

Monitoring energy transition and climate goals

Role of the statistical office in the information supply

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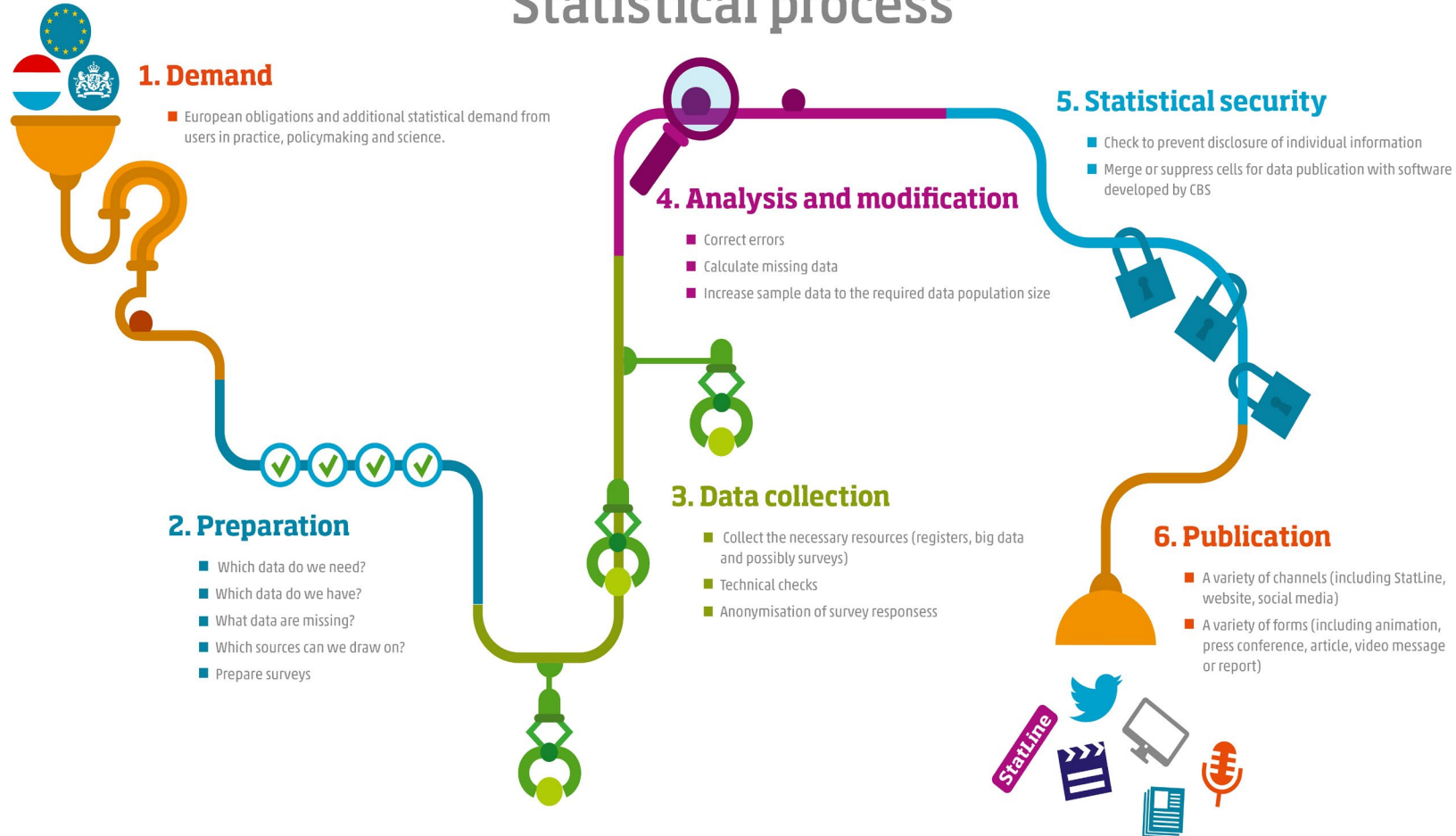
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Contents

1. The NSO and additional statistical services
2. Information demand and supply energy transition
 - Co-operation, lessons learned
 - Renewable energy by region
3. Example: Emissions mortgage portfolios
4. Example: IPCC emissions on quarterly base



Statistical process



The national statistical office in the Netherlands

Also for additional statistical services



Factual, based on data
(no forecasts/models)



For government,
rarely for the 'market'



Results public available,
only output, no microdata



Can be in partnership



Checked for
risk on disclosure



Financing integral costs



Climate and energy transition

Global/UN: Paris, 2015



Europe: 55% reduction GHG in 2030; climate neutral in 2050

Netherlands: Climate law (2019): 49% GHG reduction in 2030 and 95% in 2050



yesterday



few large power plants



centralized, mostly national



based on large power lines and pipelines



top to bottom



passive, only paying

production



many small power producers

market



decentralized, ignoring boundaries

transmission



including small-scale transmission and regional supply compensation

distribution



both directions

consumer



active, participating in the system

tomorrow

Improving information supply

- Energy transition is a complex task for the country
- Many organisations are involved: public and private
- The government is divided in organisations with specific tasks (planning, grid operator, land registry, subsidy granting, statistics etc.)
- Using each others data is not regular business
- When we met colleagues from the other public organisations, we missed guidance/direction on the information demand and supply.



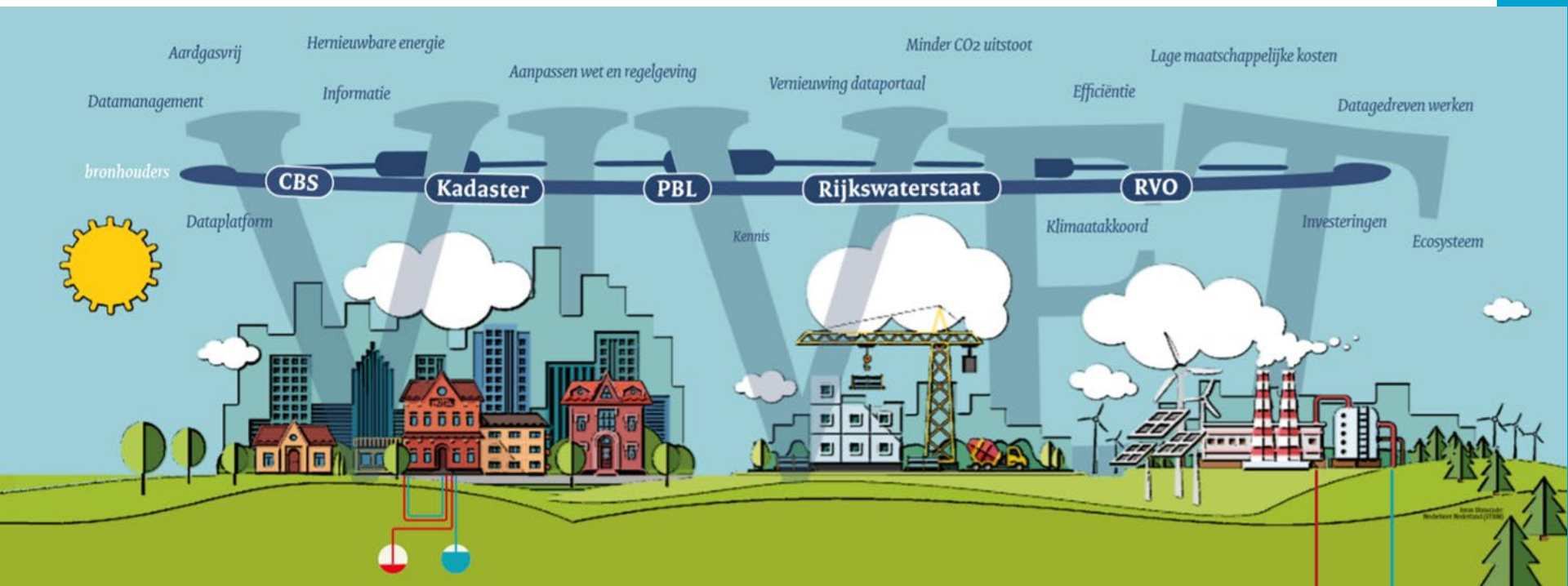
Improving information supply

So we combined forces and proposed the ministries to make an inventory of data gaps.

We asked stakeholders (regional authorities, grid operators, consultancy companies) what gaps they experience.

This led to a three year program to fill some of the gaps.





Planbureau voor de Leefomgeving

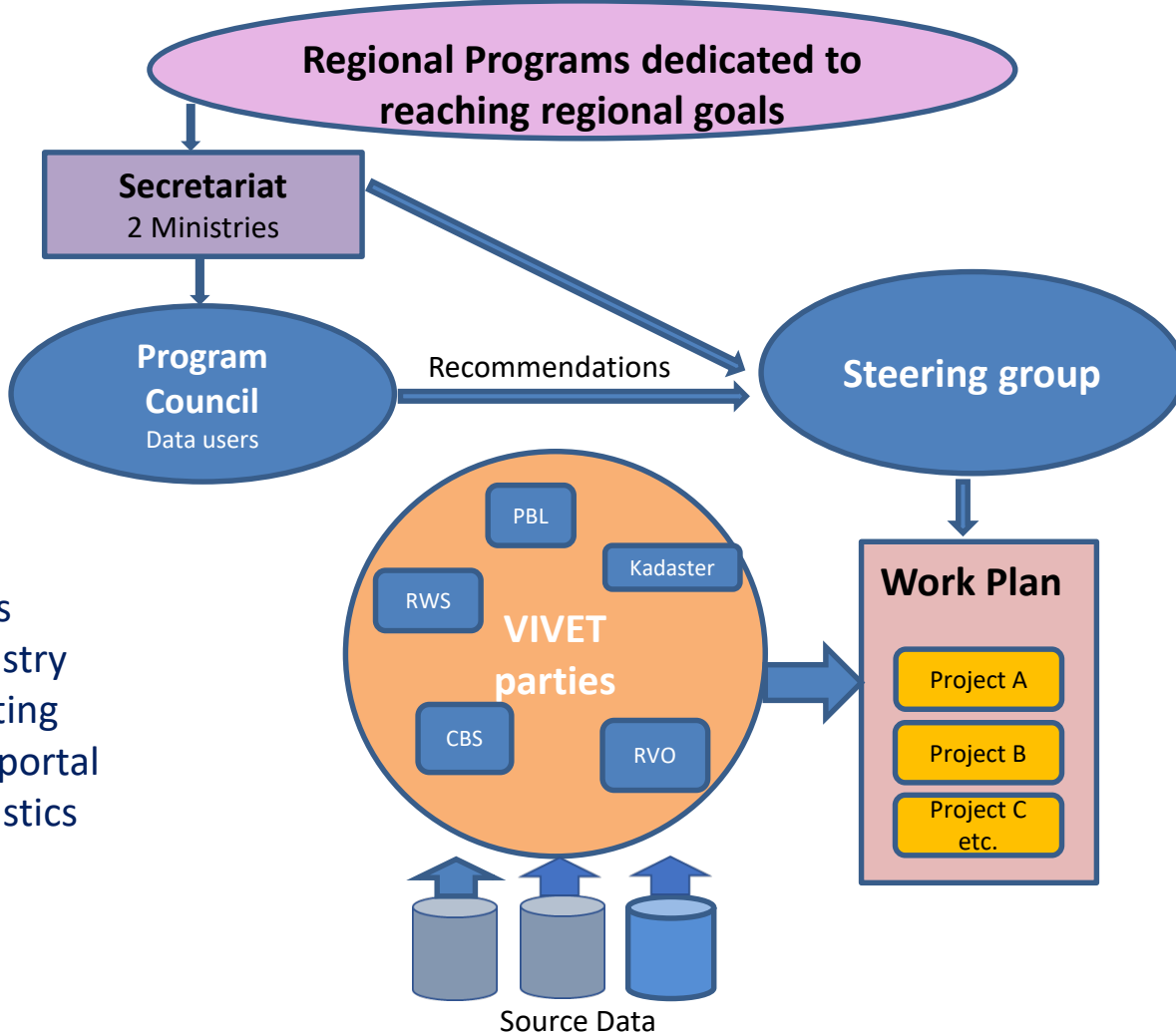


Rijkswaterstaat
Ministerie van Infrastructuur en Waterstaat



Rijksdienst voor Ondernemend
Nederland

Gover- nance



Partners

PBL: policy analysis

Kadaster: land registry

RVO: subsidy granting

RWS: information portal

CBS: data and statistics



Co-operation, what do we learn?

1. Start simple with a report describing needs
2. Find support, there should be a common goal and a responsible government
3. Technical aspects, like standardisation and (meta)data management are difficult for policy makers
4. Sometimes a 'data problem' helps, unfortunately
5. Keep on evaluating and holding sessions with data users



Renewable energy: regional goals

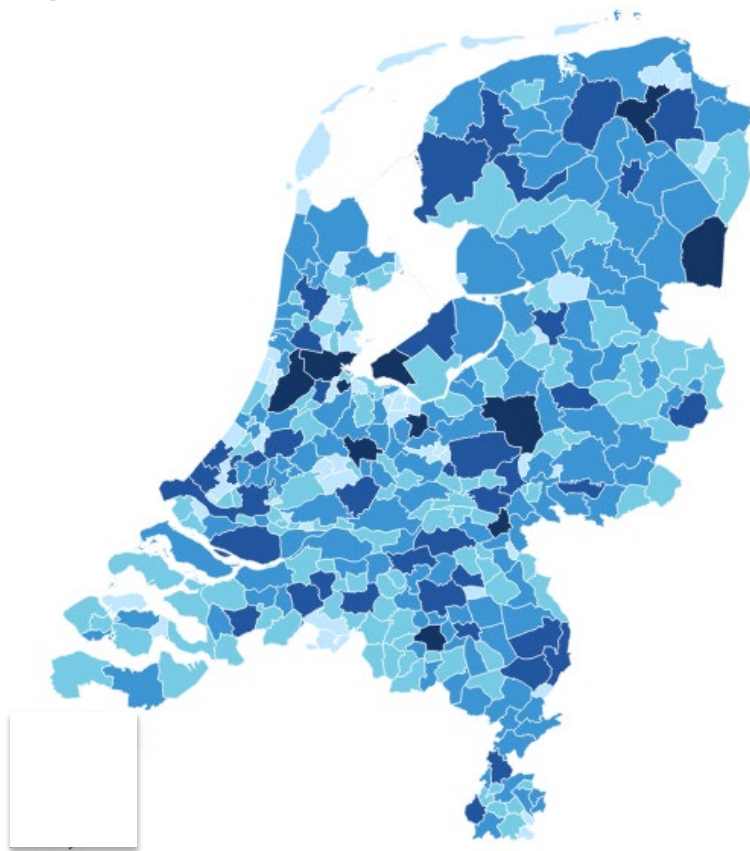
One of the issues in the Dutch climate plan is that regions get a specific task for renewable energy (mainly wind, solar). Regions are now finding space for these purposes.



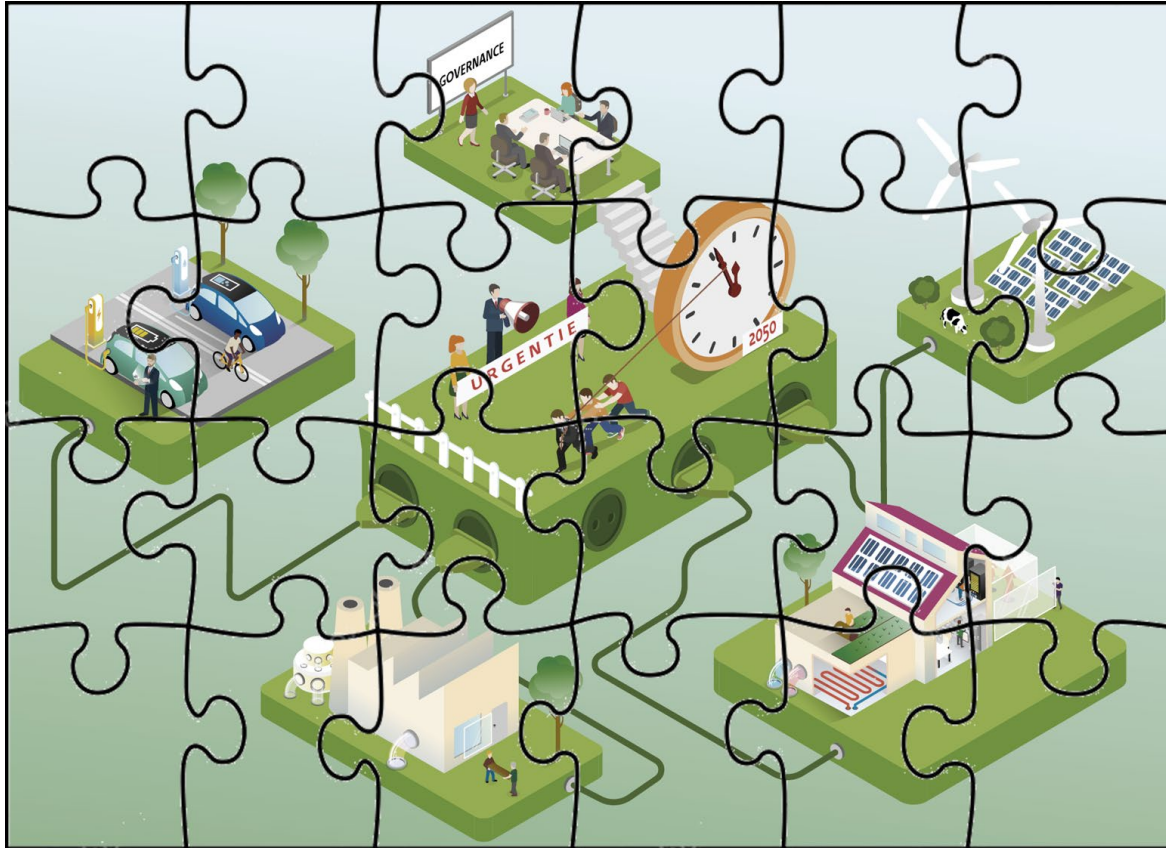
Renewable energy: example

A main task for statistics was to publish data on solar energy by municipality.

We managed that by using the register from the grid operators combining with other sources.



Some examples of the puzzle



IPCC: need for higher frequent data

- Politicians ask voor higher frequent data on greenhouse gas emissions
- Fossil energy has a share of >90%
- Monthly data for oil and gas are available through IEF/JODI (International Energy Forum/Joint Organisations Data Initiative)
- Non-energy GHG is generally less fluctuating
- IPCC approach can be used for monthly/quarterly data
- $\text{Emission} = \text{Activity} * \text{Emission Factor}$



IPCC: estimate based on monthly energy data

- The CO2 emission based on monthly energy data gives a very accurate estimate. Difference with the annual figure was less than 1%. We're exploring sectoral detailing.

<i>Mton CO2</i>	2015	2016	2017	2018	2019
IPCC annual	166,8	166,7	164,9	160,6	156,6*
Estimate with detailed data	167,8	167,8	165,6	160,5	156,8
Percentage difference	0,6%	0,7%	0,4%	0,0%	0,1%



CO2 emissions of Dutch banks' mortgage portfolios

- Banks are interested in the 'sustainability' of the buildings in their assets.
- They organized themselves in the Partnership for Carbon Accounting Financials (PCAF).
- PCAF asked CBS to help assess CO2 emissions from the mortgage portfolio:

<https://carbonaccountingfinancials.com/newsitem/cbs-publishes-co2-emissions-of-dutch-banks-mortgage-portfolios#newsitemtext>

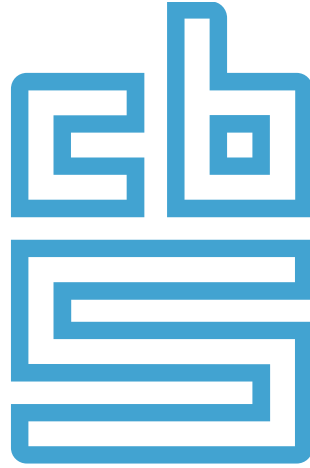


CO2 emissions of bank's portfolios: method

- General: combining houses with mortgages and gas and electricity supply
- Scope 1 - direct emissions: gas consumption multiplying with emission factor
- Scope 2- indirect emission: electricity supply to houses multiplied with emission factor based on CO2/kWh produced electricity¹⁾
- Scope 3 – footprint: not relevant here

¹⁾Consider combined heat-power production (CHP) carefully





Facts that matter