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Deploying Participatory Value Evaluation for facilitating
effective participation of citizens in the energy transition

Biden vs. Trump

Source	Date	Sample	Biden	Trump	Other
Poll Averages*			46.7%	47.6%	-
Quinnipiac	11/02/2020	1,440 LV ±2.6%	47%	43%	10%
Rasmussen Reports	11/02/2020	800 LV ±3.5%	45%	48%	7%
Research Co.	11/02/2020	450 LV ±4.6%	47%	47%	6%
Morning Consult	11/02/2020	2,179 LV ±2%	47%	49%	4%
Trafalgar Group	11/01/2020	1,041 LV ±3%	44%	49%	7%
Civiqs	11/01/2020	1,136 LV ±3%	48%	49%	3%
Emerson College	11/01/2020	656 LV ±3.8%	49%	48%	3%
Quinnipiac	10/29/2020	1,186 LV ±2.9%	48%	43%	9%



Candidates



Donald Trump
Republican Party

Vote % Vote count

53,4% 3.066.271



Joe Biden
Democratic Party

45,2% 2.596.694



- The world is becoming more and more complex
- (Increasing) segment of the population is looking for certainty and overarching explanations
- Increases popularity of leaders (Trump) and theories (Qanon) that provide simplifications makes their life manageable.
- These leaders/theories nourish distrust towards 'elite' that addresses complex issues (climate change).

Some of my own observations:

- Segments of the population feel the 'elite' is not considering important arguments;
- 'Elite' uses communication strategies as a holy grail;
- Segment feels that 'elite' should **listen**, feels humiliated/anger;
- Segment wants to raise their voice and not be educated by the elite;
- Segment prefers to raise their voice anonymously.

PVE designed as viable alternative for CBA

1. Cost-Benefit Analysis dominant method for evaluation public policies;
2. Societal value of a government policy derived from number of euros that individuals are willing to pay from their **private income** for the impacts;
3. Longstanding criticism 'private willingness to pay' approach:
 - Philosophy (Kelman, Sagoff, Ackerman and Heinzerling);
 - Economics (Solow, Sunstein; Sen);
 - Behavioral economics (Thaler, Kahneman).

Consumer-citizen duality:

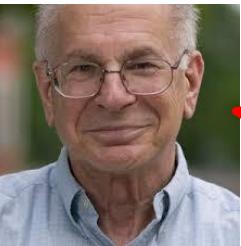
"Individuals' private WTP may not reflect how they want public policies to change."

What explains the consumer-citizen duality?



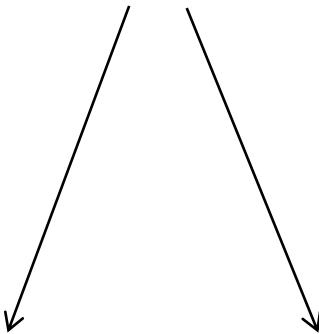
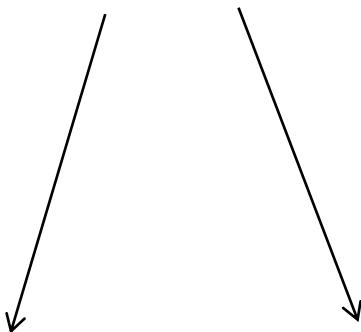
“Moral considerations more salient in a public context than in a private context”

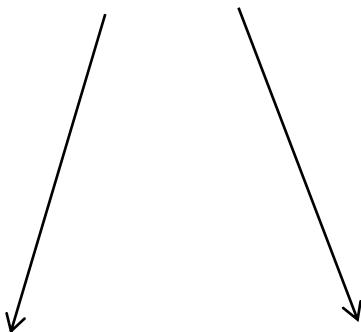
Ackerman, Heinzerling, Sagoff



“Dollars in different mental accounts can have different purposes. Private and public euros might have different purposes.”

Thaler and Kahneman





- Mouter, van Cranenburgh, van Wee, 2017. *Do individuals have different preferences as consumer and citizen? The trade-off between travel time and safety.* Transportation Research Part A.
- **Conclusion:** trade-offs individuals make between safety and travel time differ in a **car driver** context (**consumer** of mobility) and a **citizen** context.
- Using **car driver preferences** or **citizen preferences** big influence on results of welfare analysis of government projects:
 - **Citizen:** 15 min travel time savings for 80,000 trips per day < prevention of 1 traffic death per year;
 - **Car driver:** 3 minutes travel time savings for 80,000 trips per day > prevention of 1 traffic death per year;
 - **Car driver (current Dutch values):** 45 sec travel time savings for 80,000 trips per day > prevention of 1 traffic death per year;

Let's provide a viable alternative!

Participatory Value Evaluation:

1. Mimic a choice situation of an elected official
2. Provide information about the pros and the cons of each choice option
3. Ask citizens to provide a recommendation (and explain their recommendation)

Applications

- Corona PVE (30,000 citizens)
- Transport Amsterdam (2,500 citizens)
- Flood protection (3,000 citizens)
- **RES Sudwest-Fryslan (1,300 citizens)**
- **Thermal energy transition Utrecht (600 citizens)**
- Nieuw Sloten (150 citizens).

COEFFICIENTS**PROJECT CONSTANTS:**

1: Nursing and care homes allow visitors	2.6867*** (0.0272)
2: Businesses open again (except Horeca & contact-jobs)	2.6451*** (0.0202)
3: Employees in contact professions go back to work	3.2382*** (0.0233)
4: Young people may come together in groups	1.8825*** (0.0130)
5: All restrictions are lifted for people who are immune	1.5608*** (0.0193)
6: Restrictions lifted in Friesland, Groningen and Drenthe	1.5954*** (0.0301)
7: Social contact between family members is allowed again	2.4893*** (0.0273)
8: Horeca and entertainment open again	2.7346*** (0.0327)

ATTRIBUTE EFFECTS

Additional 10.000 deaths of people of +70 years	-0.4130*** (0.0821)
Additional 10.000 deaths of people of less than 70 years	-0.9286*** (0.1448)
Additional 10.000 people with permanent physical injury	-0.1033*** (0.0162)
Minus 10.000 people with permanent mental injury	0.0023 (0.0036)
Minus 10.000 households that have lost 15% of income	0.0094*** (0.0024)

Observations	26293
Log-likelihood	-127928.8122
AIC	255831.6245
BIC	255725.3227

Top-10 portfolios of policy options

	Ranking of portfolio's					
	Best	2 nd	3 rd	4 th	5 th	% Appearance
Contact professions back to work	✓	✓	✓	✓	✓	100%
Businesses open again (except Horeca & contact-jobs)	✓	✓	✓	✓		80%
No 1.5 meter rule for direct family members from other households	✓		✓		✓	60%
No 1.5 meter rule for young people			✓	✓		40%
Nursing and care homes allow visitors						0%
Horeca and entertainment open again						0%
All restrictions are lifted for people who are immune						0%
Restrictions lifted in Friesland, Groningen and Drenthe						0%
Additional pressure health care system	31.6%	21.4%	38.1%	27.9%	21.7%	

PVE as a method to facilitate mass participation

Conventional participation approaches are designed for the happy few:

- People who have a lot to gain;
- People who have a lot of spare time;
- People who like to speak in public/discuss with other citizens.

Overrepresentation of *old highly educated white males*.

Policy makers: “*to what extent do the citizens who participate represent “the public”?*









PVE vs conventional approaches to participation

	PVE	Conventional
Entry barriers	<ul style="list-style-type: none">• Low• Around 20 minutes• Where and when you want	<ul style="list-style-type: none">• High• You need to go to a public hearing or a 'community evening'.
Number of citizens who participate	<ul style="list-style-type: none">• 1,000 – 10,000	<ul style="list-style-type: none">• 100 max.
Discuss with other citizens?	<ul style="list-style-type: none">• No	<ul style="list-style-type: none">• Yes• You need to speak in public• You need to listen to (annoying) citizens.
Investment of civil servants	<ul style="list-style-type: none">• Low investment of time/energy	<ul style="list-style-type: none">• Participation fatigue

PVE thermal energy transition Utrecht

Effective participation

1. Two-way communication citizens-government
2. Meets the goals of stakeholders
 - PVE enables participation of people that normally do not participate (particularly young people);
 - low time investment of civil servants;
 - outcomes of a PVE should be useful for decision-making
 - PVE raises awareness among citizens about decisions and implications of the thermal energy transition
 - participation should be meaningful for citizens

PVE thermal energy transition Utrecht

Step 1: citizens allocate 100 points to four strategies to achieve sustainable thermal energy goals of the municipality:

Assumption: financial support of the government is equal.

1. Low cost strategy (citizens do not have to contribute financially);
2. Freedom of choice;
3. Maximum CO₂-reduction;
4. Start in the rich areas.

Step 2: citizens are asked to provide arguments for their choices;

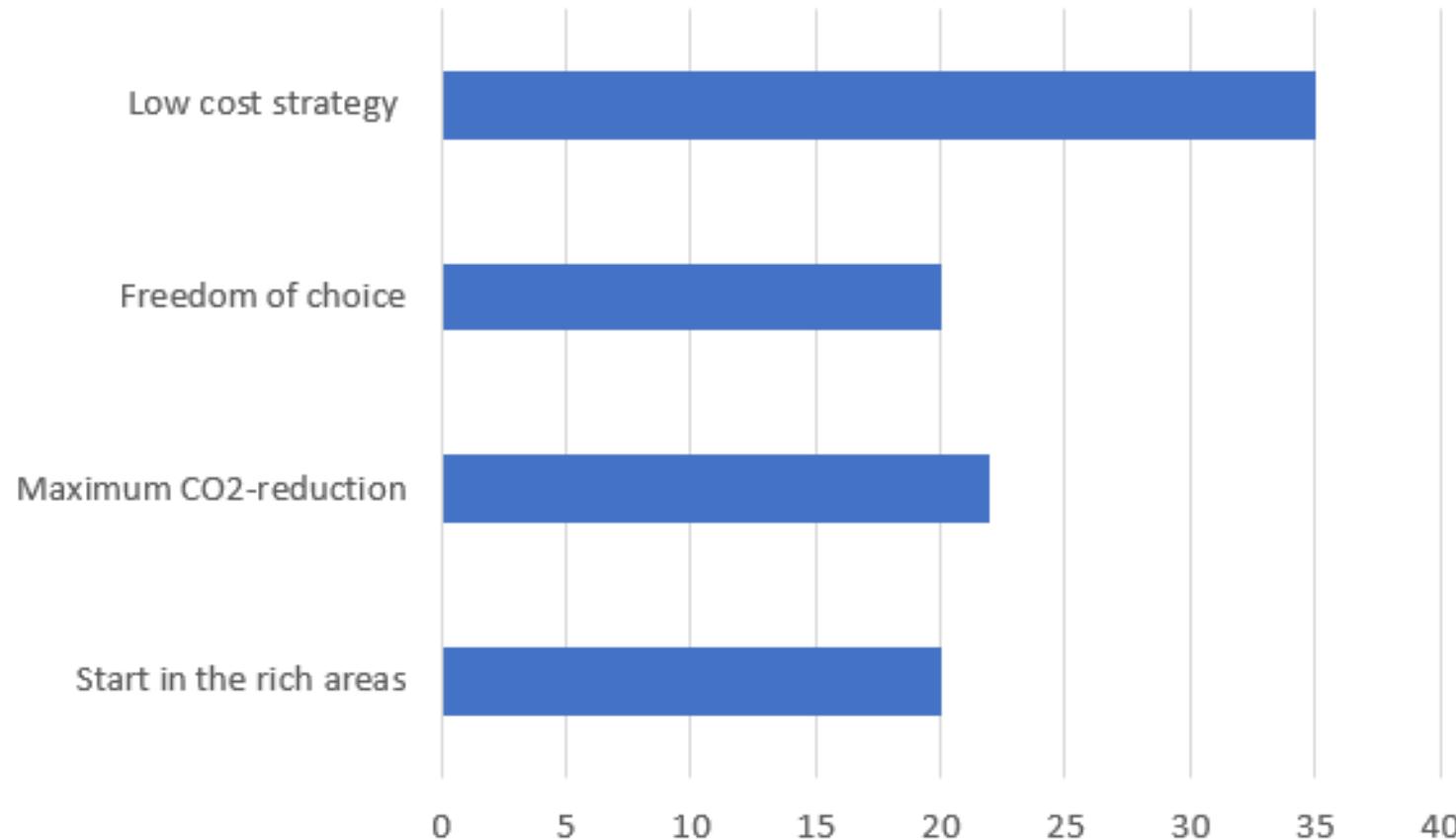
Step 3: citizens have the option to design their own strategy;

Step 4: citizens advise the municipality about how to use the results.

Descriptive results

- Citizens were invited through a municipal panel and social media
- 619 citizens participated;
- Particularly young citizens (26 – 35 year) participate
- 58% males;
- Overrepresentation of Green Voters;
- Overrepresentation of high educated citizens.
- 168 citizens want to be updated about the results and how the municipality uses the results.

Allocation of points



- Heterogeneity in preferences:
- Substantial number of points allocated to strategies which resulted in costs for citizens.

Allocation of points

	Strategy 1	Strategy 2	Strategy 3	Strategy 4
Number of citizens allocating 100 points	27	9	7	4
Number of citizens allocating 0 points	62	130	129	150

- Not a lot of public support for full focus on one strategy
- Advise: integrate (elements of) different strategies in the government decision.

Quantitative analysis

Regression analysis reveals:

- Citizens do not allocate significantly more points or less points to strategies that affect their neighbourhood;
- Liberal voters allocate more points to 'freedom of choice' strategy;
- Older people allocate more points to 'low cost strategy';
- Number of points increased with higher CO₂-reduction;
- Number of points decreased with higher level of own financial investments.

Qualitative data

- Citizens provided qualitative arguments for underpinning the number of points they allocated
- **Normative uncertainty:** similar arguments for opposing strategies
- Low cost strategy with top-down government decisions: efficient, fair and high public support
- Freedom of choice: efficient, fair and high public support.
- **Advise**: if the municipality uses efficient, fair and high public support as arguments to support their final decision it is important to explicitly explain why this decision performs better on these criteria than alternative strategies.

Importance of citizens' input

- How much value should we assign to the advise of experts and the advise of citizens?
 1. *Implement the advise of the citizens (**5%**)*
 2. *Assign more value to the advise of citizens than the advise of experts (**9%**)*
 3. *Assign an equal value to the advise of citizens and experts (**47%**)*
 4. *Assign more value to the advise of experts than the advise of citizens (**35%**)*
 5. *Implement the advise of experts (**4%**)*

Positive citizens

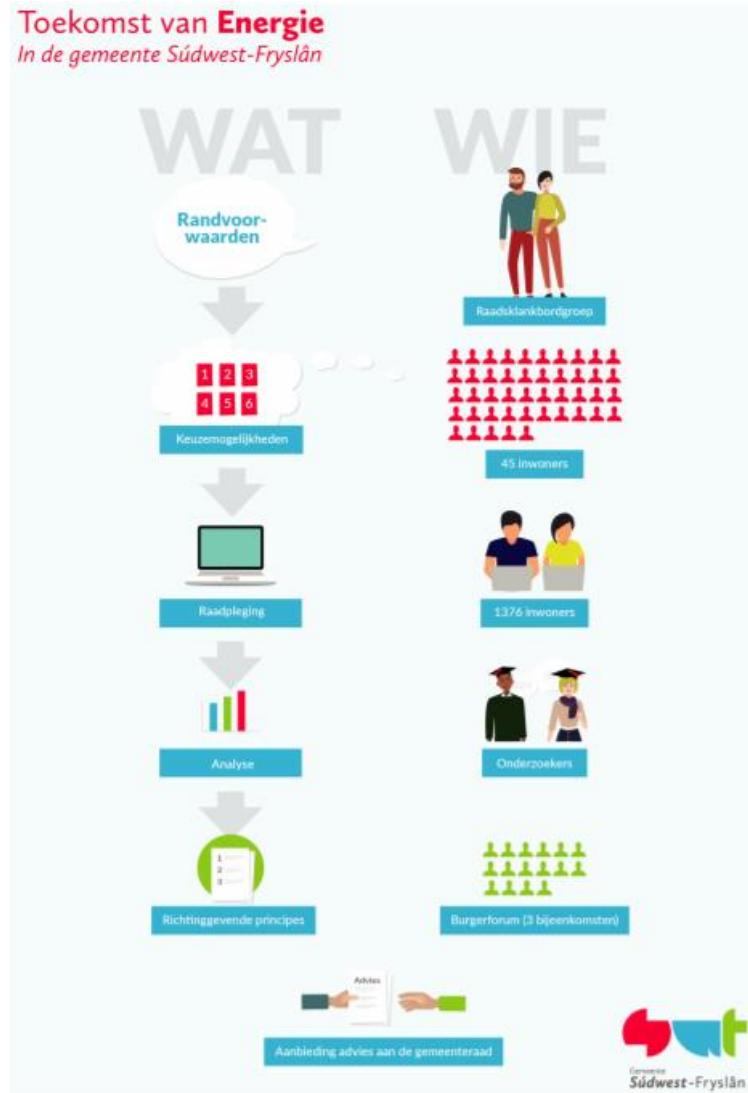
- *"I am a big fan of this type of citizen participation"*
- *"This is the first time that the municipality allowed me give my opinion in a nuanced and complex way. I really appreciate this."*
- *"This is a quick and comprehensive approach to citizen participation"*
- *"This experiment increased my awareness of the different options among which the municipality has to choose and this gives me some food for thought".*

Negative citizens

Particularly focused on meaningfulness for citizens

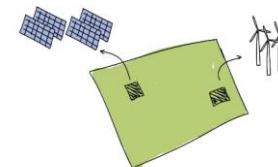
- This experiment was too complex for low-educated citizens
- Disagreed with the fact that they could only choose between different strategies to reach sustainable energy goals.
 - *"I don't believe that it is necessary to achieve these goals and/or I don't believe that we start with getting rid of natural gas from the built environment."*

Sudwest-Fryslan

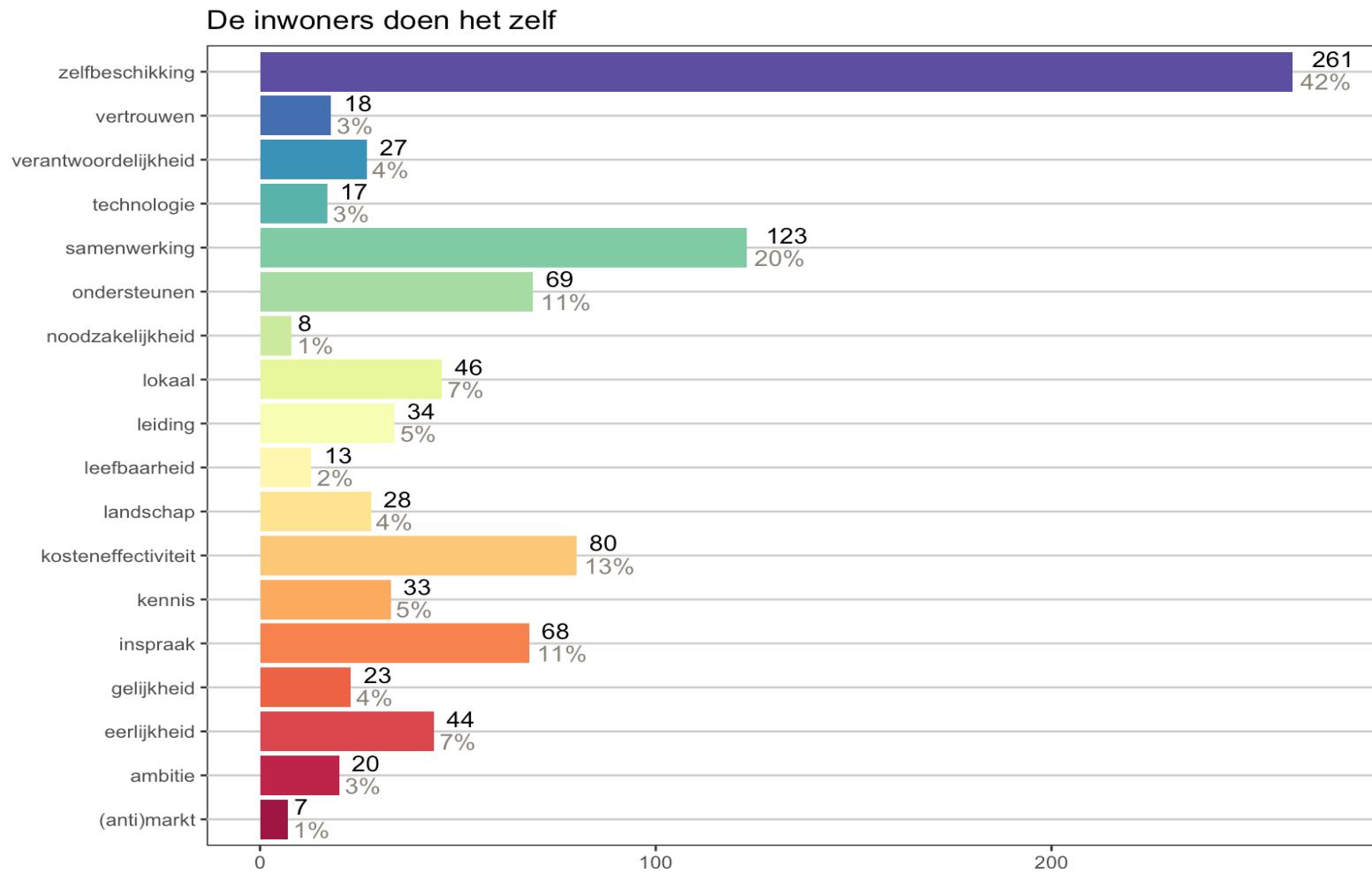


Arguments & conditions

Motivaties	Zorgen
<ul style="list-style-type: none">• Het verstoort het landschap het minst• Zo voorkom je wildgroei• Minder mensen hebben hier last van• Beter voor het toerisme• Grootchalige energieopwekking kan hier, er is ruimte• Grote schaal is nodig om te verduurzamen• Grootchalige energieopwekking is goedkoper• En is een inkomstenbron voor de regio• Zo hebben meer mensen toegang tot duurzame energie• Het heeft ook technische voordelen voor transport van energie• Het is duidelijk en herkenbaar beleid	<ul style="list-style-type: none">• Tast het landschap te veel aan• Leidt tot te veel overlast voor mens en natuur• De verdeling is moeilijk te maken, en wellicht niet eerlijk• Kleinschalig is beter• Dit is niet grootchalig genoeg• Dit doen we al, en het is nu genoeg• Dit kan ons stroomnet niet aan, er zijn bijkomende kosten• Zo is het geen collectief project
Voorwaarden	
<ul style="list-style-type: none">• Mits er rekening wordt gehouden met de omgeving• Het gedrag wordt door de omgeving• En de lusten en lasten eerlijk verdeeld zijn• Alleen als het zonne-energievelden zijn, geen windmolens• Alleen voor windmolens, zonnepanelen moeten op daken• Het liefst zo onopvallend mogelijk• Kijk ook naar alternatieve technologie• Mits heel Nederland meer energie zal gaan opwekken	



Value maps



More information

www.tudelft.nl/pwe (in English: www.tudelft.nl/pve)

Mouter, N., Koster, P.R., Dekker, T. (2019). Participatory Value Evaluation: a novel method to evaluate future urban mobility investments. Working paper Tinbergen Institute. 09-046/VIII.

Dekker, T., Koster, P.R., Mouter, N., (2019). The economics of Participatory Value Evaluation. Working paper Tinbergen Institute. 19-008/VIII

Mouter, N., Koster, P.R., Dekker, T. (2019). An introduction to Participatory Value Evaluation. Working paper Tinbergen Institute. 19-024/V

Animation:

https://www.dropbox.com/sh/7on9zmlyj4ho9b2/AADwUMI96QwANhW1GMO_sDkGa?dl=0&preview=PVE_7.10.20-zonder+achtergrondmuziek.mp4