

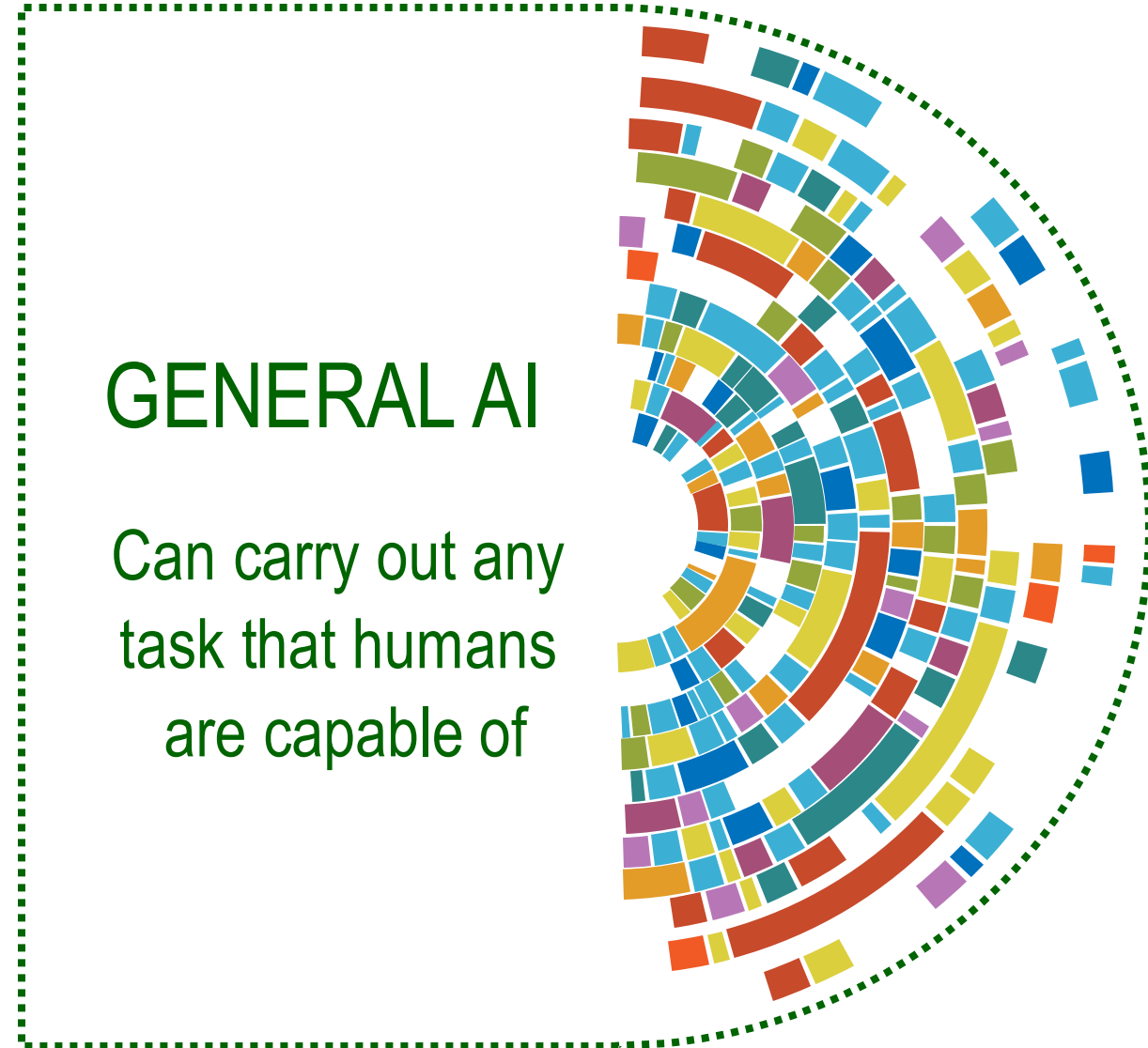
Maritime AI

Concepts, Challenges & Opportunities

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What is Artificial Intelligence?



What is NARROW AI

EXPERT SYSTEMS

MATHEMATICAL
OPTIMISATION

FUZZY LOGIC

EVOLUTIONARY
COMPUTING

MACHINE
LEARNING

+ many more...



What is MACHINE LEARNING



① SUPERVISED LEARNING

Algorithms that learn from existing observation and known outcomes.

ie. Vessel values, charter values forecasting, fault prediction, threat detection, weather routing.



② UNSUPERVISED LEARNING

Algorithms that find hidden patterns in unknown data.

ie. anomaly detection, collision risk detection, engine failure warning, fraud detection.



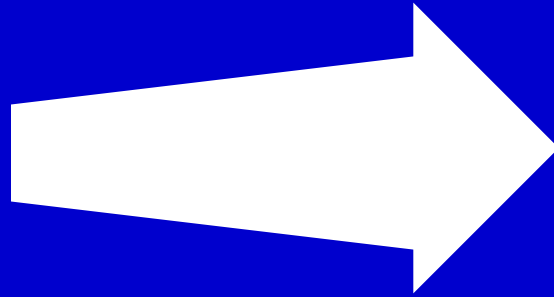
③ Reinforcement learning

Algorithms that learn through trial and error.

i.e. autonomous vessel control, port traffic management, robotic hull cleaning control.

What fuels the AI wave?


New ideas



Cheaper
Better tools
Easier

While some new ideas have emerged, the current AI revolution is mostly attributed to the tools and frameworks that followed.

Transformers: Fueling the recent AI revolution



TRANSFORMERS

Algorithms that can focus better on data during the learning process.

ie. text comprehension, text generation, image generation

ANTHROPIC

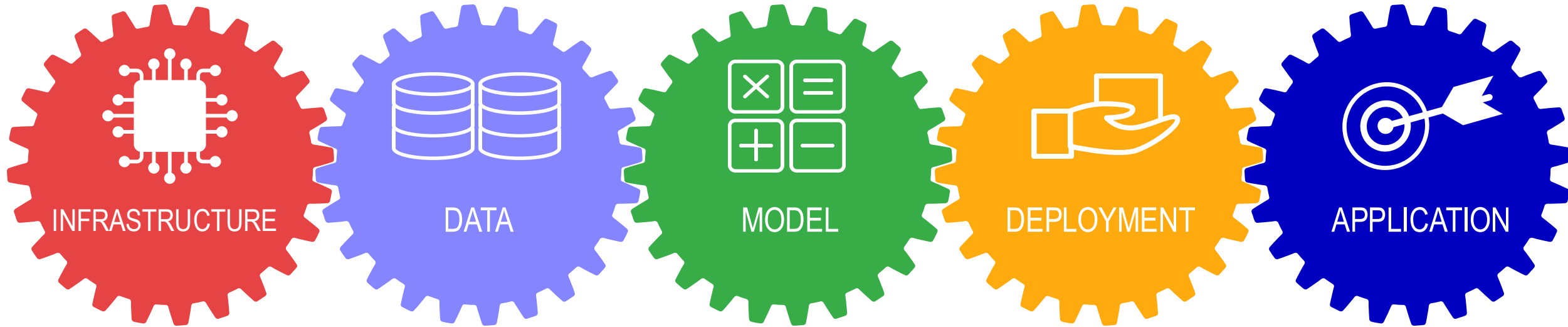
ChatGPT



WINDWARD^o



Composition of AI products



Underlying computing power, storage, networking to run AI workloads.

Data sourcing, processing, storage and annotation. Use in training & evaluation

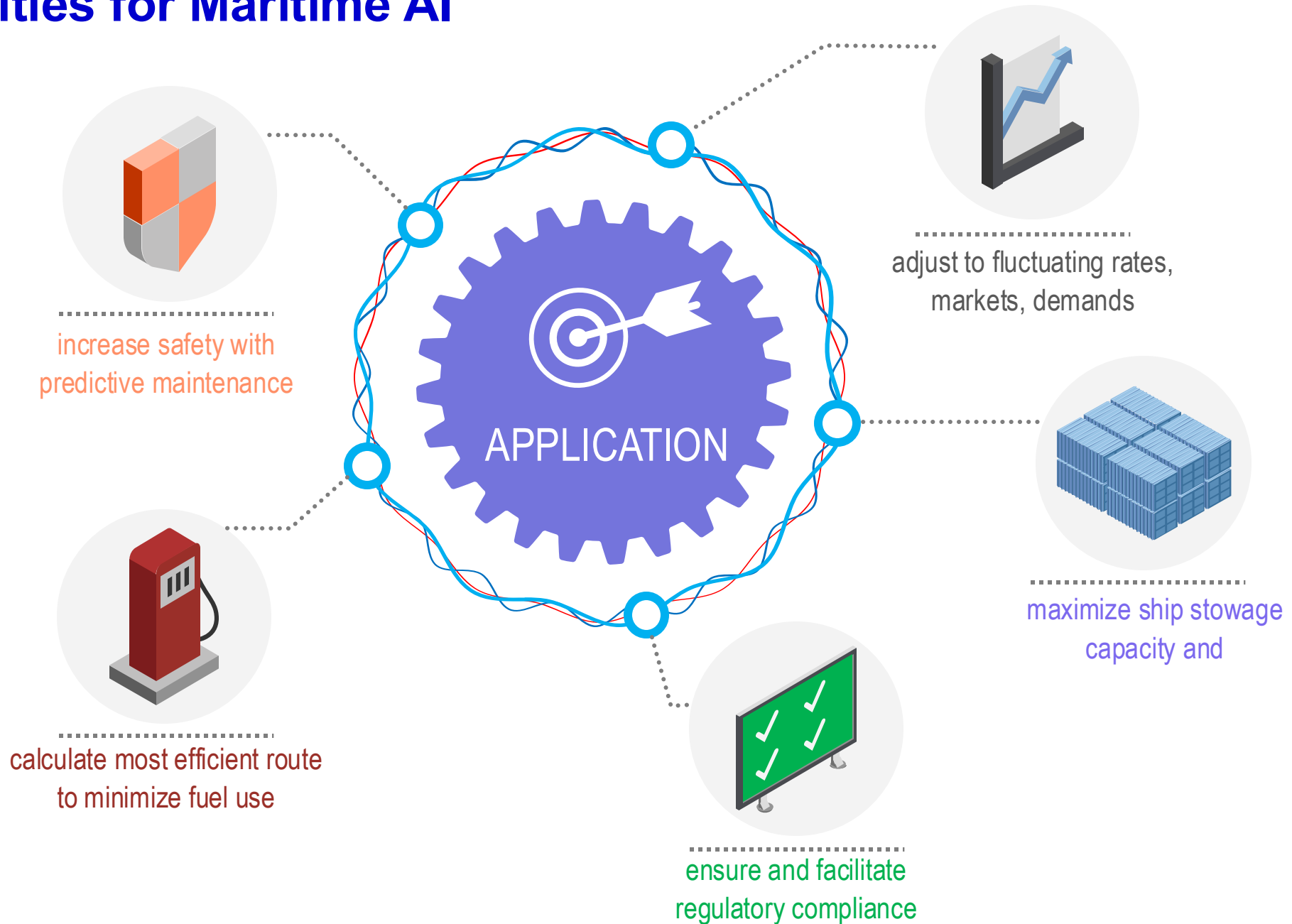
Development and training of ML models. Provide inference upon deployment

Delivering models for real-world usage: validation, containerization, scale, etc.

Front-facing layer where AI delivers value. Specific to each application.



Opportunities for Maritime AI



IMPERIAL

Thank you

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