



The Power of a Billion Minds

While building the future of compute.

whurley

Founder & CEO | Strangeworks





Our world has problems.



Pandemics that shut down the world.



\$8.2T

estimated loss of output
due to global recession
caused by pandemic.

FINANCIAL TIMES

The rising threat of deadly
diseases jumping from animals
to humans

The Guardian

Future pandemic as big as Covid
is inevitable, says Whitty

REUTERS

Big Pharma lacks motive to prep
for new pandemics

CNN

Is bird flu the next pandemic? What
to know after the first H5N1 case in
the US



A climate that is burning, drowning, and drying.

50%

CO₂ increase since
pre-industrial times due
to human activities.

**The
Guardian**

Scientists deliver 'final warning'
on climate crisis: act now or it's
too late

Vox

Welcome to the world of triple-
digit spring weather

COP30

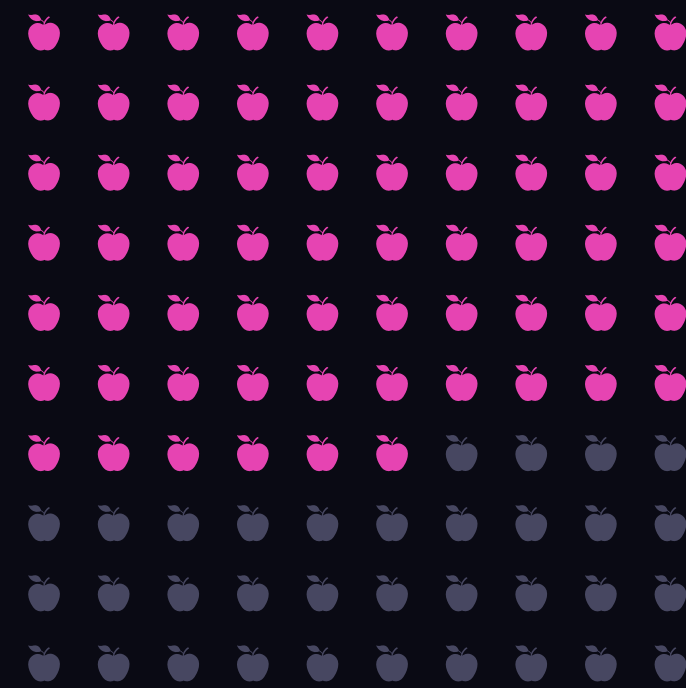
The cost of inaction: a dire
warning for our planet's future

AP

Last decade was Earth's hottest
ever as CO₂ levels reach an
800,000-year high, says UN report



The silent collapse of Africa's food supply.



34%

decrease in agricultural
production across Africa.

FURTHER AFRICA

Agricultural productivity in Africa
declines 34%

The INDEPENDENT

Climate change has reduced
agricultural productivity by 34
percent in Africa

The
Economist

Africa has plenty of land. Why is it
so hard to make a living from it?

WORLD
ECONOMIC
FORUM

Why science is key in Africa's
agricultural transformation



Disease, a war we're still losing.



1 in 6

deaths is
caused by cancer.

The
Economist

Why cancer has not been cured

TIME

The Race to Explain Why More
Young Adults Are Getting Cancer

HARVARD
medicine

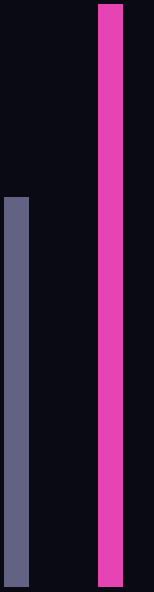
The Limits of Computer Vision,
and of Our Own

USA
TODAY

50 years after the US declared war
against cancer, the fight continues



An energy appetite we can't satisfy.



50%

increase in the world's
energy consumption
by 2040.

The
Economist

The world's energy system must
be transformed completely

Goldman
Sachs

AI is poised to drive 160% increase
in data center power demand

The
Guardian

Fossil fuel use reaches global
record despite clean energy growth

WORLD
ECONOMIC
FORUM

Surge in global energy demand
growth, and more top energy stories

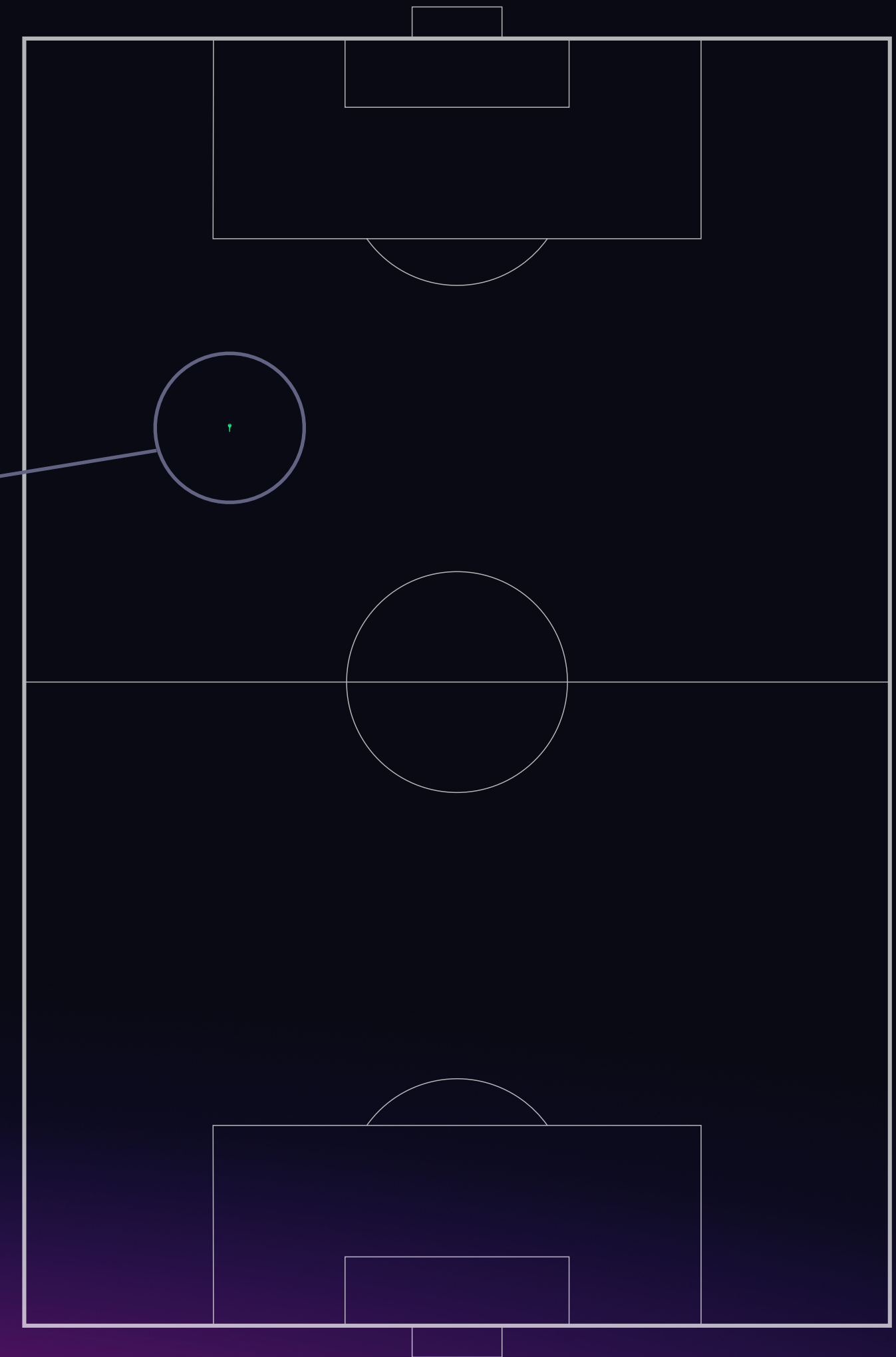


And a shortage of scientists.

Less than
0.1%
of the population are
scientists and researchers.



That's the length of
your house key vs the
length of a football pitch.





Our challenges are complex,
their computation is intractable.



We'd like to propose a solution.



From playgrounds to particle physics.

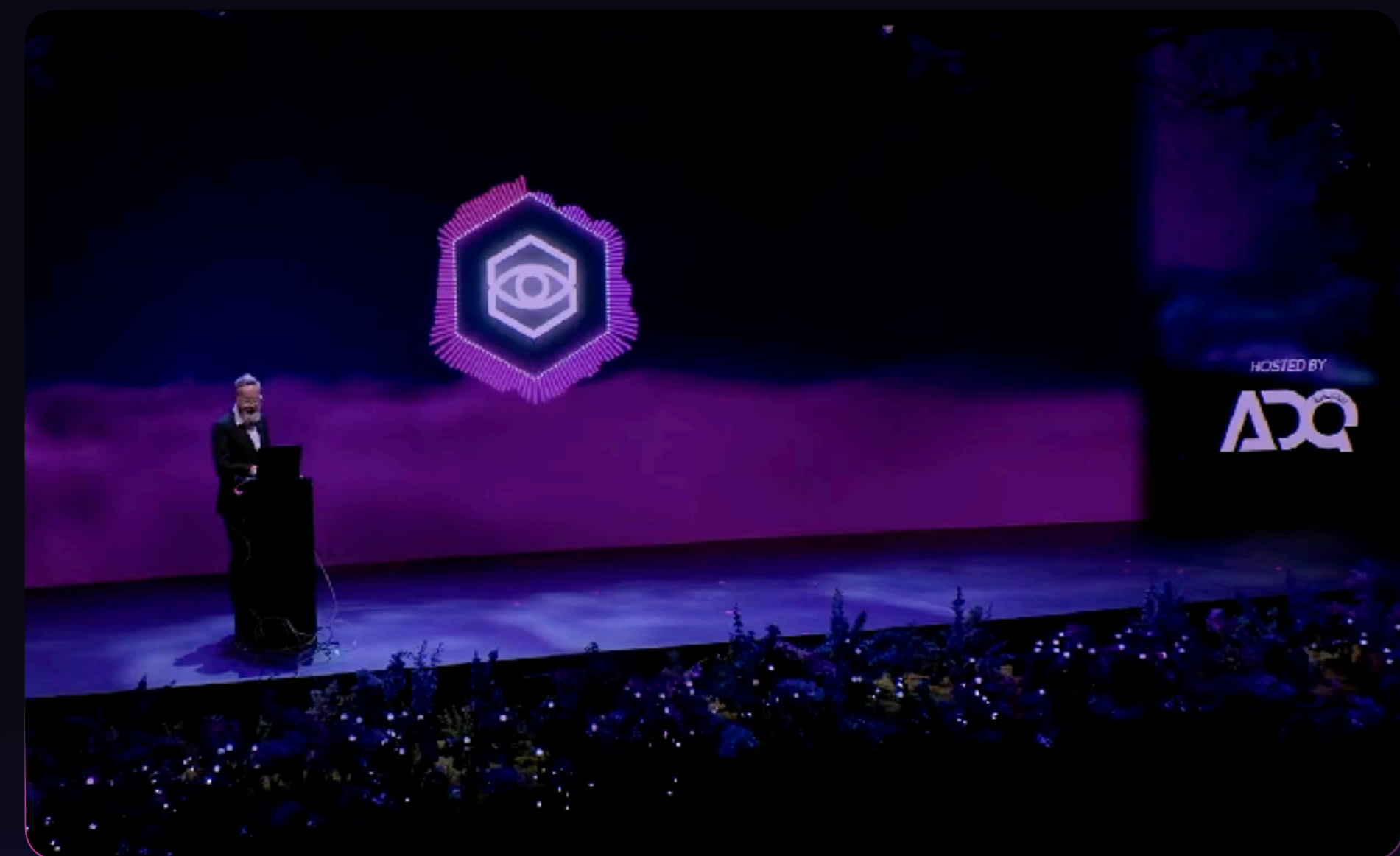
Dubai Future Forum

NOV 2023



Expanse Abu Dhabi

NOV 2024



More scientists, more solutions.



Condorcet's Jury Theorem

○ 1785

This theorem highlights the power of group decision making by stating that as the size of a group increases, the probability that the majority's choice is correct approaches certainty, assuming each member's decision is better than random. It underscores the importance of group size, independence, and diversity in enhancing the accuracy of collective decisions.



Law of Large Numbers

○ 1837

This principle explains that the average result of repeating the same experiment many times will converge to the expected value, improving in accuracy with the number of trials. In the context of crowd wisdom, it suggests that larger crowds can provide more accurate aggregate predictions or estimations due to this statistical phenomenon.



Diversity Prediction Theorem

○ 2007

Formulated by Scott E. Page, this theorem provides a mathematical justification for why diversity within a crowd improves its collective decision-making ability. It reveals that the collective error decreases as the diversity of individual predictions increases, assuming there's no systematic bias, thereby enhancing the crowd's accuracy through diverse viewpoints.

Let's take advantage of the “Wisdom of the crowds”.





The state of artificial intelligence.





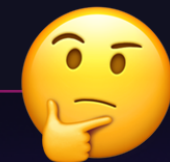
The state of the quantum computing.



Exaggerated claims but good science.

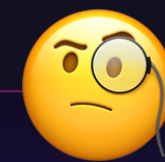
89

“World’s
_____”



72

“Ground
breaking”



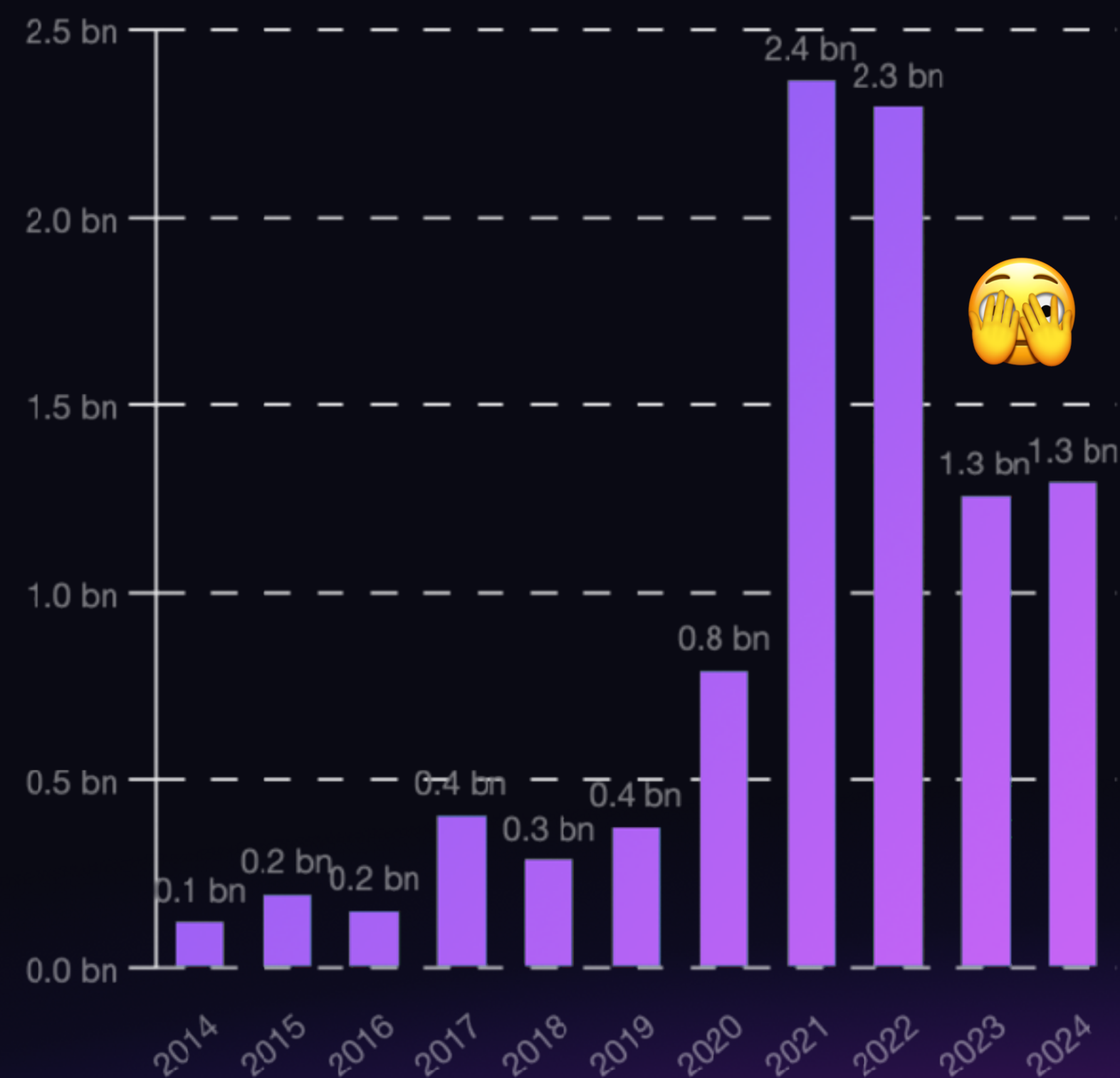
57

“Industry
leading”



A dramatic downturn in funding.

Quantum Tech Investment (USD)



WIRED

Revolt! Scientists Say They're Sick of Quantum Computing's Hype

Forbes

Quantum Computing: The Next Frontier Or A Hype-Filled Bubble?

cybernews

Race to quantum future: have you mounted a horse or a goat?

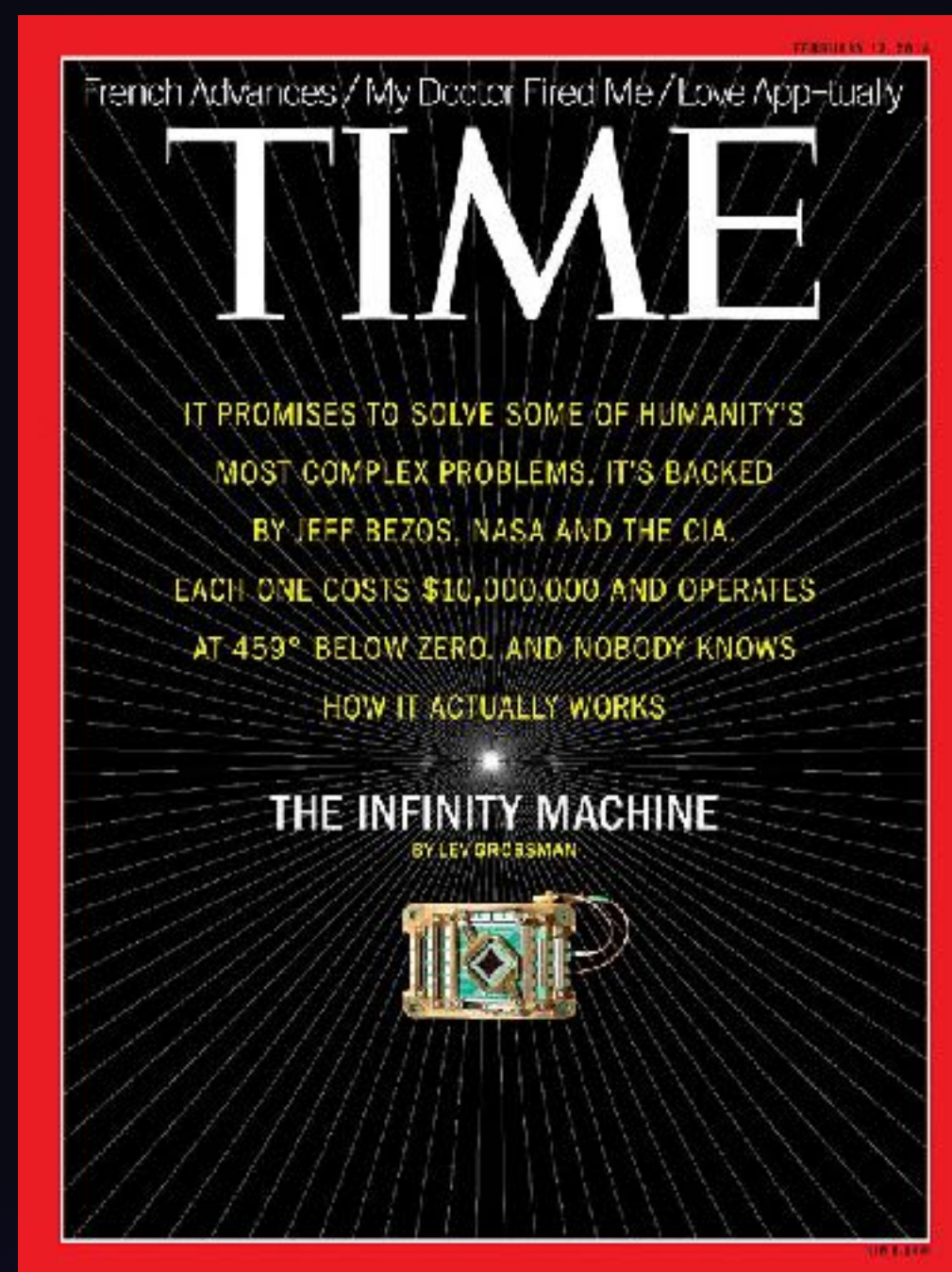
TECHMONITOR

VC quantum computing investment crashed by 50% in 2023



Quantum computing's current phase.

FEB
2014



FEB
2023



FEB
2025





Quantum is science.



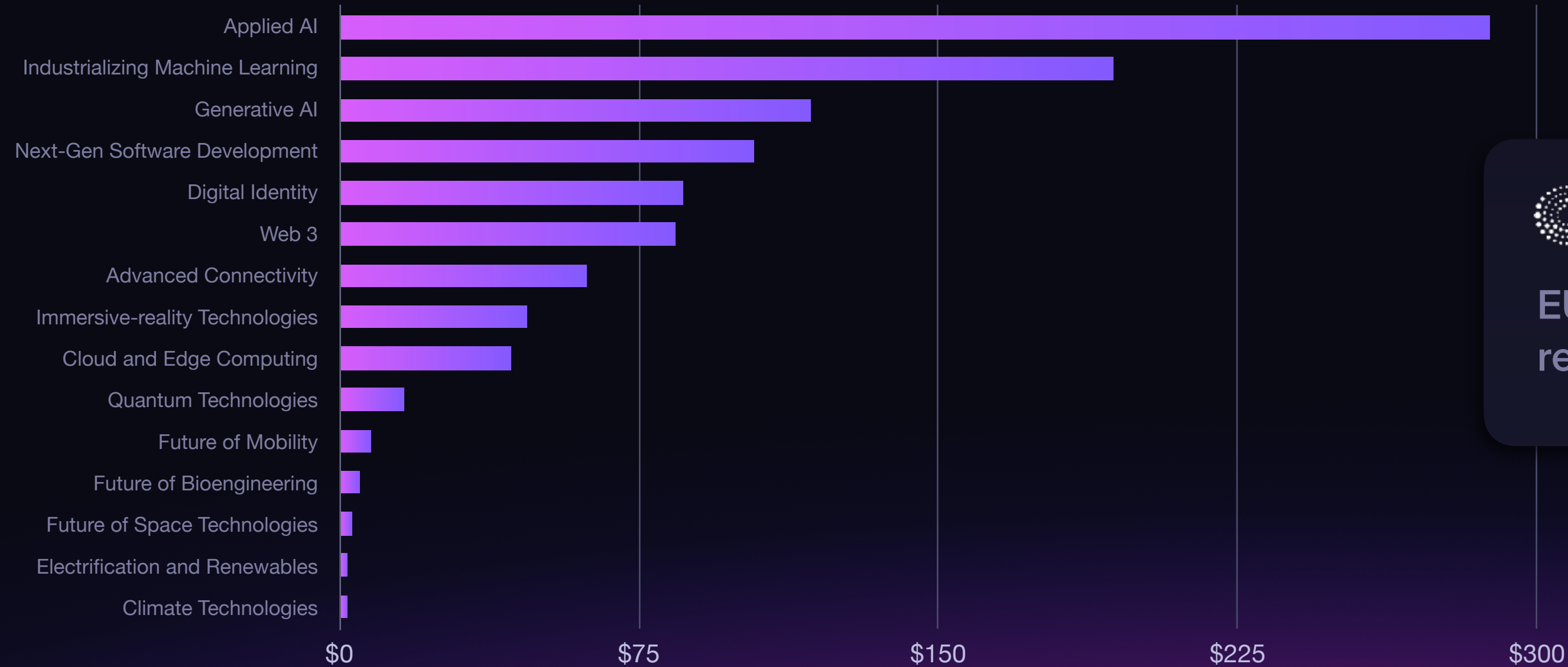


Science is business.



No more Instagrams and OnlyFans.

20%
of venture capital funding
is now in deep tech Up from 10% a decade ago



TC TechCrunch

Deep tech exits: Not just science fiction anymore

Capgemini

Deep tech for climate action: Balancing long-term innovation and urgency

REUTERS

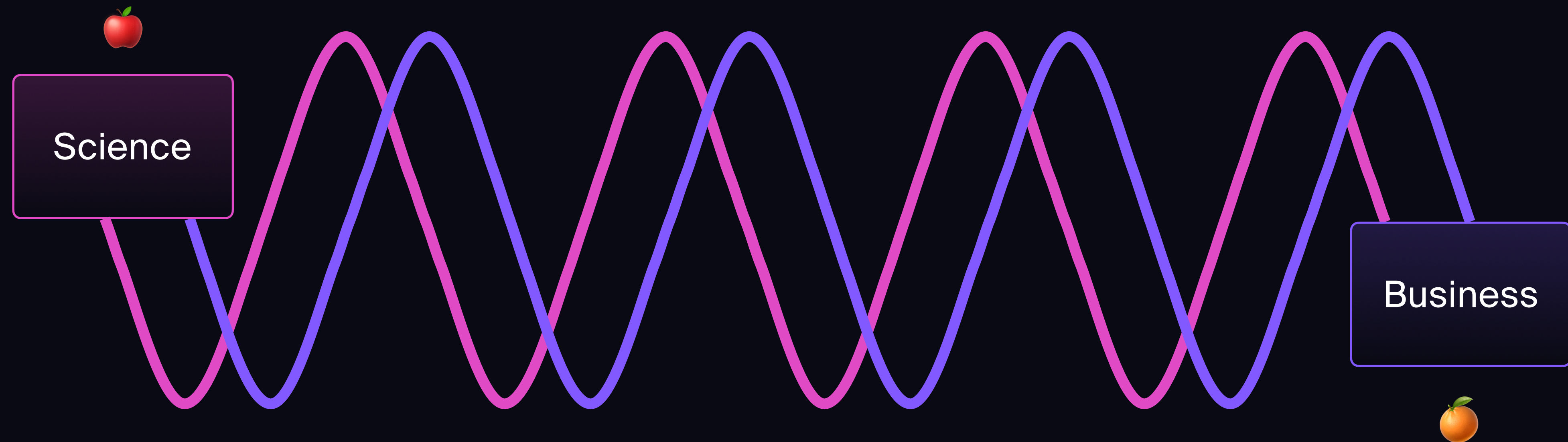
EU to invest \$1.5 billion in region's deep tech sector

LDN LONDON DAILY NEWS

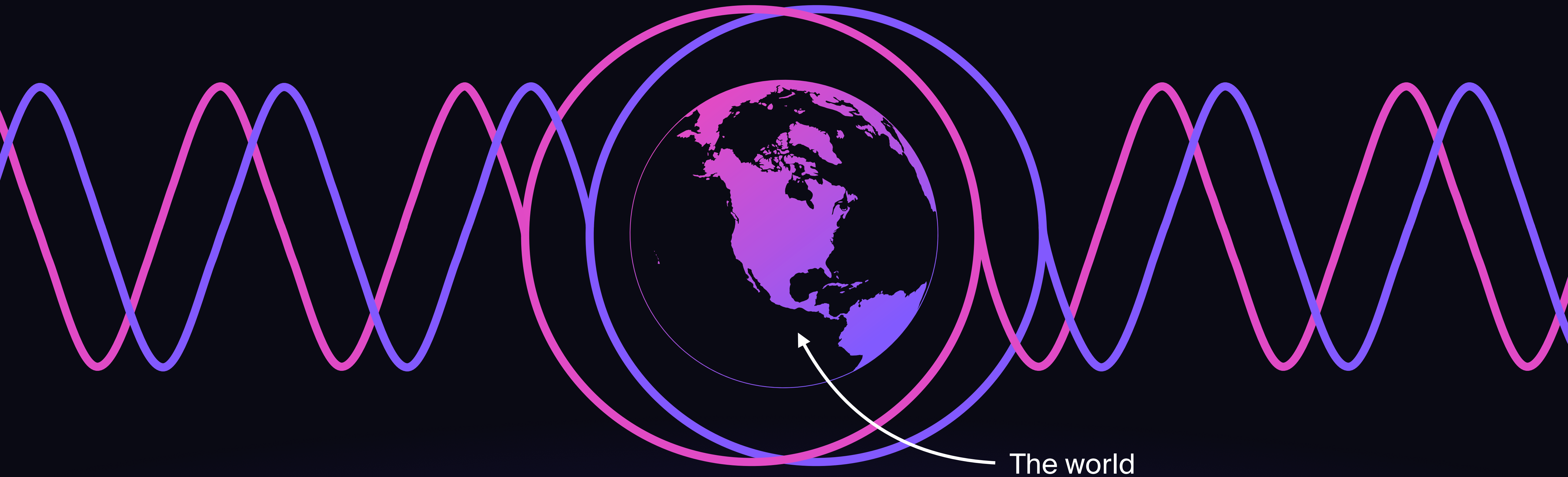
Industry leaders look to Quantum to transform operations



But we're still out of sync.



And it's not just with business.





So what does quantum need?

But quantum needs to...



Be intuitive and easy to use.



Be flexible enough to work the way you work.



Understand the context of what your working on.



Be secure, you must control your data and intellectual property.



Have access to the world's most powerful algorithms.

But quantum needs to...



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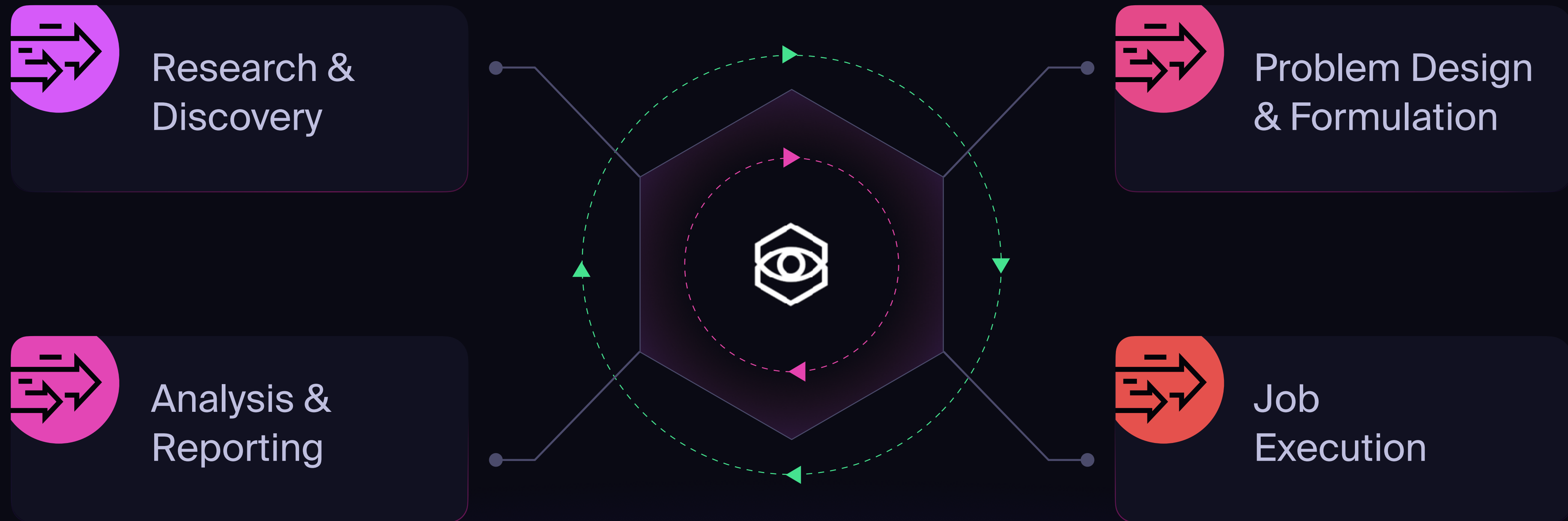


Have access to the world's most powerful algorithms.



90

The focus should be on...





Strangeworks Workflows

combines AI and quantum computing to accelerate
the transition from research to revenue.

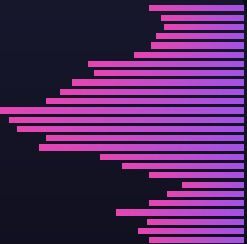
Our very strange stack.

Experts

AI agents and humans working to help you research and formulate your solutions.

Schrödy + Human Interface

@ Hi there, can you help me work on my _



Agentic Services + Copilots

 QUBO BUILDER

 MPS BUILDER

 LP BUILDER

 QUERA ASSISTANT

 IONQ ASSISTANT

 TOSHIBA ASSISTANT

 DATA RESEARCHER


 DATA ANALYST


 RESULTS QA ENGINE


Technology


Including AI tools and assistants to accelerate the adoption of technology and generate solutions.


Large Language Models


 OpenAI

 ANTHROPIC

 Gemini

 LLAMA

 OpenCV

 Keras

Infrastructure + Management

AUTHENTICATION + SECURITY

TEAM MANAGEMENT

BILLING ENGINE

3RD PARTY APIS

JOB MANAGEMENT

REPORTING + ANALYSIS

Partners

The largest collection of hardware & software compute from classical, quantum-inspired and quantum.

Advanced Compute

CPU

QPU

NPU

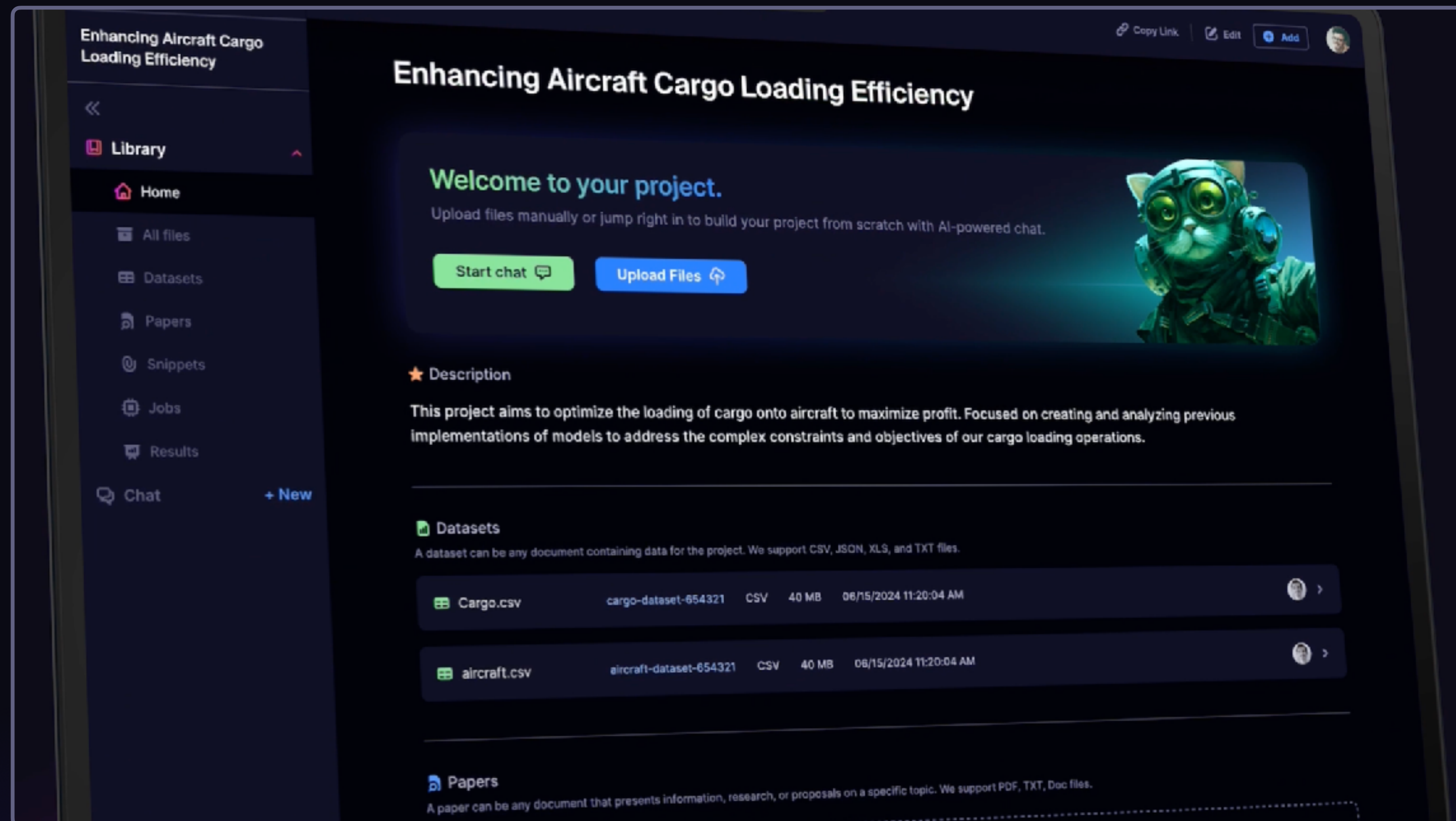
     



Strangeworks enables businesses to harness the untapped potential of advanced technologies to solve complex computational challenges, delivering measurable value now while positioning them to capitalize on rapid innovation.



Find the signal in the noise.



Research & Discovery

- Literature search and review.
- Paper summarization and analysis.
- Relevance scoring and method briefs.



Turning conversation into code.

Problem Design & Formulation

- Copilot for problem design & formulation.
- Automated notebook and code creation.
- Rapid prototyping and iteration.
- Create and organize and data sets.

The screenshot displays the Schrödy Chat interface, which is used for problem design and formulation. It is divided into two main sections: a chat area on the left and a code editor on the right.

Chat Area (Left):

- Schrödy Chat:** A message from the chatbot says, "Thank you for your selection. Of the datasets you have provided, which would you like to include in your problem formulation?". Below this is a table for selecting datasets.
- Dataset Selection Table:**

Datasets	Use
Cargo Dataset	<input checked="" type="checkbox"/>
Aircraft Dataset	<input checked="" type="checkbox"/>

Below the table is a "Submit" button.

- Model Selection:** A message from the chatbot says, "Suggest applicable models". Below this is another table for selecting models.
- Model Selection Table:**

Models	Use
Q (Quadratic Unconstrained Binary Optimization)	<input checked="" type="checkbox"/>
(Mathematical Programming System)	<input type="checkbox"/>
(Linear Programming)	<input type="checkbox"/>

Below the table is a "Submit" button.

- Chat:** A message from the chatbot says, "Use the QUBO model to start the formulation."

Code Editor (Right):

- Formulate notebook with selected methods:** A button to generate code from the chat conversation.
- Create CQM/QUBO:** A section containing a code editor with the following Python code:

```
[ ] import pandas as pd
from dimod import Binary, ConstrainedQuadraticModel

cargo_csv = 'cargo.csv'
aircraft_csv = 'aircraft.csv'

# Load CSV files
cargo_df = pd.read_csv(cargo_csv)
aircraft_df = pd.read_csv(aircraft_csv)
# Create a Constrained Quadratic Model
cqm = ConstrainedQuadraticModel()
# Create binary variables for each cargo-aircraft combination
x = {
    (cargo_idx, aircraft_idx): Binary(f"x_{cargo_idx}_{aircraft_idx}")
    for cargo_idx in cargo_df.index
    for aircraft_idx in aircraft_df.index
}
# Objective: Maximize profit - cost of transport
objective = sum(
    cargo_df.loc[cargo_idx, "Profit"] * x[(cargo_idx, aircraft_idx)]
    - aircraft_df.loc[aircraft_idx, "Cost of Transport Per Cargo"]
    * x[(cargo_idx, aircraft_idx)]
    for cargo_idx in cargo_df.index
    for aircraft_idx in aircraft_df.index
)
# Adding the objective to the model
cqm.set_objective(-objective) # Negative sign because we are maximizing
# Constraint: Priority 1 cargo must be sent
for cargo_idx in cargo_df.index[cargo_df["Priority"] == 1]:
    cqm.add_constraint(
        sum(x[(cargo_idx, aircraft_idx)] for aircraft_idx in aircraft_df.index)
        == 1,
        label=f"priority_constraint_{cargo_idx}",
    )
# Constraint: Cargo can be loaded in only one aircraft
for cargo_idx in cargo_df.index:
    cqm.add_constraint(
```



An execution machine.

Searching for the list of the available solvers that you can use to solve your problem.

Searching solvers...

Suggested Solvers	Use
D-wave BQM	<input checked="" type="checkbox"/>
D-wave CQM	<input checked="" type="checkbox"/>
Toshiba	<input type="checkbox"/>
Fujitsu	<input type="checkbox"/>
Hitachi	<input type="checkbox"/>
NEC	<input type="checkbox"/>
Gurobi	<input checked="" type="checkbox"/>

[Submit](#)

[Ask me anything](#)

D-WAVE [Learn more](#)
D-Wave offers quantum annealers based on superconducting qubits. Quantum annealing processors naturally return low-energy solutions. This type of QPU or hybrid solver is a specific-purpose machine that's designed to solve quadratic unconstrained optimization (QUBO) problems. This includes optimization and probabilistic sampling problems.

TOSHIBA [Learn more](#)
Inspired by quantum technology, Toshiba's SQBM+ is an optimization solution derived from the Quantum Simulated Bifurcation Machine, a combinatorial optimization solver built on the Simulated Bifurcation Algorithm developed by Toshiba Corporation.

FUJITSU [Learn more](#)
Fujitsu's Digital Annealer provides an alternative to quantum computing technology, which is at present both very expensive and difficult to run. Using a digital circuit design inspired by quantum phenomena, the Digital Annealer focuses on rapidly solving complex combinatorial optimization problems without the added complications and costs typically associated with quantum computing methods.

HITACHI [Learn more](#)
CMOS annealing machines are non-Neumann architecture computers using dedicated combinatorial optimization processing technology developed by Hitachi to optimize the Ising model.

NEC [Learn more](#)
Use NEC's Vector Annealing Service for solving large-scale combinatorial problems at ultra-high speed

Job Execution

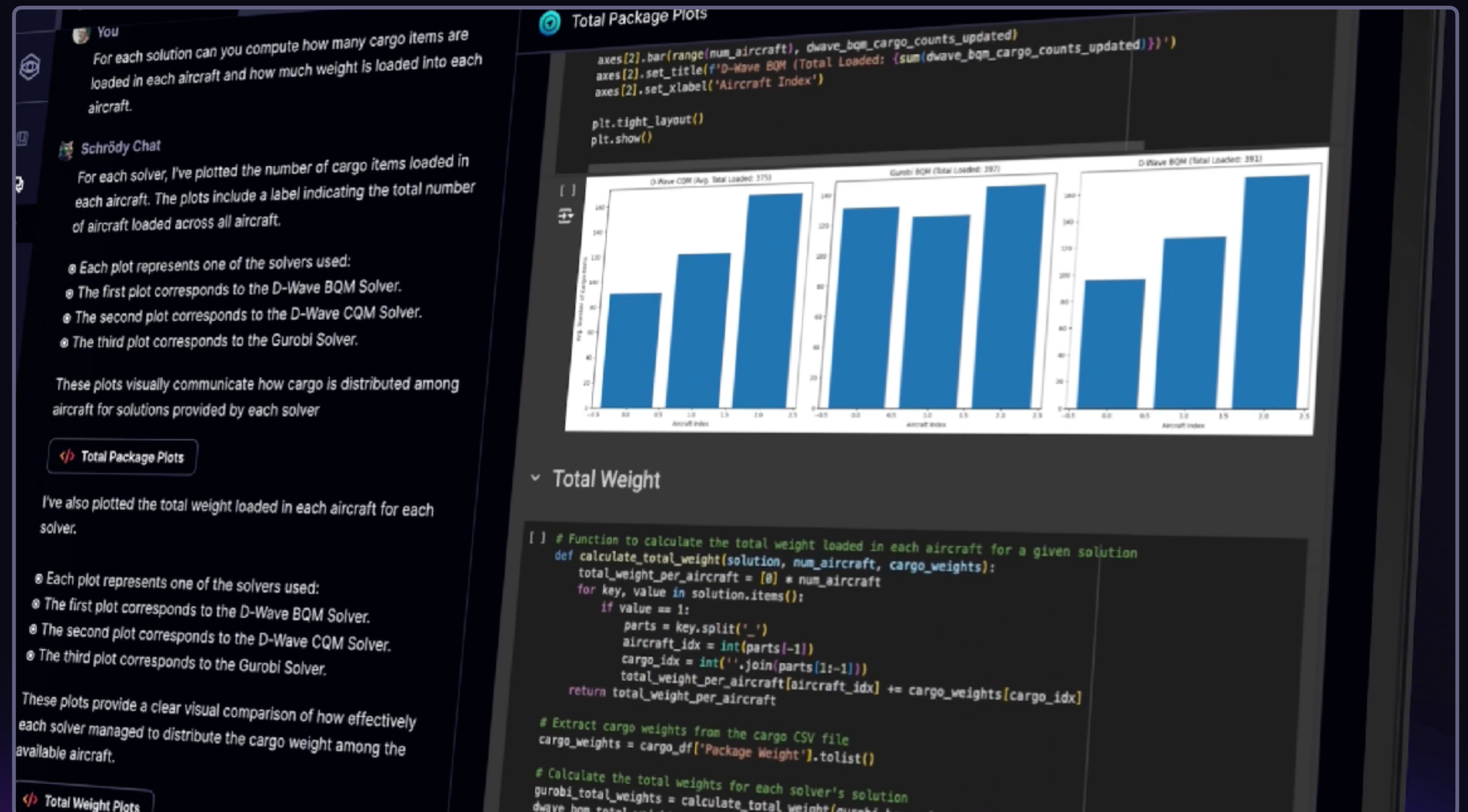
- Automated job submission through chat.
- Quantum, q-inspired, & classical solvers.
- Connect to Strangeworks applications.
- Job organization & data management.



Analysis without the paralysis.

Analysis & Reporting

- Conduct analysis with results via chat.
- Generate graphics & data visualizations.
- Automated customized report creation.





A billion minds innovating on the
future of humanity.





Thank you.



Email us
goquantum@strangeworks.com

