ORORA TECHNOLOGIES

OroraTech's Global Wildfire Warning

Living Planet Symposium 2022

May 27th, 2022

Company Profile

- Founded 2018 in Munich/Germany
- Spin-off from the Technical University of Munich
- Grown to a team of over 70 international team members
- Successfully raised >7 Mio € in Seed & Series A Round

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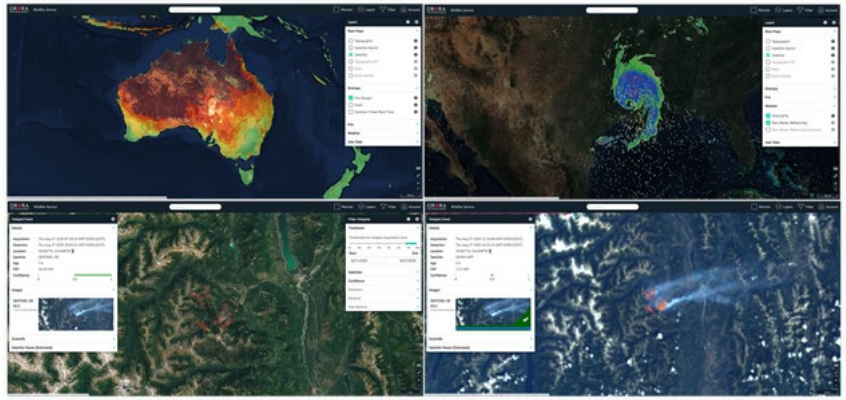
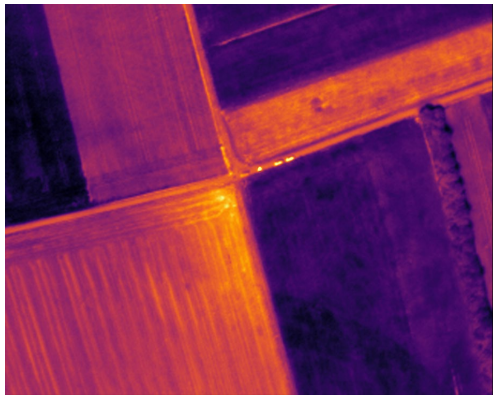
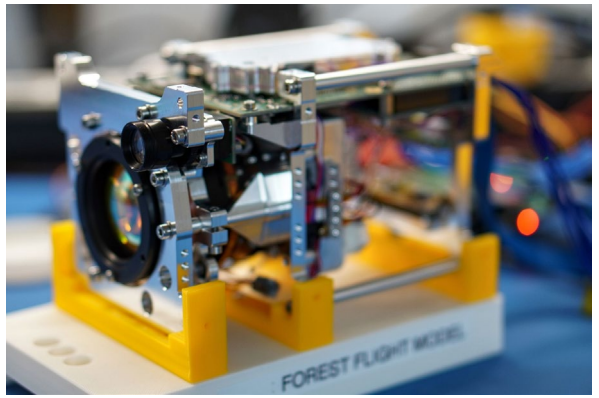
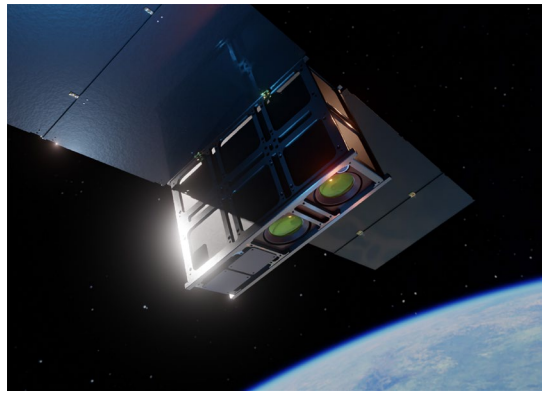








30% More Megafires by 2050

3.0 million km²
burned area per year
(~ size of India)

$10 billion
insured damages per year
(rising fast)

6.5 billion tons
of CO_2 equivalent released in 2021
(17 % of total carbon emissions)

Subscription based

Wildfire Service

OroraTech CubeSats

Public Satellites

Ground-based cameras & IoT sensors

Feeds from public sources and social media

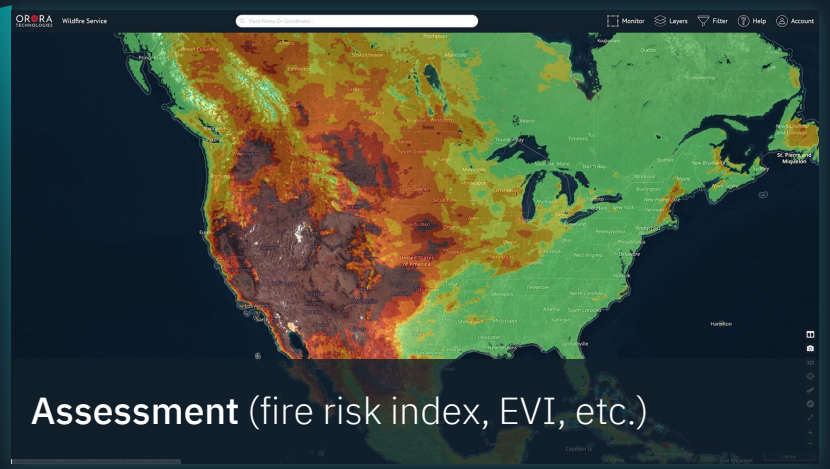
OroraTech
AI-powered Analytics Core

Actionable Insights

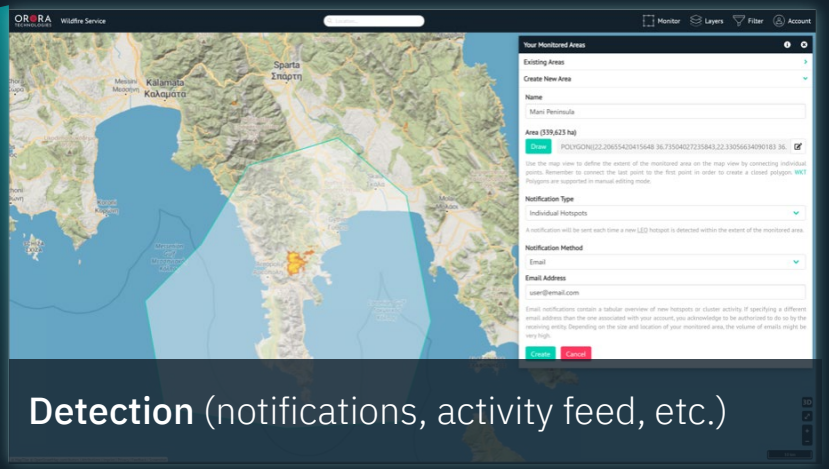
Strategic Planning

User Interface

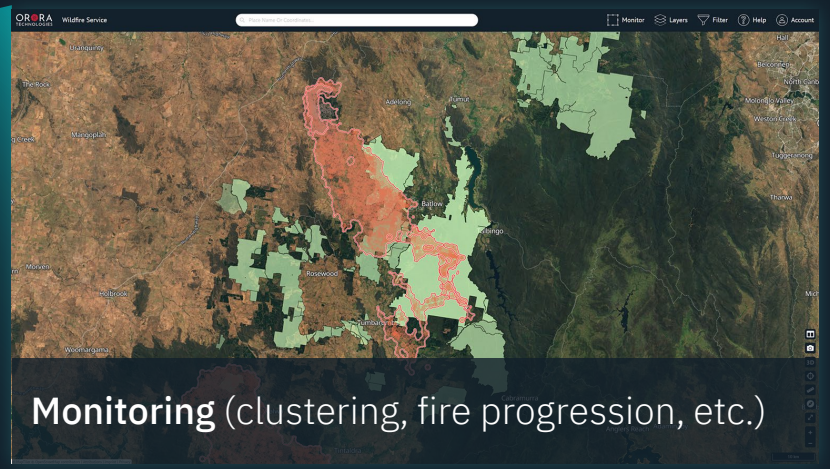
An Innovative, Easy-To-Use, Central Platform



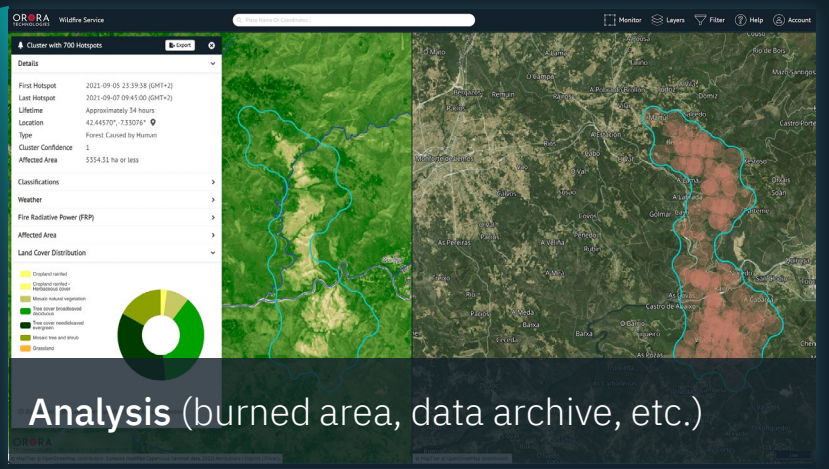
Assessment (fire risk index, EVI, etc.)



Detection (notifications, activity feed, etc.)



Monitoring (clustering, fire progression, etc.)



Analysis (burned area, data archive, etc.)

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Wildfire Service
Location...
Monitor
Layers
Filter
Account
Cluster with 23690 Hotspots
Details
First Hotspot
Sun Aug 16 2020 20:20:00 GMT+0200 (CEST)
Last Hotspot
Tue Aug 25 2020 12:08:41 GMT+0200 (CEST)
Lifetime
9 days or more
Location
37.360°N, 121.472°W
Type
Forest Fire Caused by Lightning (Click to edit...)
Affected Area
0.17 km² or less
Classifications
Classifications help in identifying the cause and origin of a hotspot cluster. You can edit your classification.
Time
Class
Source
Notes
2020-08-20 15:26
Forest Fire (Lightning)
Manual (Yours!)
-
Charts
FRP (MW)
50000 MW
30000 MW
4000 MW
2000 MW
300 MW
20 MW
5 MW
1 MW
Layers
Base Maps
Topographic
Satellite Hybrid
Satellite
Topographic OT
Dark
Black Marble
Overlays
Fire Danger
Fuels
Sentinel-3 Near Real-Time
Fire
Adaptive
Markers
Circles
Heatmap
Clusters
Weather
Wind (GFS)
Rain (Radar Reflectivity)
San Francisco
Oakland
Berkeley
Richmond
Alameda
Hayward
Fremont
Redwood City
Palo Alto
Sunnyvale
San Jose
Santa Cruz
Gilroy
Salinas
Tracy
Manteca
Modesto
Stockton
Concord
San Rafael
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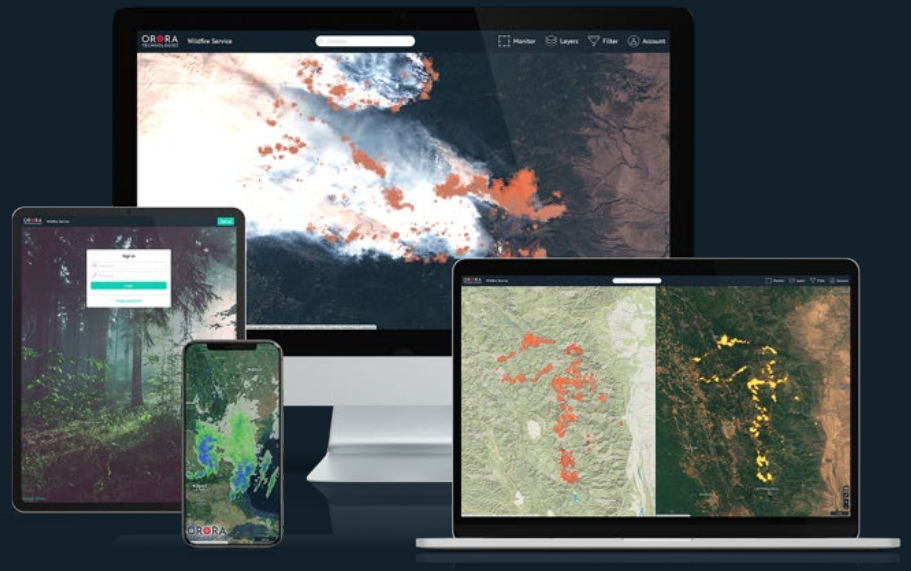
SaaS platform with real-time alerts

Available for All Devices and Control Rooms

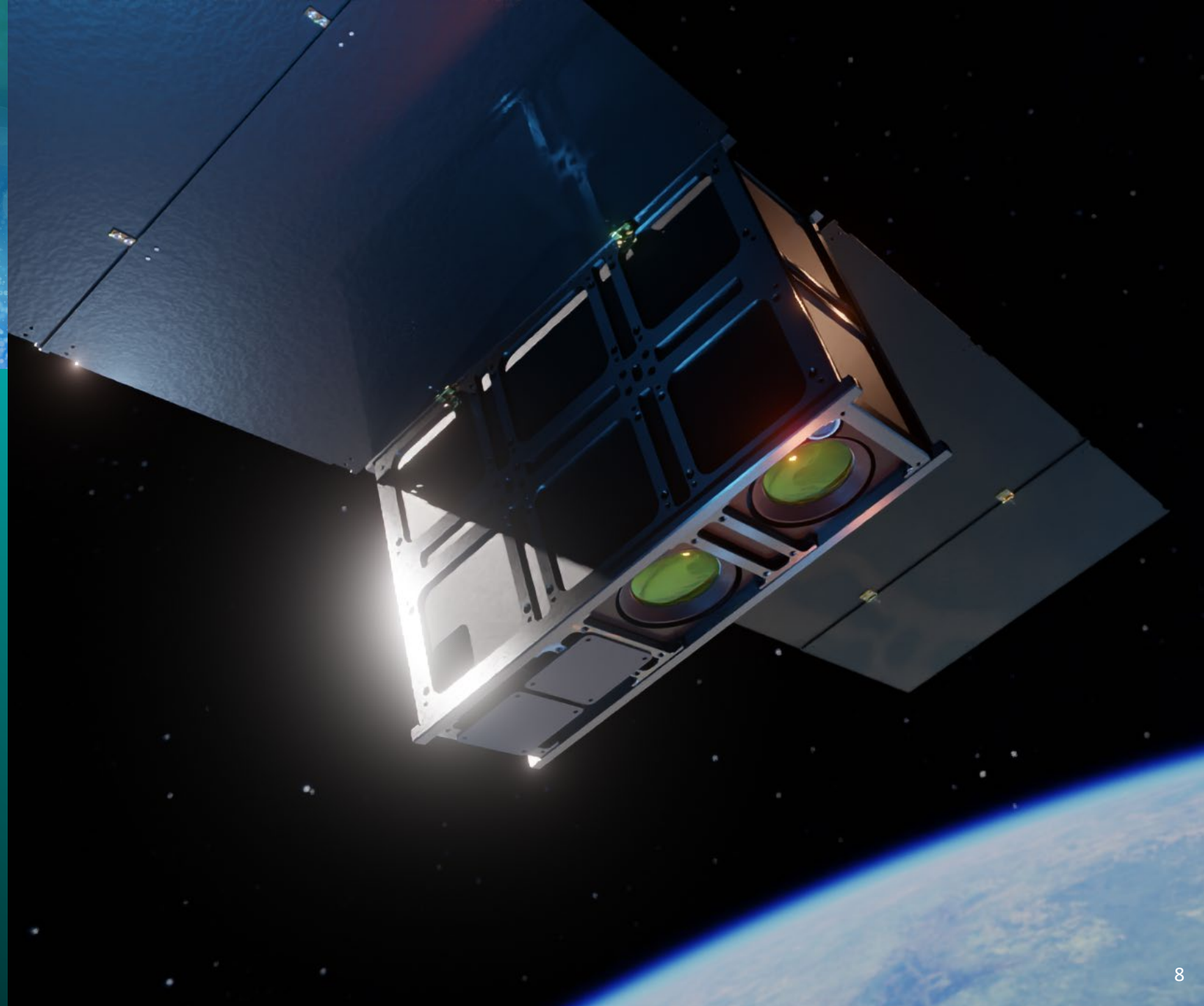


Cross-platform frontend with detailed wildfire information

API for integration into existing customer control rooms and platforms

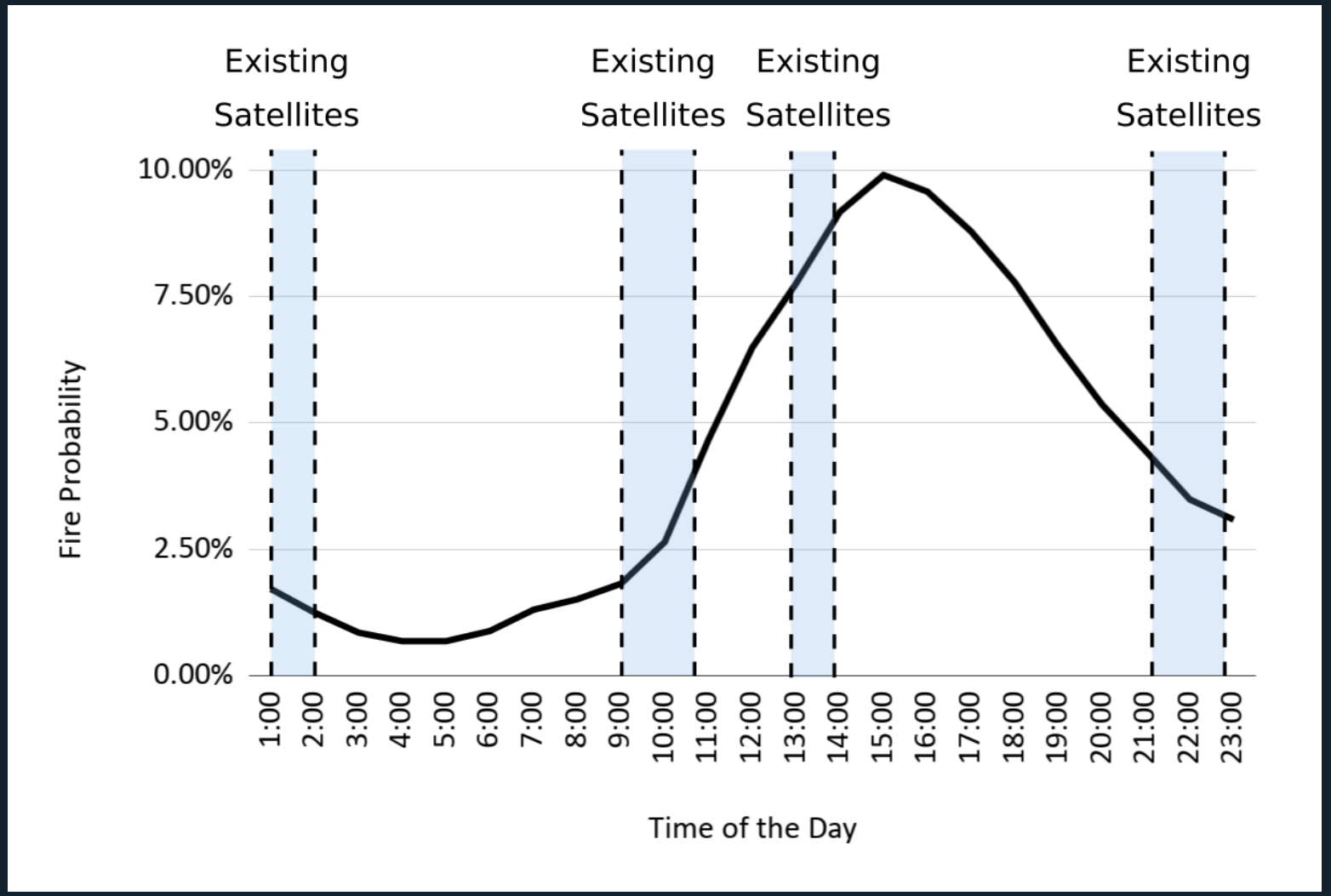
InCubed

OroraTech's Global Wildfire Warning



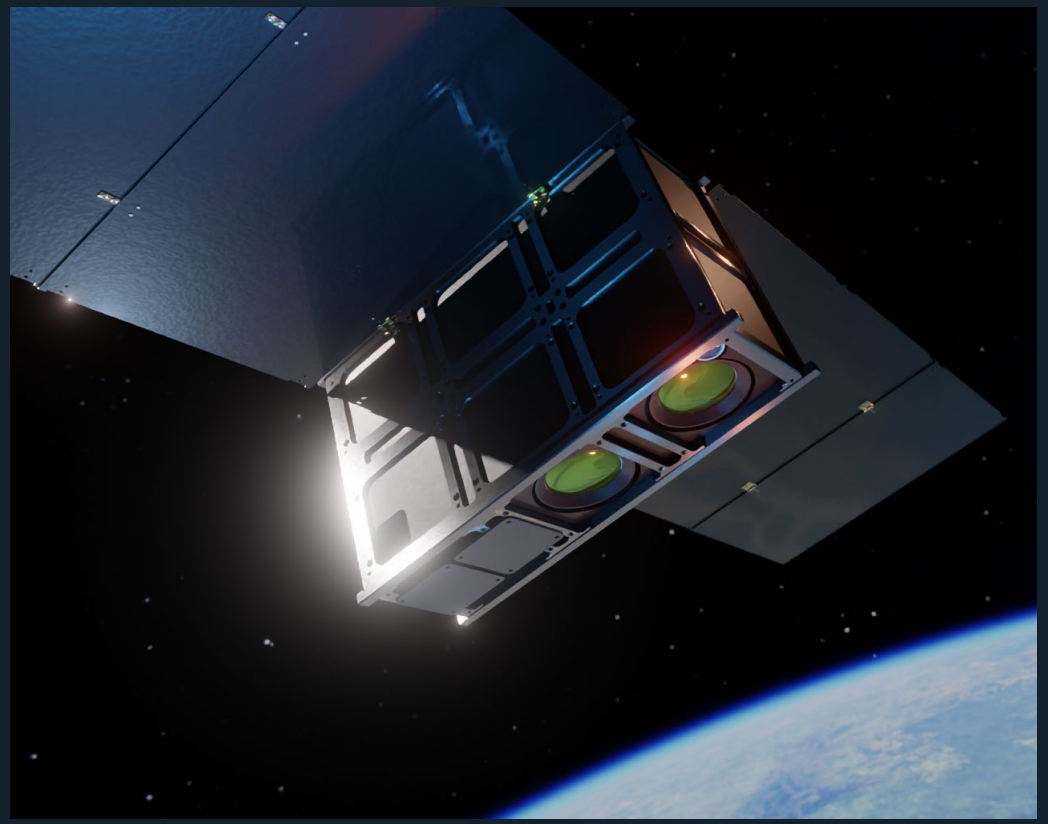
Currently available LEO thermal-infrared satellite data

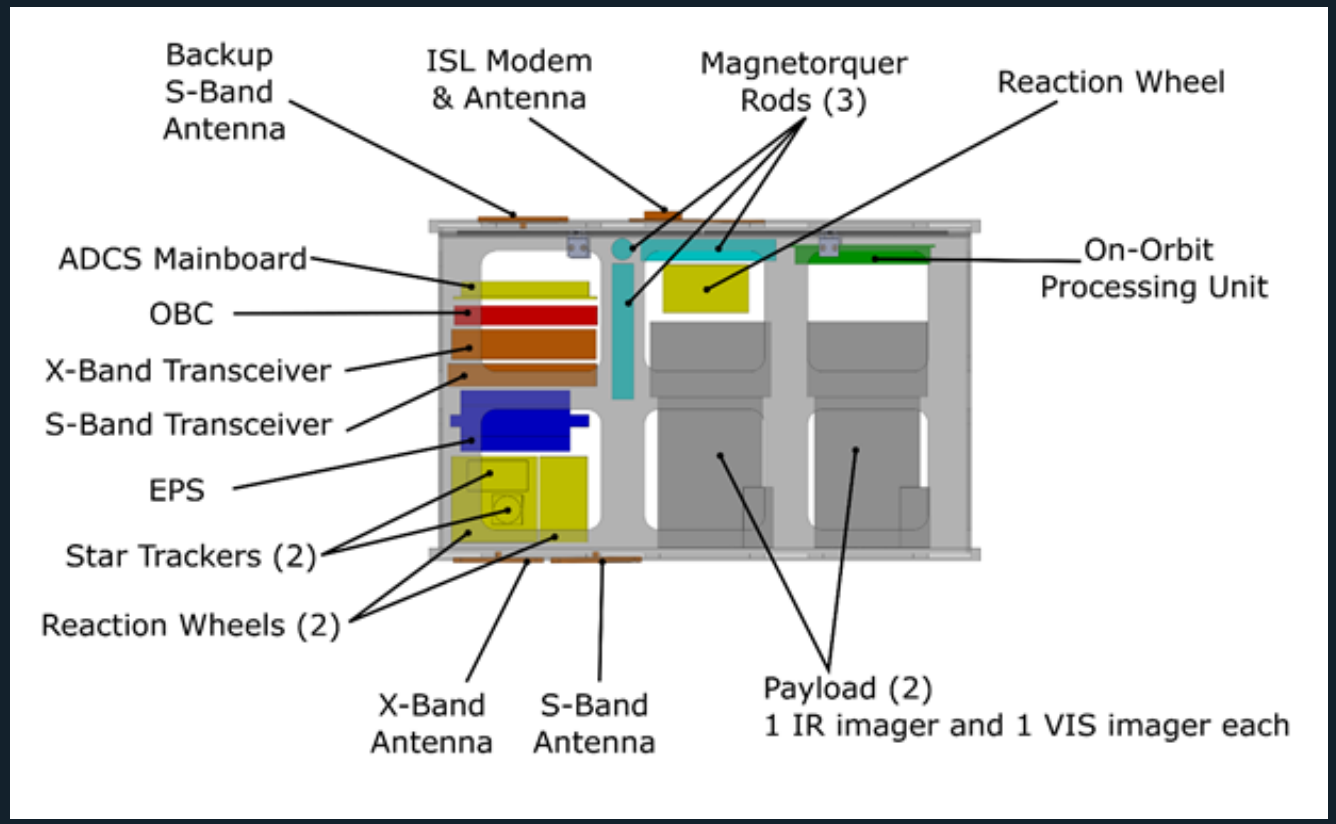
The need for more data



Miniaturized Technology for Space

OroraTech's Nanosatellite Platform



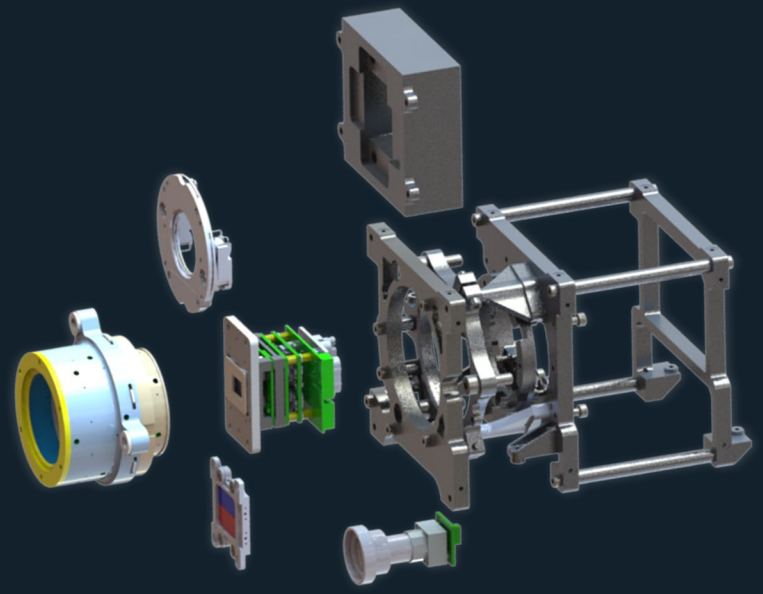


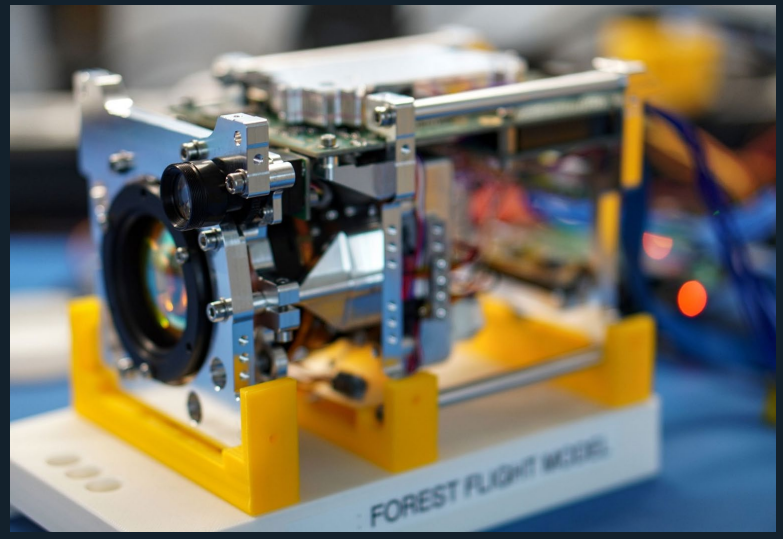
Launch in Q3/Q4 2023

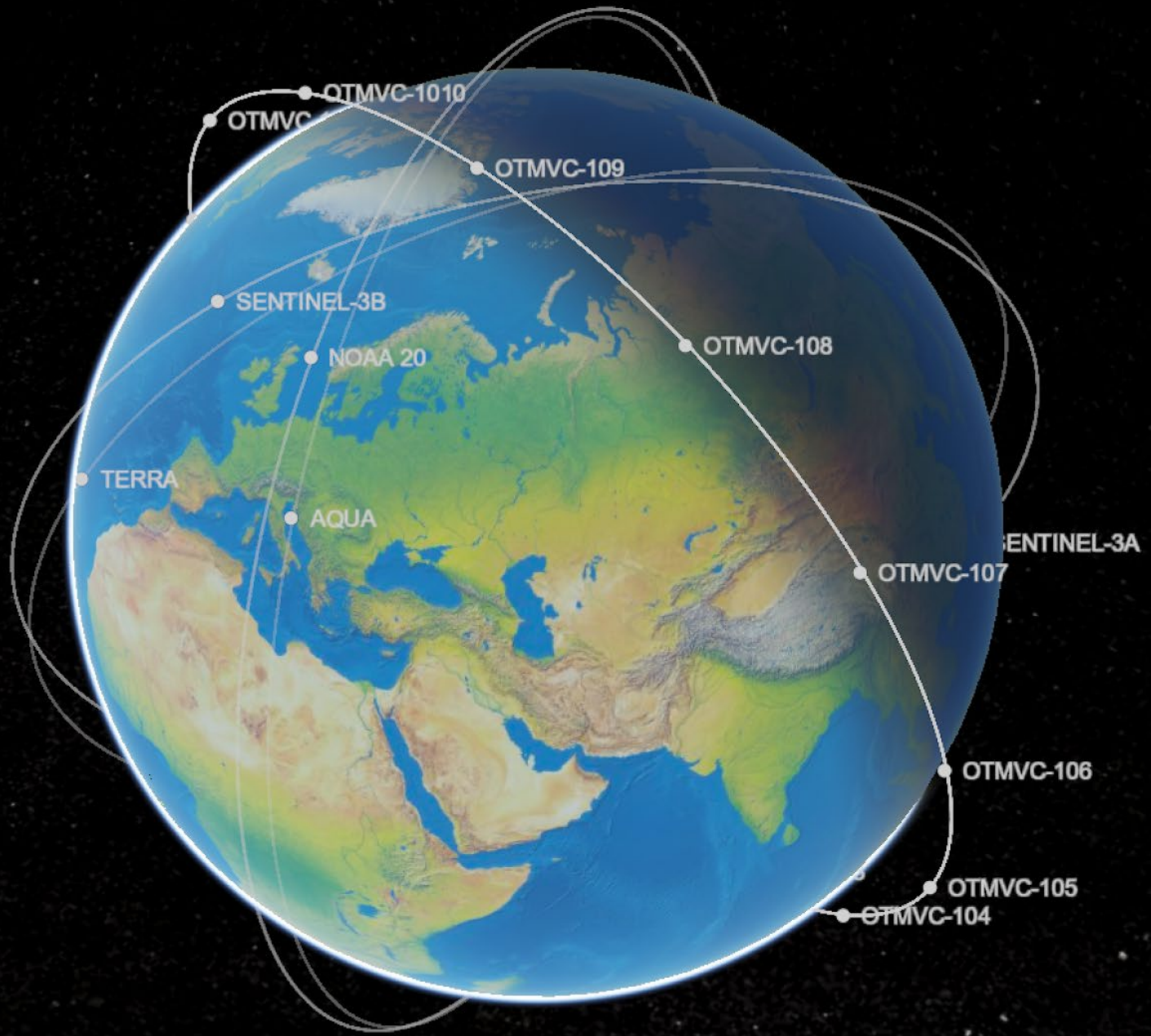
Miniaturized Technology for Space

OroraTech's Thermal-Infrared Camera

- Miniaturized thermal-infrared sensor sensitive in MWIR and LWIR
- 200 m ground resolution, detects fires < 10x10m
- Swath of one camera: 200km
- 16 x 10 x 10 cm^3, <2 kg
- Prototype launched into Space in January 2022
- On-orbit fire detection via GPU
- Realtime downlink of information via intersatellite modem

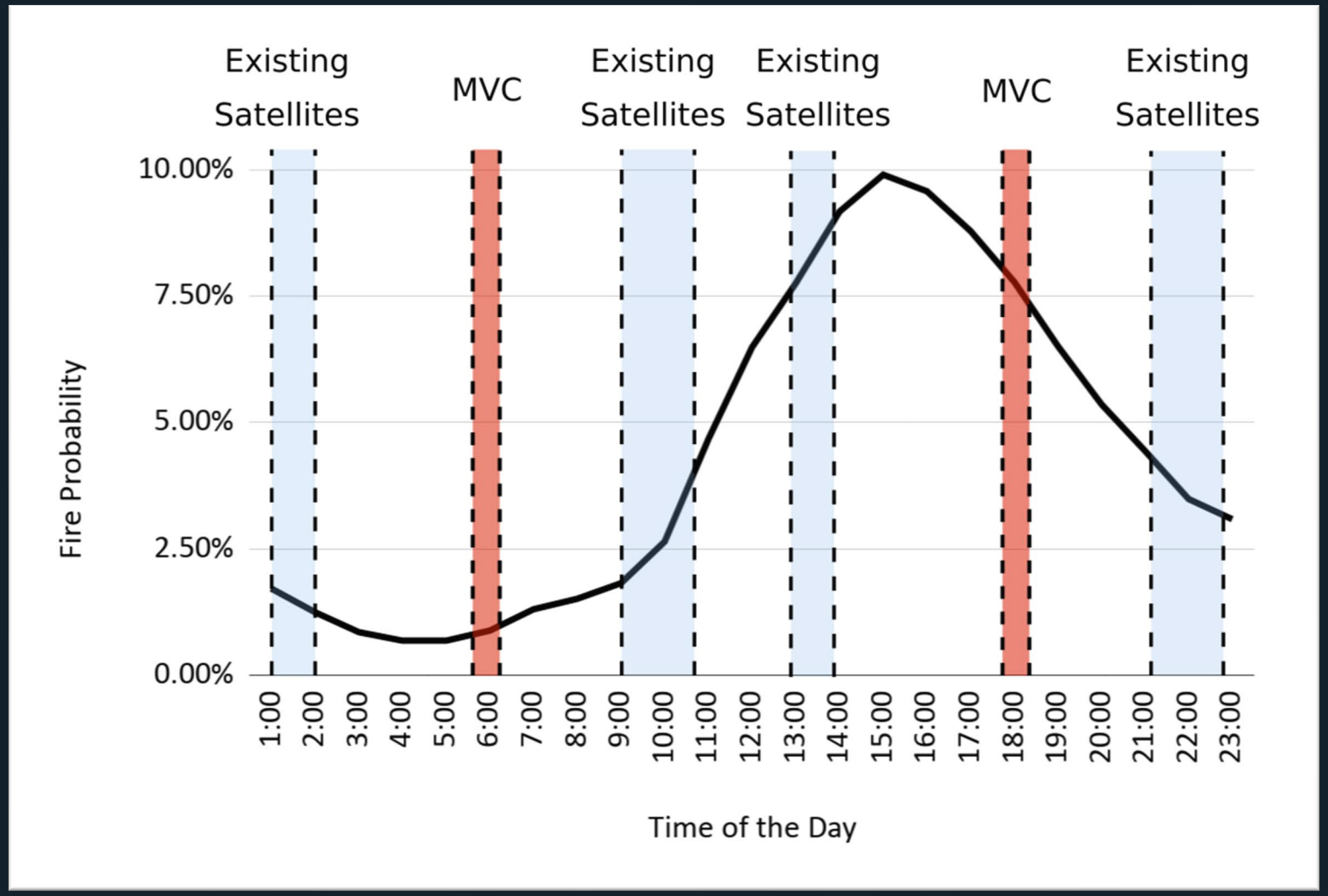





OTMVC-1010
OTMVC-109
SENTINEL-3B
NOAA 20
OTMVC-108
TERRA
AQUA
OTMVC-107
OTMVC-106
OTMVC-105
OTMVC-104

Significant improvement of afternoon coverage

Minimum Viable Constellation



NewSpace Intelligence for a Sustainable Earth

Thank You for Your Attention!

Visit our Booth in the Exhibition Area

Dr.-Ing. Martin Langer

CTO

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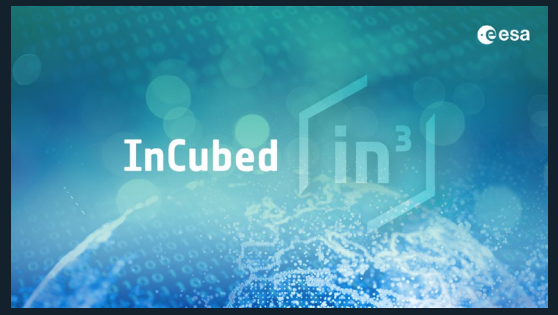
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