

# Research and innovation partnership offer

## Key facts

NeverBlink – deep tech startup / SME from Poland

#### Main expertise:

- Scalable knowledge graph (KG) technology
- KG + GenAl integration
- Real-time streaming
- Cloud-Edge-IoT continuum systems

#### Team experienced in R&D:

- Horizon projects (including proposal writing and coordination teams)
- Academic research at Polish Academy of Sciences and Warsaw University of Technology



#### Team's R&D experience

- Best example: tech leadership in ASSIST-IoT H2020 project
  - Our team led the technical tasks in the Smart Safety of Workers pilot
  - Bringing cutting-edge Edge-IoT tech from TRL 3 to 6/7
  - Integration of 20+ software and hardware modules
  - Deployment on a live construction site
  - Awarded as the Best Professional Research by buildingSMART International (2024)







See the video







#### Team's R&D excellence

- 3 experienced AI researchers in the core team; specializations:
  - Scalable KGs, streaming (Piotr)
  - GraphRAGs, distributed AI (Karolina)
  - Agentic AI, data science (Anastasiya)
- Open source software
  - Highlight: the Jelly project https://w3id.org/jelly
  - Contributions to Apache Jena and other high-profile projects
- EU research collaborations with:

TU Berlin, TU Wien, Fraunhofer HHI, UPV, Warsaw University of Technology, Polish Academy of Sciences, and more



## R&D partnership offer (1/2)

#### Open to collaborations on:

- Cutting-edge AI

   (incl. neurosymbolic AI, frugal, active inference, agents...)
- Making GenAl deliver business value grounding LLMs in real knowledge
- Computing continuum
- Real-time and streaming systems
- Preferred role: core technical partner
  - Can also do pilot implementation (jointly with end user)
  - We can bring end user partners if needed (multiple verticals)



## R&D partnership offer (2/2)

- Extensive experience in proposal writing
  - → we can make strong contributions to proposals
- Can bring additional partners, if needed:
  - End users / pilots (construction, automotive, robotics, OSH...)
  - Academia
- Open science and open source software track record
- Gender-balanced team, including leadership & technical staff
- EU deep-tech with large potential to make measurable impact (economic, social, environmental)





# Let's get in touch



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# Appendix: NeverBlink's technology

## Why knowledge graphs (KGs)?



**Integrate many data sources** all information in one graph



**Explain your system's decisions** all reasoning steps are traceable



Harness and scale LLMs
KG = brain, LLM = mouth & ears



Make sense of your data with powerful logical reasoning



**Evolve domain knowledge** no re-training required, just add it



#### The problem

- KGs have already revolutionized:
  - Logistics (Amazon, Zalando)
  - Biotech (drug interactions, gene-protein mapping)
  - Cybersec (Wiz, acquired for \$32B by Google)
  - Scaling GenAI (GraphRAG method)
- But, KGs don't work if you need simultaneously:
  - Low latency
  - High throughput
  - Integration of many data sources

...like you do in Industry 4.0, large-scale live analytics, construction



## NeverBlink's technological focus

- Scale KGs to huge problems
  - → breakthrough KG processing algorithms
- Reason in real-time on quickly changing data
  - → dynamic / streaming knowledge graph technology
- Integrate enterprise data sources
  - → ingest pipelines for (almost) any data format
- Enable hybrid reasoning: KGs + LLMs/ML
  - → GraphRAG and other neurosymbolic techniques



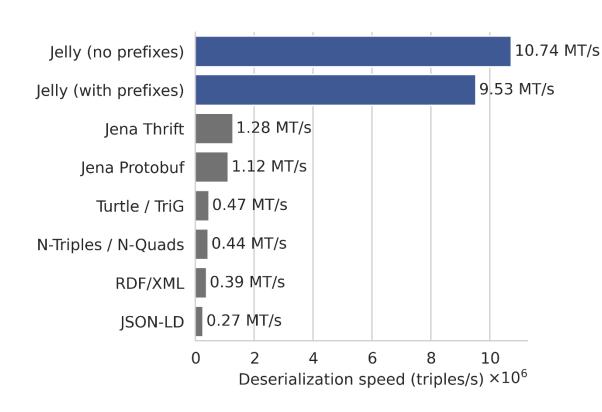
#### Example business cases

- Rapidly growing generative AI demand (\$36B market, 46.7% CAGR)
  - → Realizing GenAl's full potential requires dynamic KGs (GraphRAG)
- Industry 4.0 & industrial IoT expected to become ubiquitous
  - → Live data integration & reasoning can be solved with KG streams
- Streaming data analytics increasingly relies on heterogeneous data
  - → KG streams can integrate the data and enable complex analytics

Our solutions are applicable in all of these cases.



## Our technology today



Benchmark details: https://w3id.org/jelly/dev/performance

Jelly – our open-source KG transmission / streaming protocol

- 2–8x faster than any competition
- The only solution to support all types of KG streams
- Full conformance with the open RDF 1.1 standard
- Implemented for popular libraries (Jena, RDF4J, Titanium)

Learn more: https://w3id.org/jelly



#### **Business value**

# Increase throughput

Process more data, faster.

# **Lower** latencies

Quickly respond to events and changing knowledge.

# Reduce your infra bill

You need less compute & network bandwidth.

#### Plug & play

Full support for the RDF 1.1 standard. Switch to Jelly and go.

