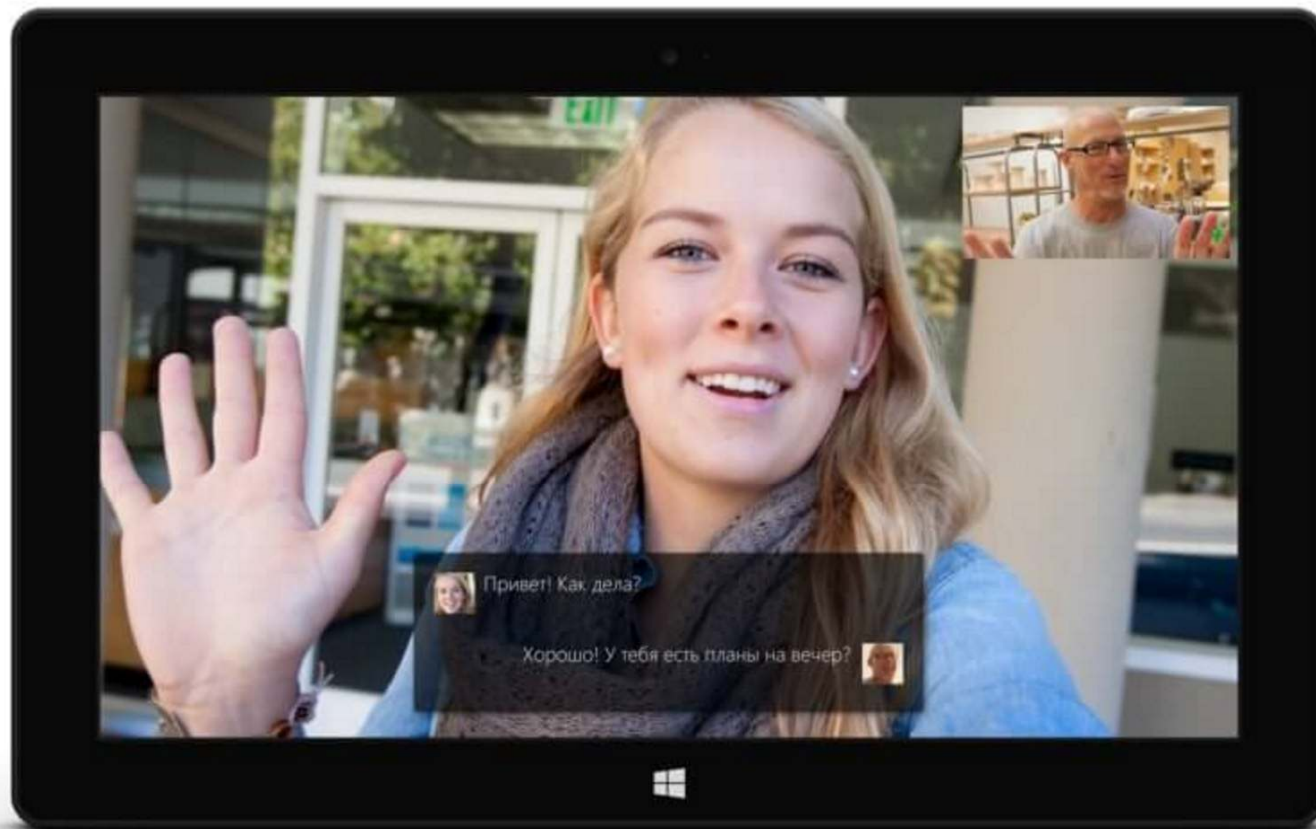
# Re-engineering conversation: Solving the language barrier



# Microsoft's Skype Translator now speaks Russian

JORDAN NOVET    OCTOBER 11, 2016 12:00 AM

TAGS: MICROSOFT, SKYPE, SKYPE TRANSLATOR



Now speaking...

- English
- French
- German
- Italian
- Mandarin
- Portuguese
- Spanish
- Arabic
- Russian
- +50 text languages



# Future for Translator

## Recent shift to Neural Network

- Neural networks are making major advances in translation quality over the existing industry-standard Statistical Machine Translation (SMT) technology.
- Neural networks better capture the context of full sentences before translating them, providing much higher quality and more human-sounding output.
- Available as Microsoft Translator API on Azure

The screenshot shows the Microsoft Translator 'Try & Compare' interface. At the top, there's a dark header with the Microsoft Translator logo, a 'Text' button, and a 'Try & Compare' button. Below the header, the 'Try & Compare' section is highlighted in green. It features a sub-header 'Artificial Intelligence, powered by neural networks'. The main input area is for Arabic, with a dropdown menu showing 'Arabic' and a '50/1000' character count. The input text is 'كيف يقرأ صندوق النقد الدولي حالة الاقتصاد السعودي؟'. Below the input area is a green 'Translate & Compare!' button. The output area is divided into two columns. The left column is for English, with a dropdown menu showing 'English' and a 'Neural' button. The output text is 'How does the International Monetary Fund read the situation of the Saudi economy?'. The right column is for French, with a dropdown menu showing 'French' and a 'Statistical' button. The output text is 'Read how the IMF Saudi economy?'.

Microsoft Translator

Text Try & Compare Apps

Try & Compare

Artificial Intelligence, powered by neural networks

Arabic

كيف يقرأ صندوق النقد الدولي حالة الاقتصاد السعودي؟

50/1000

Translate & Compare!

English French

How does the International Monetary Fund read the situation of the Saudi economy?

Neural

Read how the IMF Saudi economy?

Statistical

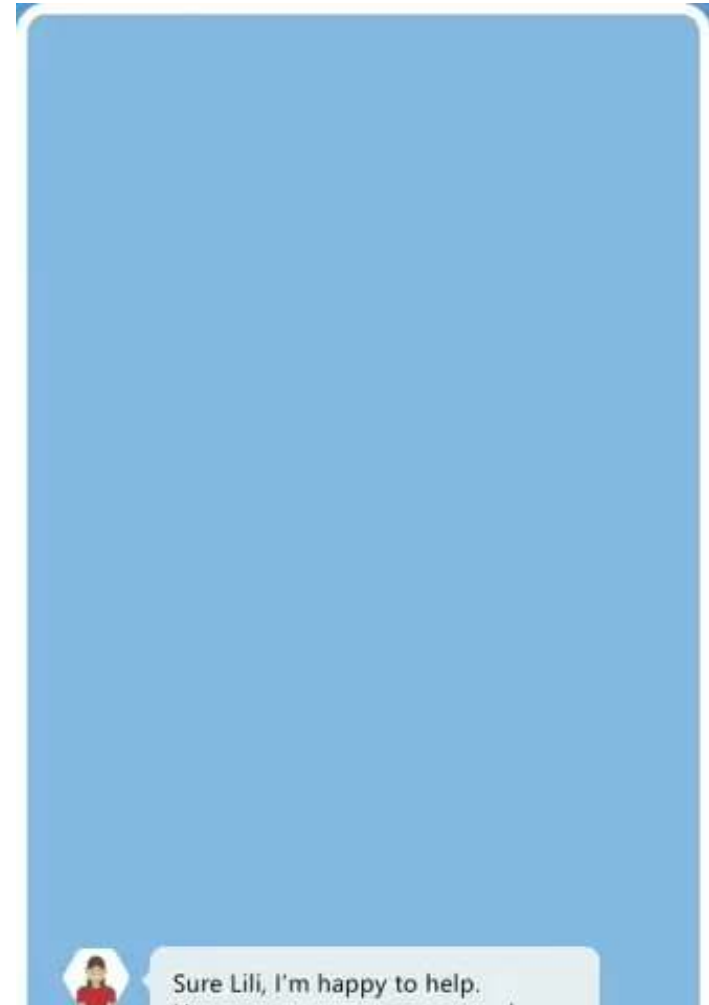


# Re-engineering conversation: AI powered Conversation



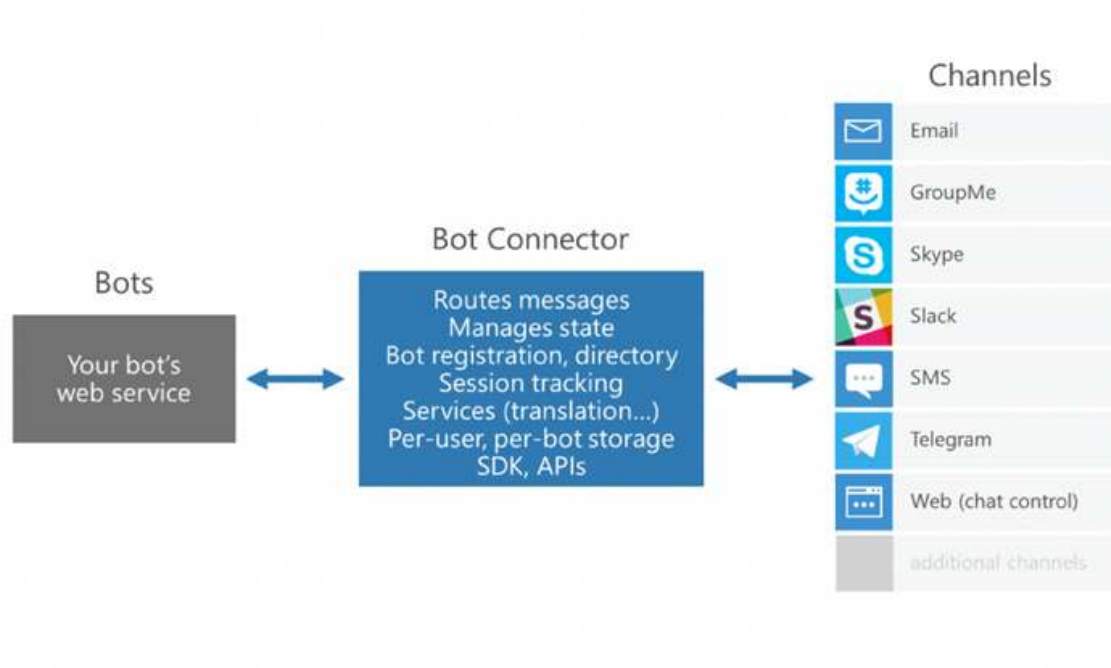
# "Bots are the new Apps"

kik.

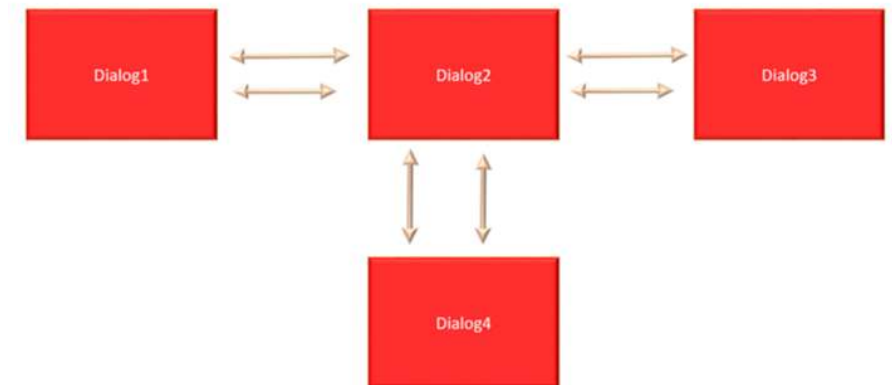


# Bot Framework: build once, talk everywhere

## General purpose bot framework



## Simple dialogue model



<https://dev.botframework.com/>

# Language Understanding Intelligence Service

Create language models to map natural language to intents in your app. Available as API with other cognitive services

Type a sentence:

how is the weather in cairo



Go

LUIS response ?

```
{
  "query": "how is the weather in cairo",
  "topScoringIntent": {
    "intent": "GetCurrentWeather",
    "score": 0.491221875,
    "actions": [
      {
        "triggered": true,
        "name": "GetCurrentWeather",
        "parameters": [
          {
            "name": "location",
            "required": true,
            "value": [
              {
                "entity": "cairo",
                "type": "builtin.geography.city"
              }
            ]
          }
        ]
      }
    ]
  }
}
```

<https://www.microsoft.com/cognitive-services>

# Growing set of APIs for AI

Vision	Speech	Language	Knowledge	Search
Computer Vision	Bing Speech	Bing Spell Check	Academic	Bing Autosuggest
Content Moderator	Custom Recognition	Language Understanding	Entity Linking	Bing Image Search
Emotion	Speaker Recognition	Linguistic Analysis	Knowledge Exploration	Bing News Search
Face		Text Analytics	Recommendations	Bing Video Search
Video		Translator		Bing Web Search
		WebLM		

Still looking for the right API?   [See the entire collection >](#)



# Thank you



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