Earth Observation & AI
at Satellite Applications Catapult

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We work with
Innovate UK
Our Mission

// To innovate for a better world, empowered by satellites.
WE HELP ORGANISATIONS GROW THEIR BUSINESS.

We help organisations to use satellite applications to grow their business in the UK and internationally.

WE ARE INDEPENDENT.

We bring together industry, researchers, end-users and government to explore and develop new ideas.

WE ARE GOVERNMENT BACKED.

We are partly-funded by the Government and work closely with Innovate UK, UK Space Agency, UK Science & Innovation Network, and other public bodies.

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SATELLITE APPLICATIONS CATAPULT

Who are we

We are a not-for-profit innovation and technology company transforming the way the world uses satellite technology and data.

SATELLITE APPLICATIONS CATAPULT
OUR APPROACH

We do 3 things

Across Global Markets

Across key Technologies

ENERGISE
INTELLIGENT TRANSPORT
SMALLSAT CONSTELLATIONS

EMPOWER
BLUE ECONOMY
MOBILE COMMUNICATIONS

ENABLE
SUSTAINABLE LIVING
AUTONOMOUS SYSTEMS

GOVERNMENT SERVICES
GEOSPATIAL SYSTEMS
WE WERE SET-UP 5 YEARS AGO

Our impact

Met 3500 organisations

Engaged with 427 SME

Delivered over 200 externally funded projects

Worked in 22 countries

Built relationships with 118 universities

Including 66 university departments

Invested £19.7m in world-class facilities
WHAT SIZE IS THE MARKET?

15 $Bn p.a. market by 2025

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Industry Challenges

Flood of Data

Labour intensive Processes

Opportunity: “To accelerate the transformation of the Earth Observation industry through the adoption of Artificial Intelligence technologies.”
CATAPULT’S PROGRAMME OF WORK – AI FOR EO

4 Key Activities

RAISE AWARENESS
- Conferences
- Competitions
- Case-studies

BUILD ECOSYSTEM
- User challenges
- AI capabilities
- EO capabilities

SHARE TOOLSET
- Platforms
- Open-source
- Data sources

TRIGGER FUNDING
- Commercial R&D
- Public grants
- Start-ups funding

Key blocker
Training Data
MARKET-LED USE-CASES

Challenges relevant to AI

- **AgriTech**: Growth Disease, Logistics, Intelligence/Compliance
- **BlueEconomy**: Coastal Monitoring, Smart Ports, Maritime Domaine
- **Extractive Ind.**: Tailing Dams, Environmental impact, Illegal mining
- **Intel. Transp.**: Autonomous vehicles, Traffic management
- **Governments**: Urban development, Disaster management …

Nature of technical challenges – % relevant

- Forecasting: 44%
- Prob Class: 69%
- Change Detection: 31%
- Detection: 47%
- Extraction: 56%

Business improvement opportunity – % relevant

- Provenance: 80%
- Precision: 70%
- Accuracy: 80%
- Latency: 60%
LABELLING TOOL PROJECT: USE CASES

ATKINS

Classification of building types for land-use planning in developing countries.

Kenya

Global monitoring of PV farms deployments to model commodities demand.

USA

Damage assessment of infrastructures to steer relieve effort post-disaster.

Dominica

Detection of household reservoirs as indicators of narcotics production sites.

Afghanistan
Assessment of infrastructures damages to steer relief effort post-disaster.
WHAT’S NEXT?

Ai4Space activities

- Raise Awareness
- Build Ecosystem
- Share Toolset
- Trigger Funding

WHAT’S NEXT?

- ENGAGE’18 conference
- Cooperations international scene
- Oxford AIMS Doctoral Training
- Constellation Predictive maintenance & capacity management
- Intuitive Data Access Data Discovery Portal
- FDL’18 AI accelerator
Thank you.