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# Signet Mandate

*Webservice usage*

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## 1 INTRODUCTION

Signet Mandate is a solution intended for digitally signing mandates and is part of the Signet suite. The solution has been developed to be very flexible and robust to accommodate most use cases for signing and applying mandates.

## 2 TECH

The solution is composed of a MVC website for filling out mandate and a WebAPI REST API. Authentication for the website and webservice is by way of digital certificates.

## 3 URLs

Signet Mandate has a preproduction and production environment with the following urls.

### 3.1 PREPRODUCTION

- Web
  - <https://prufa.signet.is/mandate>
  - Filling out forms with certificate authentication
    - <https://prufa.signet.is/mandate/home/form/<Form ID>>
  - Filling out forms with token authentication
    - <https://prufa.signet.is/mandate/home/tokenform/<Form ID>>
- Web API mandate controller
  - <https://prufa.signet.is/mandateservice/api/mandate/<method>>
- Web API mandate token controller (for getting mandate after authentication)
  - <https://prufa.signet.is/mandateservice/api/token/<method>>

### 3.2 PRODUCTION

- Web
  - <https://mandate.signet.is/>
  - Filling out forms with certificate authentication
    - <https://mandate.signet.is/home/form/<Form ID>>
  - Filling out forms with token authentication
    - <https://mandate.signet.is/home/tokenform/<Form ID>>
- Web API mandate controller
  - <https://mandate.signet.is/mandateservice/api/mandate/<method>>
- Web API mandate token controller (for getting mandate after authentication)
  - <https://mandate.signet.is/mandateservice/api/token/<method>>

## 4 WEB API

The webservice has various methods for mandate usage, i.e. searching mandates, pre-saving mandates, collecting tokens and deleting mandates. Authentication is by way of digital certificates and username/password in posted request.

## 4.1 AUTHENTICATION

The mandate web API requires authentication by digital signatures (tls client auth) and the service accepts digital certificates that meet the following criteria

- Issued by Fullgilt aukenni, Traustur bundar or LAWtrust2048 CA2
- Contains company registry number in subject serialNumber
- Valid on time of authentication

## 4.2 PRESAVED MANDATE PROCESS

When presaving mandate and autofilling the process is as follows.

1. User is authenticated and appropriate data gathered.
2. Mandate is presaved with SaveMandate method
3. With the ID returned and appropriate user information (ssn and mobile) a token is fetched using GetToken method.
4. With the token returned the user is redirected to the token authentication url (POST'ed to <url>/home/tokenform/<form id>).
5. The mandate is filled and user redirected to Signet Forns and Signet for signing mandate
6. After signing mandate the user is redirected back to Signet Mandate
7. If more people need to sign there is the option to
  - send an email message to the individual with a link to signing the mandate
  - send the user directly to Signet for signing mandate supply'ing his mobile phonenumber containing digital certificates.
8. After the mandate is ready a notification message is sent to a registered endpoint so mandate data can be fethed using GetMandate

Below is a simplified flowchart with the process but in chapter 5 is a more detailed process flow.

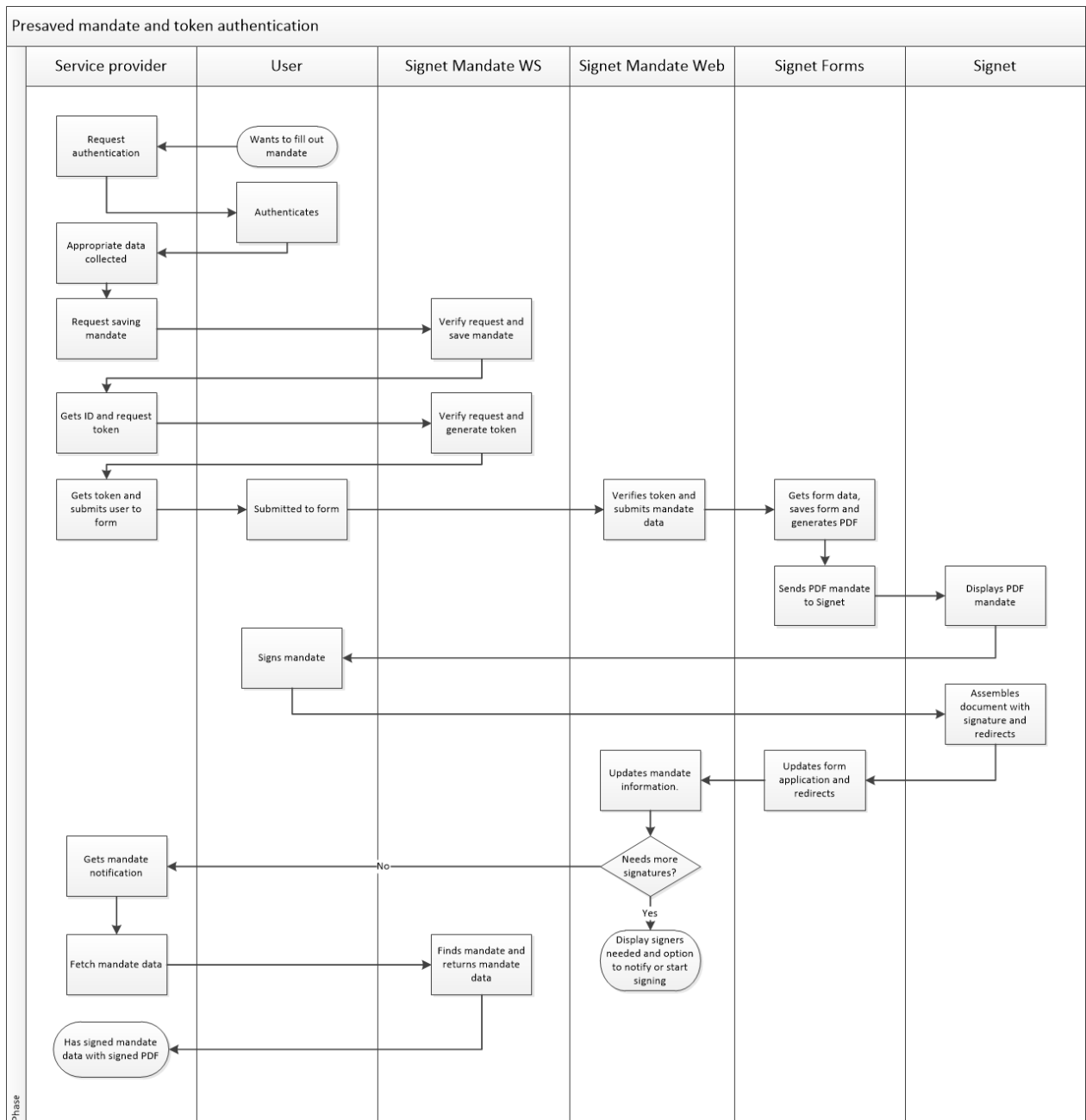


Figure 1. Presave mandate process

### 4.3 WEBSERVICE CLASS

The API uses the following classes for requests and responses.

#### 4.3.1 MANDATEREQUEST

When searching mandates we use MandateRequest.

- MandateID
  - string
  - ID of mandate, required when getting a single mandate (GetMandate)
- GiverSSN

- string
  - National registry number of person giving the mandate, used when searching for mandates (plural)
- HolderSSN
  - string
  - National registry number of person holding the mandate, used when searching for mandates (plural)
- OnBehalfSSN
  - string
  - National registry number of identity giving mandate, used when searching for mandates (plural)
- FromTime
  - date
  - Time to search for (mandate given after time)
- ToTime
  - date
  - Time to search for (mandate given before time)
- UserName
  - string
  - The account username, identity in addition to the digital certificate
- Password
  - string
  - The account password, identity in addition to the digital certificate

#### 4.3.2 TOKENREQUEST

When requesting token for submitting mandate we use a TokenRequest.

- SSN
  - string
  - National registry number of user giving mandate
- Mobile
  - string
  - Mobile phone number (holding digital signatures) of the person who is giving/signing the mandate. Phone numbers should start with +354, ie. „+354-8765432“.
- MandateForm
  - integer
  - ID of mandate form
- ReturnURL
  - string
  - Where to redirect person after signing
- UserName
  - string
  - The account username, identity in addition to the digital certificate
- Password
  - string
  - The account password, identity in addition to the digital certificate

#### 4.3.3 FORMREQUEST

When searching for mandate forms we use FormRequest.

- FormID
  - integer
  - ID of form. Required when getting a single form (GetForm)
- FromTime
  - date
  - Time to search for (form created after time)
- ToTime
  - date
  - Time to search for (form created before time)
- OnlyEnabled
  - boolean
  - Only get enabled forms
- UserName
  - string
  - The account username, identity in addition to the digital certificate
- Password
  - string
  - The account password, identity in addition to the digital certificate

#### 4.3.4 SAVEMANDATEREQUEST

When pre-saving mandate we use SaveMandateRequest;

- MandateID
  - string
  - ID the mandate being used (GUID).
- FormID
  - integer
  - ID of the mandate form.
- Giver
  - string[]
  - Array of givers of mandate (national registry numbers)
- ExtraAttribute
  - string
  - Mandates extra value (ie amount)
- Receivers
  - string[]
  - Array of receivers of mandate (national registry numbers)
- UserName
  - string
  - The account username, identity in addition to the digital certificate
- Password
  - string
  - The account password, identity in addition to the digital certificate

#### 4.3.5 MANDATEDATA

When getting mandate information the response is a MandateData.

- ID
  - GUID
  - ID of mandate

- HolderSSN
  - string[]
  - National registry numbers of mandate holders
- OnBehalfSSN
  - string[]
  - National registry numbers of identities giving mandate
- GiverSSN
  - string[]
  - National registry numbers of identities giving mandate
- Document
  - byte[]
  - The signed PDF mandated
- DocumentContent
  - string
  - The string contents of the PDF mandate
- Data
  - KeyValuePair<string, string>[]
  - Array of KVP with mandate values
- Added
  - date
  - Time when mandate was saved
- Signed
  - date
  - Time when mandate was signed
- ValidFrom
  - date
  - Time when mandate gets valid
- ValidTo
  - date
  - Time mandate is valid to
- State
  - AuthorizationState
  - State of mandate (Issuance = 0, Revocation = 1, Unknown = 2)

#### 4.3.6 MANDATEFORMINFO

When getting information about mandate form the response is a MandateFormInfo.

- FormID
  - integer
  - ID of form
- Name
  - string
  - Name of form
- Description
  - string
  - Description of form
- FormString
  - string
  - HTML form for mandate. Only returned in GetForm
- Attributes
  - string[]



- Array of form attributes
- ExtraAttrName
  - string
  - Name for mandate extraattribute
- ExtraAttrID
  - string
  - Unique id for mandate extraattribute
- ExtraAttrPlaceholder
  - string
  - Placeholder gildir fyrir aukagildi (s.s. Sláðu inn skráningarnúmer)
- Receiver
  - bool
  - True if mandate is registered by receiver of mandate
- Added
  - date
  - Time when form was created
- Edited
  - date
  - Time when form was last edited
- Enabled
  - boolean
  - True if form is enabled
- Visible
  - boolean
  - True if form is visible in list of forms (/home/forms).

#### 4.3.7 MANDATETOKENREQUEST

When getting mandate after successful authentication a MandateTokenRequest is used:

- Token
  - string
  - The base64 encoded SAML the user was POSTed with

## 4.4 MANDATE METHODS

The following methods are available in the /Mandate webservice.

### 4.4.1 GETMANDATE

The method accepts MandateRequest and responds with MandateData if the mandate is found and belongs to account.

### 4.4.2 GETMANDATES

The method accepts MandateRequest and responds with an array of MandateData if mandates are found.

### 4.4.3 DELETEMANDATE

The method accepts a MandateRequest and responds with true or false if mandate was successfully deleted.

#### 4.4.4 GETTOKEN

The method accepts a TokenRequest and responds with a base64 coded token which can be used for filling out mandate.

#### 4.4.5 GETFORM

The method accepts a FormRequest and responds with a MandataFormInfo if a form is found.

#### 4.4.6 GETFORMS

The method accepts a FormRequest and responds with an array of MandataFormInfo if forms are found.

#### 4.4.7 SAVEMANDATE

The method accepts a SaveMandateRequest and responds with a ID string for the mandate if successful.

## 5 TOKEN METHODS

The following methods are available in the /Token webservice. The controller requires basic authentication (user/password).

#### 5.1.1 GETMANDATE

The methods accepts MandateTokenRequest and repsonds with MandateData if the token is valid, mandate is found and belongs to account.

## 6 PROCESS FLOW

This chapter goes into more detail the processes for saving mandate and authentication with mandate.

### 6.1 PRESAVING MANDATE PROCESS FLOW

The following diagram shows the process flow for saving a mandate via webservice and have the user(s) sign it accordingly.

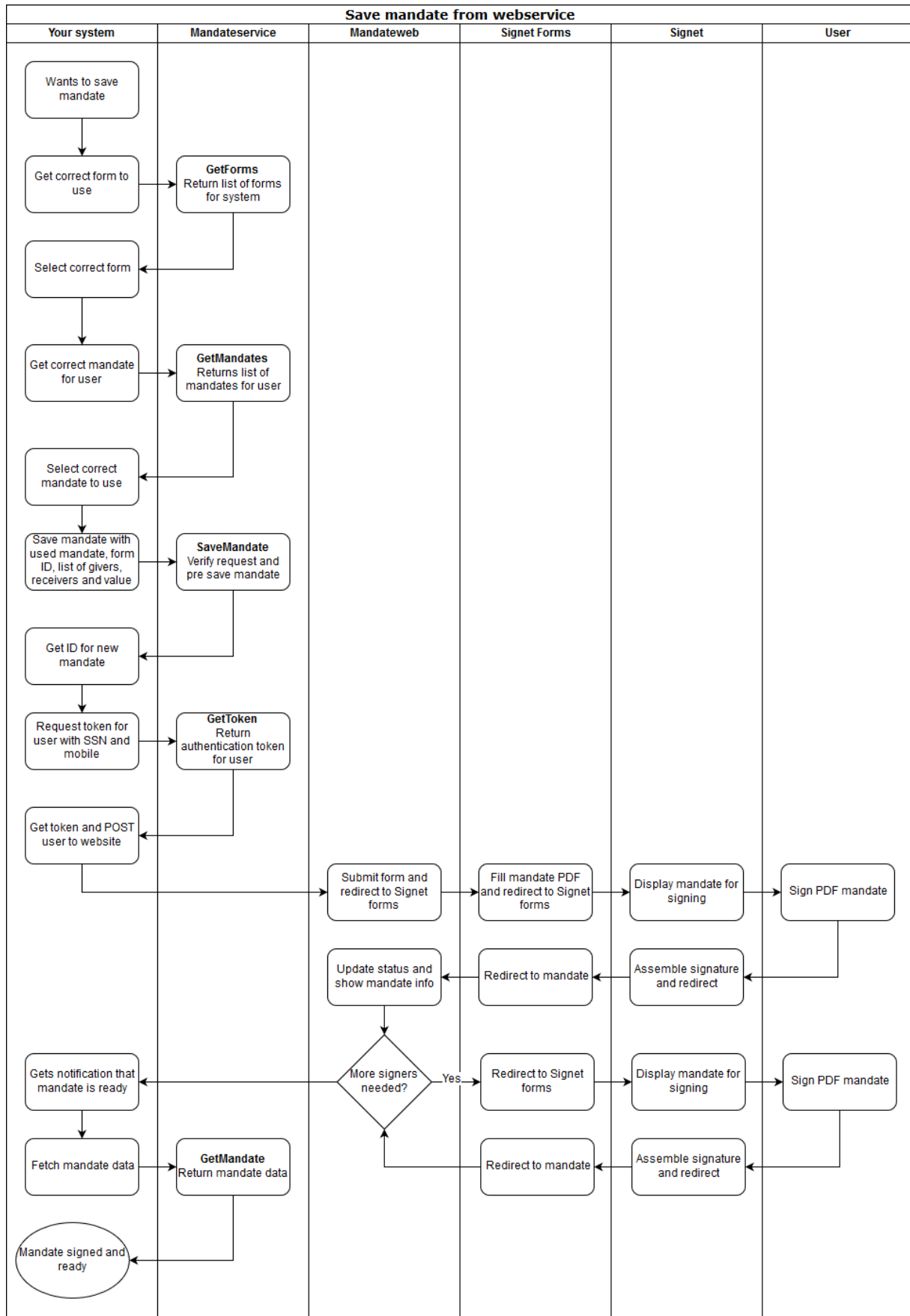


Figure 2. Saving mandate from webservice

## 6.2 AUTHENTICATION WITH MANDATE PROCESS FLOW

The following diagram describes the process flow for using Signet Mandate for authentication with (or without mandate).

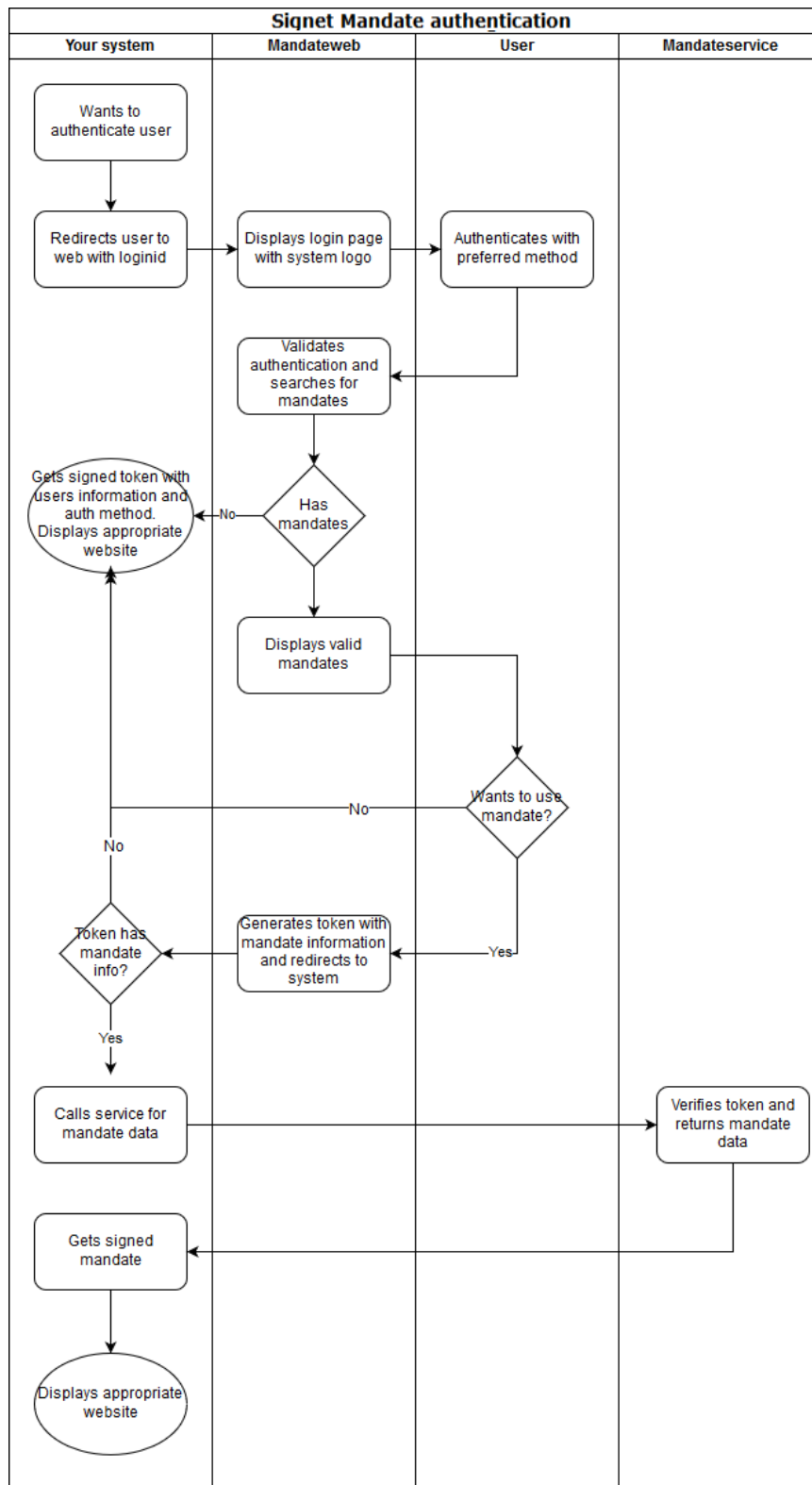


Figure 3. Mandate authentication process