



Workshop IAM

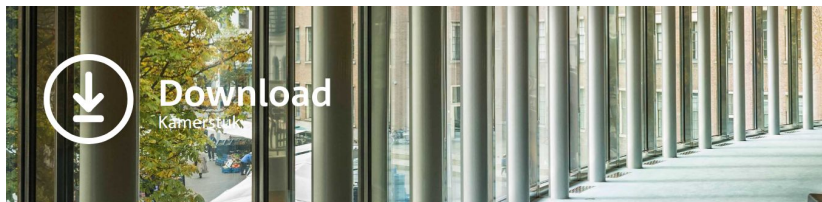
September 30th 2020



Content

- Regie op Gegevens (RoG)
- Self-Sovereign Identity (SSI)
- Discipl Society Architecture
- Open Innovation
- Infrastructure
- Concluding thoughts

Out of scope



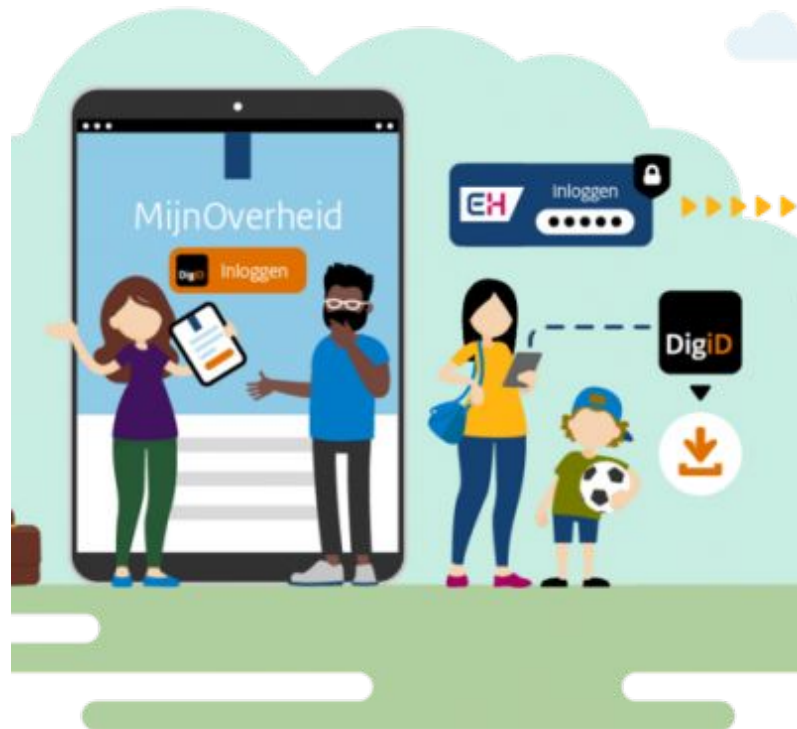
Home > Kamerstukken > Wetsvoorstellen

Delen  

Wetsvoorstel

Wet digitale overheid

Het wetsvoorstel legt de basis voor verdere digitalisering, waaronder regulering van de digitale overheid en meer in het bijzonder de generieke digitale voorzieningen in een gemeenschappelijke infrastructuur van de overheid. Dit wetsvoorstel vormt een eerste tranche van regelgeving ten behoeve van de verdere digitalisering van de overheid op de verschillende niveaus. Het



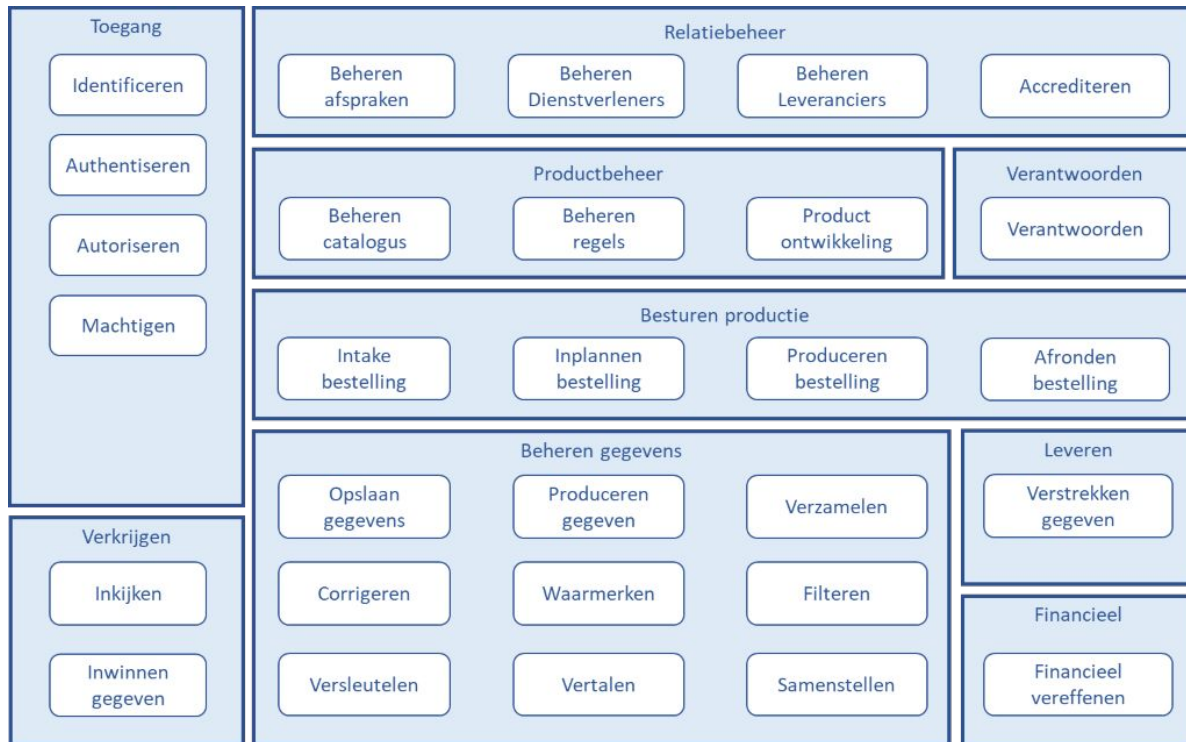
Regie op Gegevens (RoG)



Functionele domeinen

Referentiearchitectuur versie 0.3

1. Toegang
2. Verkrijgen gegevens
3. Relatiebeheer
4. Productbeheer
5. Besturen productie
6. Beheren gegevens
7. Verstrekken gegevens
8. Verantwoorden



Handelingsopties RoG

Referentiearchitectuur versie 0.3

Inzage en correctie

De eigen gegevens kunnen inzien en controleren, kunnen inzien welke gegevens worden en zijn uitgewisseld, en de gegevens kunnen (laten) corrigeren.

Eenmalige verstrekking

Kunnen weigeren om gegevens te verstrekken die binnen de overheid al beschikbaar zijn.

Delen van gegevens

De gegevens zelf, digitaal kunnen delen met dienstverleners buiten de overheid.



Self-Sovereign Identity (SSI)



The Path to Self-Sovereign Identity

Life With Alacrity, April 25th 2016 by Christopher Allen

1

Centralized Identity

Administrative control by a single authority of hierarchy.

3

User-Centric Identity

Individual or administrative control across multiple authorities without requiring a federation.

2

Federated Identity

Administrative control by multiple, federated authorities.

4

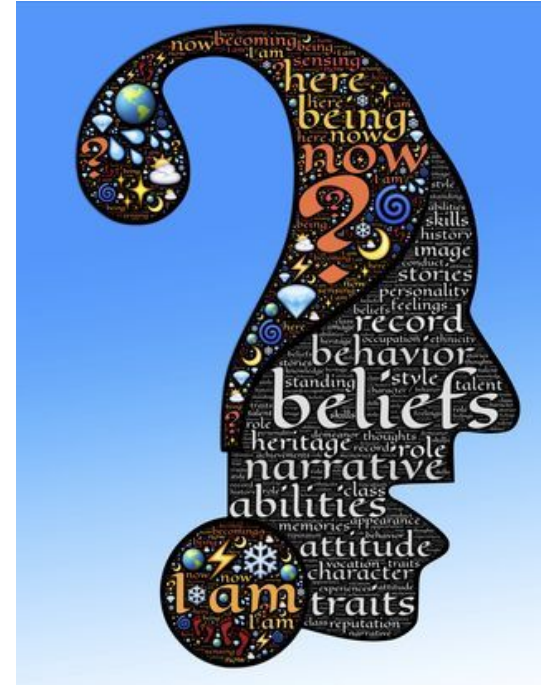
Self-Sovereign Identity

Individual control across any number of authorities.

Principles of Self-Sovereign Identity

These principles attempt to ensure the user control that's at the heart of self-sovereign identity. As with the definition itself, consider these principles a departure point to provoke a discussion about what's truly important.

- | | |
|-------------------|-----------------------|
| 01 Existence | 06 Portability |
| 02 Control | 07 Interoperability |
| 03 Access | 08 Consent |
| 04 Transparency | 09 Minimization |
| 05 Persistence | 10 Protection |



De soeverein is niet thuis

Self-Sovereign Identity (SSI) en Attribute Based Credentials (ABC)

Mireille Hildebrandt*



LESS Identity & Trustless Identity

LESS Identity

*“Legally-Enabled Self-Sovereign” Identity**

Key characteristics:

- Minimum Disclosure
- Full Control
- Necessary Proofs
- Legally-Enabled

Trustless Identity

Or more properly “Trust Minimized” Identity

Key characteristics:

- Anonymity
- Web of Trust
- Censorship Resistance
- Defend Human Rights vs. Powerful Actors
(nation states, multi-national corps, mafias, etc.)



LESS Identity

“I want my identity to be digital, good and better, but in the end, I want my identity to be less than the real me.”

– *Tim Bouma (@trbouma)*

“LESS Identity is for higher trust environments with real-world identity verification, trust frameworks, privacy with accountability and government acceptance”

– *Christopher Allen (@ChristopherA)*



Trustless Identity

“Identity is local, insecure, and labor-intensive... Identity-based access will exclude at least a third of world's future adults”

— Nick Szabo (@NickSzabo4)

“1.1 billion people have no legal identity, including tens of millions of stateless refugees.”

— The World Bank



Private Key Management

One of the fundamental differences between how legacy identity technologies vs Self-Sovereign Identity technologies is how they handle private keys.

- In SSI, ideally the user holds the keys, not the platform provider, not a corporation, not the government.
- However, this moves all the work and risk to the user, which is not practical.
- Some solutions are emerging, but there are architectural issues.





FIBREE

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Unique Object Identifier

Gebouwen spelen een belangrijke rol in onze samenleving. Maar wat weten we eigenlijk over de gebouwen waarin we wonen en werken? Het Unique Object Identifier (UOI) systeem dient als sleutel om toegang te krijgen tot interoperabele databases met dynamische informatie over nieuwe en bestaande gebouwen of hun gebouwde omgeving. Met de UOI kunt u specifieke informatie over een gebouw, verdieping, kamer of raamkozijn bekijken op basis van uw rol en toegangsrechten.

Circulaire gevel als dienst

IenW - Uitvoeringsprogramma Circulaire Economie 2020-2023

De gevelindustrie registreert haar producten in het [Cirling](#) platform met behulp van een productenpaspoort. Dit draagt bij aan het hoogwaardig hergebruik van de producten, materialen en grond stoffen en ondersteunt daarnaast circulaire businessmodellen en financiering.

Januari dit jaar rondde Alkondor Hengelo een heel bijzonder en [interessant project](#) af. De oostgevel van de faculteit Civiele Techniek is vervangen door nieuwe hoogwaardige en slimme **gevelelementen** (ongeveer 3000m²), die als een **dienst** fungeren voor de gebruiker in het gebouw en de eigenaar TU Delft.



Disicpl Society Architecture



Multi-year program

1

Objective

The primary focus for Discipl is a gradual shift from centralized control to decentralized, distributed self-organization at the level of society.

2

Mission

In a changing society, partly due to the impact of economic, social and technological innovations, we work on solutions that contribute sustainably to a better society.

3

Scope

We offer governments an alternative way of dealing with information management with solutions to problems concerning privacy, ethics and trust.

4

Strategy

We do this by working together with governments, the business community, science / education and citizens on POCs, pilots and change processes and by publicly publishing our insights, designs and code.

Principles

Discipl identifies an easy to remember set of main principles out of which the architecture unfolds.

These principles are:

01 | Compassion By Design

- Attend to all non controversial needs
- Non-violent collaboration

02 | Anonymous Transparency

- Dataminimalisation
- Open and free knowledge

03 | Sustainable nature 2.0





Models for the governance of data economics

Ingrid Schneider (political science professor at U Hamburg) described four main proposals around the economics of a data society:

- Individual data ownership + micropayments (Jaron Lanier, 2015).
- Data as public goods, managed by the state (Evgeni Morozov , 2017).
- Data as commons (Elinor Ostrom, 1990), managed by communities.
- Fiduciary trust (David Winickoff (2003 & 2005), where people commit their data to fiduciary trust, who governs the system.

Schneider discussed the relative merits of these four models, and made a case that Europe is currently “squeezed” between a Lanierian-dystopian America and a Morozovian China, but maybe Europe could (and should) develop a third way.



FLINT - Compliance by design

CALCULEMUS: Towards a Formal Language for the Interpretation of Normative Systems

Robert van Doesburg and Tijs van der Storm and Tom van Engers¹

Abstract. In this paper we will introduce a method for creating computational models of normative systems deduced from sources of norms in natural language.

The authors show how to make formal interpretations of normative sources in natural language that result in a computational model, which includes explicit references to all sentences of sources of norms that are considered relevant by the interpreters to constitute a computational model. The models produced can easily be held in sync with these sources.

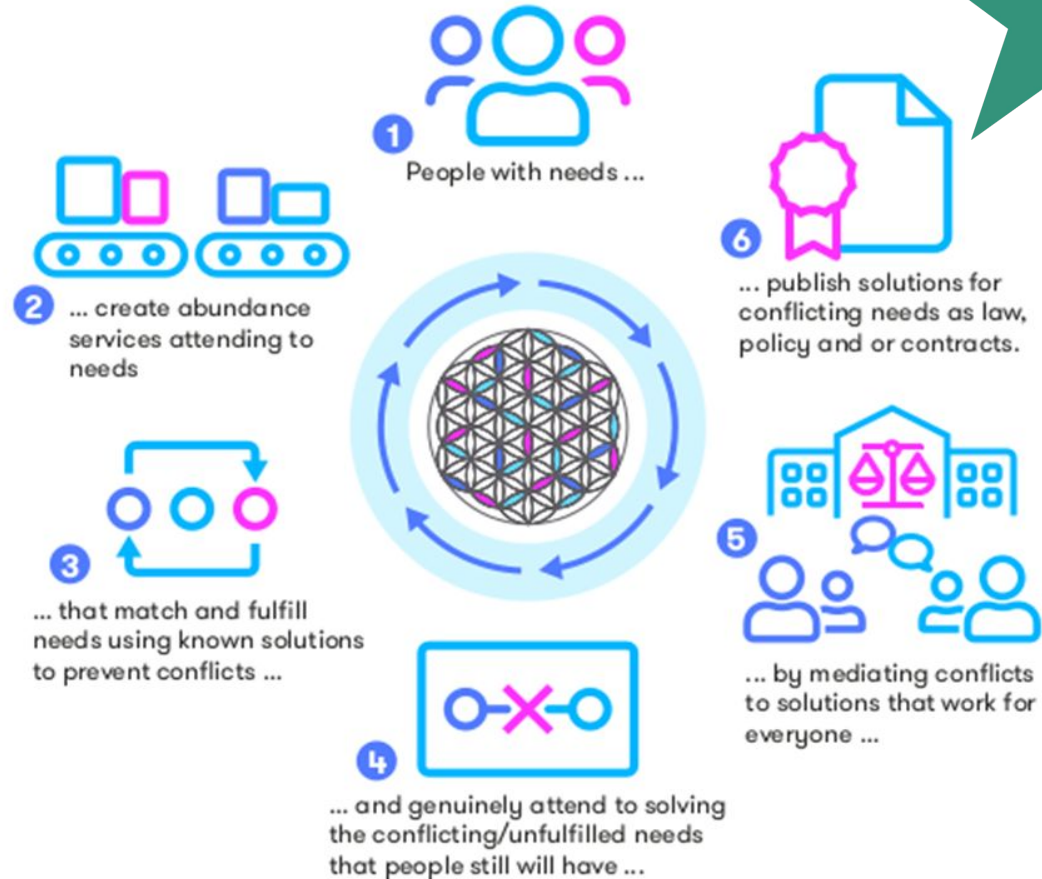
In the early nineties and the first decade of the twenty-first century solutions for this problem were presented [1][16][17], but none of these methods are presently being used on production scale within governmental organizations or industries. In this paper we will shortly describe the difference between our approach and early work. An elaborated overview of the various earlier approaches and the relation to our work will be published as a separate paper, this paper is too short for that exposé.

Verifiable claim with the AWB model as JSON-LD

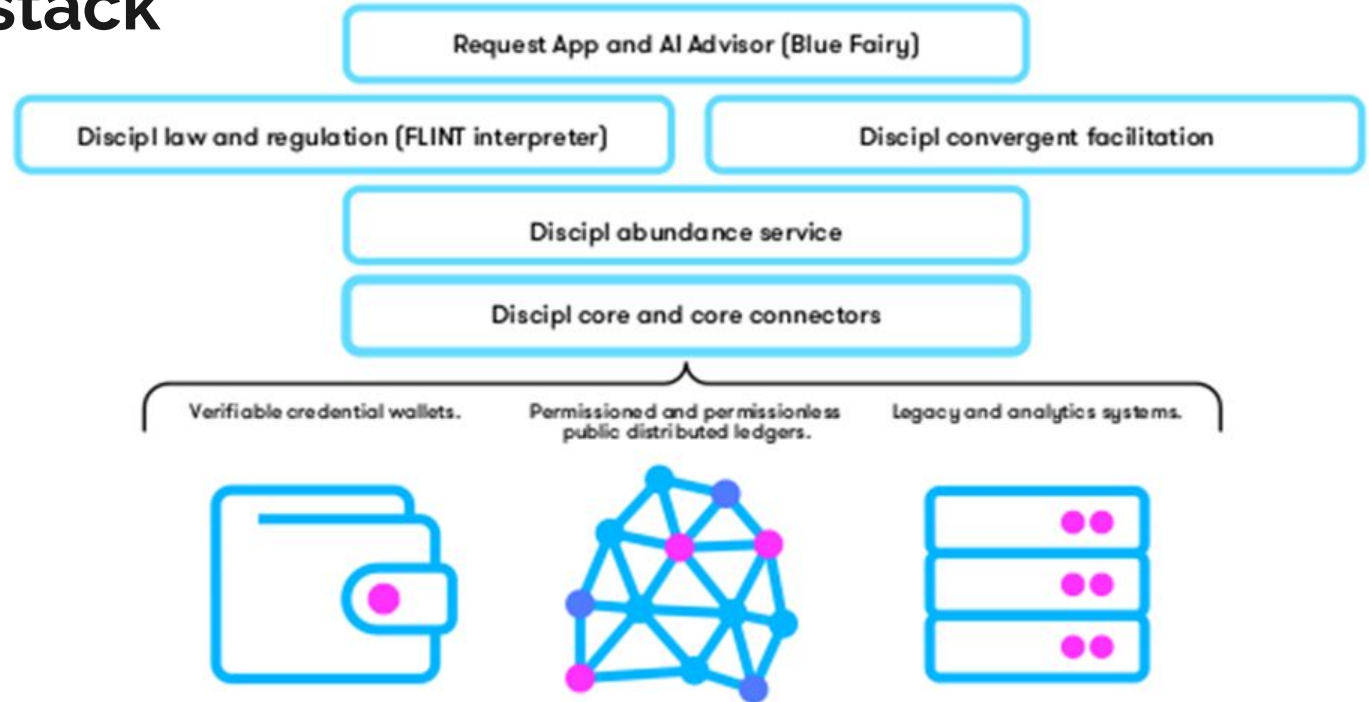
```
{
  "acts": [
    {
      "tags": "",
      "act": "<<indienen verzoek een besluit te nemen>>" ,
      "actor": "[belanghebbende]" ,
      "action": "[indienen]" ,
      "object": "[verzoek een besluit te nemen]" ,
      "recipient": "[bestuursorgaan]" ,
      "preconditions": {
        "expression": "NOT",
        "operand": "[bij wettelijk voorschrift is anders bepaald]"
      }
    }
  ]
}
```



Architectural pattern

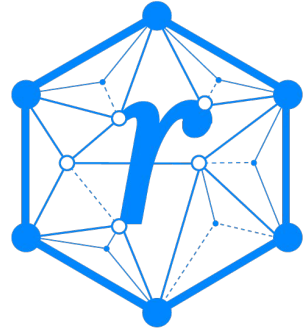


Software stack



Open Innovation

Rebooting the Web of Trust (RWOT)



Who are we?

- A 501(c)4 social benefit organization based in the United States
- A semi-annual collaborative writing workshop
- A volunteer organization advancing the cause of decentralized identity
- A safe space for companies, organizations, and governments to explore new ideas in identity

Rebooting the Web of Trust gathers passionate professionals to define, explore, and advocate for decentralized identity. We hold workshops and salons where we discuss, collaboratively write, and ultimately publish ground-breaking papers and software to help shape the future of identity.

RWOT outcomes

State to date May 2020

- 50+ collaborative white papers published from 9 Workshops in the topic areas of Identity, Reputation, Privacy & Digital Rights, Verification, Public Key Infrastructure, and more (complete list at <http://www.weboftrust.info/papers.html>)
- 250+ topic papers shared to participants before events
- Both the new W3C **Verifiable Credentials** standard and the newly chartered W3C **Decentralized Identifier** Working Group have adopted the technologies incubated during RWOT for International Standards
- 10+ active major platform providers building on technologies created or incubated at RWOT



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IIWXXXI #31 🐱 WILL BE ONLINE

Internet Identity WORKSHOP



Local Initiatives

State to date Sep 2020

- Samen Organiseren / Common Ground
- Dutch Blockchain Coalition
- Odyssey
- CherryTwist
- Digicampus
- Nijenrode Digital Ecosystems Institute
- City Deals
- SMART City Nederland
- (...)





Tender Protocol

In development

Empowering citizens in The Netherlands to **adopt open-innovation**, by facilitating an easy to use and transparant protocol for a continuous iterative process that delivers **governmental public services**.



Infrastructure



Technologies et al

- **NL** GDI / Common Ground
- **EU** SDG / European Blockchain Services Infrastructure (EBSI)
- **WWW** IPv8



Common Ground

Architectuurprincipes >>



Component gebaseerd

Afgebakende functionaliteiten en gestandaardiseerde interfaces i.p.v. geïntegreerde (silo)systemen.



Open

We geven inzicht wat er met de data gebeurt en hoe processen werken.



Vertrouwd

Privacy & security worden integraal meegenomen in het ontwerp van de applicatie.



Eenmalige vastlegging

Gegevens worden eenmalig vastgelegd en rechtstreeks bij de bron bevraagd.



Regie op gegevens

Rechtmatige partijen moeten regie kunnen voeren op het gebruik van hun gegevens.



Standaarden

Voor effectieve, efficiënte en veilige samenwerking tussen gemeenten en marktpartijen.

Common Ground (cont'd)

Realisatieprincipes >>

Van toepassing op de projecten onder regie van het programma Common Ground



Community

Gemeenten, marktpartijen en de VNG werken samen in het realiseren van Common Ground.



Agile

Kort-cyclisch bruikbare (deel) producten opleveren en continu verwerken van feedback.



Nieuw naast oud

De nieuwe architectuur vervangt geleidelijk de bestaande architectuur.



Moderne IT

Kansen voor nieuwe technologie moeten benut worden, mits dit meerwaarde heeft.



Open Source

Stimuleren van open source software om afhankelijkheden m.b.t. marktpartijen te beperken.

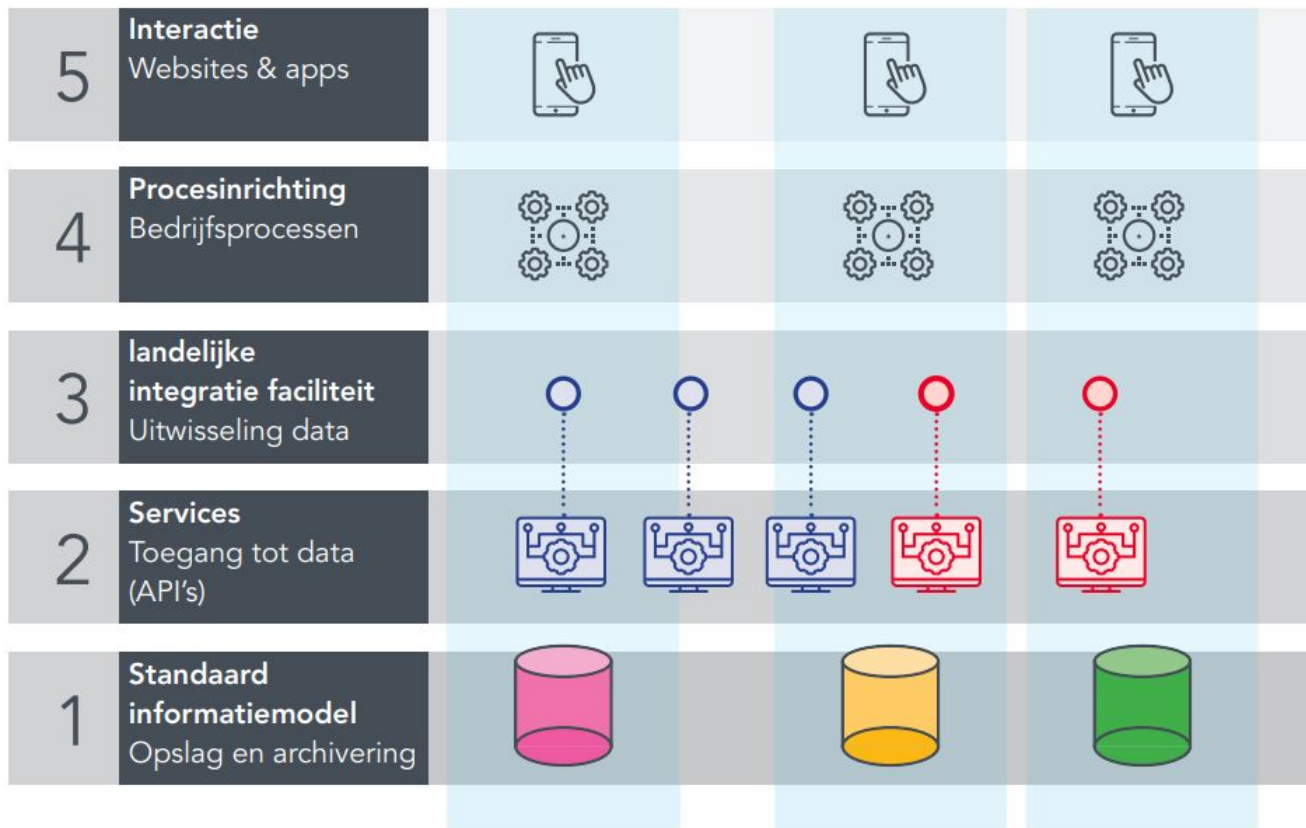


Uitwisseling

Zorgen voor veilige, betrouwbare, transparante en snelle uitwisseling van gegevens. Met de NLX laten we zien hoe dit kan werken.

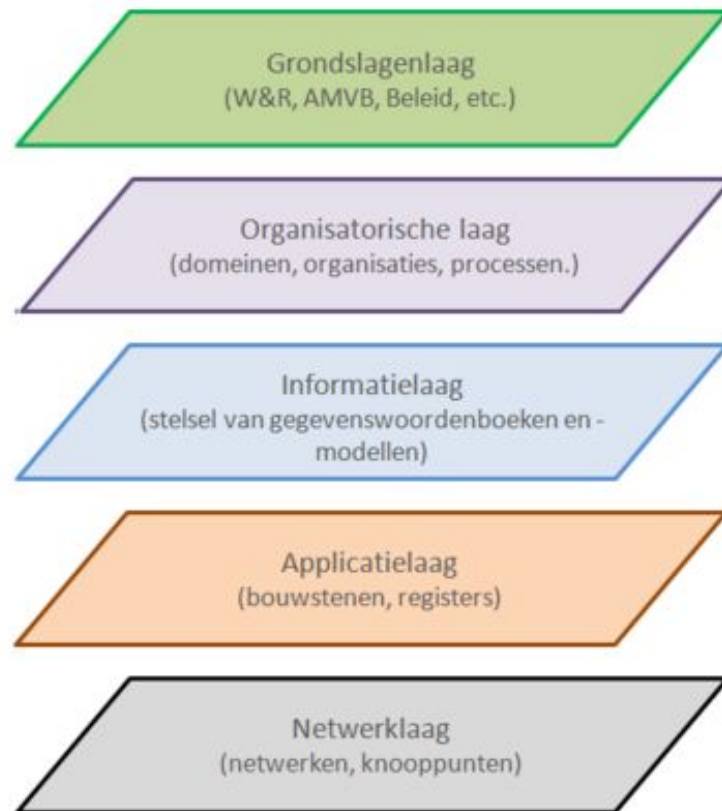
Common Ground

Het zevende realisatieprincipe is een architectuur op basis van de vijfonderstaande lagen. Daarmee creëren we meer flexibiliteit, spreiden we risico's en wordt bovendien voorkomen dat een component meer doet dan waar het voor bedoeld is.



NORA Vijflaagsmodel

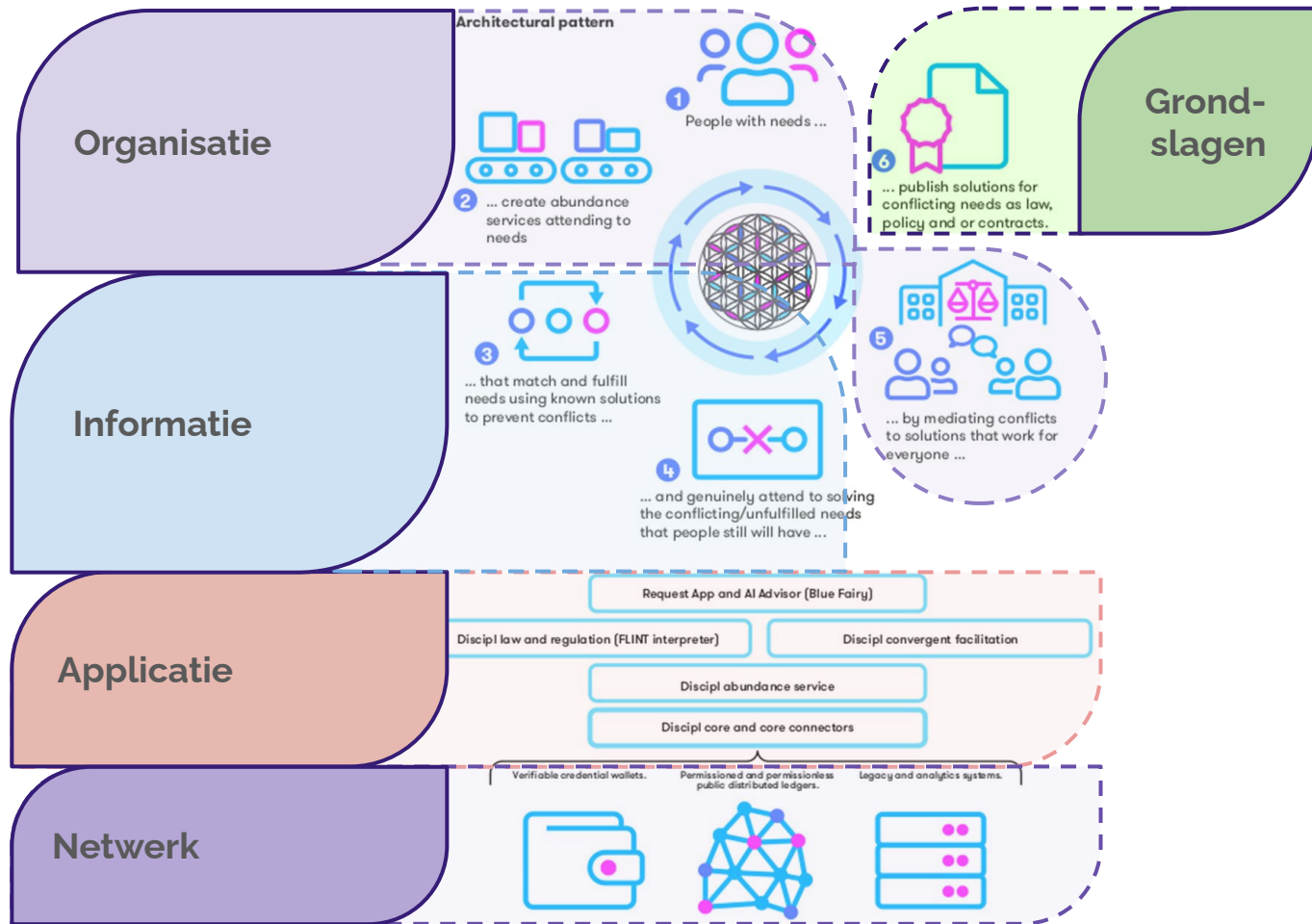
De NORA verbindt het klassieke negenvlakmodel (plus twee) zo rechtstreeks mogelijk met de diensten waar burgers, bedrijven en ook ambtenaren mee te maken hebben. Hiervoor gaan ze uit van een Vijflaagsmodel, dat aansluit bij de modellen in de [EIRA](#) en kan worden uitgebreid met actuele thema's.



Discipl

De Discipl Infograph is grotendeels overeenkomstig het NORA Vijflaagsmodel gestructureerd.

Maar zet de mens centraal i.p.v. de grondslagen





EBSI Platform

The EBSI Platform is a peer to peer network of interconnected nodes. The Commission will operate a minimum number of these EBSI nodes at the European level, and the Member States will operate EBSI nodes at the national level.

The architecture of each node will be composed of three main functional areas:

- main services
- use cases
- business applications (not part of the EBSI infrastructure)

BUSINESS APPLICATIONS

Enables private or public organisations to develop applications that connect to EBSI nodes and consume exposed core services, having the option to reuse the code from sample use cases layer.

USE CASES

Sample applications for each selected use cases to showcase functionalities, technical implementation and use of exposed services

CORE SERVICES

Enablers for all applications, that provide interfaces for on-chain and off-chain services

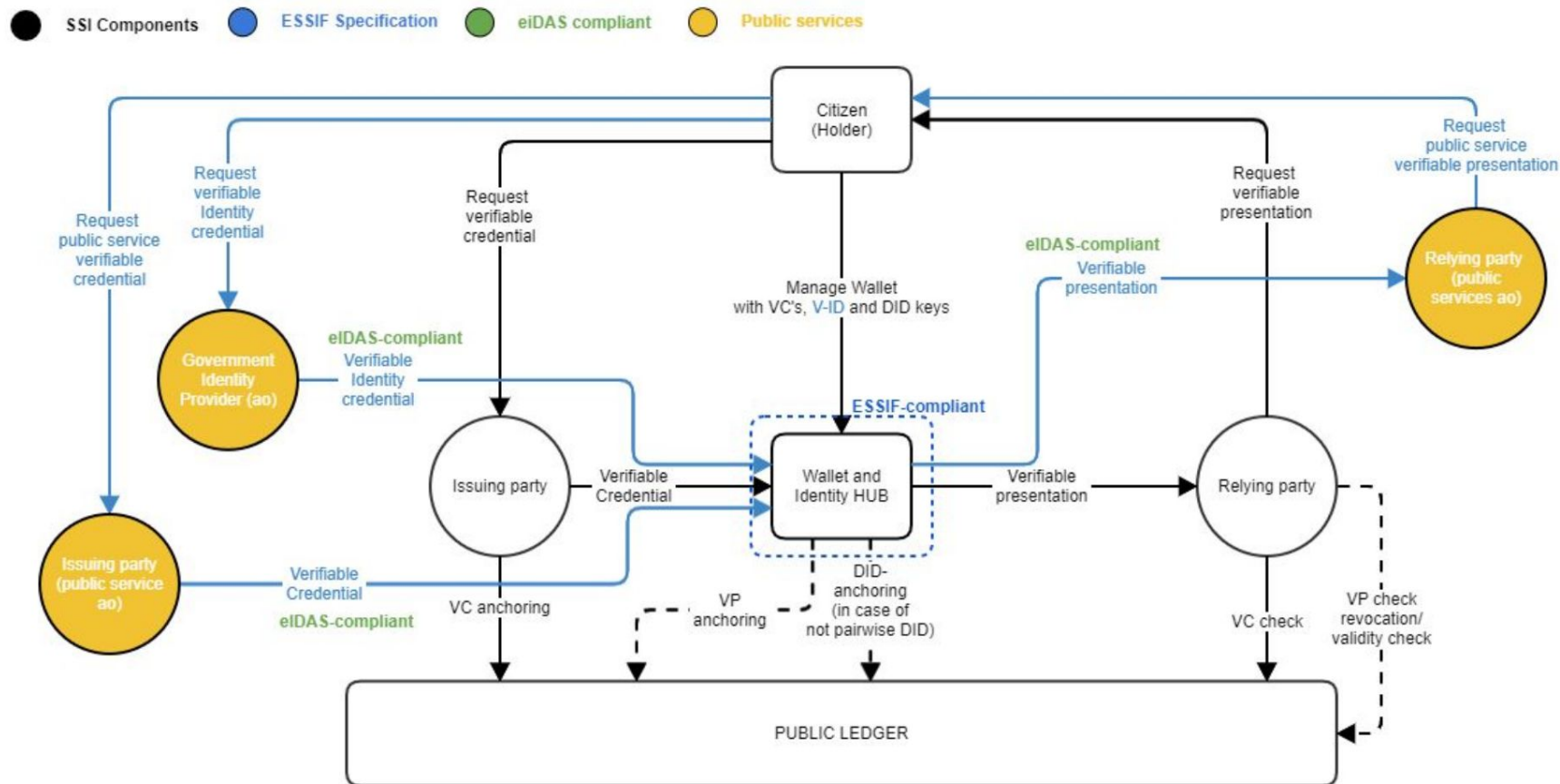
CHAIN AND STORAGE

This layer encompasses the blockchain protocols and off-chain storage protocols, currently supported by EBSI

INFRASTRUCTURE

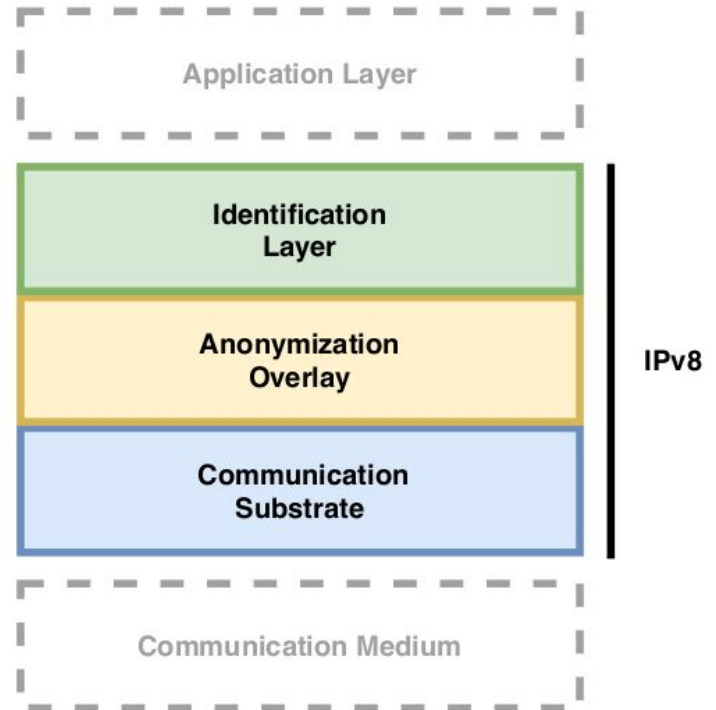
This layer enables the deployment and connectivity of the EBSI nodes (at the blockchain and off-chain storage level) and includes network, compute, security and operation capabilities.

ESSIF-specifications



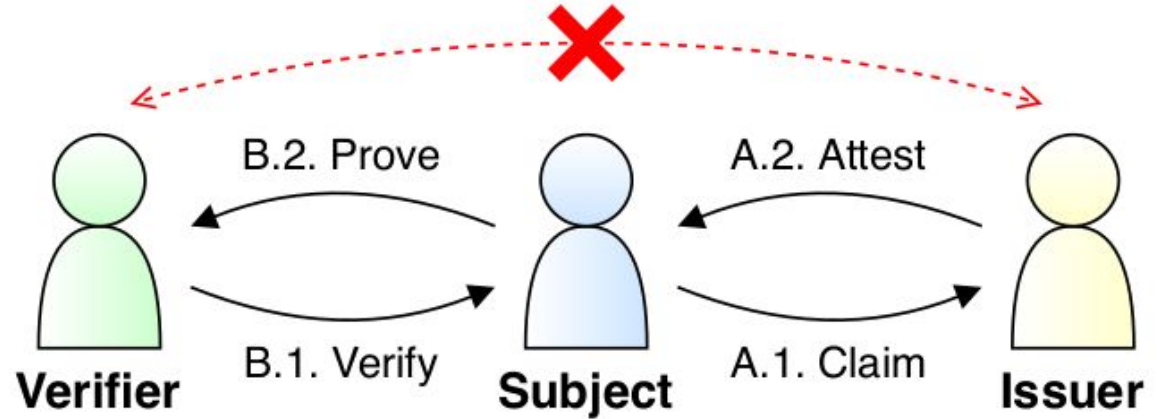
IPv8 - design

IPv8 has been initiated in 2016 and created in tight collaboration with both government and industry. The methodology consists of an iterative process of documenting, rapid prototyping, small-scale trials, and deep-dive sessions. Legal experts have established that in legal terms Self-Sovereign Identity is an unexplored field. IPv8 design complies as much as possible with existing standards for authentication.



IPv8 - SSI

The two communication flows when establishing and verifying a claim. Both flows go through the subject in a Self-Sovereign Identity solution.



Concluding thoughts



Zoek de verschillen

GDI / Common Ground / SDG / EBSI

1. Faciliteert **LESS Identity**
2. Innoveert interactie & UX
3. Scheidt data van applicaties
4. Wet & regelgeving is **uitgangspunt**
5. Richt proces in
6. Faciliteert toegankelijkheid van rechten & plichten
7. Integreert met de Generieke Digitale Infrastructuur
8. Hanteert Basisregistraties

Discipl / IPv8

1. Onderzoekt **Trustless Identity**
2. Innoveert “Blue Fairy” AI
3. Faciliteert data-dialoog
4. Wet & regelgeving is **uitkomst**
5. Orienteert zich op alle behoeften
6. Automatiseert compliancy van rechten & plichten by design
7. Onderzoekt permissieloze decentrale technologieën
8. Verrijkt Basisregistraties

Stelling 1

Mijn LESS Identity kan nooit
Trustless worden!

Stelling 2

IAM kan zonder GDI!

Stelling 3

Een overheid behoeft geen
(basis)registratie van iedereen!

—