
GWF
GEOSPATIAL WORLD FORUM
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NEO Solutions - energy and asset monitoring

Fang Fang, May 2024

NEO

For earth observation

Who are we?

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- Geospatial solution expertise
- GEO – AI
- Big data, EO and other
- Innovation
- Scalable
- Actionable
- 28 years tracking-record

✓ Better data, better decisions, better planet

✓ Cost and time efficiency

✓ Improve working/business process

NEO | Solution & Services

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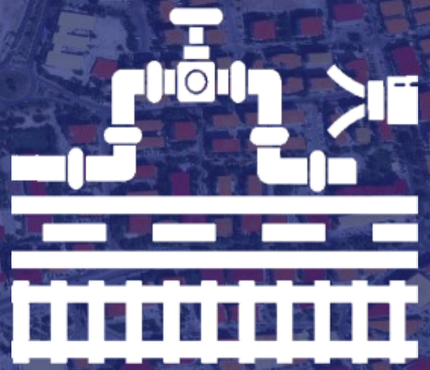
Habitat monitering



Infrastructure sustainability

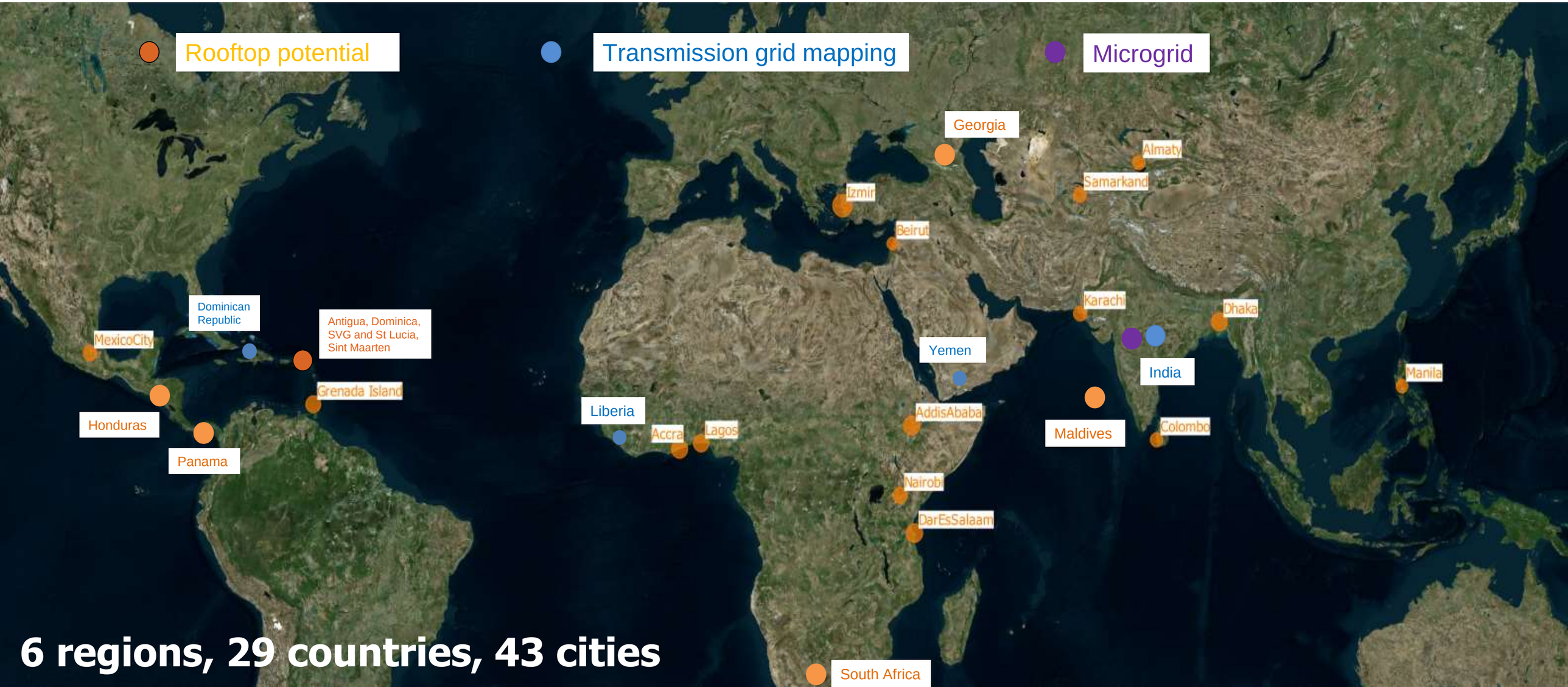
Energy transition

Agricuture & Rural area

Environment Blue zone

Government | Enterprise | Orgnisation
National | International

World Bank projects – geographic coverage



6 regions, 29 countries, 43 cities

GLOBAL ROOFTOP SOLAR PV POTENTIAL TOOL

38,000

2,800

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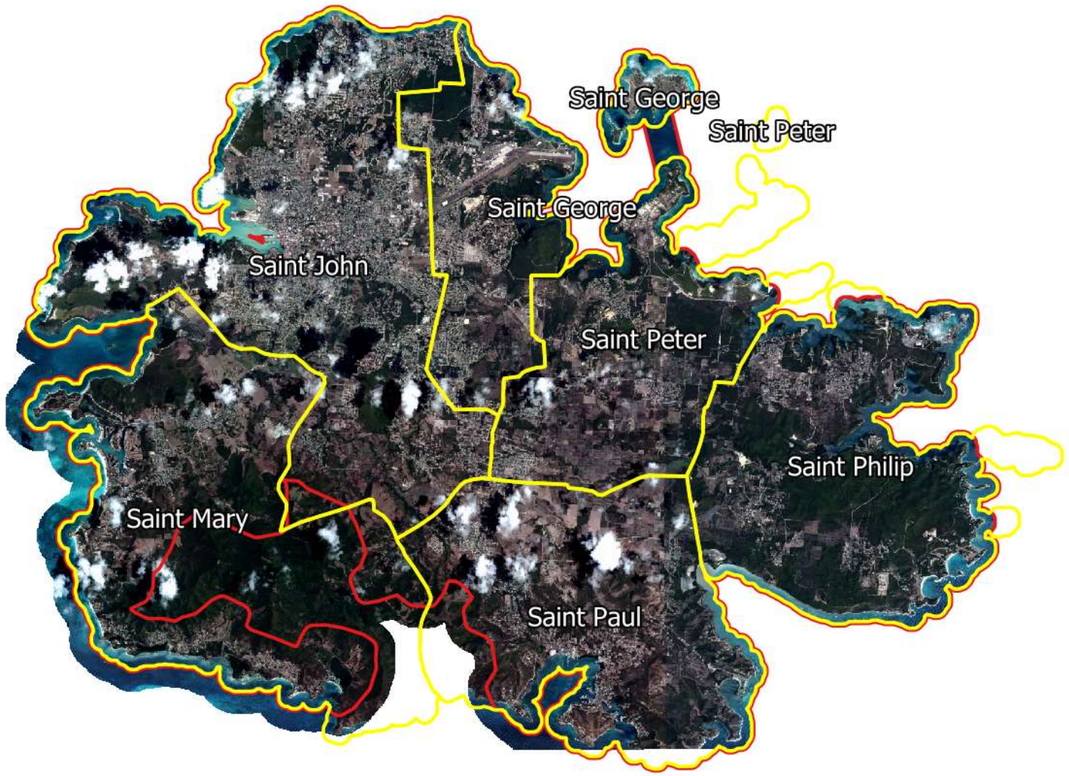
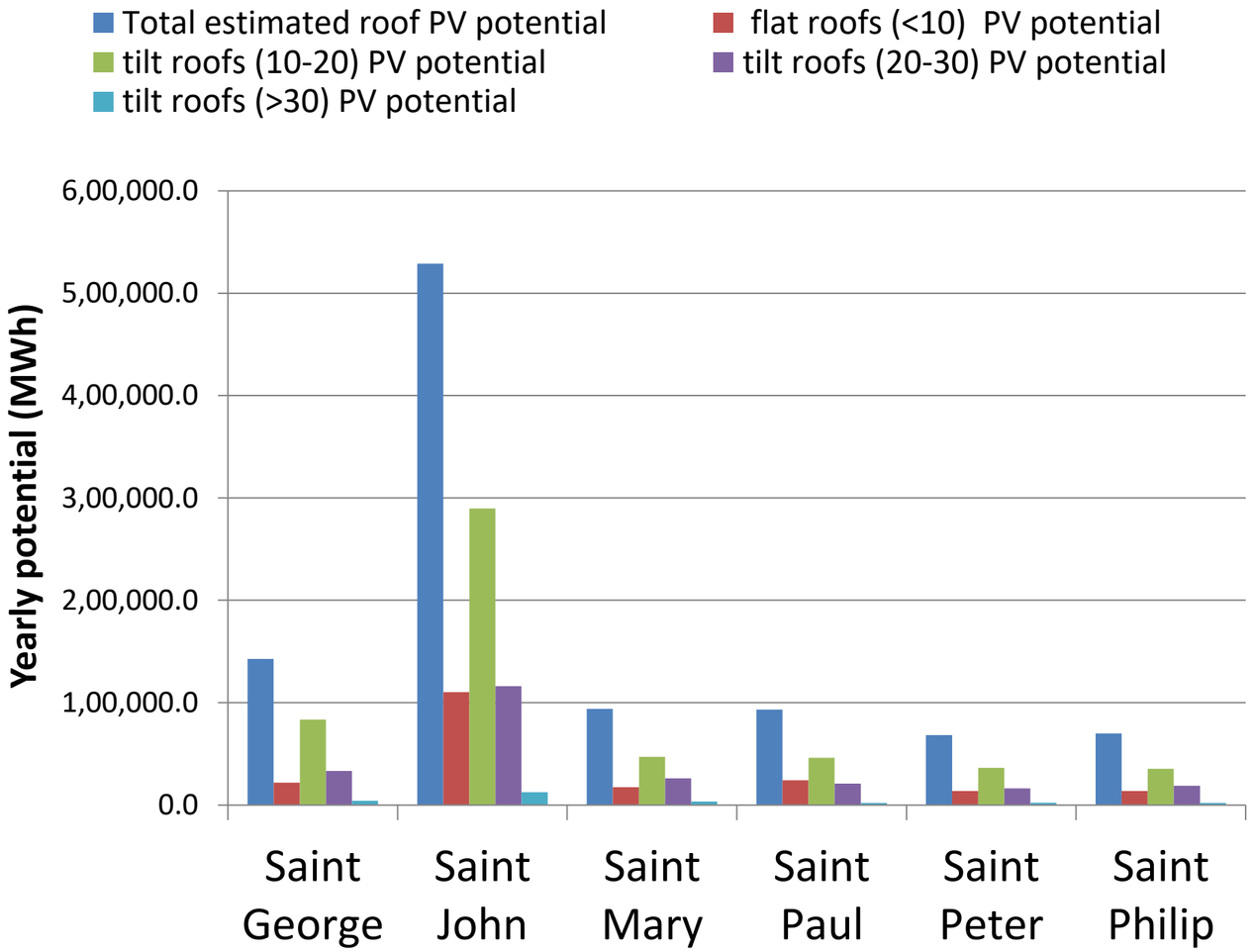
SCAN THE QR-CODE
TO PREVIEW THE VIEWER

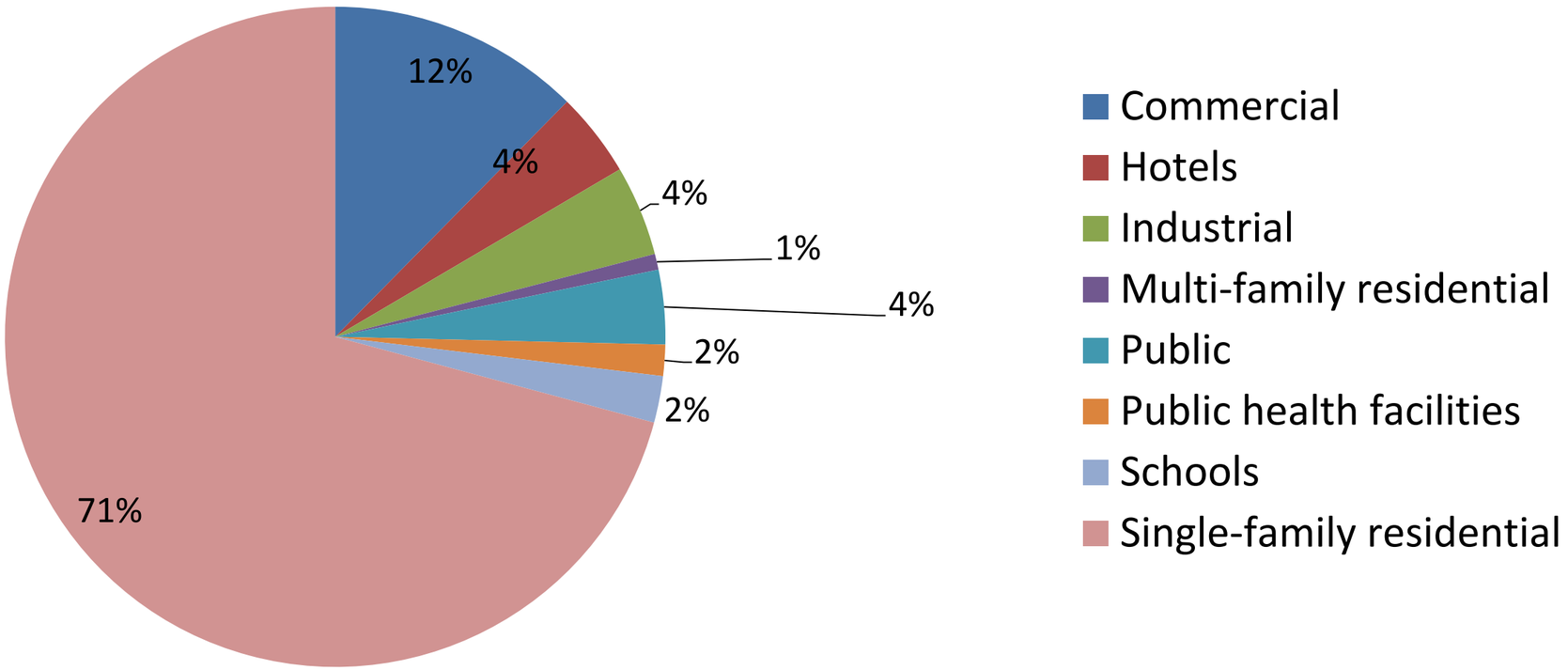
Rooftop Solar Analysis – Regional level





Yearly Potential Generation (KWh) distribution among different regions

Rooftop Solar Analysis – Sector level



Yearly Potential Generation (KWh) distribution among different sectors

Rooftop Solar Analysis – Cost Estimation

Flat Roof
(tilt angle < 10)
metallic structure
Estimate unit price:
3000 USD/kWp

Region	Total Surface area(m2)	Estimated suitable area for installation(m2)	Installation Price (USD)
Saint George	113,642	69,032	$40,177,918
Saint John	663,009	356,588	$207,535,040
Saint Mary	114,139	56,394	$32,823,187
Saint Paul	159,229	76,595	$44,577,372
Saint Peter	77,076	43,397	$25,257,414
Saint Philip	69,633	41,727	$24,283,954
Sum Flat roof	**1,196,727**	**643,733**	**$374,654,883**

Tilt Roof
(tilt angle > 10)
Flush mount
Estimate unit price :
2200 USD/KWp

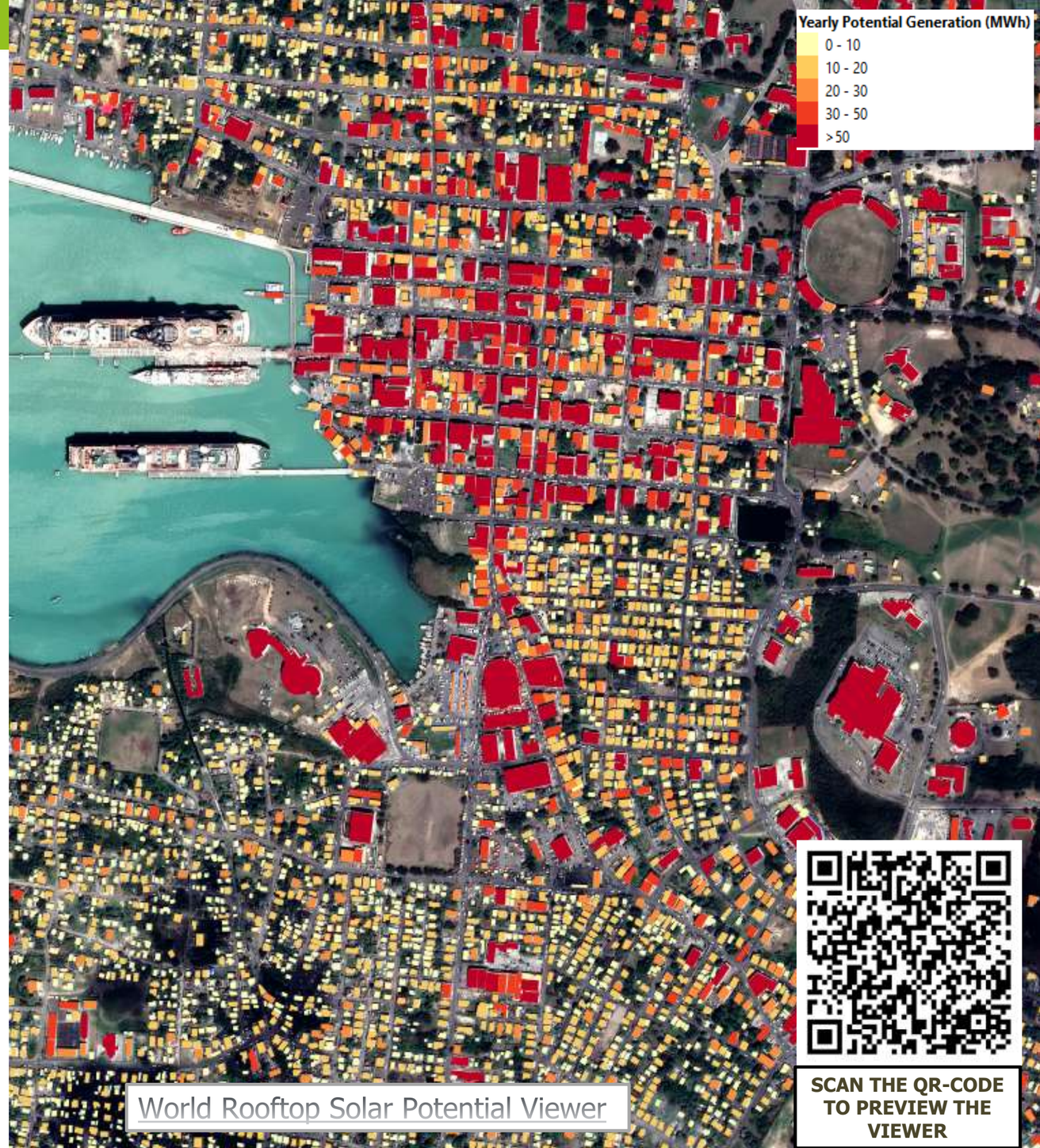
Saint George	739,704	408,339	$174,283,387
Saint John	2,667,903	1,440,826	$614,952,324
Saint Mary	500,529	265,290	$113,227,029
Saint Paul	417,227	230,386	$98,329,592
Saint Peter	339,729	185,337	$79,104,110
Saint Philip	336,324	183,128	$78,158,244
Sum Tilt roof	**5,001,417**	**2,713,307**	**$1,158,054,686**
Total	**6,198,144**	**3,357,039**	**$1,532,709,569**

Rooftop Solar viewer

User response

City	Views	Likes
Mexico city	2294	249
Karachi	2359	156
Almaty	2487	148
Samarkand	2294	152
Izmir	2379	211
Accra		
Lagos		
AddisAbeba		
Nairobi		
Manila		
Colombo		
Dhaka		
Beirut		
DarEsSalaam	991	164
Grenada	2411	66
Antigua	1467	
Dominica	885	
SVG	1170	
St Lucia	930	
Maldives	56	
Sint Maarten	123	
Total	**38,178**	**2,732**

- Government organizations
- Energy solution providers
- Solar panel installers
- Educational institutions



Global rooftop solar viewer Beta version

Upgrading - What are new?

- More functionalities
- Neat look and user friendly
- More automated for data ingestion and region expansion for scaling up

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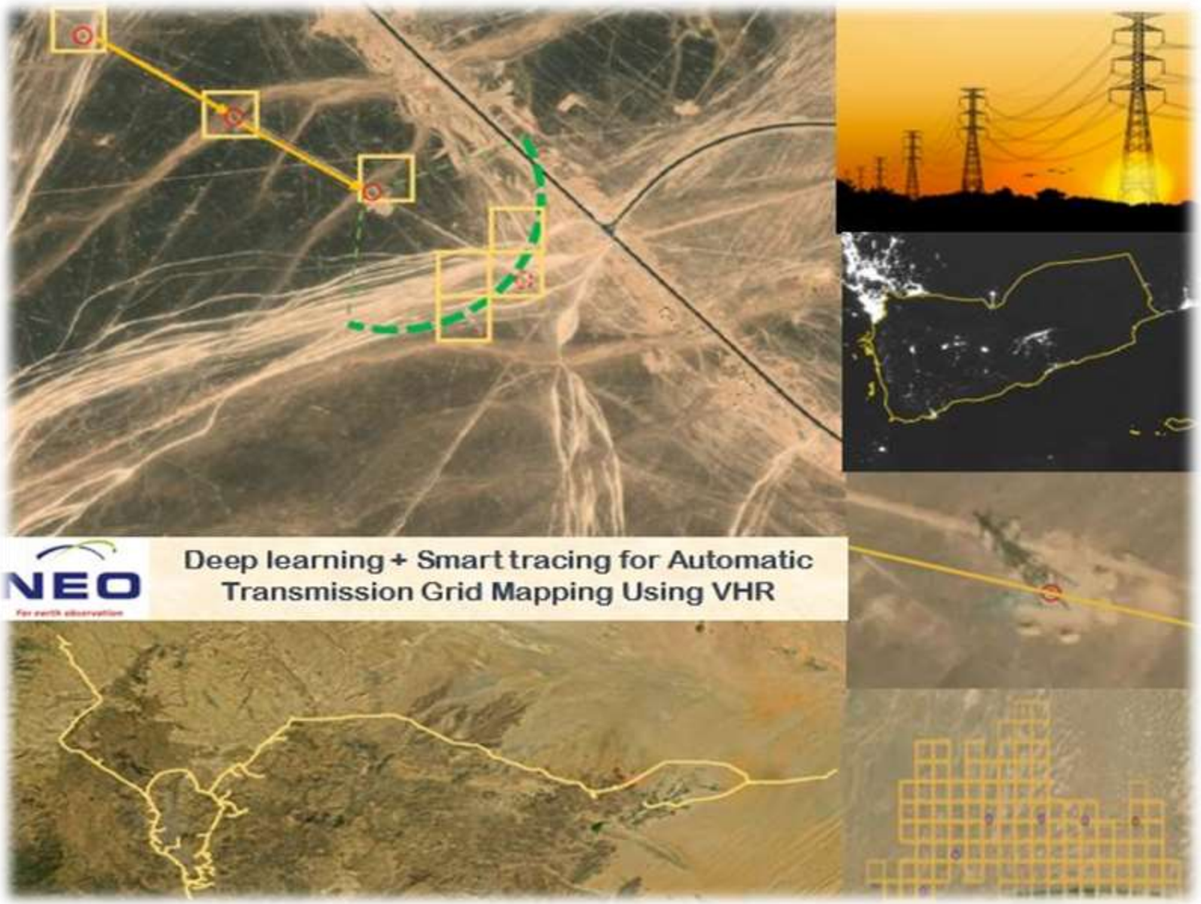
Transmission grid mapping at country level



Inputs:

- Nightlight satellite imagery
- 50cm Very High Resolution satellite imagery
- Land use
- Elevation model

Technologies:

- Deep learning
- Smart tracing
- Network analysis

Goals:

- Scalable
- Replicable to other areas
- Efficiency

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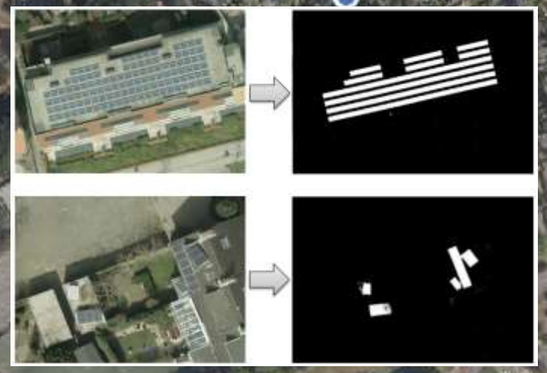
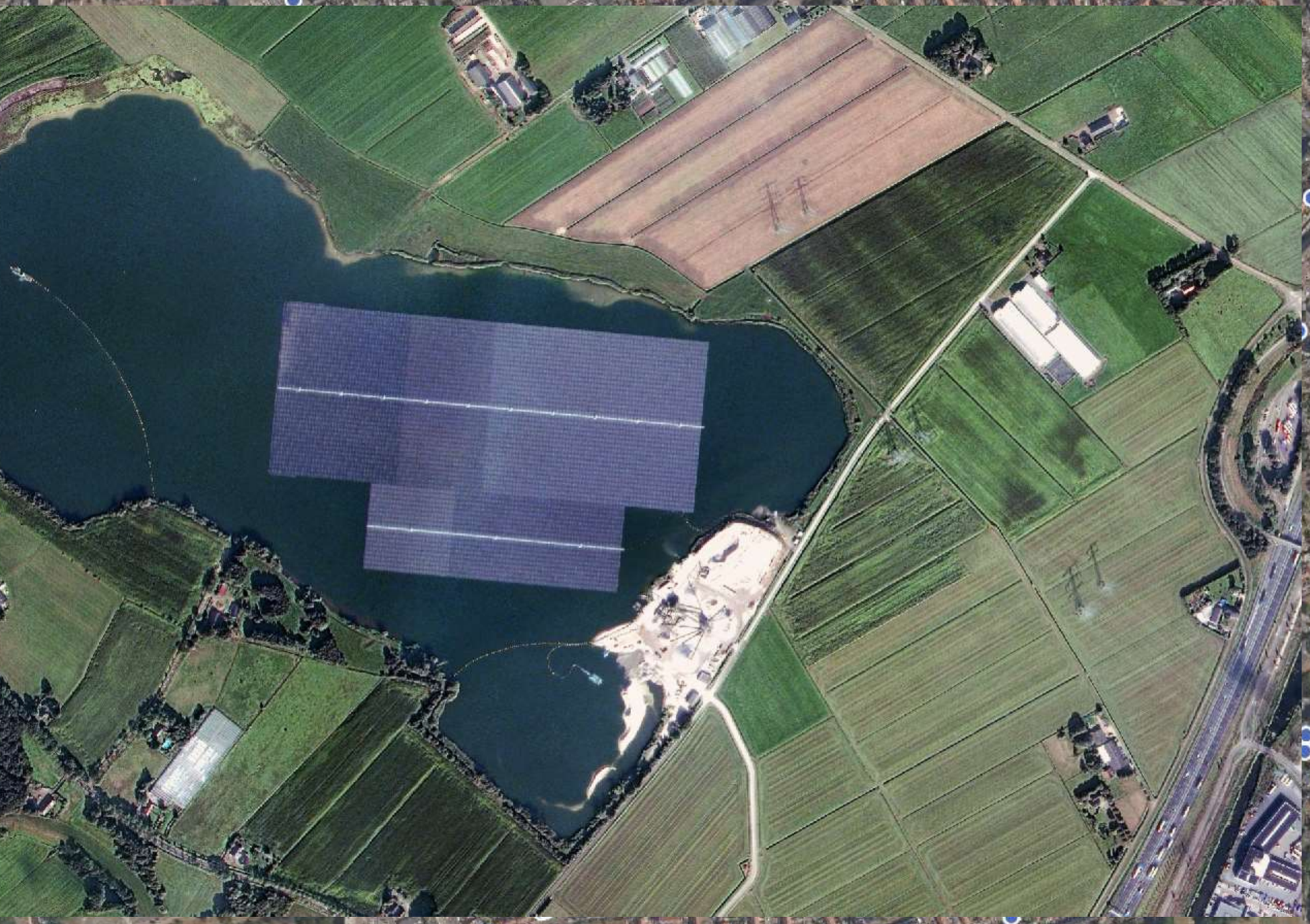
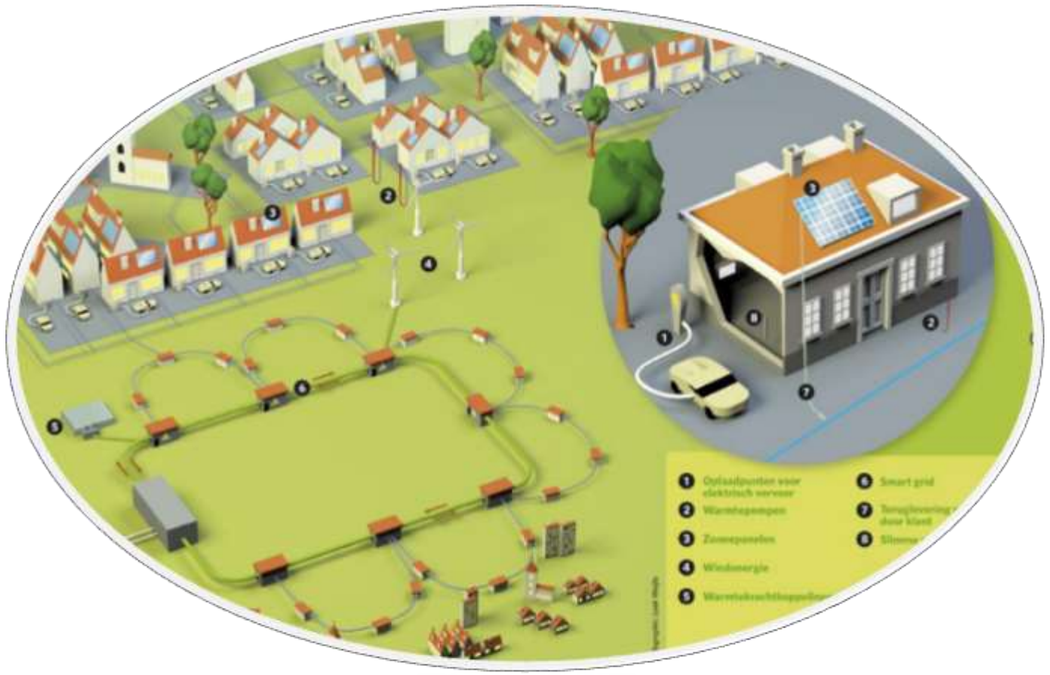
Zonnepanelen.neo.nl

- Nationwide detection and monitoring
- Update 4 times a year
- Integrated other datasets
- Powered with AI
- Online API interface





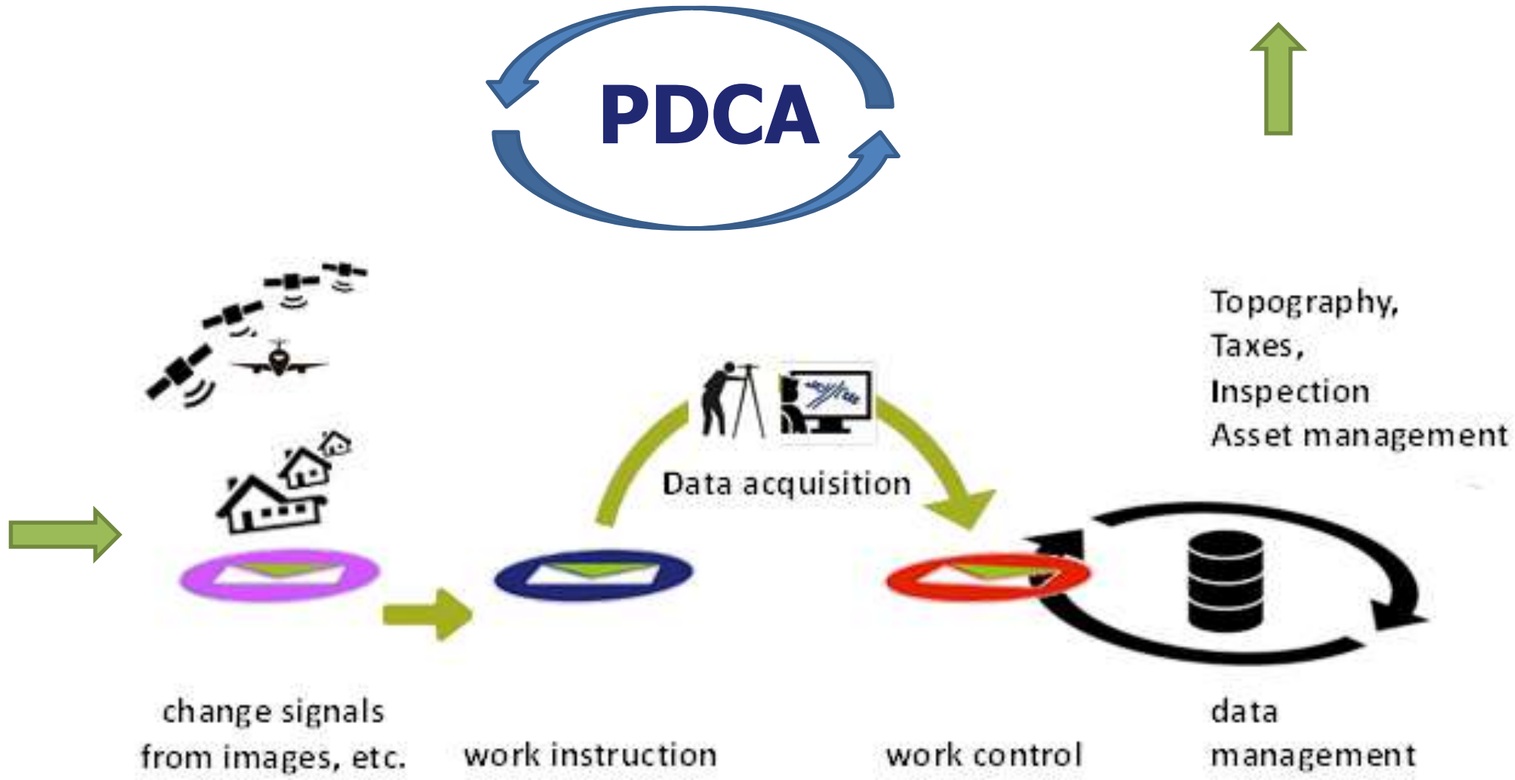


- Cable length < 200m
- Total number cables connected to station <=6

Energy solutions – monitoring and asset management

Strategic and operational maintenance

Asset Risk inventory



From challenges to solutions

Data

- Data to value adding information
- Up-to-date for monitoring
- Level of details
- Reliable service

Solution

- Assemble data from different sources
- Value adding information
- Actionable insights
- Improve process efficiency
- Better decision making
- Scalable …

More information

fang.fang@neo.nl

Tel: 033 2100 700
Web: www.neo.nl