

# Nearmap



Exec  
Summit

The Pendry, Park City UT



# Improving Property Intelligence Nationwide

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Chief Product Officer, Nearmap

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Chief Technology Officer, Nearmap

# Nearmap Geospatial Intelligence



Vertical



Panorama



Oblique



Nearmap 3D



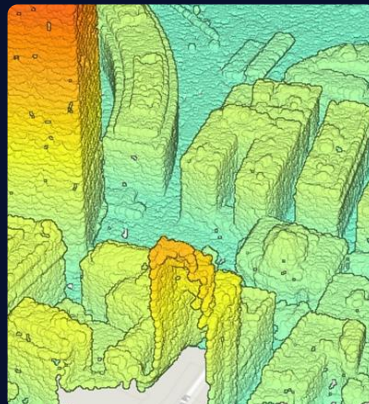
Nearmap AI



Nearmap  
ImpactResponse



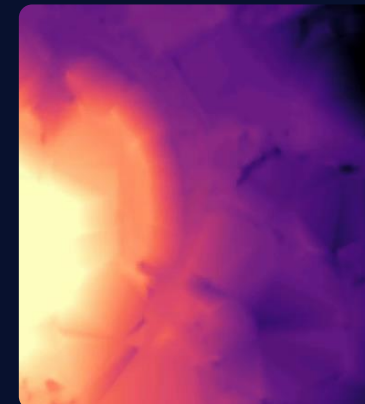
Textured Mesh



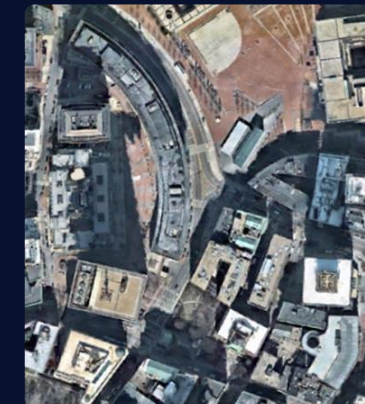
Point Cloud



Digital Surface  
Model (DSM)



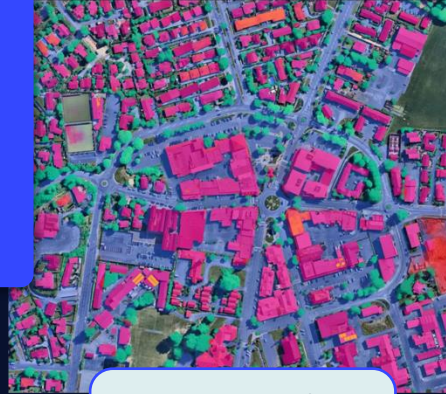
Digital Elevation  
Model (DEM)



True Ortho

### 140+ AI layers

- Buildings
- Construction
- Vegetation & surfaces
- Pavements
- Poles & utilities
- Peril scores & risks



### CAT Response



- ImpactResponse System
- Damage Classifications AI
- Damage Detections AI

### AI Detection & Scores

# Nearmap

Property Intelligence

### Materials and Pricing



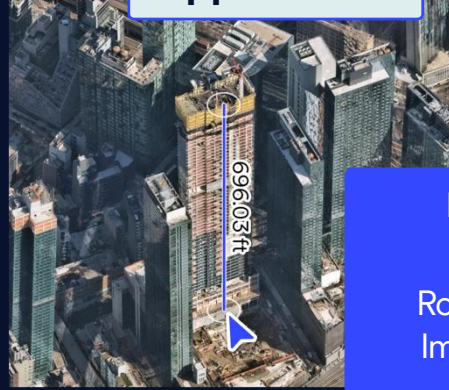
- Repairability
- Floor matching
- Roof matching
- Temporary housing
- Asphalt shingles
- Total price

### Roof Intelligence



- Roof Spotlight Index (RSI)
- Roof Age Gen 2
- Roof & Exterior Measurements

### Applications

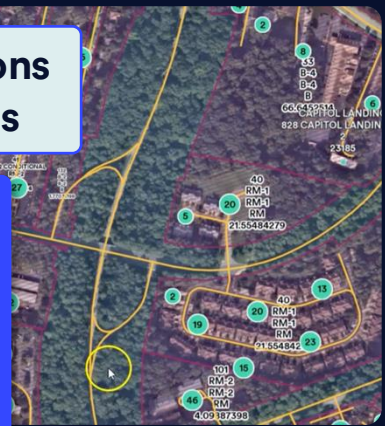


- MapBrowser
- Betterview
- Roof Assessment
- ImpactResponse
- itel Now

### Project-Based Usage Tracking

### Integrations and APIs

- APIs
- Geodata Link
- Esri ArcGIS
- Guidewire/Duck Creek
- Partner Connect
- Tyler Technologies



# \$500,000,000

## R&D investment



Aerial imaging  
systems



Capture program  
software



AI and computer  
vision



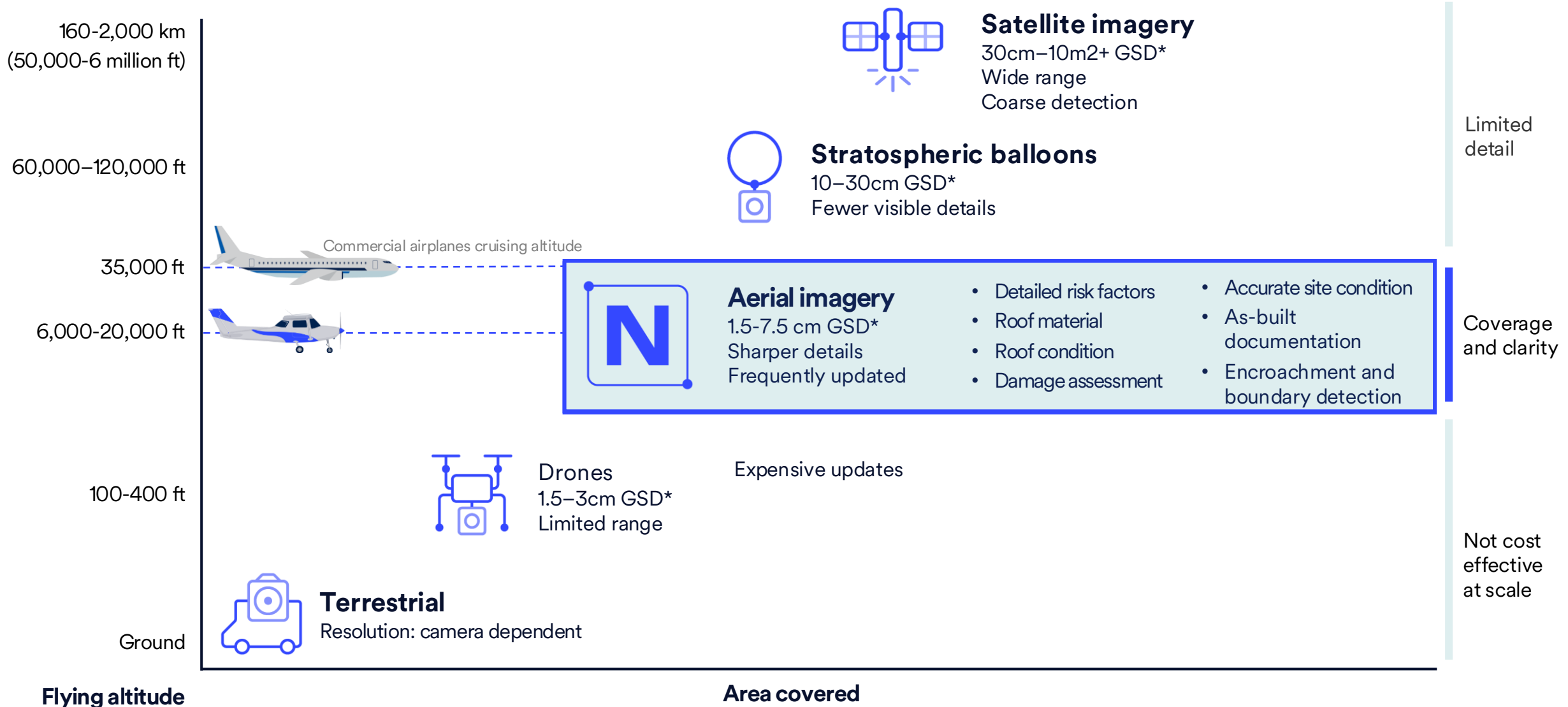
Continental-scale  
processing



Materials and  
pricing analytics

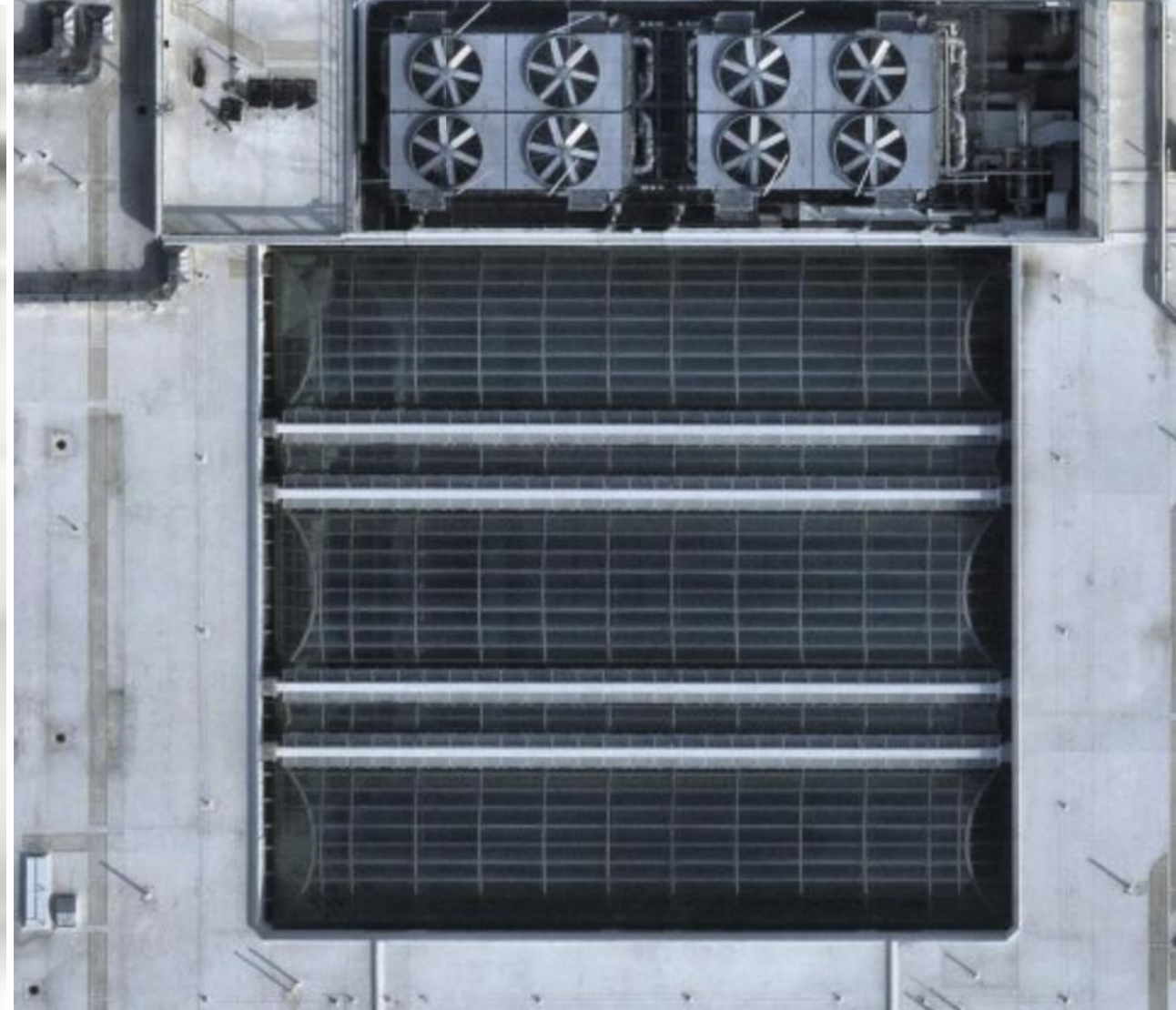
# Imagery

# Aerial imagery capture models





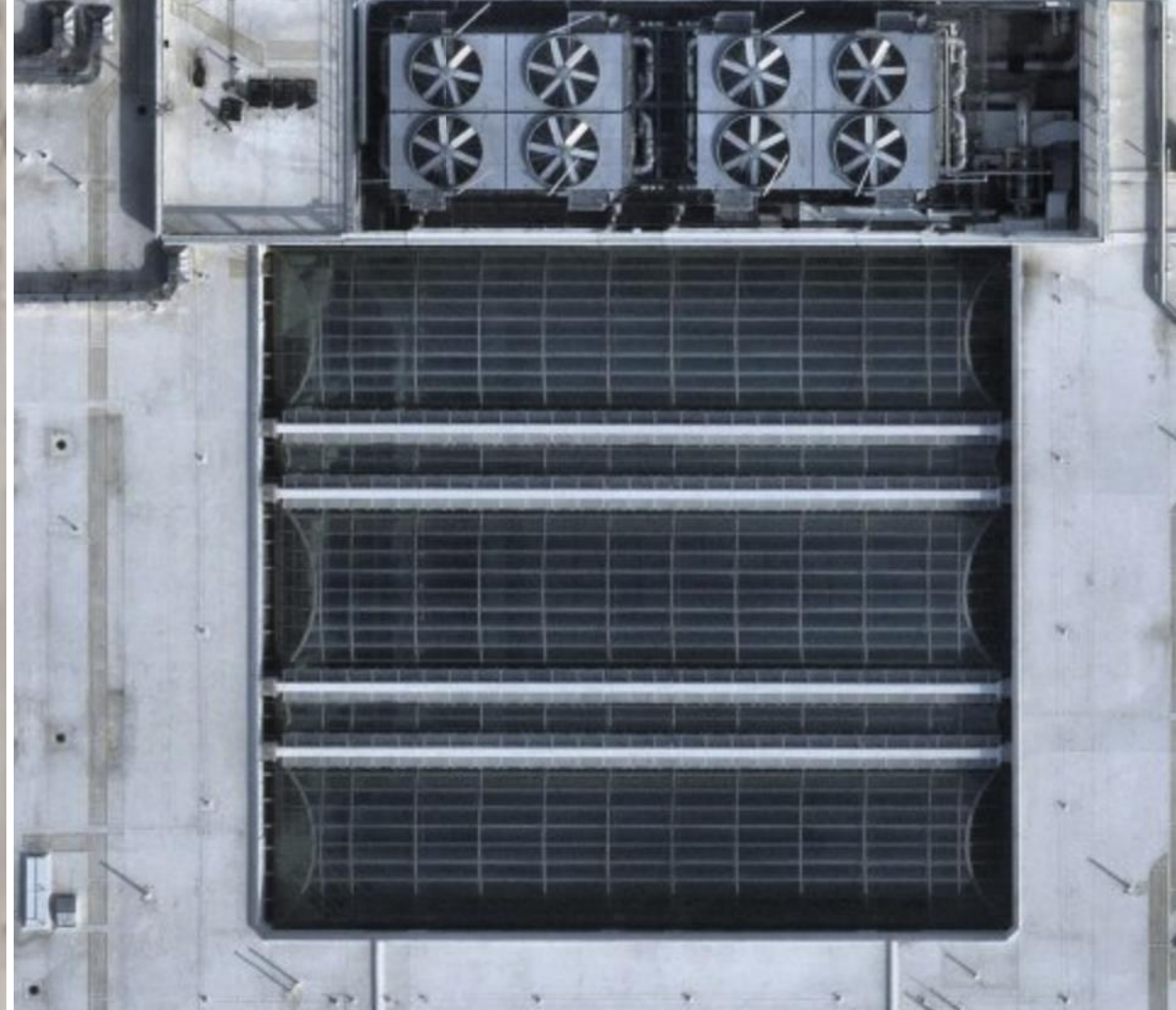
Satellite Native 30 cm



Nearmap Aerial 4.4 cm



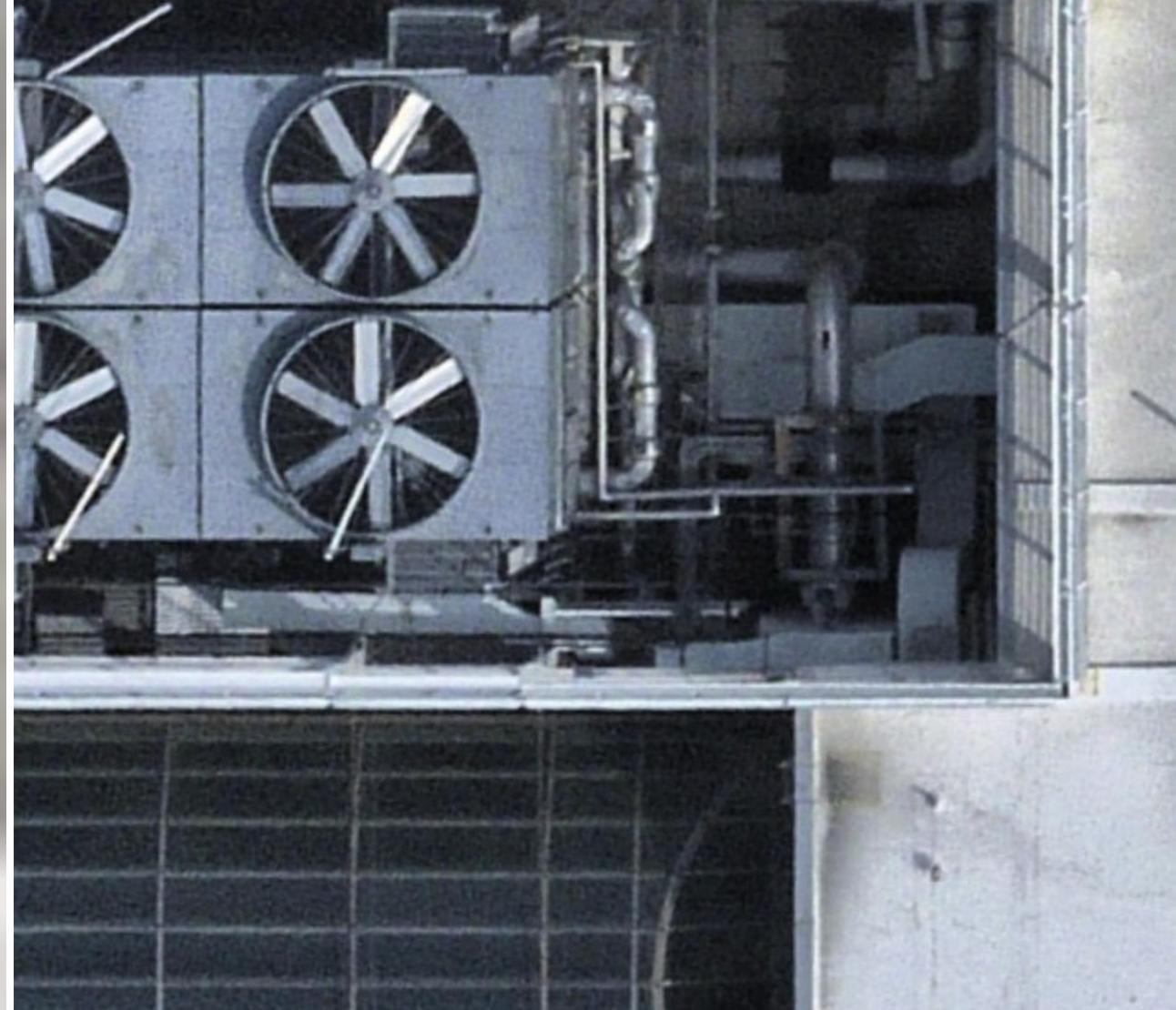
Satellite AI-Enhanced 15 cm



Nearthmap Aerial 4.4 cm



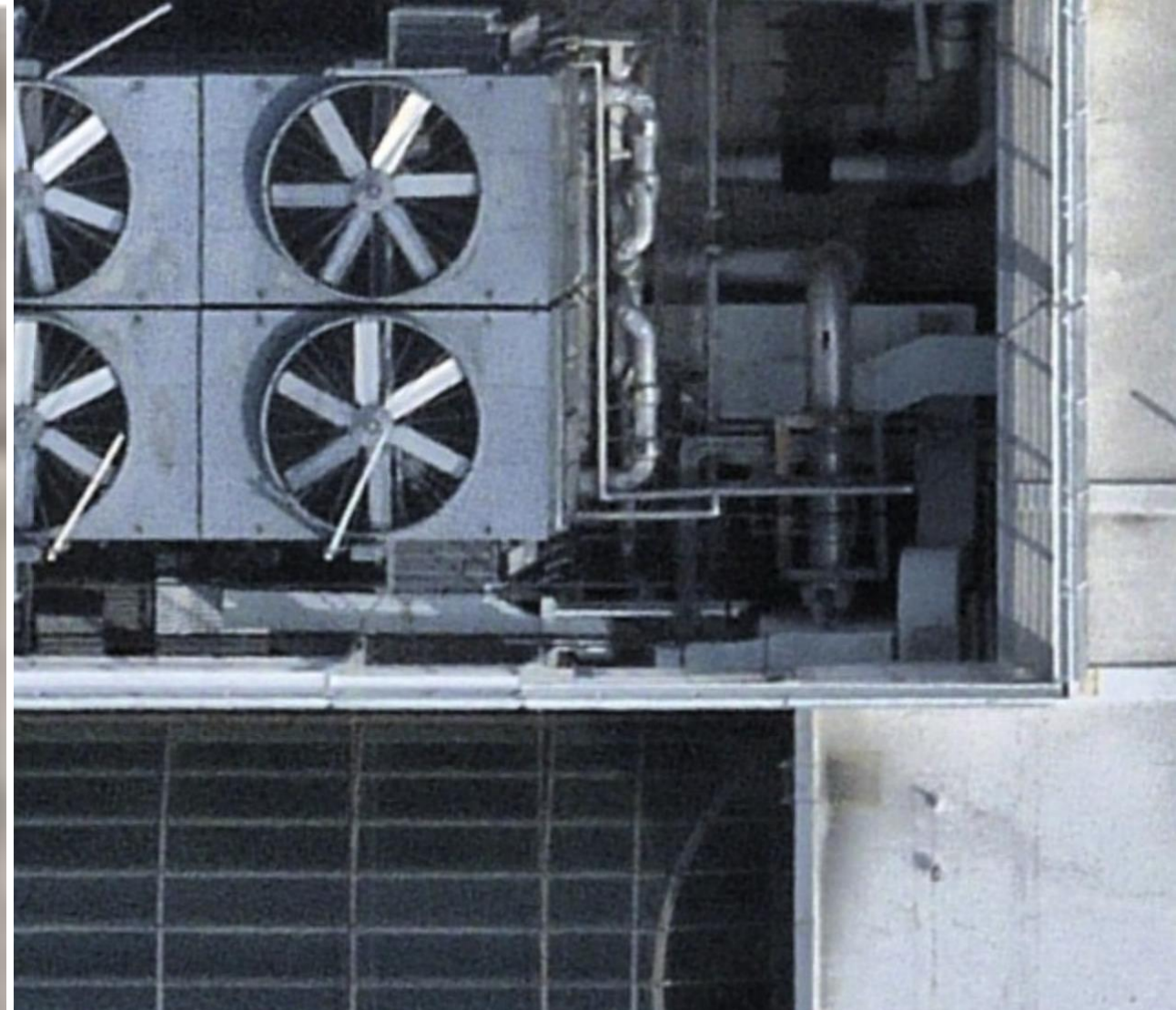
Satellite Native 30 cm



Aerial 4.4 cm

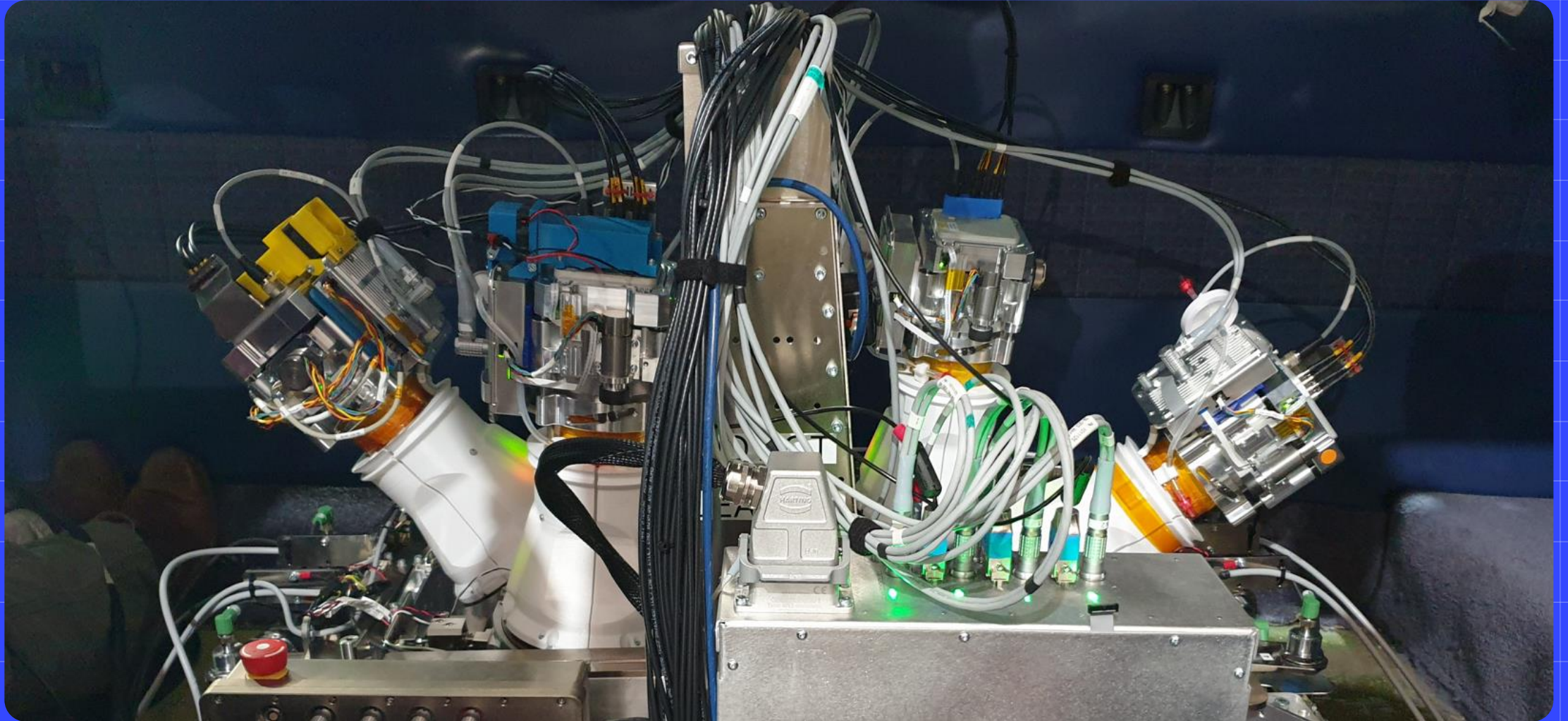


Satellite AI-Enhanced 15 cm



Aerial 4.4 cm

# The secret sauce of aerial imagery



# Aerial imaging key concepts

## Altitude

The higher you fly the more ground you see

## Speed

The faster you go, the more ground you cover

## GSD

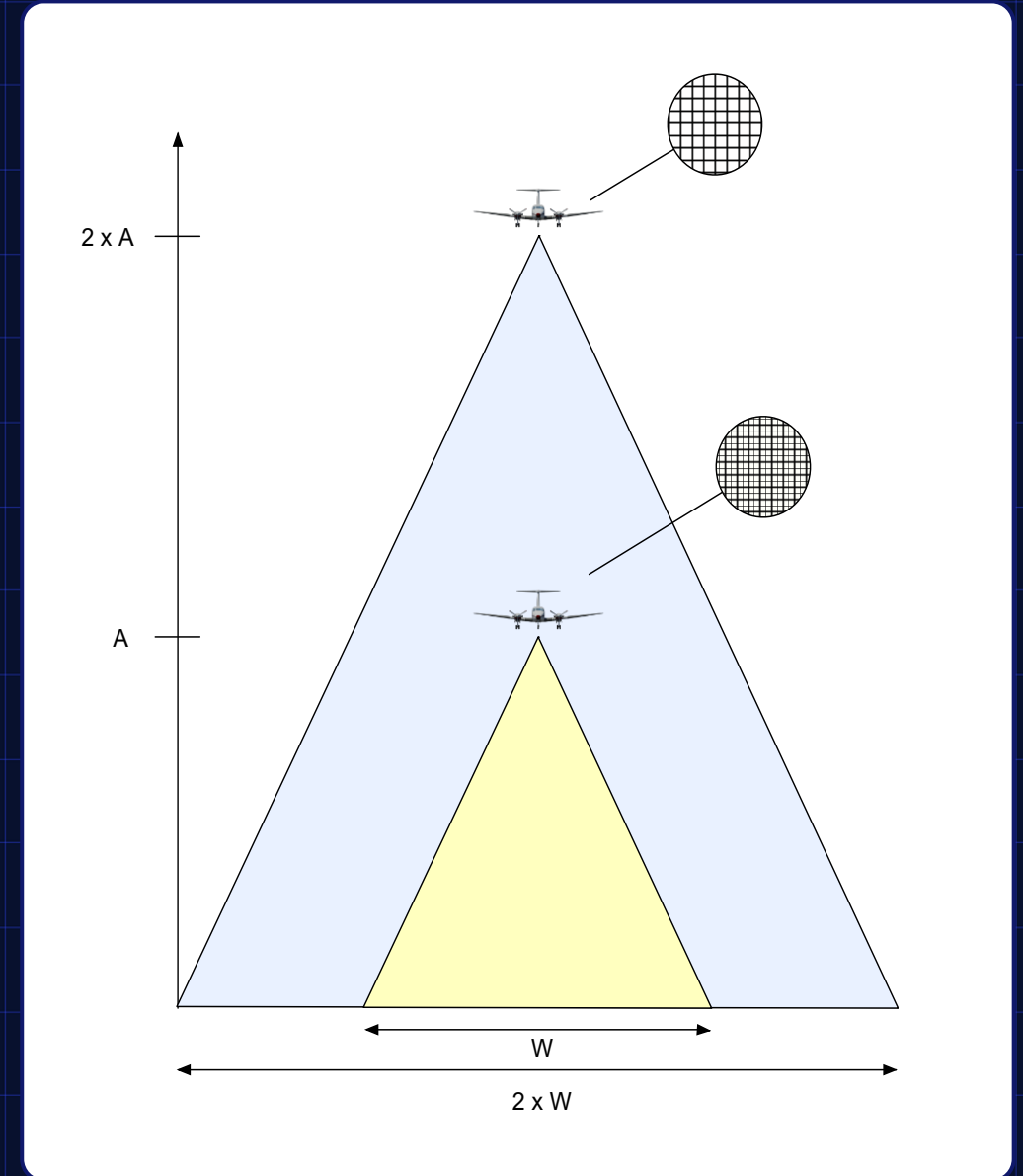
Ground Sampling Distance Size of pixel on the ground (resolution)

## Vertical (“Ortho”) imagery

Imagery intended to capture a straight down view

## Oblique imagery

Imagery intended to capture side views of objects



# Evolution of aerial imaging systems

2008 HyperPod



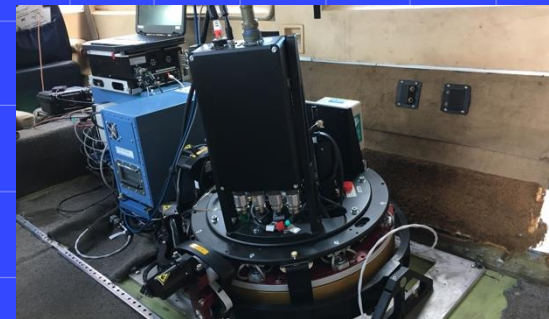
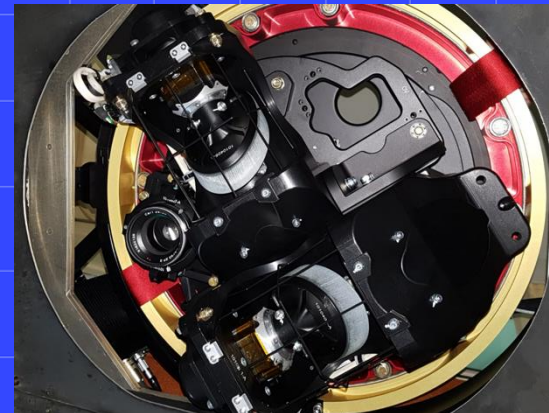
Pod mounted

2014 HyperCamera1



Hole mounted | Vertical only

2017 HyperCamera2



Hole mounted  
stabilised, obliques

Today HyperCamera3



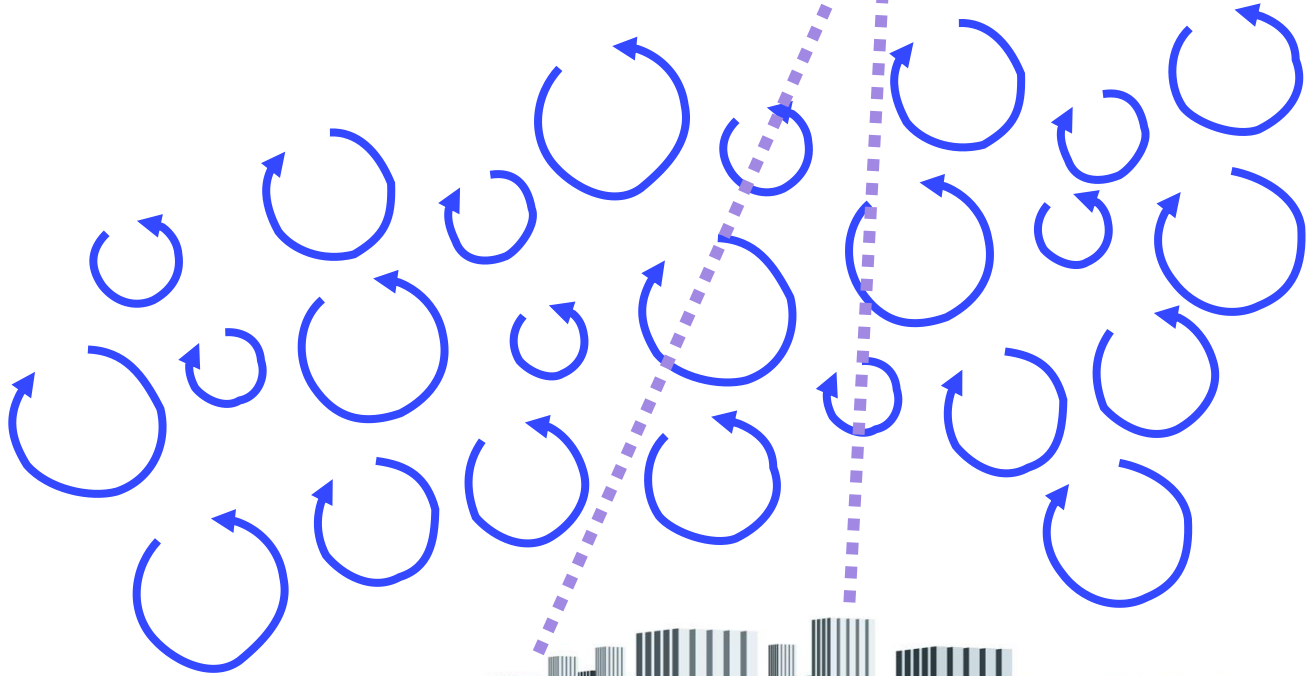
Hole mounted  
Stabilised  
Oblique Surround View  
3D optimised  
Extreme quality  
Extreme efficiency  
Extreme altitudes

**Nearmap**

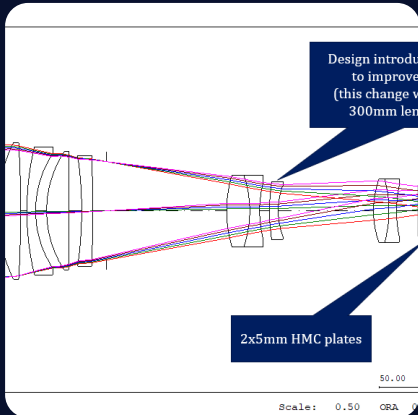
# The detail destroyers



- Optics
  - 1. Atmosphere
  - 2. Mirrors
  - 3. Lens elements
  - 4. Temperature
  - 5. Focus
- Motion
  - 6. Aircraft rotations + vibrations
  - 7. Aircraft forward motion
- Image capture
  - 8. Exposure
  - 9. Sensor

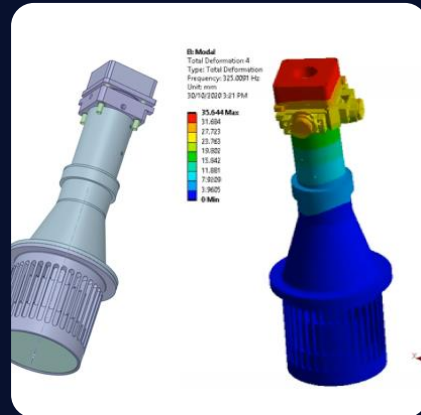


# The detail defenders



## Optics design/ sensor design

- System simulations
- Custom lens design
- Custom mirror design
- Sensors choices



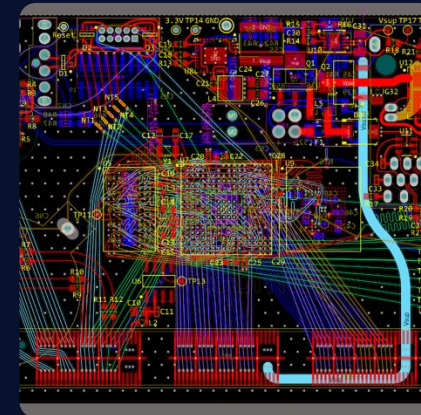
## Structural dynamics

- FEA analysis of mechanical designs
- CFD analysis (airflow etc)
- Temperature/materials analysis



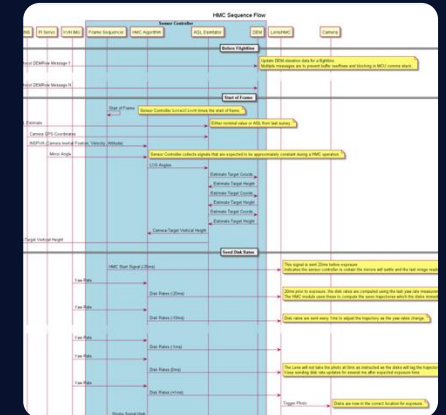
## Mechanical & feedback control

- Mechanical design
- Stabilisation systems
- Forward motion compensation



## Electronics

- Circuit designs
- PCB realisation and bring-up
- Prototypes to full Production rollout



## Software

- System-level flight control software
- Firmware running on “bare metal”
- On-board image processing and system control

# HyperCamera3

State of the Art

 **Capture Productivity**

 **Ultra-high Resolution**  
Better inspections and automated risk factor identification.

 **Better 3D**

 **Four Band Imaging**  
Assess vegetation using NIR/NDVI.

 **14 Oblique Views**  
Minimize blind spots on building sides, windows, doors.

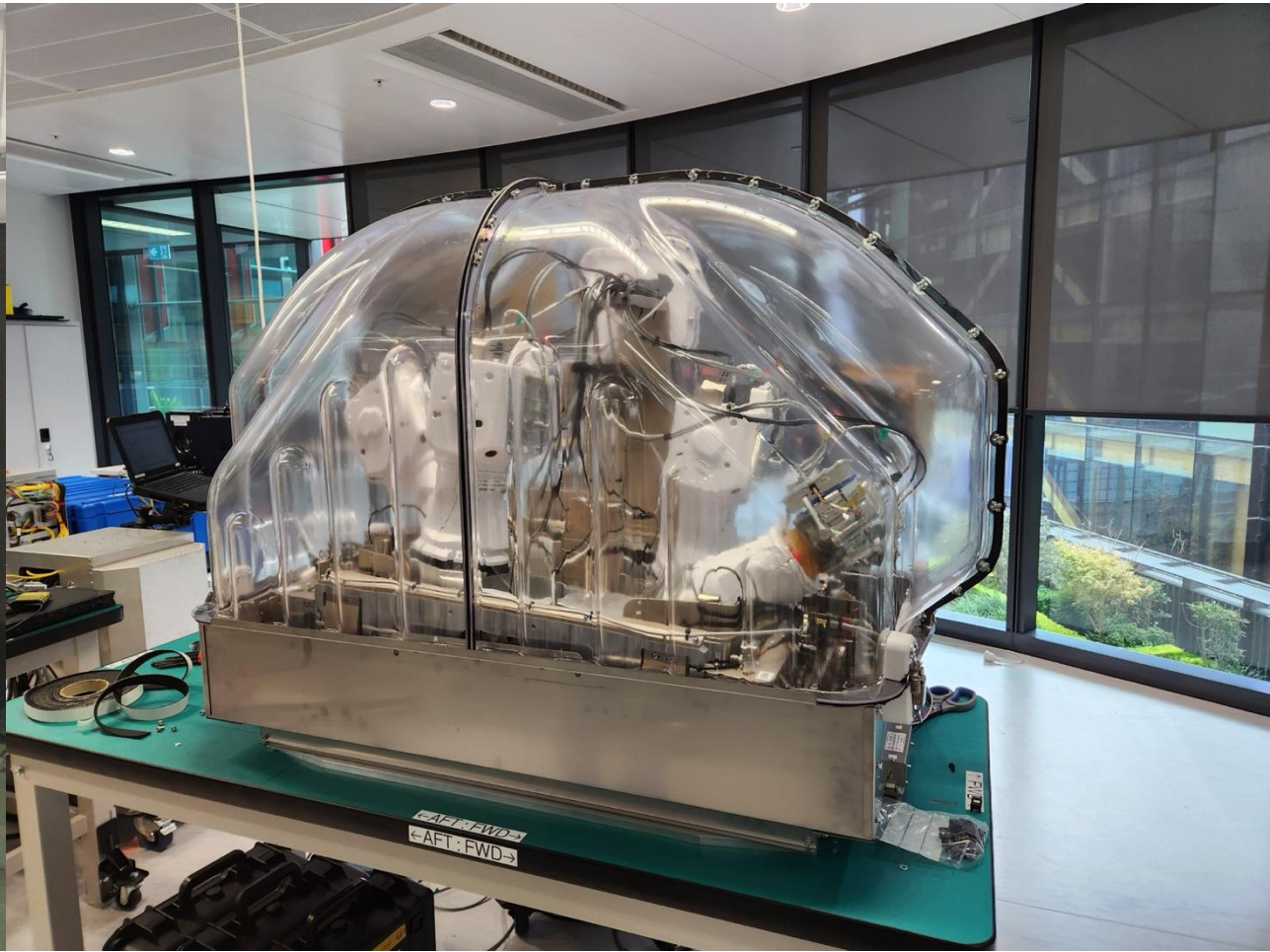
 **Better AI**

**19 cameras installed  
& operational**

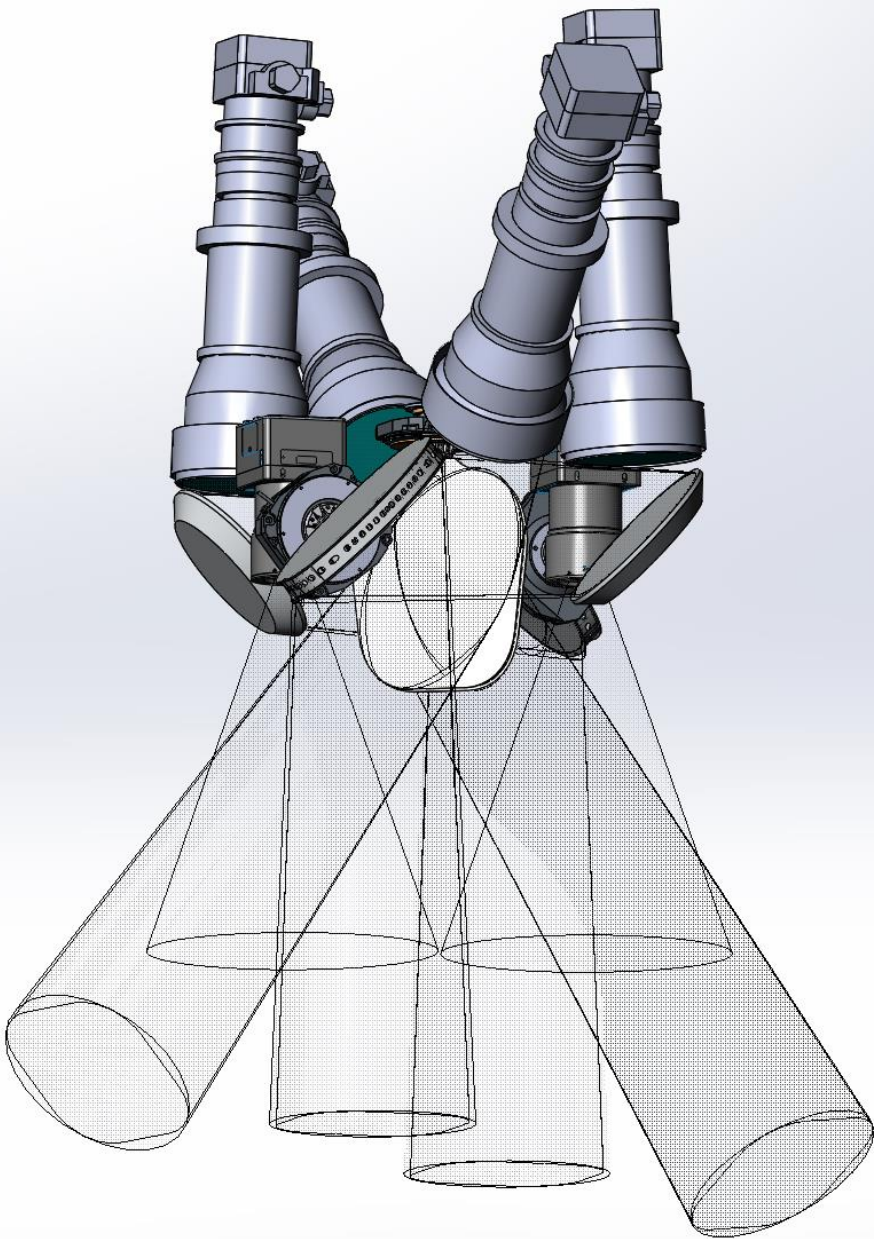
**Goal: 27 cameras  
CY26**



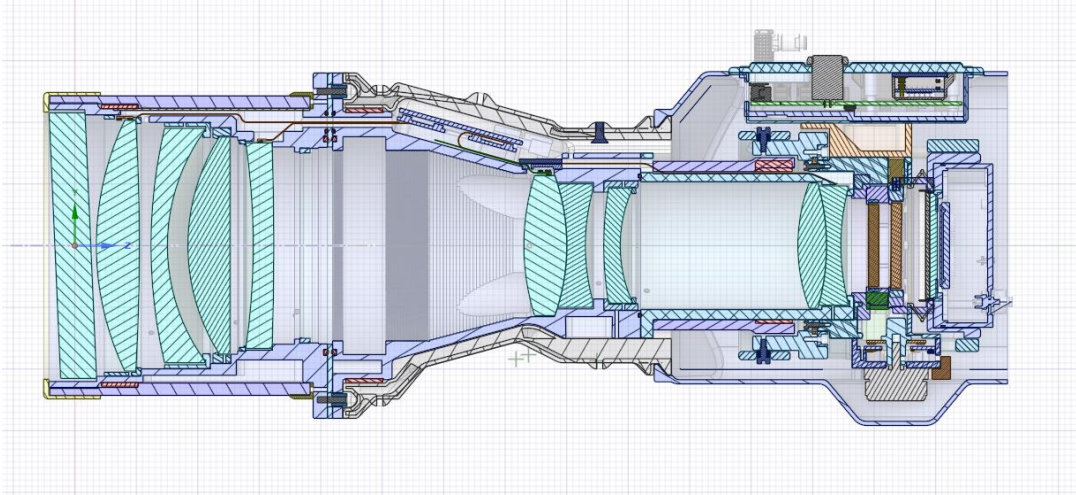
# HC3: HyperCamera 3



# HyperCamera3: Optics

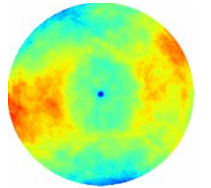


# State of the art lens



Orchestra of glass  
9 different types

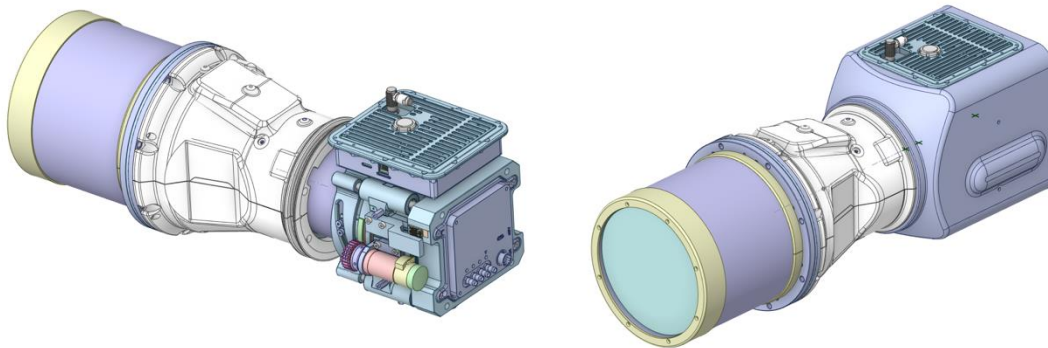
45nm shape consistency  
0.0005 of thickness of human hair



High structural stability  
Minimal bending to prevent  
distortion of glass elements

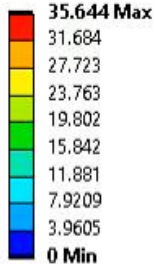
Tight temperature control  
Less than 2°F variation in extreme  
environments (+100°F to -30°F)

Forward-motion correction  
Proprietary, patented approach

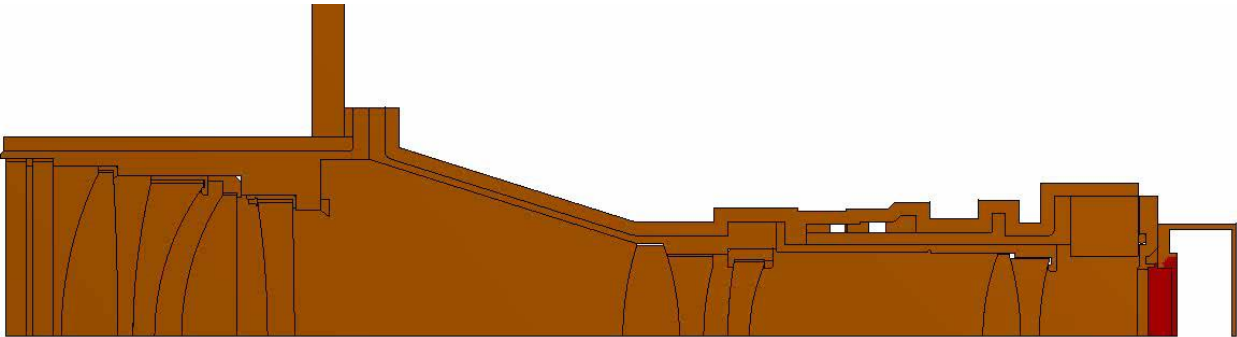
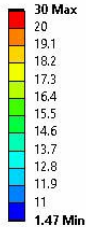


# Structural and thermal dynamics

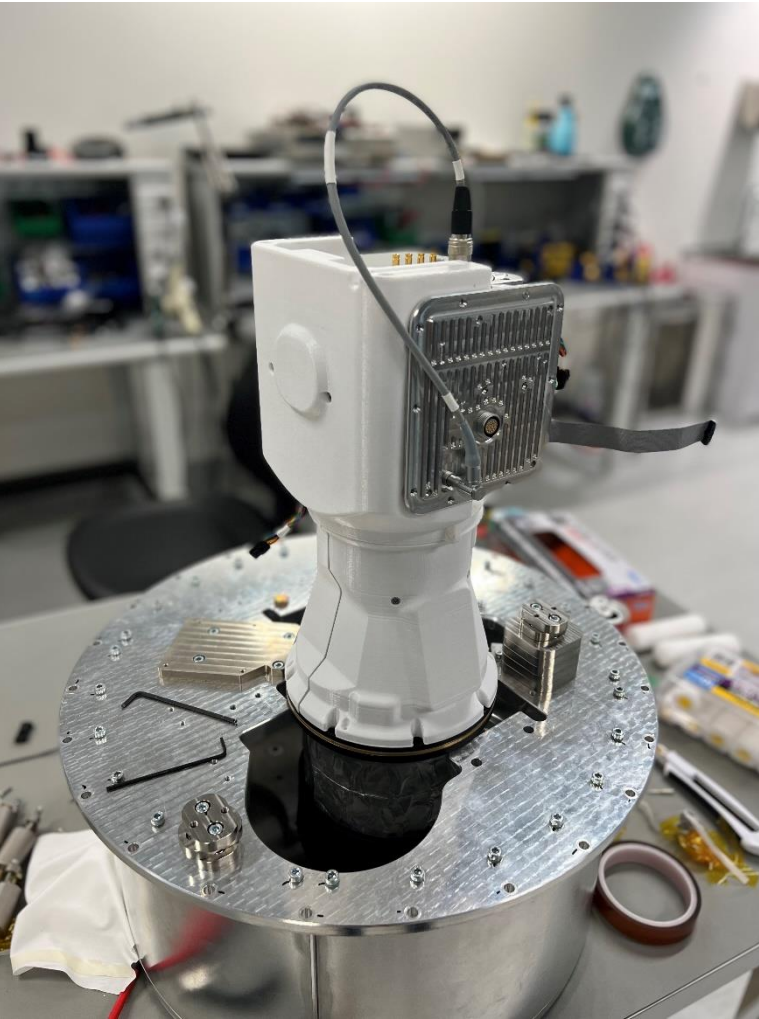
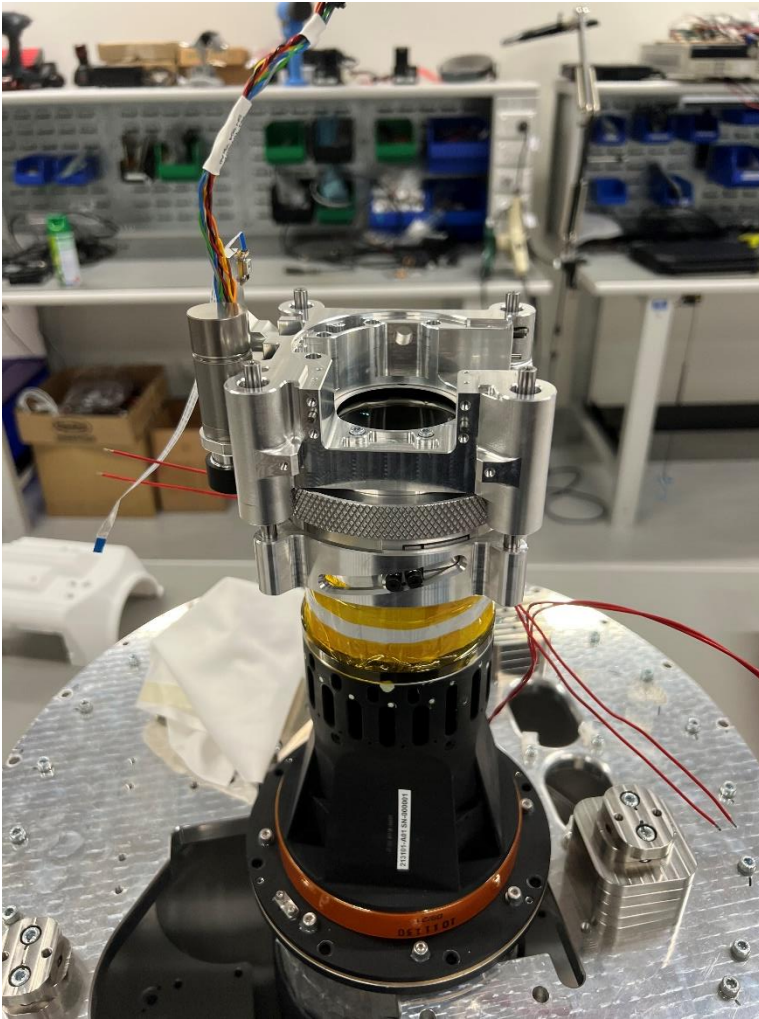
**B: Modal**  
Total Deformation 4  
Type: Total Deformation  
Frequency: 325.0091 Hz  
Unit: mm  
30/10/2020 3:21 PM



**H: Transient**  
Temperature  
Type: Temperature  
Unit: °C  
Time: 1800  
30/10/2020 3:27 PM



# Lens assembly



# How good is our lens?

1000% better MTF

50% better MTF

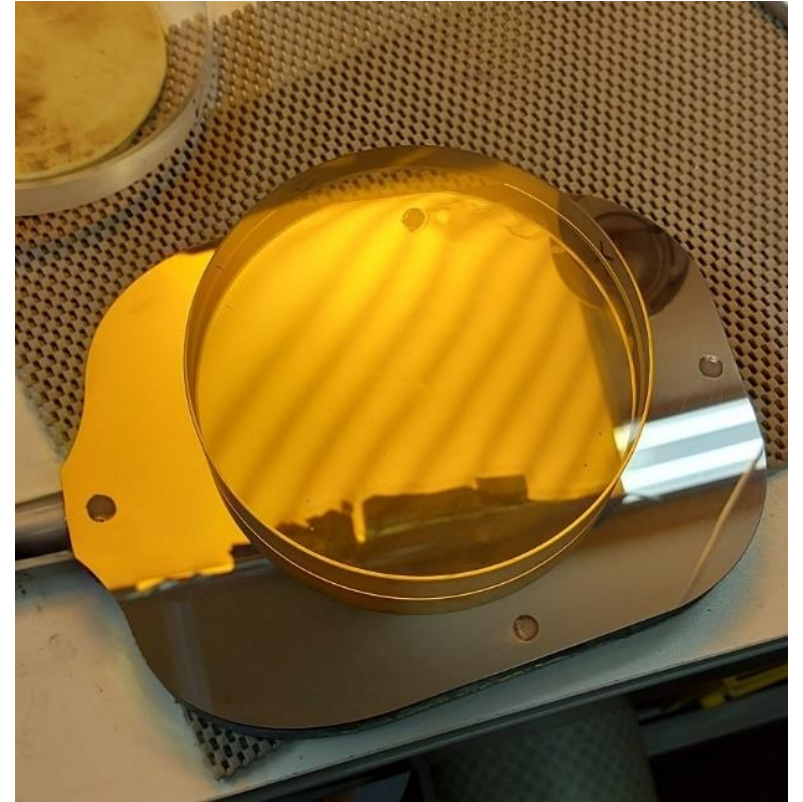
1000% better MTF



State-of-the art Canon lens

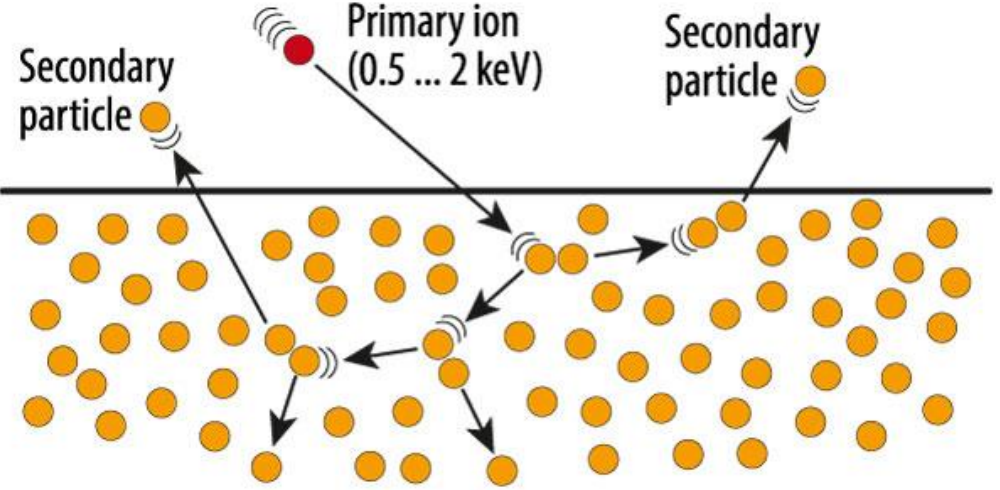
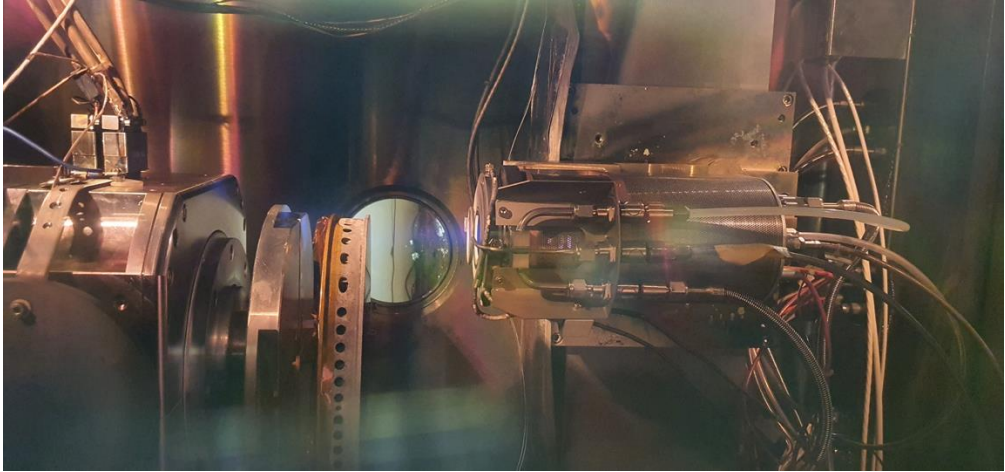
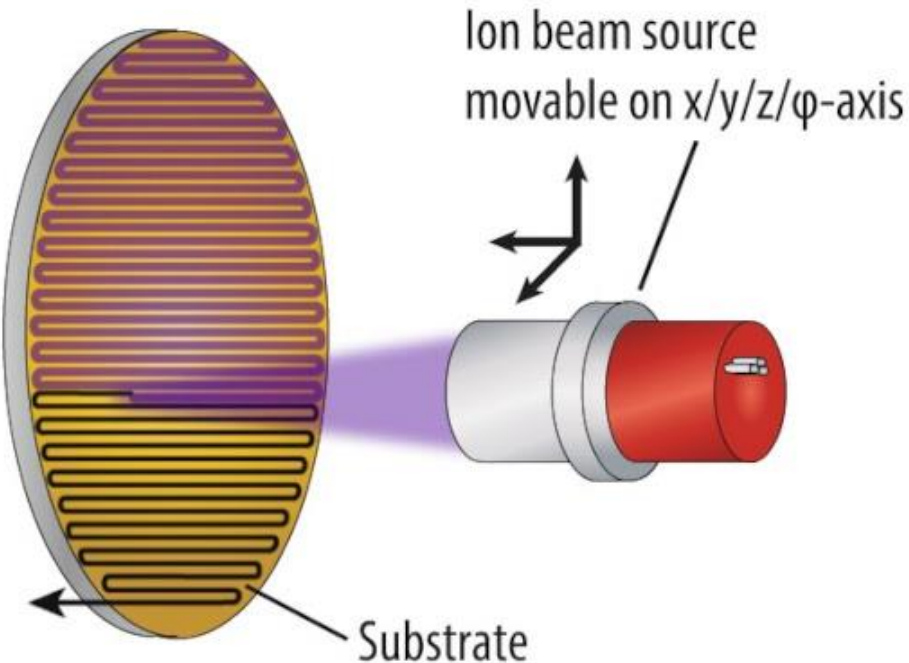
**EXTREMELY HIGH, consistent detail  
across entire field of view**

# Mirrors

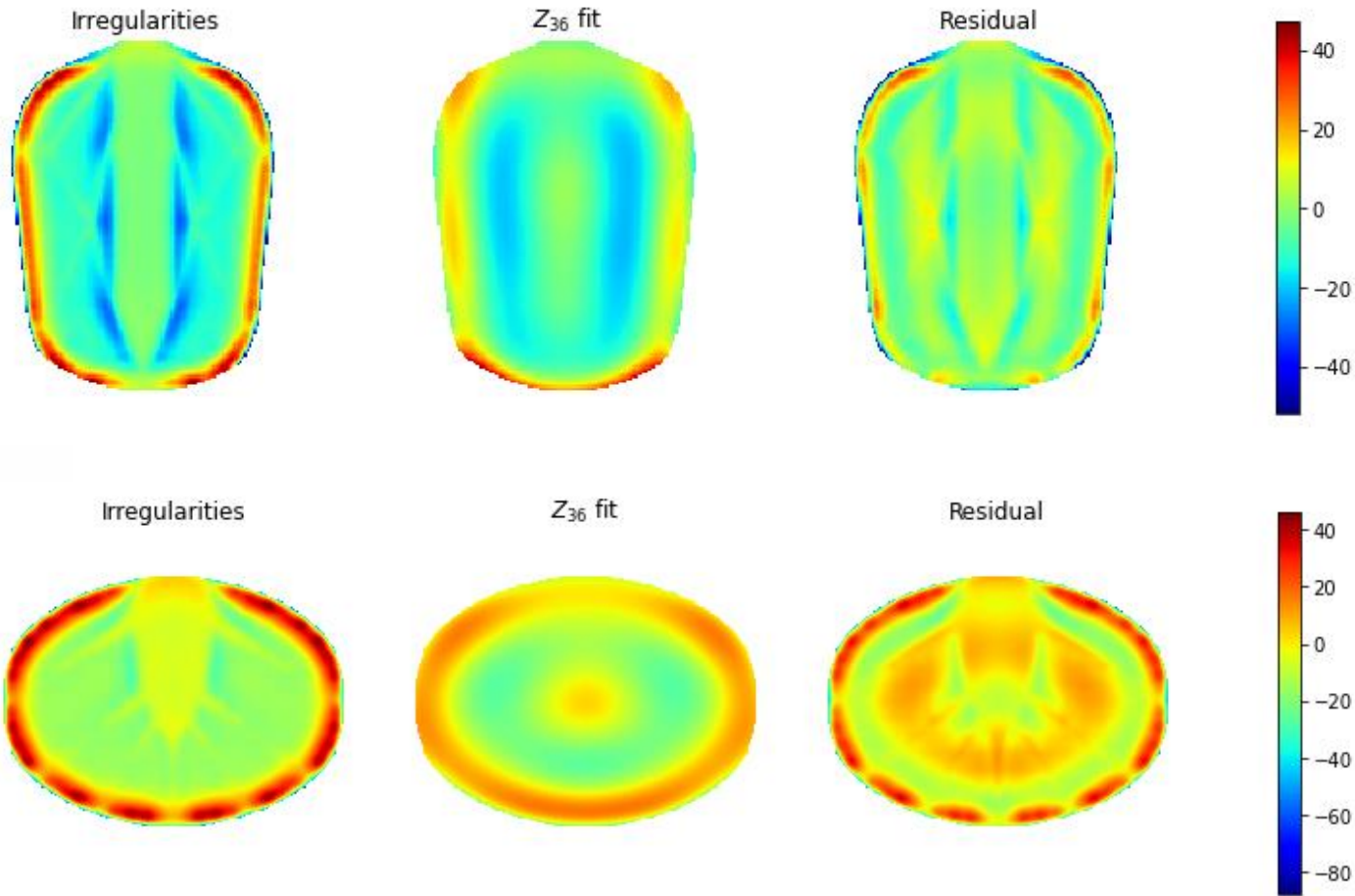
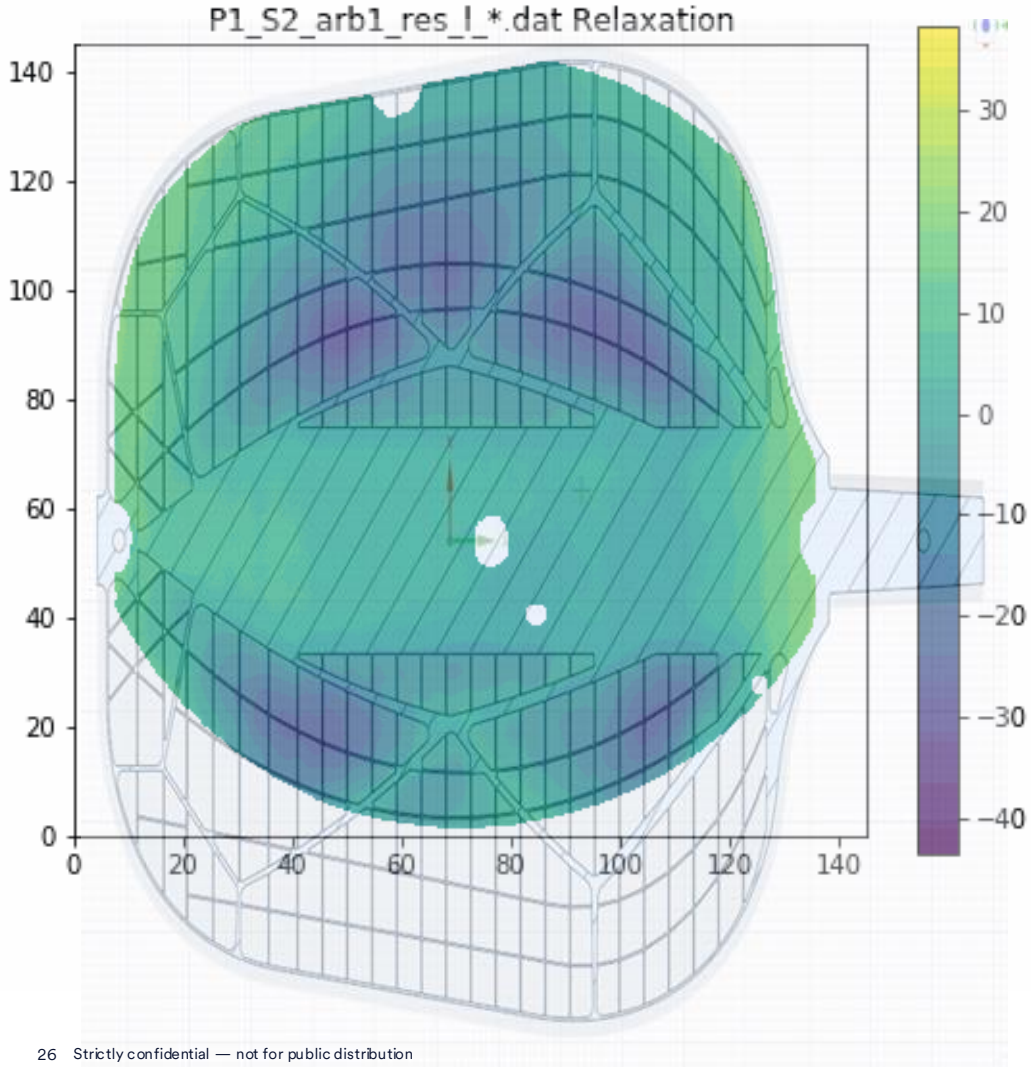


Flatness consistency 0.0005 of thickness of human hair

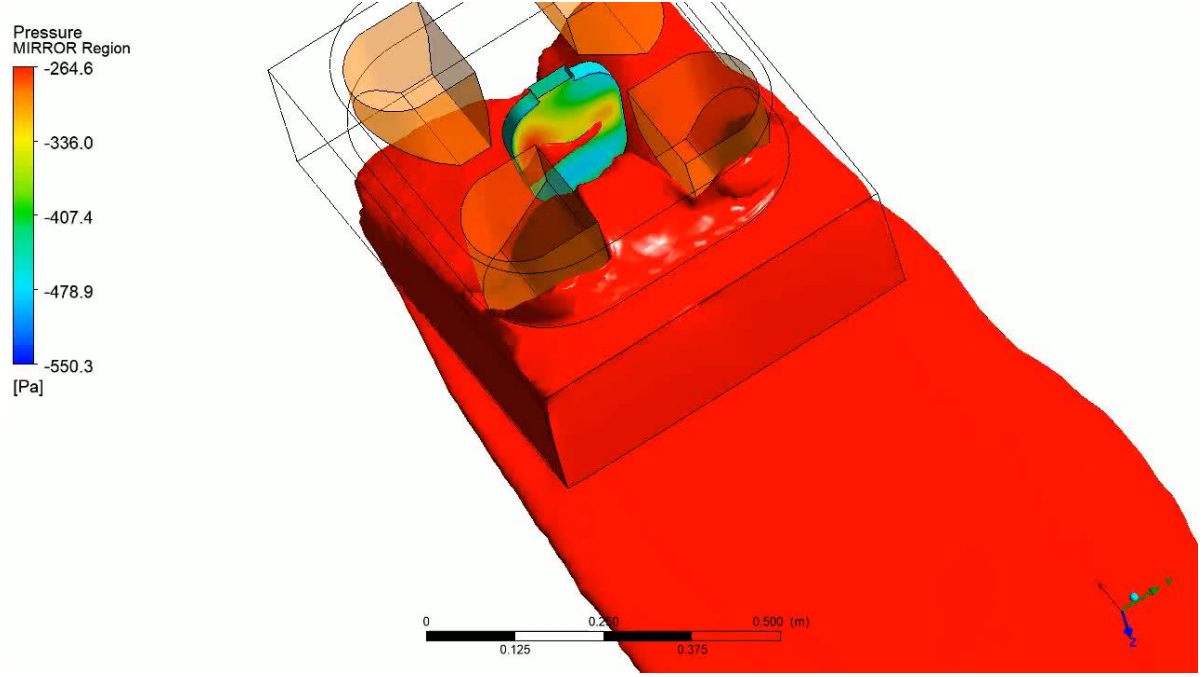
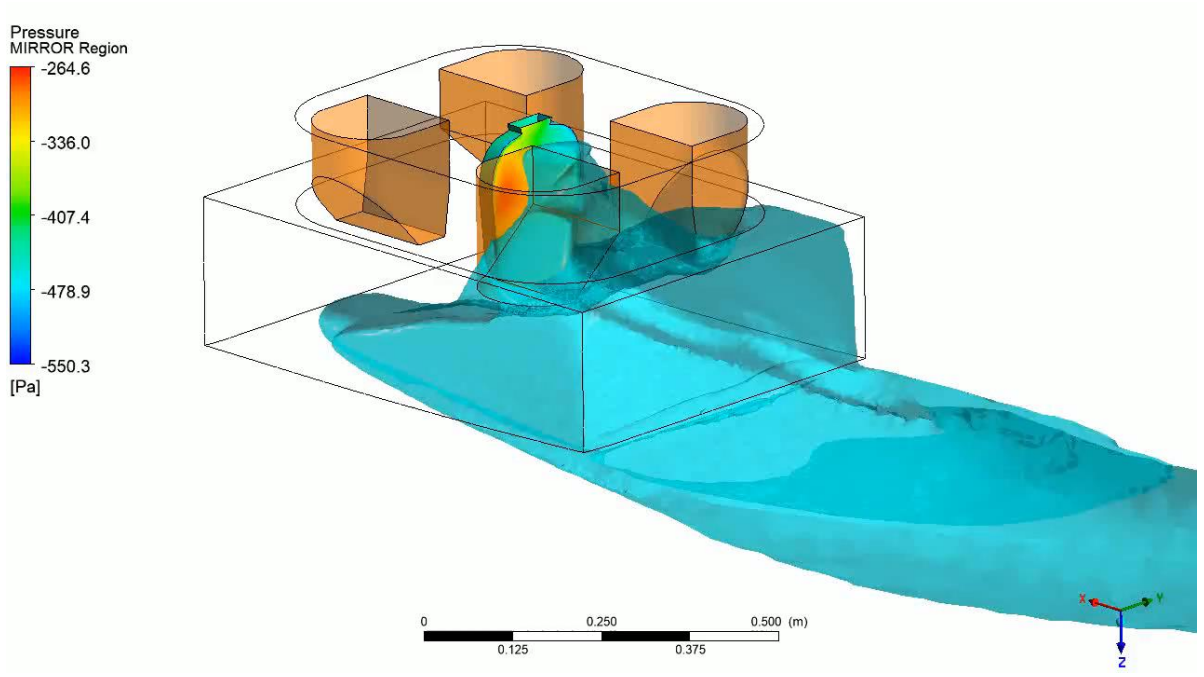
# Ion beam polishing



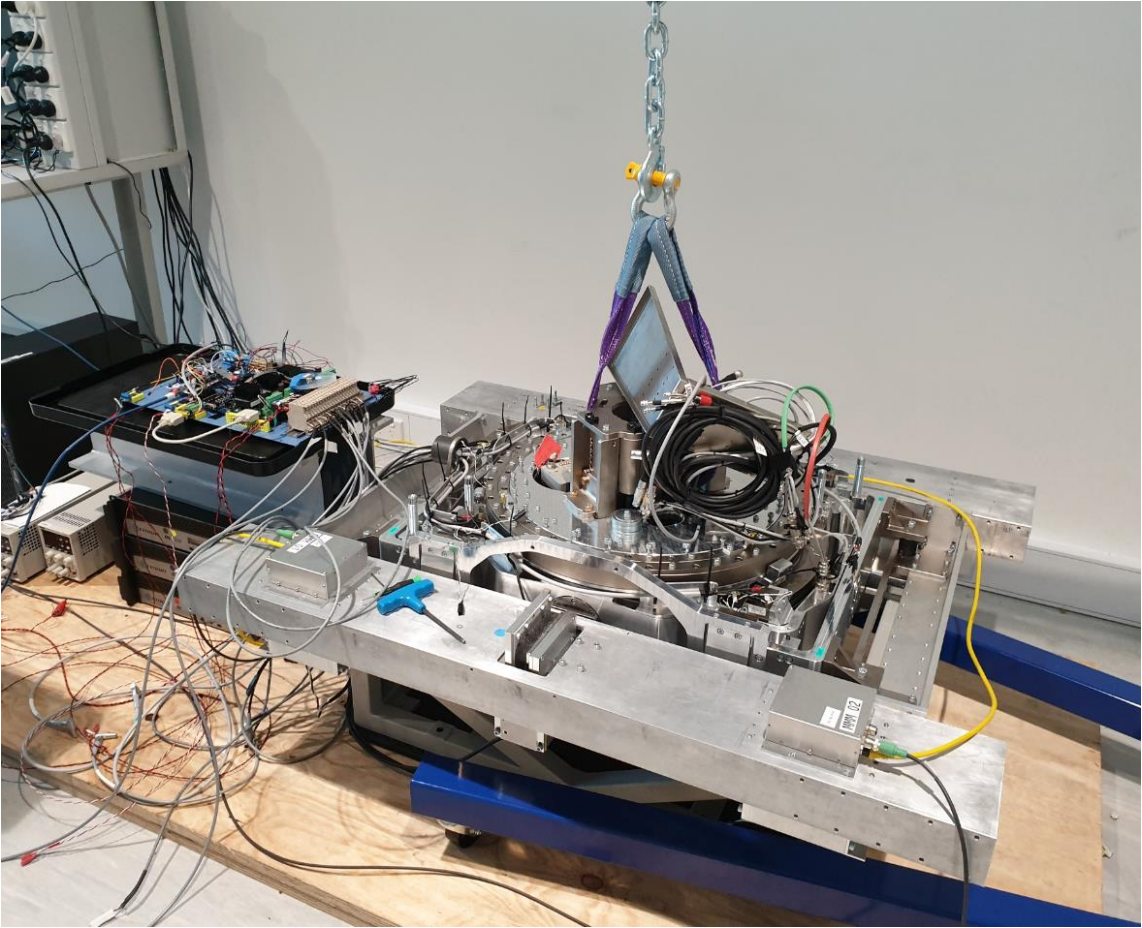
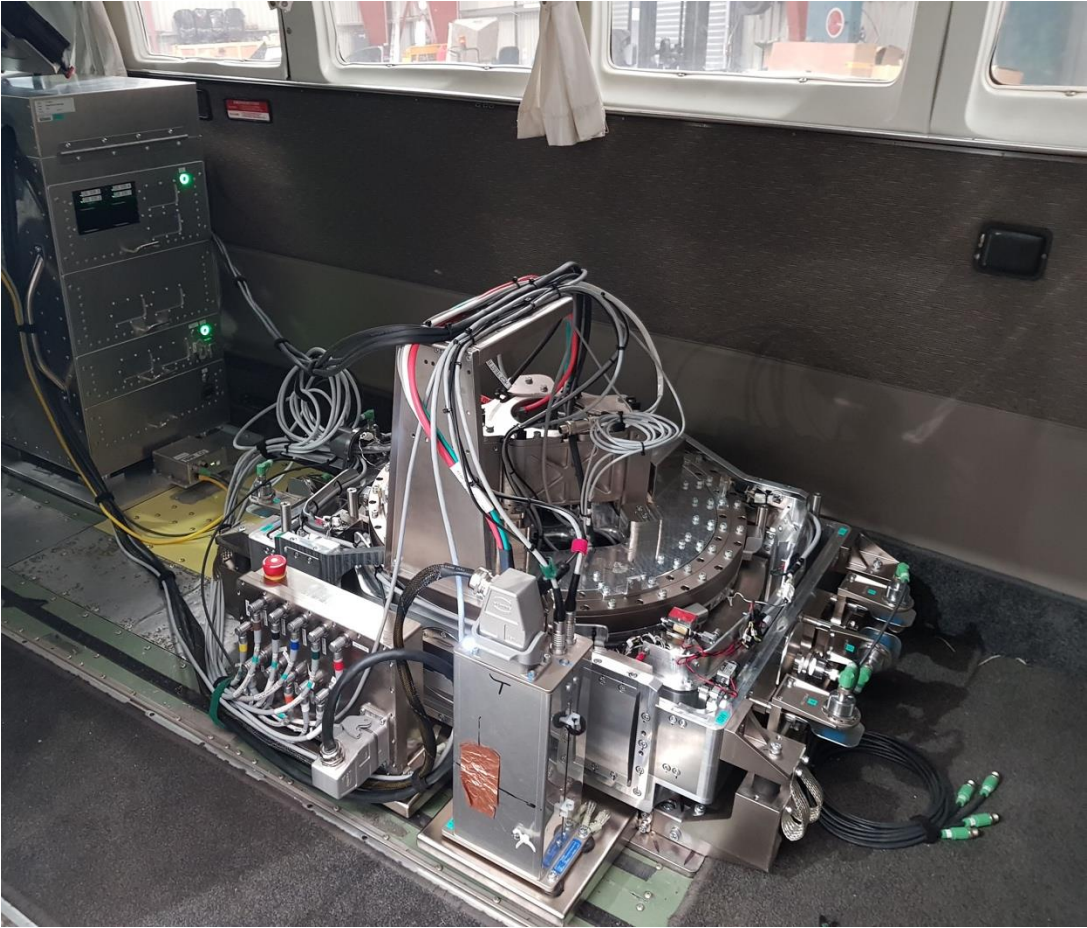
# Thermal deformations



# Effect of air flow under the aircraft



# Stabilization – Countering motion



# How stable?

500lb camera system

Denali (Mount McKinley)

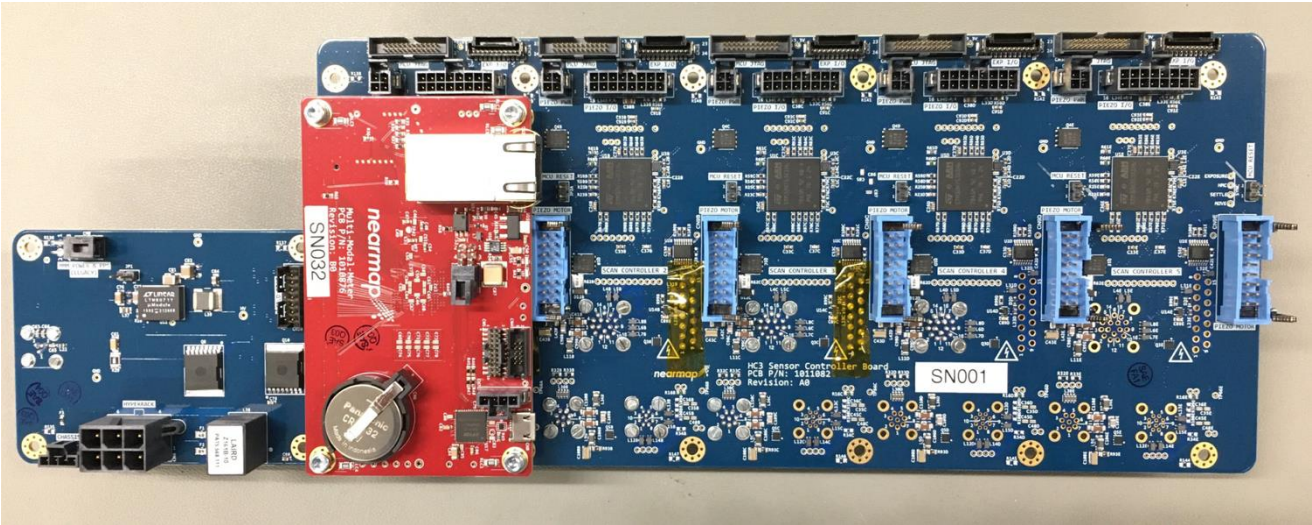
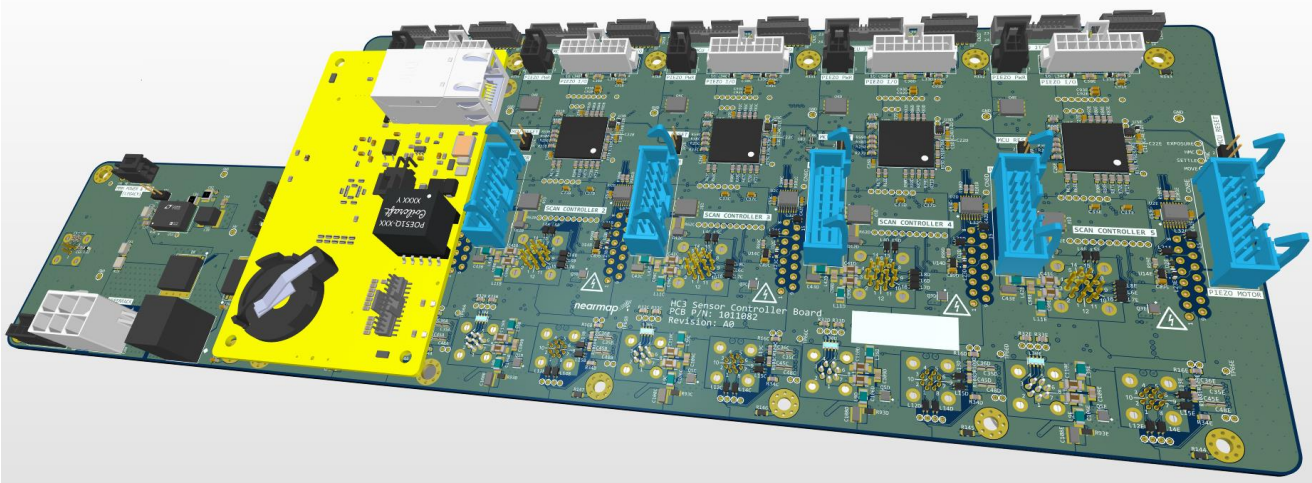
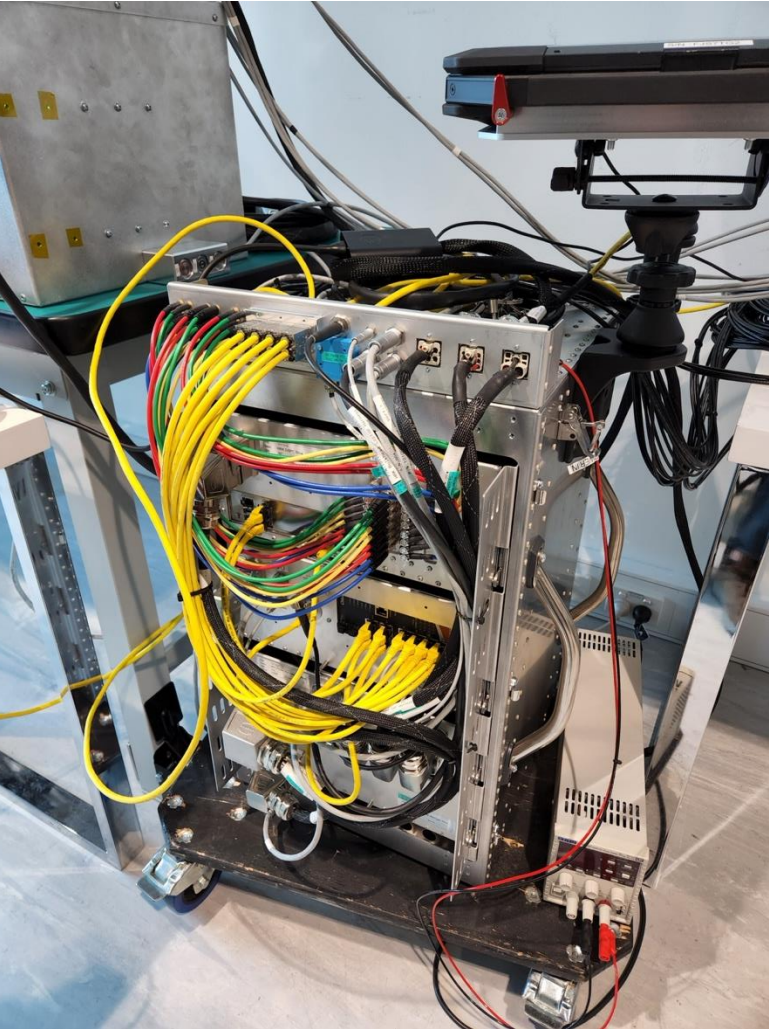
20,310 ft

Tallest mountain in the world  
from base-to-peak

Angle < 0.000085 °



# Power and control



6 gigapixels per HyperShot

620,000 photos in 5h

40TB of data

One aircraft. One flight.

# How big is 40TB?

Spider-Man: No Way Home

2h 28min

Largest Digital Cinema Package (DCP) ever  
500GB including cinema HD and 3D versions





**40TB = 80 Spider-Man digital cinema packs**



250 suppliers

9,000 parts

2,000,000 lines of code

It's what it takes.

# HC3: Powering Your Workflows with Higher Accuracy

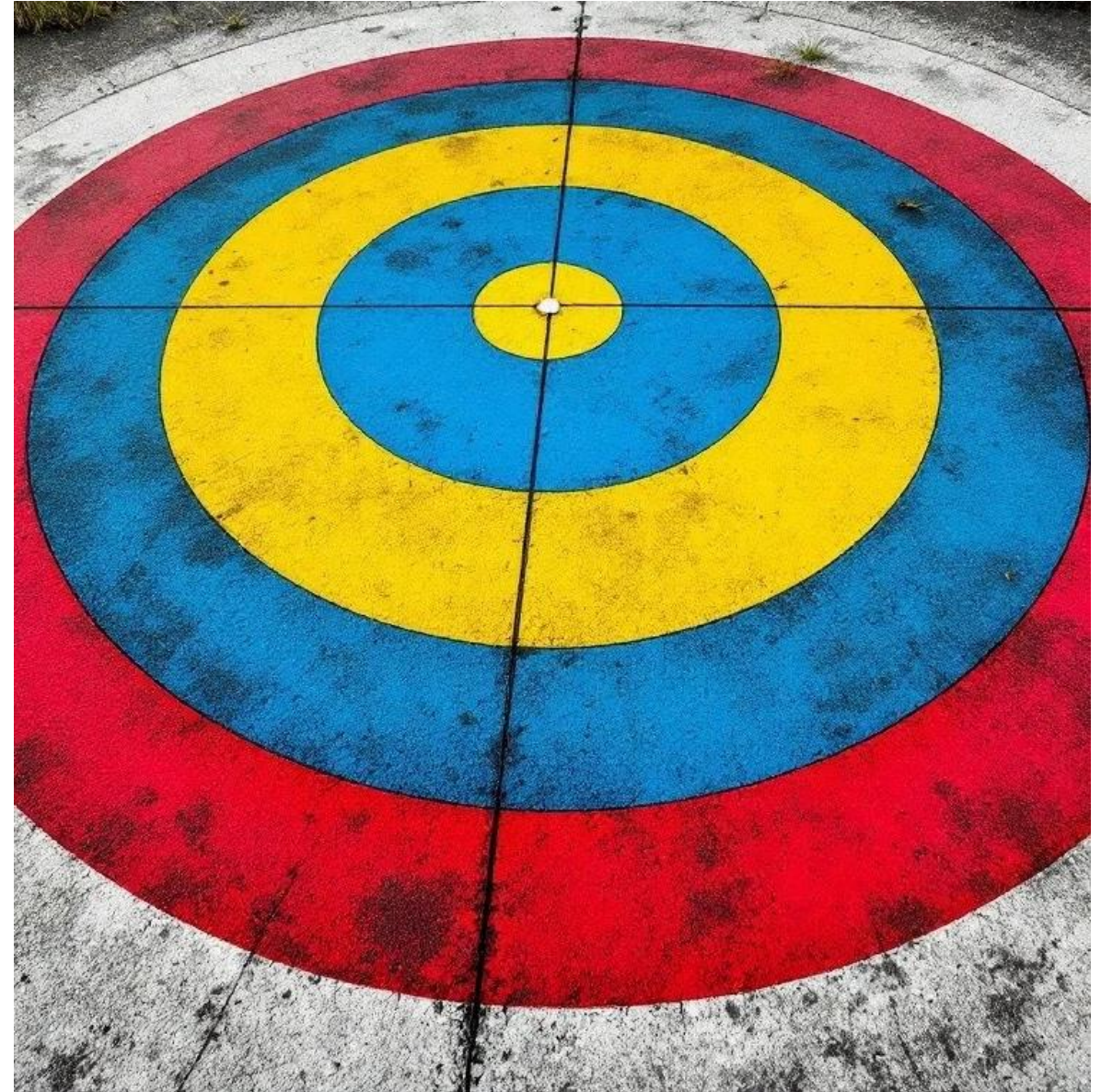
# Root Mean Square Error (RMSE)

**What it is:** RMSE shows how far off your predictions usually are.

**How it works:** It looks at how much each guess missed the real answer and averages those misses.

**The 'mean square' part:** It deals with the misses in a way that big misses count more. The final number is like a typical miss size.

**Smaller is better:** Smaller RMSE means your predictions are generally closer to the real answers



# Circular Error 90%

**What it is:** CE90 measures system precision (closeness to desired outcome).

**How it works:** CE90 is the radius of a circle around the target.

**The 90% part:** 90% of results fall within this circle.

**Smaller is better:** Smaller CE90 = higher precision.



# Measuring Accuracy: ASPRS Standards

Root Mean Square Error (RMSE) – averaged distance error between mapped points and ground truth.

Horizontal Accuracy Class	Absolute Accuracy RMSEh (cm)
---------------------------	------------------------------

5 cm

≤ 5.0

7.5 cm

≤ 7.5

10 cm

≤ 10.0

15 cm

≤ 15.0

20 cm

≤ 20 cm

30 cm

≤ 30 cm

(Source: ASPRS Positional Accuracy Standards, Ed. 2 [24])

Orthoimagery Pixel Size (GSD)	Recommended Horizontal Accuracy Class (RMSEh cm)	RMSEH in Terms of Pixels	Recommended Use
-------------------------------	--	--------------------------	-----------------

5 cm

≤ 5.0

≤ 1-pixel

Design, critical infrastructure mapping, risk assessment

5 cm

10.0

2-pixels

Asset management, environmental monitoring, urban planning, CAT response

5 cm

≥ 15.0

≥ 3-pixels

Site reconnaissance, planning, visual reports, environmental, property objects

7.5 cm

≤ 15.0

≤ 1-pixel

Design, critical infrastructure mapping, risk assessment

7.5 cm

30.0

2-pixels

Asset management, environmental monitoring, urban planning, CAT response

7.5 cm

≥ 45.0

≥ 3-pixels

Site reconnaissance, planning, visual reports, environmental, property objects

# Horizontal Accuracy

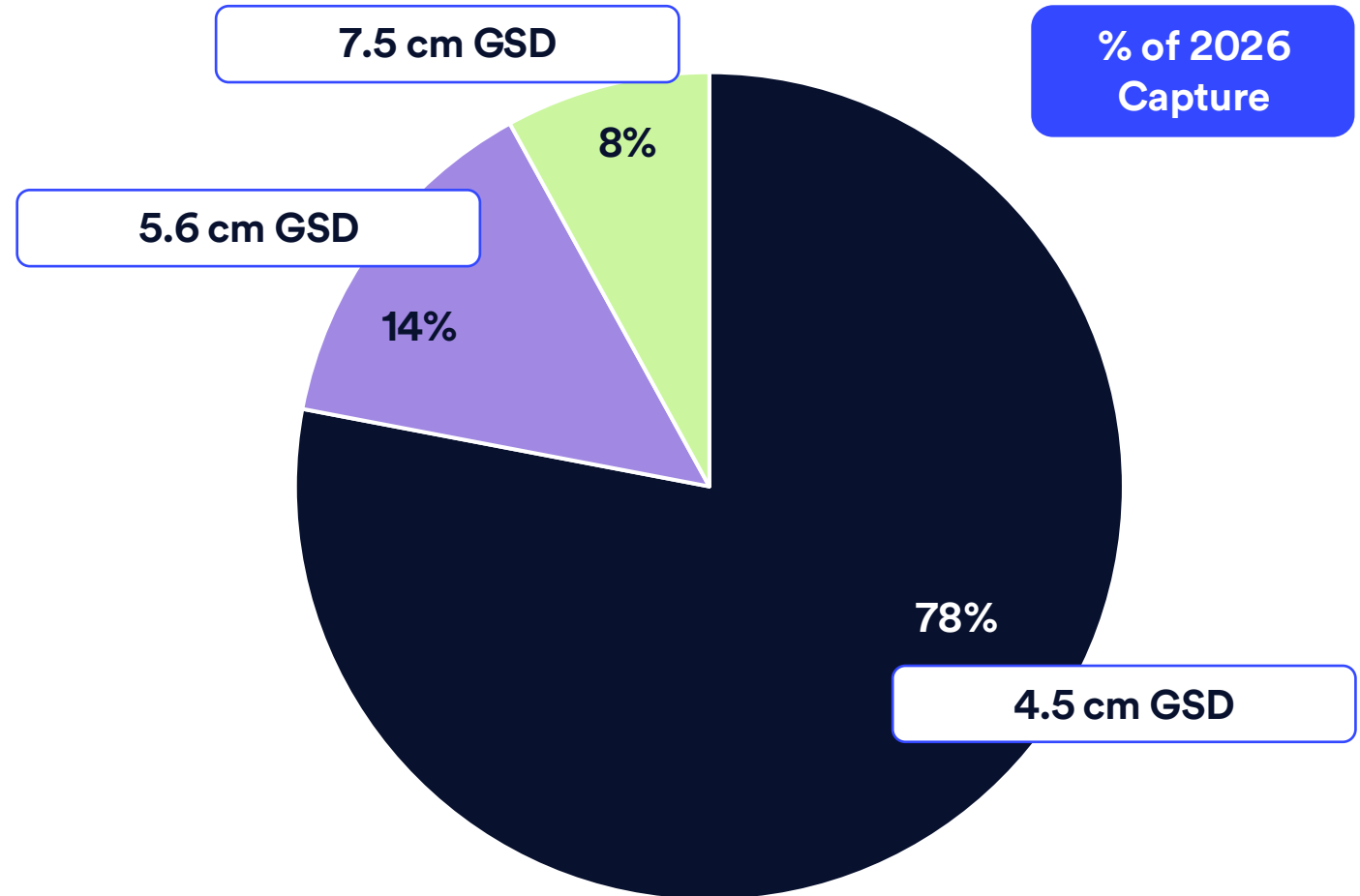
GSD (cm)	RMSEh (Horizontal)	CE90 (90% Confidence)
----------	--------------------	-----------------------

4.5	< 14.1 cm / 5.6 in	< 21.4 cm / 8.4 in
-----	-----------------------	-----------------------

5.6	19.8 cm / 7.8 in	30.0 cm / 11.8 in
-----	---------------------	----------------------

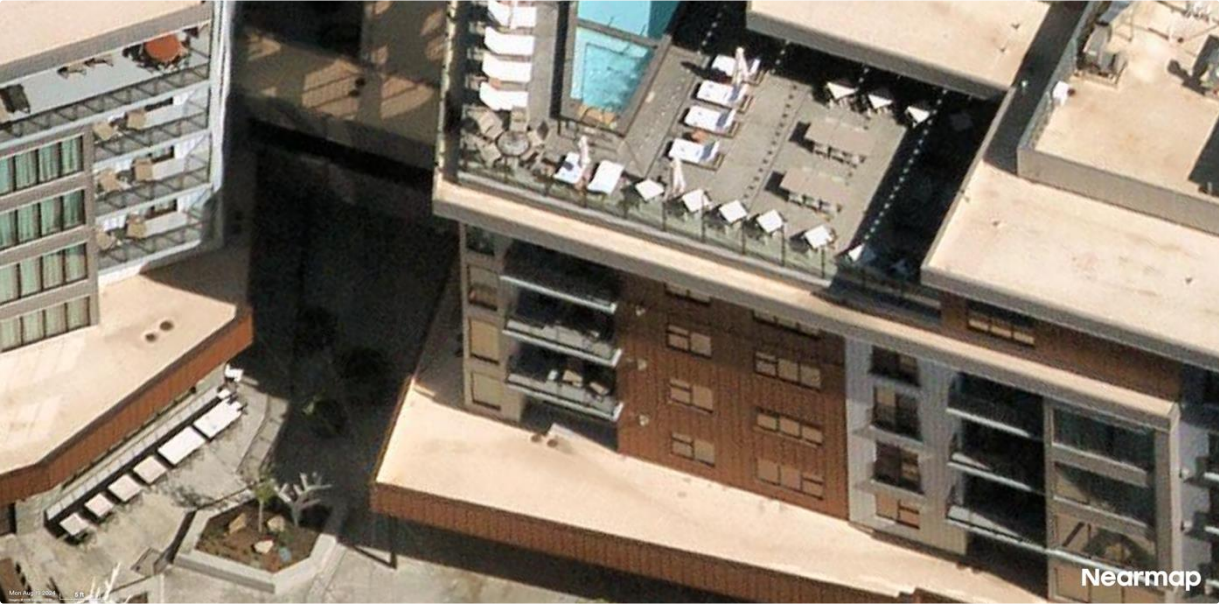
7.5	25.5 cm / 10.1 in	38.7 cm / 15.2 in
-----	----------------------	----------------------

Note: Nominal GSD applies in most cases; final product GSD may vary due to operational factors (e.g. flying altitude).



# Continuous improvement!

## The Pendry, Park City UT



Oblique: August 19, 2024



Oblique: September 3, 2025

# Capture Program and Coverage

# How Nearmap delivers imagery

Nearmap operates three capture programs that work together to keep your imagery current:



## Standard Capture Program

Scheduled captures across major metro and high-activity areas, flown multiple times a year. The foundation of most Nearmap subscriptions.



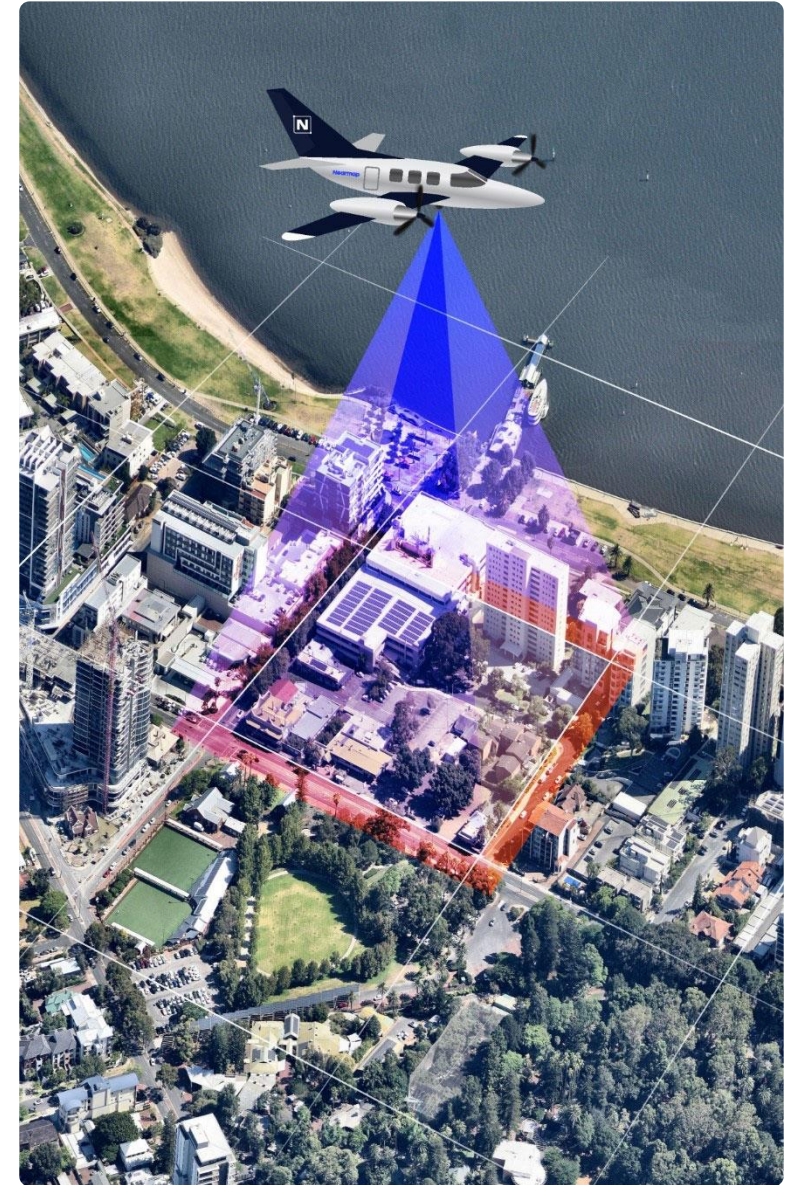
## ImpactResponse

Rapid post-event captures following hurricanes, wildfires, tornadoes, and floods, so you have current imagery for assessment and response.



## Nearmap Now

Custom captures for areas or cadences outside the Standard program. You define the area, capture type, and frequency. We fly it on your schedule.



**United  
States**

88.5%  
Population

695 K  
sq mi

Up to  
3x per year

**Canada**

66%  
Population

18.5 K  
sq mi

Up to  
2x per year

# Capture Frequency



**500 S. Oxford Ave**  
Los Angeles, CA, US

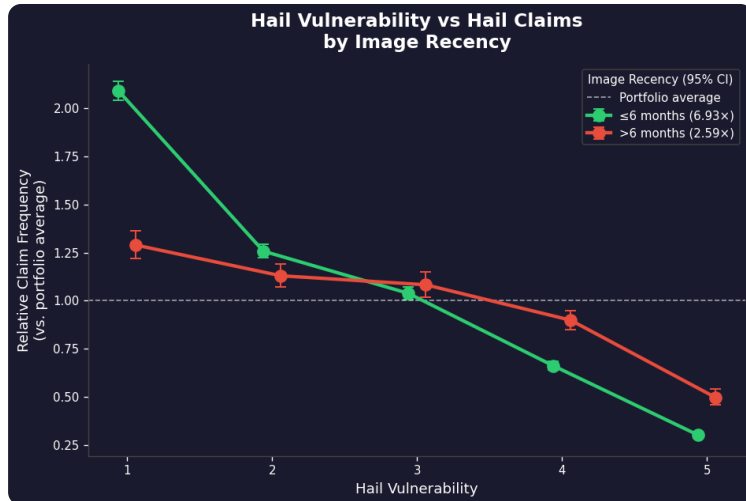
# Nearmap

4.9 months  
average recency

# Why Image Recency Matters

For Insurance

Better imagery recency directly improves pricing accuracy and reduces regulatory non-compliant issues.



+168%

Better Predictive Lift on hail claims with more recent imagery

(The likelihood of hail claims between Most Vulnerable roofs and Least Vulnerable roofs)

Older Imagery (>6 months)

Recent Imagery (≤6 months)

2.59x → 6.93x

- AI Insight is only as good as the imagery underneath it
- If you are using old imagery, you're leaving risk signal on the table
- We see similar trends on Wind Vulnerability Score and Roof Spotlight Index (RSI) – stronger lift with ≤6 months imagery
- Higher confidence in underwriting and rating decisions – lower loss ratio
- Resolution AND **Frequency/Recency** are important factors to maximize the value of Property Intelligence

Methodology: Analysis of on real policy and claims data against Nearmap vulnerability scores, segmented by age of most recent imagery prior to policy effective date. Hail claim frequency base rate ~1%; wind ~3%. Separation measured as ratio of relative claim frequency between score 1 and score 5 properties within each recency cohort.

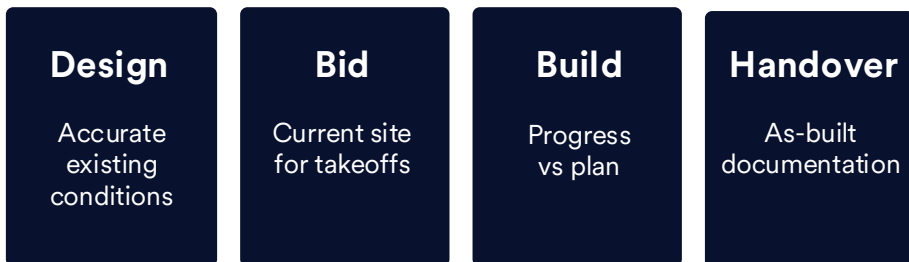
# Why Image Recency Matters **For AECO**

Current aerial imagery reduces rework, improves bid accuracy, and helps keep projects on time and budget.

**53%**  
Of rework is caused by unexpected site conditions  
Revizto, [Bridging the Gap 2025](#)

- Stale imagery leads to inaccurate bids and costly surprises on site
- Current captures enable reliable remote quantity takeoffs
- Up-to-date conditions support permits, zoning, and as-built documentation
- Teams scope and assess sites from the office – reducing fieldwork costs

Recency across project lifecycle:



**Amazon AWS**  
New Carlisle, St. Joseph, IN



April 19, 2024

April 12, 2025

March 28, 2026

# Nearmap Capture Program 2026

North America

1.5–7.5cm

GSD Resolution

Up to 3

images annually

88.5%

Population coverage

# Nearmap Product

Customer Migration  
PIF Twinning

ORV Enhancements  
Interior

Filtering  
Roof Assessment

Total Price Interior  
& Exterior

Q2 2026

Ecosystem  
Expansion Plnar  
Interior

External Beta Start  
Benchmarking

Material Expansion  
Total Price Interior &  
Exterior

Roof Repair Analysis  
with Estimate  
Exterior

Complexity &  
Waste On Report  
REM

Q3 2026

New Integration  
1.0 Release  
**ESRI Integration**

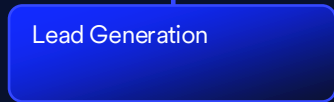
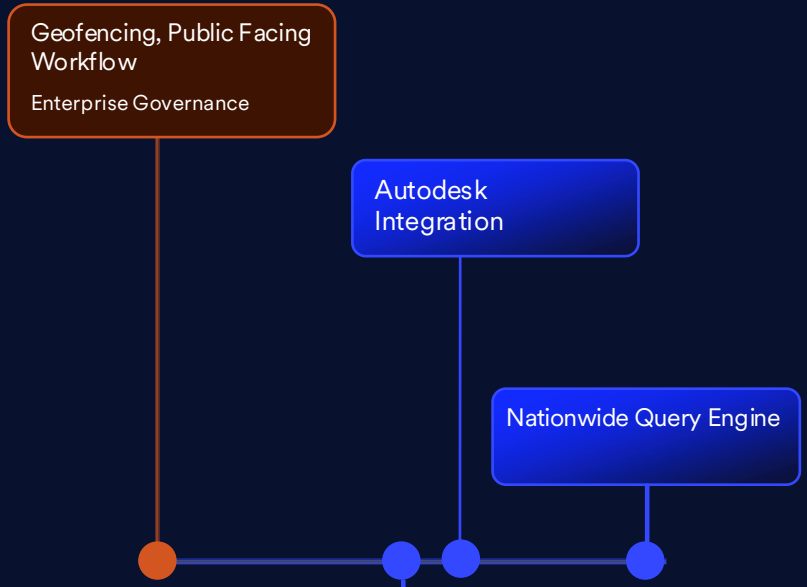
Benchmarking

Estimate to  
Guaranteed  
Fulfillment

Lab Based Cabinet  
Grade  
Interior

Organizational Units  
Enterprise Governance

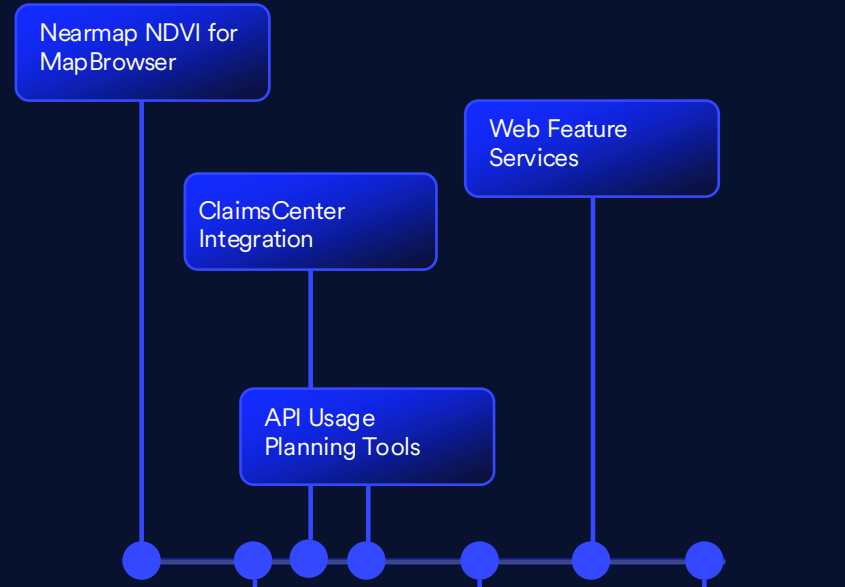
Q4 2026



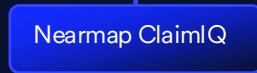
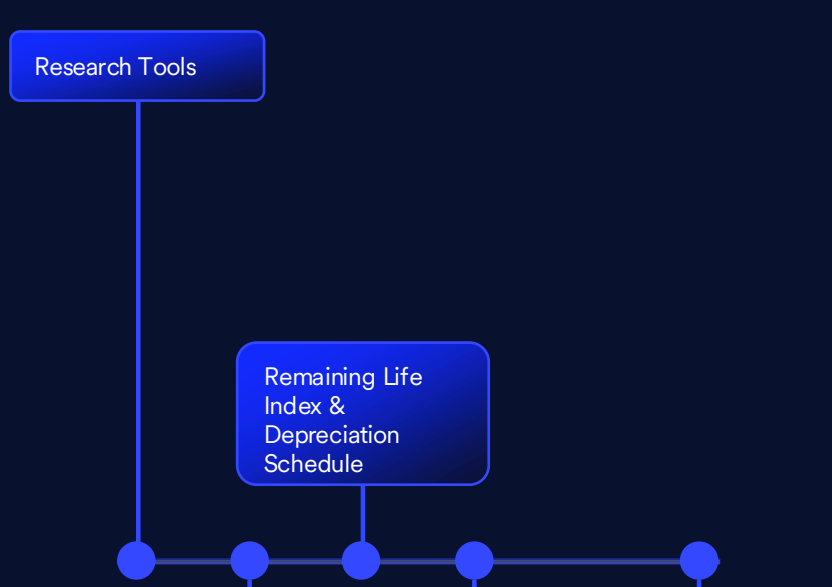
**Nearmap Labs**

Safe harbor — these items are exploratory and do not represent commitments. Features may change significantly, be delayed, or be removed entirely without notice.

**Q1 2027**



**Q2 2027**

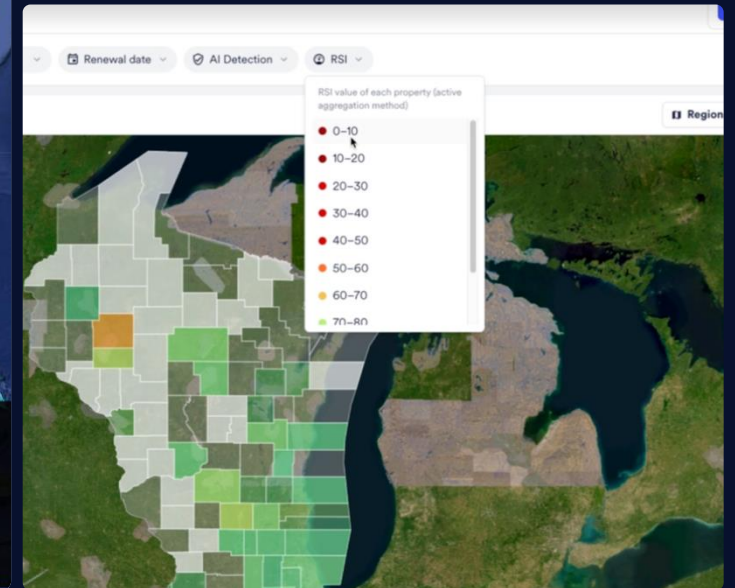
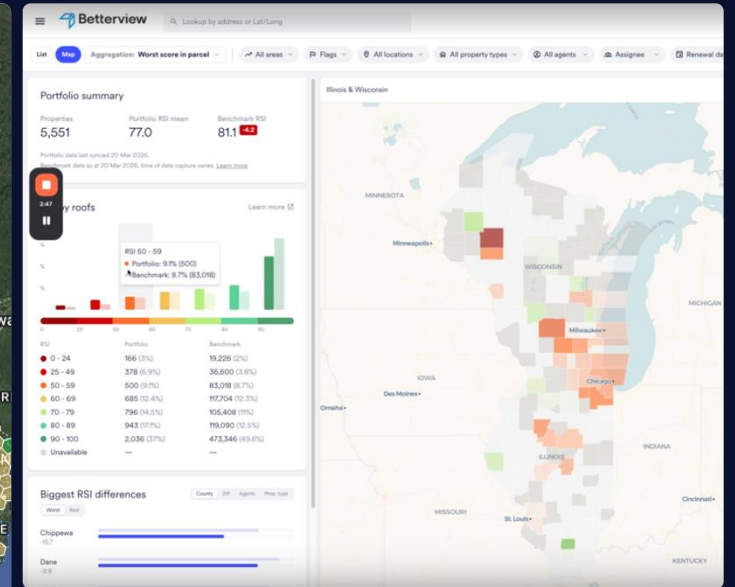
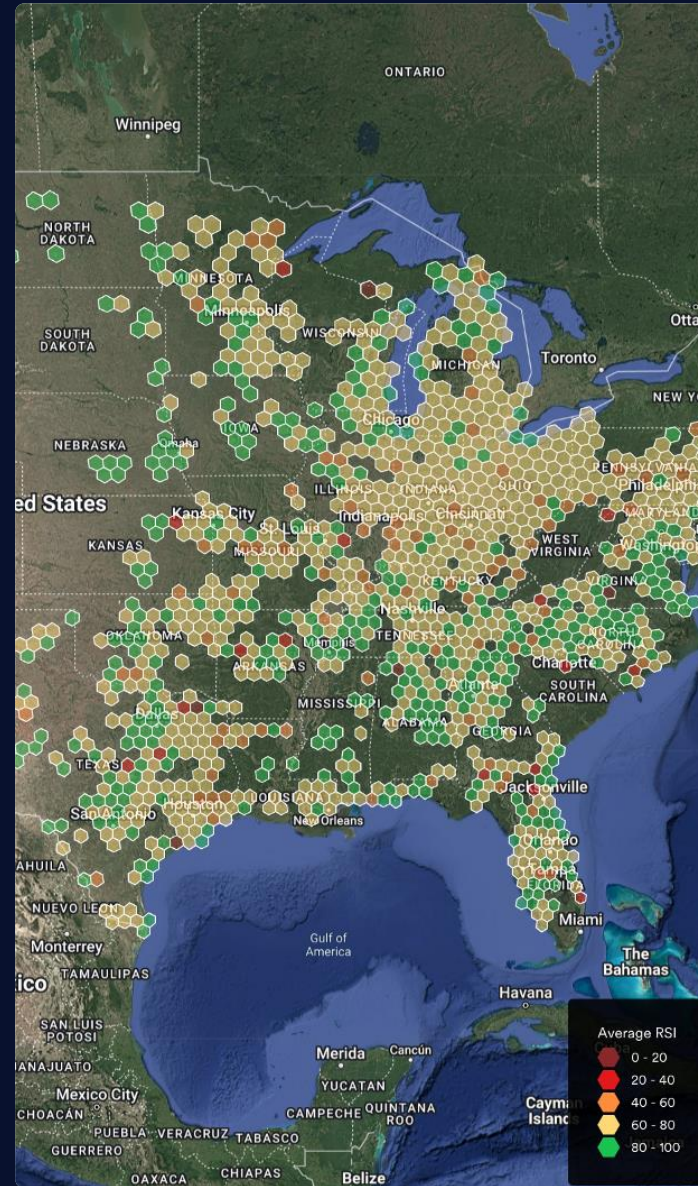


**Q3 2027**

# Portfolio Benchmarking

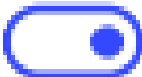
# Pre-Beta Early Preview

- Compare YOUR portfolio to all properties within our coverage areas
- Portfolio quality management
- Avoid adverse selection
- Reinsurance negotiation
- Growth and expansion



# ArcGIS Integration

Nearmap imagery, delivered natively into ArcGIS — not just replacing the deprecated Esri Marketplace — but bringing **new capabilities** to streamline your workflows.



## Native ArcGIS workflows

Access, filter, and share Nearmap imagery without leaving ArcGIS



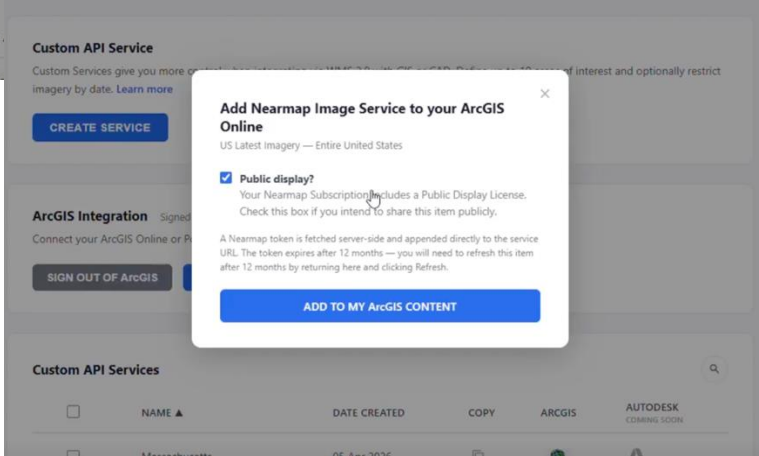
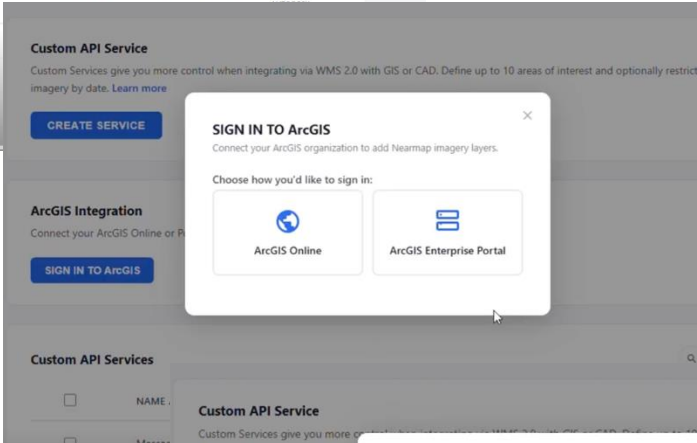
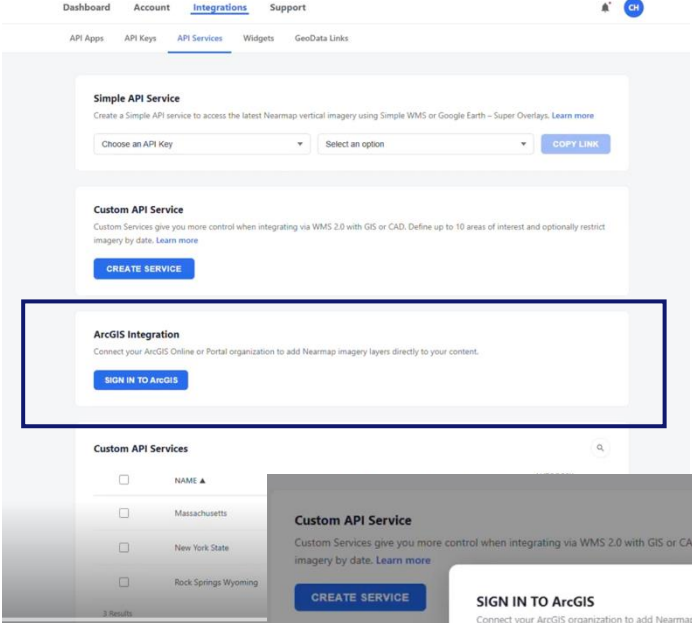
## Enterprise control NEW

Scope imagery by location and date, manage users, and enforce access from one place



## Effortless setup NEW

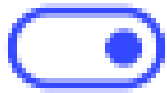
One-time simple configuration within the Nearmap UI



# Enterprise Governance

The single biggest thing we hear from customers throughout Nearmap: Give us the tools we need to manage our usage!

Visualization and feature discussion in breakout!  
Join our advisory council



## “Organizational Units” (OUs)

Abstract versions of Departments, projects, Branch offices allow tracking of API, Mapbrowser, ArcGIS through



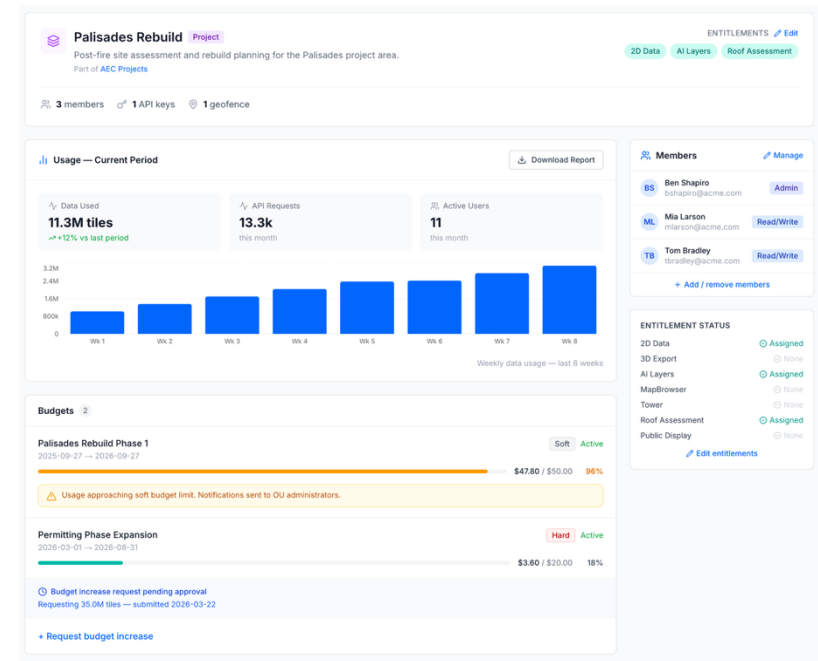
## Budgets

Users can request budgets and be approved by administrators for that use with a hard or soft cap and Rate Limits.



## Geofencing

OUs can be assigned a geofence to limit what a Project, department, or Branch office can use. All configurable by the customer.



### Budget Allocation Enterprise

Total Budget Allocated: **\$724.00** (362.5M tiles)

Total Consumed: **\$487.58** (87% of budget)

Pending Requests: **3** (Awaiting approval)

Suspended OUs: **1** (Hard budget exceeded)

Organizational Unit	Budget (est. value)	Utilization	Type	Status
Infrastructure Dept (1 pending)	\$84.20 / \$100.00 42.3M tiles / 50.0M tiles	84%	Soft	Active
Infrastructure Dept (1 pending)	\$4.20 / \$20.00 2.1M tiles / 10.0M tiles	21%	Hard	Active
Network Monitoring Project	\$16.40 / \$30.00 8.2M tiles / 15.0M tiles	55%	Soft	Active
Disaster Response GIS Project	\$23.80 / \$40.00 11.9M tiles / 20.0M tiles	60%	Hard	Active
Asset Inspection Project	\$11.90 / \$16.00 6.0M tiles / 8.0M tiles	74%	Soft	Active
Insurance Dept	\$56.20 / \$60.00 28.1M tiles / 30.0M tiles	94%	Hard	Active
Claims Assessment Project (1 pending)	\$42.80 / \$40.00 21.4M tiles / 20.0M tiles	107%	Hard	Suspended
Claims Assessment Project (1 pending)	\$0.00 / \$10.00 0 tiles / 5.0M tiles	0%	Soft	Active
Underwriting Analytics Project	\$8.24 / \$20.00 4.1M tiles / 10.0M tiles	41%	Soft	Active
Government Services Dept	\$49.80 / \$80.00 24.9M tiles / 40.0M tiles	62%	Soft	Active
Planning & Zoning Project	\$18.08 / \$24.00 9.0M tiles / 12.0M tiles	75%	Soft	Active
Planning & Zoning Budget	\$2.40 / \$12.00	96%	Hard	Active



# Roof Age Gen 2

Imagery-led, multi-source, AI-driven, preprocessed model for accurate and defensible roof age



Sub-2s

Quoting speed

98%

of the time within **2 year**  
 of the actual roof  
 replacement date  
 (accuracy of the multi-  
 imagery model)

~100%

Parcel Processed in  
 Contiguous US

2.8B

Historical Images  
 Processed  
 (Nearmap-owned imagery  
 ensures consistency)

# Nearmap Labs

# Nearmap Labs

A window into the future of  
property intelligence

Showcase of foundational technologies

Early access to our thinking and building

Behind-the-scenes look at the data and  
models shaping Nearmap's future

# Nearmap Labs

What are the foundations of Nearmap Labs

Nationwide,  
queryable at  
scale

Temporal  
Source  
Reasoning

Agentic  
Rules  
Mapping

Foundation  
Models

Zero-Shot  
Learning

Agentic  
Change  
Detection

# Nation Scale Answers

What does it mean to have access to Nearmap's complete AI library for open ended queries across entire continents?

A persistent and truly queryable world with answers in seconds.

## Enables Questions Like

- What properties in Chicago, Illinois have rusted roofs OR asphalt shingle roofs over 10 years old with lots of vegetation surrounding them? Can I get a list please?
- Which sites in the US are suitable for data center development?
- Which construction sites in California are over 3 acres?
- What is the median roof age in Texas? How does it compare to Florida?
- By state, what does solar panel installation look like for commercial roofs? Can you break it out by building size tiers?



# Temporal Reasoning

- Uses information from many images over time to validate features, making them more consistent with ground truth:
  - Temporal Reasoning Engine removes temporary occlusions and cleans up image-to-image differences
  - Roof remaining useful life predictions
  - Stable Building IDs



**Pacific Palisades:  
January 9, 2025**



**Pacific Palisades:  
January 11, 2025**



**Pacific Palisades:  
January 13, 2025**

# Agentic Workflows/MCP

All of these technologies will be deeply supported for agentic workflows with MCP tools and skills.

so this is likely a large multi-building/multi-section complex

- RSI on the first roof is 83 out of 100, which is fairly good condition, though there's

Done

Here's what Nearthmap sees at 100 Pringle Ave, Walnut Creek, CA as of the February 3, 2026 survey:

**Property Overview** This is a large commercial complex with multiple roof sections and a significant footprint:

Feature	Detail
Building footprint	~87,400 sqft (primary), ~83,200 sqft (secondary)
Roof area	~62,150 sqft + ~54,180 sqft + ~19,063 sqft sections
Roof type	Predominantly flat
Roof membrane	PVC/TPO (~38,700 + 14,100 sqft), Roof Coating (~4,800 sqft)
Hard surface	~42,200 sqft
Concrete slab	~37,400 sqft
RSI (roof condition)	83/100 (conf: 0.43) — above average

**Roof Condition Signals**

- Active ponding detected across multiple locations (up to 59 sqft isolated pools)
- Roof ponding present throughout — some is up to 288 sqft
- Roof staining widespread — largest patch ~951 sqft

Write a message...  
+ Sonnet 4.6 Adaptive

Nearthmap AI Explorer Powered by Claude

I'll need your permission before plotting — please use the buttons below.

Yes, plot them on the map

Aggregating features 460 locations mapped

Here's a full sweep of swimming pools across San Francisco — 460 pools detected in total:

Feature Type	Count	Total Area
Swimming Pool	393	~13,407 m <sup>2</sup>
Unmaintained Swimming Pool	67	~911 m <sup>2</sup>

All 460 pool locations have been plotted on the map above. A few highlights:

- Pools are distributed across the city, with notable clusters in residential neighborhoods like the Sunset, Richmond, and Glen Park areas.
- ~15% of detected pools (67) are unmaintained — potentially useful for outreach or maintenance-related targeting.

Note: 40 tiles encountered errors during processing, so a small number of pools in those areas may not be represented. The vast majority of the city was covered successfully. Would you like to do anything further with this data — such as finding pool service prospects, exporting addresses, or filtering by a specific neighborhood?

Ask about any area... (Enter to send) Send