KLEPSYDRA
TECHNOLOGIES

Klepsydra AI

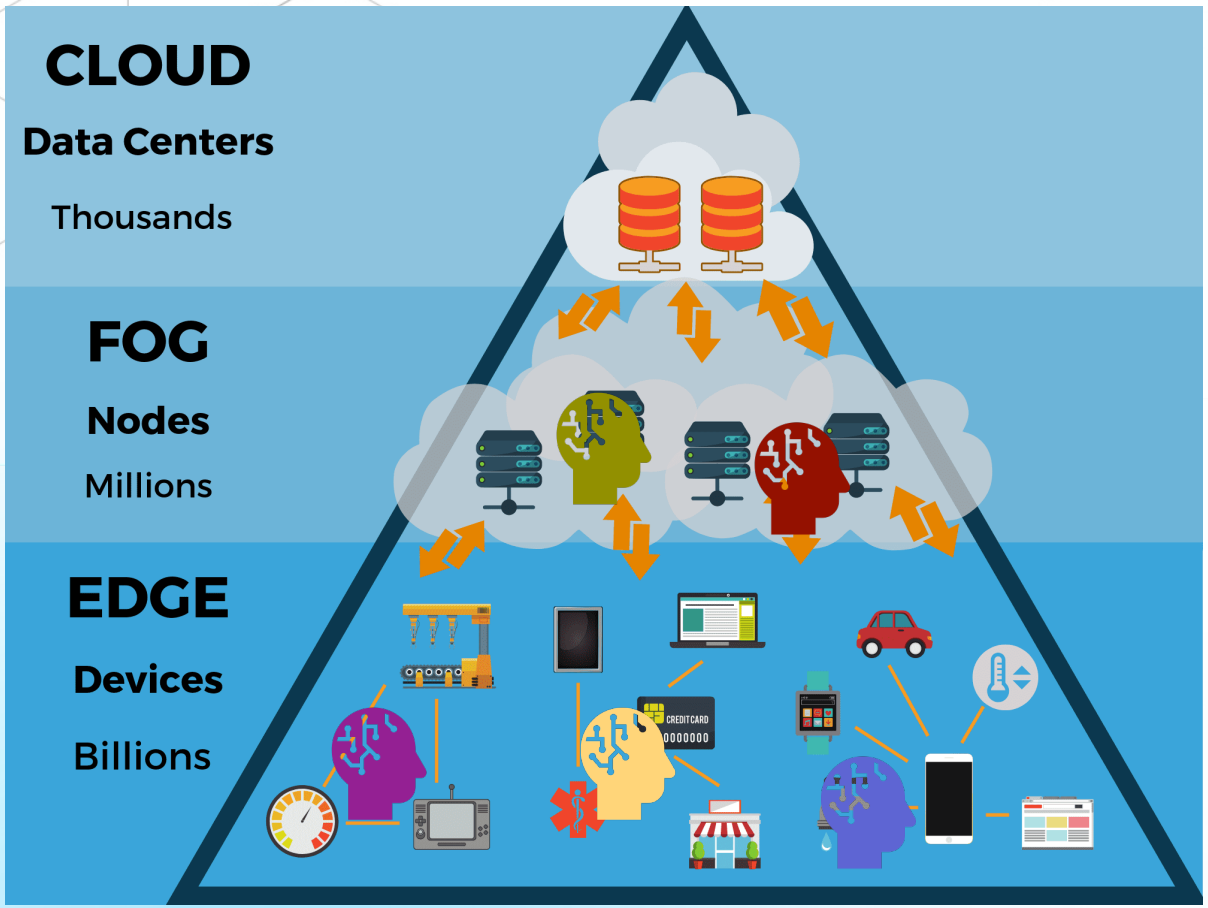
Software Framework for highly efficient AI inference and data processing to enable Intelligence for embedded systems

Klepsydra

March 2025

Problem

Edge AI - fast growing field dealing with billions of AI ...



Implementing AI for one model & one platform is already complex!

Edge runs on many different platforms

Data Preparation → AI Model Design and Training → Simulation and Testing → Deployment

Problem	Implication	Need
Algorithms do not run on the required Hardware	Low Medium High RISK	Run algorithms more efficently, → no hardware upgrade
AI application might need to run on different hardware		Unified development framewoks, agnostic of the hardware → development costs are kept low
Different hardware types come with different AI deployment tools		Software that runs agonstically on different processors while providing high efficiency

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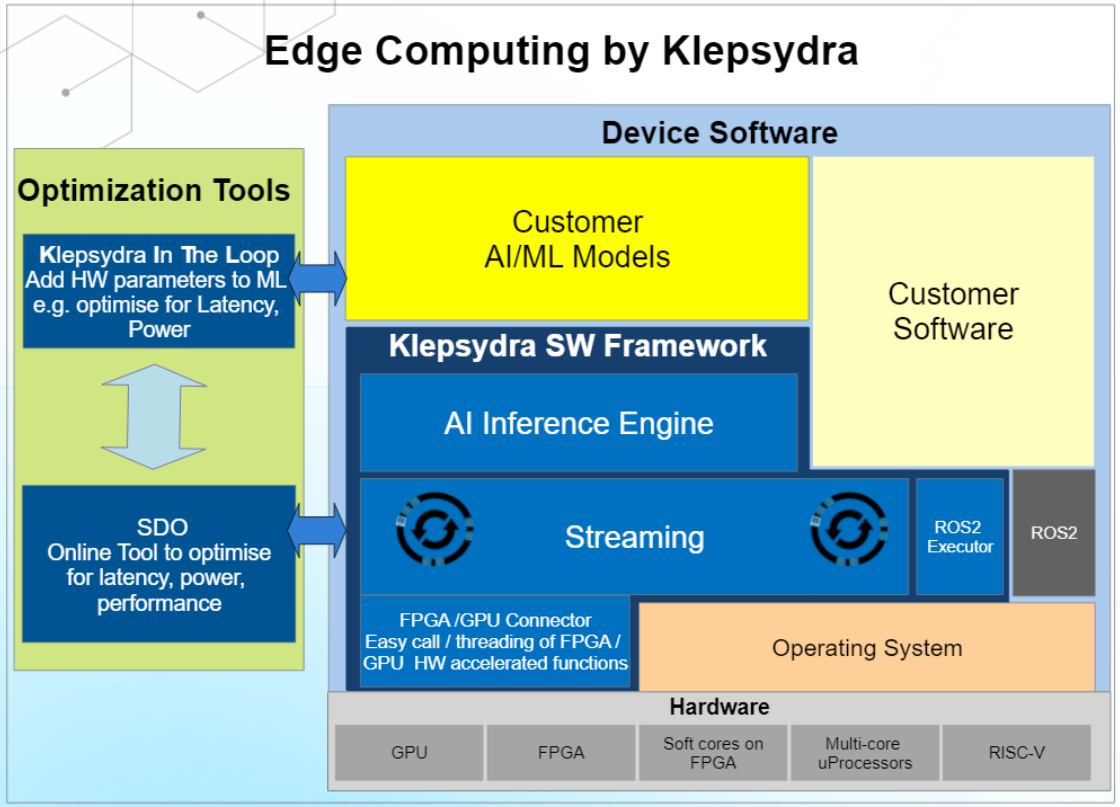
Adressing the Need

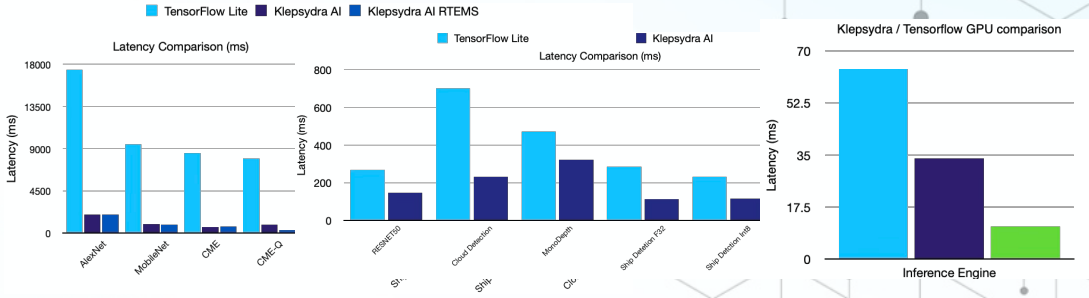
Klepsydra SW framework for edge computers



Utilize the full Potential of available Computers

	Klepsydra	TensorFlow Lite	OpenCV
Throughput	☺	☹	☹
CPU Usage	☺	☹	☺
Model Agnostic	☺	😐	☹
Hardware Agnostic	☺	😐	☹

Comparison done in a Project with esa



Implement Intelligence on a larger range of Systems

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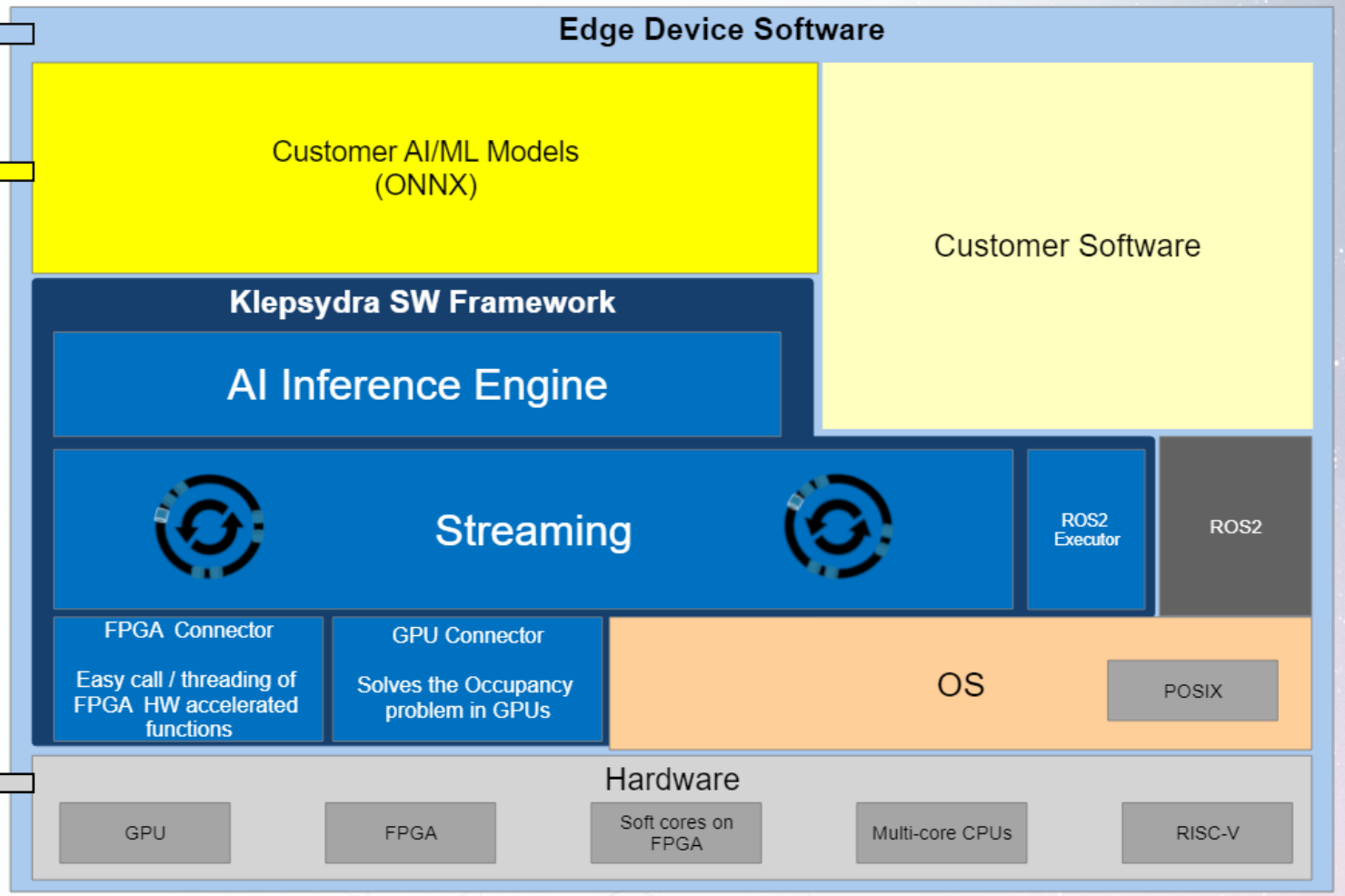
What are we looking for?

Projects using / focusing on AI / data processing @ edge

Partner interested to bring their AI to the edge / run it on different embedded processors

Partner interested to provide a HW/SW Platform for Edge AI



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Company Information

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3 mEUR orders secured
in 3 sectors Space, Defense, Mobility

3 mEUR
Funding - Investments & Grants

15 People
Across Europe and North America

2 Patents
1 Granted, 1 Pending
Wordwide application

KLEPSYDRA TECHNOLOGIES

- KATESU — Proof-of-Concept on running AI on space computers
- KRONOR — Benchmarking & GPU Streaming
- PATTERN — Support of GR740 & GR765 RTEMS6
- MANDALA — HDPD-40 support
- ENORMITY — Ramon RC64 support
- REBECCA — RISC-V support
- SMART-Connect — Framework for on-device acceleration

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