“State of the IRMA”

(Re-)introduction to IRMA and new developments

Sietse Ringers

Tomas Harreveld

Privacy by Design Foundation

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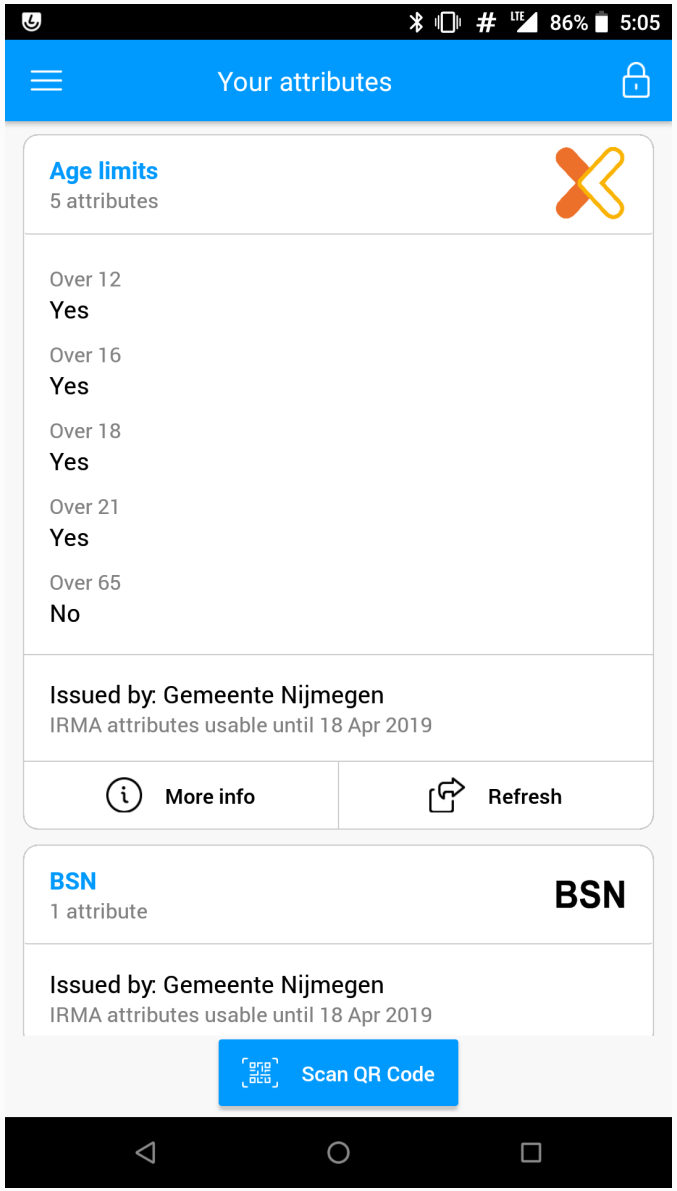
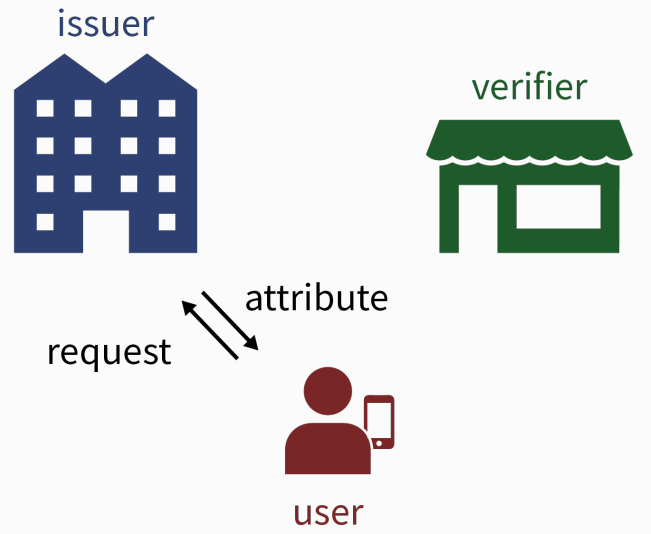
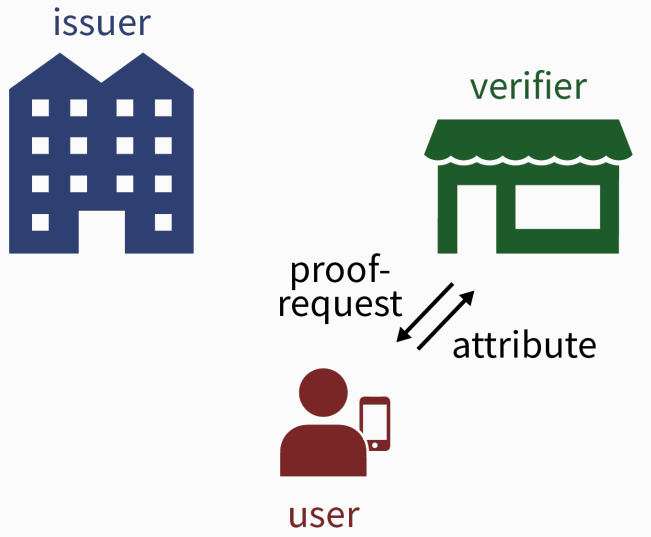
(Re-)introduction to IRMA



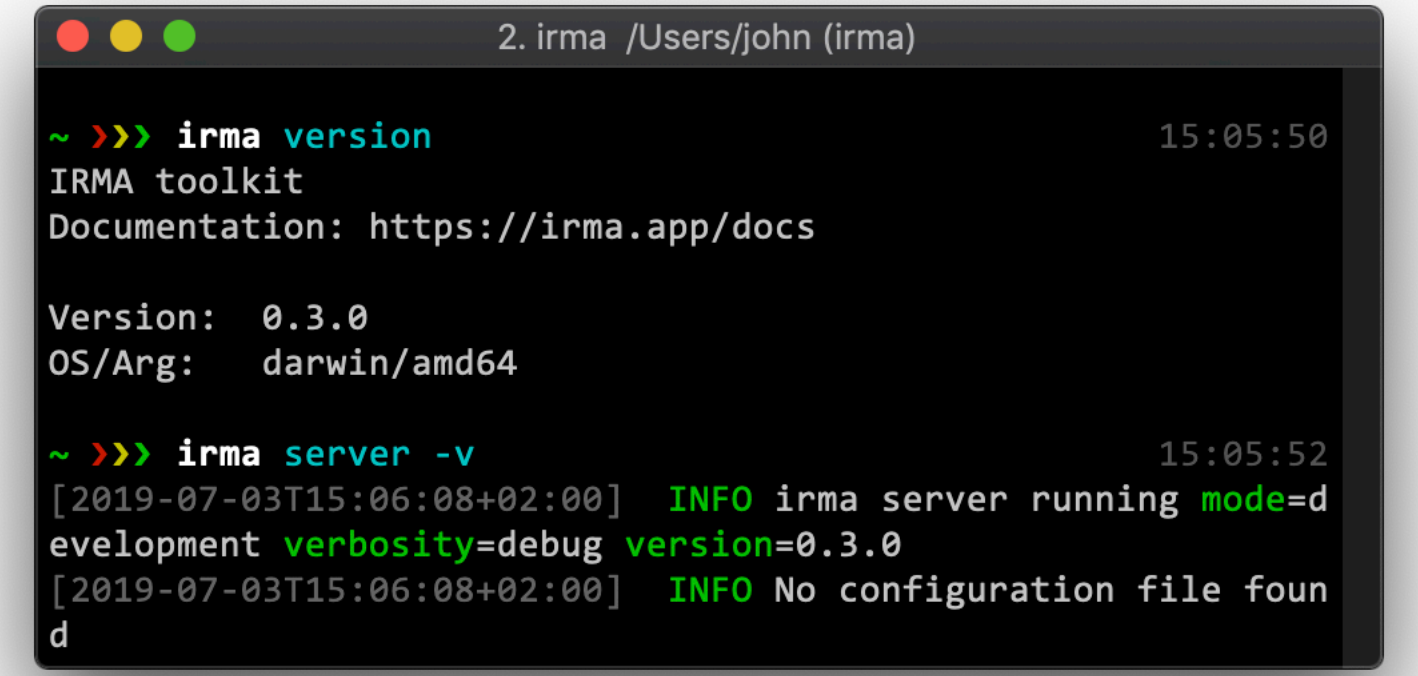
- User collects attributes
- Attributes are digitally signed by trusted issuer
- Identifying (name) or not (> 18)
- Multiple disclosures are unlinkable
- Decentral: attributes are stored only on phone
- IRMA PIN to unlock app & attributes
- Free and open source





IRMA software

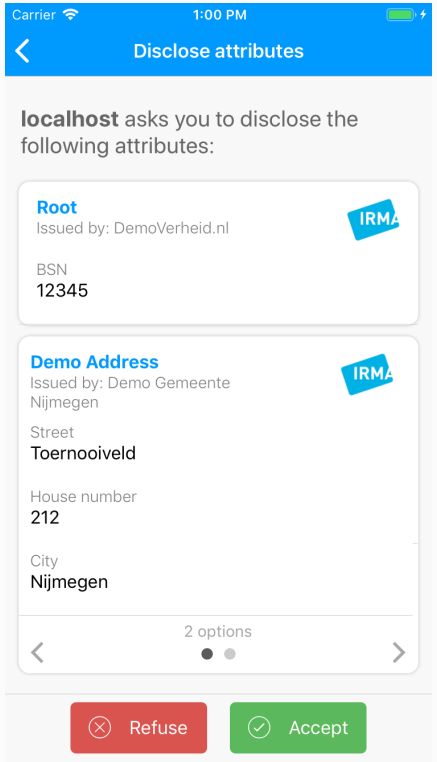
`irma` command line tool (including `irma server`)
deprecates Java `irma_api_server`



Releasing ‘condiscon’

More flexible attribute requests for IRMA verifiers

- For each requested attribute **set**, offer multiple choices
- Conjunction of disjunctions **of conjunctions** of attributes



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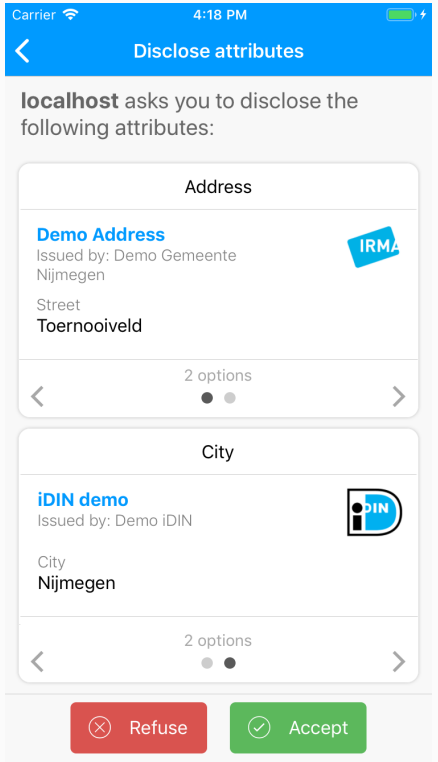

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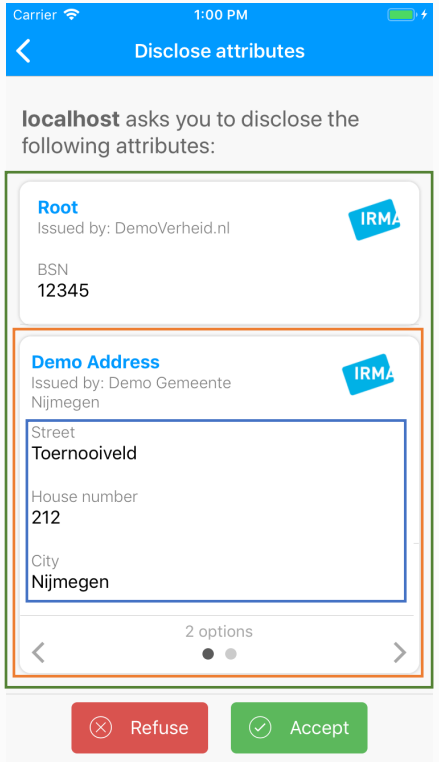

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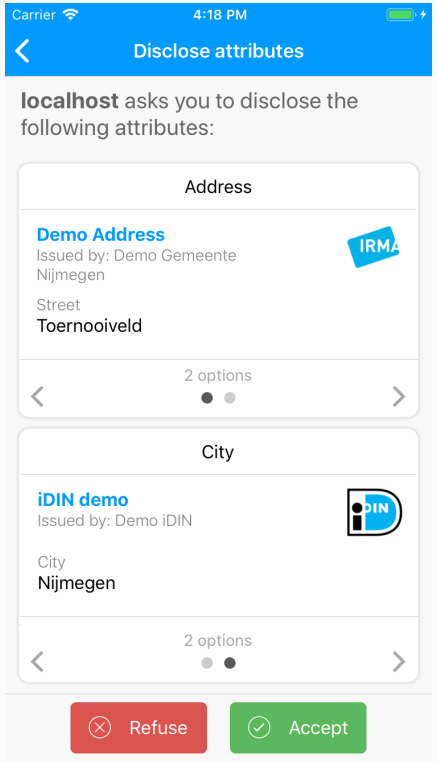

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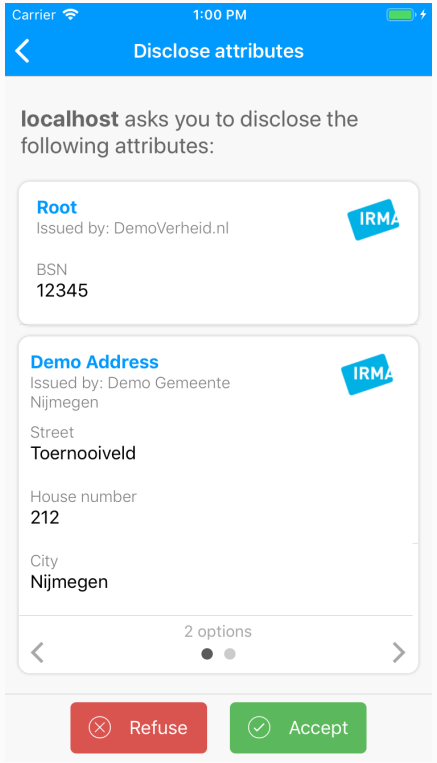
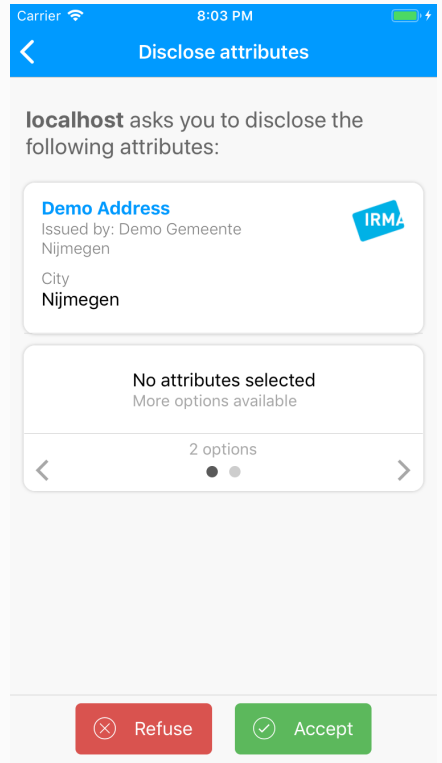


- Prevent cross-credential mixes
- IRMA app GUI: clearer relation between stored credentials and disclosed attributes
- Disclosure labels are optional and translatable
- Optional disjunctions: include empty candidate set
- Absent optional attributes (null attributes) no longer abort the session
- New IRMA apps, servers are backwards compatible with pre-condiscon
- New session request format (see updated documentation)



Coming: revocation

- Issuer can revoke individual previously issued credentials
- Revocation is instantaneous (as long as IRMA apps and servers keep up-to-date revocation state)
- Fully compatible with unlinkability

For each credential, the IRMA app includes a new zero-knowledge proof that the credential has not been revoked:

1. IRMA app sends disclosed attributes
2. IRMA app sends zero-knowledge proof:

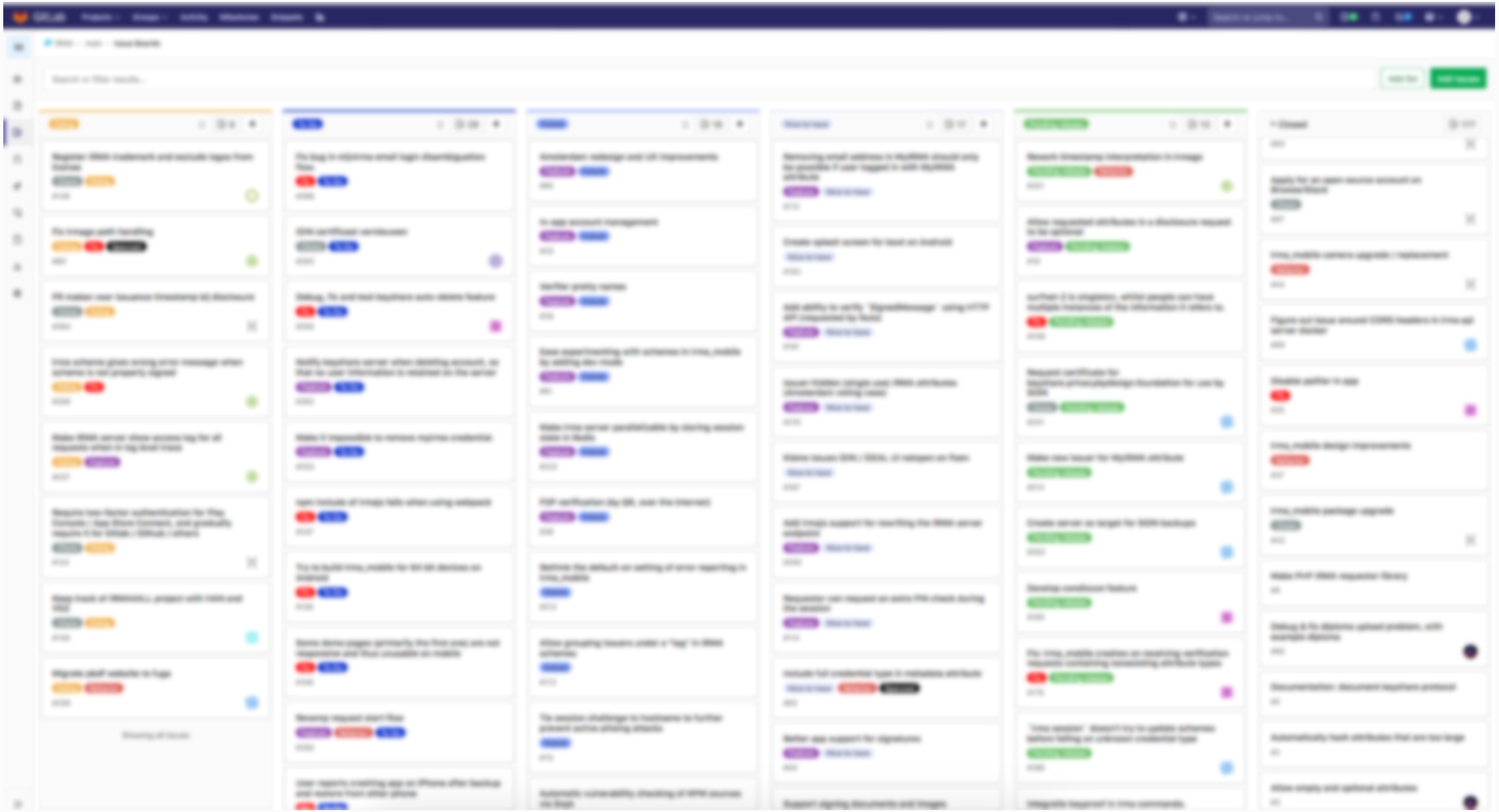
“I have a valid credential containing these attributes”

AND

“This credential has not been revoked”

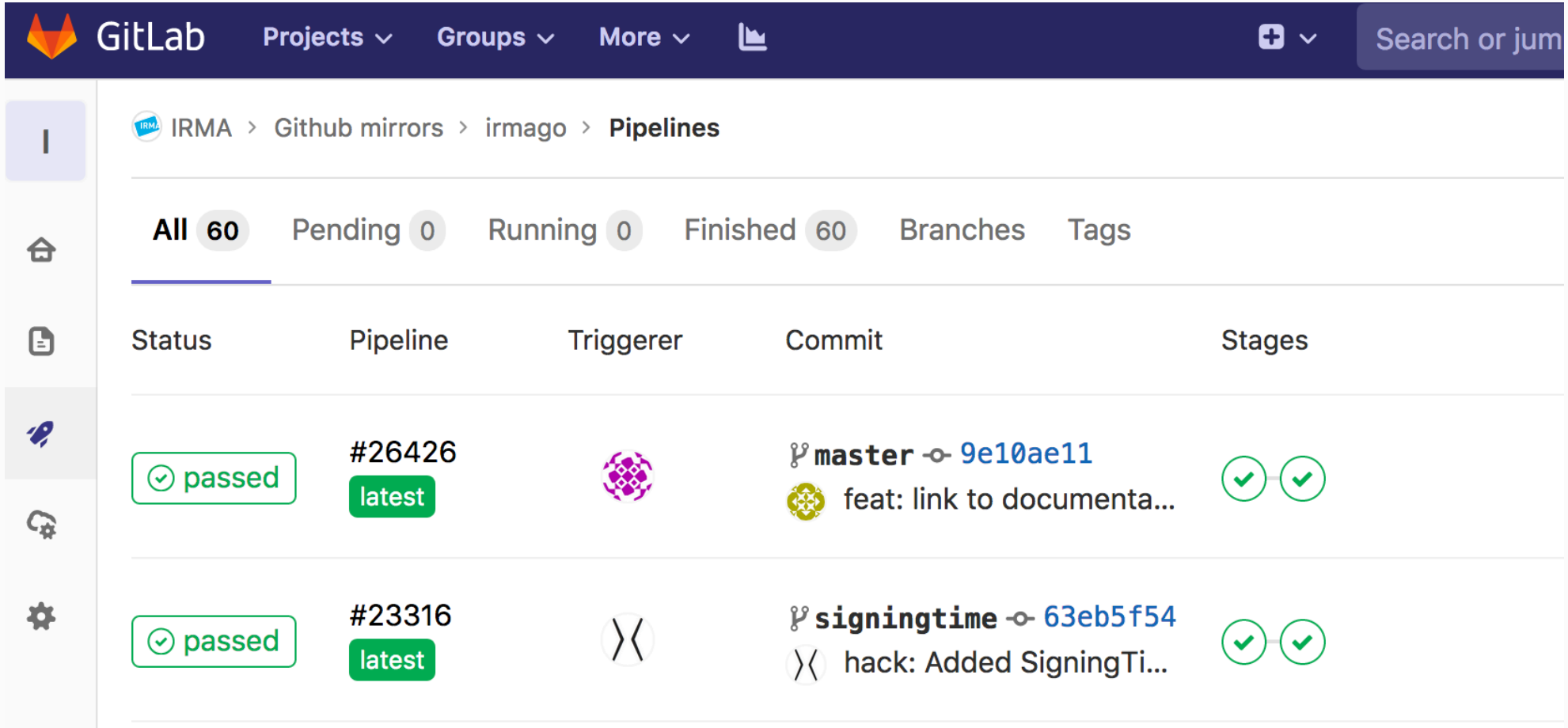
First use case: Gemeente BRP attributes

Roadmap and issue tracker

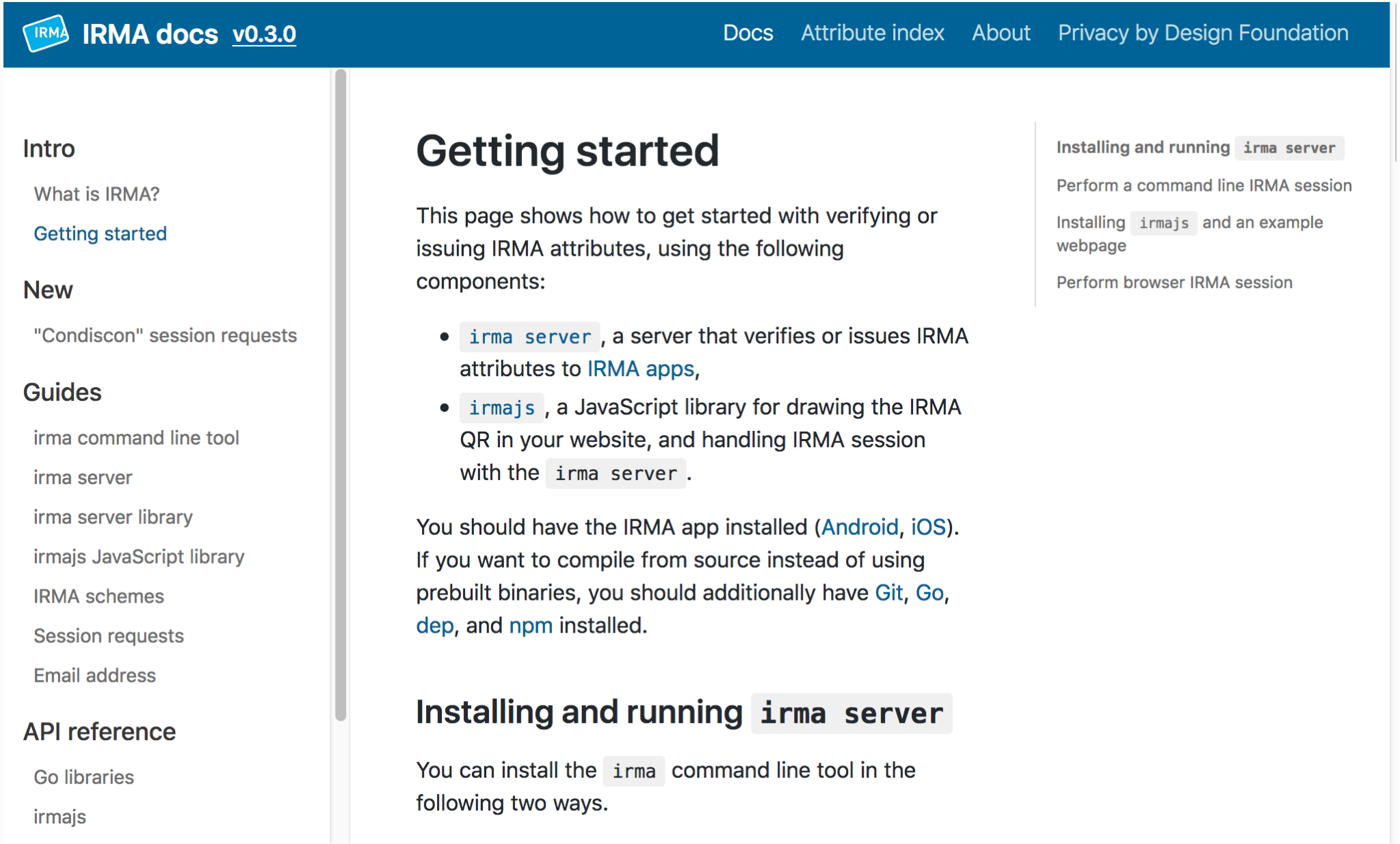


Continuous integration met Gitlab

- Richting:
  - Signed commits en releases
  - Reproducible builds



Documentatie



IRMA docs v0.3.0 Docs Attribute index About Privacy by Design Foundation

Intro
- What is IRMA?
- Getting started

New
- "Condiscon" session requests

Guides
- irma command line tool
- irma server
- irma server library
- irmajs JavaScript library
- IRMA schemes
- Session requests
- Email address

API reference
- Go libraries
- irmajs

Getting started

This page shows how to get started with verifying or issuing IRMA attributes, using the following components:

- `irma server`, a server that verifies or issues IRMA attributes to IRMA apps,
- `irmajs`, a JavaScript library for drawing the IRMA QR in your website, and handling IRMA session with the `irma server`.

You should have the IRMA app installed (Android, iOS). If you want to compile from source instead of using prebuilt binaries, you should additionally have Git, Go, dep, and npm installed.

Installing and running `irma server`

You can install the `irma` command line tool in the following two ways.

Installing and running `irma server`
Perform a command line IRMA session
Installing `irmajs` and an example webpage
Perform browser IRMA session

Landelijke BRP uitgifte

Landelijke BRP uitgifte

- Te gebruiken vanaf aankomende maandag 8 juli
- Verifiers kunnen (moeten) nu al hun requests aanpassen:

```
{
  "type": "disclosing",
  "content": [{
    "label": "Volledige naam",
    "attributes": [
      "pbdf.nijmegen.personalData.fullname"
    ]
  }]
}
```

```
{
  "type": "disclosing",
  "content": [{
    "label": "Volledige naam",
    "attributes": [
      "pbdf.nijmegen.personalData.fullname",
      "pbdf.gemeente.personalData.fullname",
    ]
  }]
}
```

IRMA Zuil

Leiden

Gemeente Almere

Haarlem

Gemeente Amsterdam

- Voortgekomen uit het Digitale Identiteitslab
- Binnen de pilot gegevens uit identiteitskaart, paspoort of rijbewijs (inclusief pasfoto)

- Uitbreidbaar naar hogere mate van controle, stadspas, balie
- Peer to peer verificatie vanuit de IRMA app
- Open source kaartlezer, ook te gebruiken op Android en iOS

Lokale Digitale Democratie met Consul

Gemeente Groningen

Log in

Log in via:

IRMA

Toegang milieustation Gemeente Den Bosch

's-Hertogenbosch

GOED VOOR AFVAL BETER VOOR HET MILIEU

afvalstoffendienst.nl

Afval ABC

Home > Bewoners > Milieustations

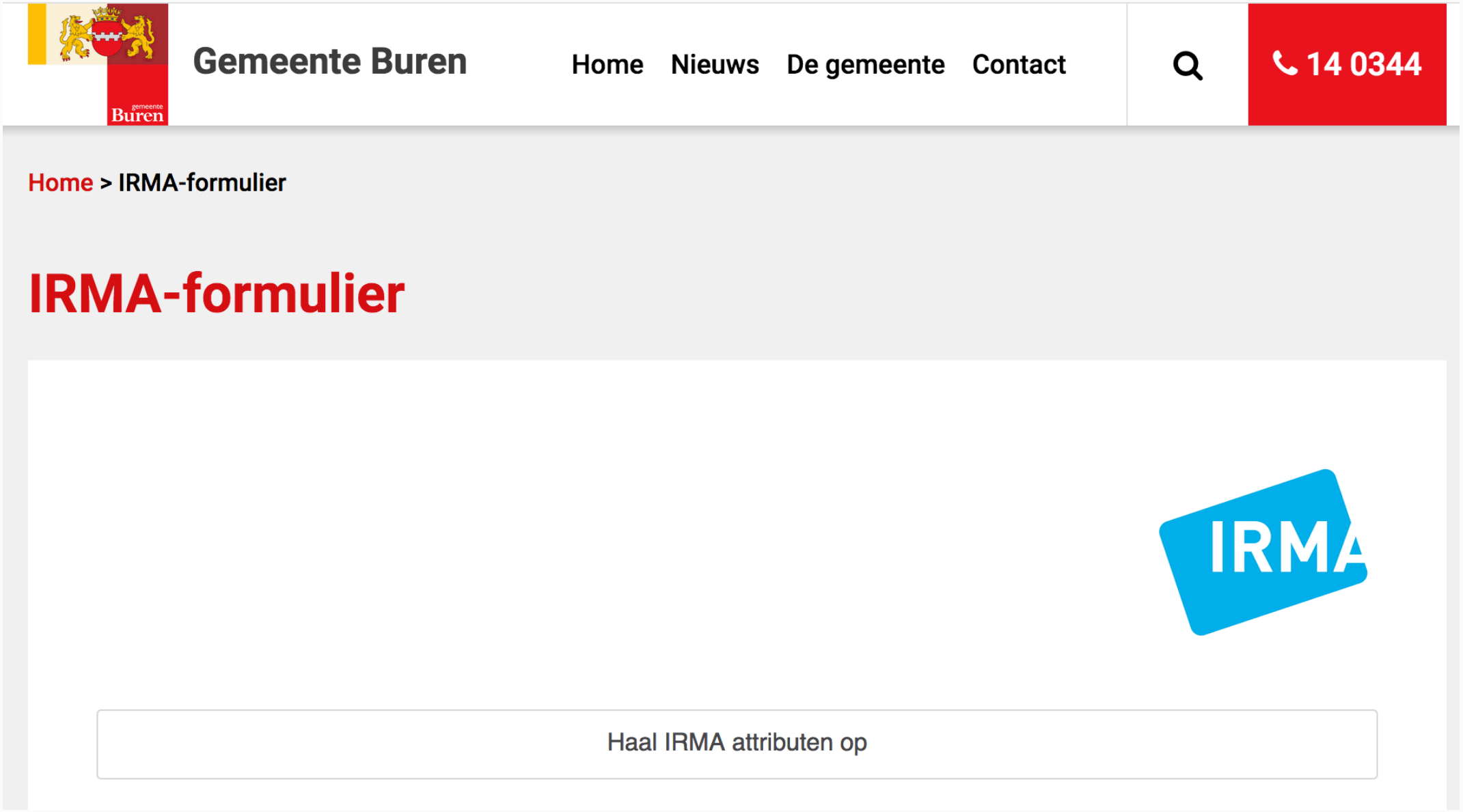
Milieustations

U kunt uw afval ook zelf wegbrengen naar een van de twee milieustations in 's-Hertogenbosch. Let op: zorg dat u uw pas bij u hebt!

Waar?

- Milieustation Treurenburg, Galliumstraat 9 in 's-Hertogenbosch. Open van maandag tot en met vrijdag van 8.30 tot 17.00 uur. Op zaterdag van 8.30 tot 16.00 uur. Hier

Gemeente Buren IRMA Wordpress-plugin



More information

- Website: https://privacybydesign.foundation
- Source code: https://github.com/privacybydesign
- Technical docomentation: https://irma.app/docs
- IRMA Slack (ask for invite)
- Twitter: https://twitter.com/irma_privacy