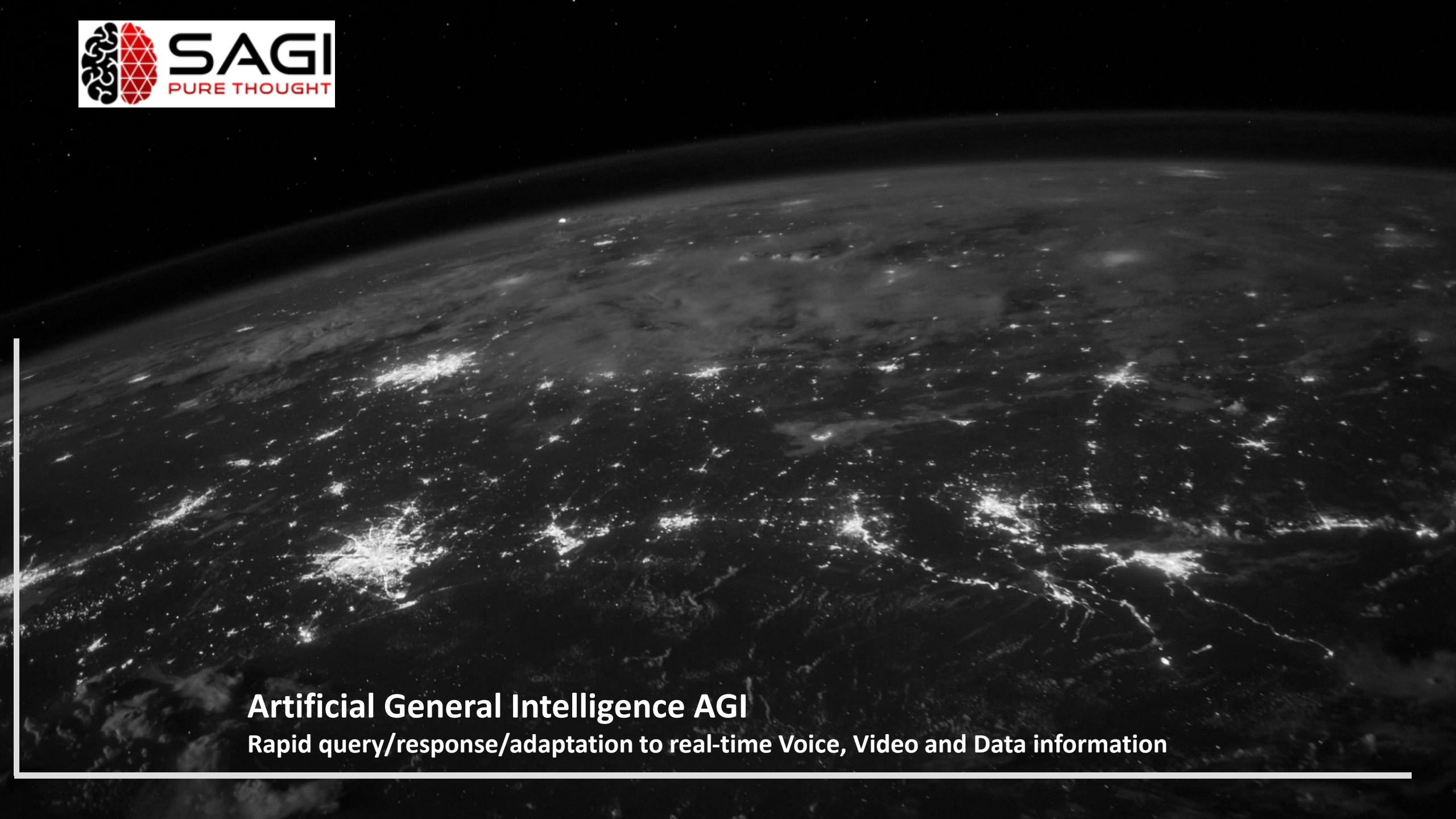


Artificial General Intelligence AGI

Rapid query/response/adaptation to real-time Voice, Video and Data information

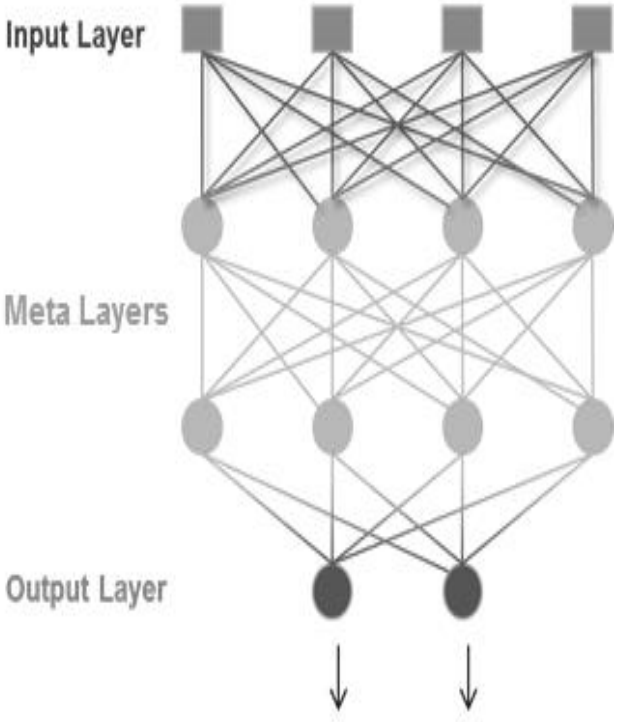
Artificial General Intelligence

Artificial general intelligence (AGI) *is a form of AI that possesses the ability to understand, learn, think, and apply knowledge across a wide range of tasks and domains.*

SAGI emulates the human mind and behavior to solve any kind of complex problem.

SAGI differs from Generative AI

Generative AI

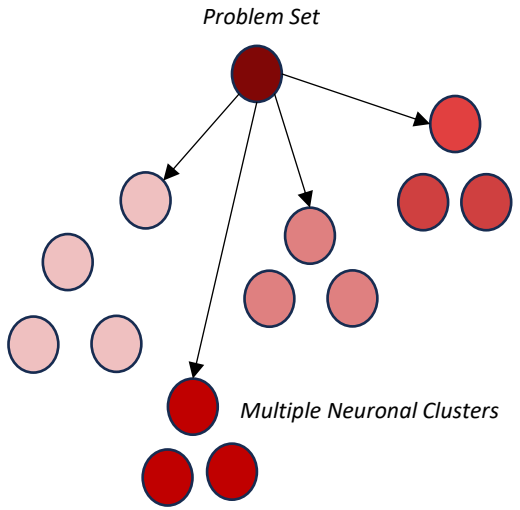


Responsible for feature extraction from raw input data.

Hidden processing layers used for training and selecting parameters for optimum performance of the rate of learning and exploration.

Responsible for "reward" systems and probability distribution functions and policies.

SAGI – Brain Biomimicry



Biomimicry of the human brain where each process enriches itself sufficient to complete its task.

Local neural networks assimilate relevant training data.

The brain is multi-modal launching neural processes for the artificial retina, cochlea, and general processing.

Power usage is proportionate to the requirements of the task at hand.

High physical and operational costs, long training cycles, and results bias are major hurdles.

Low operational costs, self-learning capability, and ability to solve complex problems.

Where Generative AI Falls Short

A game of Alpha Go is set up on a traditional rectangular board.

The board suddenly changes, to a completely different shape.

Generative AI would stop and do nothing, until it is retrained for the new board shape.

AGI will adapt to the new board, as it is a thinking machine and will continue playing without interruption.

Generative AI Sustainability Headwinds

Sustainability

Trouble for Elon Musk in Memphis

As xAI ramps up operations at its new data center in Memphis, environmental advocacy groups are crying foul about the AI startup's pollution problem.

The Southern Environmental Law Center **sent a letter** this week to the Health Department in Shelby County, requesting a probe into the Elon Musk-founded company's unpermitted use of natural-gas-burning turbines at its data center. The letter accuses xAI of installing "at least 18 gas combustion turbines" in recent months, producing a combined capacity of about 100 megawatts, or "enough electricity to power around 50,000 homes."

xAI first announced the facility back in June, shortly after it **raised $6 billion** in Series B funding. Musk said in a **post on X** (formerly Twitter) last month that xAI was training its AI model—**dubbed Grok**—at the data center using 100,000 Nvidia H100 processors. While the

https://www.linkedin.com/pulse/elon-musks-xai-has-tennessee-size-pollution-problem-its-hands-vucre/

Water Consumption

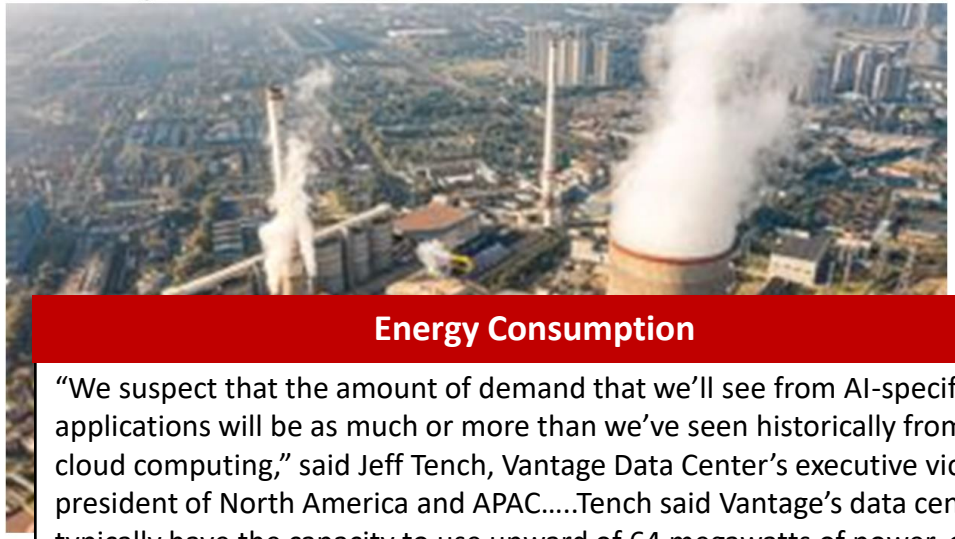
Generative AI systems need enormous amounts of fresh water to cool their processors and generate electricity. In West Des Moines, Iowa, a giant data-center cluster serves OpenAI's most advanced model, GPT-4. A lawsuit by local residents revealed that in July 2022, the month before OpenAI finished training the model, the cluster used about 6% of the district's water.

https://www.nature.com/articles/d41586-024-00478-x

Oracle will use three small nuclear reactors to power new 1-gigawatt AI data center

News
By Jowi Morales
published September 11, 2024

Oracle wants to go nuclear.



Energy Consumption

"We suspect that the amount of demand that we'll see from AI-specific applications will be as much or more than we've seen historically from cloud computing," said Jeff Tench, Vantage Data Center's executive vice president of North America and APAC…..Tench said Vantage's data centers typically have the capacity to use upward of 64 megawatts of power, or as much power as tens of thousands of homes…..And as we think about AI applications, those numbers can grow quite significantly beyond that into hundreds of megawatts," Tench said .

https://www.cnbc.com/2024/07/28/how-the-massive-power-draw-of-generative-ai-is-overtaxing-our-grid.html

Data Privacy

Data Protection And Privacy

Generative AI systems often require vast amounts of data for training, which can include sensitive personal information. This raises significant privacy concerns. Existing data protection laws, such as the GDPR in Europe, provide a framework for data privacy, but they were not designed with AI in mind.

https://www.forbes.com/councils/forbestechcouncil/2024/08/28/existing-legal-frameworks-and-gaps-in-generative-ai/

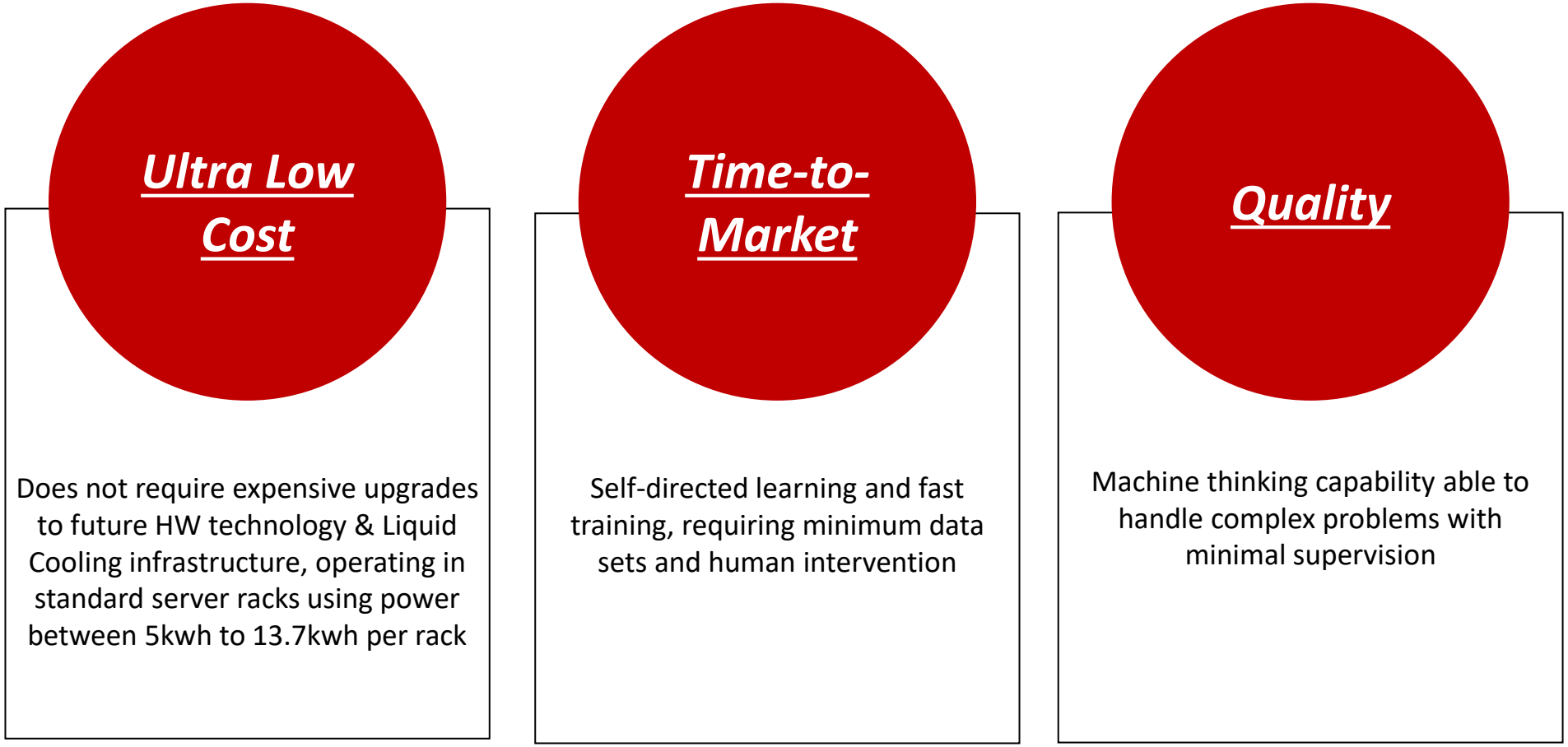
Generative AI Drawbacks

- Problem Solving Capability
- Energy Costs, Sustainability & Operational Costs
- Cloud Only Solution
- Standardization
- Complex Licensing
- Scalability Issues

SAGI Technology Advantages

	SAGI	GENERATIVE AI
DATASETS	Between 2%-10% of the number of datasets used by GEN AI applications	Large hyperscale environment required to host the training and learning data
POWER	Energy efficient – 13.7 kWh/rack	Energy intense – 30-100kWh+/rack
TRAINING	Training performed by customer	Training performed by provider
MINI-BRAINS	YES, downloadable, autonomous	NO
DATA PRIVACY	Data belong to customer	Data belong to provider
THINKING	Autonomous Learning & Thinking	Learning capable w/conditioned output
OPERATING ENVIRONMENT	Running on both standard CPUs & IT infrastructure	Running on GPU HW
Quantum Neural Networks QNN [optional]	YES, IBM currently	Unavailable

Market Competitive Advantages



Pure Thought /FTL Partnership

Pure Thought

- Newly formed as US based C-Corp
- Formerly dba SAGI LLC
- SAGI LLC fully absorbed into Pure Thought

FTL Distribution Agreement

- FTL is primary distributor of Pure Thought products to the US DoD, DoE, and Aerospace & Defense industry
- FTL Board Member named to Pure Thought Advisory Board

For More Information on FTL and Pure Thought products & services

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