



PBL Netherlands Environmental  
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# WORKING PAPER: 'AN EVALUATION FRAMEWORK FOR THE TRANSFORMATIVE CAPACITY OF DUTCH CLIMATE POLICY'

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PBL

## Colophon

### **Working Paper ‘AN EVALUATION FRAMEWORK FOR THE TRANSFORMATIVE CAPACITY OF DUTCH CLIMATE POLICY’**

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# Contents

<b>Colophon</b>	<b>2</b>
Corresponding author	2
Author(s)	2
Acknowledgements	2
Visualisations	2
Project coordination	2
Accessibility	2
<b>Preface: Towards an evaluation framework for the Reflexive Evaluation of Dutch Climate Policy</b>	<b>4</b>
<b>1 Nederlandse samenvatting: Een evaluatiekader voor het transformerend vermogen van het Nederlandse klimaatbeleid</b>	<b>5</b>
<b>2 Working Paper: an evaluation framework for the transformative capacity of Dutch climate policy</b>	<b>12</b>
2.1 Introduction	12
2.2 Towards an evaluation framework for transformative capacity of climate policy	15
2.2.1 Transformative capacity and policy arrangement	15
2.2.2 Four components of transformative capacity	18
2.2.3 Transformative Capacity Flywheel	25
2.3 Evaluating transformative capacity, or: putting the framework to use	26
2.3.1 A reflexive approach to evaluating Dutch Climate Policy	26
2.3.2 Unit of analysis: embedded practices	27
2.3.3 Empirical research questions and design	28
2.4 Discussion and conclusion	31
<b>References</b>	<b>34</b>

# Preface: Towards an evaluation framework for the Reflexive Evaluation of Dutch Climate Policy

This background report presents the PBL & VU evaluation framework to evaluate the transformative capacity of Dutch Climate Policy. Transformative capacity refers to the capacity of the policy actors involved, and the capacity of the climate policy arrangement, to instigate, accelerate and/or redirect transformation towards a climate-neutral Netherlands by 2050. Transformative capacity builds upon four distinct capacities: orchestrating capacity, adapting capacity, system-innovating capacity and legitimating capacity.

The report is a product of the PBL & VU reflexive evaluation of Dutch climate policy. PBL & VU conduct this reflexive evaluation from 2022 until 2024 on request of the Ministries of Economic Affairs and Climate, the Ministry Infrastructure and Water, the Ministry of Interior and Kingdom Relations, and the Ministry of Agriculture, Nature and Food Quality. Other publications related to the reflexive evaluation can be accessed here: [Publicaties en presentaties | PBL Planbureau voor de Leefomgeving](#).

Our background report holds the status of a 'working paper'. Working papers are pre-publication versions of academic articles. This report presents scientific foundations of the evaluation framework. The report is theoretical in nature and informs the policy and evaluation community about the underpinning of the PBL & VU reflexive evaluation framework. It combines insights from transition management and reflexive governance into a practice-oriented evaluation framework. It does not include a methodological or practical guide for evaluators or policy makers nor does it include empirical findings from the PBL & VU reflexive evaluation study. This report is reviewed by peers with expertise in the field of climate assessments, transition monitoring and transformative governance.

Eva Kunseler and Hiddo Huitzing

Project coordination of the PBL & VU Reflexive Evaluation of Climate Policy

# 1 Nederlandse samenvatting: Een evaluatiekader voor het transformerend vermogen van het Nederlandse klimaatbeleid

In dit achtergrondrapport lichten we toe hoe het evaluatieraamwerk voor de Lerende Evaluatie Klimaatbeleid van PBL & VU tot stand is gekomen. Het rapport heeft de status van een *working paper*, een wetenschappelijk (concept) artikel, en is tot stand gekomen middels een exploratieve en iteratieve literatuur review methode rondom het concept transformerend vermogen. Hiermee beoogt PBL & VU de wetenschappelijke kwaliteit van dit evaluatiekader en de daaruit resulterende publicaties te waarborgen en te vergroten.

Met klimaatneutraliteit in 2050 als Europese doelstelling staat Nederland voor een enorme uitdaging. Dit streven brengt niet alleen de noodzaak met zich mee drastische reducties in CO<sub>2</sub>-uitstoot te realiseren, maar ook om dergelijke beleidsdoelen in onderlinge samenhang te articuleren, en beleidsprocessen en -inzet op verschillende domeinen op elkaar af te stemmen. Dat vergt nieuwe manieren van samenwerken. Bovendien worden burgers geconfronteerd met een breed palet aan maatregelen die raken aan allerlei sferen van het dagelijks leven, zoals het verwarmen van hun woning, hun woon-werkverkeer en zelfs de dagelijkse kost. De klimaatopgave vraagt, kortom, om een ‘transformatie’ van dominante manieren van denken en doen, in onze beleidspraktijk en in onze samenleving. Veel van onze economische bedrijvigheid en sociale infrastructuur die we als vanzelfsprekend zijn gaan beschouwen is inmiddels, gegeven de klimaatambities, niet vol te houden en zelf onderdeel van het probleem. Verduurzaming is nodig. In de literatuur en de praktijk is er steeds meer aandacht voor de noodzaak van maatschappelijke transformatie. De overheid en het klimaatbeleid dat zij ontwikkelt en uitvoert wordt hiervoor een cruciale rol toegedicht (Braams et al., 2022).

Vanzelfsprekend roept dit de vraag op of het huidige beleidsarrangement rondom de doelstelling van klimaatneutraliteit in 2050 (‘de klimaatopgave’) hier wel voldoende op is toegerust. Een beleidsarrangement is “de tijdelijk gestabiliseerde inhoud en wijze van organiseren rondom een beleidsdomein op één of meerdere beleidsniveaus”, aldus Arts et al. (2006 onze vertaling). In het klimaatbeleid speelt een aantal overkoepelende dilemma’s die verdere uitvoering van het klimaatbeleid uitdagend en complex maakt (Kunseler et al., 2022). De klimaatopgave is, ten eerste, inhoudelijk complex en behoeft een integrale, sector-overstijgende aanpak, terwijl er tegenstrijdige doelen en belangen spelen binnen en tussen sectoren. Controversiële onderwerpen worden daardoor lastig opgepakt, om conflicten uit de weg te gaan. Daarbij is de koppeling tussen het huidige klimaatbeleid en de voor 2050 benodigde transformatie niet altijd helder, met het risico dat actuele maatregelen (gericht op 2030) beperkend kunnen zijn voor de effectiviteit van toekomstige maatregelen (gericht op 2050). Ten tweede is er voor de klimaatopgave sprake van een ingewikkeld samenspel tussen actoren. In het samenspel tussen politiek, maatschappij en beleid ontbreekt soms de urgentie voor klimaat. Het samenspel binnen overheden is uitdagend vanwege sectorale verkokering, waardoor integraal samenwerken aan de klimaatopgave in het geding is. Het

samenspel tussen bestuurslagen is eveneens uitdagend omdat een gedeeld beeld en een gemeenschappelijke taal in de beleids- en uitvoeringsarena's vaak ontbreken. Ten derde spelen er dilemma's rondom de randvoorwaarden voor de realisatie van klimaatneutraliteit, zoals draagvlak onder burgers voor klimaatmaatregelen, de ruimtelijke schaarste en het inpassen van de klimaatopgave naast andere (urgente) opgaven, schaarste in de arbeidsmarkt en in grondstoffen en infrastructuur, en starre instituties waardoor aanpassing van wettelijke en financiële kaders ten behoeve van de benodigde transformatie traag verloopt.

Cruciaal is, kortom, het *vermogen* van een beleidsarrangement om met deze dilemma's om te gaan en zo de beoogde transformatie in gang te zetten. Dit duiden we aan als het *transformerend vermogen* van het beleidsarrangement. Het gaat hierbij zowel om het vermogen een zodanig beleidsarrangement te creëren dat de transformatie naar een klimaatneutraal Nederland in 2050 in gang zet, versnelt en/of bijstuurt, als om het vermogen een maatschappelijke setting te creëren die transformatie faciliteert. Transformerend vermogen wordt in de literatuur gekoppeld aan het vermogen om stil te staan bij de aannames die onder beleidskeuzes liggen, deze opnieuw tegen het licht te houden en wanneer nodig bij te sturen. Dit gebeurt naar aanleiding van ervaringen uit de uitvoeringspraktijk en op basis van nieuwe inzichten over wat een nieuwe samenleving behelst, en wat de realisatie daarvan belemmert dan wel bespoedigt. Wanneer het lukt om het beleidsarrangement niet alleen bij te sturen, maar vooral om in te zetten op het creëren van condities waaronder het meest passende beleid vorm kan krijgen, noemt men dat reflexiviteit. In de literatuur spreekt men wel over 'reflexieve governance': een wijze van besturen en beleidsvoering gericht op het creëren van een beleidscontext waarin de condities aanwezig zijn om adequaat te reageren op belangrijke signalen en waarin robuuste strategieën om weerbarstige opgaven aan te gaan kunnen worden ontwikkeld (Voß & Kemp, 2005).

Vanwege de centrale rol van feedback bij het realiseren van reflexieve governance is evaluatie van cruciaal belang. Transformerend vermogen, reflexiviteit en evaluatie worden in de literatuur gepresenteerd als elkaar versterkende fenomenen. In dit working paper verkennen we hoe deze met elkaar kunnen verbinden, op zo'n manier dat het leidt tot een evaluatieontwerp voor het Nederlandse klimaatbeleid. Uitgangspunt daarbij is dat wat hier wordt verstaan onder 'evalueren' leidt tot het versterken van reflexiviteit en, daarmee, van het transformerend vermogen van het beleidsarrangement. Dit type evaluatie is gericht op het instigeren van 'leren', dat in dit verband is te begrijpen als een proces van reflectie op, en correctie van (de aannames die ten grondslag liggen aan) beleidsmatig handelen naar aanleiding van feedback (Loeber & Laws, 2016). Het gaat bij deze vorm van evalueren dus niet om het beoordelen van de voortgang van het beleid gegeven gestelde doelen (zoals in effectevaluaties), maar om zicht te krijgen op knelpunten en hoe het beleidsarrangement (niet) werkt zodat het handelen van beleidsactoren kan worden ondersteund en het transformerend vermogen van beleid kan worden vergroot. De centrale vraag waar dit paper zich op richt luidt daarom: *Hoe kan het transformerend vermogen van een beleidsarrangement op basis van literatuur worden geconceptualiseerd en vertaald in een toepasbaar raamwerk voor de PBL & VU Lerende Evaluatie van het Klimaatbeleid?*

Om deze vraag te beantwoorden en een analytisch en toepasbaar evaluatiekader uit te werken, put dit paper uit literatuur over o.a. transitie management en reflexieve governance. Daartoe wordt 'transformerend vermogen' van een beleidsarrangement geconceptualiseerd en geoperationaliseerd vanuit inzichten uit verschillende wetenschappelijke invalshoeken, in het bijzonder vanuit *practice theory*. Dit maakt het mogelijk om het transformerend vermogen van het beleidsarrangement rondom de klimaatopgave te operationaliseren in relatie tot *beleidspraktijken*.

Dat geeft richting aan de blik van de evaluator: het biedt houvast bij het articuleren van *waar* deze naar kijkt tijdens het evaluatieonderzoek, en *hoe* dat gebeurt.

### **Conceptualisering van transformerend vermogen**

Wetenschappers beschrijven transformaties als complexe en grootschalige maatschappelijke veranderprocessen waarbij meerdere transities van verschillende, onderling samenhangende systemen in elkaar grijpen (Hölscher et al., 2018; Patterson et al., 2017; Scoones et al., 2020; onze vertaling). Voortbouwend daarop begrijpen we een 'transformatie' als een fundamenteel, grootschalig en maatschappij-breed veranderproces dat leidt tot veranderingen in de huidige wijze waarop in de samenleving economie, cultuur, technologie, instituties, en natuur- en milieuzorg zijn georganiseerd, en hoe we in ons denken en doen hier mee omgaan. Transformatie omvat een reeks aan onderling samenhangende transities. Zo behelst de klimaatopgave ondermeer een warmtetransitie, een energietransitie en een eiwittransitie.

De vraag in welke mate overheidsbeleid in staat is – het *vermogen* heeft – om voor deze transformatie de juiste randvoorwaarden te creëren behoeft nadere operationalisering om praktisch beantwoord te kunnen worden. Op basis van literatuur is dit transformerend vermogen in dit paper geconceptualiseerd als het vermogen op nationaal beleidsniveau om op reflexieve wijze de transformatie richting een klimaatneutraal Nederland in 2050 in gang te zetten, te versnellen en/of bij te sturen. Transformerend vermogen is vervolgens geoperationaliseerd als bestaande uit vier gerelateerde kerncapaciteiten, eveneens gedefinieerd als vermogens. De vermogens hebben als gedeeld vertrekpunt dat ze elk bij uitstek opgavegericht zijn: gericht op het behalen van klimaatneutraliteit in 2050. Ze worden hieronder eerst toegelicht in algemene zin, en vervolgens geoperationaliseerd in vraagvorm voor de lerende evaluatie van (specifiek) het klimaatbeleid. Ook zijn ze voorzien van een concreet voorbeeld van een dilemma uit het klimaatbeleid waaruit dit (on)vermogen zou kunnen blijken.

1. **Richtinggevend vermogen:** het vermogen om beleidsambities en -doelen vanuit de lange-termijn opgave en missie te definiëren en om leiderschap te nemen om beleidsprocessen vervolgens te coördineren en onderling te verbinden in het licht van deze ambities en doelen.

*Vraag: Hoe draagt de huidige beleidsinzet en -coördinatie op verschillende beleidsterreinen gezamenlijk bij aan de condities voor een transformatie naar klimaatneutraliteit?*

Voorbeeld: In staat zijn om *lock-in* effecten tijdig in het vizier te hebben en hierop te anticiperen, getuigt van richtinggevend vermogen. Concreet betekent dat bijvoorbeeld: tijdig inzien hoe de inzet op subsidiering van hybride warmtepompen nu, de uitrol van collectieve warmtenetten later in de weg kan zitten, en dit vervolgens voorkomen door de verschillende beleidsprocessen en -domeinen op elkaar af te stemmen.

2. **Adaptief vermogen:** het vermogen om op flexibele wijze lopende beleidsprocessen aan te passen en bij te sturen, in reactie op relevante (onverwachte) ontwikkelingen, onzekerheden en risico's, evenals op nieuwe inzichten en kansen, met steeds de lange-termijnopgave in het vizier.

*Vraag: Is er flexibiliteit om in de beleidsuitvoering tijdig in te spelen op nieuwe kennis en ontwikkelingen, met het oog op het streven naar klimaatneutraliteit in 2050?*

Voorbeeld: In staat zijn om structurerende keuzes te maken op basis van voortschrijdend inzicht, en deze later weer bij mogen en kunnen sturen getuigt van adaptief vermogen. Concreet betekent dat bijvoorbeeld: in staat zijn om de vergaande financiële keuzes die nu moeten worden gemaakt in het kader van het klimaatfonds op termijn weer aanpassen, als

de contouren voor hoe het energiesysteem in 2050 eruit zal komen te zien zich scherper gaan aftekenen.

3. **Systeminnovatief vermogen:** het vermogen om maatschappelijke en institutionele innovaties, die relevant zijn voor de lange-termijn opgave, te koesteren en in stelling te brengen, en om creatieve en nieuwe wijzen van doen en denken uit de samenleving op te schalen en te institutionaliseren.

Vraag: *Hoe wordt systeeminnovatie aangemoedigd en hoe zitten systeembarrrières de transformatie naar klimaatneutraliteit in de weg?*

Voorbeeld: Innovatie van mobiliteitssysteem vergt een trendbreuk in het reisverkeer. Tijdig inspelen op milieuoverwegingen van reizigers door vliegverkeer af te bouwen moet gepaard gaan met innovatie in de opbouw van hogesnelheidstreinverbindingen

4. **Legitimerend vermogen:** het vermogen om beleidsprocessen (proceslegitimiteit) en de concrete uitvoering hiervan vorm te geven op een wijze die legitiem wordt gevonden door een diversiteit aan belanghebbenden (waaronder burgers), in het licht van de lange-termijnopgave

Vraag: *Hoe wordt de legitimiteit van beleidskeuzes gewaarborgd in de ogen van (en met) de door het beleid getroffen partijen?*

Voorbeeld: In staat zijn om richting te geven aan een oplossing voor het verdelingsvraagstuk rond de stroomaansluitingen. Vraag en aanbod met betrekking tot stroom op een zo eerlijk mogelijke manier verdelen over Nederland, terwijl een prioriteringskader voor aansluitvolgorde ontbreekt.

Deze vier verschillende vermogens hangen onderling nauw samen en ze werken op elkaar in. Indien alle aanwezig zijn in een beleidsarrangement, is aan de eerste assumptie voldaan, en is er sprake van transformerend vermogen. Gegeven de samenhang tussen transformatie en reflexiviteit is een tweede assumptie dat als het transformerend vermogen op een *lerende* wijze wordt geëvalueerd, dit de reflexiviteit die nodig is voor de transformatie ten goede komt. Zoals hierboven uiteengezet, vraagt reflexiviteit om 'leren' in de betekenis van reflectie en revisie, onder meer van de wijze waarop beleid wordt georganiseerd, hoe interactie en coördinatie vorm worden gegeven en middelen besteed etc., ook gaat het om lessen die al werkendeweg worden opgedaan tijdens de uitvoering van het beleid meteen te vertalen in beleidsherzieningen.

### **Conceptualisering van het object van onderzoek: een practice-based benadering**

De focus van de PBL & VU Lerende Evaluatie Klimaatbeleid ligt op het in kaart brengen en analyseren van het transformerend vermogen, geoperationaliseerd in de vier vermogens die hierboven staan beschreven. Maar waaraan is dit vermogen af te lezen? Het concept beleidsarrangement, zoals beschreven in de inleidende paragraaf van deze samenvatting, erkent nadrukkelijk de dynamiek tussen enerzijds de rol van *agency* (het vermogen tot handelen) van beleidsactoren in het beïnvloeden en veranderen van de context waarin zij opereren, en anderzijds de institutionele condities (structuren) waaronder zij opereren, die de context kenmerken en daarmee mede bepalen hoe *agency* vorm krijgt. De plek waar *agency* en structuur elkaar raken is de dagelijkse *professionele praktijk* die actoren met hun handelen-in-context vormgeven. Het is in deze praktijken dat het transformerend vermogen van het beleidsarrangement gestalte krijgt, als *emergente* kwaliteit van het arrangement dat continu aan verandering onderhevig is.

Onderzoek dat dergelijke praktijken als analyse-eenheid hanteert wordt wel *practice-based* onderzoek genoemd (Schatzki et al., 2001). Deze benadering stelt dat (het vermogen tot) verandering zichtbaar wordt op het niveau van praktijken. Dat wil zeggen, dat in het dagelijkse



handelen van actoren hun verbale uitingen, hun interacties, en de middelen en regels die ze hiertoe in stelling brengen zichtbaar worden, in het licht van de doelen (de opgaven) waar zij aan werken. Praktijken zijn dus werksituaties-in-context, zoals uitvoeringspraktijken, besluitvormingspraktijken, of onderzoekspraktijken. Deze praktijken manifesteren de institutionele waaronder *agency* vorm krijgt, of juist erdoor belemmerd wordt. Door het beleidsarrangement rondom het klimaatbeleid te beschouwen door een *practice-based* bril wordt het object van studie in het evaluatieonderzoek concreet: de praktijken waarin (onderdelen van) het klimaatbeleid vorm krijgt, de activiteiten van beleidsactoren waarmee dat gepaard gaat, en de institutionele condities waaronder deze activiteiten worden ondernomen en die deze beïnvloeden, door ze te faciliteren, dan wel belemmeren.

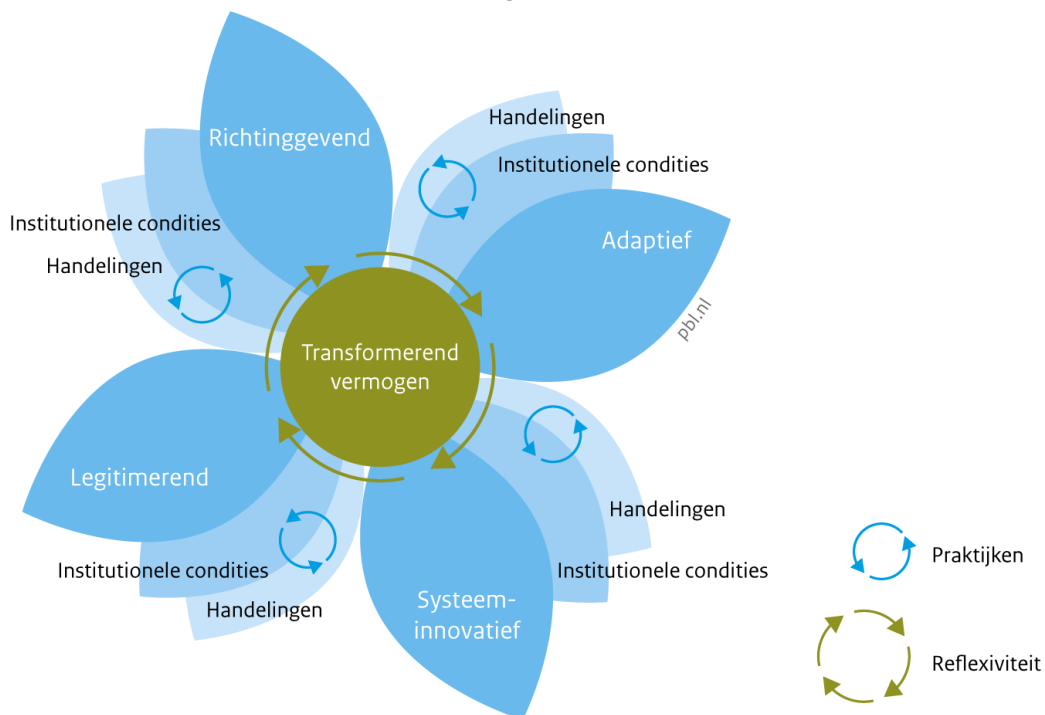
### Naar een evaluatiekader

Om bovenstaande aanvliegroute te vertalen in een evaluatiekader aan de hand waarvan de evaluatie praktisch uitvoerbaar is, zijn de vier genoemde vermogens nader geoperationaliseerd. Deze operationalisering betreft een reeks van acties van beleidsactoren die bezig zijn met het klimaatbeleid aan de dag (zouden moeten) leggen, en de institutionele condities die hierop van invloed zijn. Deze operationalisering is uiteengezet in figuur 1.

**Figuur 1**

### Vliegwiel voor Transformerend Vermogen

Evaluatiekader voor het transformerend vermogen van het Nederlandse Klimaatbeleid



Bron: PBL/VU

### Toepassing van het evaluatiekader

Zoals uiteengezet in de inleidende alinea's van deze samenvatting, wordt reflexiviteit in de literatuur gelieerd aan het vermogen van beleidsactoren om transformerend te werk te gaan. Hun

reflecteren dient verbonden te zijn aan hun acties en de institutionele context waarbinnen deze acties vorm krijgen. Er is sprake van versterken van transformerend vermogen wanneer het lukt om tegenwerkende institutionele condities te herkennen en om te vormen naar meer faciliterende condities in de richting van de geformuleerde beleidsdoelen. In de literatuur wordt hiervoor, zoals gezegd, een rol gezien voor evaluatie, namelijk in de zogenaamde reflexieve evaluatiebenadering.

Een reflexieve – of, meer gebruikelijk in het Nederlands, een lerende – evaluatie (zoals van het transformerend vermogen van het beleidsarrangement rondom de klimaatopgave) richt zich op het in beeld brengen, begrijpen en helpen veranderen (als nodig) van de dagelijkse professionele praktijken van beleidsactoren, en van de institutionele condities die hun vermogen om transformerend te werk te gaan beïnvloeden. Tijdens een lerende evaluatie zijn deze beleidsactoren geen passieve ontvangers van ‘feiten’ uit evaluatieonderzoek, maar hebben een rol als actieve co-evaluatoren die hun eigen praktijk onder de loep nemen en relevante inzichten coproduceren (Verwoerd, 2022). Gegeven deze lerende evaluatiebenadering en de focus op de dagelijkse professionele praktijken, is de volgende hoofdvraag geformuleerd:

*In hoeverre is er in het beleidsarrangement rondom de Nederlandse nationale doelstelling van klimaatneutraliteit in 2050 sprake van transformerend vermogen en hoe kan dit worden vergroot?*

De hoofdvraag valt uiteen in de volgende drie sub-vragen:

- i. *Op welke manier slagen klimaatbeleidsactoren erin om transformerend te handelen en welke uitdagingen komen zij daarbij tegen?*
- ii. *Op welke manier zijn de condities voor transformerend vermogen aanwezig in het huidige klimaatbeleid?*
- iii. *Welke handelingsperspectieven kunnen het transformerend vermogen versterken?*

Om deze onderzoeksvragen effectief te beantwoorden is het verstandig als evaluatoren schakelen tussen twee perspectieven, namelijk tussen het perspectief van betrokkenen (het *emic* perspectief), en dat van hen zelf als relatieve buitenstaander (het *etic* perspectief) (cp. Guba & Lincoln, 1989). Direct betrokkenen kijken met een blik van binnenuit: met hen meekijkend, en door hun ogen, kunnen evaluatoren zien hoe actoren zich organiseren en werken aan een specifieke taak, en komen barrières en kansen die zich voordoen in een bepaald domein in beeld. De evaluator die kijkt met een blik ‘van buiten’ is in staat om uit te zoomen en het geobserveerde te relateren aan bredere ontwikkelingen in het klimaatbeleid en de omgeving daarvan, bijvoorbeeld op basis van kamerbrieven, departementale beleidsplannen en -programma’s en beleidsevaluaties. De twee perspectieven vullen elkaar aan, en zijn beide nodig in het evaluatieonderzoek, en informeren de lerende evaluatie zowel wat betreft de scope en de inhoud, als de methoden en het proces. Hierin kunnen drie stappen worden onderscheiden:

**Stap 1: Identificeren van systemische barrières en condities** voor transformerend vermogen door gezamenlijk met beleidsactoren hun ervaren barrières en kansen in hun praktijk te inventariseren. Deze worden geformuleerd als zogenaamde ‘leervragen’ die tezamen een dynamische leeragenda vormen (Van Miero et al., 2010). Hier is specifiek aandacht door evaluatoren voor het ontrafelen van barrières die *systemisch* zijn: niet alledaags, maar juist institutioneel van aard, en die meer aandacht en persistentie vragen om op te lossen (Nabielek et al., 2022). In stap 1 komen zo het *emic* en *etic* perspectief samen. Stap 1 is zo gerelateerd aan sub-vragen i en ii.

**Stap 2: Ontwikkelen van gedeelde verandertheorieën voor het vergroten van transformerend vermogen** door gebruik te maken van het evaluatieraamwerk. De toepassing van het evaluatiekader (figuur 1) geeft inzicht in waar er in potentie vermogen ligt voor verandering en biedt daarmee een kader om te reflecteren op het huidige vermogen versus het potentieel

vermogen, de condities die dit potentieel kunnen vergroten en wat mogelijke stappen zijn om dit potentieel te realiseren. Stap 2 geeft daarmee de aanzet tot het beantwoorden van sub-vraag ii en iii.

**Stap 3: Ontwikkelen van gedeelde handelingsperspectieven** door de inzichten uit stappen 1 en 2 samen te brengen en te vertalen in een actie-agenda. In stap 3 worden de verandertheorieën uit stap 2 concreet vertaald naar mogelijke acties om het transformerend vermogen te vergroten. Stap 3 geeft zo antwoord op sub-vraag iii.

### **Conclusie en discussie**

Het evaluatiekader dat in dit paper wordt uitgewerkt beoogt evaluatoren en beleidsactoren samen te helpen beoordelen op welke manier er in een beleidsarrangement rondom de Nederlandse klimaatopgave sprake is van transformerend vermogen, en om te bepalen of de institutionele condities om transformerend te kunnen handelen aanwezig zijn, of in wording. Hoe de vier vermogens die samen, zo is de aanname, het transformerend vermogen uitmaken precies onderling samenhangen is een empirische vraag. De literatuur suggereert dat er sprake kan zijn van een *trade-off*, er kan bijvoorbeeld spanning bestaan tussen enerzijds systeeminnovatief vermogen en anderzijds legitimerend vermogen. Het is aannemelijk dat transformerend vermogen juist vraagt om schakelen tussen de vier vermogens en het zoeken naar balans. Met andere woorden: het evaluatiekader voorziet niet van een handreiking om het transformerend vermogen te optimaliseren. Het biedt wel een kompas bij het onderzoeken van, en tegelijk het ontwikkelen van de reflexiviteit die nodig is voor een effectief beleidsarrangement rondom de klimaatopgave. De samenhang tussen de vier vermogens is een punt van aandacht bij het toepassen van het evaluatiekader in de praktijk. Daarnaast is het relevant om het raamwerk te vergelijken met andere evaluatiekaders uit de literatuur die eveneens beogen transitie en transformatie in beeld te brengen en te ondersteunen.

Bij het toepassen van het raamwerk, tijdens de lerende evaluatie, schakelt de evaluator tussen een *etic* en *emic* perspectief. Hoe het in beeld brengen van het *emic* perspectief van direct betrokkenen vorm kan krijgen krijgt de meeste aandacht. Het borgen van dit perspectief is spannend, omdat evaluatoren hiervoor afhankelijk zijn van de bereidwilligheid en het commitment van beleidsactoren die hen een kijkje in hun keuken moeten willen te geven en openhartig durven reflecteren op hun eigen professionele praktijk. Hiervoor zal gedurende de lerende evaluatie continu aandacht nodig zijn.

Een mogelijk risico van het gekozen *practice* perspectief is dat grotere systemische structuren uit het zicht blijven (er wordt onvoldoende uitgezoomd), terwijl sommige wetenschappers beargumenteren dat juist deze structuren het meest bepalend zijn voor de weerbaarheid van een systeem (en reden waarom een transformatie niet op gang komt; Kanger & Schot, 2019). In plaats daarvan is er aandacht, vanuit het *practice* perspectief, voor de manier waarop deze systemische structuren de dagelijkse praktijk raken en beïnvloeden en, vanuit het institutionele perspectief, voor manieren om systemische barrières in kaart te brengen.

Het evaluatiekader voor het transformerend vermogen van het beleidsarrangement rondom klimaatneutraliteit zoals voorgesteld in dit paper zal op basis van ervaringen met de toepassing in de praktijk worden aangescherpt en door ontwikkeld.

## 2 Working Paper: an evaluation framework for the transformative capacity of Dutch climate policy

### **Abstract**

This background report for the PBL & VU Reflexive Evaluation of Dutch climate policy holds the status of a ‘working paper’, a pre-publication version of academic articles. It presents the scientific foundations of our evaluation framework, based on an interpretative synthesis review around the concept of a transformative policy arrangement. The Dutch government defined the goal of climate neutrality by 2050, and Dutch climate policy demonstrates the recognition that this requires interlocked transitions in almost every aspect of society. Dutch policy specifically addresses this in five sectors: the energy system, built environment, mobility, industry, agriculture and land use. We refer to the realisation of these interlocked transitions as a transformation. This transformation towards climate neutrality presents the Dutch government with a tremendous challenge. The government is in need of a policy arrangement that enacts what we call ‘transformative capacity’. In our paper, we present a framework to evaluate and improve transformative capacity of the Dutch policy arrangement around climate neutrality. We propose to analyse transformative capacity in terms of four (sub)capacities: orchestrating, adapting, system-innovating and legitimating capacity. We operationalize each of these capacities in terms of relevant actions and institutional conditions and explain the importance of reflexivity to the overall transformative capacity of both the policy arrangement and its evaluation. In addition, the paper suggests an embedded practices approach when applying the evaluation framework empirically. In a final section, we highlight how the framework helps to recognize relations between the four capacities – taking either the form of trade-offs or beneficial synergies. Concluding remarks concern implications of the embedded practices approach.

### 2.1 Introduction

In this section we explain that we focus on evaluating transformative capacity (and not any other aspect), in relation to (Dutch) climate policy, and why we do so. Resulting in the paper’s aim and research question.

In responding to man-made climate change, Dutch climate policy is directed to realizing transitions in five key societal and economic domains: the energy system, built environment, mobility, industry and, agriculture and land use. We refer to the realisation of these interlocked transitions as a transformation. According to Hölscher et al. (2018) and others (Patterson et al. 2017; Scoones et al. 2020), transformations are complex, uncertain, large-scale and non-linear societal change processes, that materialize in interlocking transitions pertaining to social, institutional, ecological and physical dimensions of socio-technical-ecological systems.

Though the term ‘transformation’ lacks conceptual precision (Hölscher et al., 2018), especially in view of what exactly is required, and who should act (Scoones 2020), the phrase is useful as it

emphasizes both the need for changes in deeply anchored social practices and the need for a sense of direction. Through its recognition of the need to change practices, transformation-oriented policy is not only concerned with complex problems but also with resolving their *persistence*, by recognizing their rooting in existing institutions (Schuitmaker, 2011; Arkesteijn et al., 2015). The sense of direction springs from transformation policies inherent normativity: transformations are geared towards “creating safe and just operating spaces to avoid undesirable system change” (Hölscher et al., 2018, p.2; see also Olsson et al., 2014; Raworth, 2012).

The persistence of problems entangled in the web of practices further fueling climate change stems from the fact that past and solidly institutionalized solutions are themselves part of the problem. For example, earlier yet still fairly routine ways of resolving, for instance, issues around food security or mobility have yielded agricultural and commuting practices which until recently were considered unproblematic. They were seen as economically efficient and (morally) legitimate, and hence hardly anyone was looking at governments to introduce new policies curtailing or redirecting such practices. But today, in light of the growing acknowledgement of the urgency to realize the climate neutrality, such policy solutions are frowned upon. This, however, does not make change easier. Although many policies and practices in different societal segments are now considered problematic and in need of change, their deep-rootedness in the institutions that produced what were until recently considered legitimate and laudable policies and practices makes change hard.

Moving towards sustainable practices that constitute a pathway to climate neutrality by 2050 requires an up-rooting of rules, routines, and discourses that are still embodied in today’s institutions, as well as associated changes in technology, economy and (citizen) behavior. Given the many societal, institutional and technological complexities and the many uncertainties concerning the behavior of the relevant systems, it is difficult to say what exactly the role of Dutch climate policy can or ought to be in driving, guiding or supporting the requisite changes. What we can safely infer from studies of past transformations, though, is that policy aimed at transformation includes fostering solutions that are generally disruptive of the existing social, technological, economic and institutional order. Hence, policies that seek to serve the climate agenda in principle aspire the discontinuation of ‘business-as-usual’. Such policies and their effects are deeply political, cannot leave untouched power struggles and value conflicts (Patterson et al., 2016), and will have to face head-on all sorts of problems that are extremely difficult to resolve (cf Bussels et al., 2013; Dresner, 2002; Kemp & Grin, 2009; Rotmans et al., 2001).

Altogether, the first analytical puzzle looks to be how Dutch climate policy relates to the reconfiguration of institutional settings that shape current policy-making and implementation practices. While the sense of urgency and political will to address climate change is growing, the policy arrangements (Arts & Van Tatenhove 2004; Arts et al. 2006) in place are still organized on the basis of logics developed over the last century (i.e., in an era when other problem framings were dominant, leading to different ideas about potential, feasible and legitimate solutions). Today’s climate policy needs to form an answer to these problems, impacting on practices whose roots are firmly fixed in the logics of the past. Research shows that current policy arrangements are, generally speaking, ill-equipped to deal with such transformations, due e.g. to over-regulation, rigid and siloed bureaucracies, sectoral fragmentation, etc. (cf. Pahl-Wostl, 2009). Until recently, climate policy concerns were entirely taken up ‘in silos’ (Visseren-Hamakers & Kok 2022, see also Hölscher & Frantzeskaki, 2020), that is, within the boundaries of established policy domains (e.g., energy, agriculture, water). This is especially true for environmental policy, in which, as Arts & Van Tatenhove (2004) have noted, a plurality of policy arrangements treats issues (that are now seen as

related) as if they belong to different ‘domains’<sup>1</sup> of policy making. Currently, we can see that new contours are being drafted, such as in view of energy, for which the Dutch government takes a complex mix of problems as a point of departure. In many domains, however, national policy actors by and large adhere to the siloed view on public problems they have been enculturated in (e.g. in view of agriculture). This is one reason why formulating and implementing policies that instigate, accelerate and/or re-direct dynamics towards transformation, also requires in-depth changes of the pertinent policy arrangements themselves. This view resonates with a growing consensus that where climate change is concerned, policymaking and policy implementation practices need to address overarching themes and issues (Braams et al., 2021). Policymakers at international, national and regional levels can already be seen developing policy arrangements that are specifically equipped to promoting change towards a climate-neutral society (cf. Kern & Rogge, 2016), suggesting that this is not a new thought. However, following the previous considerations above, the problem at stake here is of a slightly different nature: How can policymaking be arranged to optimally contribute to instigating, accelerating and/or re-directing transformation towards a climate-neutral society?

There is a second puzzle on the table, which is the focus of this working paper: the goal of realizing a climate-neutral society and its interlinked systemic questions does not only pose challenges to the way how policies are formulated and implemented, but also to how these *can* be evaluated (Ter Weel et al., 2022). As Visseren-Hamakers & Kok (2022) underscore in their study on transformative biodiversity governance, it is crucial to regularly evaluate whether implementation processes and governance mixes are still transformative. Yet, evaluating the transformative character of policy is far from a routine practice with an abundance of clear and consensually agreed upon frameworks, methods and instructions. Policy efforts to address society-wide transformation processes prove difficult to monitor and evaluate (Bussels et al. 2013). The long-term perspective of climate policy and the fact that one is unavoidably dealing with nested ‘systems’ complicate classic evaluation methods, aiming at attribution or contribution mapping, or establishing efficacy and efficiency of individual policy measures. Still, evaluation can contribute to improving the ‘merits’ of policy efforts in view of transformation (Bussels et al. 2013). It can do so, we argue, by focusing on capacities and underlying conditions that enable policy actors to facilitate, accelerate and/or redirect transformative dynamics in society (Nabielek et al., 2022; PBL & VU Athena Institute, 2021).

Thus, in this working paper, we build on research on transformative change for policy arrangements and associated evaluation practices. The paper is a pre-publication version of academic articles to synthesize and consolidate the current relevant literature, derived through an ‘interpretative synthesis review’ (Dixon-Woods et al., 2006). In contrast to systematic review methodologies, this type of literature review is explorative and iterative in nature. This suits the purpose here, since we do aim to give a complete overview of research on the topic of transformation-oriented policy and its evaluation at this stage. We rather aim to specify suitable concepts, or criteria, for analysing whether (Dutch) policy actors are taking action geared towards climate neutrality, and whether the requisite institutional conditions for performing such actions are in place, or under construction. We capture this under the label *transformative capacity*, which we

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<sup>1</sup> A policy domain is what Burnstein (1991, p. 238) calls "a component of the political system that is organized around substantive issues".

argue is best studied using a so-called ‘reflexive evaluation’ approach (Verwoerd 2022), given its added value to the actors charged with developing and implementing climate policy.

The remainder of this paper is structured around the different elements included in this objective. In §2.2 we explore the notion of ‘transformative capacity’ and further conceptualize this in terms of four interconnected yet separately identifiable evaluation criteria. Furthermore, we operationalize this in the design of an analytical framework that can guide the evaluation of Dutch climate policy’s transformational capacity. §2.3 then elaborates further how the framework can be put into use. It consists of a delineation of the objects of research (the ‘evaluand’) and of a methodical elaboration of the evaluation, which is geared to its aim: simultaneously assessing and improving the transformative capacity of Dutch climate policy. We end with reflections on the merits and limitations of our framework and future avenues to improve it.

## 2.2 Towards an evaluation framework for transformative capacity of climate policy

Synopsis of this section: In this section, we further refine our evaluation focus on transformative capacity of a policy arrangement and conceptualize the four capacities we distinguish herein, and explain why transformative capacity is strongly associated with reflexivity. This exploration forms the basis of our evaluation framework: the Transformative Capacity Flywheel.

### 2.2.1 Transformative capacity and policy arrangement

Dutch climate policy aims at realizing a climate-neutral Netherlands by 2050, and recognizes that achieving such a policy aim requires transitions in (at least) five interacting systems: energy, mobility, built environment, agriculture and industry (cf. Ontwerp Beleidsprogramma Klimaat, 2022). As mentioned earlier, we refer to the realisation of these interlocked transitions as a transformation. A transformation is to be understood as a fundamental, large-scale and society-wide change process in current ways of organizing, acting and thinking across social, institutional, ecological and physical dimensions (Hölscher et al., 2018; Scoones et al., 2020; Ziervogel, 2019). In literature, this change process is often associated with the concept of *systemic change*, or: “fundamental change in the system configuration [...] deemed necessary and implemented, putting the core of formerly established system configurations into question” (Solecki et al., 2016, p. 38).

To achieve this transformation, democratic governments need to act in sync with, and are largely reliant on, more ‘exogenous’ societal forces, such as international politics, market developments and large-scale environmental problems. Nonetheless, given its policy aim of a climate-neutral Netherlands by 2050, the Dutch government aspires to give *direction* to said transformation (Hölscher & Frantzeskaki, 2020). While transformations cannot be strictly controlled, they can be influenced – e.g. by mobilizing the driving forces and dynamics [that facilitate] transformations (Hölscher & Frantzeskaki, 2020, p. 31; Wolfram, 2016; Ziervogel, 2019).

#### **Transformative capacity**

As described above, the degree to which the Dutch government will be successful in working towards climate neutrality, i.e. in facilitating and accelerating transformation, depends for a large part on a wide variety of issues, developments and trends, many of which have to be considered as

exogenous or outside the immediate control of Dutch government. However, it also depends on the degree to which the Dutch government succeeds in developing and maintaining a *policy arrangement* (Arts & Van Tatenhove 2004; Hajer, 2003; Arts et al., 2006) that enacts what we call *transformative capacity*. That is to say, if we look at the pertinent actors, discourses, rules and resources under government control, do we actually see a policy arrangement that is able to facilitate and accelerate transformation across different systems and/or domains (Wolfram, 2016)? To address this question in the context of an *evaluation* of Dutch climate policy (which is the purpose here) we first have to clarify in more detail what exactly constitutes transformative capacity.

To further develop the concept of transformative capacity, we draw on different streams of literature that study or theorize on the role of governance or management of transformations, transitions, or persistent complex societal problems. This encompasses literature in the field of collaborative and network governance (e.g. Innes & Booher, 2003; Termeer et al., 2017; van der Steen et al., 2020), reflexive governance (Voß & Kemp, 2005), adaptive governance (e.g. Pahl-Wostl, 2009; Folke et al., 2005) and sustainability transitions (e.g. Loorbach et al., 2017; Loorbach, 2010; Glaas et al., 2019; de Geus et al., 2022; Hölscher & Frantzeskaki, 2020; Ziervogel et al., 2016).

Based on these literatures, we have identified four themes at the heart of governing of transformation. Each of these themes can be related to a distinct capacity, which we elaborate on below.

- 1) Processes of vision development and long-term goal formulation are necessary to develop frameworks and to coordinate and align priorities such that also short-term actions are made with an eye to the long-term goals (Chaffin et al., 2016; Hölscher, 2020; Kemp et al., 2007; Loorbach, 2010; Grin, 2000; Braams et al., 2021).  
> This translates into *orchestrating capacity*.
- 2) Since transformations, and societal forces impacting those transformations, are highly complex and uncertain, it is essential that the future's unpredictability and inherent unknowability is recognized, and that space is created for flexibility and adaptivity in policy action in response to changes relative to anticipated scenarios (Folke et al., 2005; Hölscher, 2020; Innes & Booher, 2003; Loorbach, 2010; Pahl-Wostl, 2009; Termeer et al., 2012).  
> This translates into *adapting capacity*.
- 3) It is crucial that agents – both in the sphere of government and society – get leeway, resources, and networks for developing (radical) novelties: new types of solutions, ideas, problem framings that can replace unsustainable day-to-day practices (Hölscher, 2020; Loorbach, 2010).  
> This translates into *system-innovating capacity*.
- 4) Legitimate policy-making is crucial for developing public support for transformation (Gupta et al., 2016; Loorbach, 2010; van Buuren et al., 2014), and criteria for what counts as a 'good' or 'just' transformation cannot realistically be achieved without work explicitly dedicated to warranting legitimacy. A transformation relies on a society's acceptance of the long-term policy goals and activities, which is more likely achieved through substantial and recognizable engagement of pertinent actors (cf. Gupta et al., 2016).  
> This translates into *legitimizing capacity*.

In addition to these four themes, transformative capacity is strongly associated in the literature with the capability to reflect on the assumptions underlying policy choices and to question them in the light of signals from implementation practice, and of changing insights into what constitutes a sustainable society and what hinders and can accelerate its realisation. If this reflective capability is



linked to the capability to adjust policy and policy commitments – time and again – in the light of newly forming insights and to creating the institutional conditions under which an appropriate policy can be shaped and implemented, then governance takes shape *reflexively* (Voß & Kemp, 2005). Reflexivity revolves around learning about how, for instance, to organize, interact and effectively resource strategies, and around applying what is learned to improve governance and policy making processes of transformations. Reflexivity is entailed in first, second and third order learning, meaning that it supports answering questions of the nature “are we doing things right?”, “are we doing the right things?”, and “how to decide what is right?” (Bateson 1972; Svare et al. 2023). Insofar as developing, adjusting and re-adjusting rules, policies, policy actor networks, working routines, dominant ideas and the like are supported by contemplating and answering such questions, then, reflexivity is ‘key to the capacity to contribute to transformative change’ (Haxeltine et al., 2017).

In summary, these four themes, together with reflexivity, provide an entranceway into the study and evaluation of transformative capacity, related to a policy arrangement. Building on these insights, we can now further refine our understanding of the transformative capacity of a policy arrangement. In the context of Dutch climate policy and its ambitious 2050 mission of climate neutrality, we here define transformative capacity as: *the capacity to reflexively create a setting which, from a national policy perspective, instigates, accelerates and/or redirects transformation towards a climate-neutral Netherlands by 2050*. To do so, transformative capacity builds upon four distinct capacities. These capacities share that they are inherently mission-focused to keep the long-term ambition in sight - they draw attention to what is need *now* for achieving climate neutrality by 2050:

- 1) *Orchestrating capacity*<sup>2</sup> (cf. Hölscher, 2020): the capacity to articulate policy goals and ambitions from a mission-focused perspective and the capacity to coordinate and align policy plans and actions towards these goals and ambitions;
- 2) *Adapting capacity*: the capacity to flexibly adapt on-going policy plans and programs towards the mission in response to surrounding changes and/or risks and/or reflexive insights;
- 3) *System-innovating capacity*: the capacity to create an institutional and social space that enables and empowers novelties and innovations in society that are relevant and viable to achieve the mission;
- 4) *Legitimizing capacity*: the capacity to legitimize policy processes (throughput/process) and resulting policy actions (output) to a diversity of stakeholders and in light of the mission.

As argued earlier, our core interest is in the transformative capacity of the concrete policy arrangement related to the Dutch climate policy (domain). As we see it, a policy arrangement’s effectiveness in giving direction to a transformation depends on the transformative capacity it enacts in the ‘act of governing’, or: in the way “actors use processes and make decisions to exercise

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<sup>2</sup> We borrow the term from Hölscher (2020), but use the term in a slightly different way. In Hölscher’s conceptualization, orchestrating capacity becomes visible in ‘the abilities of actors to coordinate multi-actor urban governance processes and foster synergies and minimize trade-offs and conflicts across scales, sectors and time’ (Hölscher, 2020, p. 75). Our conceptualization encompasses these abilities, but combines them with the ability to articulate a ‘mission’, long-term policy goals in relation to an integrated vision. This reasoning is also implied in Hölscher’s conceptualization, but it is not so clearly addressed. We do so, because governing a transformation requires continuous mirroring of policy actions to the transformation goal (i.e. long term goals). So coordinating cannot be separated from a long-term mission.

authority and control, grant power, take action and ensure performance – all of which are guided by sets of principles, norms, roles and procedures around which [policy] actors converge” (Emerson & Nabatchi, 2015, p. 15). Moreover, this coupling of transformative capacity to the act of governing highlights our agency-based conceptualization: we build on the idea that, within a policy arrangement, (policy) actors are not passively enacting rules and cultural scripts but are actively involved (individually and collectively) in interpreting and enacting broader institutional conditions. Institutions are not external to human action: “it is actors who make and remake institutions” (Lowndes & Roberts 2013, p. 174). At the same time, policy actors are structurally embedded: their capacity to act is both enabled and constrained by existing structures, or institutional conditions. This conceptualization implies we acknowledge both the role of agency – the capacity to act of policy actors in relation to the structural context in which they operate, and the role of structures in which they operate: the institutional conditions that constrain actors’ normative ideas and capacity to act.

Following this reasoning, we see transformative capacity – and the four distinct capacities – as stemming from transformation-supportive actions tied to various institutional conditions – here understood as the set of formal and formal rules that shape actors’ behavior (Lowndes and Roberts, 2013; Ostrom, 2005). A policy arrangements’ transformative capacity thus depends on the reciprocal relationship between actor’s actions and conditions within the broader institutional setting. In this context, we again wish to underline the importance of reflexivity on the part of the policy actors at issue for their governance of transformations. Reflexivity denotes “efforts at fundamentally challenging deeply entrenched societal structures and dominant ways of thinking and acting” (Loeber & Vermeulen, 2016, p. 19). This also includes ‘redirection’ or ‘reinterpretation’ of present institutional conditions (Thelen, 2009) towards conditions that facilitate transformative capacity.

In the following section we connect our conceptualization of transformative capacity, composed of four distinct capacities, to what each requires in terms of interplay between (a) actions and, (b) institutional conditions. The final section discusses the relationship between the four capacities and how their combination contributes to the ‘act of governing’ a transformation.

## 2.2.2 Four components of transformative capacity

### **Orchestrating capacity**

As explained previously, a first element of transformative capacity is orchestrating capacity. We define orchestrating capacity as: *the capacity to articulate policy goals and ambitions from a mission-focused perspective and the capacity to coordinate and align policy plans and actions across different administrative levels and domains towards these goals and ambitions* (cf. Hölscher & Frantzeskaki, 2020; Loorbach, 2014; Chaffin et al., 2016; van Buuren et al., 2013). This capacity has a temporal and a socio-organizational dimension, as it connects the need for a normative, systemic and long-term orientation (Hölscher & Frantzeskaki, 2020; Kemp & Loorbach, 2006; Pahl-Wostl, 2009) with the organizing and coordinating capacity of policy and government interventions to mobilize actors and actions across administrative levels and policy domains, and to engage societal stakeholders.

Orchestrating capacity, in short, targets to prevent policy myopia. In many cases, long-term goals in relation to climate change remain “add-on priorities to business-as-usual policy and planning’, still communicated as ‘an additional and separate aspect rather than a cross-cutting issue” (Hölscher & Frantzeskaki, 2020) – which in effect fails to appreciate the idea of the systemic nature of

transformation. Orchestrating capacity, then, is essentially about coordinating actions and creating institutional conditions that enable (policy) actors to formulate long-term goals and to work towards these goals across multiple levels and scales. Below, we give an overview of possible actions that ‘enact’ orchestrating capacity and of institutional conditions that enable (policy) actors to ‘orchestrate’.

**Table 1**  
Theoretical insights related to actions and institutional conditions for orchestrating capacity

<b>Orchestrating capacity</b>	
<p>This capacity has a clear temporal and boundary-spanning element. It entails the combination of (1) the capacity to articulate policy goals and ambitions from a mission-focused perspective, and (2) the capacity to coordinate and align policy plans and actions across different administrative levels and domains towards these goals and ambitions.</p>	
Actions	Institutional conditions
<p><i>Articulating a vision, or strategic direction (temporal dimension)</i></p> <ul style="list-style-type: none"> <li>• visioning; or formulate long-term visions to direct short-term actions (Hölscher, 2020).</li> <li>• create a shared identity and shared language (van Bommel et al., 2016)</li> </ul> <p><i>Coordinating and aligning actors, sectors, and policy goals (boundary-spanning dimension).</i></p> <ul style="list-style-type: none"> <li>• coordinate and align across actors, discourses (around policy goals and instruments), resources and organizational units (Hölscher, 2020; van der Steen et al., 2020)</li> <li>• identify synergies and trade-offs across sectoral policies and activities (Hölscher, 2020)</li> <li>• mainstream climate policy and/or connect it to other policy domains (van Buuren et al, 2013).</li> <li>• repurpose public investment and funding in relation to the strategic direction</li> </ul>	<p><i>Mission statements, or other forms of official communication explaining the need for change</i></p> <ul style="list-style-type: none"> <li>• presence of a shared, long-term and integrative strategic direction (vision) and reference points for <i>joint action across the different sectors and departments</i> (Hölscher, 2020);</li> </ul> <p><i>Rules that encourage visionary thinking and provide access, or define responsibilities, for actors with distinct backgrounds.</i></p> <ul style="list-style-type: none"> <li>• presence of visionary leadership</li> <li>• presence of a transition arena/platform that oversees the strategic mission</li> <li>• presence of legal provisions and decision making procedures (van Buuren et al., 2013)</li> <li>• appreciation of, and reward structures for potential change agents</li> </ul>

**Illustrative example: why require orchestrating capacity?**

Dutch climate policy formulates a clear mission: a climate-neutral Netherlands by 2050. However, the alignment between policy actions focusing on efficiency and relatively short-term goals and processes accelerating long-term transformation is less clear (Kunseler et al., 2022). One example is

the government obligation for homeowners to replace their central gas heating with (minimally) a hybrid heat-pump to increase the efficiency of heating technologies. This, however, could potentially slow down the transition to a fossil-free heating, since homeowners are neither obliged to install an all-electric heating nor to purchase the electricity from renewable sources.

### Adapting capacity

Long-term policy-making is by nature a myopic exercise “which by default typically involves improper projections of current trends into the future which do not foresee or discount, the likelihood of severe challenges to the status quo operation of a policy” (Nair & Howlett, 2016). Hence, mission-focused policymaking – as required for transformations – implies building both ‘robustness’ (clear goals) and ‘agility’ into policy processes. Seen the non-linear character of transformations, feedback mechanisms, etc., it is key that policy arrangements are flexible and able to adapt and improve in response to changing realities (Kemp & Loorbach, 2006; Pahl-Wostl, 2009; Folke et al., 2005).

Adapting capacity is about *the capacity to flexibly adapt and improve on-going policy plans and actions in response to changes and/or risks and/or reflexive insights towards the mission as articulated* (however ill-articulated) (Termeer et al., 2012; Folke et al., 2005; van Buuren et al., 2013). This capacity is about adapting to the constantly changing flow of problem definitions, solutions and context conditions and the ability to learn from new insights and experiences (Innes and Booher, 2003; Gupta et al., 2016). The emphasis in this capacity is on how the policy arrangement is able to leverage, change and adapt ‘internal characteristics’ and conditions following new insights from learning, monitoring, etc. (cf. Wolfram, 2016). In the following table, we sum up actions and institutional conditions connected to adapting capacity.

**Table 2**  
Theoretical insights related to actions and institutional conditions for adapting capacity

<b>Adapting capacity</b>	
The capacity to flexibly adapt on-going policy plans and programs in response to contextual changes, new knowledge, altered risk assessments, or reflexive insights, while keeping an eye on the original purpose.	
Actions	Institutional conditions
<p><i>Organize for learning</i></p> <ul style="list-style-type: none"> <li>engage in participatory learning</li> <li>mobilize and combine multiple knowledge sources (Folke et al., 2005) including counter narratives (Lawton &amp; Rudd 2014)</li> </ul> <p><i>Learn from feedback, monitoring and evaluation</i></p> <ul style="list-style-type: none"> <li>engage in first order learning (“are we doing things right?): revising policy in light of new or rearticulated information or knowledge within the set frameworks</li> </ul>	<p><i>Institutionalization of learning infrastructures and networks</i></p> <ul style="list-style-type: none"> <li>presence of a learning infrastructure that allows actors to learn from new insights and experiences in order to flexibly and creatively manage and adapt governance and policy instrumentation to the expected and unexpected (cf. Gupta et al., 2016)</li> <li>presence of cross-scale, cross-sectoral, public-private knowledge networks (scientists, practitioners, communities)</li> </ul>

<ul style="list-style-type: none"> <li>engage in second order learning (“are we doing the right things?”): revision of policy objectives and underlying argumentation, beyond previously set frameworks</li> <li>identify information gaps (Hölscher, 2020)</li> </ul> <p><i>Adapt/adjust</i></p> <ul style="list-style-type: none"> <li>adjust to new circumstances (van Buuren et al., 2013)</li> <li>develop flexible and reversible strategies (back-up systems, alternative policy options) (van Buuren et al., 2013)</li> </ul>	<ul style="list-style-type: none"> <li>multi-level learning and knowledge partnerships (Folke et al., 2005)</li> </ul> <p><i>Officially sanctioned learning practices</i></p> <ul style="list-style-type: none"> <li>boundary work is appreciated, such that policy actors can learn from practice (Metze 2010; Benn et al. 2013)</li> <li>presence of boundary spanners</li> <li>freeflowing information platform (Innes and Booher, 2003)</li> </ul>
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**Illustrative example: why require adapting capacity?**

To what extent are policy actors able to revise or refine current policy plans and instruments in response to new insights and developments? In the Dutch context, for instance, this means that the policy arrangement has room to adjust far-reaching financial choices that are made in the context of the Dutch climate fund. For example, it might be important to adjust financial choices when the contours of the future energy system are more clearly defined. This implies that reflexivity is necessary, in the form of second order learning. Future policy actions may be too much determined by previous financial choices, rather than by new insights or scientific knowledge.


**System-innovating capacity**

From a transformation perspective, policy systems and their actors need not only be able to change their own structures, but they also – and especially! - need to enable societies to transform (cf. Gupta et al., 2016), with societal transformation spanning such diverse elements as technology, culture, behavior, institutions, economy and industry. While adapting capacity focuses attention on (internal) organizational ways of learning and the ability of policy actors to change course in response to feedback (be it by events or new insights and information), system-innovating capacity turns explicit attention to what policy can do to pro-actively enable and stimulate incremental, radical and/or disruptive societal change- towards, of course, the envisioned transformation goal. This entails the ability of policy actors to identify and dismantle systemic barriers, as well as potential change agents or other types of accelerators of change. Hence, system-innovating capacity entails both (a) the ability to enable and empower innovations and novelties in normative understandings (new justifications and ideas), and (b) the ability to create institutional space for these novelties by identifying and ‘tackling’ system barriers and dismantling unsustainable practices and structures (Hölscher, 2020).

This capacity then accounts for the idea that innovations and new problem understandings are needed to replace existing unsustainable practices, and, for the idea that for innovations ‘to take off and get mainstreamed’, an institutional and social space is required that enables and encourages innovations, rather than suppressing them (Hölscher, 2020).

System-innovating capacity then is understood as *the capacity to create an institutional and social space that enables and empowers novelties and innovations in society that are relevant and viable to dismantle systemic barriers to transformation*. A number of potential actions and conditions related to system-innovating capacity can be found in the table below.

**Table 3**  
Theoretical insights related to actions and institutional conditions for system-innovating capacity

<b>System-innovating capacity</b>	
The capacity to create an institutional and social space that enables and empowers novelties and innovations in society that are relevant and viable to dismantle systemic barriers to transformation.	
<b>Actions</b>	<b>Institutional conditions</b>
<p><i>Enabling and empowering change/novelties</i></p> <ul style="list-style-type: none"> <li>• encourage and facilitate bottom-up initiative (Braams et al., 2021)</li> <li>• catalyze systemic change (Braams et al., 2021)</li> <li>• create space, support and fund ‘novelties’: innovations and experiments (Braams et al., 2022)</li> <li>• identify and accumulate small wins (Termeer &amp; Dewulf 2018)</li> <li>• facilitate processes of organizational and pedagogical unlearning (van Oers et al., 2023)</li> </ul> <p><i>Addressing persistent problems</i></p> <ul style="list-style-type: none"> <li>• challenge and question existing narratives and assumptions</li> <li>• actively identify system barriers: dismantle path dependencies and maladaptation (Hölscher &amp; Frantzeskaki, 2020).</li> <li>• withdraw support and penalize unsustainable practices (Geels, 2014)</li> <li>• stop / phase out unsustainable processes (Braams et al., 2021)</li> </ul>	 <p><i>Regulations, financial incentives and other forms of reward that allow for experimentation</i></p> <ul style="list-style-type: none"> <li>• protected and informal space for safe-to-fail experimentation (van Buuren &amp; Loorbach, 2009)</li> </ul> <p><i>Institutional drivers to escalate novel practices</i></p> <ul style="list-style-type: none"> <li>• propelling mechanisms (Termeer &amp; Dewulf, 2018)</li> <li>• good monitoring of policy trajectories for phase-out (van Oers et al., 2021)</li> </ul> <p><i>Presence of institutional entrepreneurs, actors capable to bend, transform or abolish institutional conditions</i></p> <ul style="list-style-type: none"> <li>• measures that help avoid specific actor groups to appropriate the process for their interests, and policies being trumped by the power of incumbents (Scoones, 2016).</li> </ul>

**Illustrative example: why require system-innovating capacity?**

System innovative capacity largely revolves around finding or using the traction between various actions that help to dismantle systemic barriers. How we, as a society, reshape our relationship to flying as a means of transportation provides a case in point. Starting with the novel societal phenomenon of ‘flight shame’, systemic changes might be catalyzed by, e.g., taxing kerosine (legal measure), developing alternatives for flying in the form of fast and long-distance train networks (technological measure), changing imaginaries around attractive vacation or leisure time (change in discourses), supported by institutional adaptation resulting from the exploitation of synergies

between benefits of trimming down air travel for health (exposure to air and noise pollution) and nature (nitrogen, air quality).

### **Legitimizing capacity**

A fourth sub-capacity of transformative capacity is the legitimating capacity of policy arrangements in relation to facilitating and accelerating transformations. Legitimacy is a key issue in the governing of transformations. More related to the Dutch context, this means that the transformation to a climate-neutral Netherlands by 2050 will only be possible if policy processes, actions and interventions in relation to this mission are broadly considered to be legitimate (Hegger et al., 2016; van Buuren et al., 2013). Traditionally, in relation to governance, a distinction is made between input, throughput, procedural (legal), and output legitimacy. In short, these forms of legitimacy can be conceptualized as follows:

- *Input legitimacy* concerns the degree to which a diversity of stakeholders have the opportunity to provide input to policies (Klijn & Edelenbos, 2013; Hagendorn Krogh & Torfing, 2020; Martens et al., 2023);
- *Throughput or process legitimacy* encompasses the democratic quality of the process through which stakeholders get influence in the process. Relevant qualities here are openness, transparency and accessibility (Klijn & Edelenbos, 2013; Doberstein and Millar, 2014; Braams et al., 2021);
- *Procedural legitimacy* refers to legitimacy gained by procedural accountability and predictability, i.e. the implementation of laws and procedures and how citizens feel treated by authorities (Martens et al., 2023);
- *Output legitimacy* concerns the efficacy of solutions and stakeholders' acceptance of (policy) outputs (Klijn & Edelenbos, 2013; Martens et al., 2023).

Legitimizing capacity, then, is about the degree to which a policy arrangement is able to maintain (and get) these forms of legitimacy in relation to its policy actions and processes, 'thereby ensuring public compliance with and acceptance of its policies and regulations' (Woo, 2021). A helpful distinction here, to further conceptualize legitimating capacity, is one between a conformance approach to legitimacy, and a process-oriented approach. The first approach sees legitimating capacity as the ability of a policy arrangement to ensure and secure that action is realized by conformity: the actions are in line with the strategic vision and/or transformation goal (cf. van Buuren et al., 2013). The process-oriented approach considers that this path towards the transformation goal is not that straightforward: policy actions will have to be adjusted to changing circumstances. In that view, legitimating capacity is about the ability of policy actors (and surrounding institutional conditions) to motivate changes and building up consensus and or basis of support around that change (Woo, 2021; van Buuren et al., 2013). This, in turn, hinges on the level of political and social trust an actor has: more trust gives a policy actors larger room for maneuver in initiating and complementing transformations.

We consider both these elements as important in relation to the transformation towards a climate-neutral society. However, especially process-oriented legitimacy is key in the governance of transformations: 'these processes should be managed as cooperative and deliberative processes, with clarity about public and private responsibilities, transparency of the procedures of decision-making and accountability of the final decisions' (van Buuren et al., 2013).

Following from the above, we see legitimating capacity as *the capacity of a policy arrangement to work towards legitimate policy actions, policy processes and changes herein (input), that are so recognized by the relevant diversity of stakeholders, and in light of the transformation goal itself*. Below we present a shortlist of actions and institutional conditions related to legitimating capacity.

**Table 4**  
Theoretical insights related to actions and institutional conditions for legitimating capacity

Legitimizing capacity	
The capacity to work towards legitimate policy actions, policy processes and changes herein (input), that are so recognized by the relevant diversity of stakeholders, and in light of the transformation goal itself.	
Actions	Institutional conditions
<p><i>Generate and maintain social and political trust</i></p> <ul style="list-style-type: none"> <li>empower decentralized actors (Braams et al., 2021), encourage formation of social associations (Woo et al., 2015)</li> <li>enlist alternative perspectives on the transformation (de Geus et al., 2022).</li> <li>organize broad discussion on cultural imaginaries (Braams et al., 2021; de Geus et al., 2022)</li> </ul>	<p><i>Presence of a deliberation structure, e.g. participation rules that legitimate and effectuate citizen action</i></p> <ul style="list-style-type: none"> <li>inclusive and ongoing dialogue (van Buuren et al., 2013)</li> <li>transparent procedures of decision-making and accountability of final decisions (van Buuren et al., 2013)</li> </ul>

#### Illustrative example: why require legitimating capacity?

Warranting the legitimacy of transformation-oriented policy may take various shapes and forms, since policies' legitimacy must be accounted for in multiple directions. For instance, Dutch climate policy arrangements need to be legitimate in light of both international agreements such as the Paris Agreement of 2016, and in light of considerations of justice and fairness vis-à-vis vulnerable societal groups. The issue of legitimating capacity becomes very concrete when we look at (changing) connections to the Dutch electricity net which are necessary for electrification of households and businesses. It is a question how this can be done in a fair way, as long as there are no guidelines for prioritizing the order of connections.

#### Concluding remarks

To finalize this section, we wish to end with some concluding remarks about orchestrating, adapting, system-innovating and legitimating capacity. In our conceptualization, we implicitly see the first two capacities as capacities of a policy arrangement to *internally* create conditions that facilitates transformation, by (1) alignment of actors, resources, rules and discourses *within* the policy arrangement, and (2) creating a learning environment that enables the policy arrangement to adapt and change when necessary (Hölscher, 2020). In contrast, the third and fourth capacity draw our attention to how the Dutch climate policy arrangement *links up with the broader societal environment* and thus has an *outward orientation* (Foster-Fishman et al., 2001; Innes & Booher, 2003; Gupta et al., 2016). Here, our focus shifts to how the policy arrangements succeeds in creating a *societal setting* that facilitates transformation, one in which (3) innovation and novelty is embraced



and ‘unsustainable practices’ are phased out, and one that (4) is deliberative and inclusive in relation to developing pathways to facilitate and accelerate the envisioned transformation.

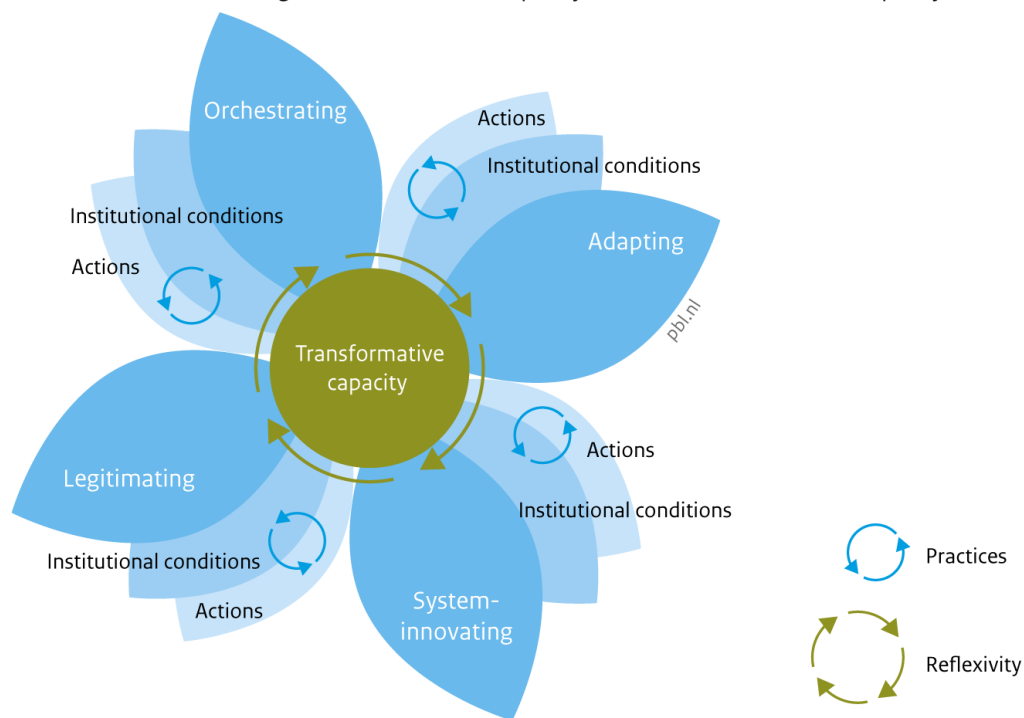
### 2.2.3 Transformative Capacity Flywheel

Each of the four capacities discussed above serve as a lens to observe and analyse particular aspects of the way a policy arrangement enacts transformative capacity. Each of these capacities have relevance on their own, because they give insight in different terrains of action and change: each of them is thus analytically distinct, and a separate part of our evaluation framework, which is presented below. (Figure 2)

**Figure 2**

#### Transformative Capacity Flywheel

A framework for evaluating the transformative capacity of transformation-oriented policy



Source: PBL/VU

While all these capacities separately give us insight in specific aspects of transformative capacity, they are also closely interrelated and interdependent. With the Flywheel, we want to visualize that all these capacities are needed to ‘enact’ transformative capacity. Change in one capacity will most likely affect the other capacities too. For instance, if orchestrating capacity is strengthened, it may equally strengthen the legitimizing capacity of a policy arrangement. This works as follows: if policy actors succeed in developing a shared and integrated long-term vision, it might be easier to generate support. In short, we assume that the four parts of the Transformative Capacity Wheel have some overlap.

A last element of the Transformative Capacity Flywheel refers to reflexivity as the assumed underlying mechanism that strengthens transformative capacity. Our evaluation framework

includes the notion that reflexivity (visualized by the green arrow in the center) is required to set the wheel -transformative capacity - in motion. Reflexivity in governing in view of climate-neutrality can be strengthened by a specific mode of evaluation: reflexive evaluation. In the next section we wish to explain this in greater detail.

## 2.3 Evaluating transformative capacity, or: putting the framework to use

Synopsis of this section: We develop an approach to empirically assess the transformative capacity of the policy arrangement for a climate-neutral Netherlands by 2050. We discuss the necessity of a reflexive evaluation approach and elaborate on how we, empirically, come to grips with a policy arrangement's capacities through combining an etic perspective and an emic perspective on the assessment of embedded practices of Dutch climate policymaking and implementation.

As stated in our introduction, the evaluation framework presented in §2.2 – the Transformation Capacity Flywheel and its four sub-capacities – is informed by an explorative and iterative literature study such as proposed by Dixon-Woods et al. (2006). Putting the Flywheel into use, however, still requires scholars to specify the 'evaluant' – the precise object of the evaluation and the methods and questions that guide the empirical analysis. Since our framework is drafted from the idea of *generality*, it can only provide a universal set of analytical elements (expressed here in capacities, conditions and actions that describe transformative policy arrangements) and the relationships among these elements (Ostrom 2005, p.28). We then still need to specify how this evaluation framework will be used within the empirical reality of the particular (policy) situation under study in this working paper: Dutch national climate policy heading towards climate neutrality.

### 2.3.1 A reflexive approach to evaluating Dutch Climate Policy

As stated earlier, we assume that reflexivity is key within the governance of transformation, it needs to be “an integrated part of governance processes” (Loorbach, 2010, p. 170). Reflexive activities are considered necessary to prevent lock-in's and facilitate the exploration of new ideas and trajectories.

Following this argument, we suggest that to enable transformative capacity within a policy arrangement, social learning and reflexivity need to be linked to the core processes in relation to the actions and institutional conditions that shape orchestrating, adapting, system-innovating and legitimating capacity. This, in turn, implies the development of reflexive evaluation formats<sup>3</sup> that critically question the current (or realized) transformative capacity of a policy arrangement vis-à-vis its potential capacity as formulated in our framework (van Bommel et al., 2016; Wolfram, 2016; cf.

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<sup>3</sup> In reflexive evaluation approaches, the evaluation's purpose is to enhance reflexivity through monitoring of, and reflection on, goals, strategies, actions, institutional and social context. (Verwoerd et al., 2021)

Sztompka, 1993). Reflexivity and reflection thus need to be put central stage in the evaluation we propose here, and are considered crucial in developing focused accelerative interventions in relation to both agency (the potentiality to act; Giddens, 1984), and structures that translate into the conditions under which that potentiality to act is made manifest in actions (cf. Wolfram, 2016). This is the case if the evaluation is targeted to instigating ‘learning’, which in this context is understood as a process of reflection on, and correction of (the assumptions underlying) policy actions in response to feedback (Loeber & Laws, 2016). Such a form of evaluation is, hence, not about assessing the progress of policies given objectives (as in impact evaluations), but about gaining insight into bottlenecks and opportunities that make policies (not) work. Such an evaluation can inform and support the actions of policy actors, and enhance what we dub in the ‘transformative capacity’.

A reflexive evaluation approach to the transformative capacity of the policy arrangement for a climate-neutral Netherlands by 2050 then seeks to address actors’ capacities, since “policymakers are no longer perceived as passive recipients of the facts, but as legitimate knowledge holders and co-investigators who play an active part in the knowledge production process”(Verwoerd, 2022, p. 25). This implies that policy actors are partners and co-learners when assessing and improving transformative capacity through applying the Transformative Capacity Flywheel, and that they can take different roles:

- provide a window onto the practice of climate policy, insofar as they can share their first-hand observations of actions undertaken and the institutional conditions in place;
- act as reflexive practitioners, who through their engagement with this evaluation will (be supported in) engage/-ing in first-, second- and third-order learning;
- act as change agents who can, with the assistance of the evaluators, themselves promote and facilitate the actions envisaged as crucial to strengthen the policy arrangements’ transformative capacity.

### 2.3.2 Unit of analysis: embedded practices

To develop our understanding of the transformative capacity of the Dutch climate policy arrangement, we propose to focus on the *embedded practices* of policymaking and implementation (cf. Nicolini, 2012). Embedded practices encompass actors’ interactions, and the activities they undertake, but also the tools and artefacts they use, etc. in relation to realizing the overarching mission of the Dutch climate policy: a transformation towards climate neutrality. Practices are always oriented, and they are performed in view of the meaning and direction that they carry – they are used to achieve certain goals (Ostrom, 1999). Moreover, our focus is on practices in relation to a specific context (box 2.3.2).

#### **box 2.3.2 Embedded practices...**

... refer to the enactment and re-enactment of rules, ideas & procedures within existing policy arrangements as well as to new/alternative practices which can achieve the status of rules over time (Lowndes & Roberts 2013, p. 94; Nicolini, 2012, p. 221).

... are rules-in-use (Ostrom 1999) rather than just ‘rules’: actor’s practices are ‘tools’ to achieve certain objectives.

... are specific to a particular political or governmental setting (Lowndes & Roberts 2013, p. 47)

... have an institutional and social, not a personal dimension. [they are] “distinct from personal habits [...]: they are recognized by actors [...] and have a collective (rather than a personal) effect” (Lowndes & Roberts 2013, p. 47; cf. Nicolini, 2012).

We follow Shove (2010) in arguing that a practice-based approach acknowledges both the institutional conditions under which actors operate and actor’s abilities to reform those conditions. Policy actors creatively interpret and work with and within these conditions, to a certain extent drawing on them consciously if they are considered instrumental or unavoidable – which is enacted in their *embedded practices*. Such an orientation helps to shed light on what was defined previously in terms of a ‘policy arrangement’, namely the agglomerate of (formal or informal) rules, discourses and resources, that rein in specific chains of policy settings and actor networks (a ‘nexus of practices’, Shove, 2003; Shove & Walker, 2007) and that not only informs action from the perspective of what is considered desirable and appropriate in a certain context, but that also co-evolves with those actions (cp. Hoffman & Loeber, 2016).

The focus on embedded practices necessary entails a preliminary focus on the mundane and day-to-day activities of policy actors, and thus allows us to obtain a thick and grass roots understanding of the institutional conditions that enable action in a specific policy situation in relation to the main goal of a climate-neutral Netherlands by 2050. As such, these practices give us insight into the extent to which transformative capacity is currently realized and into the practical concerns that possibly hinder transformative capacity.

### 2.3.3 Empirical research questions and design

The focus on reflexivity, as well as the focus on embedded practices, enables us to specify what knowledge we want to gain from the empirical study of Dutch Climate Policy. Putting the evaluation framework to work empirically then boils down to inquiring the following main research question and sub-questions:

*To what extent does the Dutch policy arrangement around the goal of a climate-neutral Netherlands by 2050 enact transformative capacity and how can it be improved?*

- *In which way do climate policy actors enact transformative capacity (cf. the actions in the left columns of the four tables in §2.2) and what challenges do they experience?*
- *In which way are the conditions of transformative capacity (cf. the conditions in the right columns of these tables) present in the climate policy arrangement?*
- *Based on these insights, which shared perspectives for action can be derived to improve transformative capacity (and underlying four capacities) of the climate policy arrangement?*

To address these questions, we analyse the transformative capacity of the Dutch climate policy arrangement from two different points of view: an *etic* research perspective, based on the analysis of documents such as parliamentary briefings, ministerial programs, policy project descriptions and policy instrument evaluations and engagement with experts in relevant fields of knowledge; and an *emic* research perspective, based on the analysis of relevant practices and issues of learning, from the perspective of policy actors that are deeply involved in Dutch climate policymaking and implementation.

The *etic research perspective* entails the development of an understanding of transformative capacity from an outsider’s (scientist-oriented) perspective. Such an approach shifts the focus from embedded practices and actor’s experiences & interpretations to more general observations and

conclusions ('zooming out'). Informed by the Transformative Capacity Flywheel, it enables evaluators to identify systemic challenges and perspectives of action that might not be immediately visible by actors deeply engrained in policymaking and implementation processes. Here, it is particularly important to keep the focus on the *systemic* dimension. To this end, we propose to make use of an analytical framework developed previously focused on institutional change and transformative policy (Nabielek et al., 2022). This framework provides means to classify experienced challenges and barriers and to categorize these as systemic (or not).

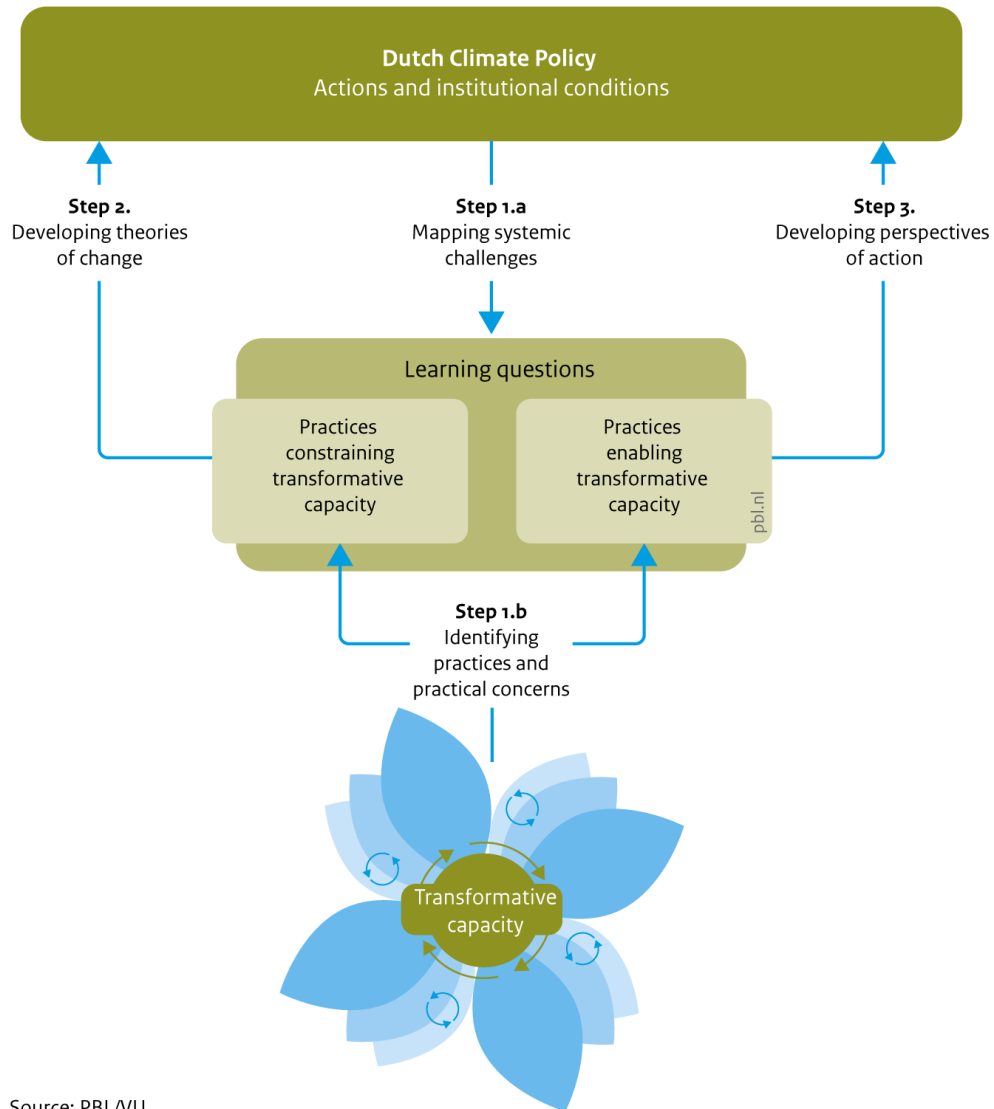
The *emic perspective* is about assessing transformative capacity from an insiders' point of view which implies tracing how particular sets of actors organize themselves and work to address transformative policy arrangements in a specific domain or around a specific, climate-related, task such as, for instance, local-level heat transition trajectories. We see this emic perspective as 'zooming in': as bringing forward the lived directionality and telos of embedded practices (cf. Nicolini 2012), and the mundane practical concerns actors experience in their work on the climate policy.

These two perspectives inform our research in a dialectical fashion: we constantly put both perspectives into dialogue throughout our research. Reflexivity then ideally is produced and strengthened through the evaluation, as a result of an iterative cycle of defining, implementing and adjusting the policy's designs and outcomes (Regeer et al. 2009; Verwoerd 2022). In this cycle, at least four steps are conceivable in terms of the main research question and related sub-questions (figure 3).

Figure 3

**Iterative cycle of learning and action**

Applying the Transformative Capacity Flywheel in the context of Dutch climate policy



Source: PBL/VU

- *Step 1*: In this step, we combine two research activities: *Mapping systemic challenges* (1.a) and *identifying practices and concerns* (1.b) to transformative capacity. By doing so, we wish to get an understanding of the current enactment of transformative capacity within the Dutch climate policy arrangement. Practices might be constraining or enabling, depending on how they relate to identified systemic challenges to transformative capacity. Jointly identified barriers and opportunities for transformation are reformulated in so-called ‘learning questions’ (Huitzing et al., 2020) in which there is specific focus on their systemic character (Nabielek et al., 2022). Step 1 combines etic and emic perspective and connects to the first and second sub-question.

- *Step 2: developing theories of change.* In the step that follows, we use the Transformative Capacity Flywheel to arrive at a shared theory of change<sup>4</sup> for how the transformative capacity of the Dutch climate policy arrangement may be enhanced. The Transformative Capacity Flywheel gives insight in potential capacity, and enabling institutional conditions and actions, and thus offers a framework to set off realized capacity to potential capacity. This facilitates the development of a theory of change. Step 2 addresses the second and third sub-question.
- In *Step 3, developing perspectives of action*, focus is upon connecting insights from step 1 and 2 to develop shared action perspectives and formulate an action agenda. The logic of change developed in step 3 is elaborated during this step into concrete options for action: what steps and interventions are actually needed to implement the desired changes? In this final step, we address the final sub-question.

## 2.4 Discussion and conclusion

The last section leads to an indication how this working paper might contribute to the further elaboration of the concerned theories. We also discuss shortly the pros and cons of our theoretical choices and framework and main implications for the empirical study of Dutch climate policy.

This working paper presents an evaluation framework - the Transformative Capacity Flywheel - for analysing the extent to which policy actors enact transformative capacity, and for assessing the degree to which the institutional conditions for performing such actions are in place, or under construction. We suggest that when applying the framework empirically, in the context of Dutch climate policy, it serves best to study the embedded practices these actors partake in, looking at concrete situations where the interplay between embedded agency and institutional conditions becomes visible. Furthermore, we argue that when putting the evaluation framework to use, reflection and reflexivity should take centre stage in the research design. The paper elaborates scientific insights that suggest that if designed in a particular manner, ‘evaluation’ can lead to a strengthening of reflexivity. In its current state, the evaluation framework is purely theoretical. Applying it in real-life settings is necessary to obtain empirical insight in its practical applicability and for its further development and improvement.

We finish with some reflections on how our framework may inform the reflexive evaluation of Dutch climate policy and on how experiences from the framework’s application may inform further scientific elaboration in the form of journal articles.

Our Transformative Capacity Flywheel provides a rich overview of actions and institutional conditions that contribute to the transformative capacity of climate policy. Particular attention is paid to the role of legitimizing capacity. We noticed that legitimation in relation to policy and governance is a challenging issue. Scholars (van Buuren et al. 2013; Braams et al. 2021) noted that

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<sup>4</sup> To emphasize, this theory of change focuses on how the transformative capacity may be increased. It is not a policy theory, i.e. a theory of change of climate policy for how climate neutrality may be achieved.

traditional conceptions of legitimacy that can be found in public administration and governance literatures fall short for properly understanding legitimation in relation to transformations. We think that the conceptualization of legitimating capacity offered by our framework provides avenues to both assess how political actors deal with the difficulties and complexities of generating legitimacy and support, and to improve scientific understanding of the concept of legitimacy in relation to transformative policies and governance.

The framework also helps to recognize several interesting, inherent and important relations between the four capacities – taking either the form of inconvenient trade-offs or of beneficial synergies vis-à-vis Dutch policy goal of climate neutrality. Per instance, a trade-off which might be difficult to cope with are possible discrepancies between enabling system-innovating capacity and enacting legitimating capacity. Strong financial incentives that facilitate bottom-up climate initiatives may have limiting effects on a policy arrangement's legitimating capacity, since these rules might reduce procedural legitimacy. On the other hand, system-innovating capacity may directly relate to the output legitimacy, e.g. when the policy arrangement shapes efficient sustainable practices. We conclude that there is no 'perfect' transformational capacity, rather there is a question of searching for a 'balance' between sub-capacities and related actions and institutional conditions. Put differently: the Transformative Capacity Flywheel offers no recipe, it does not outline how to navigate around trade-offs and towards synergies. Moreover, since its application heavily relies on reflexivity, it doesn't give a straightforward answer to the question which *mixture* of actions and institutional conditions would optimally support Dutch climate policy in accelerating or (re)directing the requisite societal transformations needed to realize climate neutrality by 2050. Our evaluation framework helps discover and understand these dynamics, and so do other frameworks in related fields of research. It might therefore be relevant not only to improve the framework with respect to potential overlaps between sub-capacities, but also to investigate the contribution of our framework in wider literatures and frameworks studying transition or transformation dynamics (Glaas et al., 2019; Loorbach, 2010; Moore et al., 2014).

In relation to our choice for a practice-based and reflexive evaluation approach, we note that the focus on practices may entail the risk that highly institutionalized settings and broader social structures remain opaque in analysis, while some scholars argue these structures may be most determinant for the stability of systems (Kanger & Schot, 2019). Indeed, fostering reflection on such challenges needs continuous attention when putting the evaluation framework to use. We propose to cover potential shortcomings of our practice-based approach by using insights from institutional literature to identify and classify systemic challenges. A second aspect to consider are potential shortcomings of the reflexive evaluation method, since this kind of evaluation requires policy actors' active participation. To warrant the actor's participation, our research design encompasses learning-action cycles that enable the participating actors to develop problem conceptualisations, theories of change and action perspectives. Here, however, might be some pitfalls, which need to be anticipated by evaluators. The empirical data harvested by a reflexive evaluation approach is not only depended on the construction of a scientifically sound framework, it is also heavily depended on the readiness and availability of policy actors to share experiences and actively contribute to knowledge generation in the course of the evaluation. To this aim, it might be necessary to develop supportive formats that foster co-inquiry and strengthen the dialogue between evaluator and policy practitioner.

Lastly, some reflections can be made about the initial idea of our evaluation to contribute to transformation-oriented policy. The evaluation framework builds on the assumption that



enhancing transformative capacity and reflexivity should stimulate transformative actions. Although we admit that having the capacity to act is not the same than performing an action, we believe that our framework provides valuable insights that evaluators can use to assist policy actors to make the policy arrangement 'work' and to act as change agents on the path to a climate-neutral Netherlands by 2050.

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