



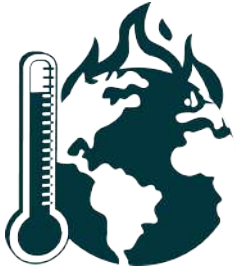
DRYAD
CONNECTING THE NATURAL WORLD

Ultra-Early Wildfire Detection

December 2024



Impact of Wildfires



**GLOBAL
WARMING**

20%

of global CO₂
emissions
is caused by
wildfires



**HUMAN
INDUCED**

80%

of wildfires
are human
induced



**BIODIVERSITY
LOSS**

>3

billion
animals
killed

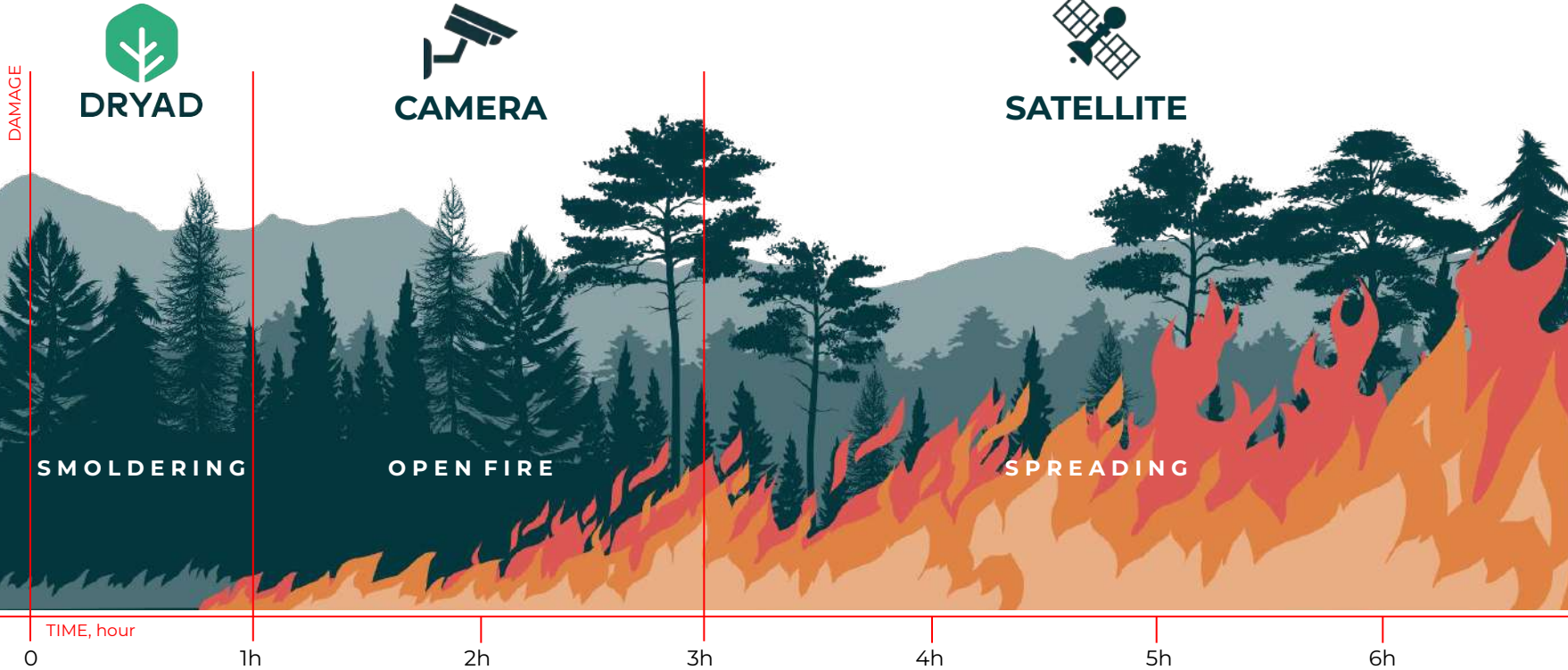


**FINANCIAL
DAMAGES**

\$893

billion economic
loss per year in US

Time is of the Essence



Dryad Silvanet™



SENSOR

Solar-powered gas sensors detect wildfires within minutes.



GATEWAYS

Distributed LoRa Gateways provide a large-scale mesh network infrastructure.

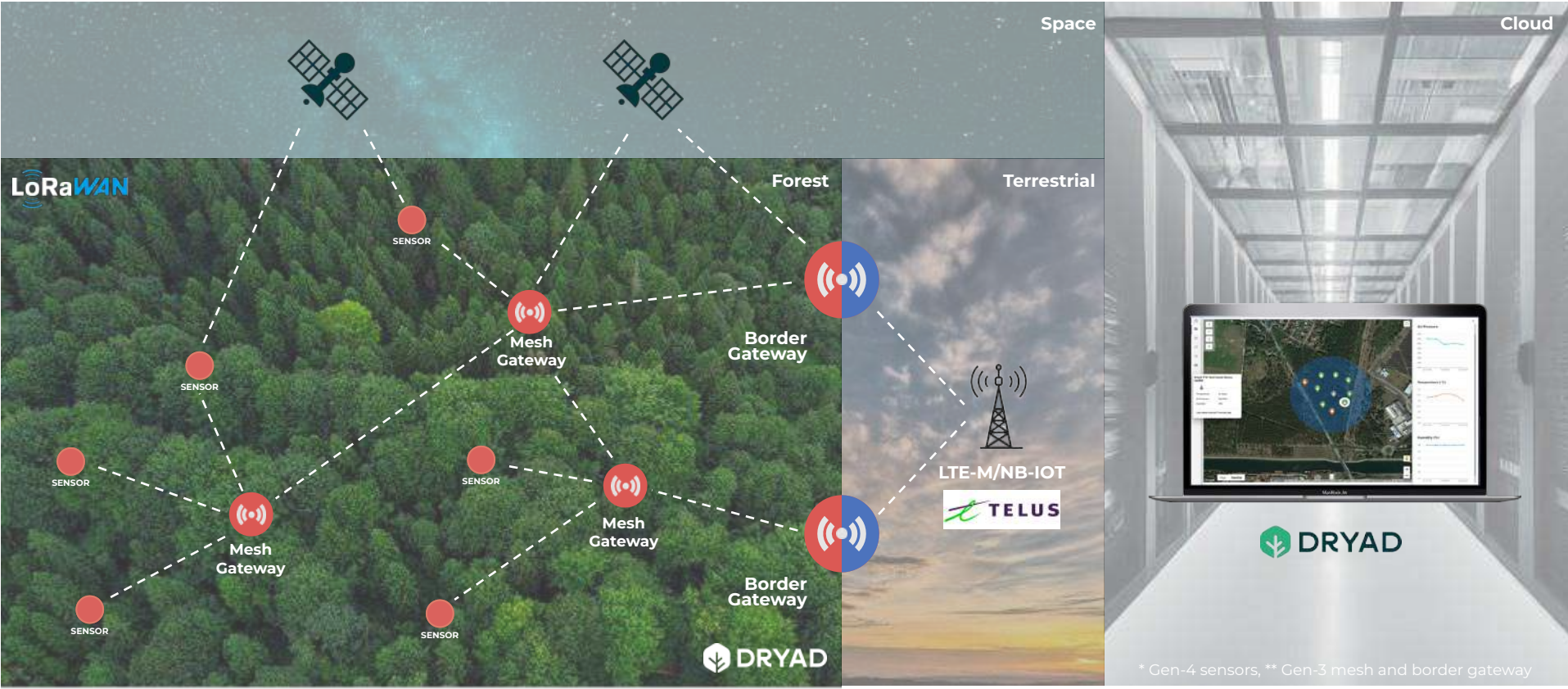


MONITORING

Deployment planning, device management, monitoring and alerting.

19 patent families, 25 PCT filings, 28 international filings

Large-Scale IoT Mesh Network for Forestry



* Gen-4 sensors, ** Gen-3 mesh and border gateway

Optimizing Wildfire Sensor Deployments





SPARSE DEPLOYMENT
in remote locations

1 Sensor per 10 hectare

DENSE DEPLOYMENT
in high-risk areas

1 Sensor per hectare

1 SENSOR
per 5 hectares
on average

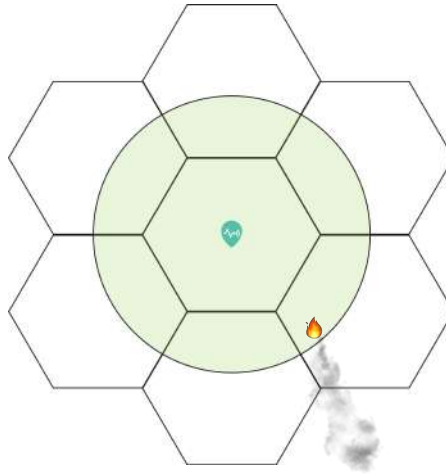
-  Sensor in high-risk areas
-  Sensor in lower-risk areas



Scaling Ultra Early Detection



Silvanet is able to detect a fire in less than 60 minutes, within a 100m radius

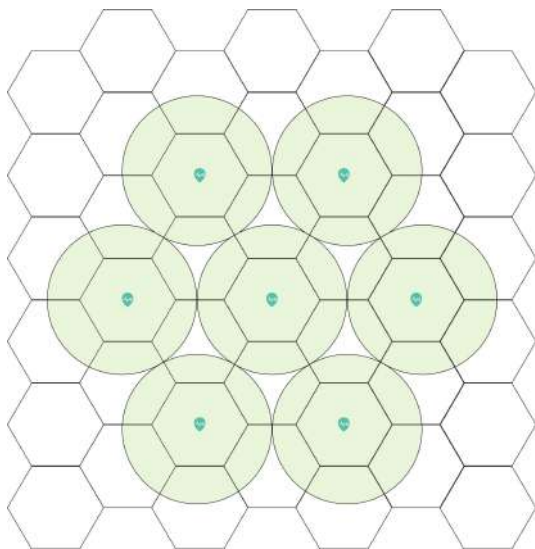


In the field, detection can be impacted by wind conditions

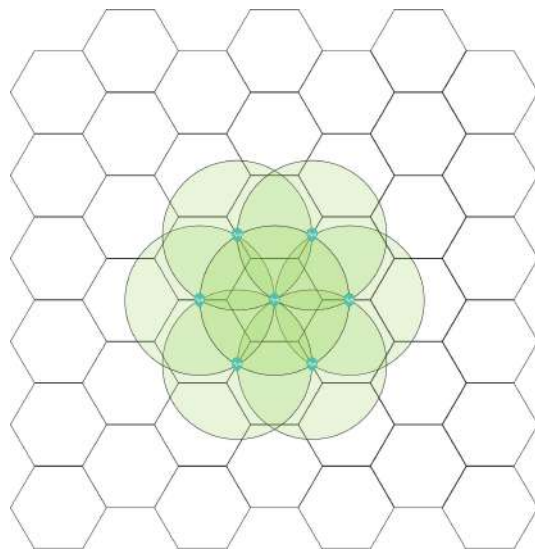
Scaling Ultra Early Detection



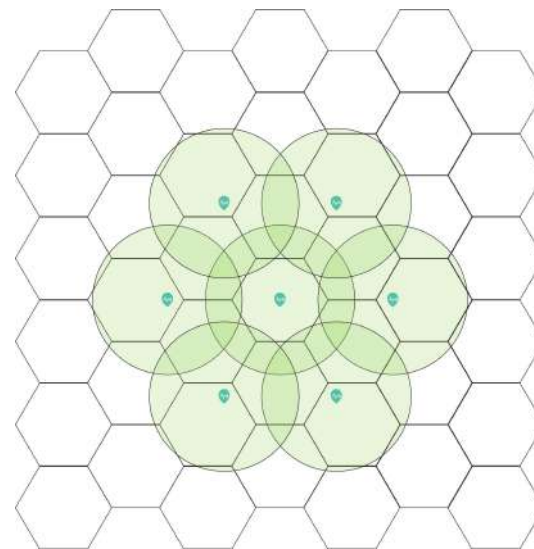
Silvanet enables a Budget-to-Performance flexibility to adapt the customers' requests



**Medium Protection Level
(200m)**

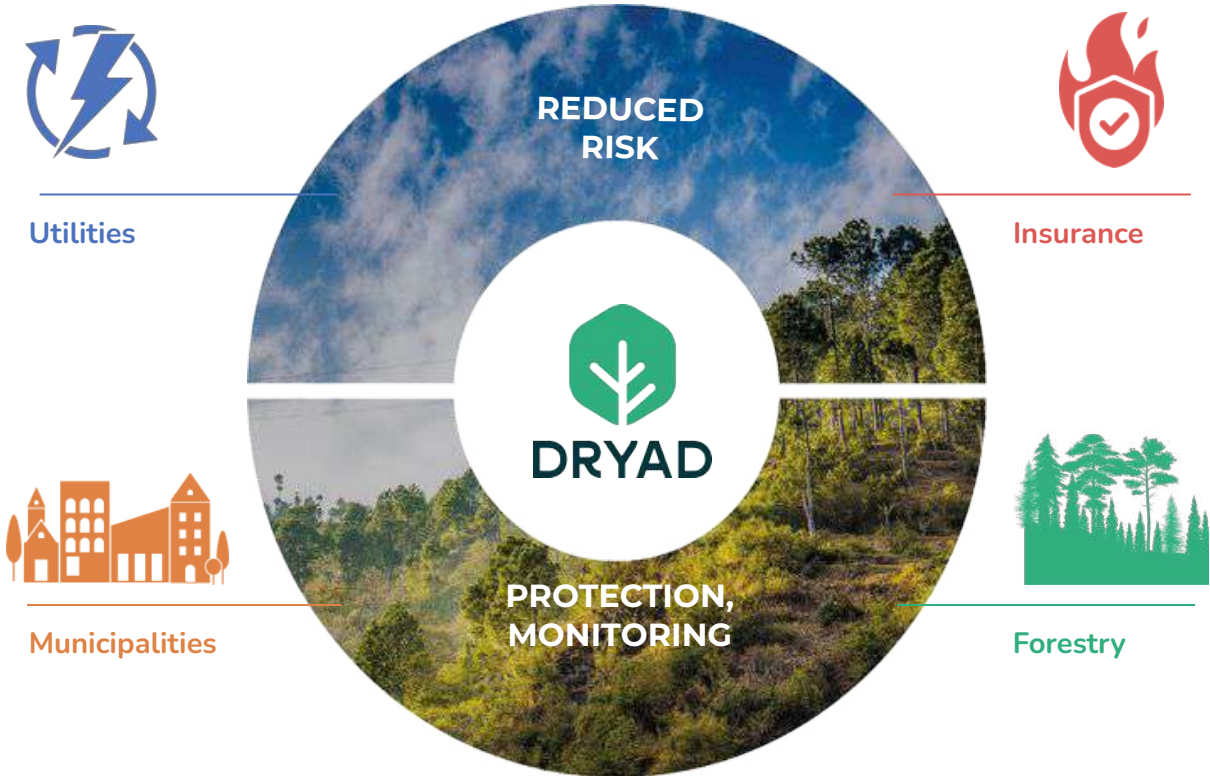


**High Protection Level
(100m)**



**Medium-High Protection Level
(150m)**

Key Customer Segments



Global Reach with Local Focus



TRACTION



20+ active Resellers
in EU, USA and Asia



50+ Paid-for POC / Pilots



+20.000 sensors sold

Pilot

8-12 months

Live


testing and scalability
400+ sensors


live monitoring
1.000+ sensors

Benefits & Roadmap

ULTRA-EARLY FIRE DETECTION

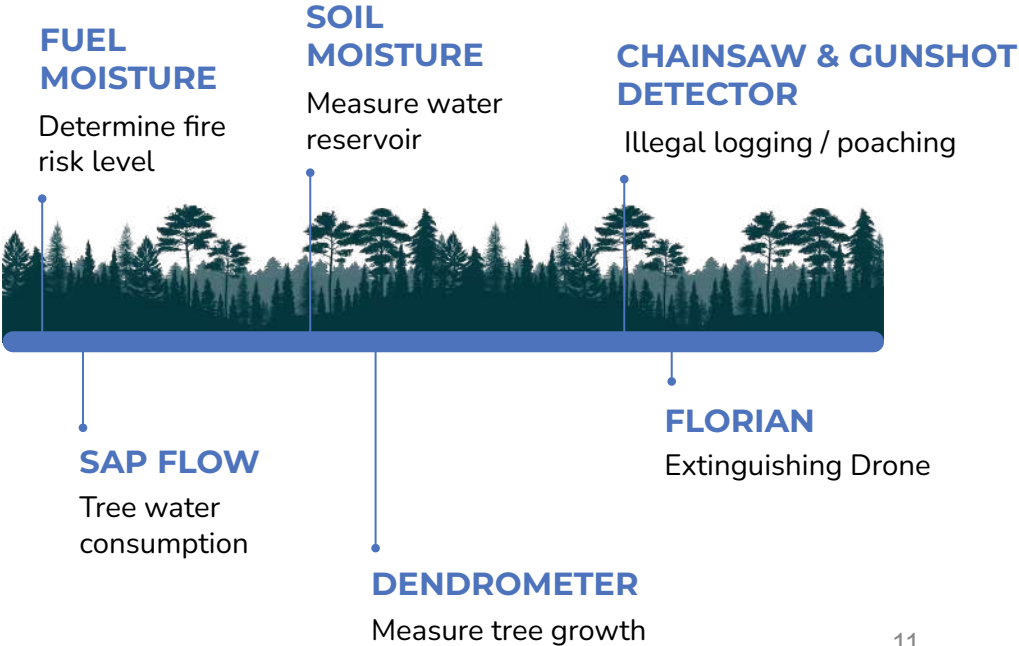
 **Protects** assets and prevents financial damages

 **Reduces** insurance payments

 Dramatically **reduces** costs of firefighting

 **Saves** human and wildlife

ROADMAP: FOREST MONITORING



Fire Risk Prediction

Track, manage and forecast wild fires

90% chance that fire will spread

Temperature: 35° (vs last hour: +12%)
Air Pressure: 1023 hPa (vs last hour: +2%)
Humidity: 5% (vs last hour: +50%)
VPD: [Line chart showing VPD over time]

Prediction

User Management

Eberswalde Pilot [Customer name]

This site is live

Border Gateway: 1 Active, 0 Inactive
Mesh Gateway: 1 Active, 0 Inactive

Device Overview

Last refresh 12:43 am

| Device | Name | Status | Connect |
|------------------|------------------|-------------|-------------------|
| [Device Name 01] | [Device Name 01] | Maintenance | [Signal strength] |
| [Device Name 01] | [Device Name 01] | Maintenance | [Signal strength] |
| [Device Name 01] | [Device Name 01] | Maintenance | [Signal strength] |
| [Device Name 01] | [Device Name 01] | Maintenance | [Signal strength] |
| [Device Name 01] | [Device Name 01] | Maintenance | [Signal strength] |
| [Device Name 01] | [Device Name 01] | Maintenance | [Signal strength] |

Showing 1 to 10 of 1350 entries

Detection

Drone 6

Track, manage and forecast wild fires

New Fire detected

Speed: 10 m/s
Battery: 75%
Height: 50 m
Home: 1.2 km

Live Image: [Video player showing drone footage of a fire]

Live Location: [Map view of drone location]

Suppression

Detection Sensor 1

Track, manage and forecast wild fires

Chainsaw Sound detected

Live Location: Loc. 52.53083526582695, Lat. 13.392058228189645

Sound Detected: [Audio waveform of chainsaw sound]

AI Categorisation: Chainsaw

Sound Analysis AI: [AI-generated spectrogram of the sound]

Security

Tree Health Sensor

Track, manage and forecast the Trees.

Overall Health: Excellent

Live Location: Loc. 52.53083526582695, Lat. 13.392058228189645

Tree Sensor Data: 250, Excellent, 0.25 meters, 50%

Carbon History: [Line chart showing carbon levels over time]

Health

Sustainable Development Goals

By 2030 we project the following SDG related impact:



2.8 m hectares
forest saved
from wildfires



1.1 bn tonnes
CO₂ emissions
prevented



166 m
animals saved
from wildfires



\$21 bn **protected**
economic loss



DRYAD

CONNECTING THE NATURAL WORLD

BERLIN-BRANDENBURG
GERMANY WWW.DRYAD.NET



EUROPEAN UNION
European Regional
Development Fund



THANK YOU!

