SBR Working Group

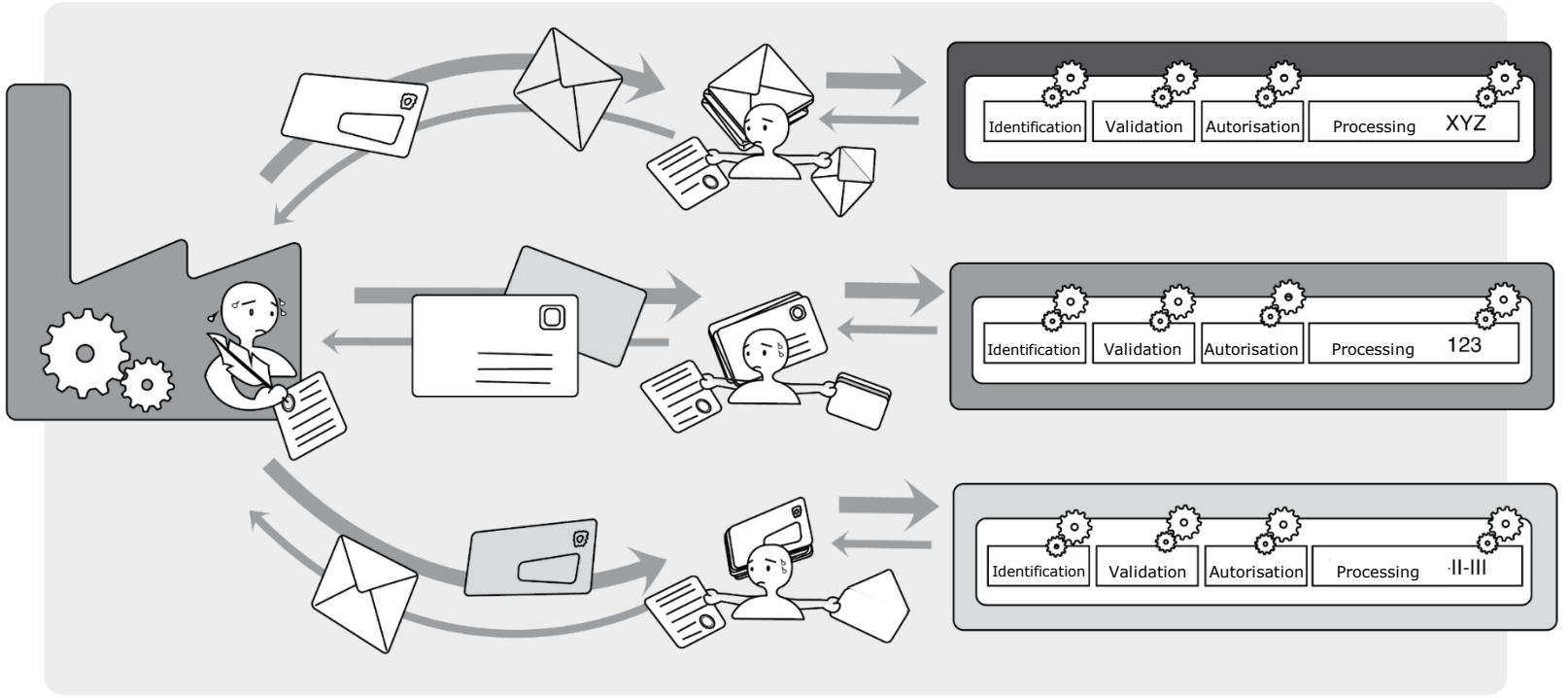
- Frans Hietbrink
- SBR NL
- XBRL NL
- a personal update from Tax
  - SBR 2.0 developing an ecosystem
  - Banking and Taxes: a match made in heaven?
  - And more and more!

Agenda

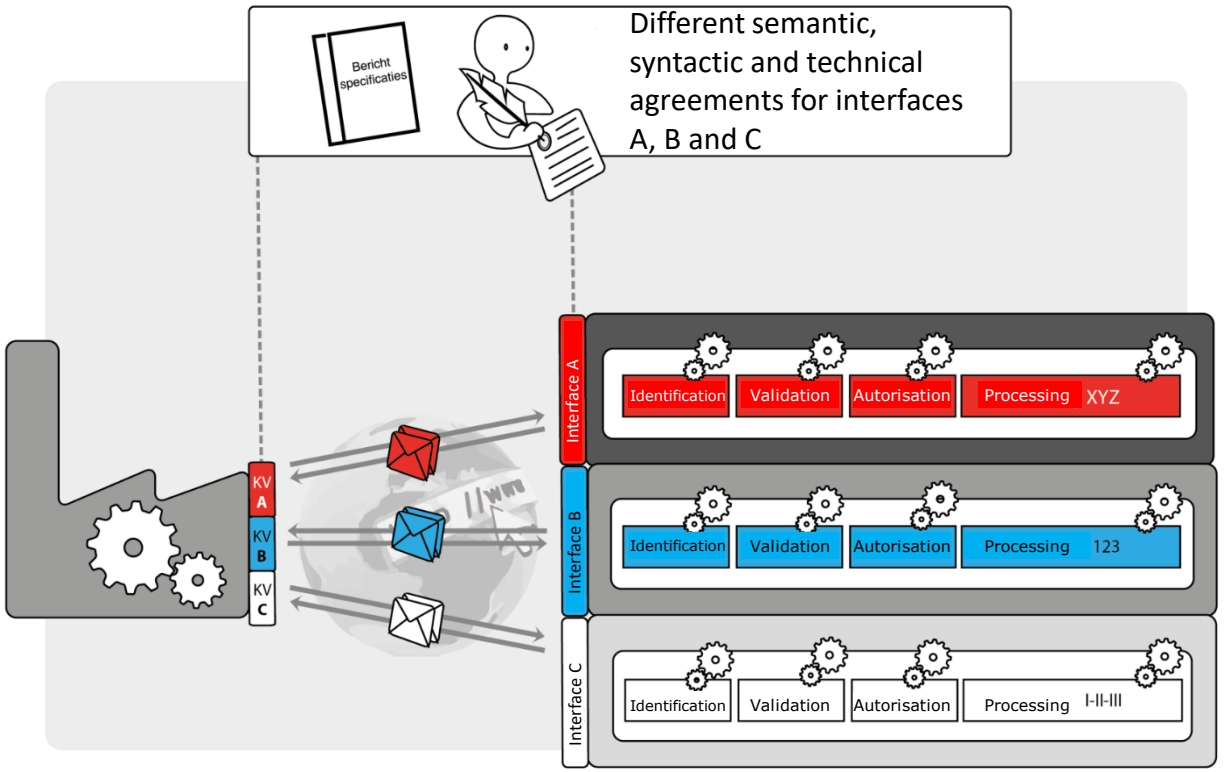
I. The succes of SBR
II. The limitations of SBR
III. The next step: a modernized ecosystem approach
IV. Tax and Banks
V. And more and more
VI. Questions

Annex

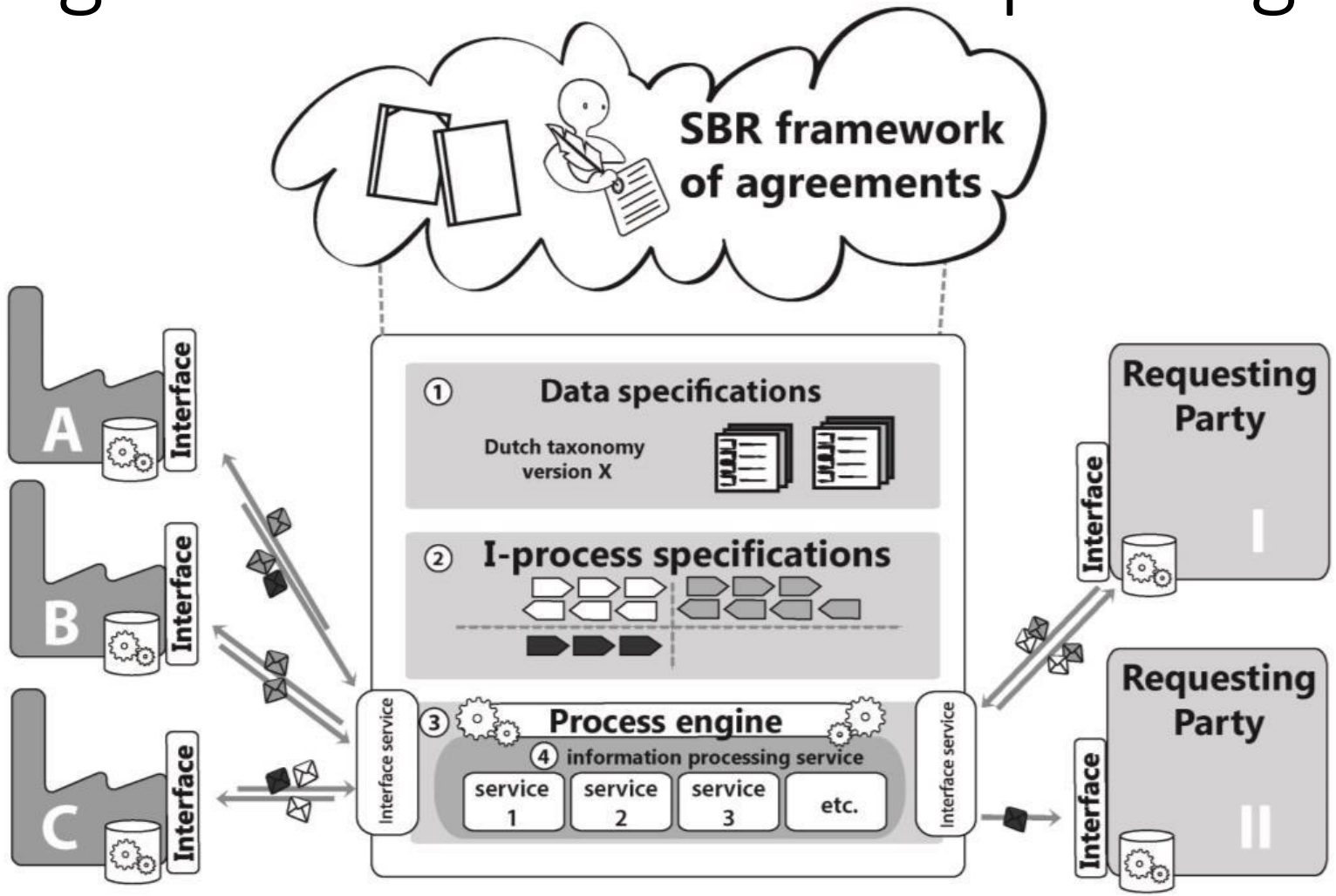
Challenge 1: paper interaction



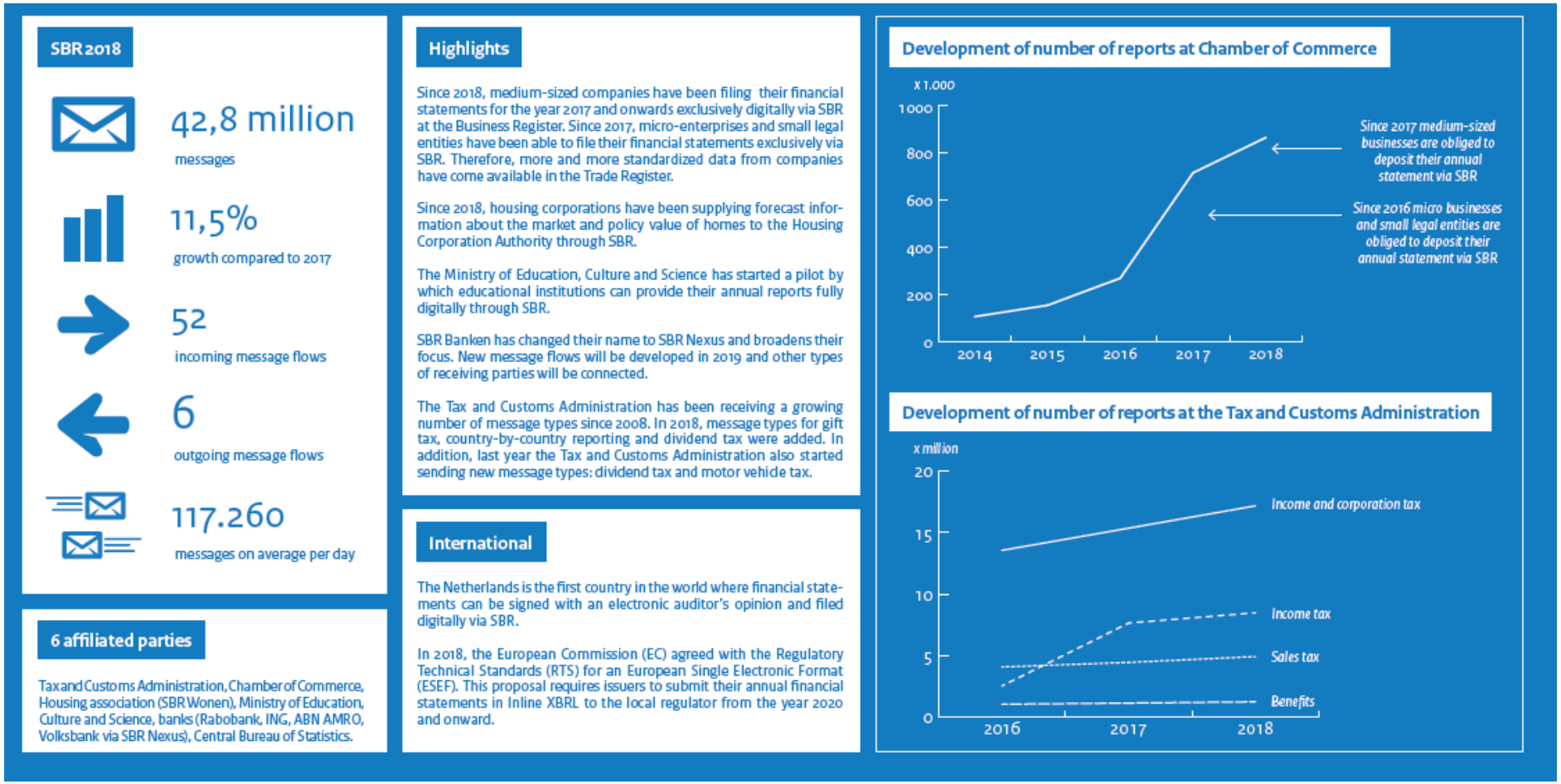
Challenge 2: digital interaction via different interfaces



Introducing Standard Business Reporting



Standard Business Reporting



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Limitations in the current design

1. Identification of the sender
2. Expression of will by the sender (can be an intermediary)
3. Expression of will by the beneficiary
4. Authenticity of data
5. Quality of data

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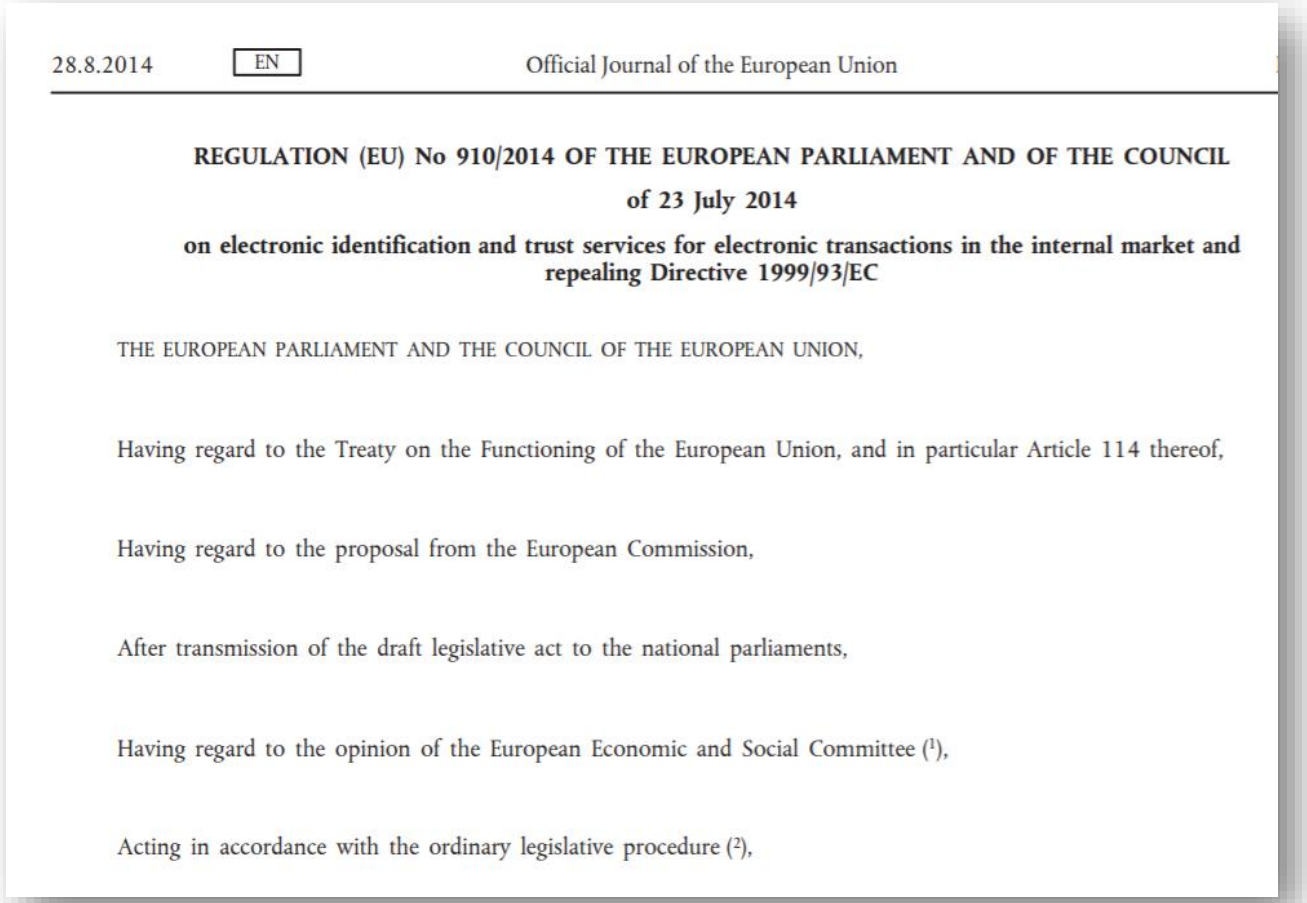
Co-create a trusted online ecosystem based on eIDAS



28.8.2014 EN Official Journal of the European Union

REGULATION (EU) No 910/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 23 July 2014

on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 114 thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee (1),

Acting in accordance with the ordinary legislative procedure (2),

"trust in the online environment is key to economic and social development."

"This Regulation seeks to enhance trust in electronic transactions [...] by providing a common foundation for secure electronic interaction [...]"

Regulation (EU) No 910/2014

eIDAS provides the requirements for the electronic equivalent of the handwritten signature

"A qualified electronic signature shall have the equivalent legal effect of a handwritten signature" (Art. 25:3, eIDAS)

" 'qualified electronic signature' means an advanced electronic signature [...] based on a qualified certificate for electronic signatures" (Art. 3:12, eIDAS)

" [...] a certificate for electronic signatures, that is issued by a qualified trust service provider [...]" (Art. 3:15, eIDAS)

Phase 1 - Research - completed

When Willeke can get rid of paperwork: a lean infrastructure for qualified information exchange based on trusted identities

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ABSTRACT

As a frequent participant in eSociety, Willeke is often preoccupied with paperwork because there is no easy to use, affordable way to act as a qualified person in the digital world. Confidential interactions take place over insecure channels like e-mail and post. This situation poses risks and costs for service providers, civilians and governments, while goals regarding confidentiality and privacy are not always met. The objective of this paper is to demonstrate an alternative architecture in which identifying persons, exchanging information, authorizing external parties and signing documents will become more user-friendly and secure. As a starting point, each person has their personal data space, provided by a qualified trust service provider that also issues a high level of assurance electronic ID. Three main building blocks are required: (1) secure exchange between the personal data space of each person, (2) coordination functionalities provided by a token based infrastructure, and (3) governance over this infrastructure. Following the design science research approach, we developed prototypes of the building blocks that we will pilot in practice. Policy makers and practitioners that want to enable Willeke to get rid of her paperwork can find guidance throughout this paper and are welcome to join the pilots in the Netherlands.

CCS CONCEPTS

• **Computer systems organization** → *Cloud computing;*

KEYWORDS

Qualified information exchange, digital infrastructures, personal data management, distributed systems, privacy, data minimisation, authentication, authorisation, data portability, EIDAS, GDPR

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1 INTRODUCTION

Meet Willeke, a fictional character that personifies the interactions of a citizen in our eSociety. Willeke leads a busy life and does her Christmas shopping online, as well as most of her freelance work. For her business, she can do more and more formal interactions with the Dutch government online, such as filing sales tax returns on the Tax Office portal and requesting permits using a standardised login scheme. However, she frequently has to print contracts on paper, sign these with 'wet signatures' (pen and ink), and deliver these using postal services. She's somewhat happy that retrieving her medical records still requires physical identification at the doctor's office, instead of logging in to an insecure online portal.

Sometimes Willeke is shocked to see the private information others are sharing with her over an unsafe channel such as email [12]. Over the years, our eSociety — referring to the coexistence of several e-communities such as e-business, e-government and e-health that use information and communication technologies (ICT) in order to facilitate interactions — has gained traction. Due to major investments and standardization efforts, many types of interactions (e.g. online sales and access to public services) have undergone transformations that harness the potential of information technologies. The latest analysis of ICT developments from the International Telecommunication Union [10] shows that the availability, access and use of internet communication has grown substantially over the past decade, resulting in more persons online than ever before (almost 4 billion). Social media usage and online sales are breaking record numbers and many people like Willeke reap the benefits. Surely, this is progress. However, as we have already stated in the case of Willeke, there are still some concerns.

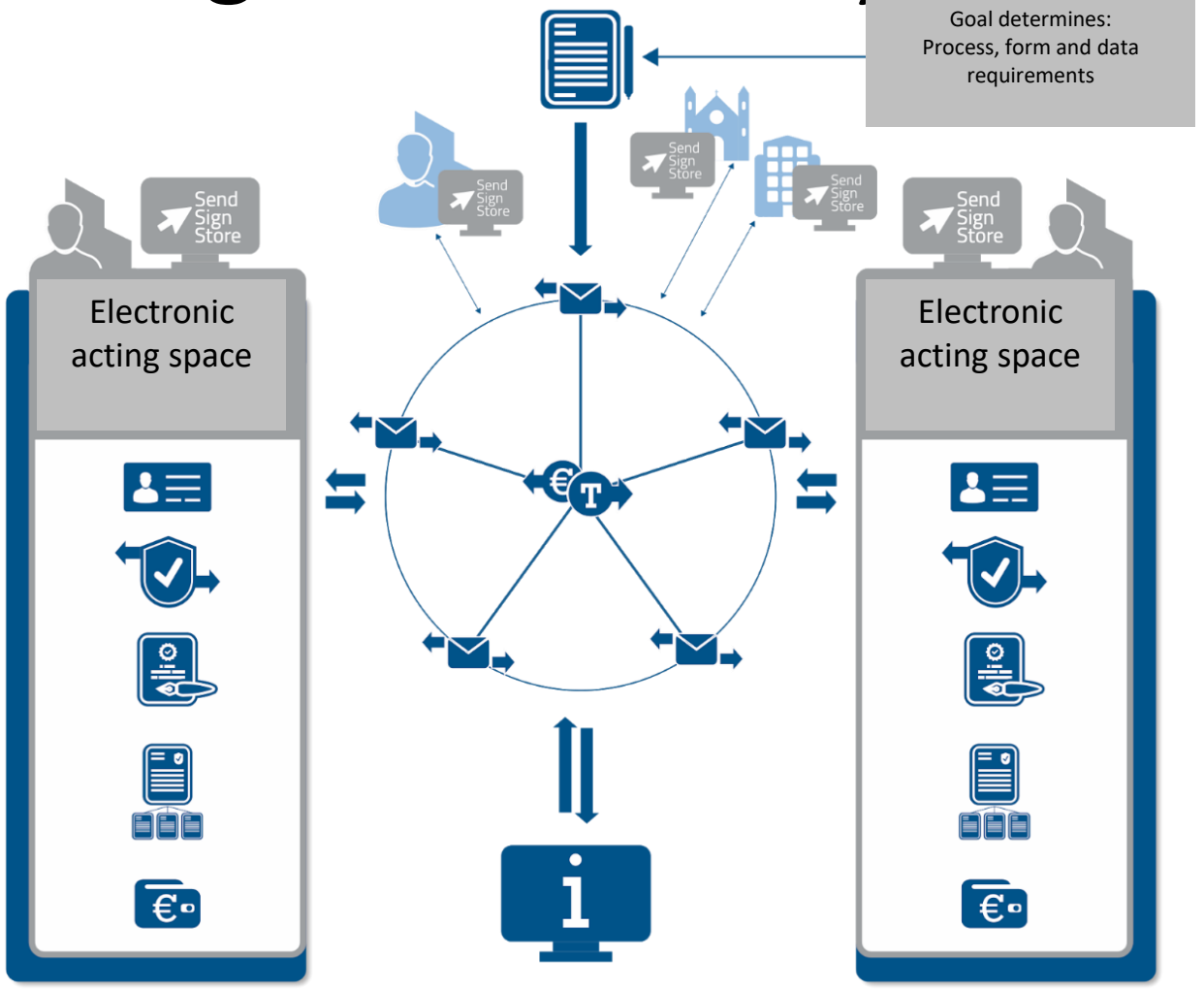
First, there is the concern of provider centricity. Giovanni Buttarelli, the European Data Protection Supervisor (EDPS), warns[1]: *"Our online lives currently operate in a provider-centric system, where privacy*

[1] https://edps.europa.eu/press-publications/press-news/press-releases/2016/towards-new-reality-taking-back-control-our-online_en

Propositions:

1. use QTSPs for trust services and data exchange
2. get persons online with a high level eID
3. sign expression of will with qualified electronic signatures

High level design of the ecosystem approach



Functional Ingredients of a trusted ecosystem

Electronic acting space - a system that is under the sole control of one responsible actor. From here, an actor can perform actions on his own behalf with the highest level of certainty.

Qualified eID - A unit containing person identification data, which can be used for online authentication.

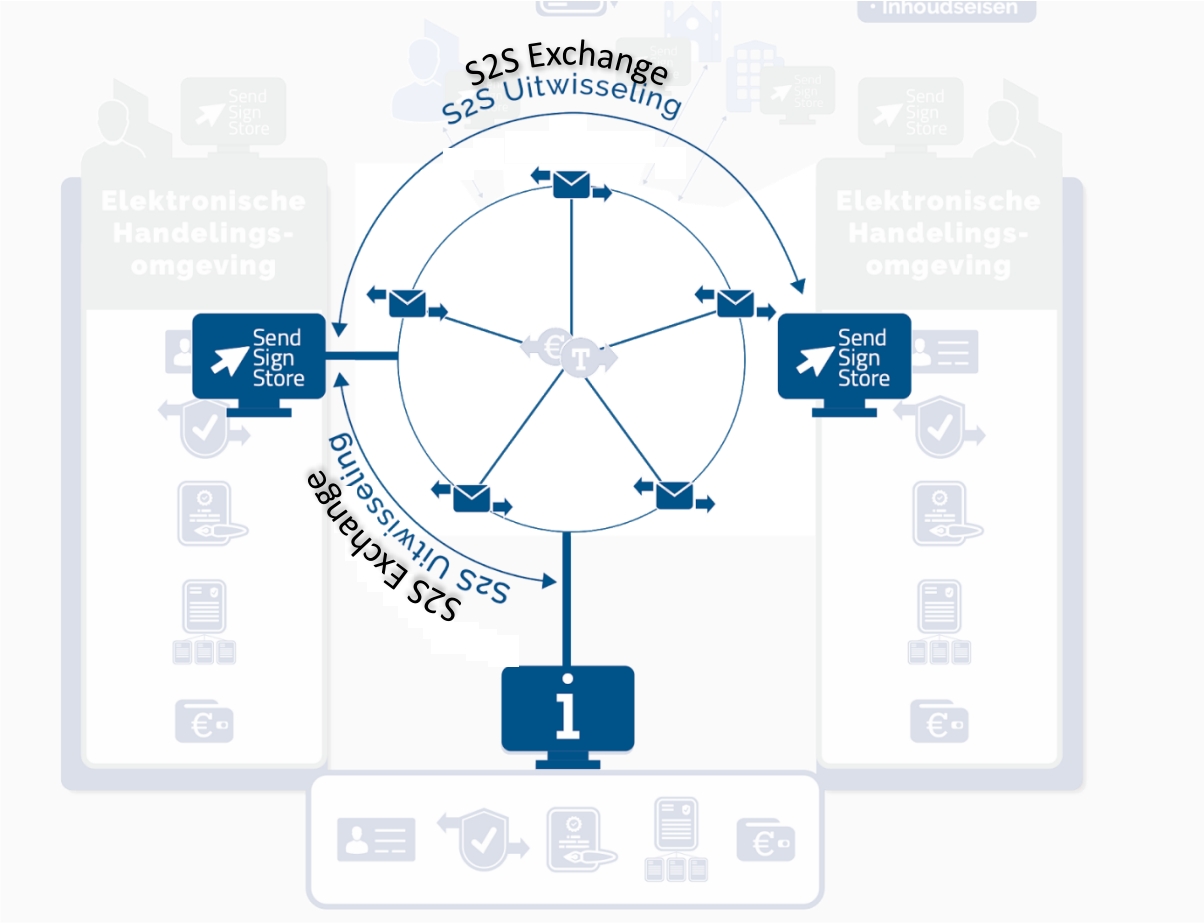
Electronic Registered Delivery Service - a service for **transmitting data** between parties which ensures data integrity and provides evidence of sending and receive.

Qualified Signatures & Seals - An advanced electronic signature/seal, meeting specific legal requirements. The electronic equivalent of a handwritten signature/seal.

Qualified Archive - For the safe storage with guaranteed authenticity of electronic documents and signatures.

Wallet – used for payments in the context of the use of collective functionalities. The chain specifications of exchange processes describe which actor (s) should provide the payments for this.

Data is exchanged peer-2-peer via ERDS

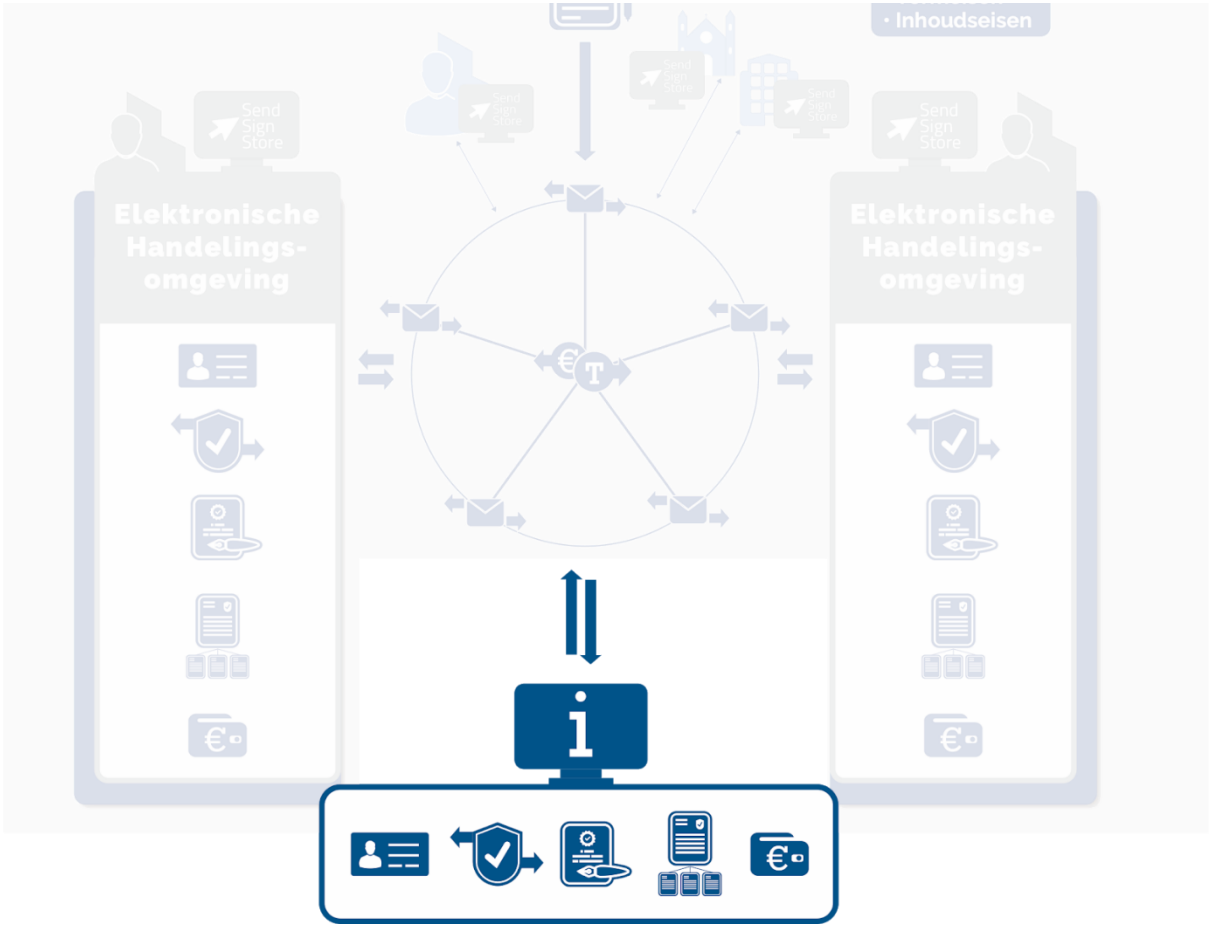


Centralized functionality solely consists of:

1. adressing & routing
2. published chain-specifications.
3. ledger of tokens to fund the above and clear optional third party service consumption

ERDS: Electronic Registered Delivery Service

Consume third party (market) services



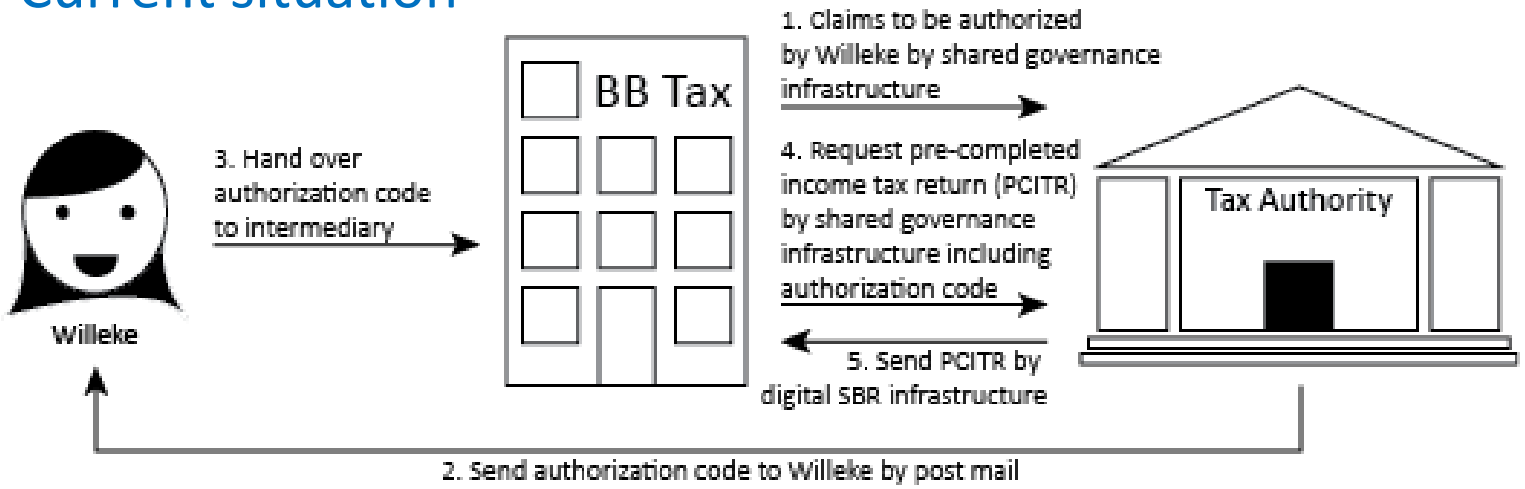
Trusted (certified) third party service providers can provide value added services in the ecosystem.

Examples:

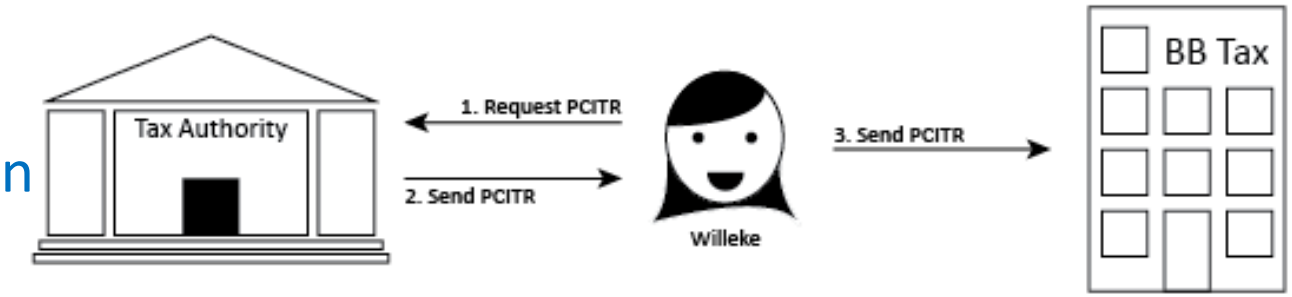
- data conversion and validation
- checks via authentic registers
- assurance services

Phase 2 – proof of concept-

Current situation



Anticipated situation



Anticipated improvements: annex

Improvement goal	Research question	Measure
Expression of will by the taxpayer	Is it possible to guarantee the expressions of will?	*eID + qualified signature from taxpayer*
Authentication of the sender	*Is it possible to authenticate the sender with a high level of certainty?*	*eID + qualified signature from sender, while PKIo remains relevant for secure connection*
Expression of will by the sender (can be an intermediary)	Is it possible to guarantee the expressions of will?	*eID + qualified signature from both sender and taxpayer*
No use of third-party services	Is it possible to consume third party services in a secure way?	*Consume trusted third-party services via electronic acting space* *Data exchange via ERDS*
Data authenticity	Is it possible to guarantee that the same data(set) is being sent?	*eID + signature from filer* *hashes are included in the digital signature file* *eSeal (hashing, envelope)*
Data quality	Is it possible to explicitly state the quality of data?	*eID + qualified signature from auditor / actuary / appraiser / …hashes are included in the digital signature file* *assurance taxonomies and assurance statements* *eSeal (hashing, envelop)*

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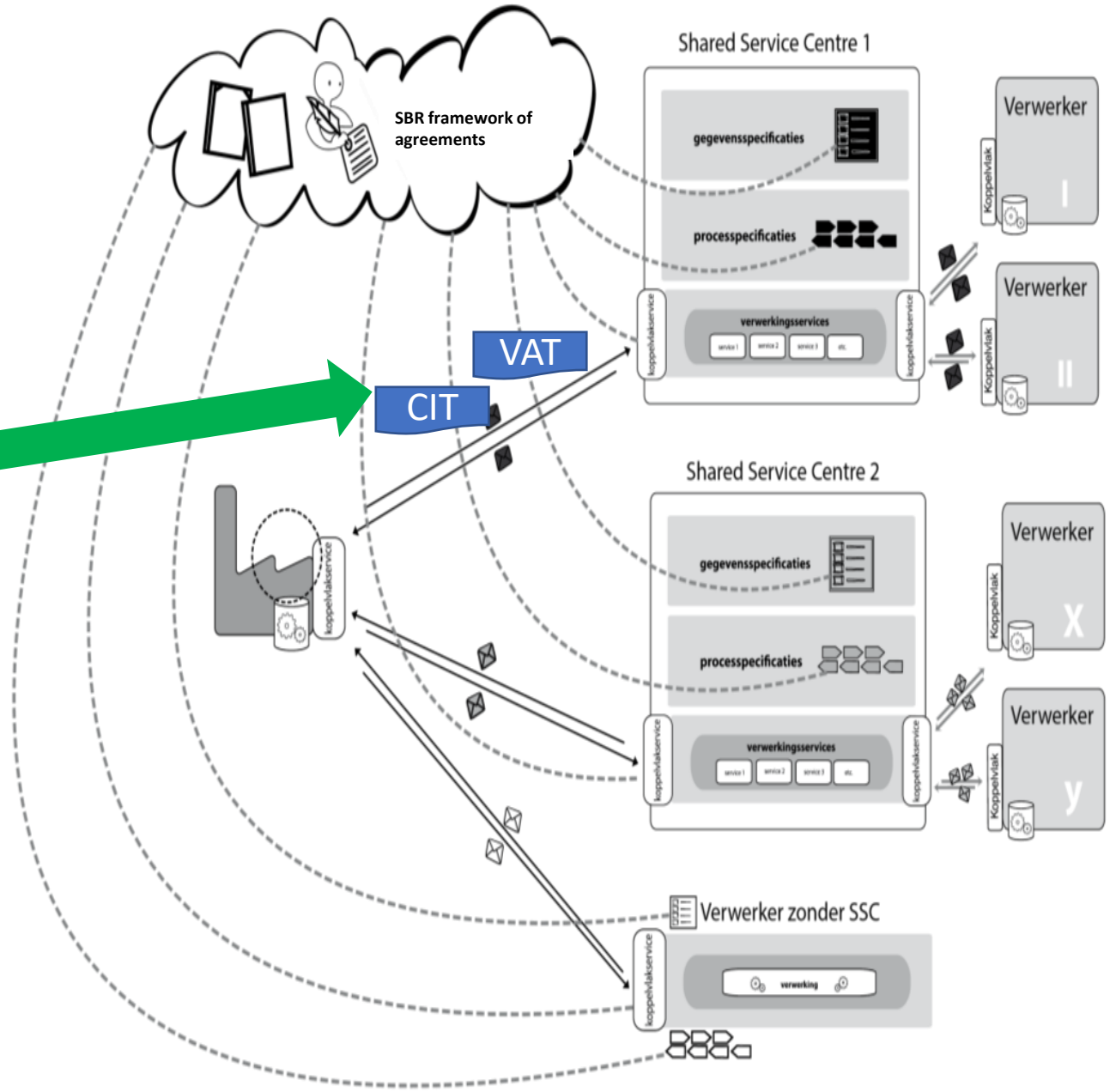
Tax and Banks

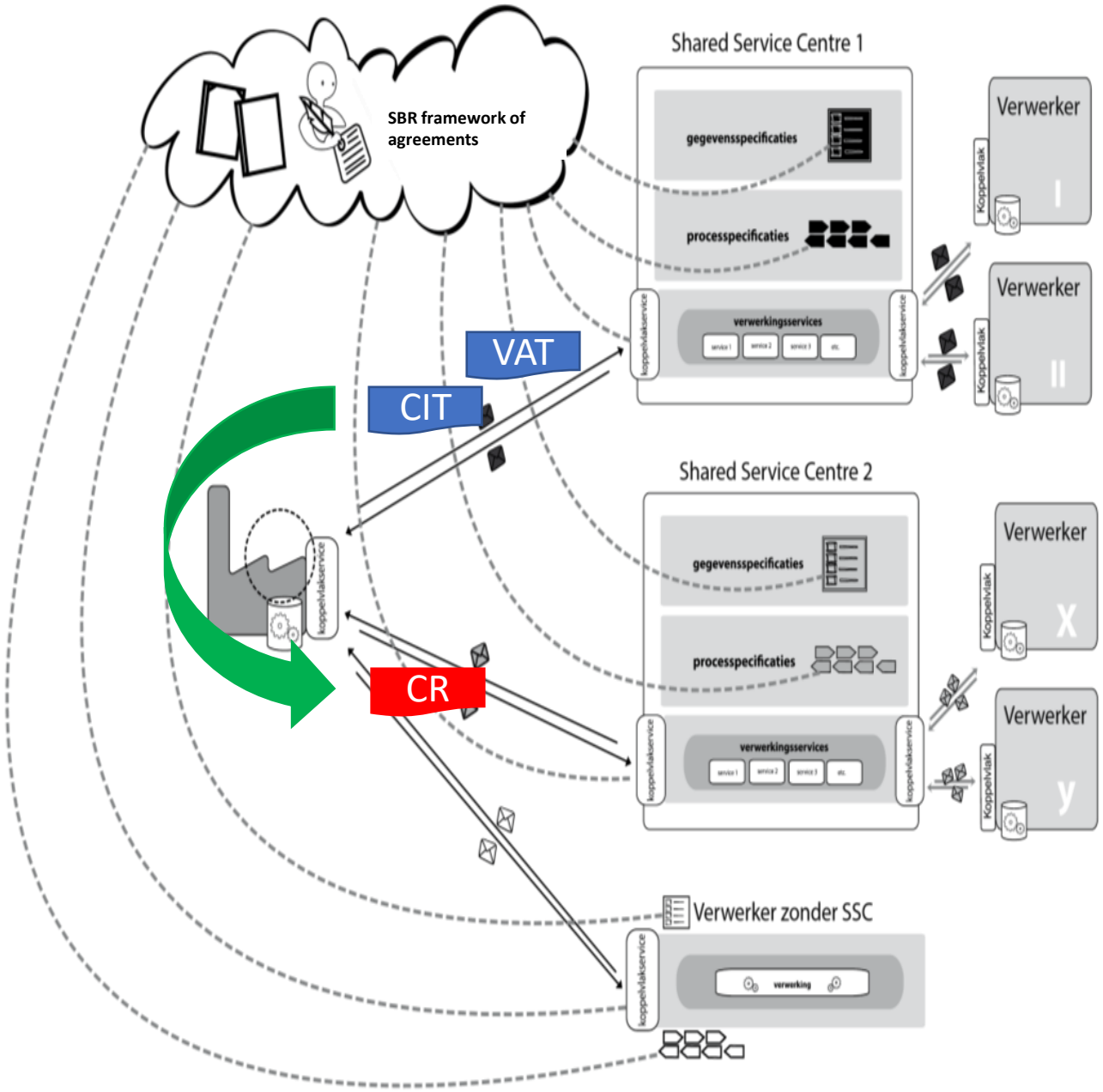
- CIT = Corporate Income Tax
- VAT = Value Added Tax



Tax and Banks

- CIT = Corporate Income Tax
- VAT = Value Added Tax

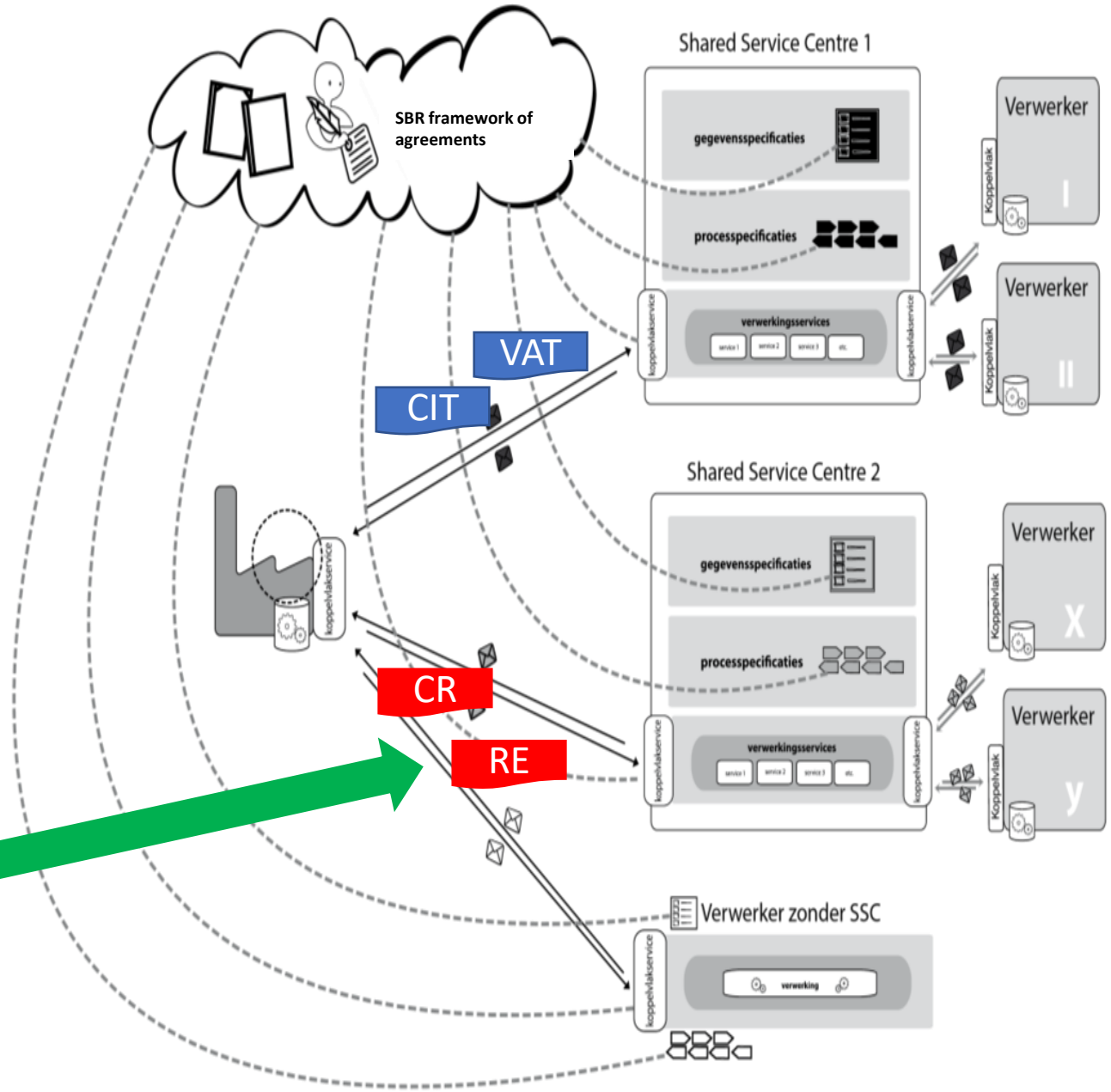
- CR = Credit Revisioning



Tax and Banks

- CIT = Corporate Income Tax
- VAT = Value Added Tax

- CR = Credit Revisioning
- RE = Real Estate
  - new players
  - SBR assurance



Standardisation of (collateral) data

- For the valuation of Real estate four different standards are used:
  - RICS
  - IVS
  - EVS
  - Open Standard Commercial Real Estate – OSCRE

- All four standards have overlapping definitions (approximately 400.000-500.000 unique elements).

Standardisation of (collateral) data

- Most of the data is manually processed which increases potential data quality issues
- A lot of the collateral data is requested for reporting to regulators e.g. the Assed Quality Review, Ana Credit, CRD IV, etc.

- Regulators are not aware of the different standards, manual filling problems and the DQ issues involved! Using SBR with one standard (Taxonomy) will resolve a lot of regulation issues.

Standardisation of (collateral) data

- In The Netherlands the banks work together with relevant parties on retrieving information from clients in XBRL.
  - A special working group is started with three banks and several vendors (e.g Flux, SBR Nexus) and Appraisers (E.g. CBRE, Cushman & Wakefield, MVGM).
  - We started with the AQR report (only 200 elements in 2016)
  - Now we have a Real Estate Taxonomy (VT14) covering Valuation reports, Rental lists, Assignment letters and Environmental reporting.

Standardisation of processes

- SBR is not only taxonomy driven, but has also a specific process for assurance
  - A signature of a ‘registered real estate’-professional has more value than a regular one
  - A POC by ING, SBR Nexus, Flux and CBRE (as appraiser) to re-use in the real estate worldthe SBR assurance solution from the accountants
- The authenticity of signed claims must be evaluated to determine their true value
  - eIDAS provides the requirements for the electronic equivalent of the handwritten signature

Tax and Banks

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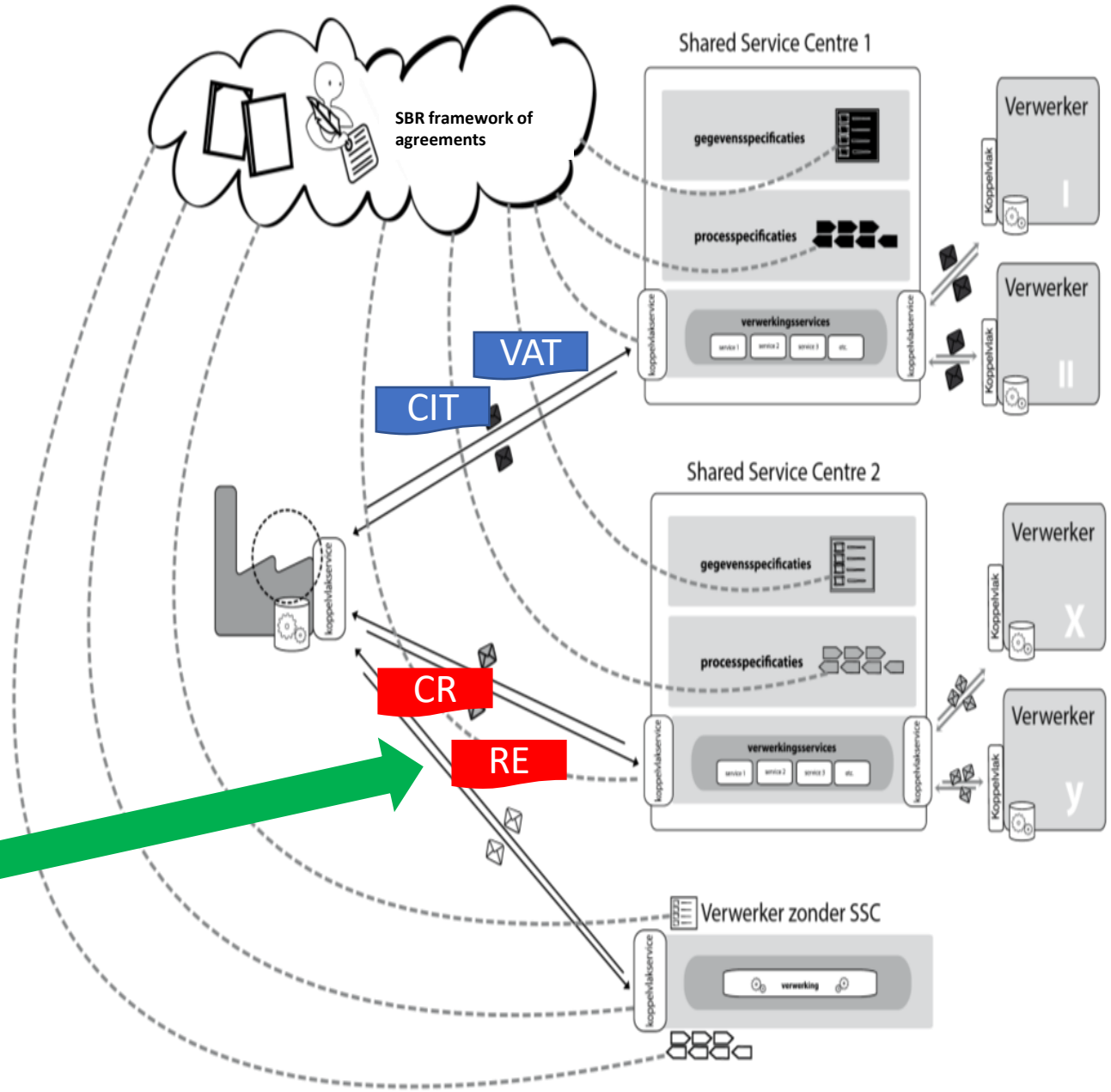

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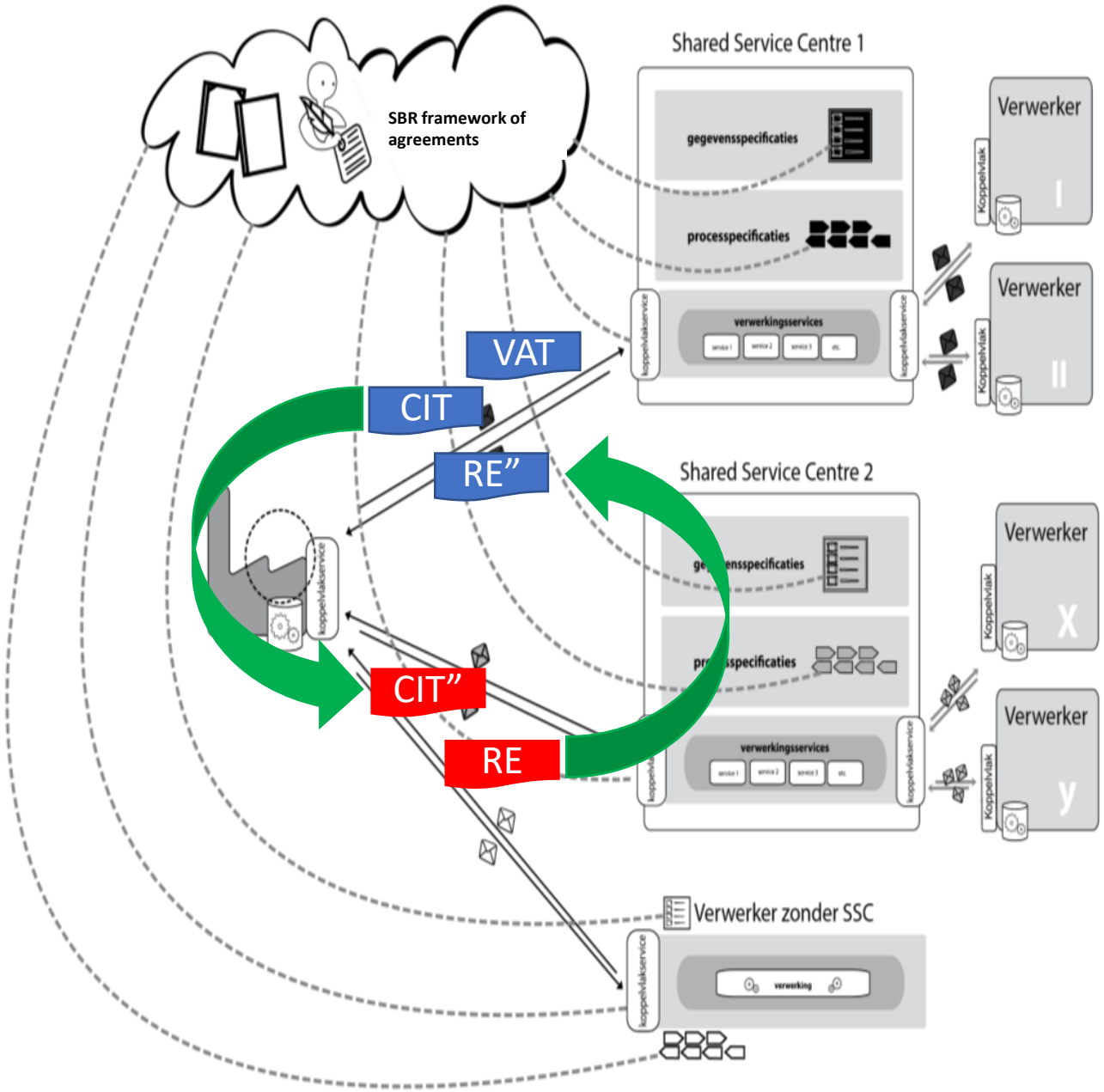

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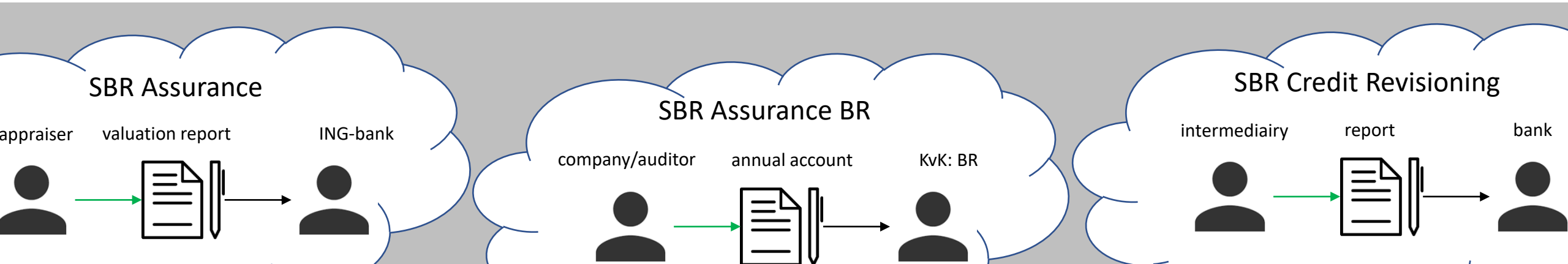
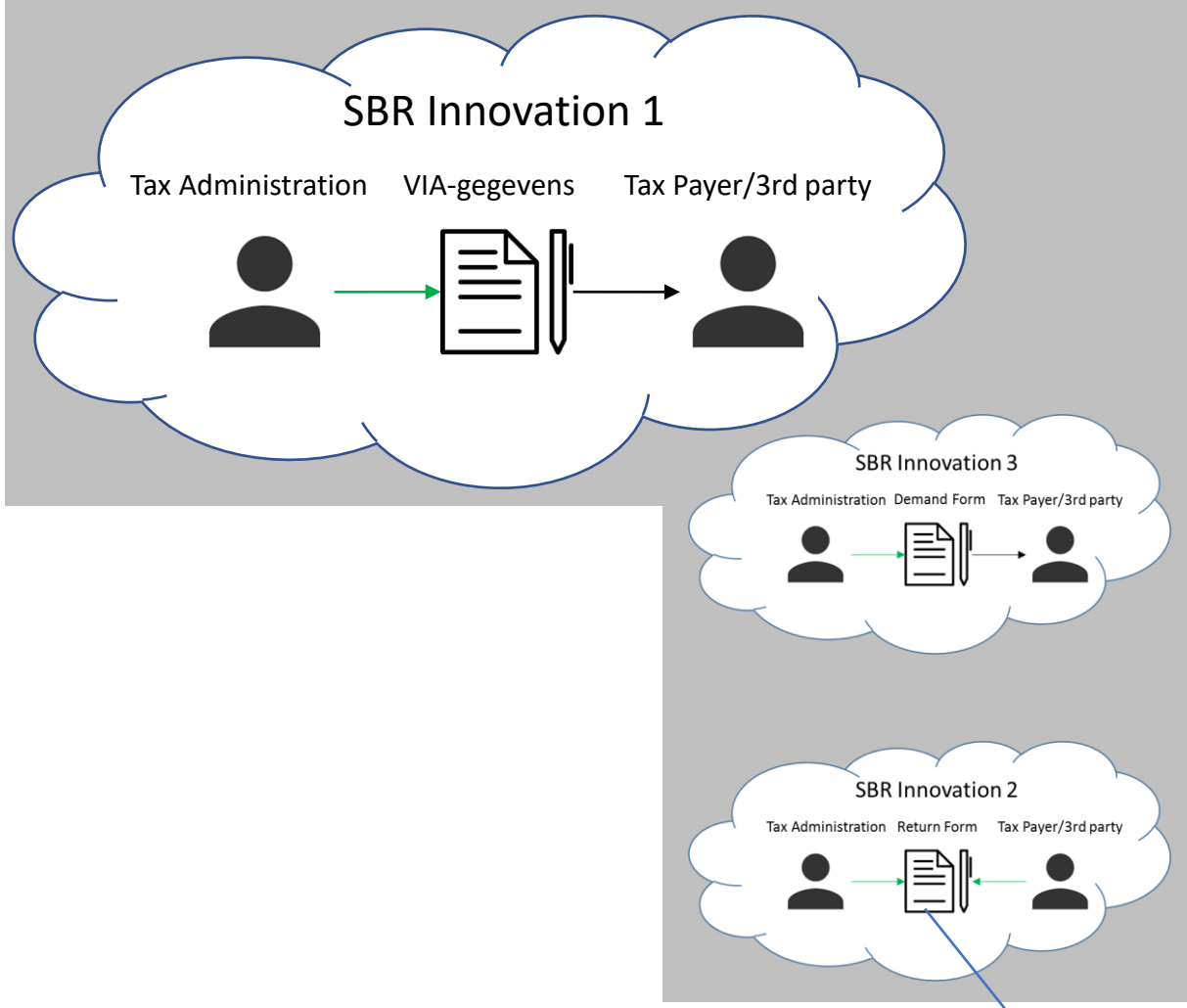
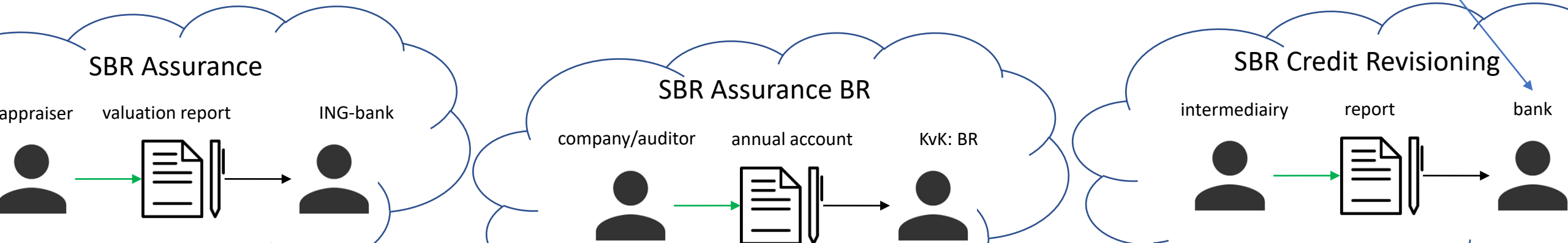
2020: in production

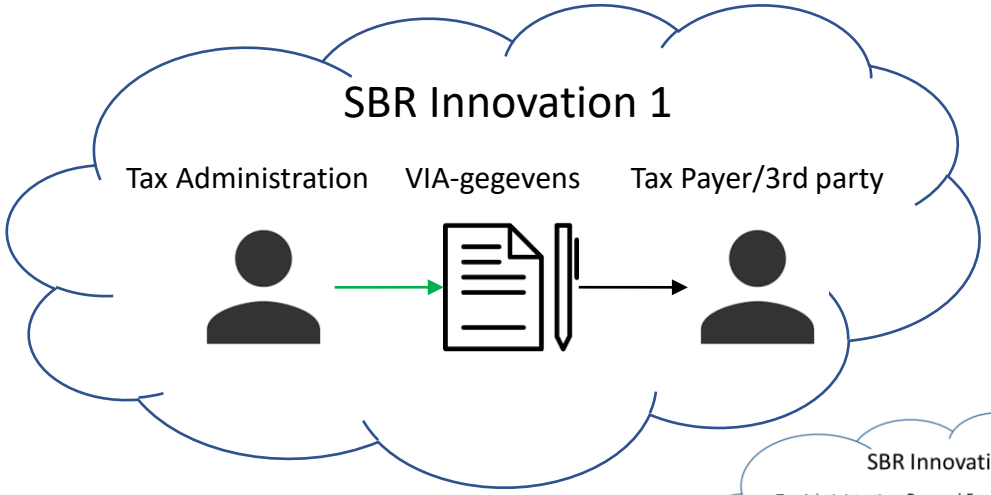


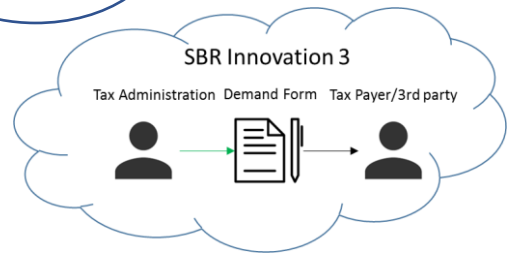
2020: experimentation Tax Administration

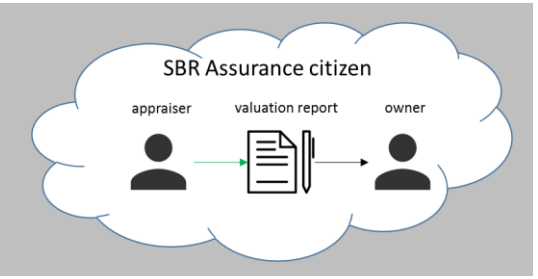


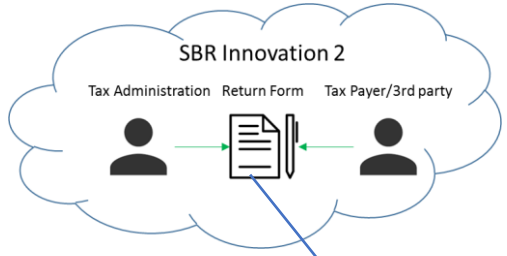


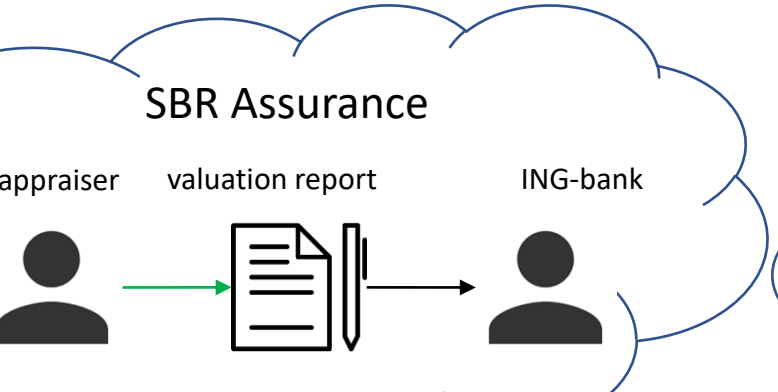
2020: development Banks

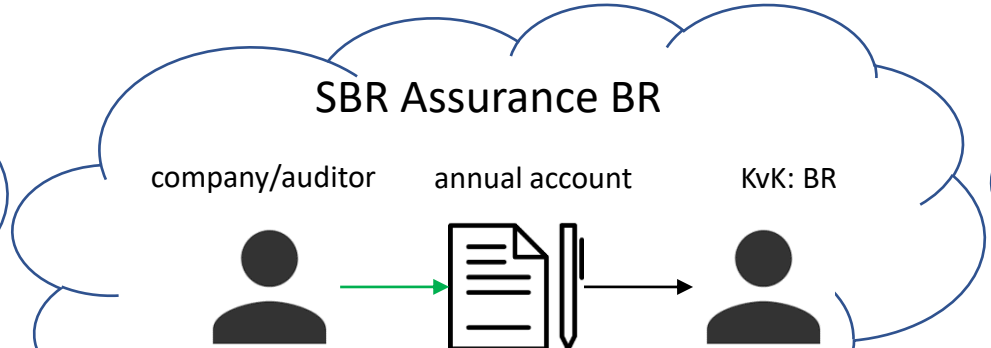


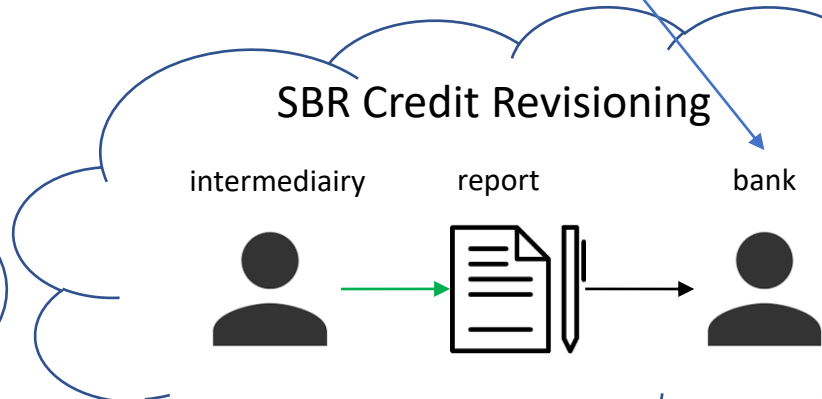




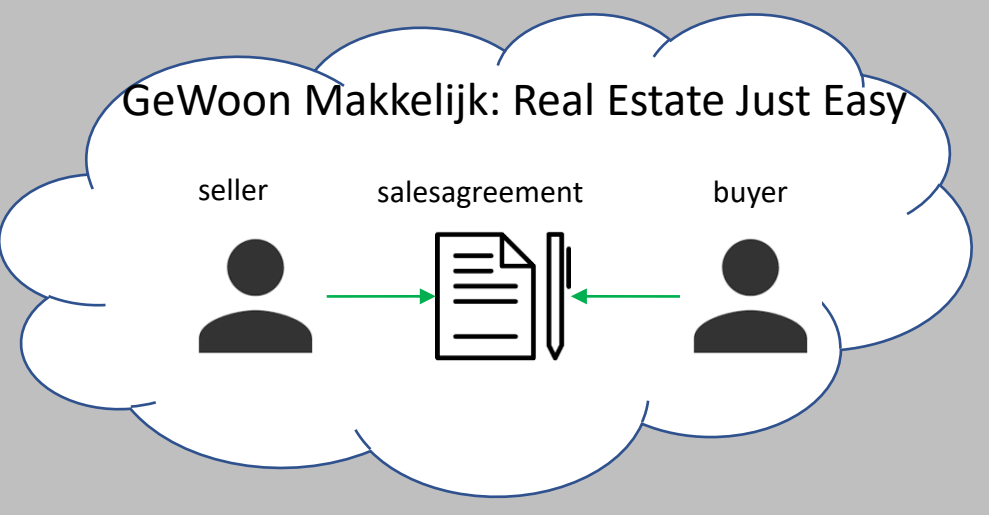


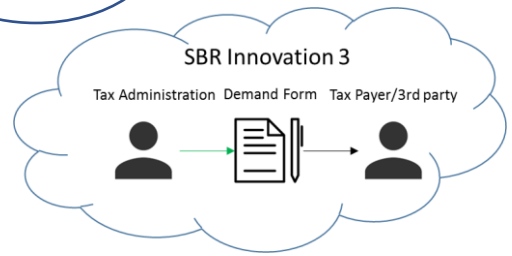


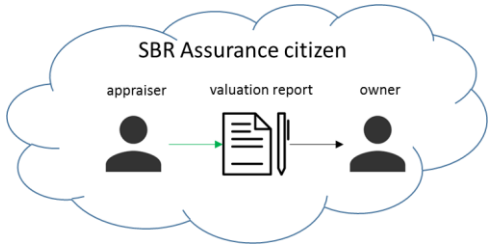


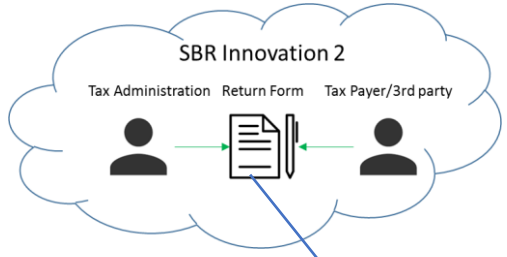


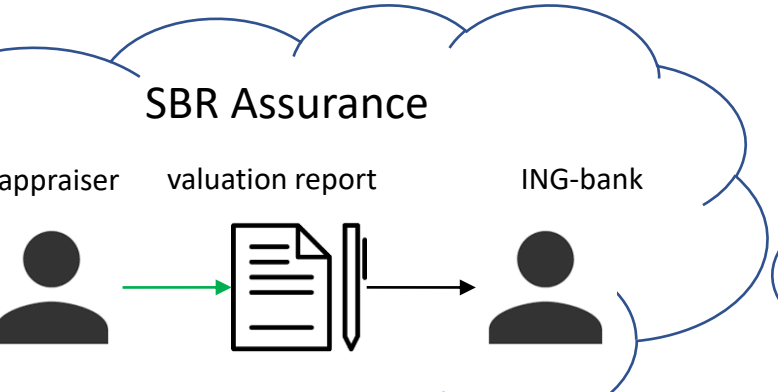
2020: development Real Estate transactions

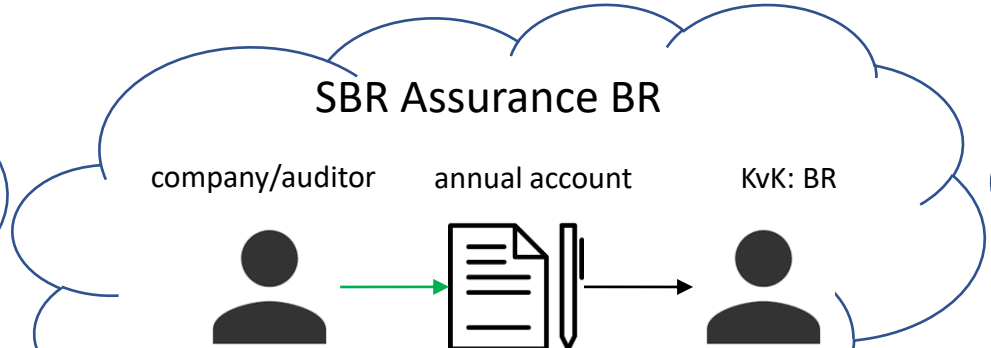


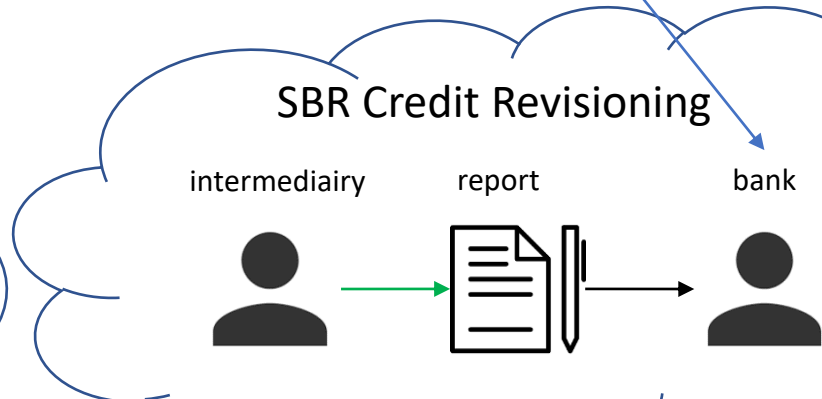




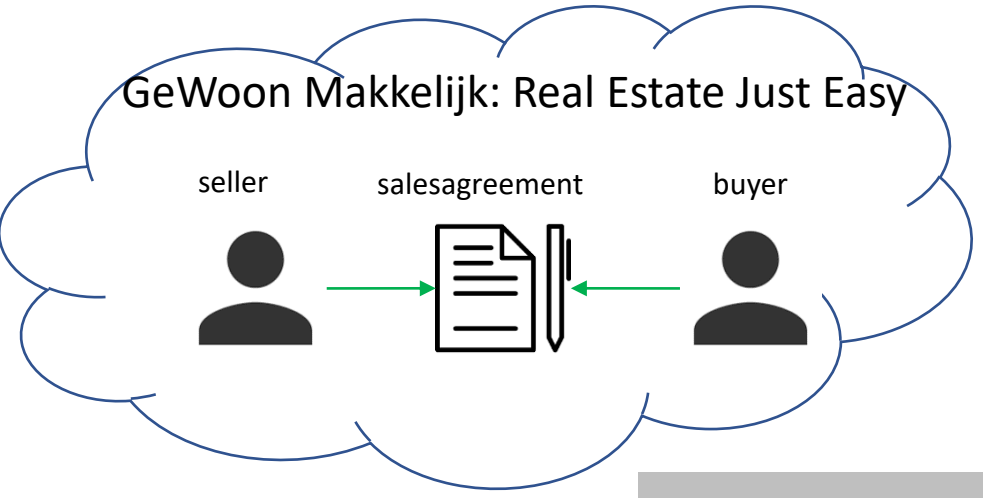


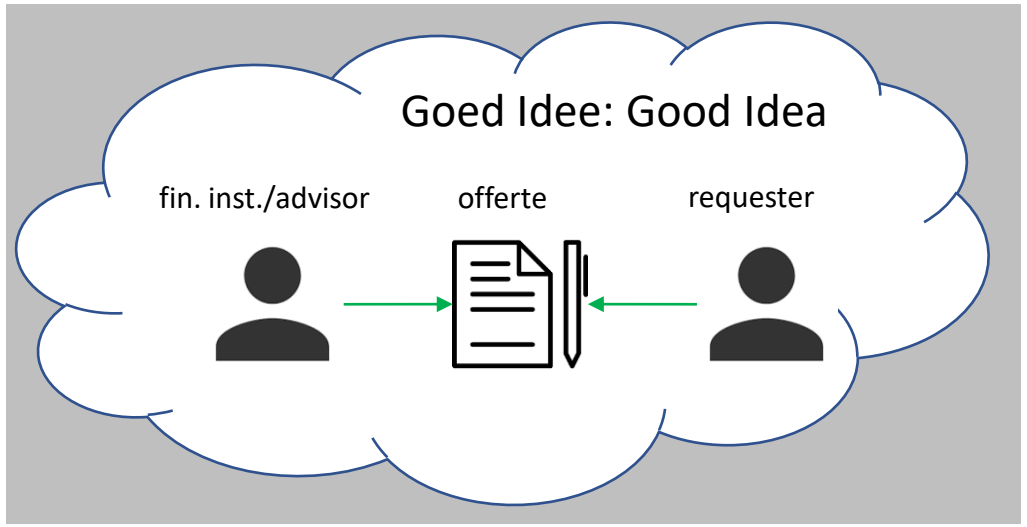


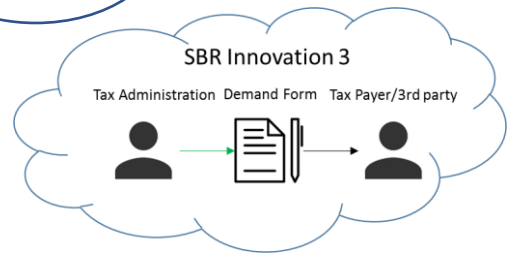


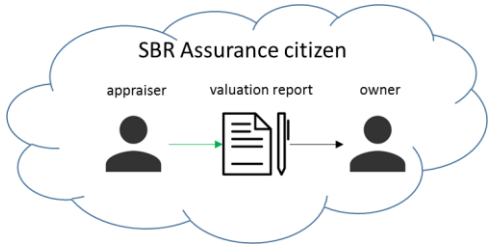


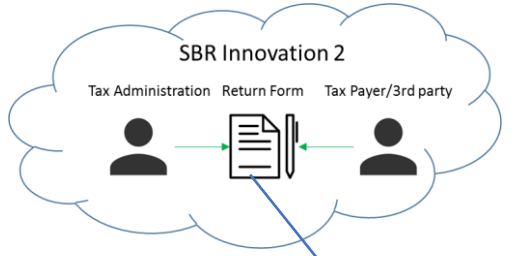
2020: development Real Estate financing

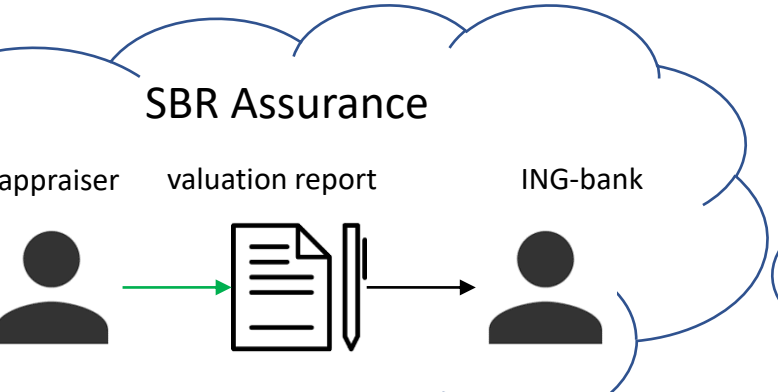


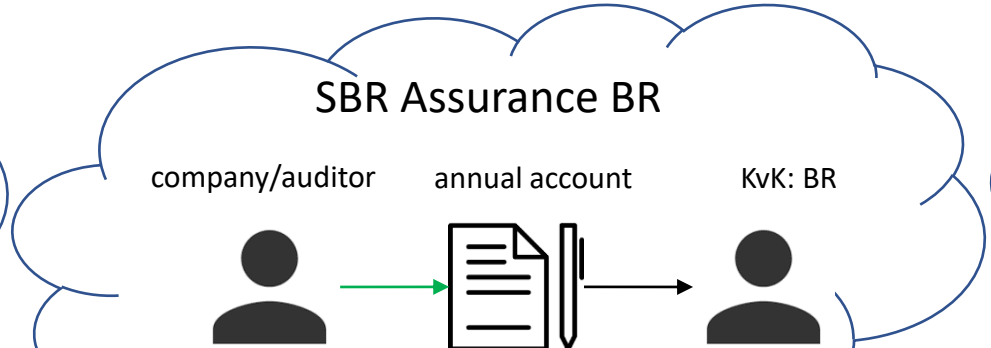


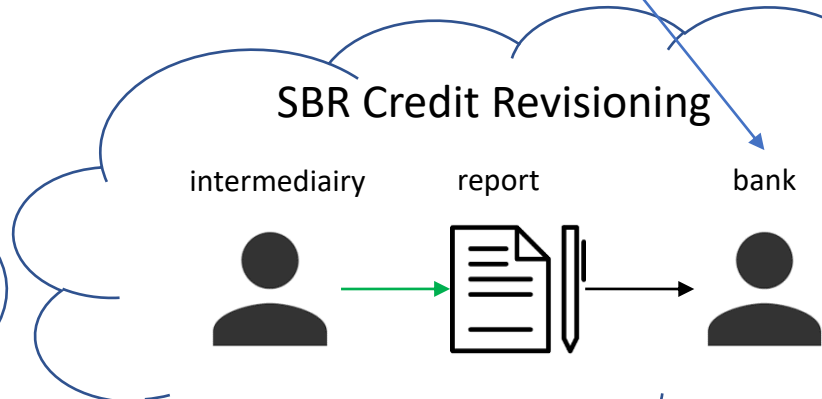


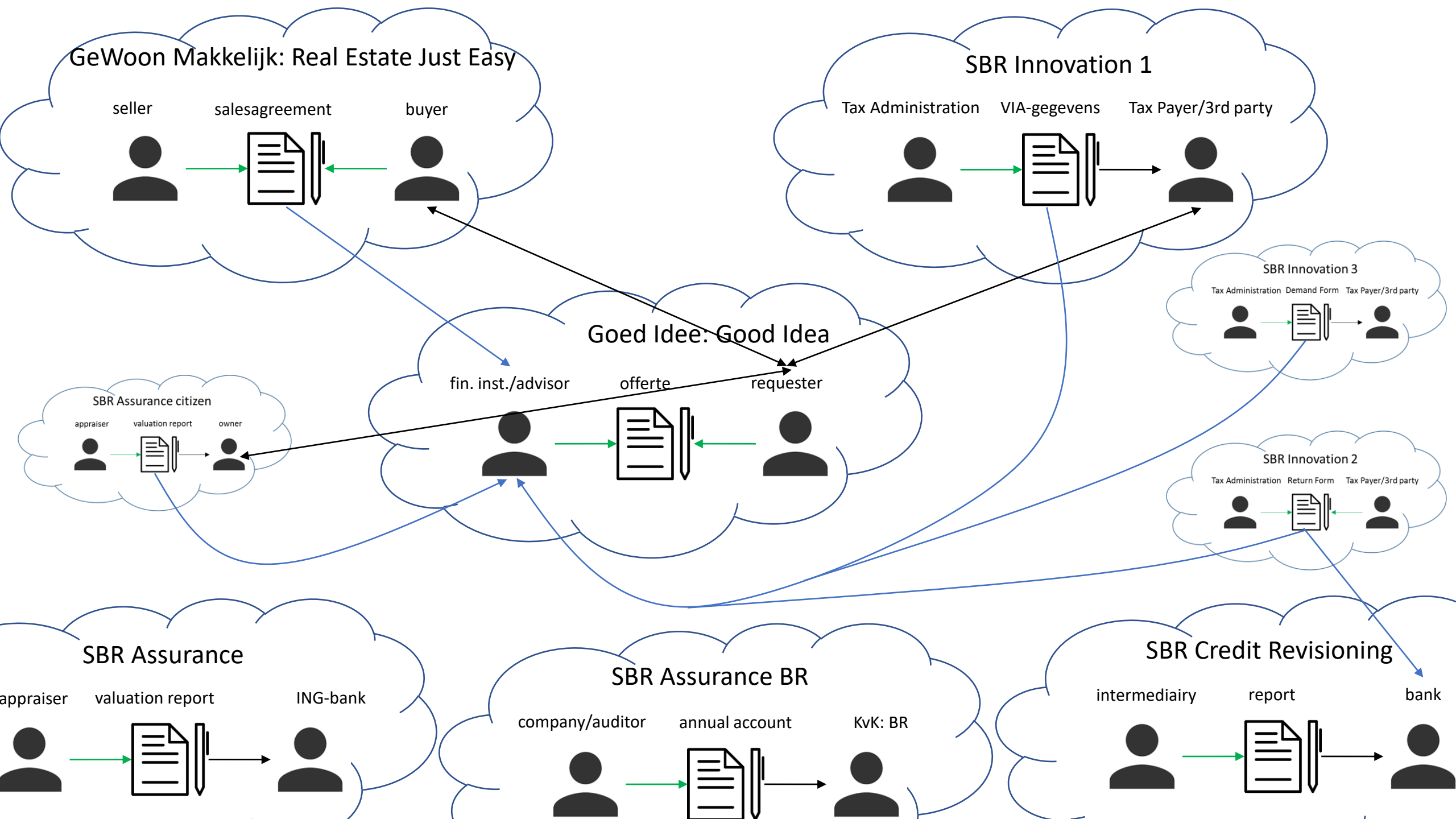










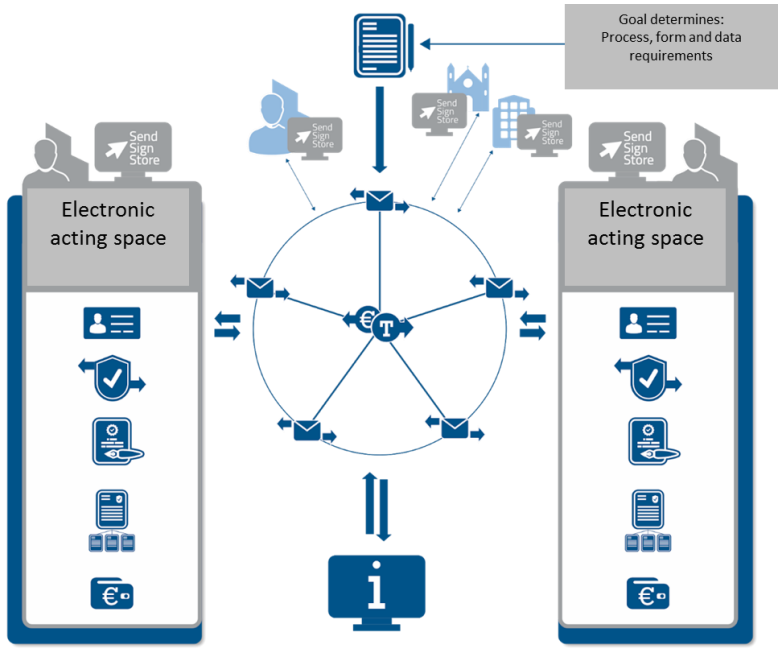

GeWoon Makkelijk: Real Estate Just Easy
seller
salesagreement
buyer
SBR Innovation 1
Tax Administration
VIA-gegevens
Tax Payer/3rd party
SBR Innovation 3
Tax Administration
Demand Form
Tax Payer/3rd party
Goed Idee: Good Idea
fin. inst./advisor
offerte
requester
SBR Assurance citizen
appraiser
valuation report
owner
SBR Innovation 2
Tax Administration
Return Form
Tax Payer/3rd party
SBR Assurance
appraiser
valuation report
ING-bank
SBR Assurance BR
company/auditor
annual account
KvK: BR
SBR Credit Revisioning
intermediairy
report
bank

Agenda

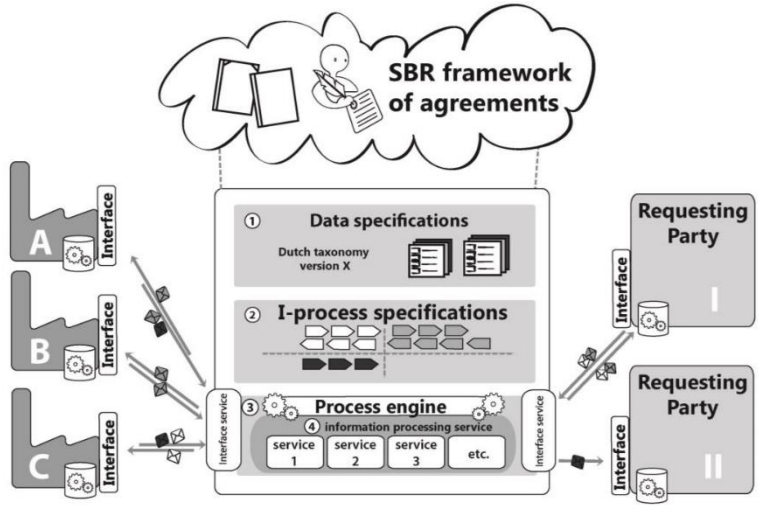
I. The succes of SBR
II. The limitations of SBR
III. The next step: a modernized ecosystem approach
IV. Tax and Banks
V. And more and more
VI. Questions

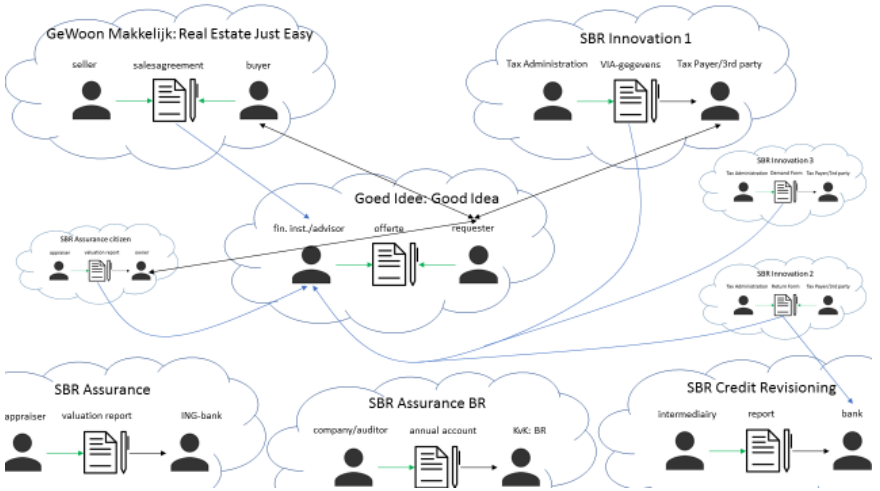
Annex

Questions


Goal determines:
Process, form and data requirements
Electronic acting space
Electronic acting space


WHAT?
WHY?
WHERE?
WHEN?
HOW?
WHO?
WHICH?
WHOSE?


SBR framework of agreements
Data specifications
Dutch taxonomy version X
I-process specifications
Process engine
information processing service
service 1
service 2
service 3
etc.
Interface
Requesting Party I
Requesting Party II


GeWoon Makkelijk: Real Estate Just Easy
SBR Innovation 1
Goed Idee: Good Idea
SBR Assurance
SBR Assurance BR
SBR Credit Revisioning

Agenda

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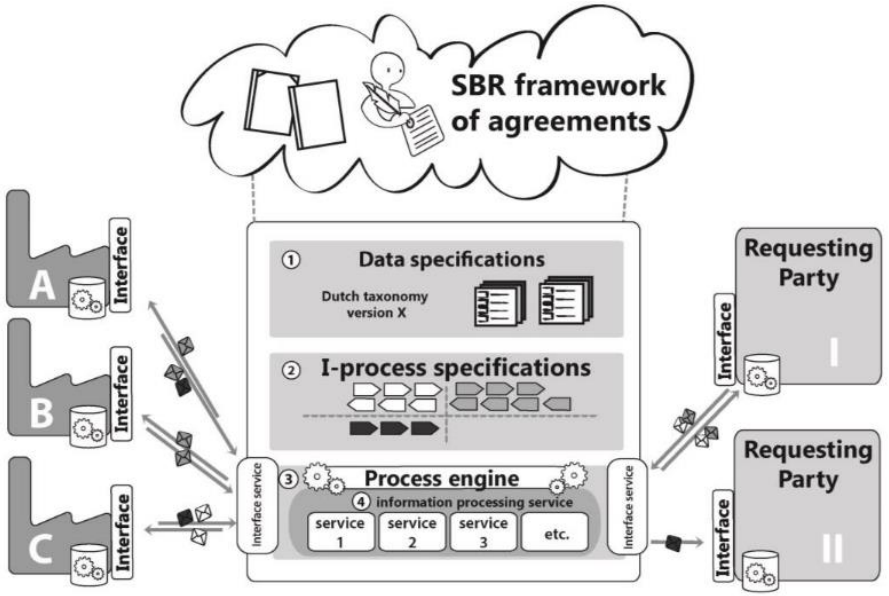
Annex

Anticipated improvements: annex

Improvement goal	Research question	Measure
Expression of will by the taxpayer	Is it possible to guarantee the expressions of will?	*eID + qualified signature from taxpayer*
Authentication of the sender	*Is it possible to authenticate the sender with a high level of certainty?*	*eID + qualified signature from sender, while PKIo remains relevant for secure connection*
Expression of will by the sender (can be an intermediary)	Is it possible to guarantee the expressions of will?	*eID + qualified signature from both sender and taxpayer*
No use of third-party services	Is it possible to consume third party services in a secure way?	*Consume trusted third-party services via electronic acting space* *Data exchange via ERDS*
Data authenticity	Is it possible to guarantee that the same data(set) is being sent?	*eID + signature from filer* *hashes are included in the digital signature file* *eSeal (hashing, envelope)*
Data quality	Is it possible to explicitly state the quality of data?	*eID + qualified signature from auditor / actuary / appraiser / …hashes are included in the digital signature file* *assurance taxonomies and assurance statements* *eSeal (hashing, envelop)*

Identification of sender

- SBR: PKI-certificate is used to
  - setup a secure connection
  - identify sender:
    - company
    - intermediairy
    - software supplier



- *Is it possible to identify the sender?*
- *eID + qualified signature from sender, while PKIo remains relevant for secure connection*

Expression of will by …..

- Sender
  - SBR: implicitly
- Represented party (tax payer)
  - SBR: implicitly
- *Is it possible to guarantee the expressions of will?*
- *eID + qualified signature from both sender and tax payer*

Authenticity of data

- SBR: data is:
  - stored at the company
  - sent to a requesting party
  - can be-resent to other parties

- *Is it possible to guarantee that the same data(set) is being sent?*
- *eID + signature from filer*
  - *hashes are included in the digital signature file*
- *eSeal (hashing, envelop)*

Quality of data

- SBR: data is:
  - prepared by a company
  - reviewed by an auditor / actuary / appraiser / …. / Tax Administration?

- *Is it possible to explicitly state the quality of data?*
- *eID + qualified signature from auditor / actuary / appraiser / …*
  - *hashes are included in the digital signature file*
- *assurance taxonomies and assurance statements*
- *eSeal (hashing, envelop)*