

Believe in Humans

1. Humans and Language

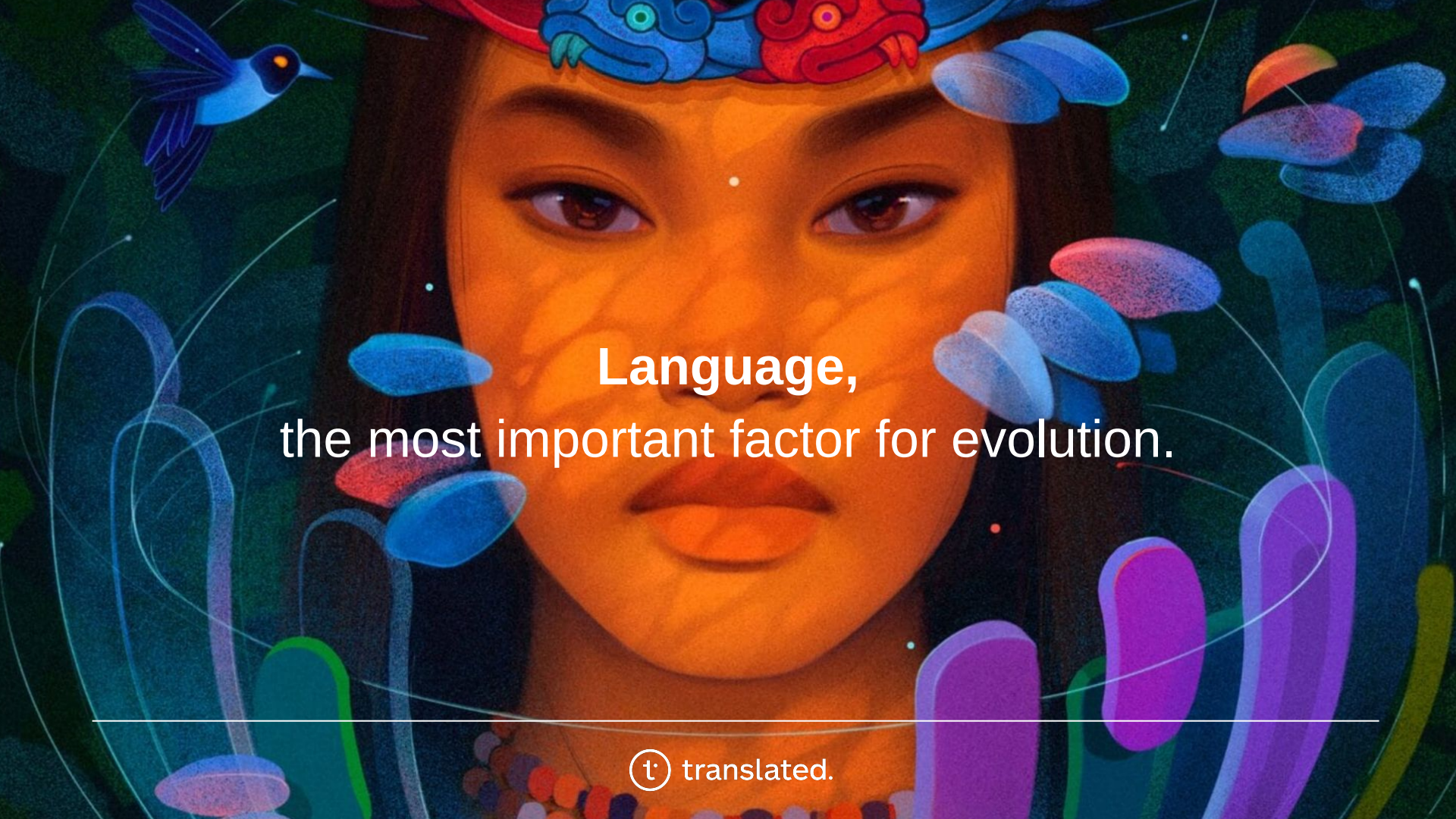
The Role of Language

Key role of language in AI as
a predictor of what will happen
across the broader tech sector

Why is **language** so important?

Even the **simplest biological** units have developed **motor control**.



A vibrant, stylized illustration of a woman's face, which is the central focus. She has a warm, orange-toned complexion and dark, expressive eyes. She wears a colorful headband with blue and red patterns. A small blue hummingbird with an orange beak is flying in the upper left corner. The background is dark green with various colorful, abstract shapes and patterns, including blue and purple leaf-like shapes and a rainbow-colored flower in the upper right. The overall style is artistic and modern.

Language,
the most important factor for evolution.

Understand and be understood

2. Evolution of AI



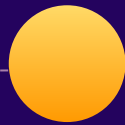
1936 - Alan Turing
Enigma as a language translator

HCI in Language Translation



1999

Started
Translated



2006

The **first**
AI to really
help
Translators



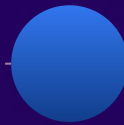
2011

Adaptive
Machine
Translation



2017

Transformer,
larger
context.



2025

Approaching
singularity on
written text.

What is it happening
in **language** now?

So that we can predict
what is going to happen.

Computation

Data

Algorithm

AMTA 2022



Human
equivalence



100B
words



1T
words

TRANSFORMER
Adaptive

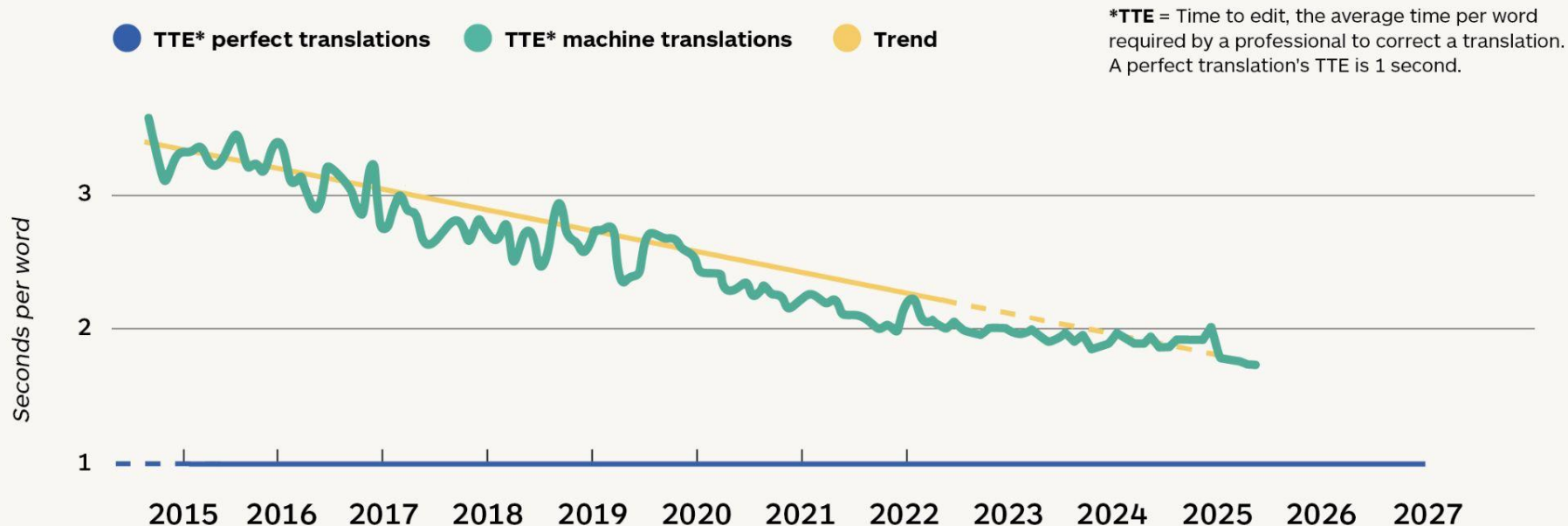


10X

	Computation	Data	Algorithm
AMTA 2022		100B words	TRANSFORMER Adaptive
2025		10T words	MoE (x5)
Human equivalence		1T words	10X

Progress to AI in Singularity

Measured using Time to Edit in machine translation.



Source: Translated's data from **2B** sentences edited by **136K** top translators using Matecat and ModernMT.

AI Milestones

AI Milestones

Perception

Gen AI

**Digital
Agents**

**Physical
Agents**

Perception

Computers recognize
information.

Understand it.

Classify it.



AI Milestones

Perception

Gen AI

**Digital
Agents**

**Physical
Agents**

Generative AI

Multimodal, an AI able to learn both images and Language.

The ability of AI to be multimodal as well as able to translate and generate content enabled the Generative AI revolution.

AI Milestones

Perception

Gen AI

**Digital
Agents**

**Physical
Agents**

Agentic AI in the Digital World

It's the ability to understand, perceive, reason, plan, solve problems step by step, explore, acquire new information, seek support, and use tools.

Today, all of this is made possible by Agentic AI.



AI Milestones

Perception

Gen AI

**Digital
Agents**

**Physical
Agents**

Agentic AI in the Physical World

AI sensing the environment
and generating motion

Impact on Translation

Translation Memories are becoming useless

Context, Errors, Sync

What's new in Human Computer Interaction?
It's trust.



Translate text ✓



Translate documents

Incognito mode



English ▾

 Add context



Italian ▾

Faithful ▾

Type or paste your text here

Translation



Translation has a big latent demand

Polarization in Wealth

- AI risks amplifying inequalities between rich and poor.
- Access to AI tools = opportunity vs exclusion.
- Building inclusive products means fair access and design for all.

**TRANSLATOR'S
INCOME \$30K**

```
graph TD; A[TRANSLATOR'S INCOME $30K] --> B[$0]; A --> C[$120K];
```

A diagram illustrating a financial split. At the top, a purple rounded rectangle contains the text 'TRANSLATOR'S INCOME \$30K'. Two arrows originate from the bottom of this rectangle: a white arrow pointing down and to the left to the text '\$0', and an orange arrow pointing down and to the right to the text '\$120K'.

\$0

\$120K

Empowering humans is not enough

Sense of Purpose

AI must align with human goals, ethics, and meaning.

Beyond efficiency: empowering creativity, education, sustainability.

Purpose-driven AI serves people and society.sign for all.

**The more
interesting
the work**

**The more top
translators stay**

**PERFORMANCE
IS NOT ENOUGH**

Better quality data

The more interesting the work,
the more top translators stay with us,
and the better the quality of the data
for artificial intelligence.

Market Size	Content Type	Tier 1 (Top 10 Langs)	Tier 2 (Extra 20 Langs)	Tier 3 (Extra 30 Langs)	Tier 4 (Extra 150 Langs)
~ \$0,3B	Conversational Chats, Support Target EPT: <20 Target Turnaround: <1s	Lara EPT (in/out): 2 / 2 Cost: \$0.0001 / word Turnaround: 1 sec	Lara EPT (in/out): 8 / 8 Cost: \$0.0001 / word Turnaround: 1 sec	Lara EPT (in/out): 20 / 20 Cost: \$0.0001 / word Turnaround: 1 sec	Lara + Light Review EPT (in/out): 50 / 20 Cost: \$0.05 / word Turnaround: Hours
~ \$1B	User Generated Content Reviews, Social, Product Descriptions, Knowledge Bases Target EPT: <20 Target Turnaround: Hours	Lara EPT (in/out): 8 / 8 Cost: \$0.0001 / word Turnaround: 1 sec	Lara EPT (in/out): 20 / 20 Cost: \$0.0001 / word Turnaround: 1 sec	Lara + Light Review EPT (in/out): 50 / 20 Cost: \$0.05 / word Turnaround: Hours	Lara + Mid Review EPT (in/out): 100 / 20 Cost: \$0.10 / word Turnaround: Hours
~ \$20B	General Content Technical Content Target EPT: <8 Target Turnaround: 48h	Lara + Mid Review EPT (in/out): 20 / 8 Cost: \$0.10 / word Turnaround: Hours	Lara + Deep Review EPT (in/out): 50 / 8 Cost: \$0.12 / word Turnaround: 24h	Lara + 2 Deep Reviews EPT (in/out): 100 / 8 Cost: \$0.16 / word Turnaround: 48h	Lara + 2 Deep Reviews EPT (in/out): 200 / 8 Cost: \$0.16 / word Turnaround: 48h
~ \$40B	Premium Content Marketing, Legal, UIs and other high investment content. Target EPT: <2 Target Turnaround: 72h	Lara + 2 Deep Reviews EPT (in/out): 20 / 2 Cost: \$0.16 / word Turnaround: 48h	Lara + 3 Deep Reviews EPT (in/out): 50 / 2 Cost: \$0.20 / word Turnaround: 72h	Lara + 3 Deep Reviews EPT (in/out): 100 / 2 Cost: \$0.20 / word Turnaround: 72h	Lara + 3 Deep Reviews EPT (in/out): 200 / 2 Cost: \$0.20 / word Turnaround: 72h

What are
the problems
we want
to solve

Perception

Solved

Gen AI

Hallucinations

Freshness

Physical
Grounding

Digital Agents

Multimodality

Success Rate

Learn by doing
Learning Parallelism
Func. Connectivity

Physical Agents

Robots

Universal
Modality

What are the problems
we want to solve

Universal Tokenization

Current tokenization is ambiguous and designed for text.

Processing any input from any sensor is a key feature to enable leveraging every unstructured past data and future interaction data.

What are the problems
we want to solve

Learning by Doing

AI today is trained on past data.
We need to model learning on the job.

What are the problems
we want to solve

Parallel Reasoning

Today models reason sequentially via natural language. This is inefficient from a latency perspective and from a quality perspective. We need to move from simple expert routing (MoE) to deep interaction.

Example:

Italian: Solo 3 parole: Non sei solo.

English: Just 3 words: **You are not alone.**

A growth phase on a
completely different scale.

Human Touch

 translated.



Believe in Humans