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Geospatial mapping for sustainable energy investments
Presentation to Eastern Partnership Platform III on Energy Security
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BUILDING PARTNERSHIPS FOR ENERGY SECURITY

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Agenda

- Concept
- Demonstration of prototype mapping tool
- Next steps



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Wind energy in Georgia?



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- How much wind energy capacity could really be developed?
- Where would it be located?
- What economic benefits could it bring?
- What policies do we need to encourage investment?

Investor



- How much money will be needed?
- What is the likely return on investment?
- What risks exist and how can they be mitigated?
- Where should I undertake feasibility studies?

Supplier



- How much equipment will be needed? Where? When?
- How quickly are projects likely to get built?
- Is there enough business here to merit setting up local distribution?

All stakeholders



- Why should I get involved?
- How does this compare to other options available?
- What is the **value at stake?**



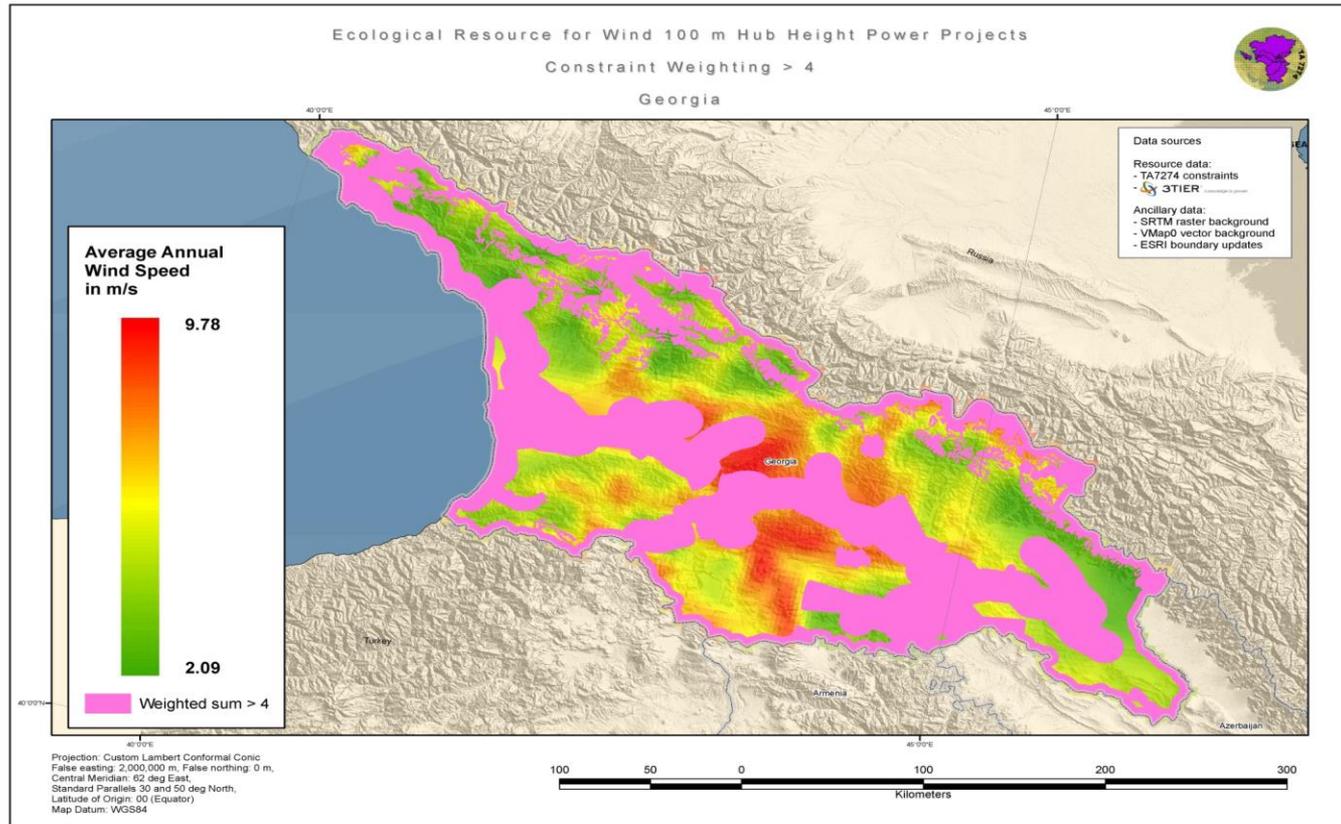
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RE resource mapping concept

- Determines 'value at stake' from renewable energy
- Screens out areas where construction is disallowed
- Ranks resource by relative economic viability



Intended final product



- Online tool to help investors and national agencies decide where to invest in RE feasibility studies
- Shows how much resource might be developed, where, at what cost and what return, for a range of tariff/discount rate combinations
- Allows map creation for site-specific discussions
- Registry function to store site-specific data
- Zoom, bookmark, measure functions
- Map resolution: 10km²
- **NOT** a substitute for feasibility studies

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Demonstration



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My Map

Armenia Pv 12 t 490 My Map

icfgeospatial.maps.arcgis.com/home/webmap/viewer.html?webmap=1bc6783210884ff9a5703395c369187a#

HOME My Map NEW MAP ICF

Details Add Edit Basemap Save Share Print Directions Measure Bookmarks Find address or place

Perform Analysis

- Summarize Data
 - Aggregate Points
 - Summarize Nearby
 - Summarize Within
- Find Locations
- Data Enrichment
- Analyze Patterns
- Use Proximity
- Manage Data

Georgia, Shida Kartli NPV t 400

Net Present Value

1000's USD

Location	NPV (1000's USD)
1	~1000
2	~1500
3	~2000
4	~2500
5	~3000
6	~3500
7	~4000

Zoom to Get Directions

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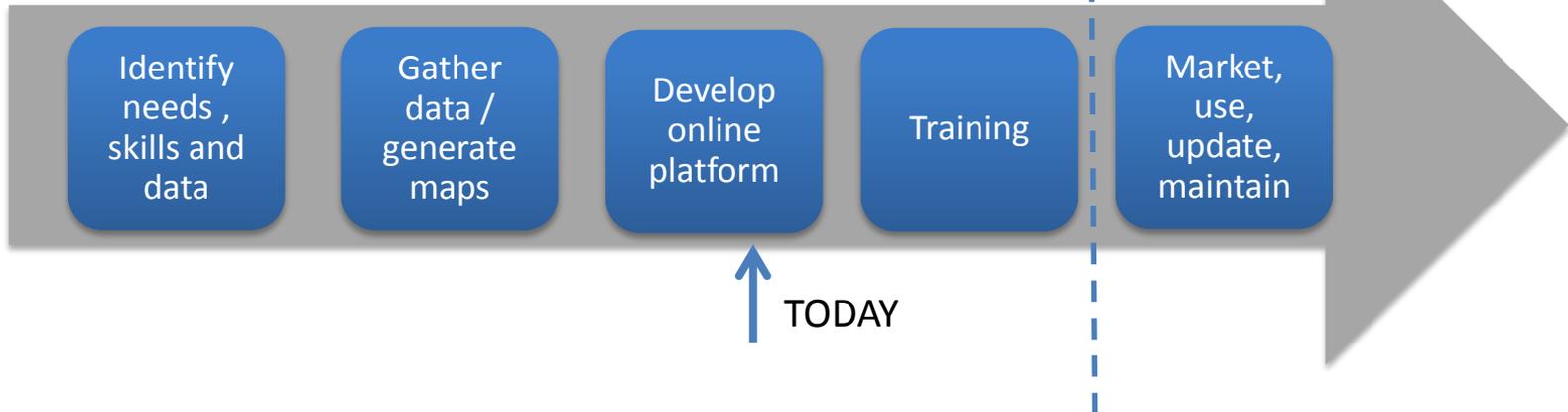
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Process



Handover from Inogate to Georgia

- Inogate leads development
- Georgia provides data, skills and trainees



System environment and hosting



- ArcGIS Online – each beneficiary to hold a licence
- Cloud hosting
- Ownership of data remains with the source organisation, but must be shared for regional view
- Inogate supports development, training and initial hosting, then transfers to partner countries
- Partner countries pay for continued hosting, update and maintenance

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Approximate Partner Country contributions



Partner Country contribution to development:

- Help to gather data and to co-develop tool: 0.1 – 0.3 Full Time Equivalent (dependent on size of datasets)

Estimated Partner Country costs in operation:

- Update and maintain tool: 0.1 Full Time Equivalent
- Cloud-hosting / licence fees €2,500/yr

Geospatial mapping for sustainable energy developments



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