

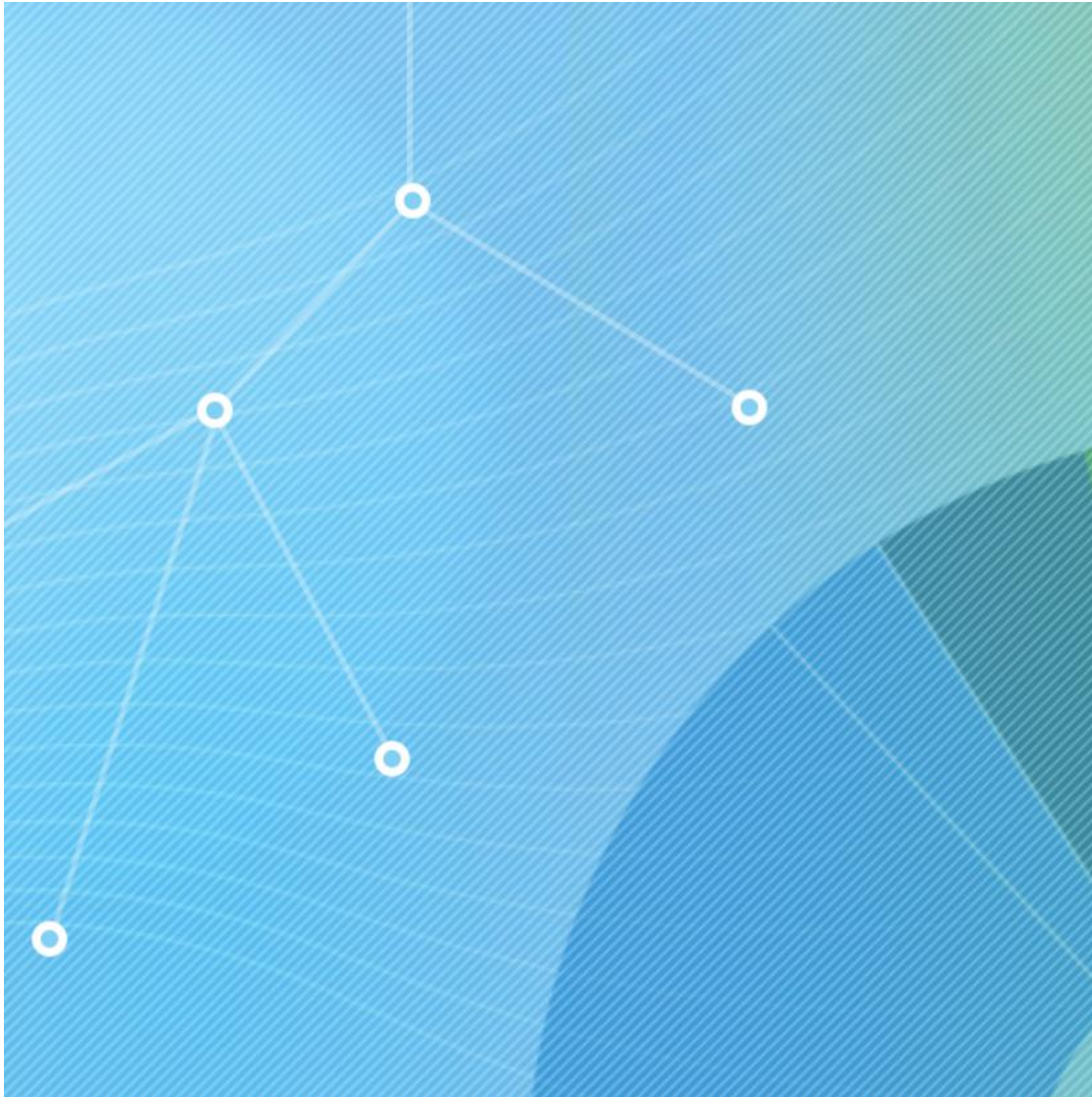


# Multilingual Knowledge System

## Key Enabler for NMT Workflows

@JochenHummel  
@coreonapp





- ✓ Berlin-based software company
- ✓ Leader in Multilingual Knowledge Systems
- ✓ Software-as-a-Service
- ✓ Management owned – CEO Jochen Hummel
- ✓ Makes search, machine learning, and IoT applications interoperable
- ✓ Deployed in industry, eGov, and education

# Benefits



## Biz: E-Commerce

- ✓ Customers find products: Revenue!



## Enterprise: Global Champions

- ✓ Optimized global biz processes: Savings!

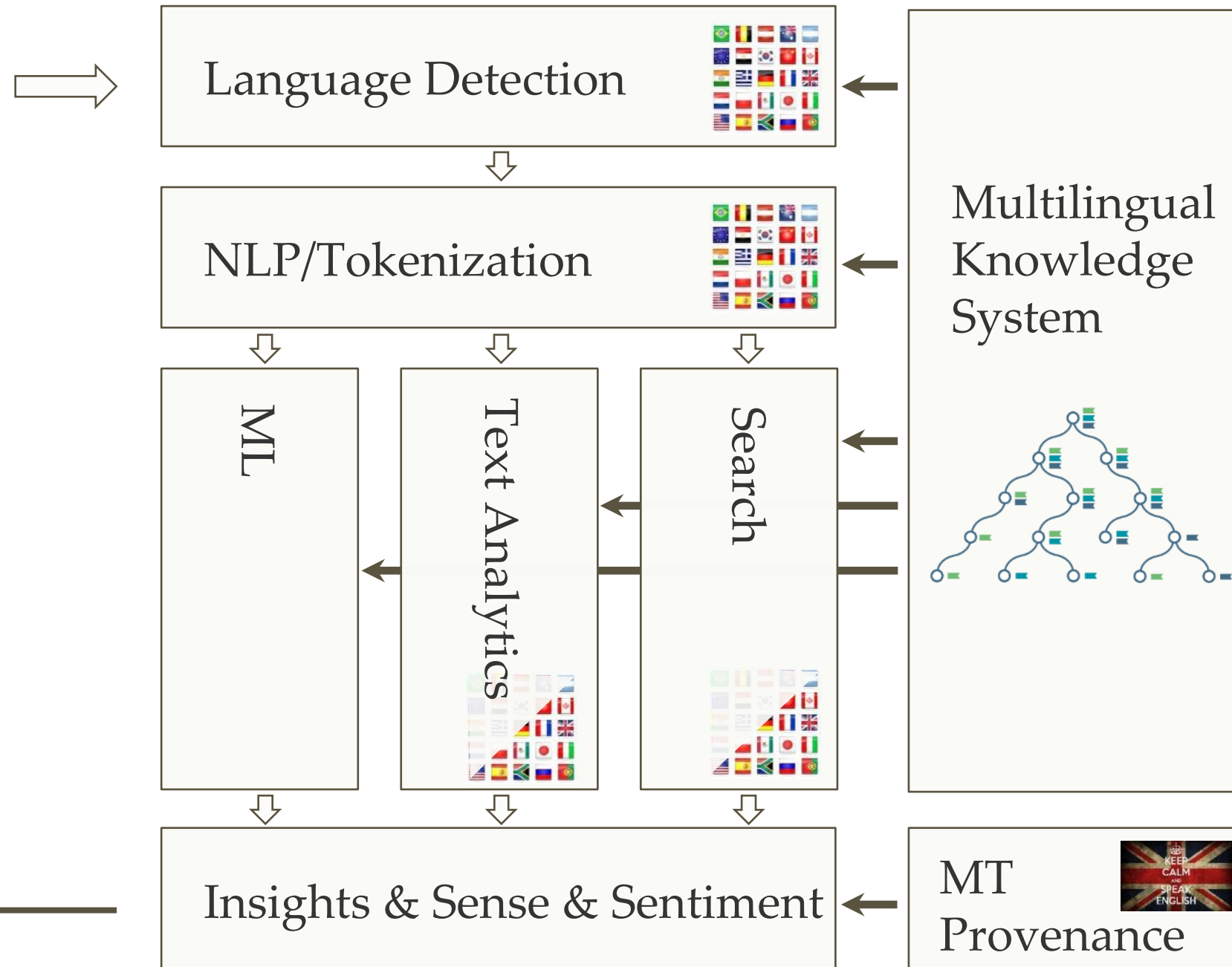


## eGov: Interoperability

- ✓ Information exchange: Efficiency!

# Processing Multilingual Data

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# Game Changer Human Parity MT

Technology

## “Nearly Indistinguishable From Human Translation”—Google Claims Breakthrough

by Florian Faes on September 27, 2016



The Google te machine trans coming out of paper publish 2016 entitled Translation Sy Between Hun the research

search engine giant's all-out effort to maintain its lead in mac



Chris Wendt @Tian500

Follow

Replying to @Jeromobot @tarfandy @allisonlinn

Thanks. It is not a career path I can reasonably recommend to a young person. Not for that language pair and without a really deep specialization. We can debate the human parity claim endlessly. There is no doubt about the fact that machines are getting better at it every day.

5:55 PM - 15 Mar 2018

### Intelligent Machines

## Google's New Service Translates Languages Almost as Well as Humans Can

A jump in t efforts to n

by Tom Sim



Microsoft

The AI Blog

The Official Microsoft Blog

Microsoft On the Issues

Transform

Microsoft reaches a historic milestone, using AI to match human performance in translating news from Chinese to English

March 14, 2018 | [Allison Linn](#)



Jagwar [grrr...] @terakasorotany · 29 Aug 2017

I've just realised that the **quality** of #DeepL machine translations is mind-blowingly good! 🤯 Holy sh\*t, the future is now! #FutureIsNow

## Microsoft Research Achieves Human Parity For Chinese English Translation

Written by Sue Gee

Wednesday, 21 March 2018

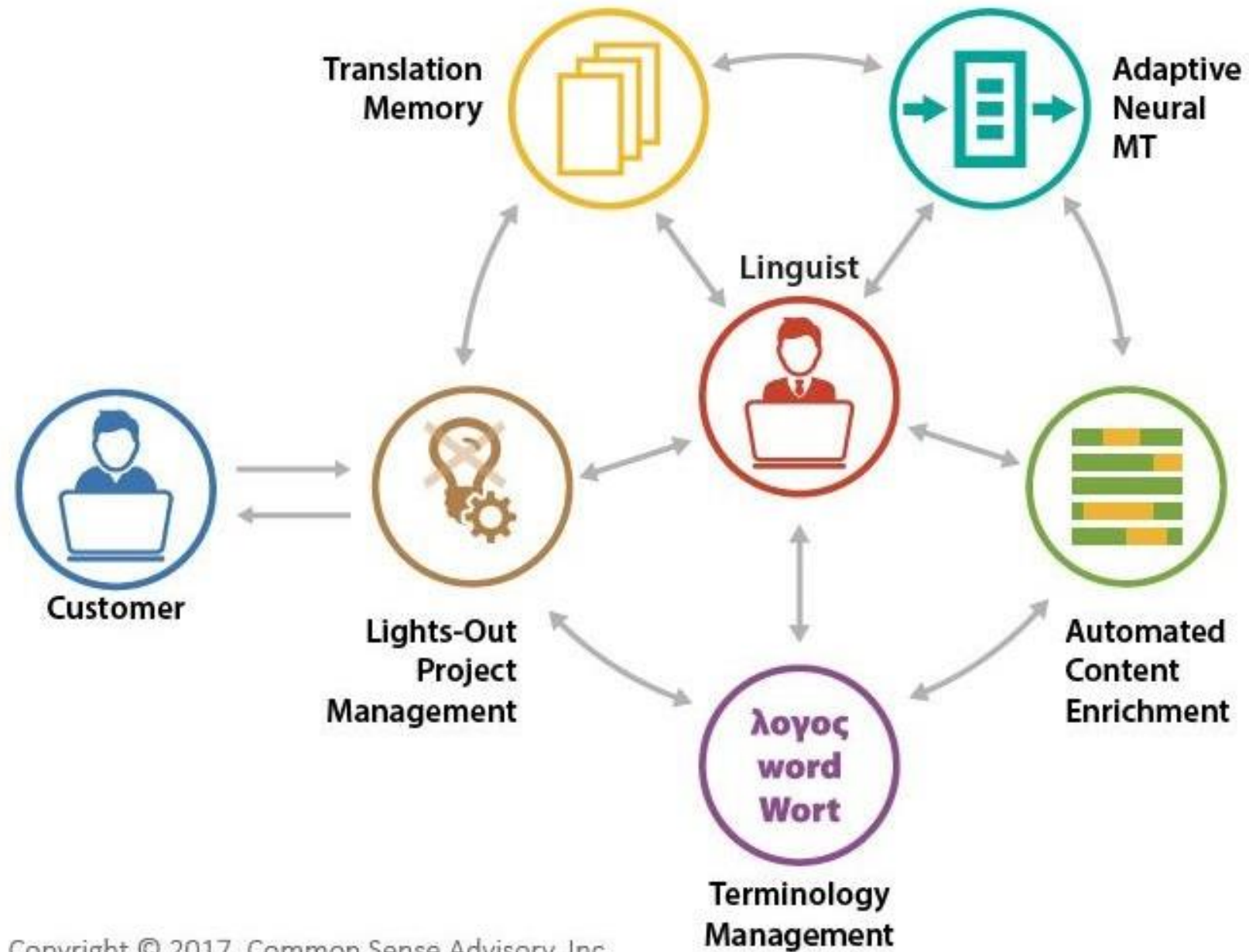
Researchers in Microsoft's labs in Beijing and in Redmond and Washington have developed an AI machine translation system that can translate with the same accuracy as a human from Chinese to English.



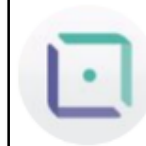
## SDL Cracks Russian to English Neural Machine Translation

Global Enterprises to Capitalize on Near Perfect Russian to English Machine Translation as SDL Sets New Industry Standard

# Augmented Translation?



Copyright © 2017, Common Sense Advisory, Inc.



**Lilt** @LiltHQ · 18 Feb 2017

Adaptive MT from **Lilt** one of four fundamental technologies for the "**augmented translator**" #xl8 @CSA\_Research [buff.ly/2ITm5j2](https://buff.ly/2ITm5j2)

**Jeromobot** @Jeromobot

Replying to @ProfessorOlsen @adrechsel and 3 others

Yes, I think this is true. The positive aspect of "augmented translation" is that the translator is the agent who is being supplied with data by technology as s/he drives the process. Post-editing of MT would therefore not be augmented translation.



**Véronique Özkaya**

@vozkaya

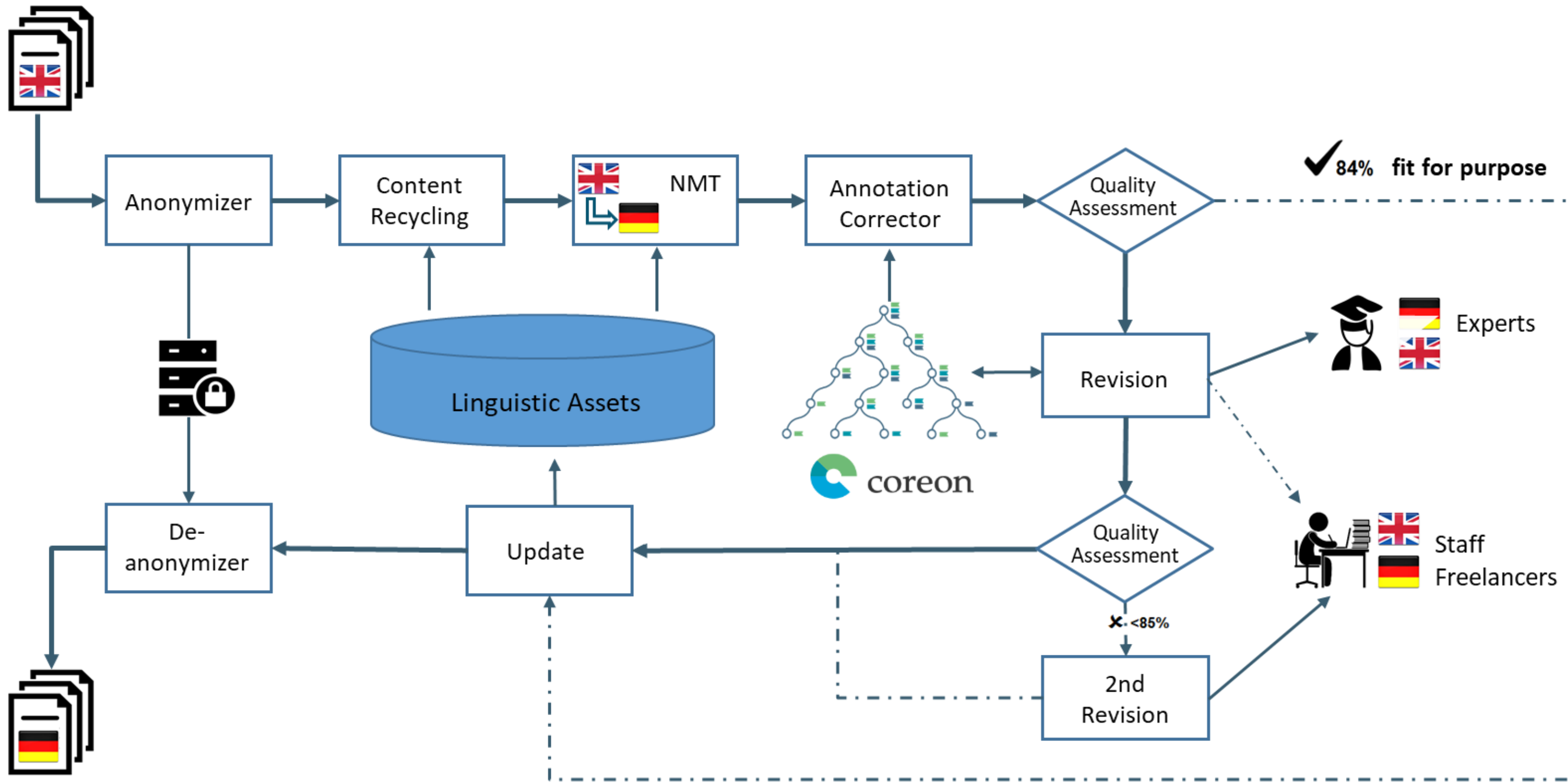
Following

With NMT, the future is happening faster.  
Augmented translation at our door.

#SlatorConSF18



# Disruptive NMT Workflow is Sunsetting CAT



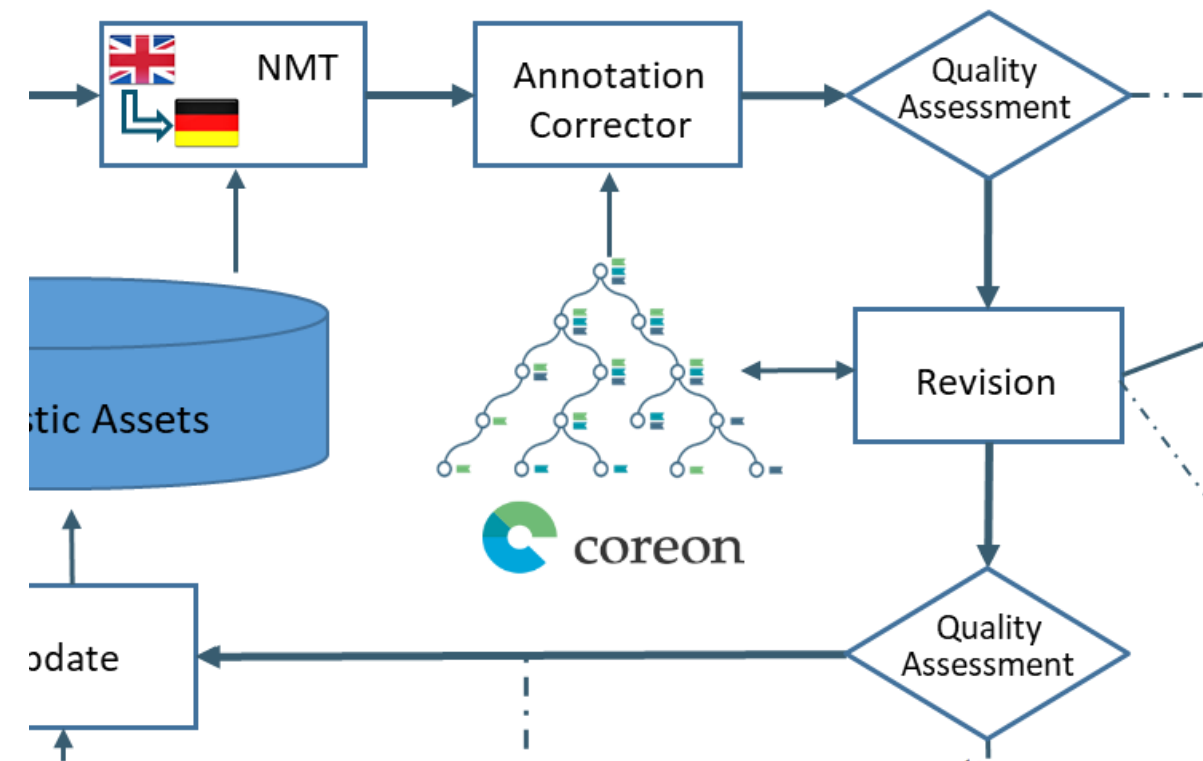
# NMT Workflow Questions



- ¿ Content to recycle?
- ¿ Translations to train the NMT?
- ¿ NMT engine to pick?
- ¿ Terms correct or wrong?
- ¿ Style rules to apply?
- ¿ Criteria for fit-for-purpose?
- ¿ Best experts?
- ¿ If busy, second best?



# Key Enabler Multilingual Knowledge System



An MKS classifies linguistic assets, human resources, workflow rules, and projects in a unified system which is expandable, dynamic, and provides fallback paths.

# Leverage Existing Assets

Multilingual Terminology List



Knowledge Graphs



*Structure  
semantically*

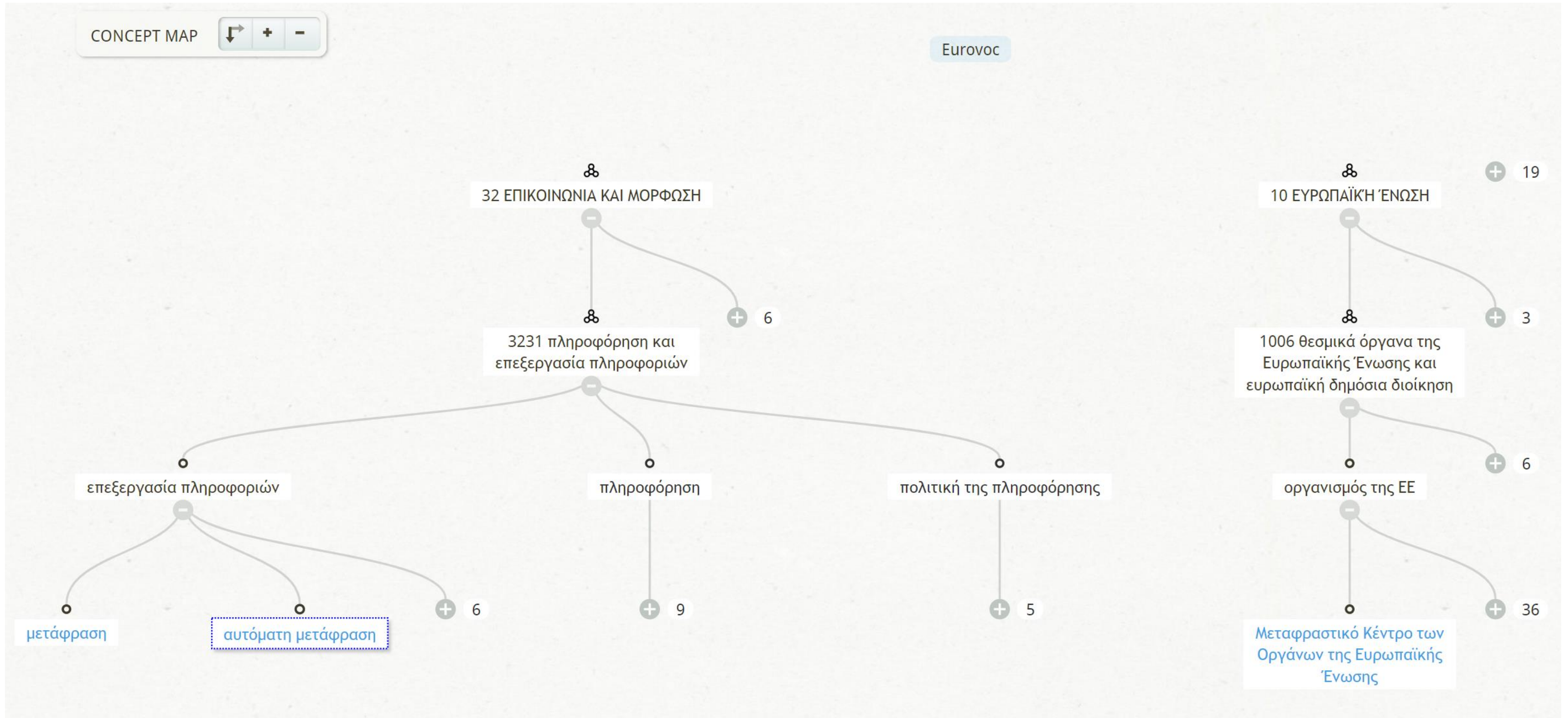


*Fill-up with languages,  
variants, control*



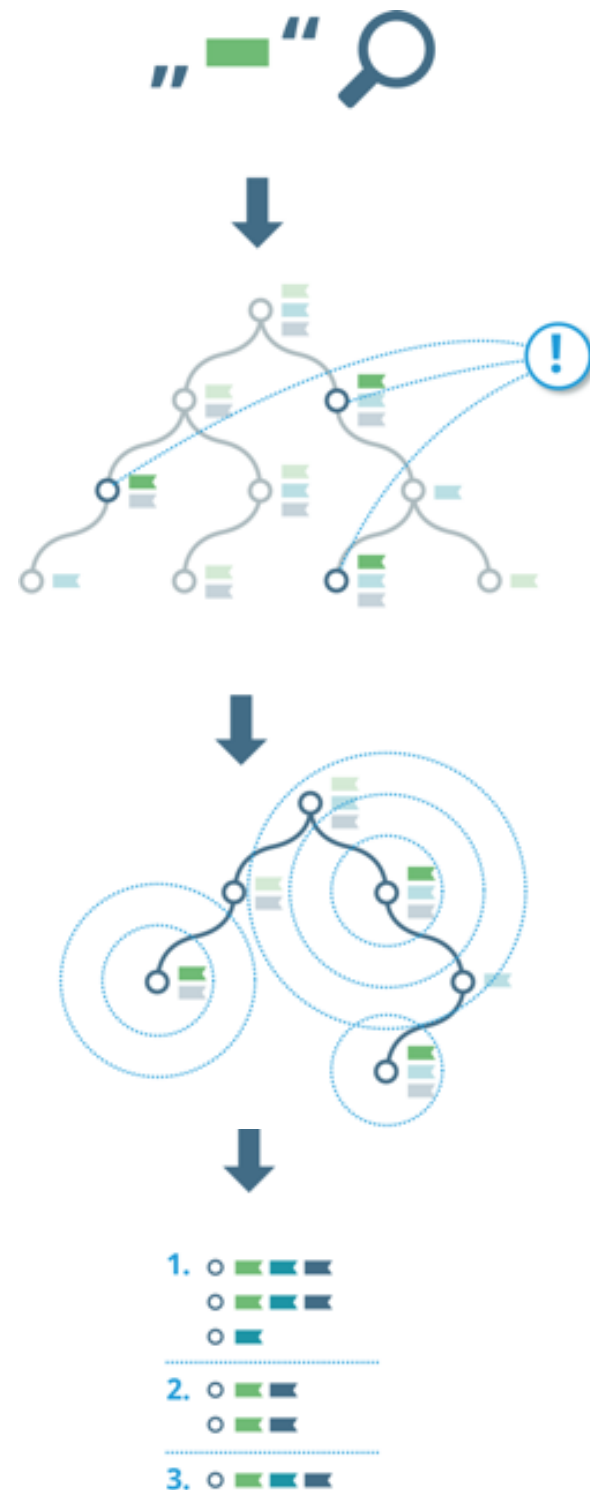
**Multilingual Knowledge System**

# EuroVoc – a Multilingual Knowledge System





# From Strings to Meaning



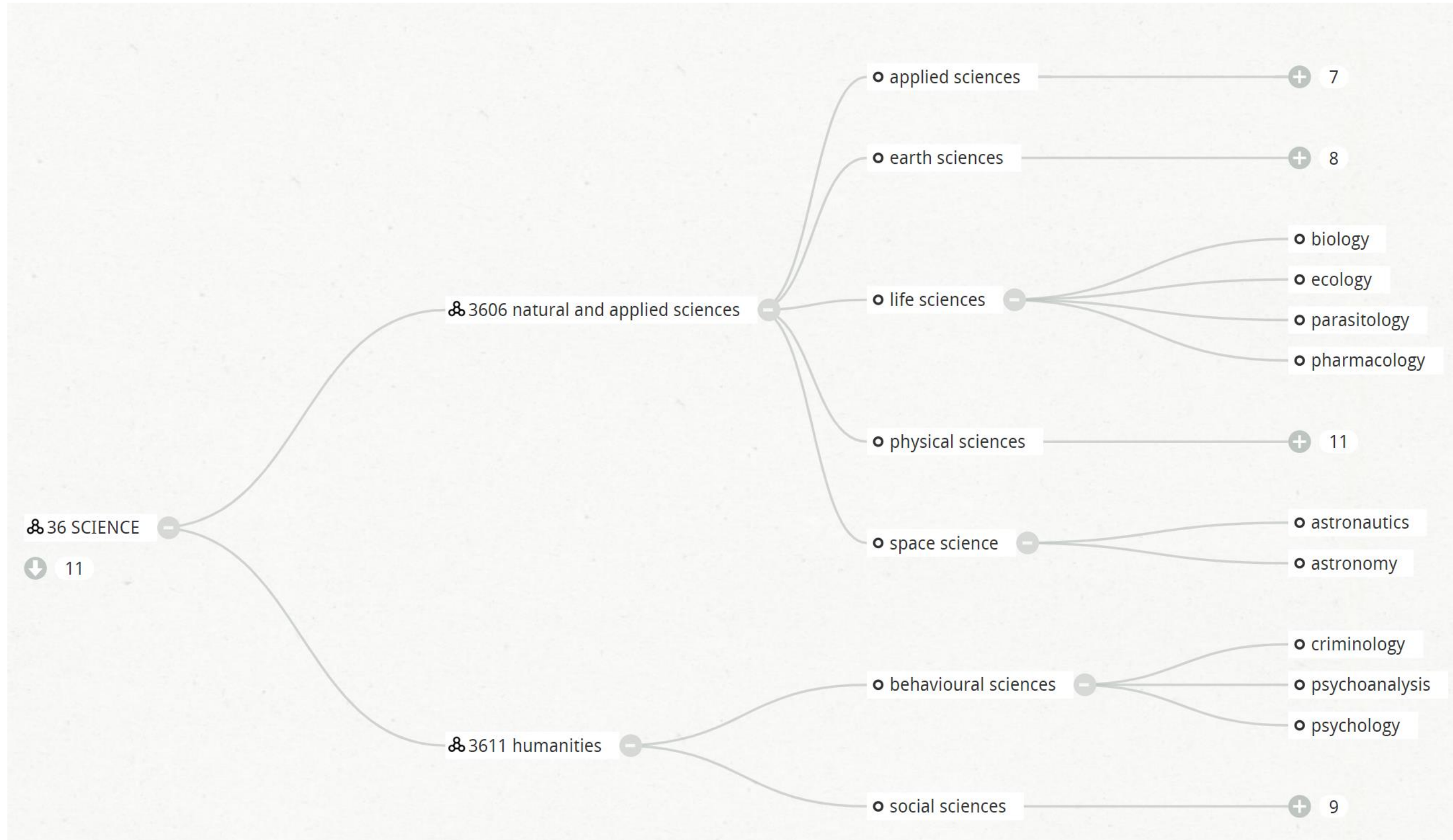
Find terms in text using Advanced Linguistic Search.

Locate them in the taxonomy.

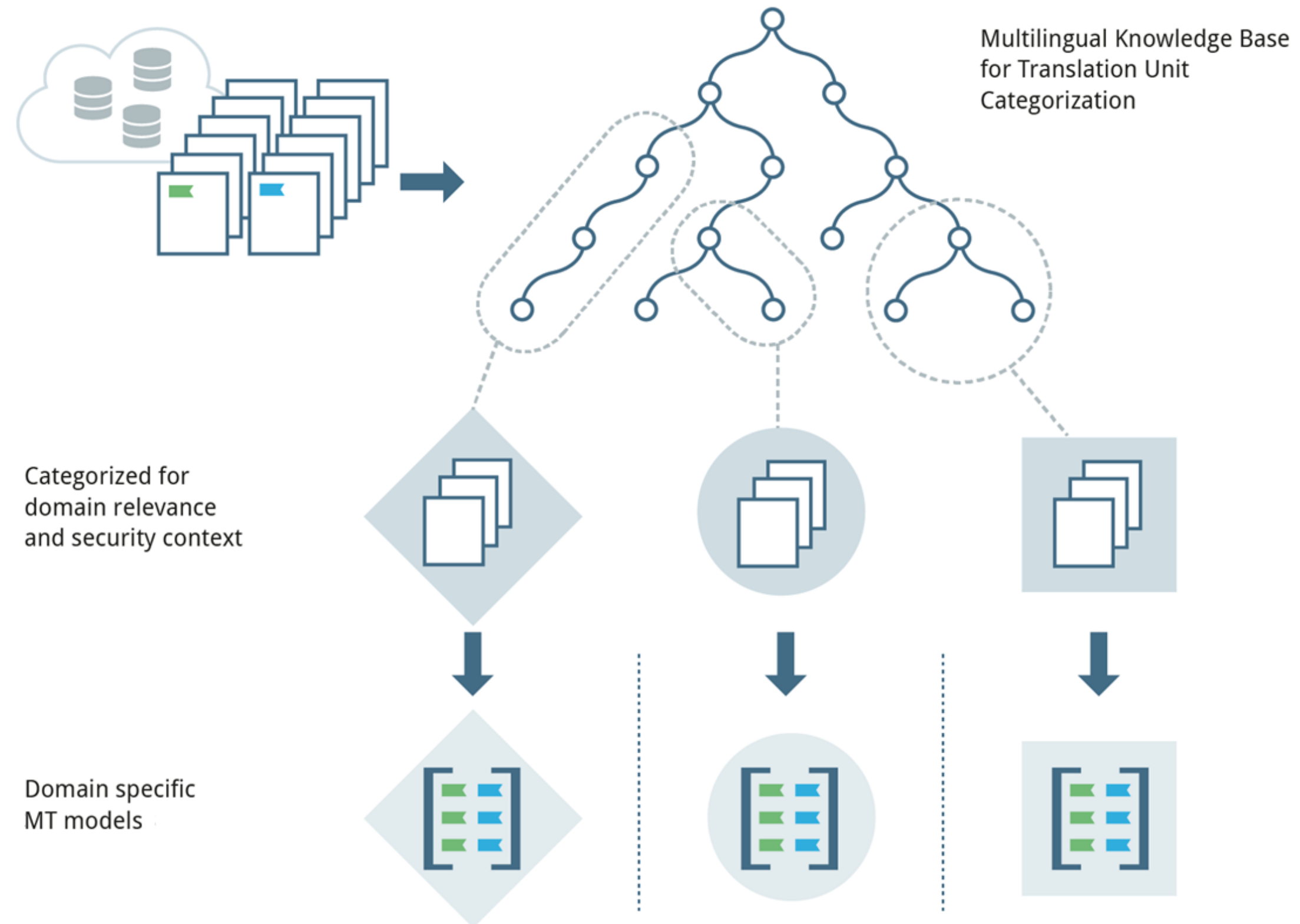
Create domain heat maps.

Link to other datasets (HR, DMS, QA rules).

# Classification with a Multilingual Taxonomy

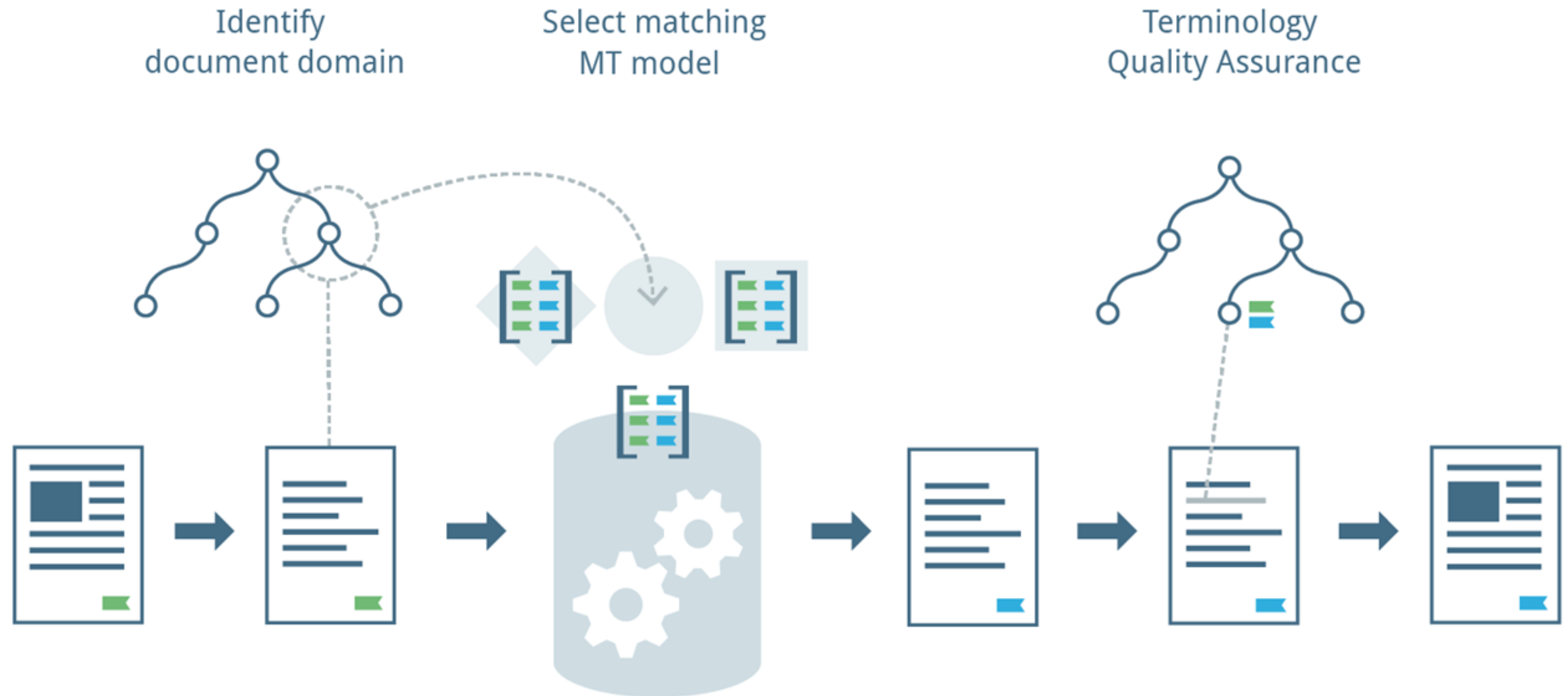


# Knowledge-based MT Training





# Knowledge-based MT Workflow



# New Roles for Linguists



- ✓ Revisor
- ✓ Multilingual Knowledge Manager
- ✓ Linguistic Assets Curator
- ✓ Translation Workflow Engineer



# coreon

Knowledge meets language.

Jochen Hummel

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s Jochen.Hummel

t @JochenHummel

l Berlin-Mitte

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[www.semiox.com](http://www.semiox.com)