There’s no one ring to rule them all

(DIGITAL TWIN IS NOT AN ANSWER TO YOUR QUESTION

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THERE'S NO ONE RING TO RULE THEM ALL

Introduction

Harald Görtz – Business consultant bij IMAGEM

In 30 minutes

A general policy to apply climate measures does not work. And a Digital Twin is not an answer to your question. But combined with the right analyses, it does provide insight into the challenge. This is the way to level in a conversation with the stakeholders. Show what is possible and what the consequences are.

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Who is IMAGEM?

We are translators

- From raw data to **immediately usable information, knowledge and insight**
- From GIS to **Location Intelligence**
- With standard technology to **user friendly solutions**
- **Hexagon geospatial technology**

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What we do

Adding value to technology by using domain knowledge

Data automatisation

- Mutatiesignalering & objectherkenning
- Machine Learning & Data science
- Big Data Management

Digital Twins

- Simulation systems
- Advanced Visual Analytics

Control information

- Asset Management
- Monitoring and enformcement
- Geospatial Intelligence

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HEXAGON GEOSPATIAL

De basis hiervoor is Hexagon Geospatial technologie

In (less) then 30 minutes

1 Area

2 Models

3 Datatypes (Vector, Pointcloud, Raster)

4 Data sets

Insight in (possible) climate measures

Using the digital twin

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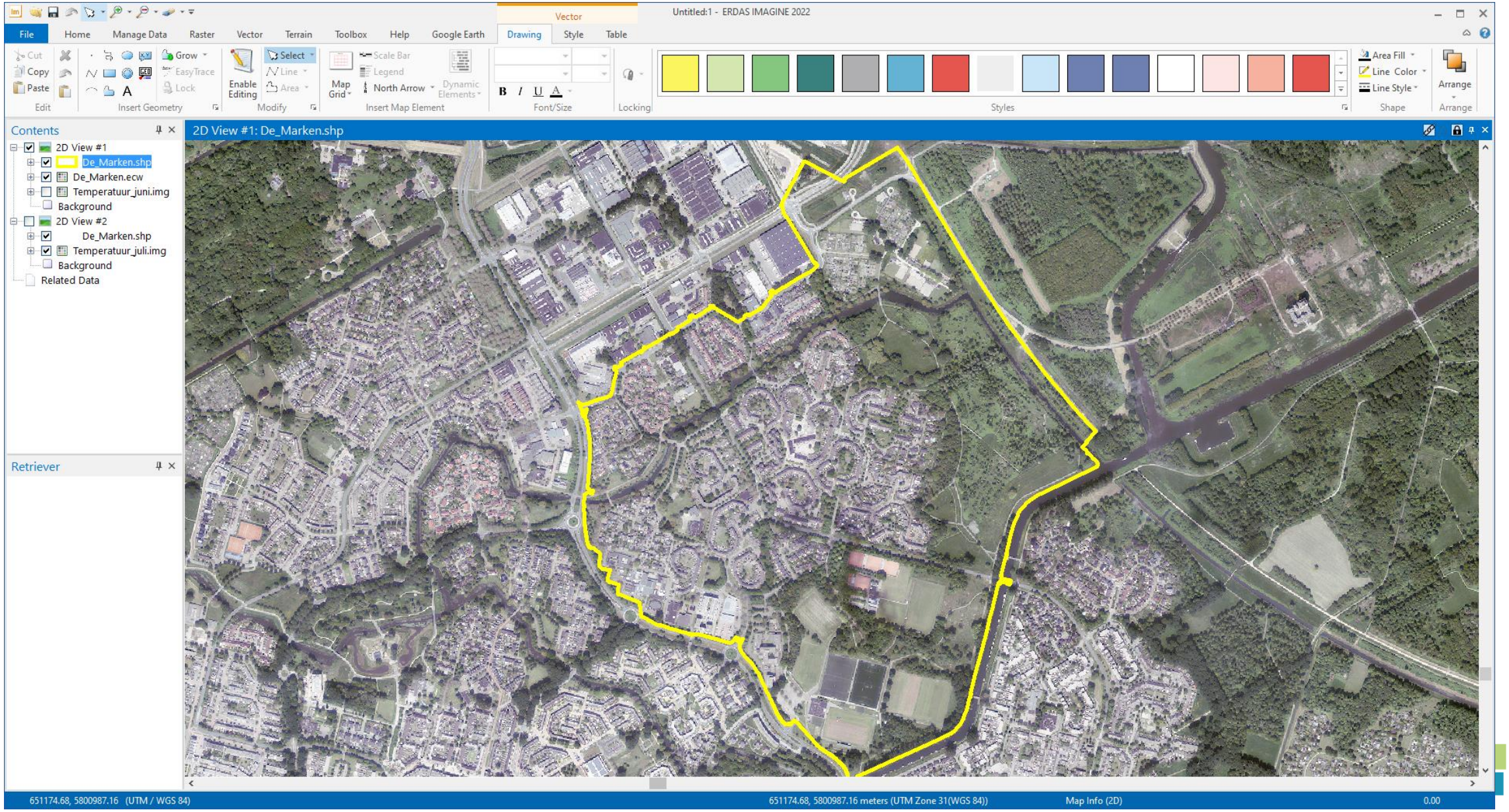
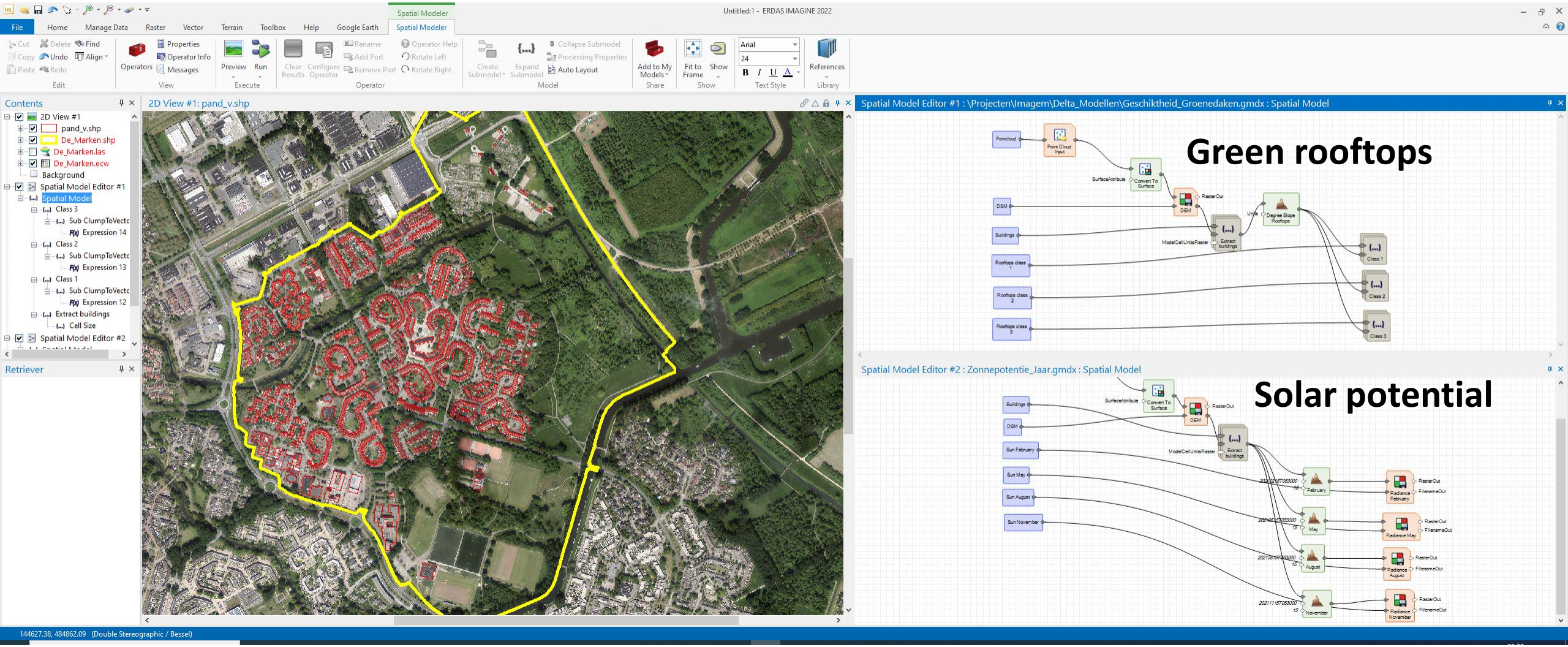
1 area “De Marken” in Almere



2 Models

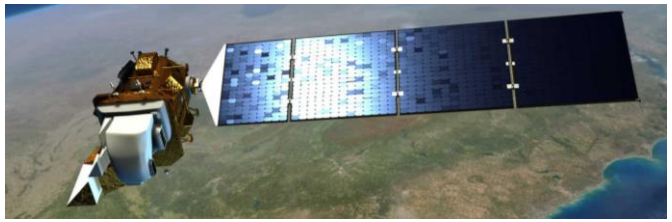

Untitled:1 - ERDAS IMAGINE 2022
Contents
2D View #1
pand_v.shp
De_Marken.shp
De_Marken.las
De_Marken.ecw
Background
Spatial Model Editor #1
Spatial Model
Class 3
Sub ClumpToVecto
Expression 14
Class 2
Sub ClumpToVecto
Expression 13
Class 1
Sub ClumpToVecto
Expression 12
Extract buildings
Cell Size
Spatial Model Editor #2
Retriever
2D View #1: pand_v.shp
Spatial Model Editor #1 : \Projecten\Imagem\Delta_Modellen\Geschiktheid_Groenedaken.gmdx : Spatial Model
Green rooftops
Spatial Model Editor #2 : Zonnepotentie_Jaar.gmdx : Spatial Model
Solar potential
144627.38, 484862.09 (Double Stereographic / Bessel)

3 Datatypes & 4 Datasets

1 Beeldmateriaal Nederland — Aerial Image– since 2021 (raster)

2 Actueel Hoogtebestand Nederland — AHN4 – since 2020 (pointcloud)

3 kadaster — BGT – since 2016 (vector)

4  — Landsat 8 – since 2013 (raster)

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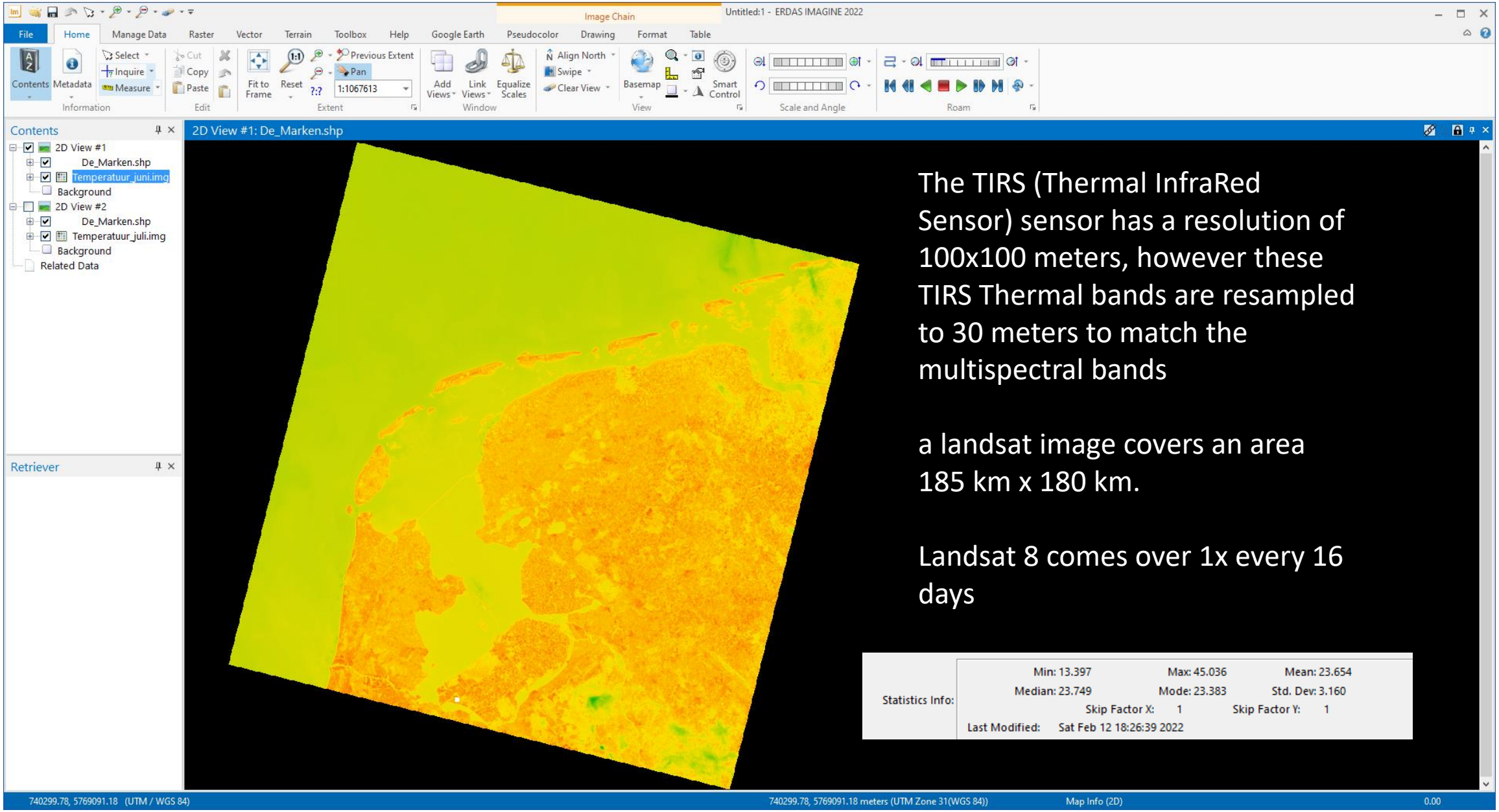
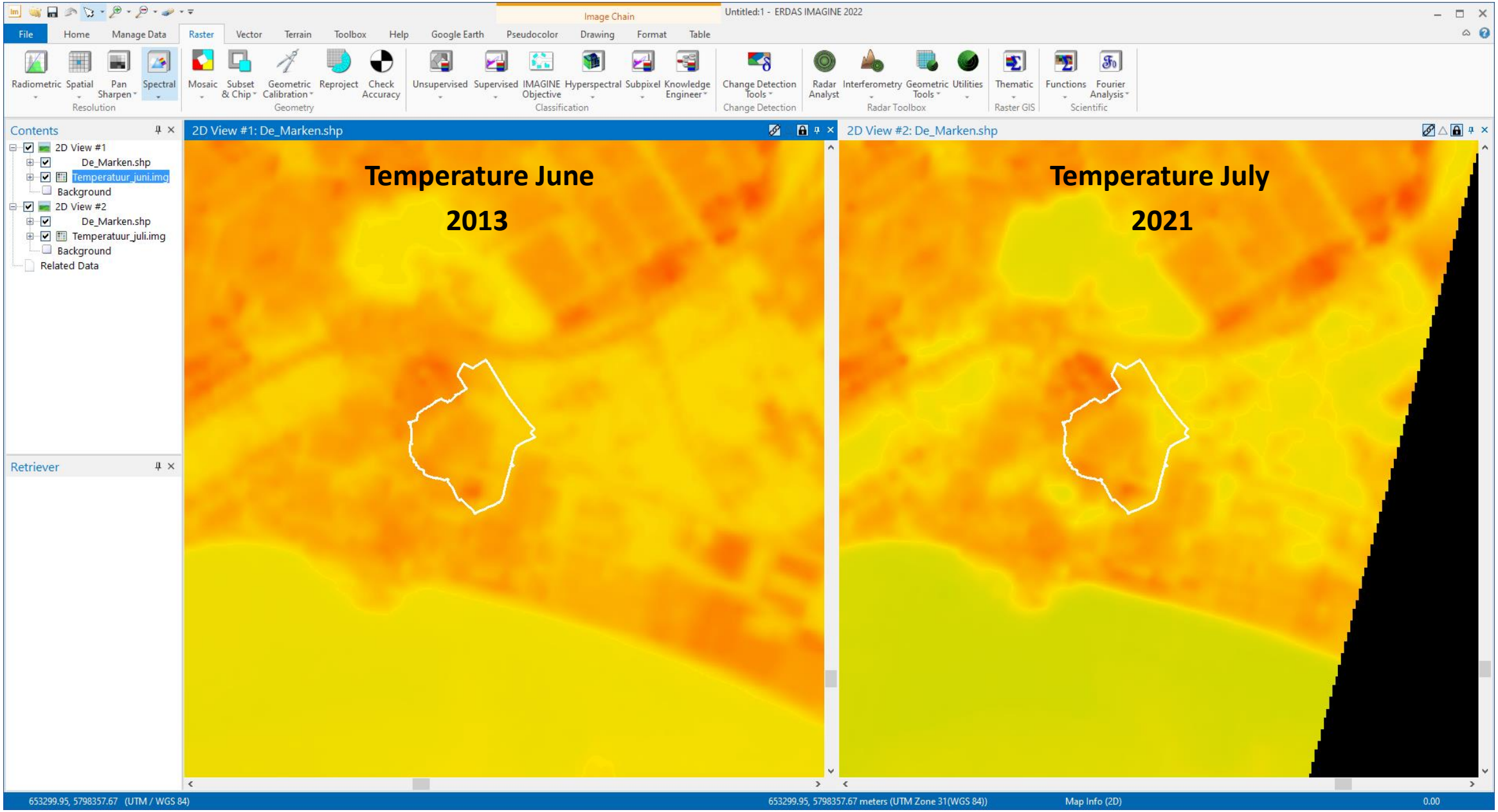
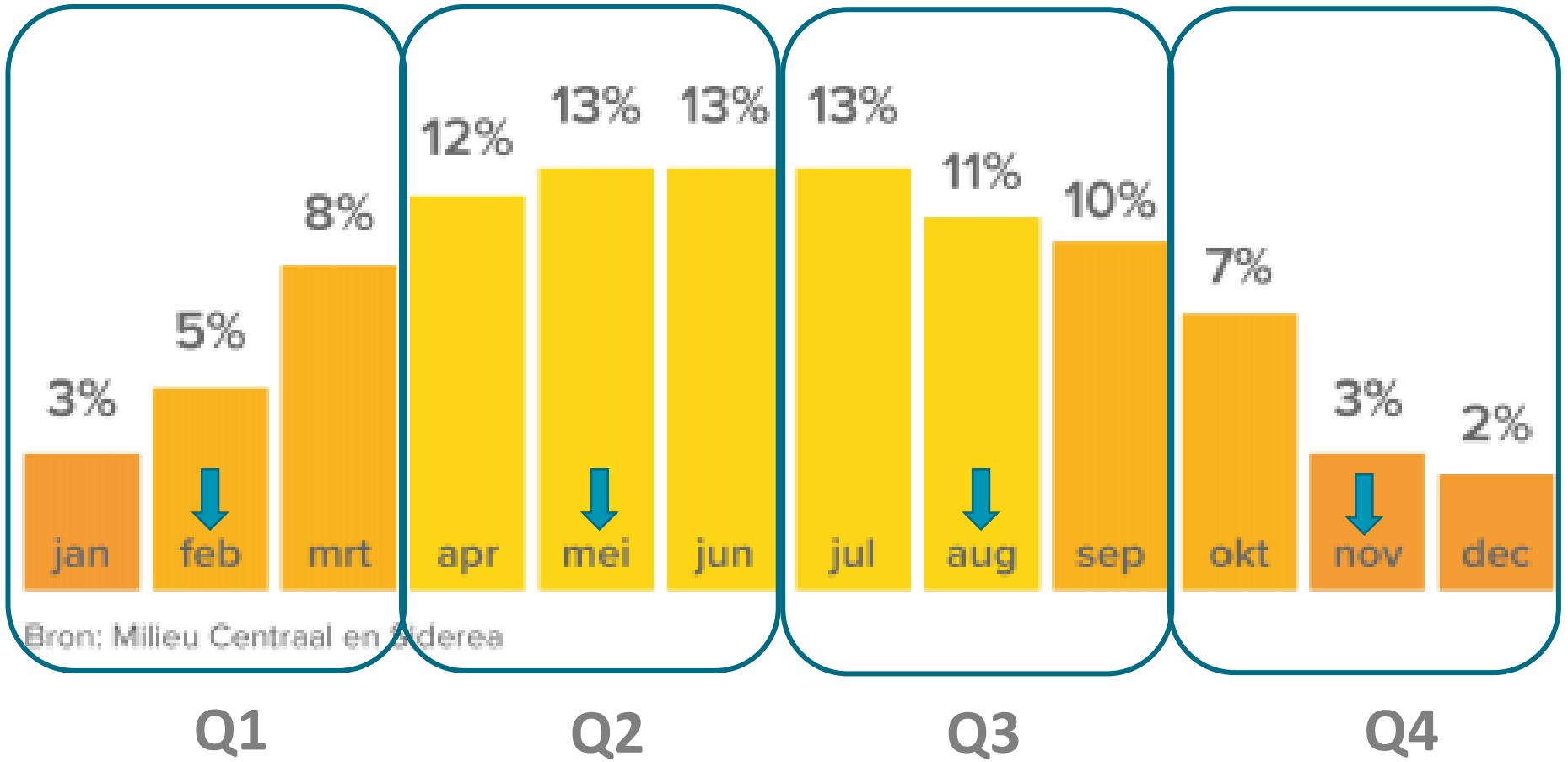
Landsat 8 – TIRS 2



Landsat 8 - Temperature



Solar potential in a year



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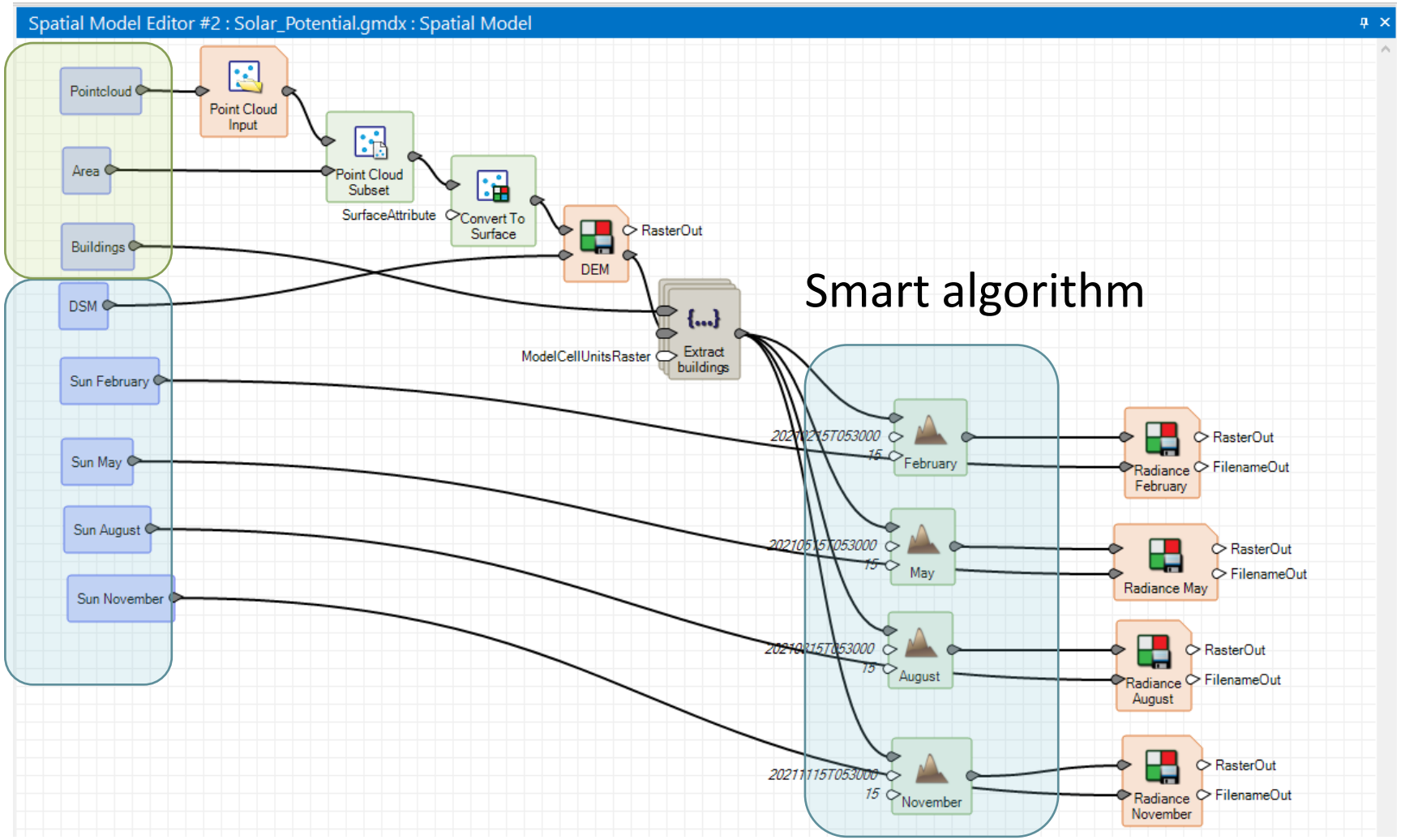
Model solar potential

Input

Output



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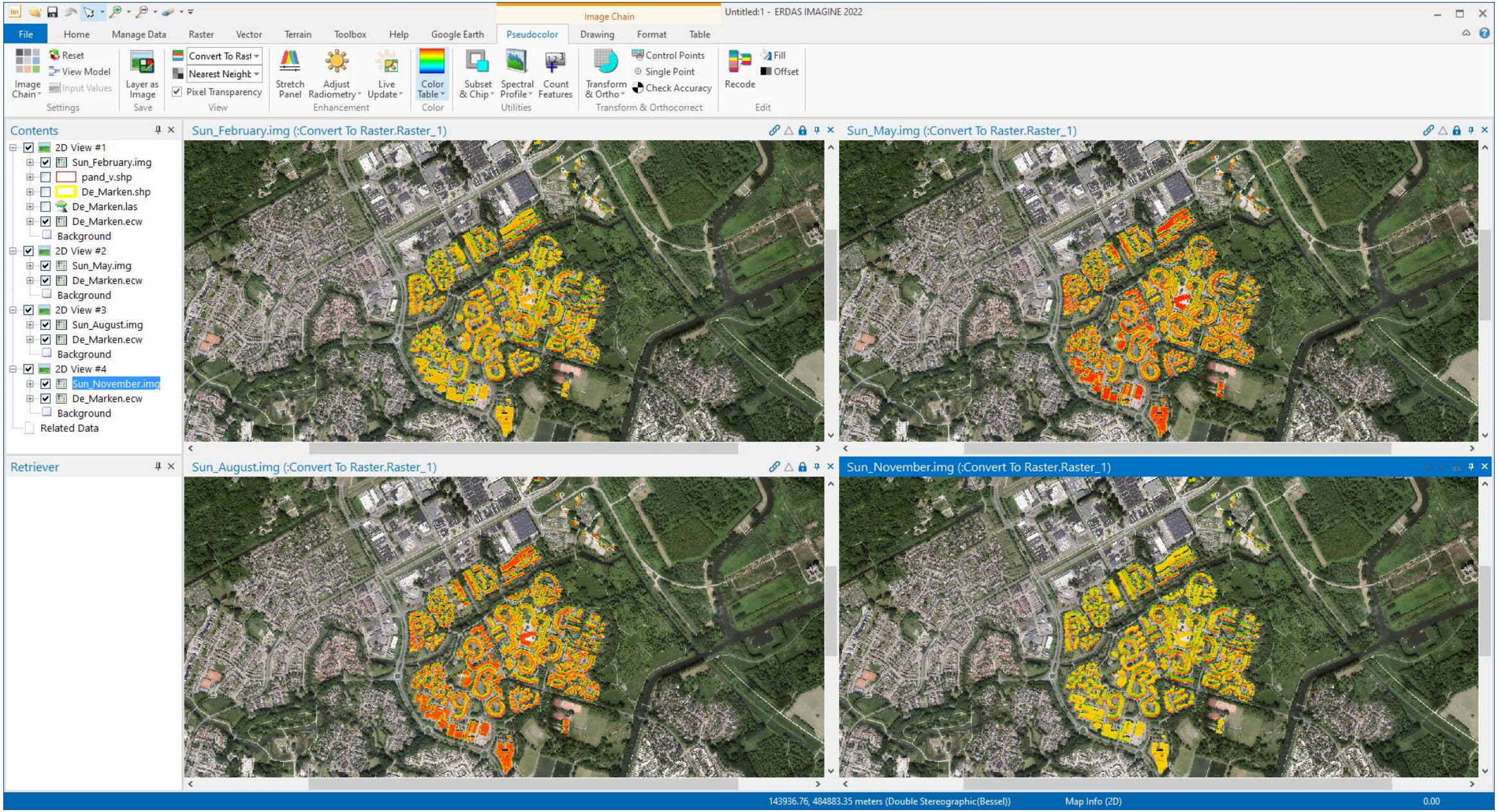
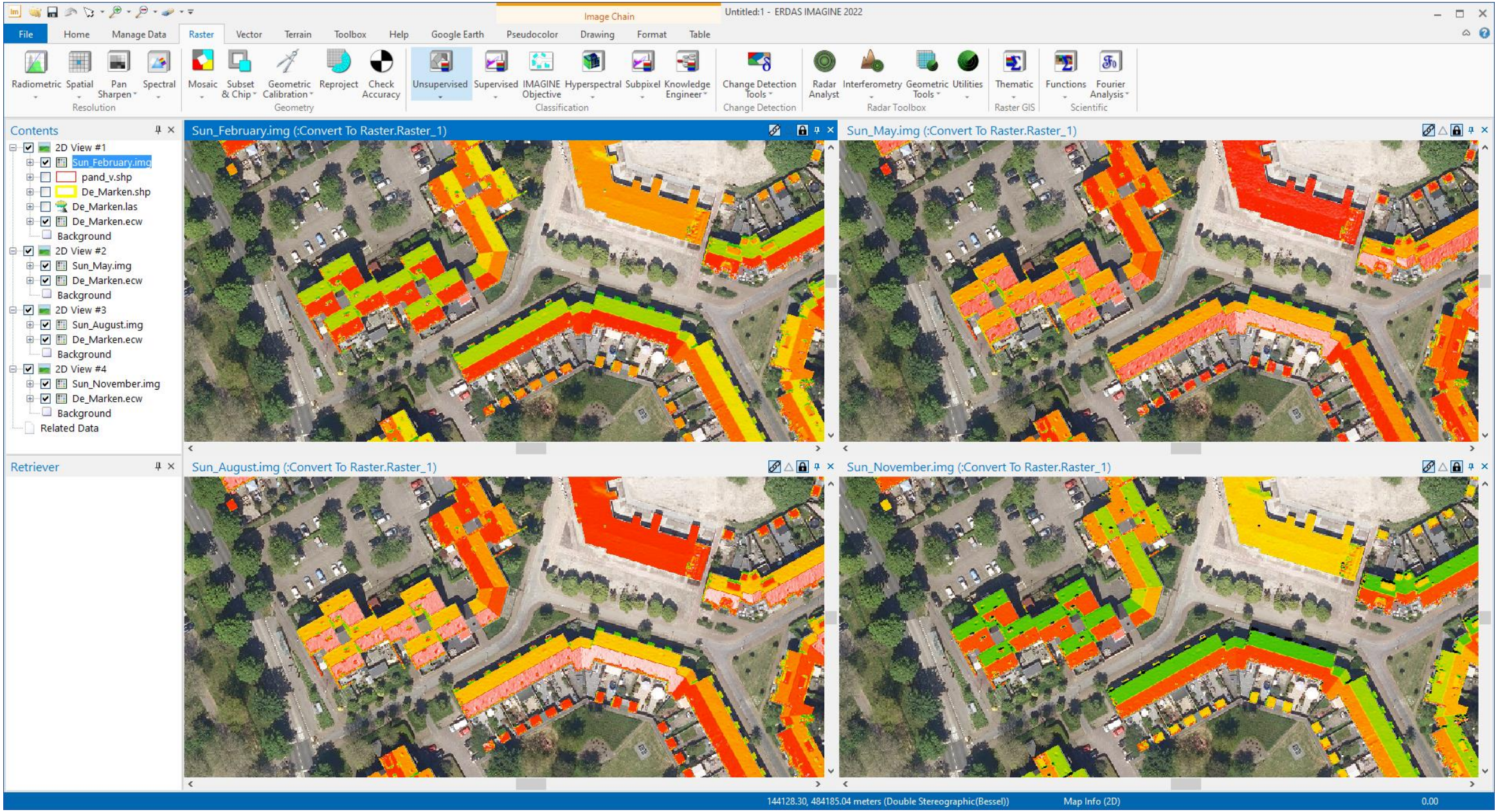
Solar potential



Solar potential detail



CLASS. N/A - "De_Streep_hrl.tif" - Country: N/A, Date: ---------- --:--:--

Zonintensiteit W/m2
De Streep - Landgraaf
Zonintensiteit d.d. 15 juli

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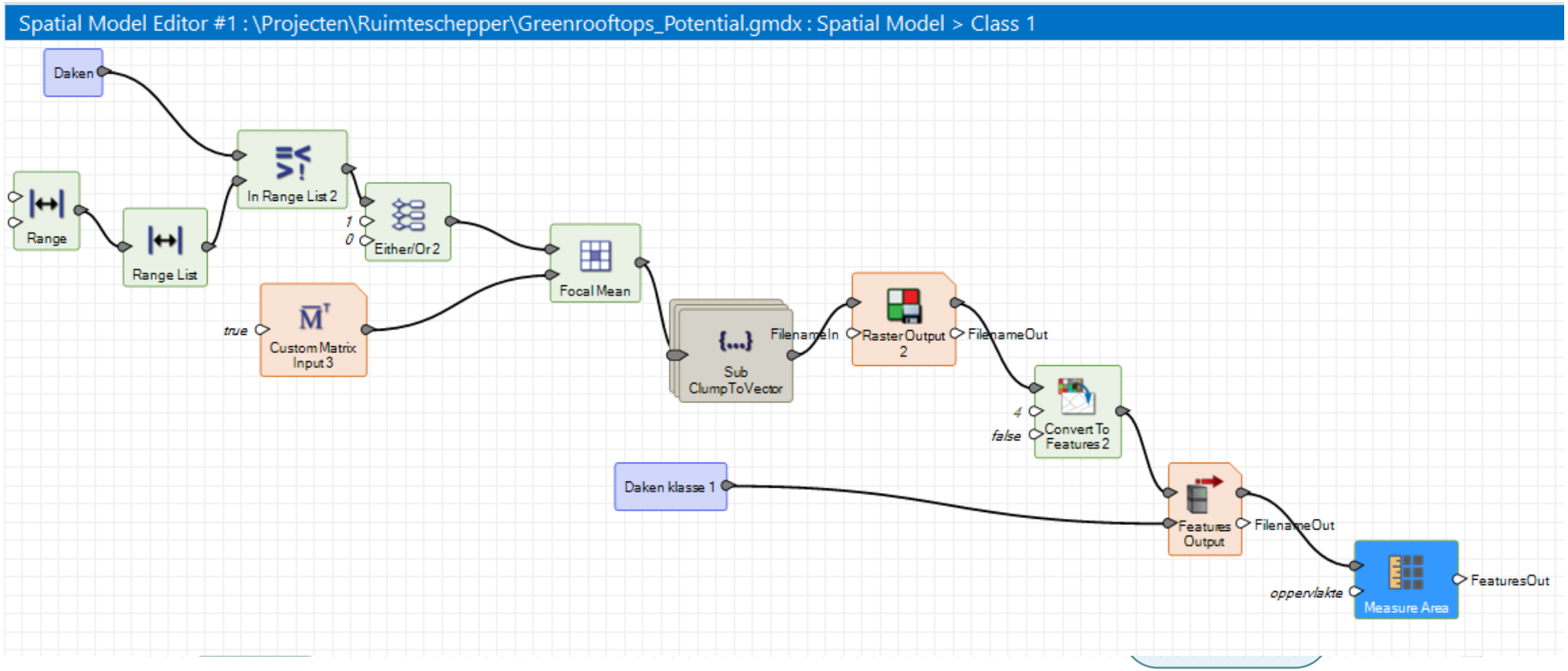
Model green rooftops potential



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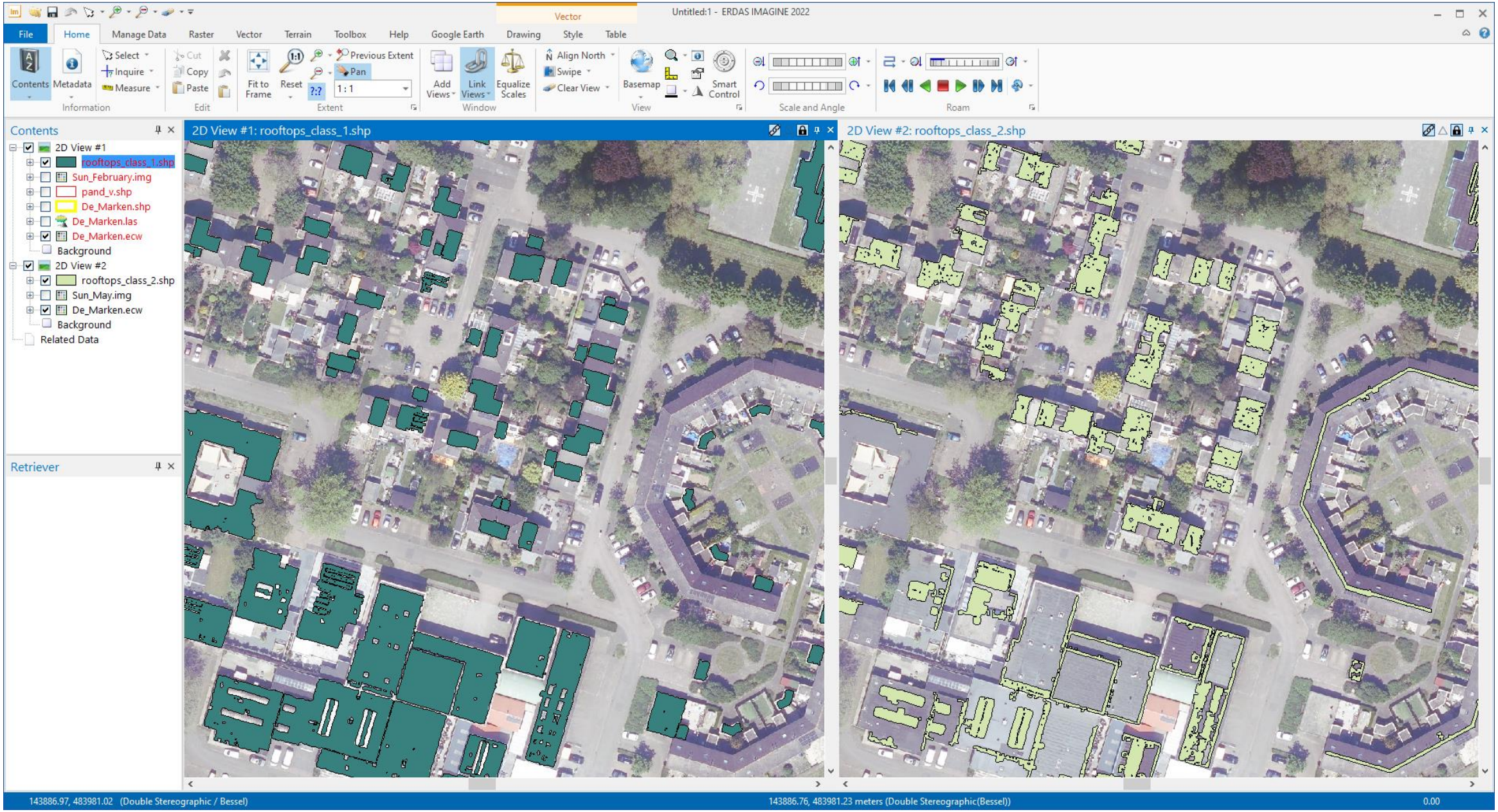
Green rooftops potential class 1 & class 2



Green rooftop classes

Class 1 (0 – 8,5 degree): Suitable for recreation, easy to maintain

Class 2 (8,5 – 35 degree): Construction and maintenance is becoming more intensive

Class 3 (35 – 45 degree): Special attachment, more difficult to maintain

Flat, biodivers

Flat, shadow

Combined with solar panels

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Biodivers opportunities

Cultivar

Domestic

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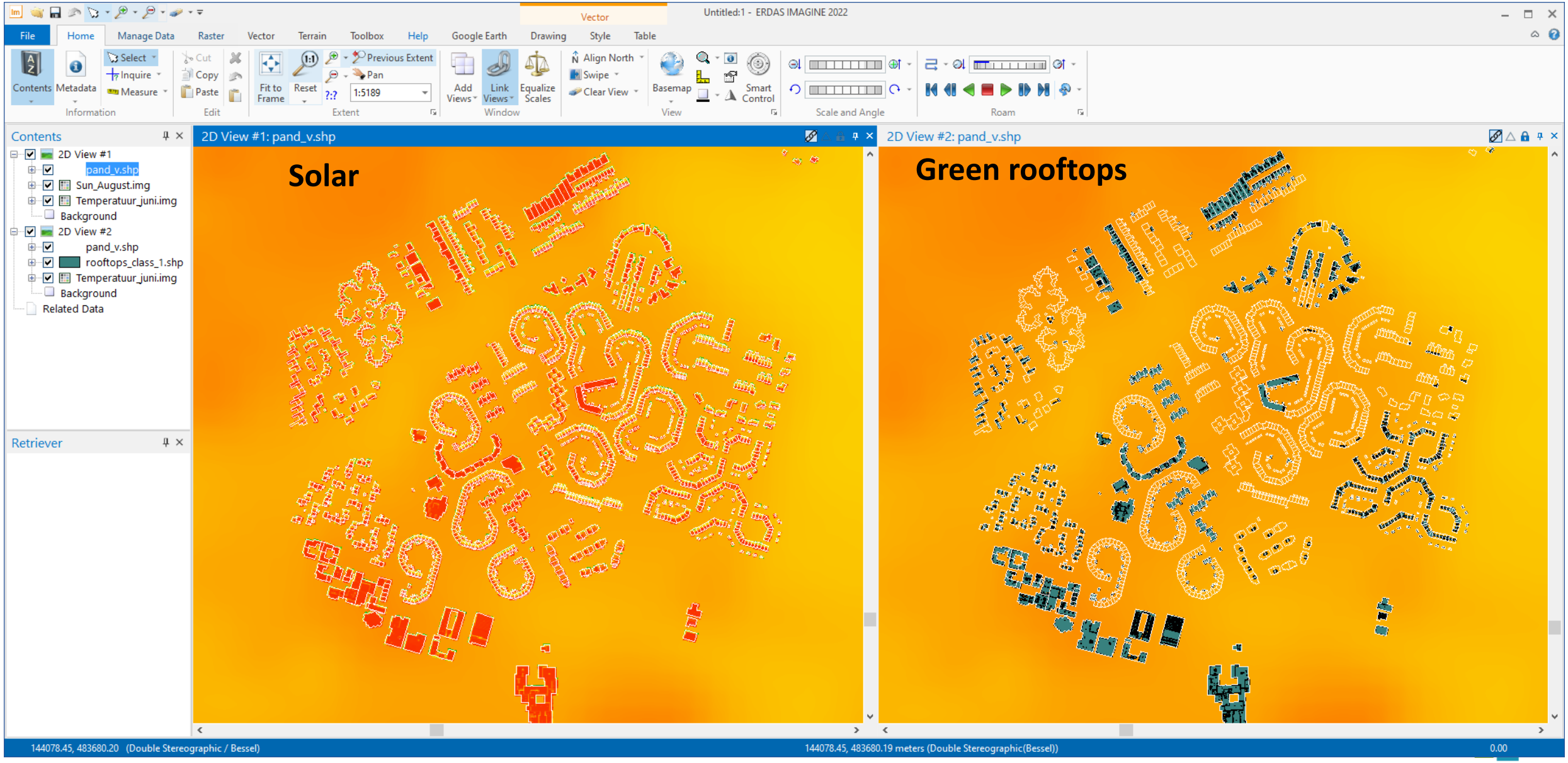
Results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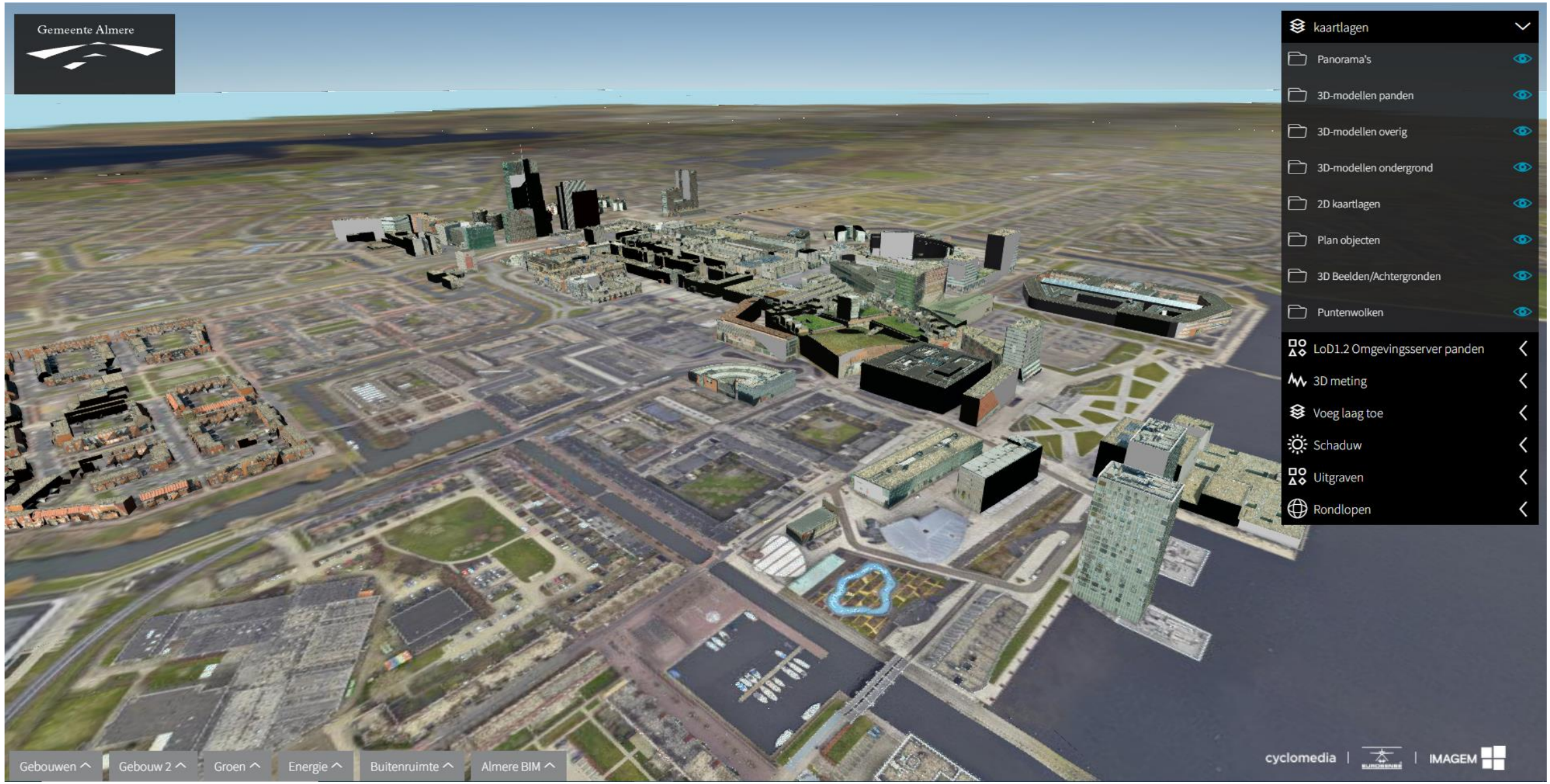
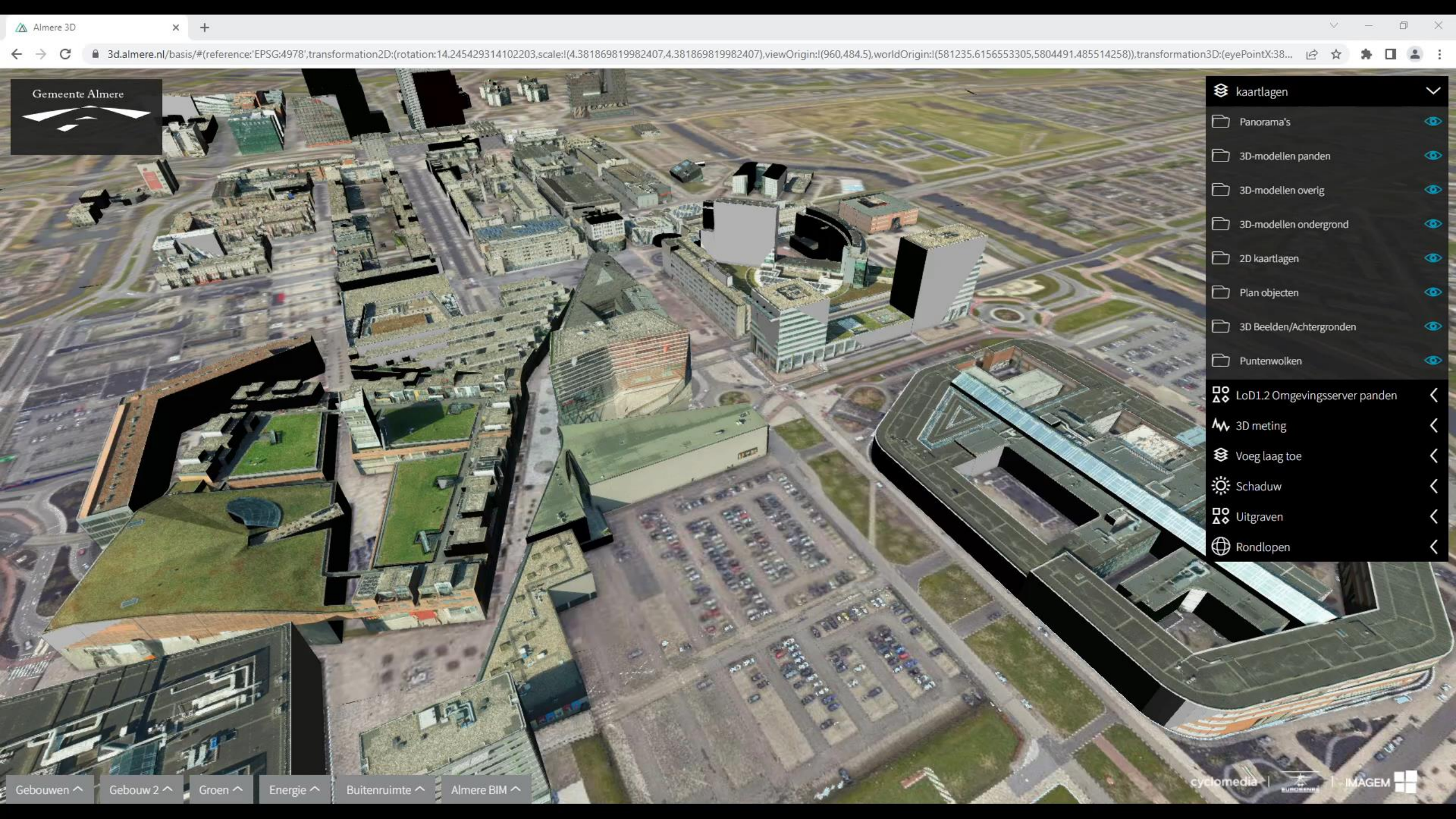
pand_v.shp
Sun_August.img
Temperatuur_juni.img
Background
2D View #2
pand_v.shp
rooftops_class_1.shp
Temperatuur_juni.img
Background
Related Data
Retriever
2D View #1: pand_v.shp
Solar
2D View #2: pand_v.shp
Green rooftops
144078.45, 483680.20 (Double Stereographic / Bessel)
144078.45, 483680.19 meters (Double Stereographic(Bessel))
0.00

Solar potential | Green rooftops | Digital Twin




Almere 3D
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Gemeente Almere
kaartlagen
Panorama's
3D-modellen panden
3D-modellen overig
3D-modellen ondergrond
2D kaartlagen
Plan objecten
3D Beelden/Achtergronden
Puntenwolken
LoD1.2 Omgevingsserver panden
3D meting
Voeg laag toe
Schaduw
Uitgraven
Rondlopen
Gebouwen
Gebouw 2
Groen
Energie
Buitenruimte
Almere BIM
cyclomedia
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THERE'S NO ONE RING TO RULE THEM ALL

*There is still a lot to **learn**, both for the **computer** and for **us** to use the existing data and put the results into **practice!***

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Many Thanks

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