# BeSt Address Services: Overview
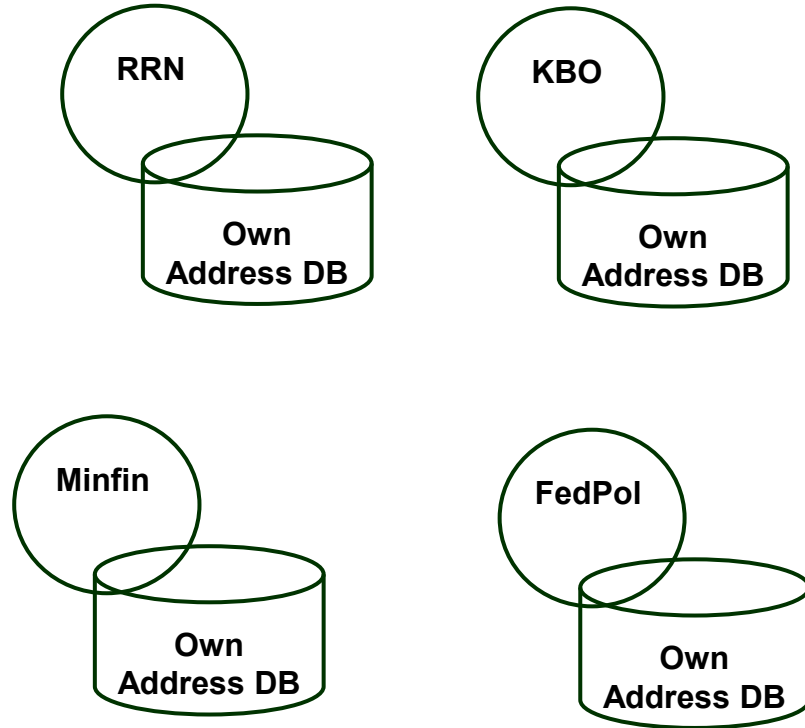
BO·sa

**FOD Beleid & Ondersteuning**

**SPF Stratégie & Appui**

July 2023

# BeSt: Objective

- BeSt stands for "Belgian Streets".

- The objective of the BeSt project is to provide address information on a **national** level based on the ***three regional address master data sets*** from Brussels, Flanders and Wallonia.

- Cooperation between regions and federal government organisations (samenwerkingsakkoord/accord de cooperation")

- One unique ID for each address in Belgium
  - Namespace : https ://data.vlaanderen.be/id/address
  - objectIdentifier : 12345
  - versionIdentifier : 18/04/2019 12 :35
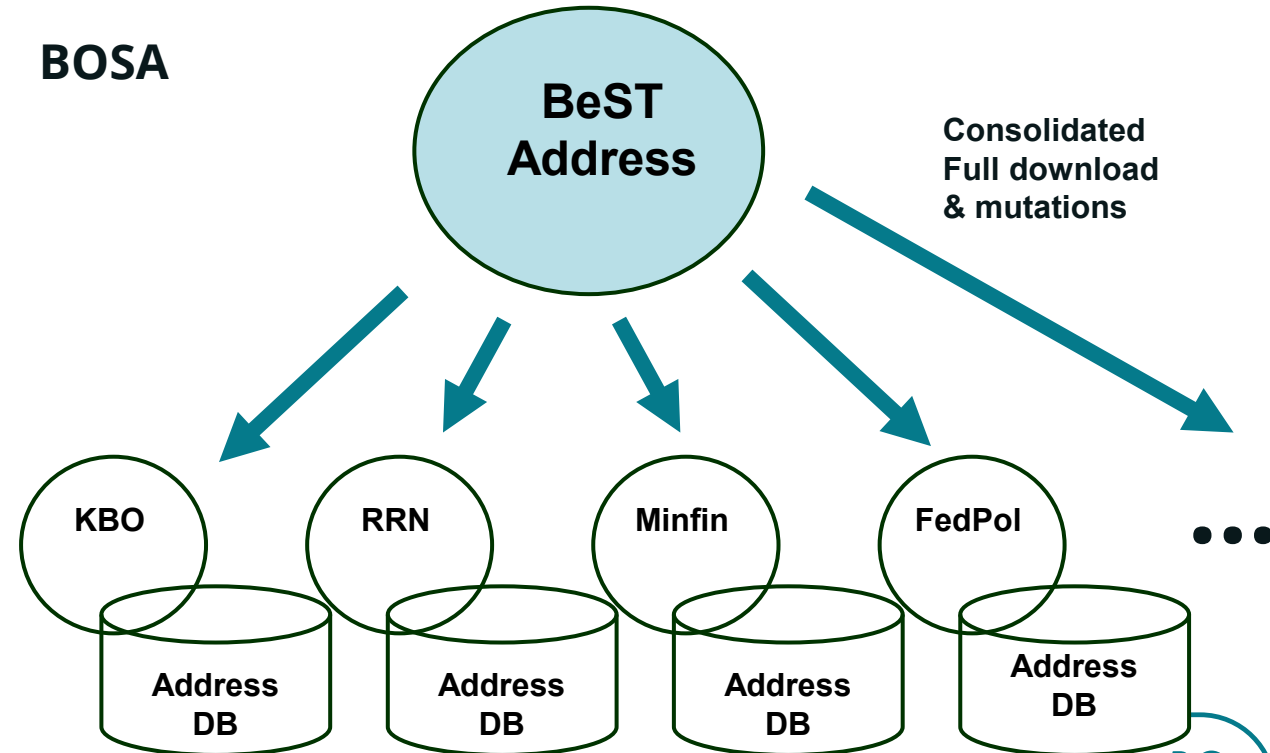
# Today

## All manage their own unique address database

**RRN** — Own Address DB

**KBO** — Own Address DB

**Minfin** — Own Address DB

**FedPol** — Own Address DB

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# Future

**Region Authentic Sources**

BRU   FL   WAL
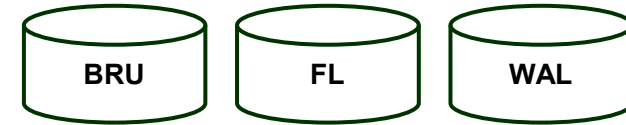
Individual region
Full download
& mutations

**BOSA**

**BeST Address**

Consolidated
Full download
& mutations

**KBO** — Address DB

**RRN** — Address DB

**Minfin** — Address DB

**FedPol** — Address DB

• • •

# BeSt: cooperation agreement

- Partners

  - The National Geographic Institute (NGI)
  - The General Administration of the Patrimony Documentation (AAPD) from the FPS Finance
  - The National Registry (NR) from the FPS Internal Affairs
  - Statistics Belgium from the FPS Economy
  - The Crossroad Bank for Enterprises (CBE) from the FPS Economy
  - The Directorate general Security and Prevention from the FPS Internal Affairs
  - The FPS Governance and Support (BOSA)
  - The Agency for Administrative Rationalization (DAV)
  - The supplier of the universal postal services

  - The regions: Brussels, Flanders and Wallonia

# EU perspective

- Inspire: legal framework set forth by the EU to standardize geospatial information within the EU
  - BeSt was established on the basis of the INSPIRE data model of the addreses. The BeSt Model is not fully compliant with the INSPIRE data model of addresses, and therefore, with the EC Regulation 1089/2010 (interoperability of spatial data sets and services). This was a conscious decision:
    - Inspire is very general, for example one could provide an address without a street name. Simply following Inspire would not allow data to be validated against the Belgian format
    - The attribute "house number" does not exist in Inspire: the house number would be stored in "user defined field no. 3"
    - Each address would contain streetname and municipality name in full writing
    - …
  - Nevertheless with the BeSt model one can *generate* data that are compliant with both the INSPIRE data model of the addresses and the EC Regulation 1089/2010

# How to use the BeSt Address service?

**Consumer type 1**: builds his own on-premise address database

- Uses full download service to initially load database
- Uses daily mutations service to keep that database up-to-date

**Consumer type 2**: Uses one of the webservices to retrieve address information from the BOSA database
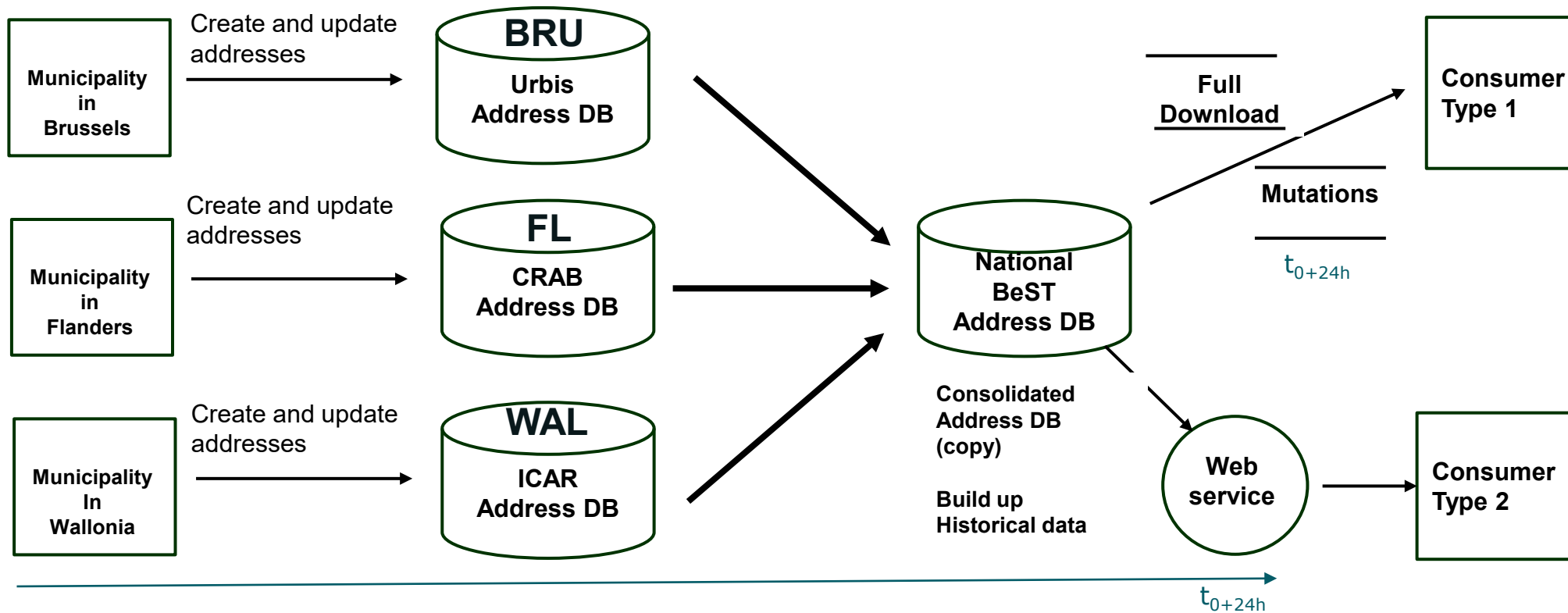
# BeSt: Actors

**Initiators:**
Municipalities

**Managers:**
Regions: Brussels,
Flanders, Wallonia

**Integrator**:
BOSA

**Consumer**



Note: the full download is also available via the BOSA OpenData platform

# What kind of information in BeSt?

BeSt provides information about the following objects:

- Municipality
- partOfMunicipality (only Wallonia)
- streetName
- Address
- postalInfo

# What BeSt Services are available?

| | Name | Type | Description | Availability Date |
|---|---|---|---|---|
| **Web Services** | S352 – SearchMunicipality | SOAP | Search for a municipality based on info from municipality | Q3 2019 |
| | S353– SearchStreetname | SOAP | Search for a street | Q3 2019 |
| | S354 – SearchAddress | SOAP | Search for address info (multiple criteria) | Q3 2019 |
| | S352 – SearchMunicipality | REST | Search for all addresses within a radius around a given coordinate | Q3 2022 |
| **File Service** | S349 – Full Download | File Service | Full download of all address objects of all regions | Q2 2019 |

Note: Existing SOAP services will be decommissioned at the end of this year 3 months after the release of the REST services

# Planned Services

| | Name | Type | Description | Planned Date |
|---|---|---|---|---|
| **Web Services** | **AddressInfoSearch** | | | |
| | /Addresses | REST | Search addresses using one or more search parameters (ID, postal code, REFNIS code, postID, municipalityID, gps or Lambert coordinates, status) | Q3 2023 |
| | /Municipalities | REST | Search municipalities using one or more search parameters (ID, name, postal code, REFNIS code, postID) | Q3 2023 |
| | /Postalinfos | REST | Search municipalities using one or more search parameters (ID, name, postal code) | Q3 2023 |
| | /Streets | REST | Search streets using one or more search parameters (ID, name, postal code, REFNIS code, postID, municipalityID, status) | Q3 2023 |
| | **AddressHistory** | REST | Search address history | Q4 2023 |
| | **AddressAnomaly** | REST | Report an anomaly in BeSt data to region | Q4 2023 |
| **File Service** | **S350 – Mutations** | File Service | Daily address mutations (add, update) | Q4 2023 |

# Example webservice response

**Request:** Streets (nisCode = 21004, name = "Simon Bolivarlaan")
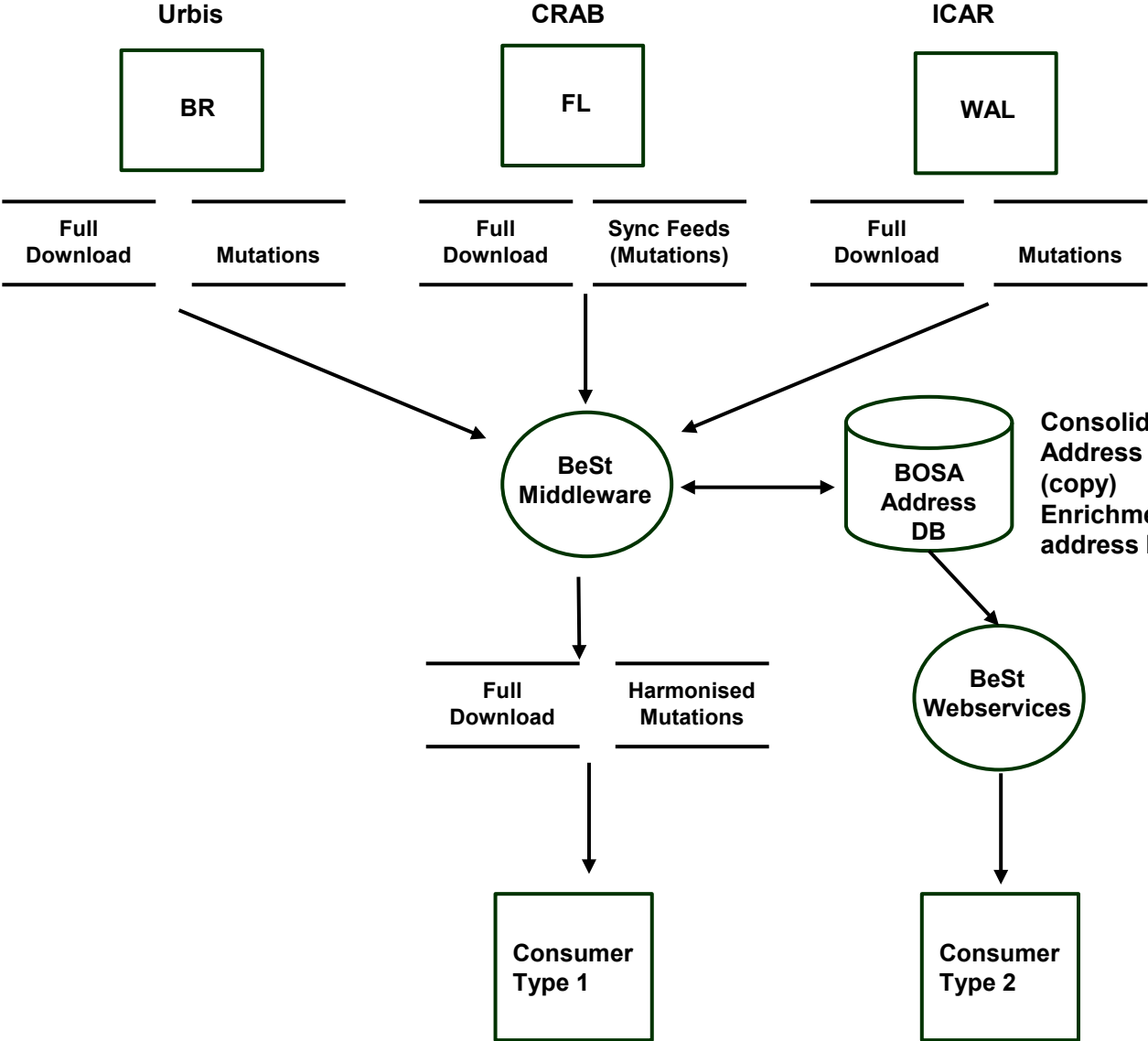
Response body

```
{
  "self": "/api/best/v1/belgianAddress/v2/streets?embed=false&name=simon bolivarlaan&nisCode=21004&status=current&pageNo=1",
  "items": [
    {
      "id": "https://databrussels.be/id/streetname/4526/2",
      "bestidentifier": {
        "nameSpace": "https://databrussels.be/id/streetname",
        "objectIdentifier": "4526",
        "versionIdentifier": "2"
      },
      "name": {
        "nl": "Simon Bolivarlaan",
        "fr": "Boulevard Simon Bolivar"
      },
      "streetNameType": "streetname",
      "status": "current",
      "validFrom": "2000-01-01T00:00:00",
      "beginLifeSpanVersion": "2021-04-28T15:00:12",
      "isAssignedBy": {}
    }
  ],
  "totalPages": 1,
  "pageSize": 400,
  "total": 1,
  "first": "/api/best/v1/belgianAddress/v2/streets?embed=false&name=simon bolivarlaan&nisCode=21004&status=current&pageNo=1",
  "last": "/api/best/v1/belgianAddress/v2/streets?embed=false&name=simon bolivarlaan&nisCode=21004&status=curr      ag
}
```

Download

# BeSt Solution Overview



**Weekly Full downloads & daily mutations from Regions to BOSA**

Urbis

BR

| Full Download | Mutations |

CRAB

FL

| Full Download | Sync Feeds (Mutations) |

ICAR

WAL

| Full Download | Mutations |

BeSt Middleware

BOSA Address DB

**Consolidated Address DB (copy) Enrichment with address history**

**Harmonised Mutations from BOSA to Partners**

| Full Download | Harmonised Mutations |

BeSt Webservices

Consumer Type 1

Consumer Type 2

# Data quality track

- **Objective**
  - ensure data quality in region authentic sources is sufficient for the Federal Government to make transition to BeSt as the source of address information

- **Approach**
  - Address data in region authentic sources are "mapped" on address data in RR (persons) and KBO (companies)

RR Addresses ⬌ Region Addresses ⬌ KBO Addresses

# Data quality - mapping

- Using automatic mapping algorithms, BOSA achieved a mapping of 95,2% for RR address data and 84,5% for KBO
- Limits of automatic mapping have been reached, since Q2 this year municipalities have started to map the remaining address issues using the BOSA municipality correction tool


Remaining addresses to map
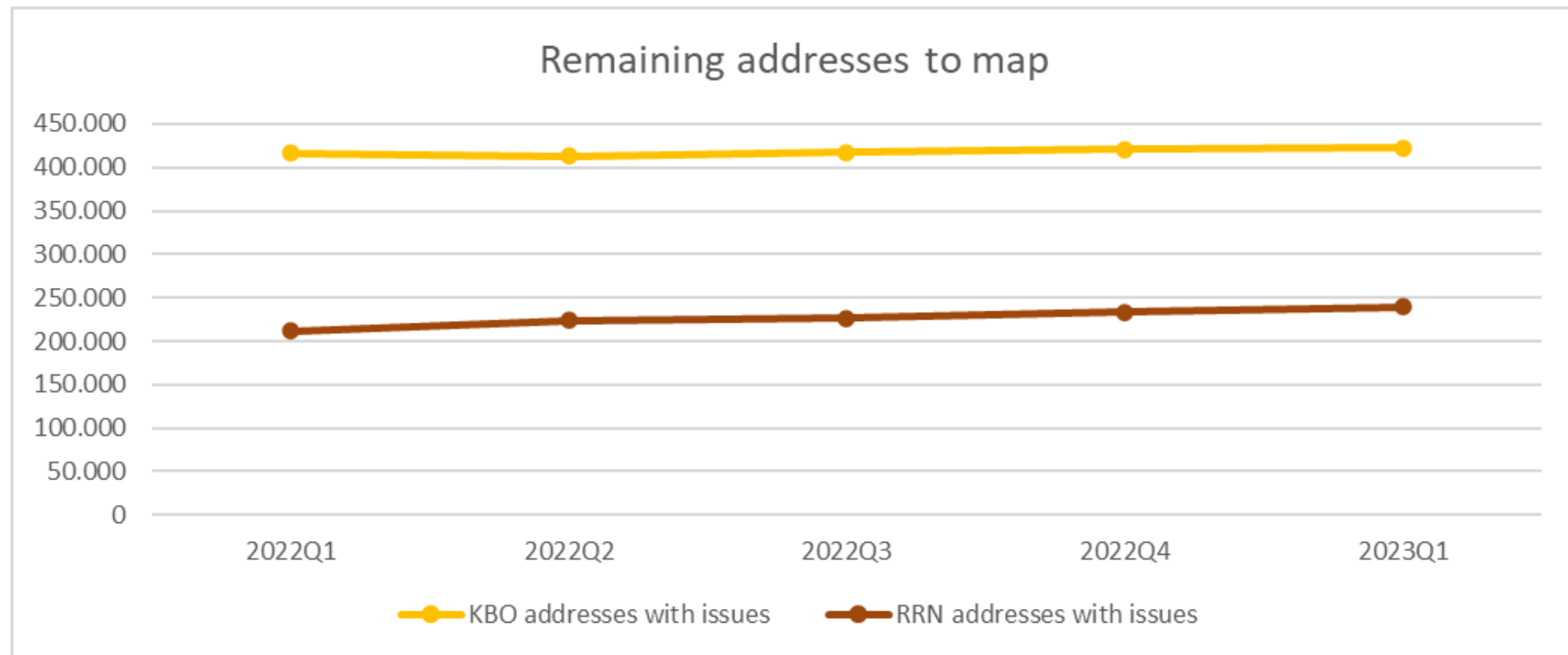
# Municipality Correction tool – start page



**Mapping RRN - BEST**                    Login                    Nederlands ⌄

**BEST: Straten en Adressen**

**Info**
Versie:         PROD (compiled)
Gebruiker:

**Hartelijk welkom !**

De bedoeling van deze applicatie is dat de gemeente de laatste mappingproblemen van Rijksregister-adressen naar BEST-adressen oplost.

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## HELP

## Gebruikershandleiding

Er is een gebruikershandleiding die je via het Download scherm kan ophalen.
Deze gebruikershandleiding legt uit hoe je de tool kan gebruiken en bevat eveneens een FAQ-lijst die regelmatig zal worden bijgewerkt.

## Instructie-video's

taal wijzigen
1e gebruik
paswoord wijzigen
verkennen van het hoofdscherm
oplossen van mappingproblemen
behandelen van postcodes
aanvaarden/verwerpen van tricky mappings
opkuisen van dubbele adressen bij het Rijksregister
downloaden van de todo's
downloaden van de gebruikershandleiding

# Municipality correction tool – Issues page

# BeSt Planning – Milestones

# BeSt Planning - Milestones

| | |
|---|---|
| **New Mutations** | the address Mutations process is available |
| **REST/JSON Services** | REST/JSON services have been delivered. |
| **Mapping done** | the corrections by the municipalities are ready or the intended mapping % has been achieved |
| **Adaptations Federal partners done** | the federal partners have finished adapting their applications to include the BeSt Address Identifier **(Acceptance)** |
| **BeSt Address Operational** | the federal partners use the BeSt Address Identifier in their communications **(Commissioning)**.<br>This date is determined by the Address Committee and depends on the data quality in the authentic sources |

# More information

[FPS Policy and Support | BOSA (belgium.be)](FPS Policy and Support | BOSA (belgium.be))

[BeStServices (S332) | DG DT (bosa.be)](BeStServices (S332) | DG DT (bosa.be))

| User guide | Purpose |
|---|---|
| 1 BeSt_Userguide_INTRO_and_DATA | Provides an overview of the BeSt application and describes the BeSt data, including the data model and the different data entities with their elements. |
| 2 BeSt_Userguide_WEB_services | Describes the webservices that are available to the consumer to consult the BeSt address data |
| 3 BeSt_Userguide_MFT_services | Describes the Managed File Services that are available to the consumer to obtain a full download file of BeSt addresses or to obtain daily mutations |