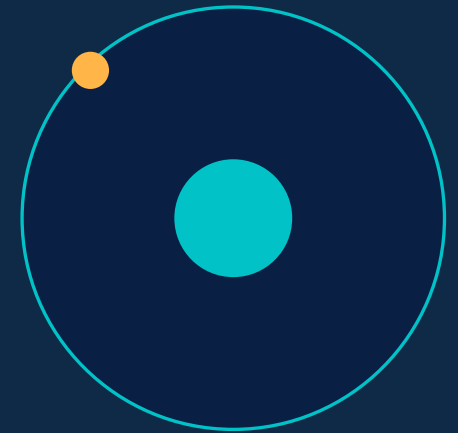


Deep Adaptive AI Translation

Multi-agentic RAG for critical terminology

Marina Albert · Manuel Herranz

Pangeanic



Why existing approaches fall short



Public LLM APIs

Fluent, multilingual.

- Terminology drift
- No control



Fine-tuned LLMs

Custom to domain.

- Expensive
- Brittle edges



Classical NMT

Stable, cheap.

- No reasoning
- Hard to adapt

One pipeline, three modes

DIRECT

Source → DAAIT

grounded translation from scratch

HYBRID

NMT/LLM draft → DAAIT

full agentic refinement on top of the system of preference

REFINE-ONLY

Existing translation → DAAIT

polish a single aspect over a prior translation

Features

- **RAG: Human TMs, glossaries**
- **LLM adaptation: style guides, domain, formality**
- **MTQE: confidence + risk flag**

source	target	score
Custom LLMs and Adaptive GenAI to monetize your content and knowledge	Modelos LLM personalizados y GenAI adaptativo para monetizar tu contenido y	88
Pangeanic produces custom AI models so you can create your own Generative AI (GenAI) with no data transfer to third parties. We build systems that talk to your data and has your data talk to members of your organization, users and clients. Your	Pangeanic produce modelos de IA personalizados para que puedas crear tu propia IA Generativa (GenAI) sin transferencia de datos a terceros. Construimos sistemas que se comunican con tus datos y hacen que tus datos se	88
How Adaptive GenAI chatbots work	Cómo funcionan los chatbots adaptativos	93
1. We create a first chatbot using your	Creamos un primer chatbot utilizando tu	92
2. You have your data talk to clients, employees, subscribers immediately	2. Tienes tus datos que hablan con clientes, personas trabajadoras y	85
3. Update and enhance knowledge with your own documents, reports, analysis in	3. Actualiza y mejora tus conocimientos con tus propios documentos, informes y	87

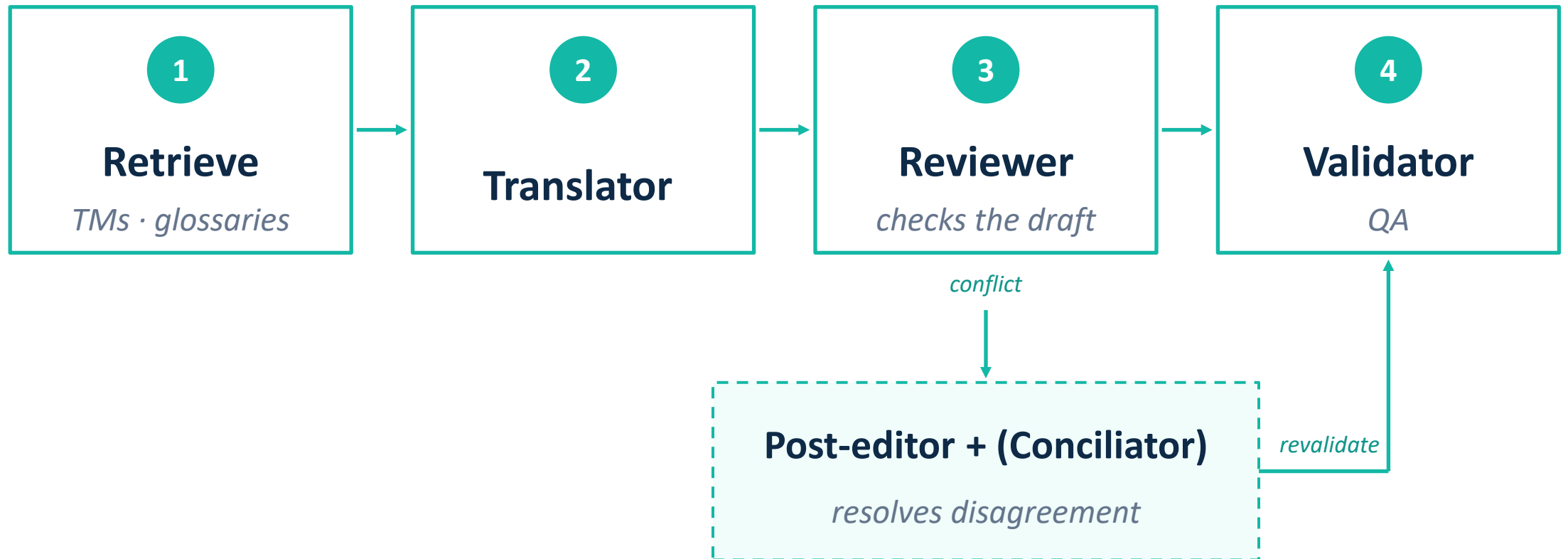
DAAIT output with MTQE per row

Multilingual:
+200 languages supported

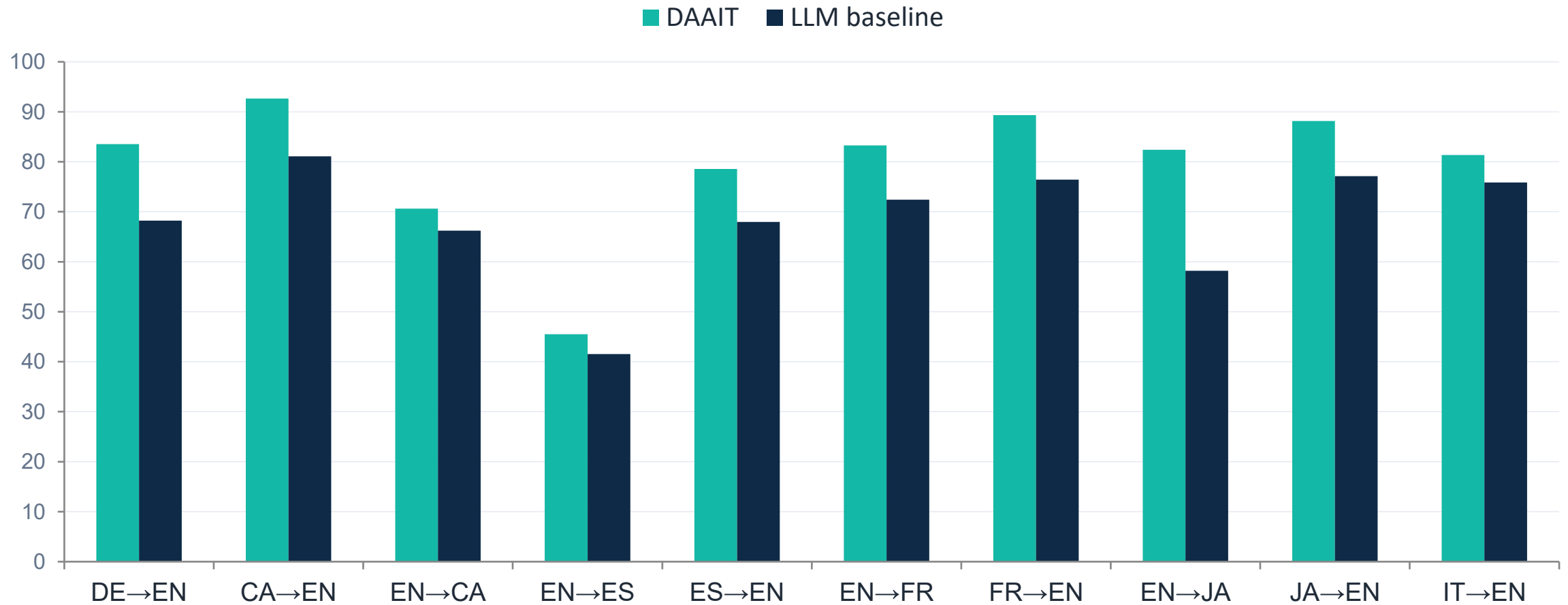
Main Supported Languages											
ace-a	bjn-a	el	hi	khk	lo	nl	ru	su	tw		
ace-l	bjn-l	en	hne	kl	lt	nn	run	sv	tzm		
af	bn	eo	hr	kk	ltg	no	rw	swa	ug		
ak	bod	es	ht	km	lua	nso	sa	szl	uk		
am	bs	et	hu	kmb	luo	nus	sat	ta	umb		
ar	bug	eu	hy	kn	lus	ny	sc	tah	ur		
ar-l	ca	fa	id	knc-a	lv	oc	scn	taq	uzn		
as	ceb	ff	lg	knc-l	mag	om	sd	te	va		
ast	cjk	fi	ilo	ko	mai	ory	sg	tg	vec		
awa	ckb	fj	is	krc	mi	pa	shn	th	vi		
ay	crh	fo	it	ks-a	min	pag	si	ti	war		
azb	cs	fon	ja	ks-d	mk	pap	sk	tk	wes		
azj	cy	fr	lv	ku	ml	pbt	sl	tl	wo		
ba	da	fur	ka	ky	mni	pl	sm	ton	xh		
bam	de	ga	kab	lb	mos	plt	sn	tpi	ydd		
ban	din	gl	kac	lg	mr	pp	so	tr	yo		
be	diq	gn	kam	li	ms	prs	sq	ts	yue		
bem	dly	gu	kbp	lij	mt	pt	sr	tsn	zh		
bg	dzo	ha	kea	lmo	my	quy	ss	tt	zh-tw		
bh	ee	he	kg	ln	ne	ro	st	tum	zu		

Privacy: No training on client data, GDPR

Multi-agent translation pipeline



DAAIT vs LLM baseline — chrF



Terminology similarity to client refs

0.80

- Best: EN→CA at 0.93
- Worst: DE→EN at 0.71

avg, 11 directions · range 0.71 – 0.93

Thank you for your attention!

Q&A

Marina Albert · Manuel Herranz

pangeanic.com



Our website



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