

Third Arab Land Conference
Troisième Conférence Arabe sur le Foncier
المؤتمر العربي الثالث للأراضي
18-20 FEBRUARY 2025 • RABAT, MOROCCO



From Satellites to Solutions: Smart Monitoring for change detection

AI-Powered Geospatial Solutions: Integrating NSDI for Effective Land and Asset Management

Eng. Jean Daniel, Vice President of Sales and Marketing, OMEO Space

المملكة المغربية
ROYAUME DU MAROC



وزارة إعداد التراب الوطني والتعمير
والإسكان وسياسة المدينة

ROYAUME DU MAROC

MINISTÈRE DE L'AMÉNAGEMENT DU TERRITOIRE NATIONAL
DE L'URBANISME, DE L'HABITAT ET DE LA POLITIQUE DE LA VILLE



الاراضي العربية
مبادرة
Arab Land Initiative

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT



الهيئة المصرية العامة للمساحة



وزارة التخطيط والتنمية الاقتصادية
والتعاون الدولي
Ministry of Planning, Economic
Development & International
Cooperation



3rd Arab land conference, Rabat February 18th 2025

Remote sensing at scale with high resolution satellites for land tenure and change detection

Jean-Daniel TRAGUS
VP Marketing & Sales

Jean-daniel.tragus@omeospace.com

98 satellites in orbit



OPTICAL

73 VERY HIGH RESOLUTION SATELLITES

MEDIUM RESOLUTION

RADAR

C-BAND SAR

L-BAND SAR

	OM30	OM30	OM30NEO	SV/TJ/BJ	EARTHSCANNER	GAOFEN-7 STEREO	DAILYVISION	DV WIDE	GAOFEN-2	NIGHTVISION & VIDEO	NATUREYE	ZY3 TRI-STEREO	HYPERSCAN	GAOFEN-5	ZY1 HYPERSPECTRAL	GAOFEN-3 SAR	C-SAT-2 & C-SAT-3 SAR	TAIJING-4	LT1	
#	1	1	2	7	9	1	54	4	1	3	5	3	2	1	2	3	2	1	2	
GSD	0.30m PAN 1.2m MS	0.30m PAN 1.2m MS	0.30m PAN 1.2m MS	SV2: 0.40m PAN 1.6m MS SV1/TJ3/BJ3A: 0.50m PAN 2m MS	0.50m PAN 2m MS	0.65m PAN 2.6m MS	0.75m PAN 3m MS	0.75m PAN 3m MS	0.80m PAN 3.2m MS	1.2m	2m PAN 8m MS	2.1m PAN 3.5 MS	3m RGB bands 20 bands 5-10-20m	30m 320 bands inc. SWIR	2,5m/10m/30m 166 Bands inc. SWIR	Up to 1m	Up to 1m	1m 3m	Up to 3m	
	OPTION: 15CM SR				EXTRA WIDE SWATH	NATIVE STEREO	INTRADAILY REVISIT			NIGHT & VIDEO		NATIVE TRI-STEREO		HYPERSPECTRAL						
STEREO	✓	X	✓	✓	X	✓	X	✓	X	X	X	✓	X	X	X	X	X	X	X	
SWATH	24 km	15 km	12 km	12-24 km	136 km 150 km	20 km	18 km	40 km	50 km	19 km	60 km	51 km	110 km	60 km	60 km	10-650 km	5-170 km	25 km	50-400 km	
REVISIT	5 DAYS	5 DAYS	2 DAYS	2 DAYS	2 DAYS	5 DAYS	18 TIMES/DAY	2 DAYS	5 DAYS	3 DAYS	DAILY	3 DAYS	2 DAYS	5 DAYS	3 DAYS	3 DAYS	2-3 DAYS	4 DAYS	4 DAYS	

EDGE-PRO works with OMEQ

Space to access millions of sqkm of fresh very high resolution (75-50cm)

archives for purpose of rural cadastral study, change detection, vegetation analysis...



EDGE-PRO and OMEO Space monitor quarterly change detection over inhabited regions of Egypt (coast, delta, Nile valley).

All areas available online in dedicated secured portal every quarter at 50 cm

The screenshot displays the OMEO software interface. On the left, a sidebar titled "My Data" contains a search bar and a list of data batches. The list includes:

- 12/29/2024 17:00:00 TEST | 0.5m | ID:20241230
- 11/29/2024 10:54:29 Test Egypt-Q4-2 | EarthScanner 50cm | 0.5m | ID:EC5_PMS02_20241129175420_2003259...
- 11/29/2024 10:54:29 Test Egypt-Q4-2 | EarthScanner 50cm | 0.5m | ID:EC5_PMS04_20241129175420_2003259...
- 11/29/2024 10:54:27 Test Egypt-Q4-2 | EarthScanner 50cm | 0.5m | ID:EC5_PMS03_20241129175420_2003259...
- 11/29/2024 10:54:27 Test Egypt-Q4-2 | EarthScanner 50cm | 0.5m | ID:EC5_PMS02_20241129175420_2003259...
- 11/23/2024 10:31:35 Test Egypt-Q4-2 | EarthScanner 50cm | 0.5m | ID:EC9_PMS02_20241123173041_2003240...

The main map area shows a 3D topographic view of Egypt with a cyan grid overlay. The Nile river and its delta are clearly visible. The "EDGE-PRO For Information Systems" logo is located at the bottom center of the map area.



Comparison between Nov 2023 and Apr 2023

Full resolution display at 50 cm (online portal and GIS streaming)



Comparison between Nov 2023 and Apr 2203

Full resolution display at 50 cm (online portal and GIS streaming)



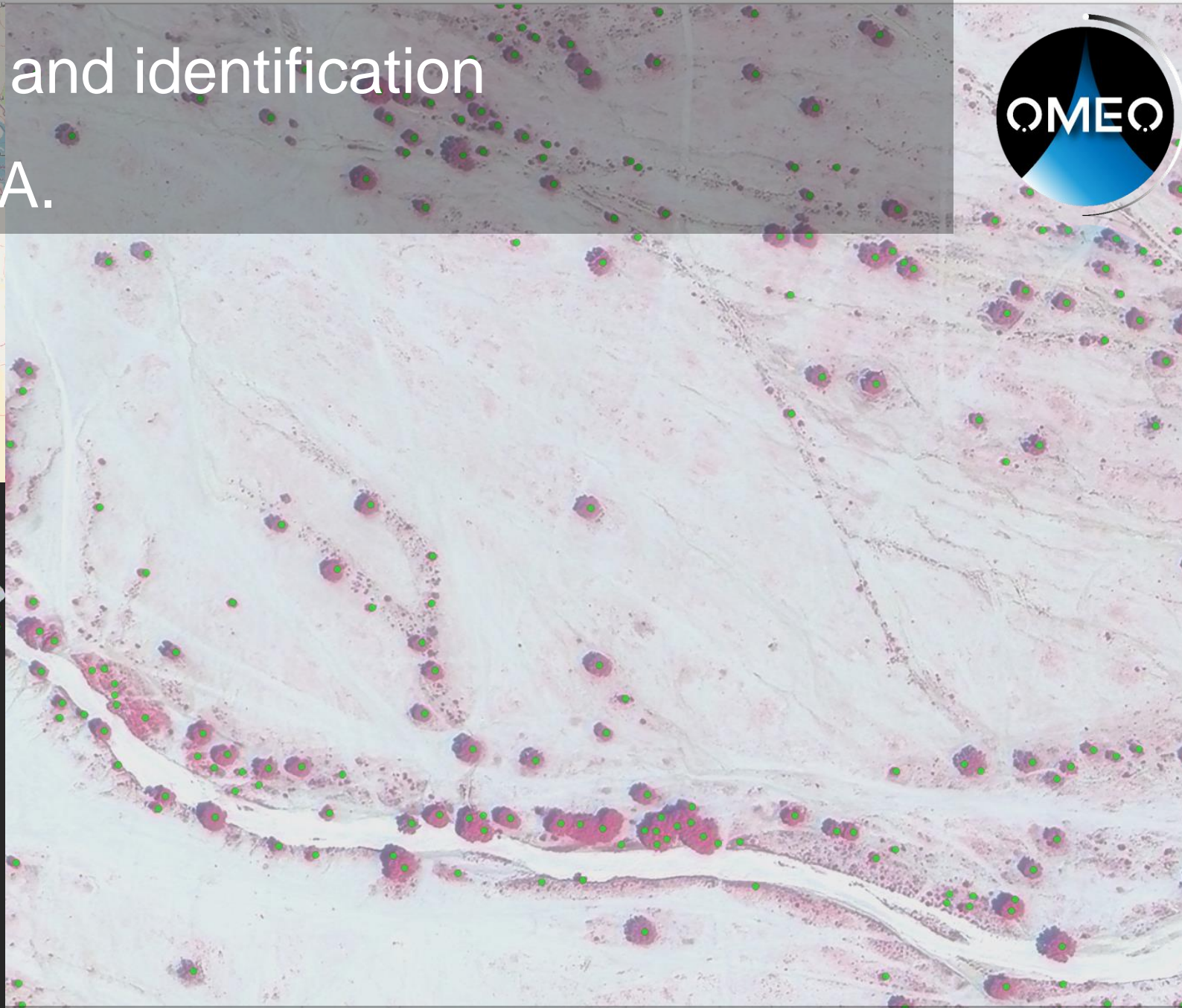
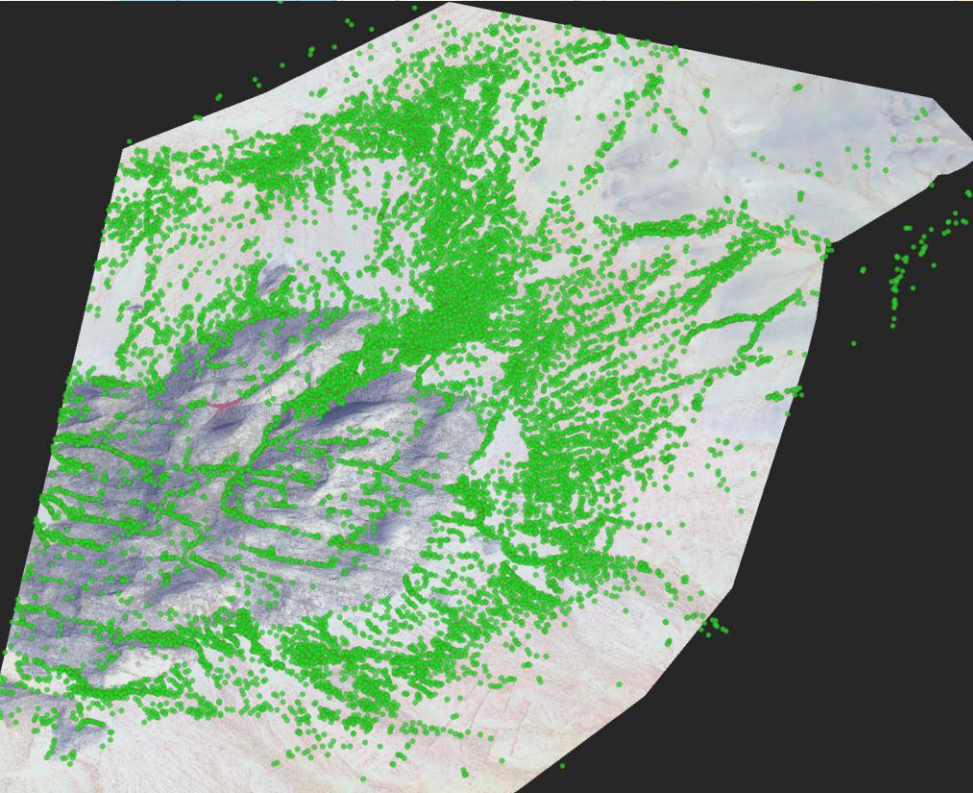
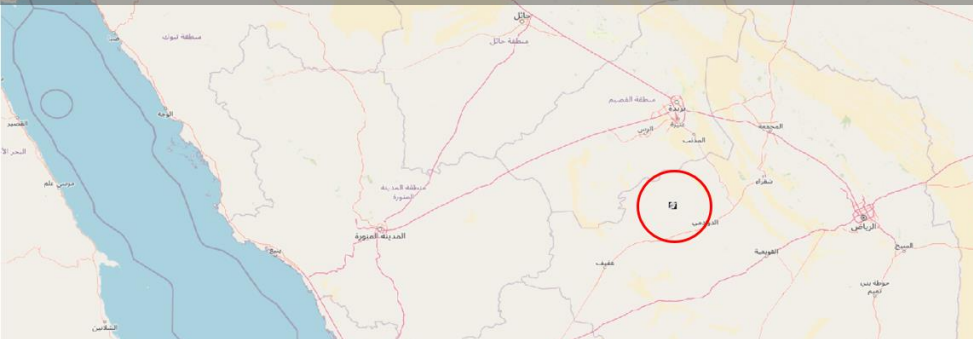
11/22/2023

04/01/2023



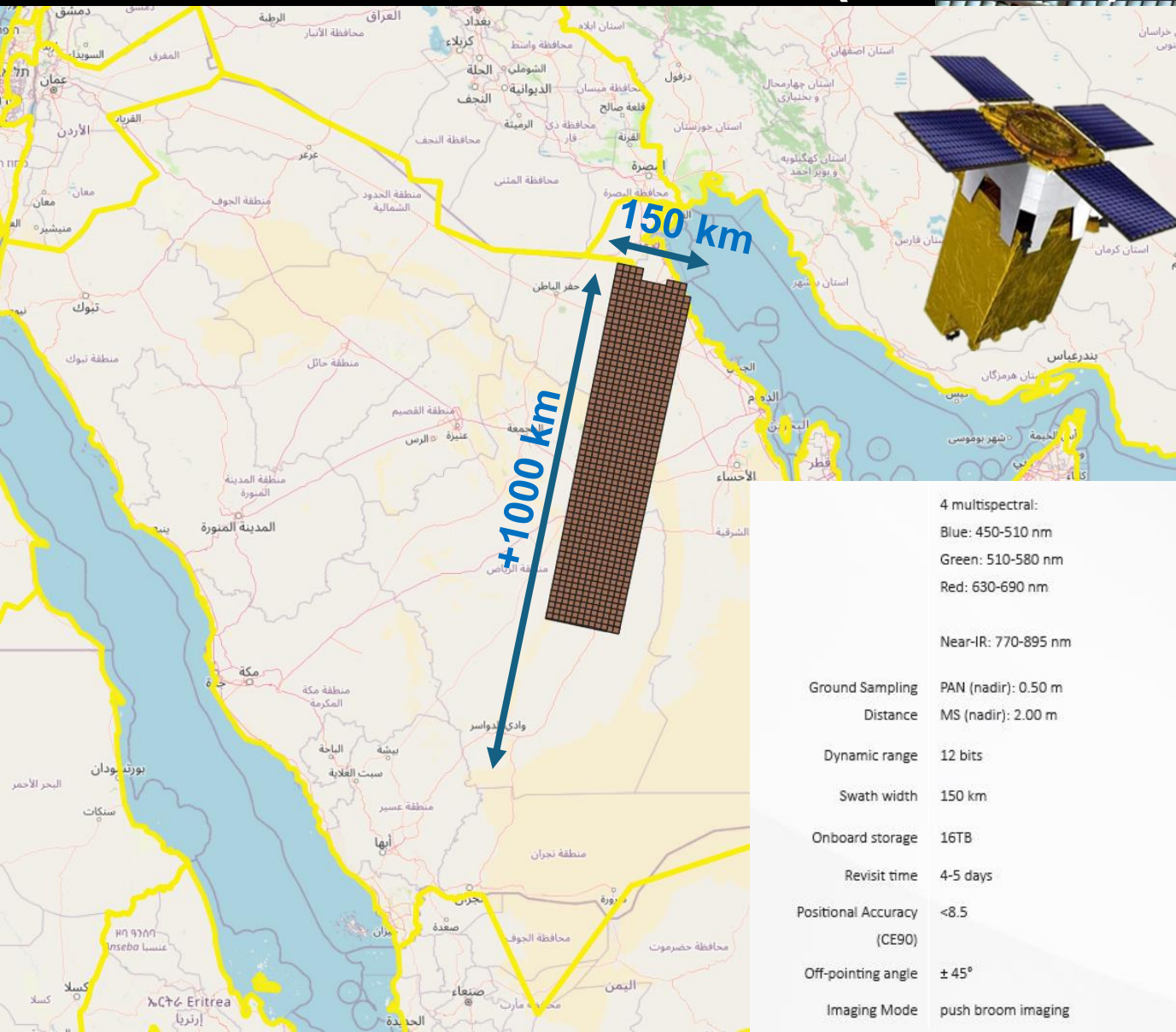
Nile Delta, Egypt, Earthscanner,

Example of tree counting and identification at 50 cm resolution in KSA.



Jebalah Mountain, near Umm Al Hamam, KSA, Earthscanner, 50 cm, False colour

9 Earthscanner on orbit satellites 50cm @ 150 km swath can collect Saudi Arabia (+2M km²) in 5 days.



4 multispectral:	
Blue:	450-510 nm
Green:	510-580 nm
Red:	630-690 nm
Near-IR:	770-895 nm
Ground Sampling Distance	PAN (nadir): 0.50 m
Distance	MS (nadir): 2.00 m
Dynamic range	12 bits
Swath width	150 km
Onboard storage	16TB
Revisit time	4-5 days
Positional Accuracy (CE90)	<8.5
Off-pointing angle	± 45°
Imaging Mode	push broom imaging



EARTHSCANNER
50cm GSD, 150 km swath
2022, Tabuk, KSA





Comparison between seasons / dates.

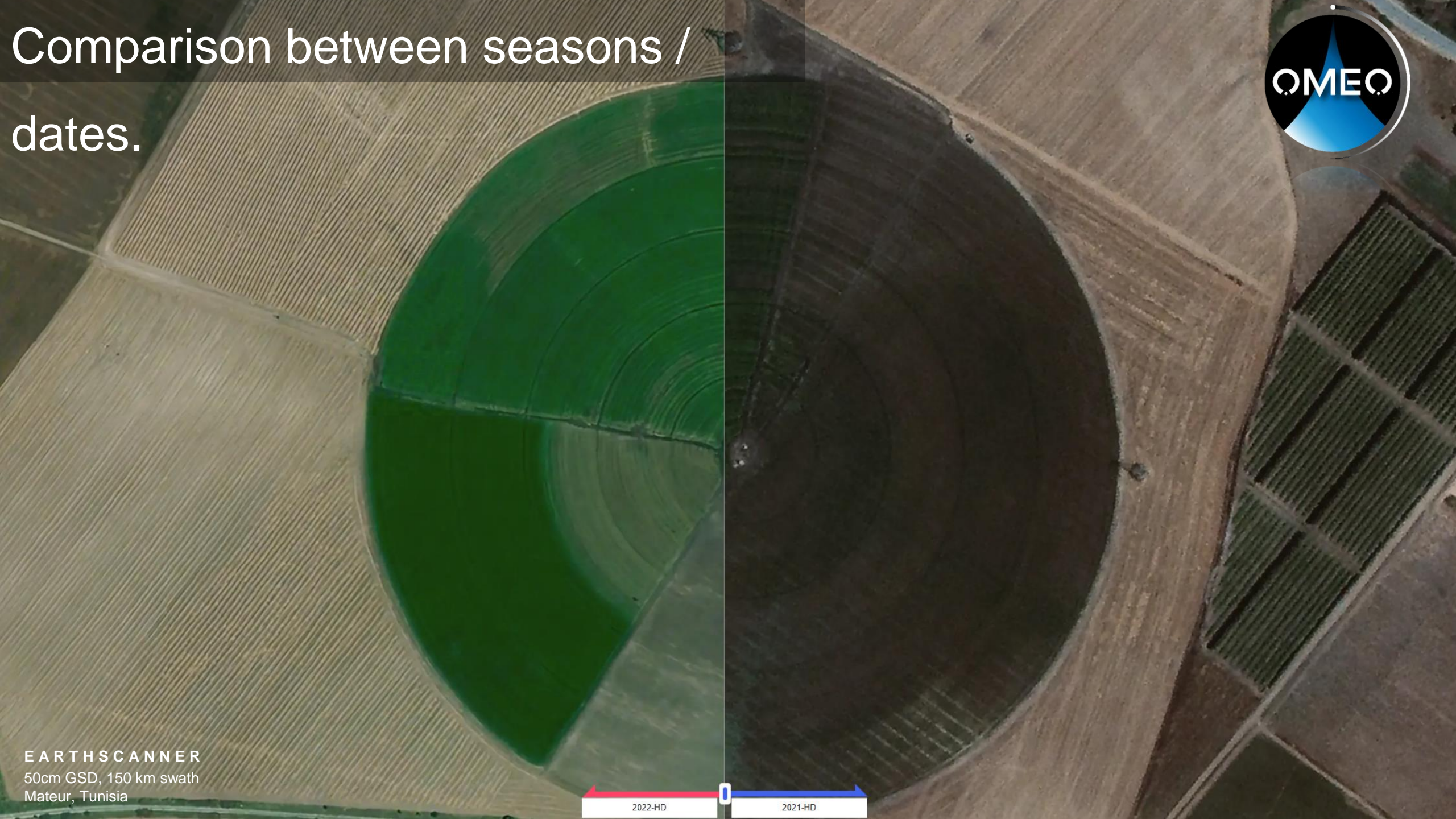


EARTHSCANNER
50cm GSD, 150 km swath
Mateur, Tunisia

2022-HD

2021-HD

Comparison between seasons / dates.



EARTHSCANNER
50cm GSD, 150 km swath
Mateur, Tunisia

2022-HD 0 2021-HD



EARTHSCANNER
50cm GSD, 150 km swath
Nile Delta, Egypt

Identification of greenhouses and buildings



EARTHSCANNER
50cm GSD, 150 km swath
Nile Delta, Egypt



EARTHSCANNER
50cm GSD, 150 km swath
Region of AlQurnah, Iraq

Plot delineations with high accuracy.



EARTHSCANNER
50cm GSD, 150 km swath
Region of AlQurnah, Iraq

Automatic change detection extraction



EarthScanner 50cm, Jeddah, KSA, 11/02/22

Automatic change detection extraction



EarthScanner 50cm, Jeddah, KSA, 13/11/22