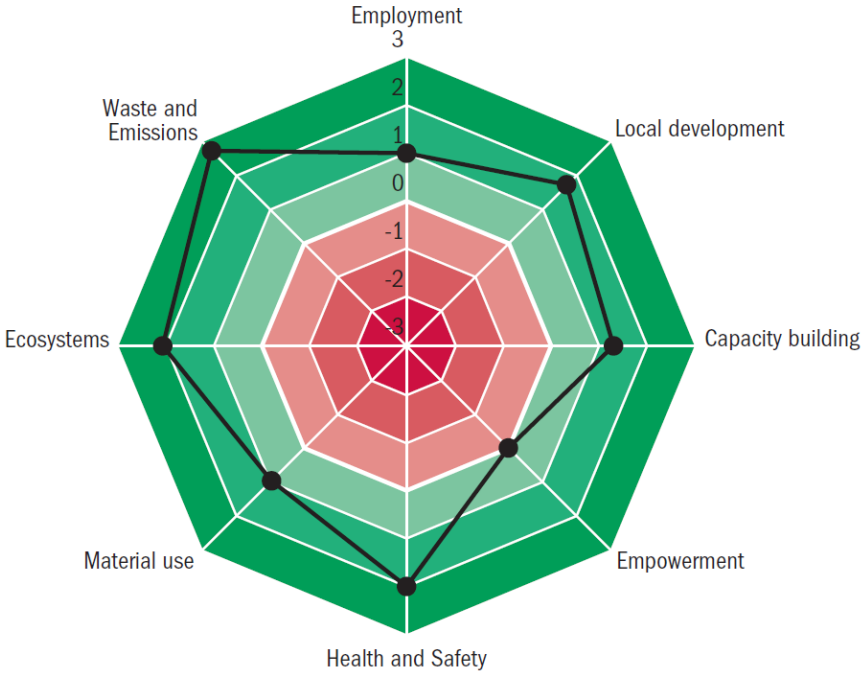
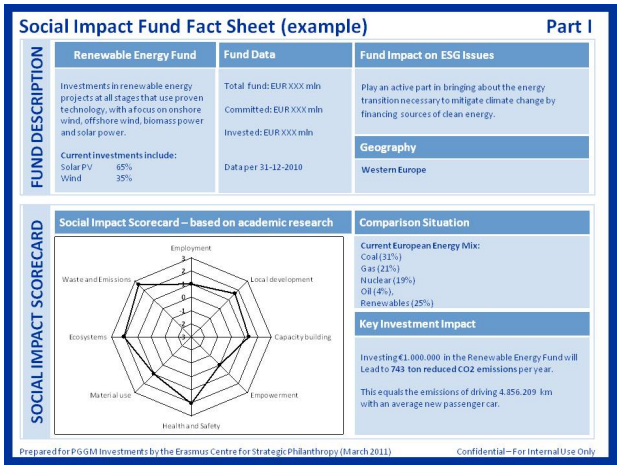
Our approach for impact measurement at PGGM

- Review of different initiatives resulted in the selection of 8 impact areas
- Based on academic studies we mapped the expected social impacts of PGGM's targeted ESG investments
- For each impact area we scored 2-3 categories of impact indicators
- Expert review of scores



Result: Social Impact Fund Fact Seets

- Summary of applied framework per fund/ mandate
- Insight in <u>expected</u> social impacts
- Nuance by adding issues that are under discussion
- Proposal for key impact indicators to measure <u>actual</u> social impact



Social Impact Fund Fact Sheet (example) Part I

FUND DESCRIPTION

Renewable Energy Fund	Fund Data	Fund Impact on ESG Issues
Investments in renewable energy projects at all stages that use proven technology, with a focus on onshore wind, offshore wind, biomass power and solar power. Current investments include: Solar PV 65% Wind 35%	Total fund: EUR XXX mln Committed: EUR XXX mln Invested: EUR XXX mln Data per 31-12-2010	Play an active part in bringing about the energy transition necessary to mitigate climate change by financing sources of clean energy. **Geography** Western Europe

SOCIAL IMPACT SCORECARD

Social Impact Scorecard – based on academic research

Comparison Situation

Current European Energy Mix:
Coal (31%)
Gas (21%)
Nuclear (19%)
Oil (4%),
Renewables (25%)

Key Investment Impact

Investing €1.000.000 in the Renewable Energy Fund will Lead to **743 ton reduced CO2 emissions** per year.

This equals the emissions of driving 4.856.209 km with an average new passenger car.

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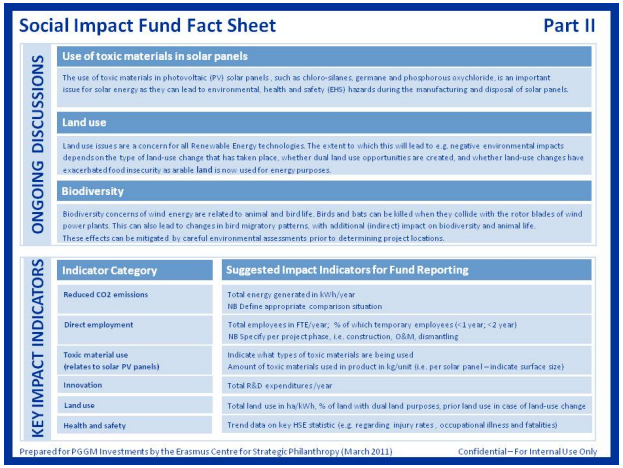

Social Impact Fund Fact Sheet Part II

ONGOING DISCUSSIONS

Use of toxic materials in solar panels

The use of toxic materials in photovoltaic (PV) solar panels , such as chloro-silanes, germane and phosphorous oxychloride, is an important issue for solar energy as they can lead to environmental, health and safety (EHS) hazards during the manufacturing and disposal of solar panels.

Land use

Land use issues are a concern for all Renewable Energy technologies. The extent to which this will lead to e.g. negative environmental impacts depends on the type of land-use change that has taken place, whether dual land use opportunities are created, and whether land-use changes have exacerbated food insecurity as arable land is now used for energy purposes.

Biodiversity

Biodiversity concerns of wind energy are related to animal and bird life. Birds and bats can be killed when they collide with the rotor blades of wind power plants. This can also lead to changes in bird migratory patterns, with additional (indirect) impact on biodiversity and animal life. These effects can be mitigated by careful environmental assessments prior to determining project locations.

KEY IMPACT INDICATORS

Indicator Category	Suggested Impact Indicators for Fund Reporting
Reduced CO2 emissions	Total energy generated in kWh/year NB Define appropriate comparison situation
Direct employment	Total employees in FTE/year; % of which temporary employees (<1 year; <2 year) NB Specify per project phase, i.e. construction, O&M, dismantling
Toxic material use (relates to solar PV panels)	Indicate what types of toxic materials are being used Amount of toxic materials used in product in kg/unit (i.e. per solar panel – indicate surface size)
Innovation	Total R&D expenditures/year
Land use	Total land use in ha/kWh, % of land with dual land purposes, prior land use in case of land-use change
Health and safety	Trend data on key HSE statistic (e.g. regarding injury rates , occupational illness and fatalities)

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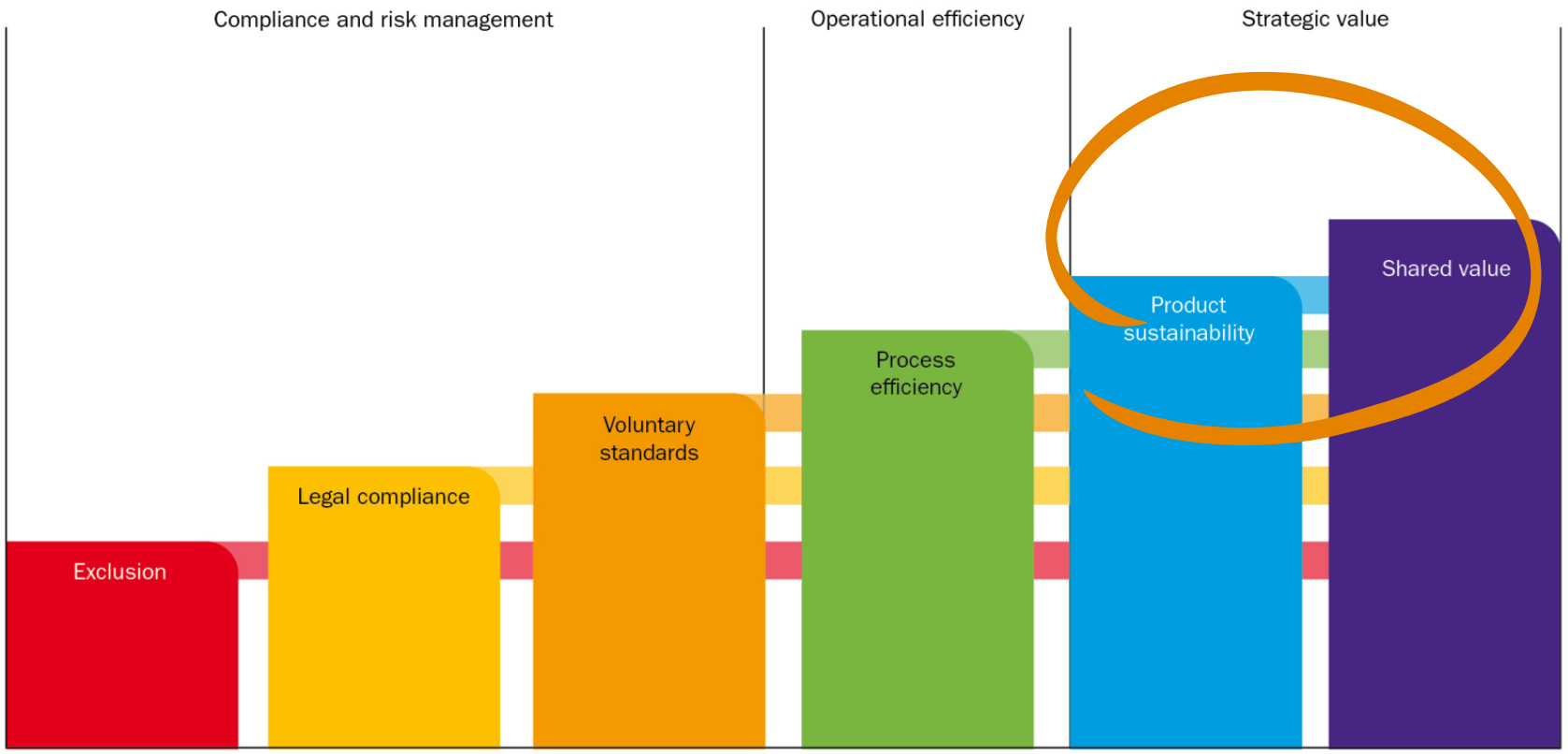
Where does this fit in? - Sustainability stairway



Looking forward – further issues for discussion

- **Communicating impact** – Who is our audience? Balancing presenting performance data vs. telling the story. Attribution: what is our contribution?
- **What level of impact is good enough?** – How to assess the effectiveness? What benchmarks are available? How to include the stakeholder perspective?
- **Credibility of data** – What is the necessary evolution in data quality? What could be the role of (social) auditors?
- **Link to financial performance** – (How) does impact contribute to returns? Can we create shared value?

PGGM

Vragen voor Karen aan Saskia (NB niet voor presentatie!)

- **What steps has PGGM taken to provide follow-up to the work we have done with you?**
  - New definition – focus on solutions, ESG improvements not enough (see slide). Measurement also part of definition: now processes in place
  - Work with LEI (Wageningen) on impact management
  - Work with fund managers in pilot project
- **What are the key issues in working with your fund managers?**
  - How to go from theory to practice: How do we keep it pragmatic?, expanding reporting requirements, standardization of indicators, quality of data, and dialogue on improving impacts.
- **What do you see as the key challenges going forward?**
  - see previous slide

PGGM