


IDI - SAI INNOVATIONS



Date: May 10th 2022



Dutch Design:
Form follows function to make them care



Design Audit Studio (DAS)
Linda Meijer-Wassenaar, Marjorie Bakker
Ruiter Janssen, Iris Korthagen



**Netherlands
Court of Audit**

Hi! We are the Design Audit Studio

Paulien
Auditor &
Illustrator

Linda
Team lead

Lizet
Design
researcher

Diny
Expert
Innovative audit
methods

Marjorie
Design
researcher

Ruiter
Design
researcher



Central question 2018:

**How can we create more
impact with our audits?**



Het kabinet verantwoordt zich in de Jaarverslaggeving slechts over een deel van de inkomsten, namelijk ongeveer € 1,9 miljard van de aanbestedingen. Aanbestedingen zijn contracten die het Rijk aangaat om inkoop te doen. Voor die contracten houdt de Rijksrekening bij of het gaat om maatschappelijk verantwoord inkoop.

Maatschappelijk verantwoord inkoop kent drie elementen: milieu, sociaal en internationale sociale voorwaarden



Milieu

De rijksinkopen stellen bijvoorbeeld grenzen aan de CO₂-uitstoot van transport of kiezen voor het gebruik van computercomponenten.



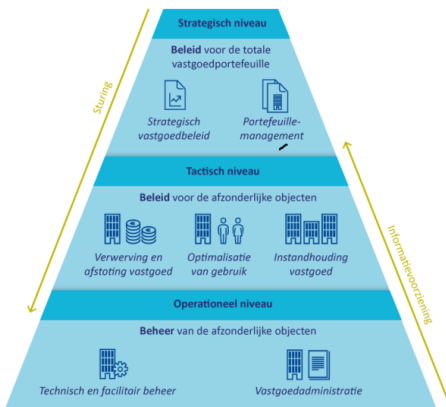
Social return

Bij de inkoop van diensten wordt het werk (deels) verricht door mensen die moeilijk werk kunnen vinden.

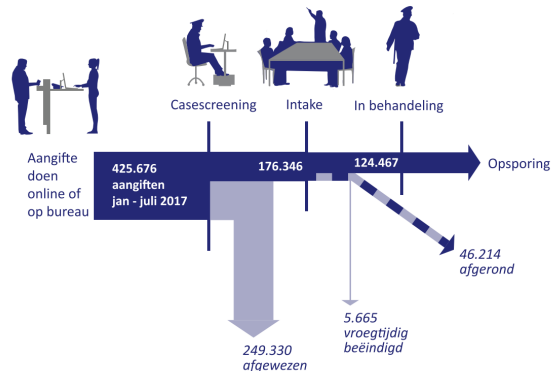
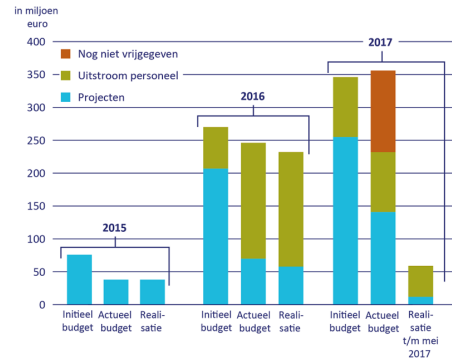
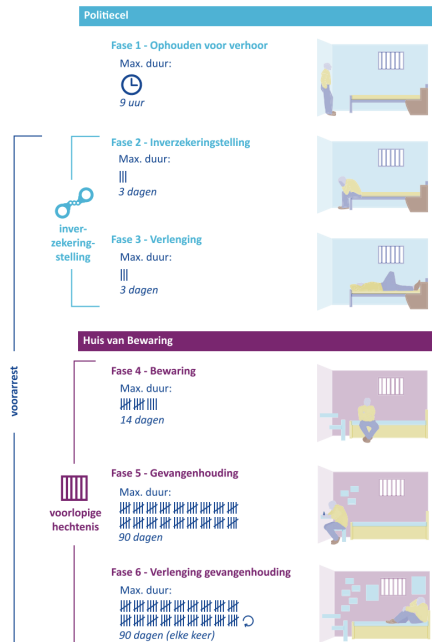


Internationale sociale voorwaarden

Bij import moet de leverancier doen wat 'redelijkerwijs' binnen zijn invloed ligt om schending van mensenrechten te voorkomen.



Visual stories



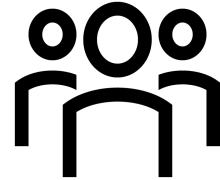
Visual stories

Our audit knowledge
in a report*
with text, data &
visual stories



Netherlands
Court of Audit

one-way



*all one-way products

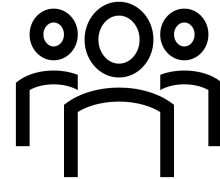
Design Audit Studio

Our audit knowledge
in any form
with text, data &
visual stories

two-way

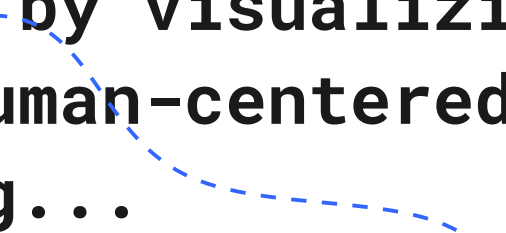


Netherlands
Court of Audit

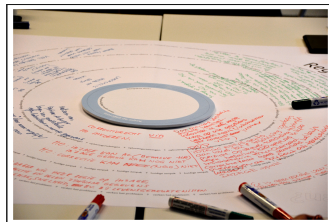
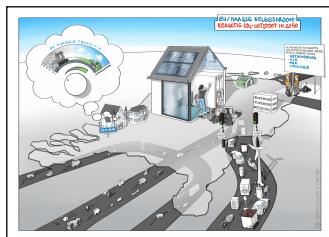
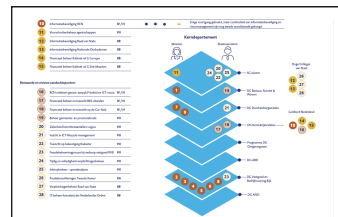


Mission Design Audit Studio

**Design impact-driven
knowledge**-by visualizing,
working human-centered and
by testing...



...in order for the NCA to use **knowledge**
to improve the performance and
functioning of national government.

[illegible]

HELPBROSURE

**Algemeen
Rekenkamer**

Eerste hulp bij ramingen

september 2012

De Algemene Rekenkamer heeft de taak om de bestuurskosten van de Nederlandse Staat te controleren. Dit gebeurt door de bestuurskosten van de Nederlandse Staat te controleren. Dit gebeurt door de bestuurskosten van de Nederlandse Staat te controleren.



Rekening

Algemeen Rekenkamer - Directie Bestuurskosten

Patroon

Hoe verhoudt het budget?

In de bestuurskostenraming worden de bestuurskosten van de Nederlandse Staat geïntegreerd in de bestuurskosten van de Nederlandse Staat. Dit gebeurt door de bestuurskosten van de Nederlandse Staat te controleren. Dit gebeurt door de bestuurskosten van de Nederlandse Staat te controleren.

Wilt u de bestuurskosten van de Nederlandse Staat controleren?



Bestuurskosten
raming



Bestuurskosten
raming



Bestuurskosten
raming



Bestuurskosten
raming

De bestuurskosten van de Nederlandse Staat worden geïntegreerd in de bestuurskosten van de Nederlandse Staat. Dit gebeurt door de bestuurskosten van de Nederlandse Staat te controleren. Dit gebeurt door de bestuurskosten van de Nederlandse Staat te controleren.

Algemeen Rekenkamer - Directie Bestuurskosten

Methode

Op wat voor manier wordt er geraamd?

De bestuurskostenraming is de bestuurskostenraming van de Nederlandse Staat. Dit gebeurt door de bestuurskosten van de Nederlandse Staat te controleren. Dit gebeurt door de bestuurskosten van de Nederlandse Staat te controleren.

Wilt u de bestuurskosten van de Nederlandse Staat controleren?



Bestuurskosten
raming



Bestuurskosten
raming



Bestuurskosten
raming



Bestuurskosten
raming

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Algemeen Rekenkamer - Directie Bestuurskosten



“

I have to change to
stay the same.

”

Willem de Kooning

Painter & graphic artist (1904-1997)

“

Today's problems are
**OPEN, COMPLEX, DYNAMIC,
NETWORKED**





we need new thinking

”

Kees Dorst

professor Design Innovation UTS

Today...

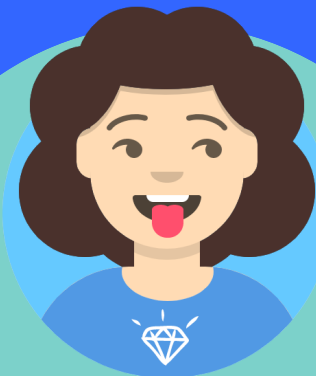
- Short introduction of speakers
-  Theory - form follows function
-  5 minute break
- 3 cases
-  **Mentimeter**
- Lessons
-  Questions



Linda

Hi, I am Linda Meijer-Wassenaar

- Social Science (MSc-2007)
- Design Research (MA-2018)
- Auditor since 2007
- Visuals in audits since 2013
- Initiated the DAS in 2018
- Lecturer visual storytelling since 2020



Linda

I



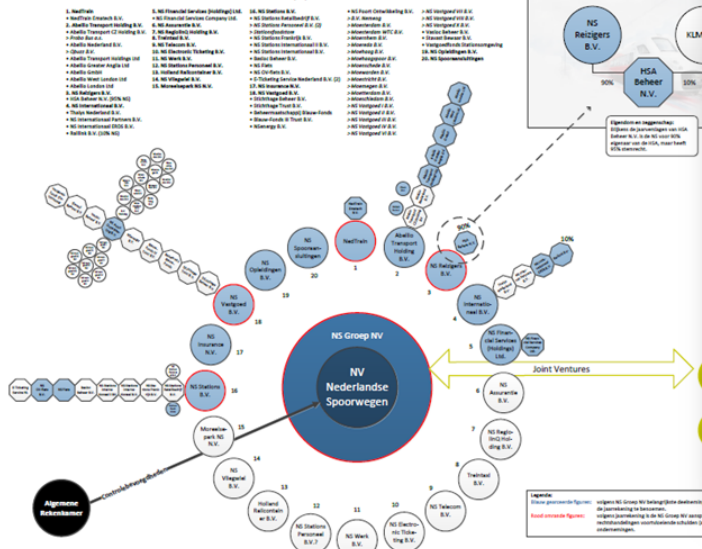
DESIGN

because...

I love
visualizing
information
and unravel
complexity...

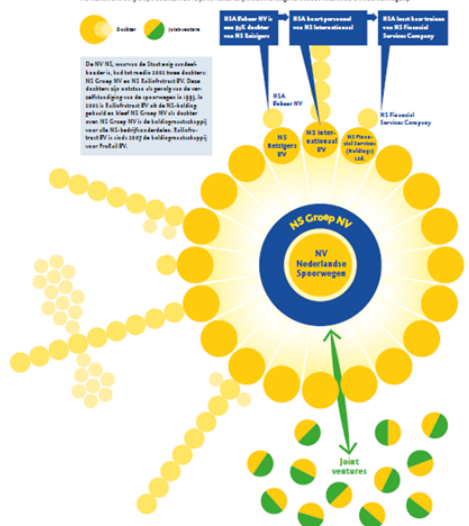
(concept, opgesteld in kader van verkennend onderzoek HSL-Zuid/Fyra, december 2013)

In onderstaand overzicht zijn de volgende 20 dochters van NS Groep NV - in casu kleindochters van NV Nederlandse Spoorwegen - opgenomen, inclusief 3 kleindochters en 25 achterkleindochters en exclusief 18 Verenigingen van Eigenaren. Het gaat om 100% dochters, mits anders vermeld.
Bron: www.company.info



NS en dochters

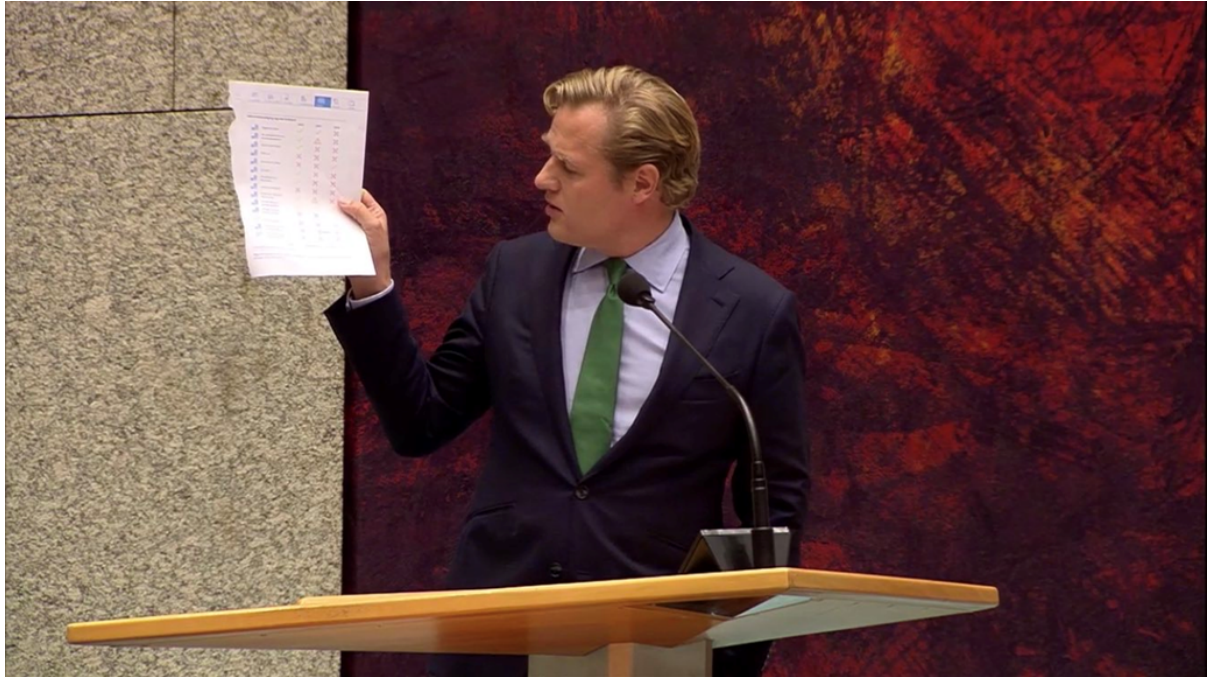
NS bestond in 2017 uit 76 dochters en 11 joint ventures (samenwerkingsverbanden met andere ondernemingen).



Legende:

Blauw gekleurde figuren:	volgens NI Groep WJ belangrijke deelnemingen en dochters om in de jaarrekening te bezemen.
Rood gekleurde figuren:	volgens jaarrekening is de NI Groep WJ aansprakelijk voor de uit rechningsbelangen voortvloeiende schulden (art. 803 §201a) van deze deelnemingen.

and I love
to make
people
care!





Marjorie

Hi, I am Marjorie Bakker



Strategic product design (MSc),
Technical university of Delft



Service designer & innovator,
Design studio 'Ideate'



Design researcher, Netherlands
Court of Audit.



Marjorie

I



DESIGN

because...

I love to
empathize
and
connect...



and I love
to create.





Ruiter

Hi, I am Ruiter Janssen

- Graphic Design (BSc) 2009
- Design (MA) 2013
- Independent information design practice 2009 - 2021
- Design Researcher at the Netherlands Court of Audit since, May 2021



Ruiter

I



DESIGN

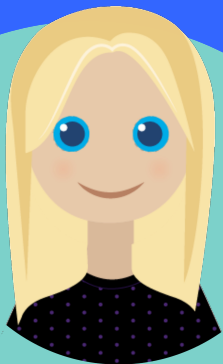
because...

I love to let
the data tell
the story.



• •

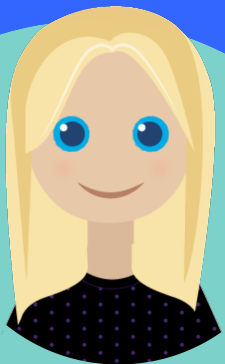




Iris

Hi, I am Iris Korthagen

- PhD in Public Administration (2015)
- Project leader at Technology Assessment institute (Rathenau Instituut) (2015-2019)
- Since 2019: NCA, team leader in research program digitalisation



Iris

I



DESIGN

because...

I love to make
people think
about
findings...



and I love to
have / organise
conversations
around
findings.



"to **help improve** the performance
and operation of central government and
the institutions associated with it.'

A history of DESIGN

“

I have to change to
stay the same.

”

Willem de Kooning

Painter & graphic artist (1904-1997)

“

Today's problems are
**OPEN, COMPLEX, DYNAMIC,
NETWORKED**

we need new thinking

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Kees Dorst

professor Design Innovation UTS



Design





Louis Sullivan

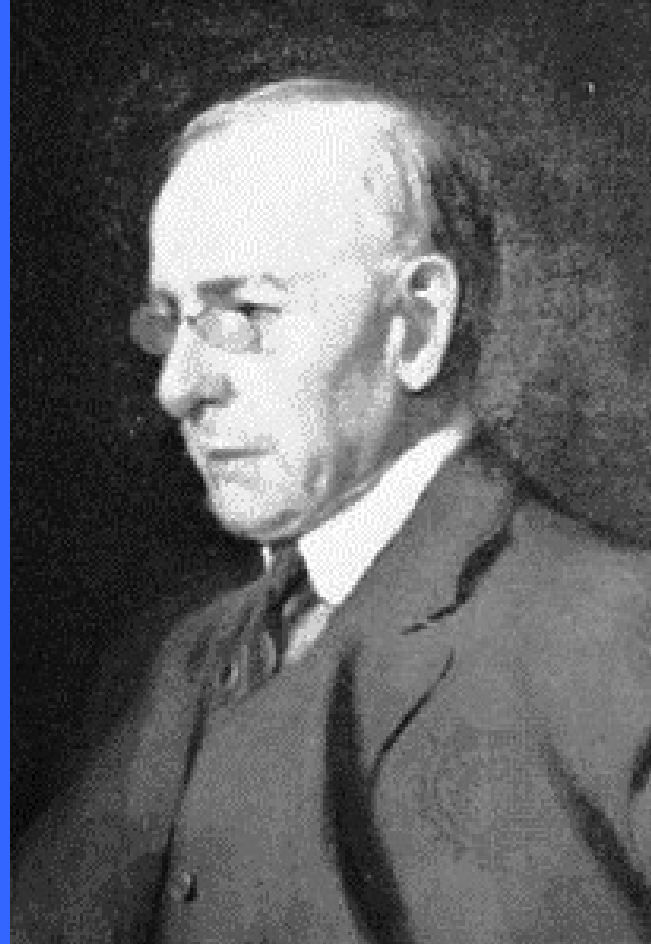
American architect, 1856-1924

"Whether it be the sweeping eagle in his flight, or the open apple-blossom, the toiling work-horse, the blithe swan, the branching oak, the winding stream at its base, the drifting clouds, over all the coursing sun,

FORM ever FOLLOWS FUNCTION, and this is the law. *Where function does not change, form does not change....*

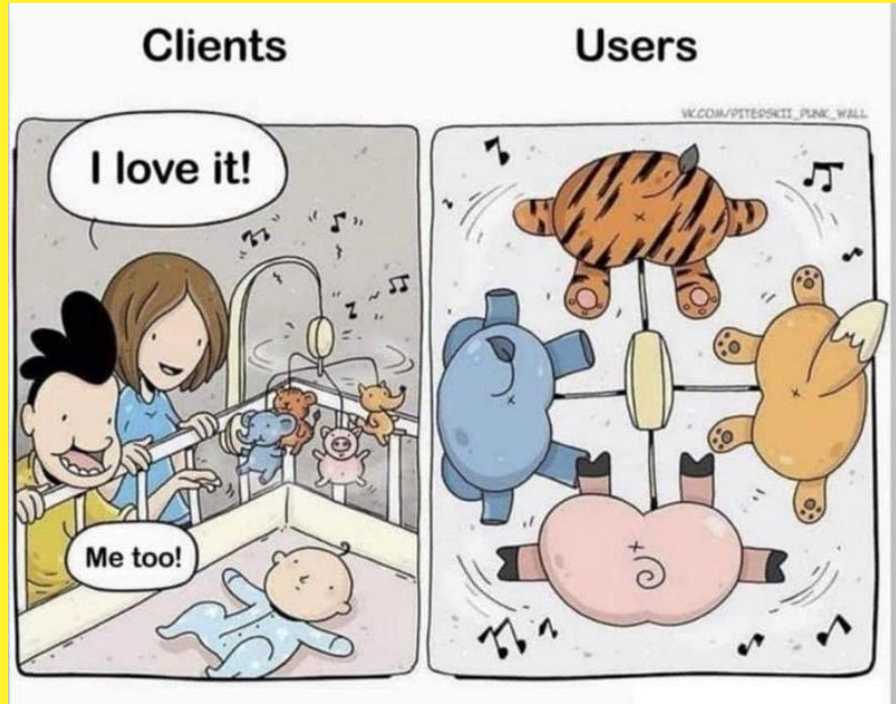
It is the pervading law of all things organic and inorganic, of all things physical and metaphysical, of all things human and all things superhuman, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, that form ever follows function. This is the law."

(essay: The Tall Office Building Artistically Considered (1896))



Which means: does your 'form' work?

What about yourself? Do you love your audit report? And? Did you have impact?



**FORM
FOLLOWS
FUNCTION**

to inform
to engage
to start a dialogue
to cocreate
to educate
to make them care
to ...

FUNCTION

FORM

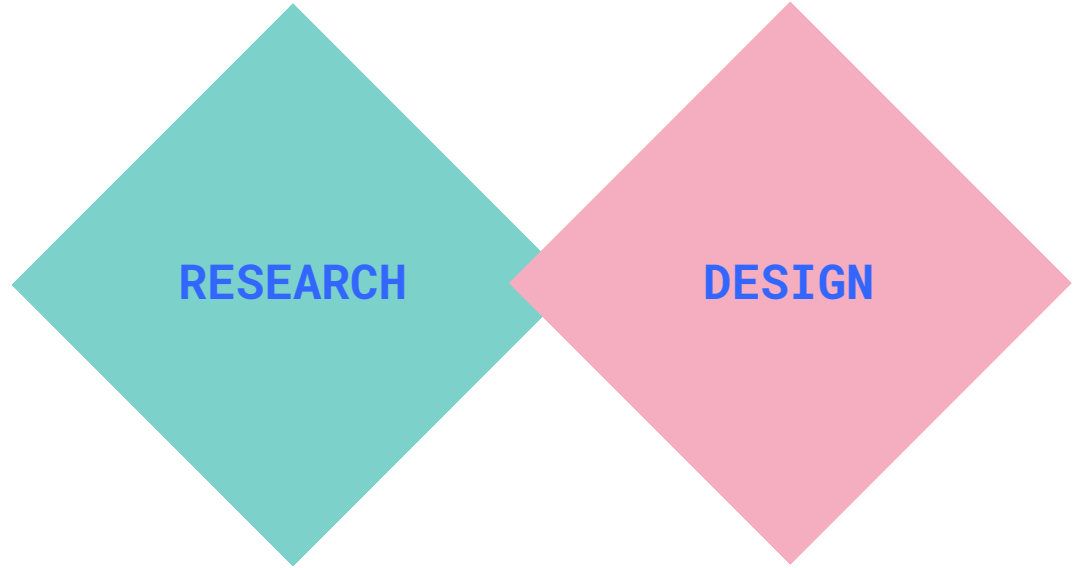
symbols

products

interactions

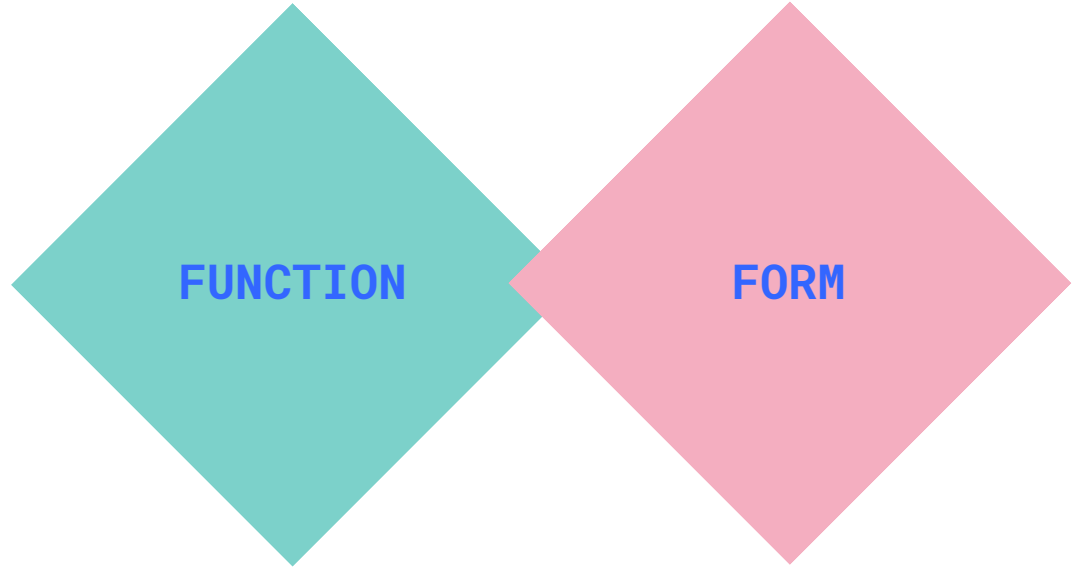
systems

**New
thinking
& new
working**



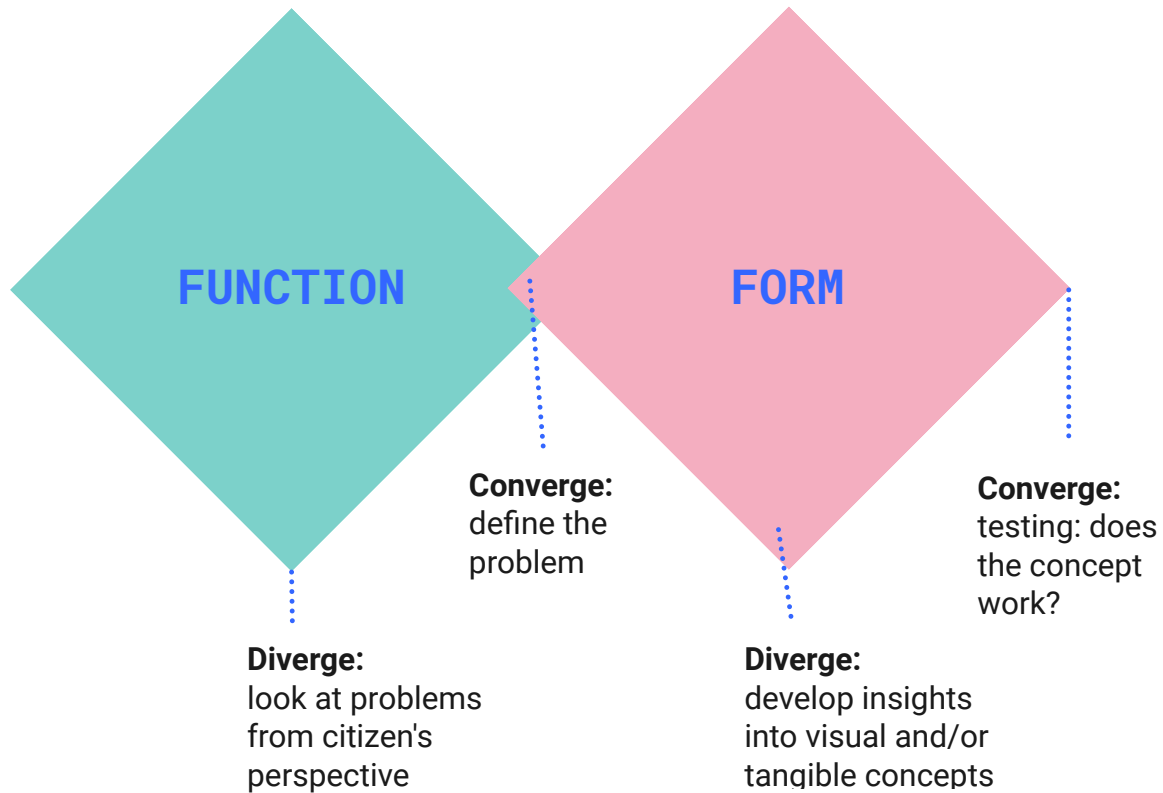
**Based upon:
Double diamond
UK Design Council**

New
thinking
& new
working



Based upon:
Double diamond
UK Design Council

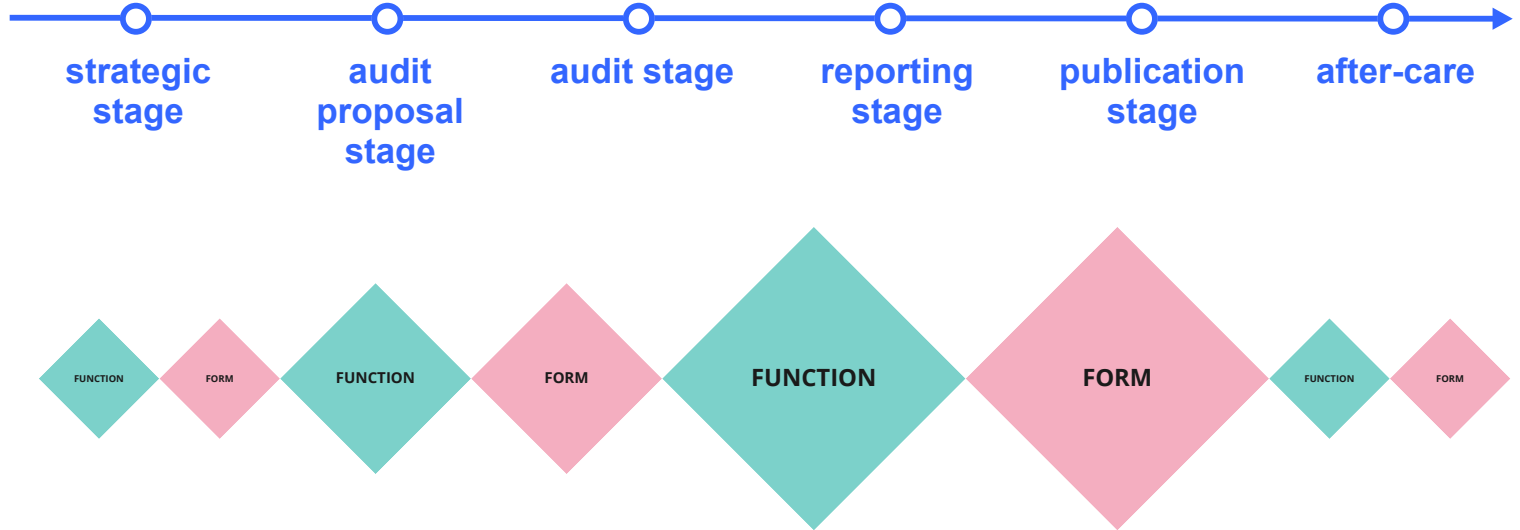
New
thinking
& new
working



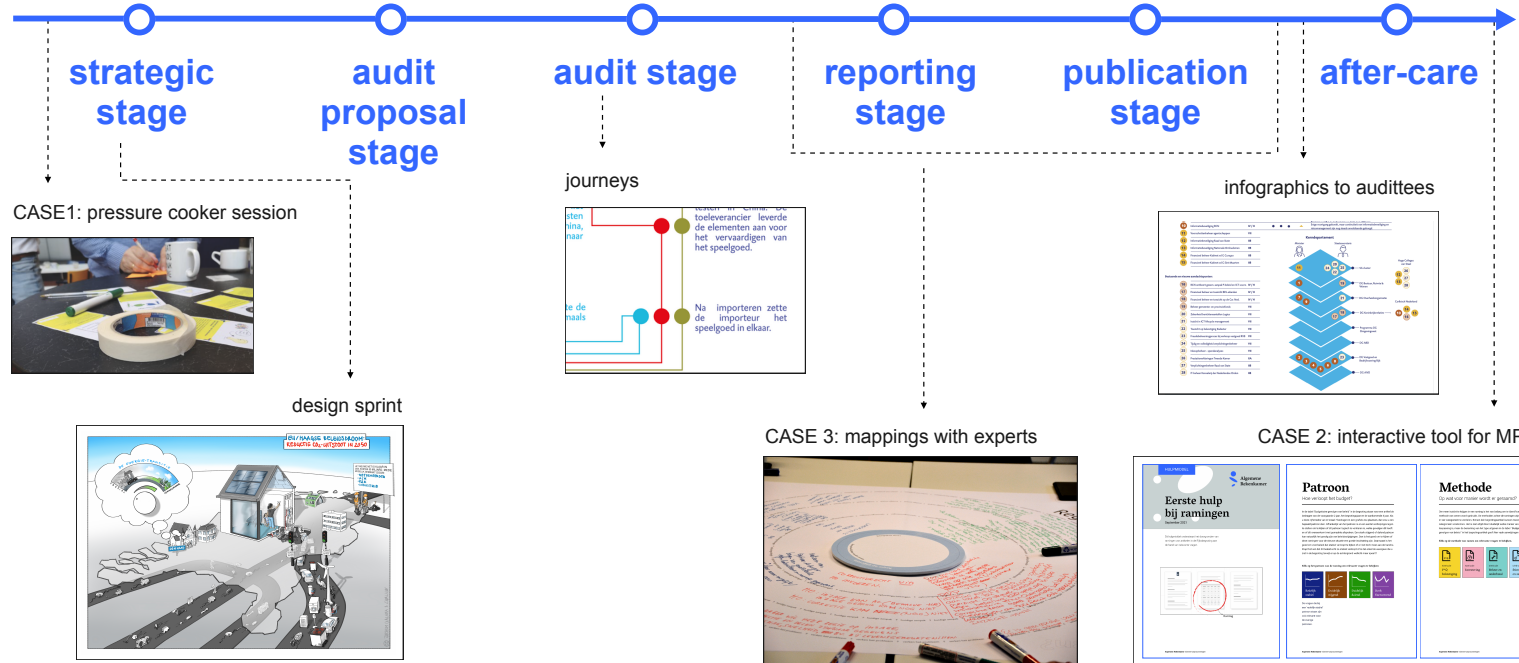
The Netherlands Court of audit: stages



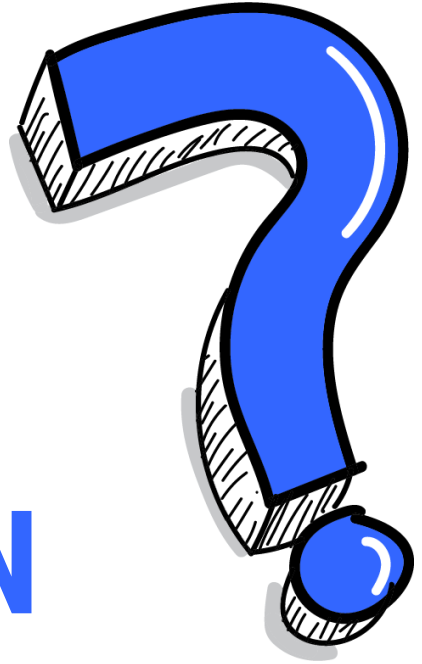
Form follows function cycles



Adjust form to stage of audit proces



**FORM
FOLLOWS
FUNCTION**



Our three cases

1. Co-creative sessions: how to create 'form follows function' together
2. First aid with forecasting: how to support MPs to improve the quality of budgeting
3. Chip in method: how to stimulate the collaboration between government agencies

CASE 1

CO-CREATION

New and shared perspectives
emerge when you 'co-create'



Practical examples on how to use co-creation in our daily audit work

1. Dashboard / factsheets ideation Energy Transition
2. Proposition new program Digital Government
3. All kind of canvases

1. Energy Transition Dashboard

**FORM
FOLLOWS
FUNCTION**

FUNCTION: spark a good conversation on why we should or should not create a dashboard on energy transition

FORM: sketchy data visuals that might be part of the dashboard/factsheets

The photograph shows a workshop environment. A person is seated at a wooden table, writing on a large sheet of paper. A cardboard box filled with markers and sticky notes is on the table. A cup of coffee is also visible. A large sheet of paper displays a hand-drawn bar chart titled 'ENERGIETRANSITIE' and 'GEREALISEERDE UITGAVEN'. The chart shows data for 'FOSIEL GAS' and 'CO2 Reductie (simulatie)' across three years: 2020, 2023, and 2029. The bars are colored in shades of green, yellow, and red.

no tech :-)

Welke vraag heeft TK?

Step 1 Empathize

*"What would
MPs want to
know about
ET?"*



Step 2 Create

*"How would a
visual answer
look like?"*



Step 3 Share

*"What did we
come up
with?"*



Step 4 Choose

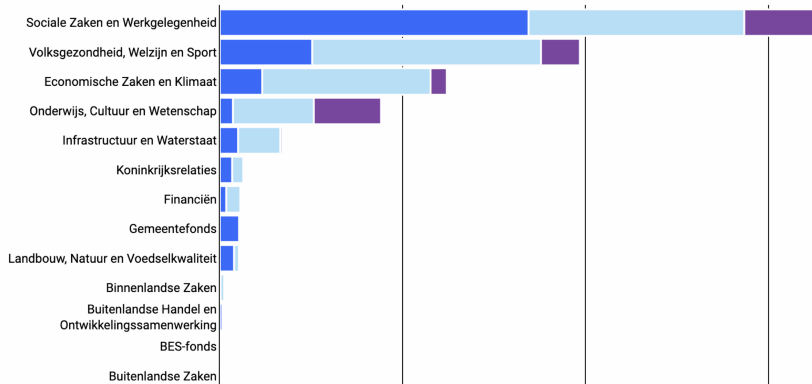
"Which visual answers are feasible?"

Type financiële stromen

De financiële stromen van het Rijk zijn hier uitgesplitst naar uitgaven, verplichtingen en ontvangsten. *Uitgaven* zijn geldbedragen die het Rijk uit de schatkist betaalt en *verplichtingen* de bedragen van nog te verrichten betalingen die het Rijk heeft toegezegd of is overeengekomen. Verplichtingen per maatregel worden niet altijd gemeld. Daarom wijkt het bedrag bij verplichting soms af van wat er bij uitgaven staat. *Ontvangsten* zijn geldbedragen die de schatkist ingaan en laten we apart in het tabblad 'ontvangsten' zien. Deze informatie betreft 'begrote' financiële informatie, dus wat het Rijk verwacht aan financiën. Het vertrekpunt zijn de begrotingen van de ministeries (de zogenaamde 'begrotingshoofdstukken'). Informatie over de 'gerealiseerde'

[Begrotingshoofdstukken](#)
[Steunpakketten](#)
[Doelgroepen](#)
[Instrumenten](#)
[Uitvoerders](#)
[Ontvangsten](#)
[Tabel](#)

Begrote uitgaven steunmaatregelen naar begrotingshoofdstuk (in miljard euro)

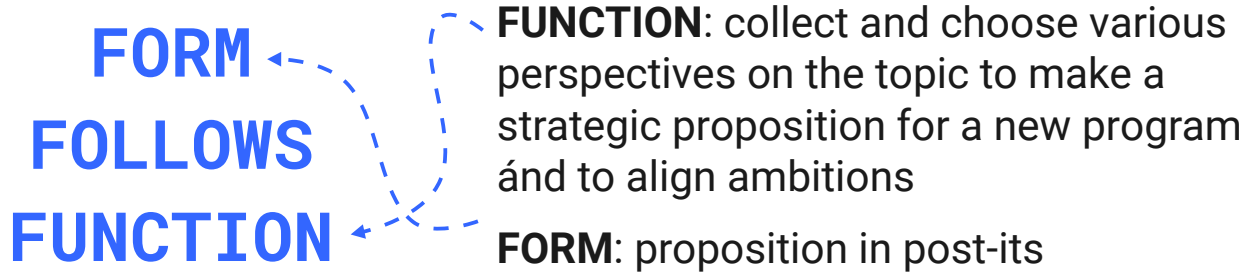


Step ?? Dashboard

*A lot of steps
need to be
taken before
creating a
dashboard
like this*

But it takes a
first step...

2. Proposition new program Digital Government



STEP 1

"How might we add value?"

STEP 2

"Why should WE do this?"

STEP 3

"What can we do to create impact?"

STEP 4

"What are the best interventions?"

STEP 5

"What new knowledge will emerge?"

STEP 6

"What four topics will we suggest?"



STEP 1

"How might we add value?"

STEP 2

"Why should WE do this?"

STEP 3

"What can we do to create impact?"

STEP 4

"What are the best interventions?"

STEP 5

"What new knowledge will emerge?"

STEP 6

"What four topics will we suggest?"

Diverge

Converge

Diverge

Converge

Diverge

Converge



PROCESS

2 facilitators

FUNCTION

18 IT auditors
Chief Information Officer
Director

FORM

1 proposition
in post-its



3. Various canvases to use:

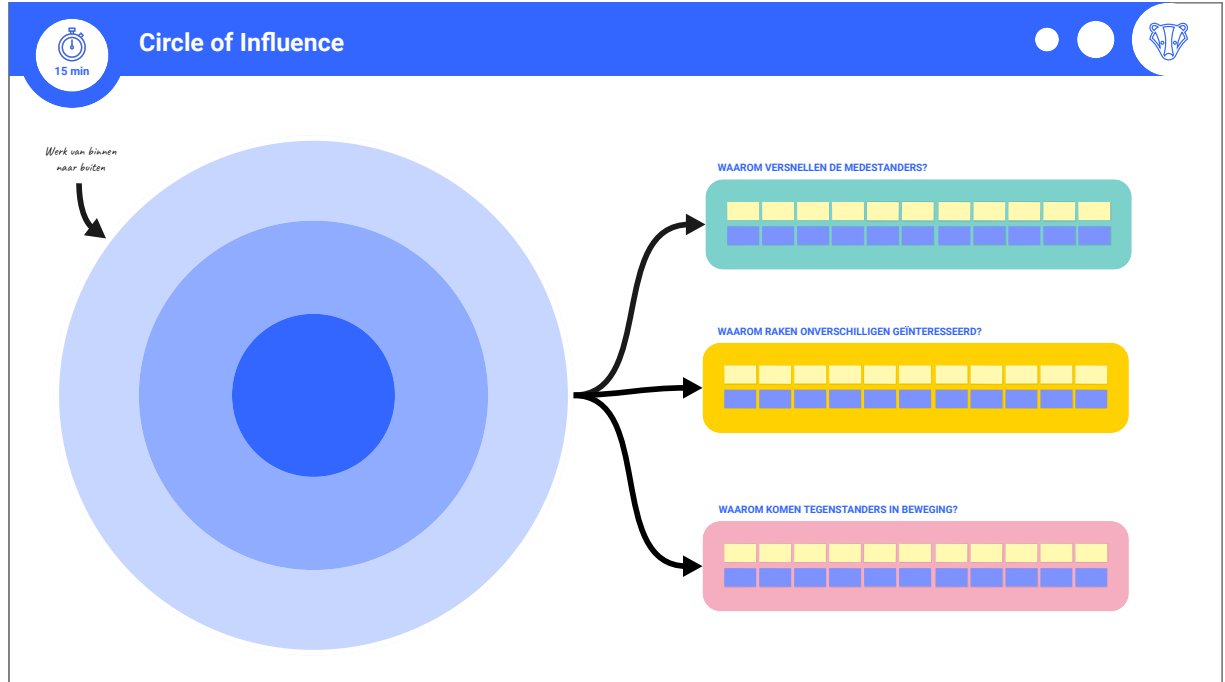
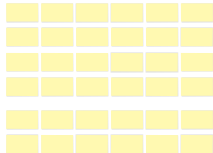
Instructie

Welke stakeholders kunnen het systeem veranderen?

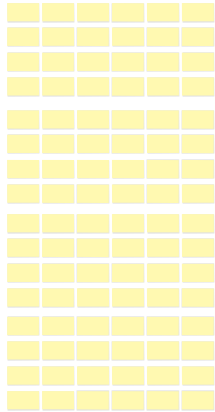
Plaats de stakeholders in de juiste cirkel links op het werkveld.

- Hoe zorgt 'onderwerp' voor:
- Medestanders >>> versnelling
 - Onverschilligen >> vooruitgang
 - Tegenstanders > beweging

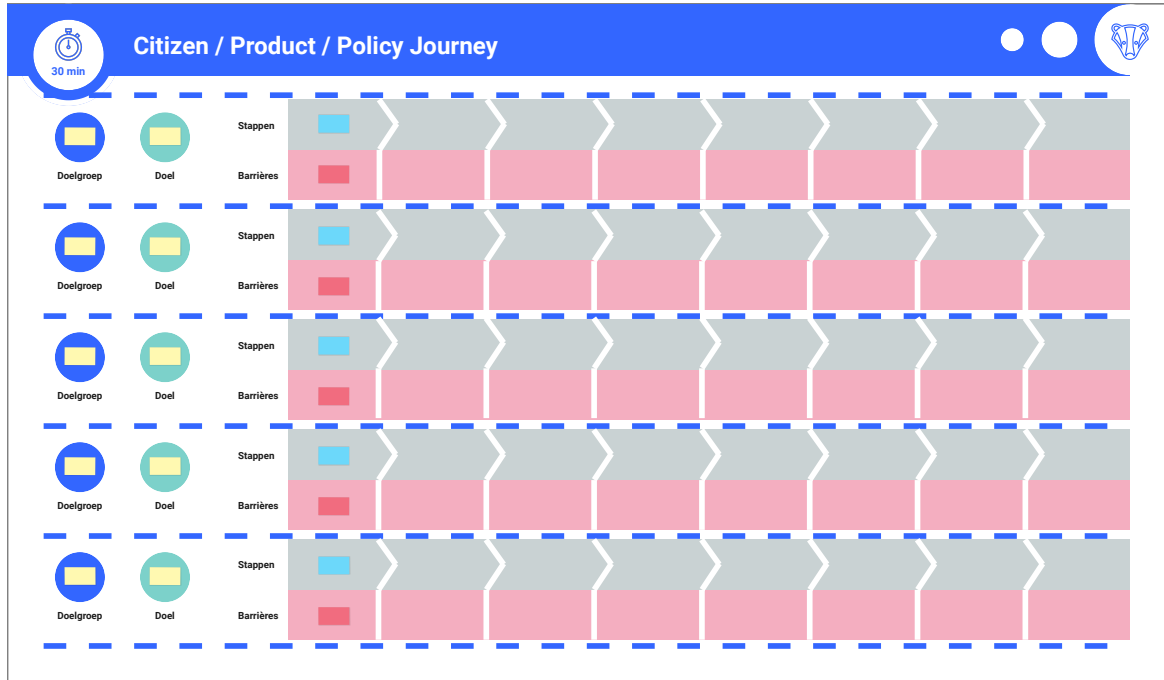
- Verplaats je in het hoofd van een medestander, een onverschillige en een tegenstander die jullie rapport straks leest. Ga dan naar de vragen boven de blokken rechts. Vul 1 antwoord per vraag in op een gele post-it en geef aan welke actor je in gedachten hebt.
- Welke impactkansen zijn er nog? Ga in duo's in gesprek en kies er twee. Vul die in op de blauwe post-its.



3. Various canvases to use:



3. Various canvases to use:



CASE 2

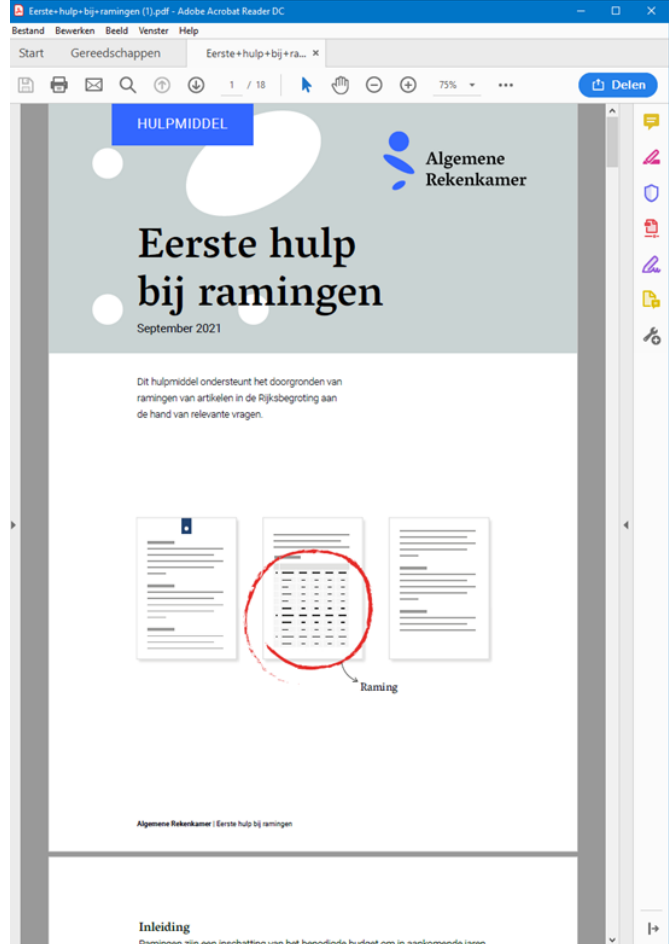
INTERACTION

A tool to improve
understanding by MPs

Raming

Tool: first aid for multiyear forecasts

- A tool in addition to a report about multiyear forecasts
- **FUNCTION:** help Dutch MP's better understand multi-year forecasts with the aim of improving the quality of the forecasts
- **FORM:** an interactive PDF



What I would like to share with you

- What is a multiyear forecast?
- What did the design process look like?
- How does the tool work?

A multiyear forecast

- Each ministry divides its budget over different topics
- Each topic is given a multiyear forecast
- Always a total of 7 years: 2 years back, the current year and 4 years ahead

2022

2021 2023

2020 2024

2025

2026

	2020	2021	2022	2023	2024	2025	2026
Verplichtingen	6.455.038	6.618.290	6.614.646	6.412.070	6.418.938	6.418.913	6.510.221
Programma-uitgaven	6.494.298	6.612.117	6.615.742	6.510.020	6.515.421	6.512.680	6.510.221
Waarvan juridisch verplicht			100%				
31.2 Bekostiging Politie							
Bijdrage ZBO's/RWT's							
Politie	6.332.513	6.310.832	6.417.990	6.212.491	6.217.752	6.215.011	6.212.552
Politieacademie	3.009	3.005	3.005	3.005	3.005	3.005	3.005
Bijdrage medeoverheden							
brandweer- en politiekorps (BES)	27.996	26.124	27.311	27.312	26.420	26.420	26.420
Opdrachten							
Taaitolken	8.577	11.369	11.369	11.369	11.369	11.369	11.369
31.3 Kwaliteit, arbeidsvoorwaarden en beheer meldkamers							
Bijdrage ZBO's/RWT's							
Internationale Samenwerkingsoperaties	9.764	11.588	11.588	11.839	11.839	11.839	11.839
Beheer meldkamers	198.948	206.757	203.543	203.503	204.355	204.355	204.355
Overige Bijdrage ZBO's/RWT's	858	871	892	892	892	892	892
Bijdrage medeoverheden							
Bijdrage in/iv de kwaliteit van de politiezorg	808	1.174	834	850	850	850	850
Subsidies							
Opsporing	2.300	2.362	2.362	2.362	2.362	2.362	2.362
Stichting Arbeidsmarkt en Opleidingsfonds Politie	3.473	3.500	3.601	3.601	3.601	3.601	3.601
Overige Subsidies	714	1.168	550	550	550	550	550
Opdrachten							
Providers	8.367	10.236	10.304	9.852	9.852	9.852	9.852

Example

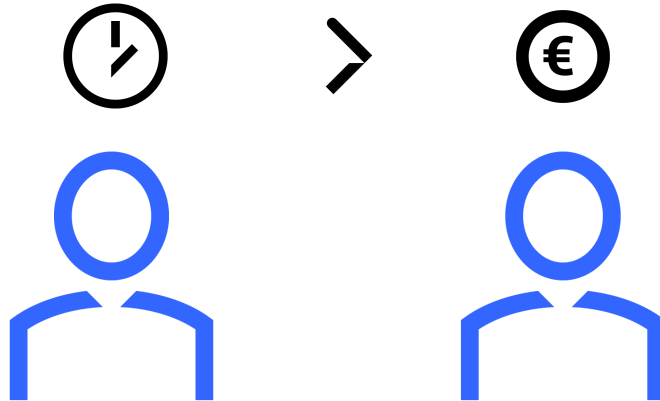
Annual financial contribution for universities

Budget
(5 Billion)



Example

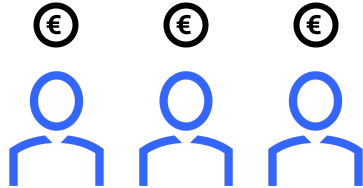
The university receives a contribution for every student



Example

Define the budget

Amount of students

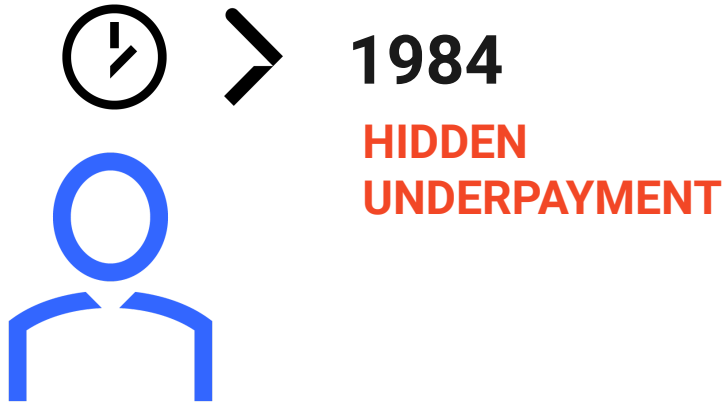


Budget
(5 Billion)



Example

When was the last time it was investigated how much time an employee spends on a student?



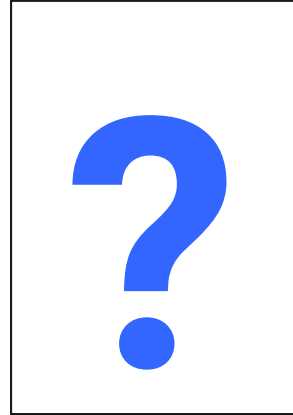
The challenge

- Each estimate seems objectively calculated but is actually highly politically charged.
- Understanding the underlying calculation is essential to decide whether the estimate is realistic.
- The Dutch constitution states that MPs must annually approve the budget.
- Dutch MPs are under high work pressure and there is a high turnover among MPs.

How can we make this complex matter more accessible?



Classic 'paper' report



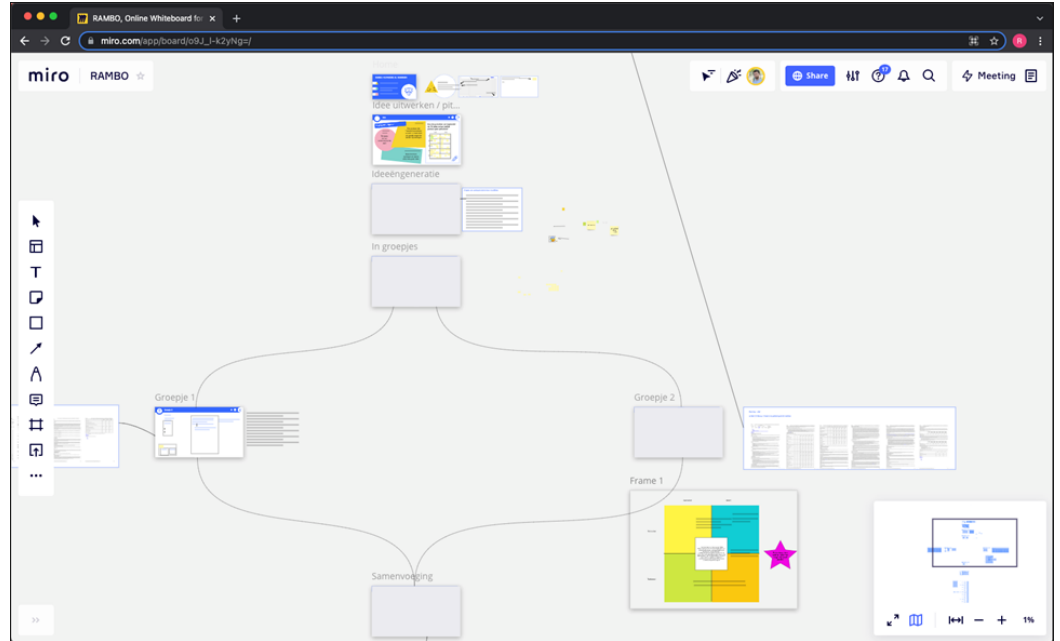
Additional product

**FORM
FOLLOWS
FUNCTION**

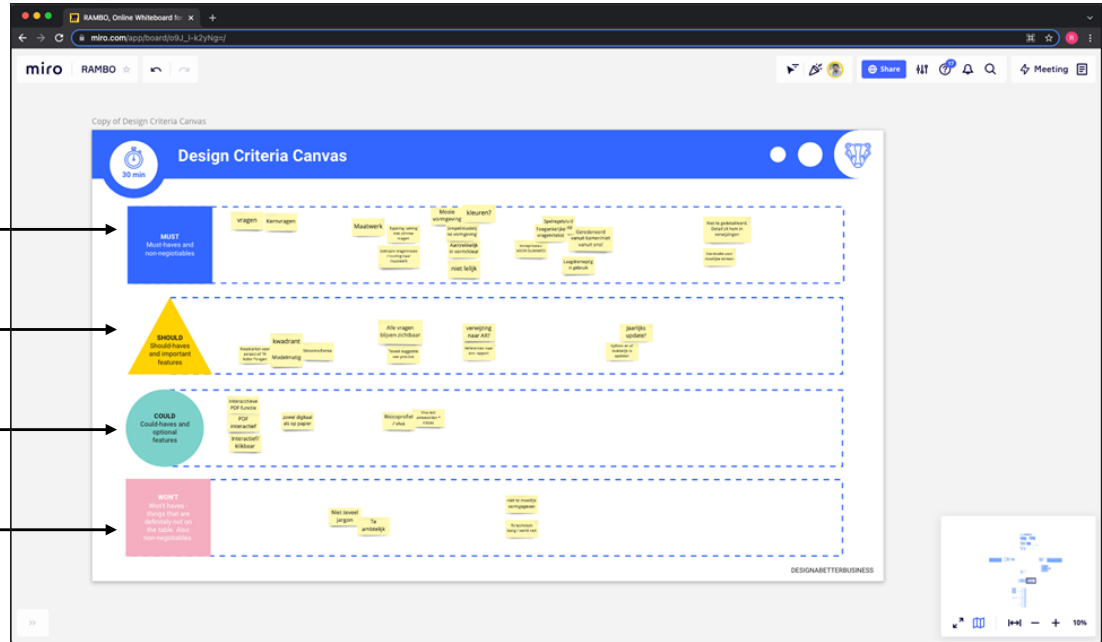
Function = to help Dutch
MP's better understand
multi-year forecasts

Design process

- Brainstorm in Miro
- 6 auditors and 2 design researchers
- Result in multiple concepts



Determine the design criteria



Design

- Sketching
- Prototyping
- Testing

Rambo

WAT

TITEL

HOE

VERY OLD

30+ v. Krogen, einige befruchtete.

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6. Signal

(2) 9.00, 1

③ Dalmanella

$$3 \overline{) 3.0}$$

③ stabil

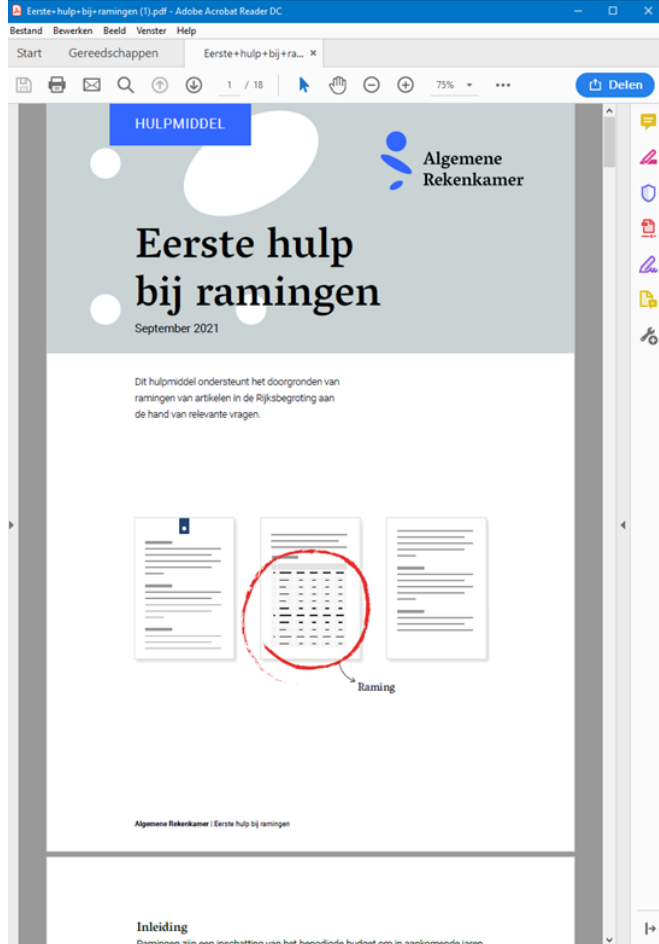
7) sl. & sol.

④ flachsend

- Raminggeleetheid
- Testen bij masterclass

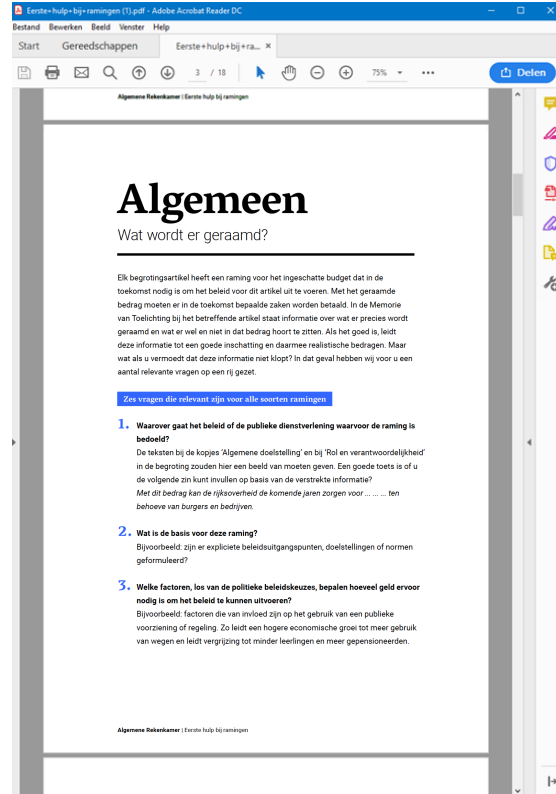
Result

- Interactive PDF
- Generate specific questions for separate forecasts

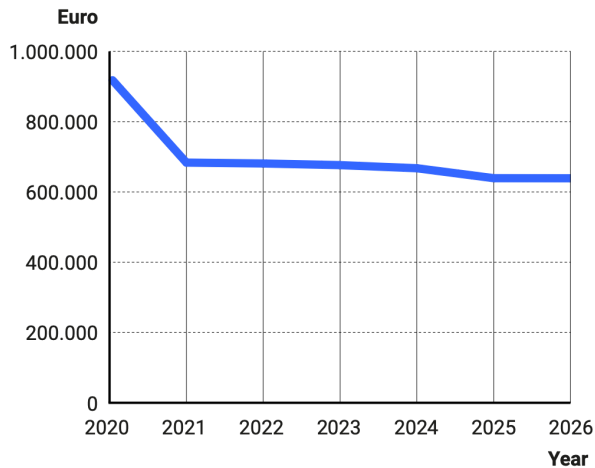


General questions

- **Example question:**
are the assumptions
and data used to
prepare an estimate
correct and current?



Coarse/ pattern



Redelijk
stabiel



Duidelijk
stijgend



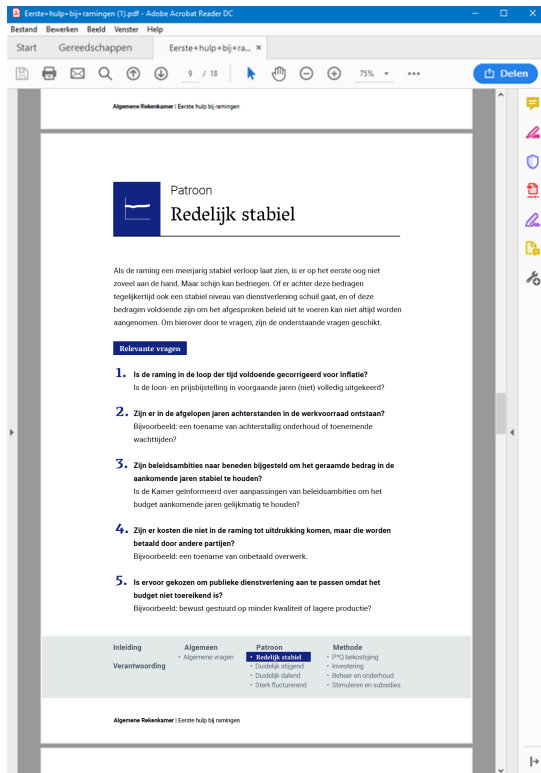
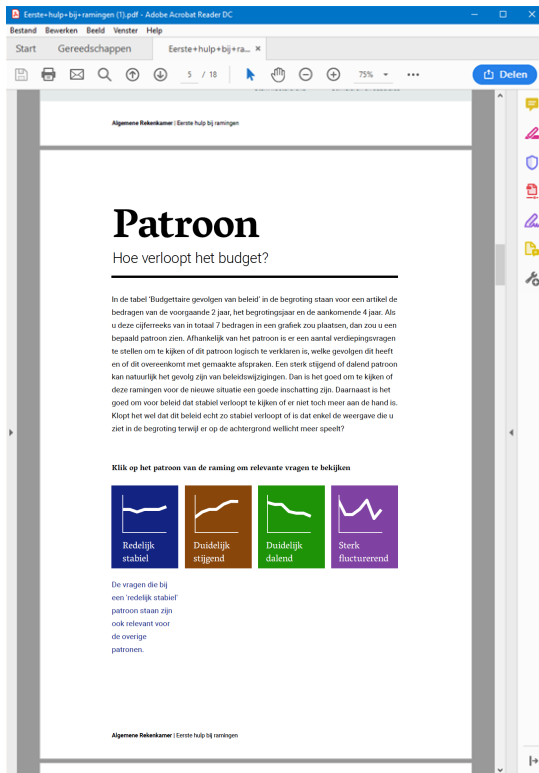
Duidelijk
dalend



Sterk
fluctuerend

Coarse/ pattern

- **Example question:**
Have there been any backlogs in the workload in recent years?



Methods

- What kind of expense?



Methode
 $P*Q$
bekostiging



Methode
Investering



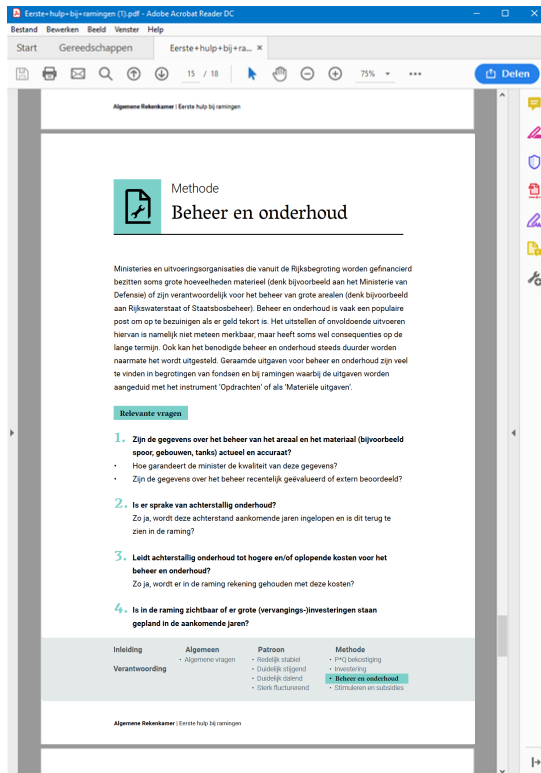
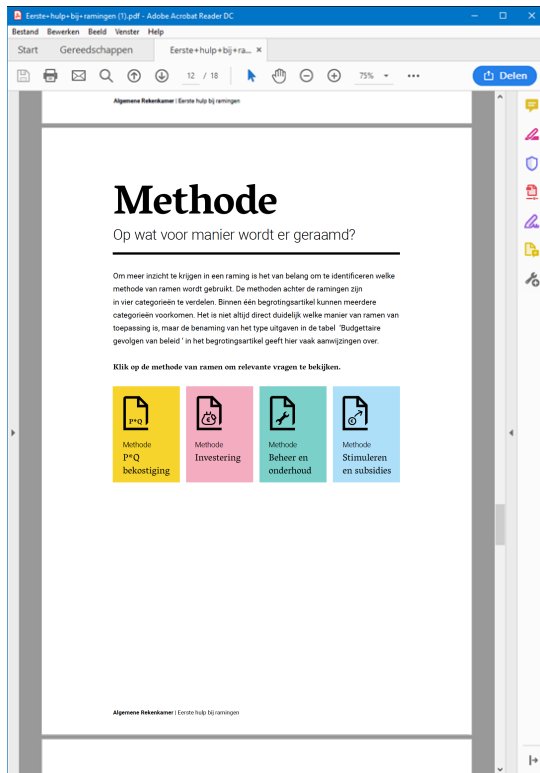
Methode
Beheer en
onderhoud



Methode
Stimuleren
en subsidies

Methods

- **Example question:**
Does overdue maintenance lead to higher and/or rising costs for management and maintenance?



CASE 3

ENGAGE

Improve performance and
operation of government

FORM FOLLOWS FUNCTION

"What is it that
you(r organisation)
can do about it?"

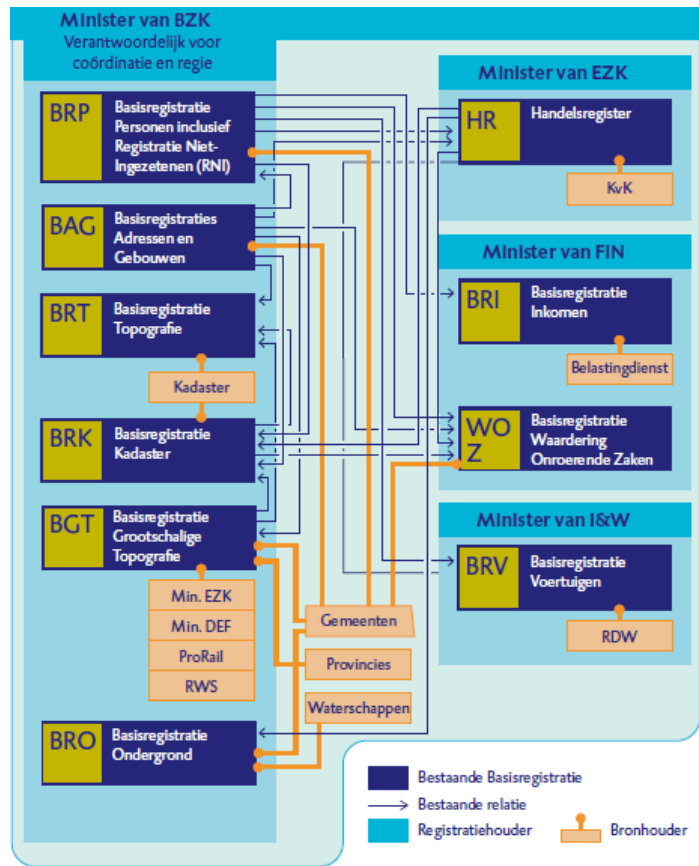
Function =
to engage

The audit itself

Topic: The system of basic registers for citizens and businesses

Our recommendations:

- a central reporting desk should be set up
- the Minister should take measures centrally in order to set and monitor common milestones in five areas: data access, data correction, data reuse, compatibility of transparent/open data with data privacy and security, and quality management.
- the Minister should set a clear course for the further development of the system of basic registers





"What is it that
your organisations
can do about it?"

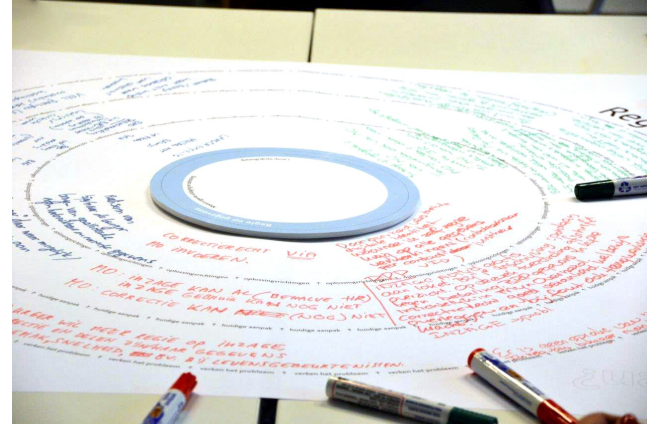
FORM:

Together with the ministry
we organised a
working conference
around the findings
and recommendations

THE DESIGN OF THE WORK CONFERENCE

6 tables around themes in our audit:

1. Usability and accessibility
2. Solution-orientedness
3. Quality of the data
4. Control over data
5. Cohesion
6. Transparency



Rules of the game:

- it must be a common approach
- discussions are prohibited

THE DESIGN OF WORK CONFERENCE

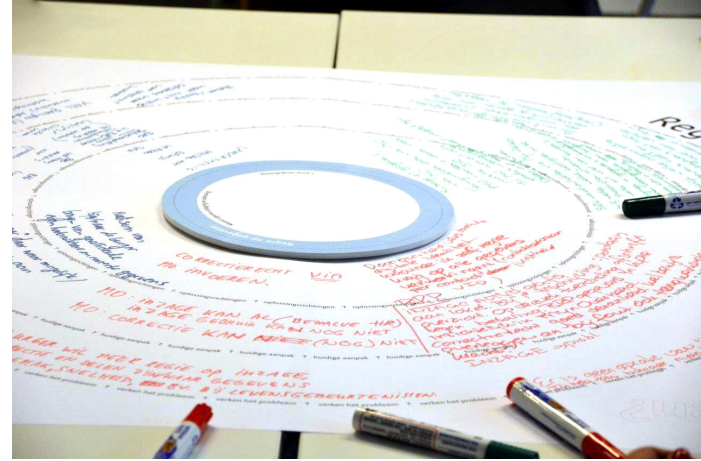
6 tables with a theme from our audit

ROUND 1: explore the most pressing societal issue

ROUND 2: how does your organization deal with this so far?

ROUND 3: brainstorm about the don'ts (how can we fail completely?)

ROUND 4: design a solution with do's.



Rules of the game:

- it must be a common approach
- discussions are prohibited

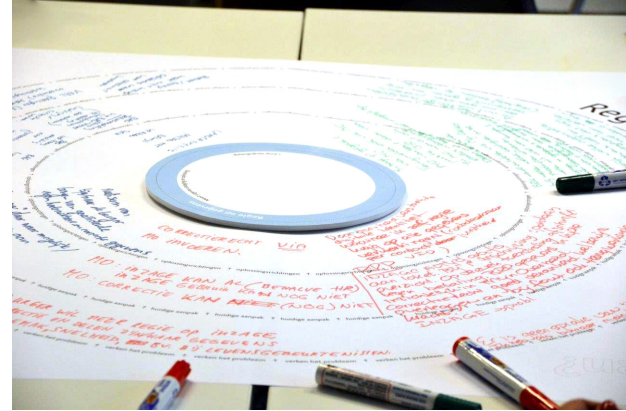
EXAMPLE: SOLUTION-ORIENTEDNESS

ROUND 1: Explore most pressing societal issue: **inaccuracies within data of citizens are not entirely fixed**

ROUND 2. How does your organization deal with this so far? **Within its sector-limits**

ROUND 3. How can we fail completely? **By relying on the basic registers even if you know that a piece of information is incorrect**

ROUND 4. Design a solution with do's. **A network of problem solvers that works across sectors, in combination with a central reporting desk**



Rules of the game:

- it must be a common approach
- discussions are prohibited



This is an example of how
we can help improve the
performance
and operation of central
government and
the institutions associated
with it



Our lessons



Start empathizing
with your stakeholders



The context changes!
Take a step back to
rethink and update
your plan



Does it work?
Test test test
the form to see
if it works (function)

THANK YOU for your attention!

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**Netherlands
Court of Audit**



E-learning: Using visuals in audits



