



Practical examples of the surveyor's contribution to energy and climate policy



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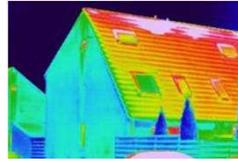
Agenda

- Energy and climate challenges
- The need for information
- 4 examples in the Netherlands
- Conclusions

Energy and Climate Challenges

- Mitigation: Reducing Greenhouse Gas emissions:

- Energy efficiency
- Renewable energy sources
- Clean use of fossil fuels

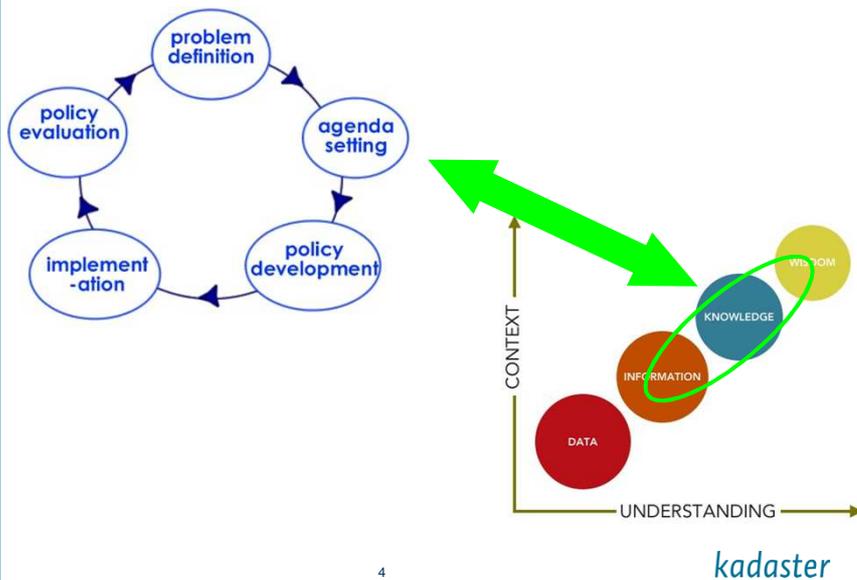


- Adaptation: Coping with increasing waterlevels, droughts, heat



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The need for information and the policy cycle



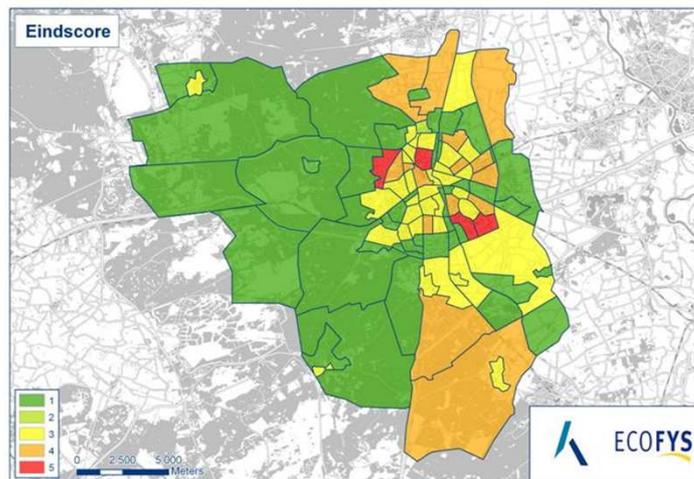
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1 (Mitigation): Reducing energy consumption and CO2 emission in privately owned houses in the municipality of Apeldoorn

- **Question:** Indicate areas with the highest chance in reducing CO2 emission so policymakers can focus on the quick wins
- **Approach:** develop physical and social-economic succes indicators on the scale of neighbourhoods
- **Contribution of surveyor:**
 - assembling succes indicators, based on core data from cadastral and other national geo-databases
 - GIS analysis and visualising results
- **Results:** Chance map used in a communication campaign to convince owners to invest in energy efficiency measures

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- Indicators including:
- Privately owned dwellings
 - Energy efficiency of houses
 - Homogeneity of houses for bulk approach
 - Monument status
 - Estimated income

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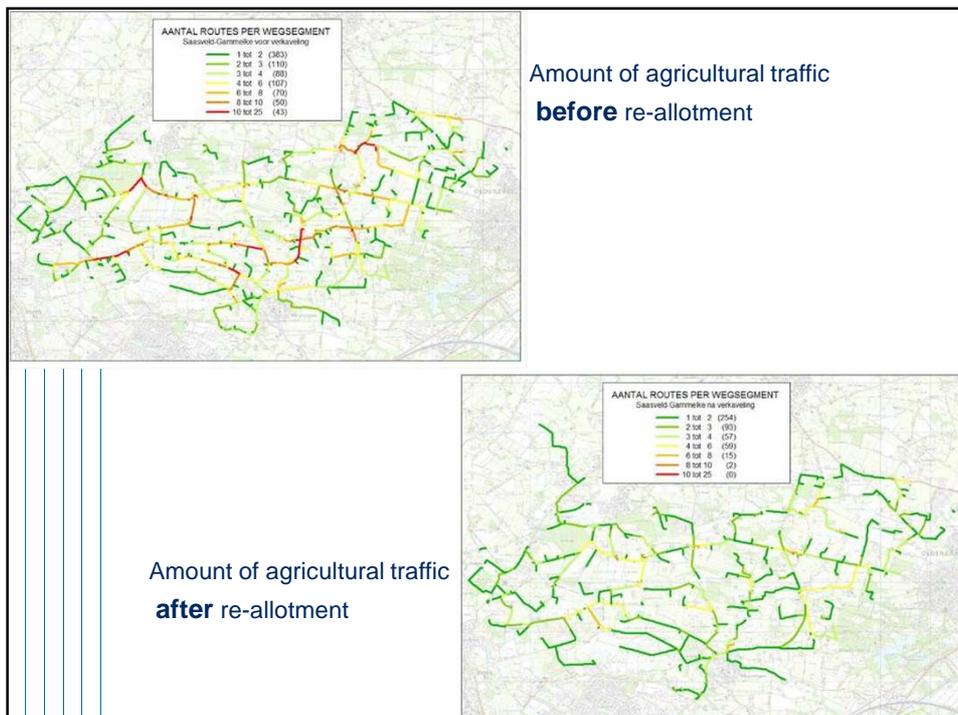
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2 (Mitigation): The consequences of re-allotment on agricultural transport and CO2 emission in the Saasveld-Gammelke area

- **Question:** What are the consequences of re-allotment in reducing agricultural transport
- **Approach:** Concentrating parcels of owners will decrease the amount of traffic and CO2 reduction
- **Contribution of surveyor:**
 - Analysing property rights and possible re-allotment scenario's
 - Calculating distances and frequency of agricultural traffic before and after re-allotment
 - GIS analysis and visualising results
- **Results:** Results visualised on a map. Up to 50% decrease in driving distance (and corresponding CO2 emission) was found.

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3 (Mitigation): Energy mapping of the Energierijk Den Haag project



- City of The Hague and Dutch government have joined forces
- Goal: cost-effective, reliable and sustainable energy supply
- Combined property of national and local government buildings in the city centre consists a 1.000.000 m2
- The energy consumption has an estimated electricity equivalent of 30.000 households

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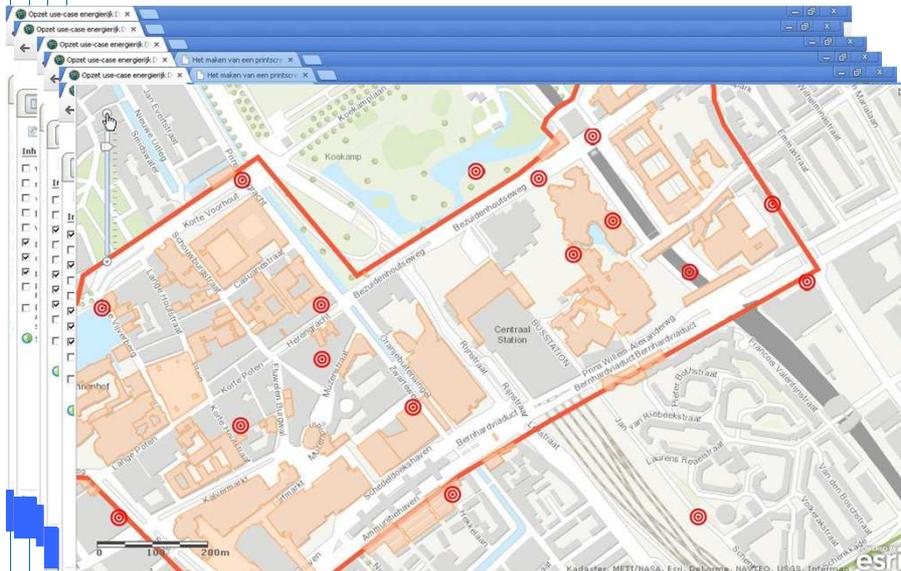
3 (Mitigation): Energy mapping: a spatial approach to energy consumption and energy generating potential in The Hague

- **Question:** Design and build an information tool to explore possibilities in energy reduction and generation for the combined real estate owned by the municipality and the Dutch government in the city centre of The Hague
- **Approach:** Outsource the energy management to a private ESCo.
- **Contribution of surveyor:**
 - Analysing the property rights
 - Developing an information foundation based on:
 - Land administration systems and other national databases
 - Third party information
 - Presenting information in a web- based GIS tool
- **Results:** The tool has been used so far for:
 - business case study report
 - Supporting the political decision making process

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Information tool EnergieRijk Den Haag



4 (Adaptation): Increasing storage and flow capacity of the IJssel river in the Veessen-Wapenveld area

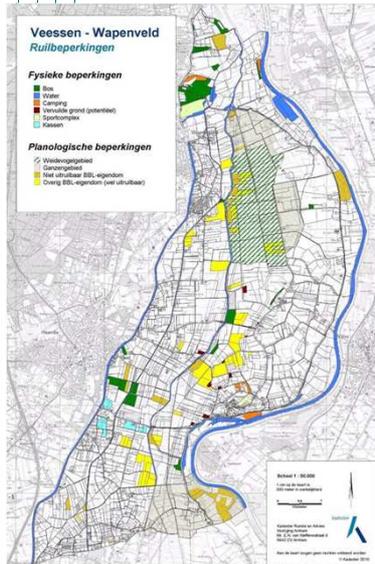


4 (Adaptation): Increasing storage and flow capacity of the IJssel river in the Veessen-Wapenveld area

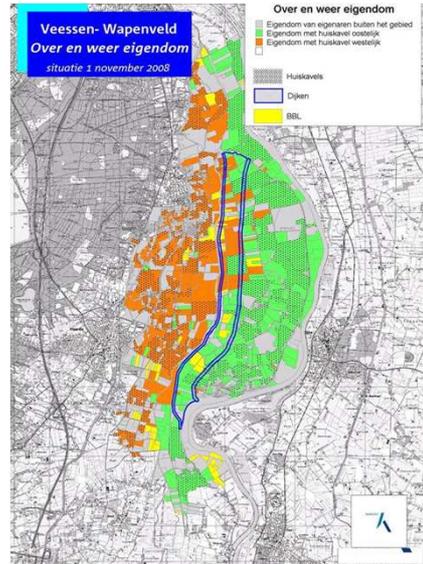
- **Question:** What are the consequences and restrictions for land use and ownership if an extra waterway is constructed?
- **Approach:** National "Room for the River Programma" gives the river more space to flood safely during high water levels.
Contribution of surveyor: analysing
 - parcel structure: ownership, location, characteristics
 - Topography
 - Zoning plans
 - Re-allotment scenario's
- **Results:** Visualise results for several scenario's on a map. One scenario enables all farmers to place their commercial buildings along the dike road

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Physical and zoning restrictions for re-allotment



Parcel distribution and blockade by new waterway

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Conclusions

- By combining core data from Land Administration Systems and other spatial datasets, highly relevant information can be build to support the development and implementation of energy and climate policy.
- The surveyor can contribute to this if he/she
 - has a thorough knowledge of the energy and climate challenges
 - understands the policy cycle and the level of information needed by decision makers
 - is able to cooperate with other organisations to assemble this information at a local, national or even international scale.

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Thanks for your attention

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