

Vaelkomin á verkstovu
um Heldina (Dagur 1)

TALGILDU
FØROYAR

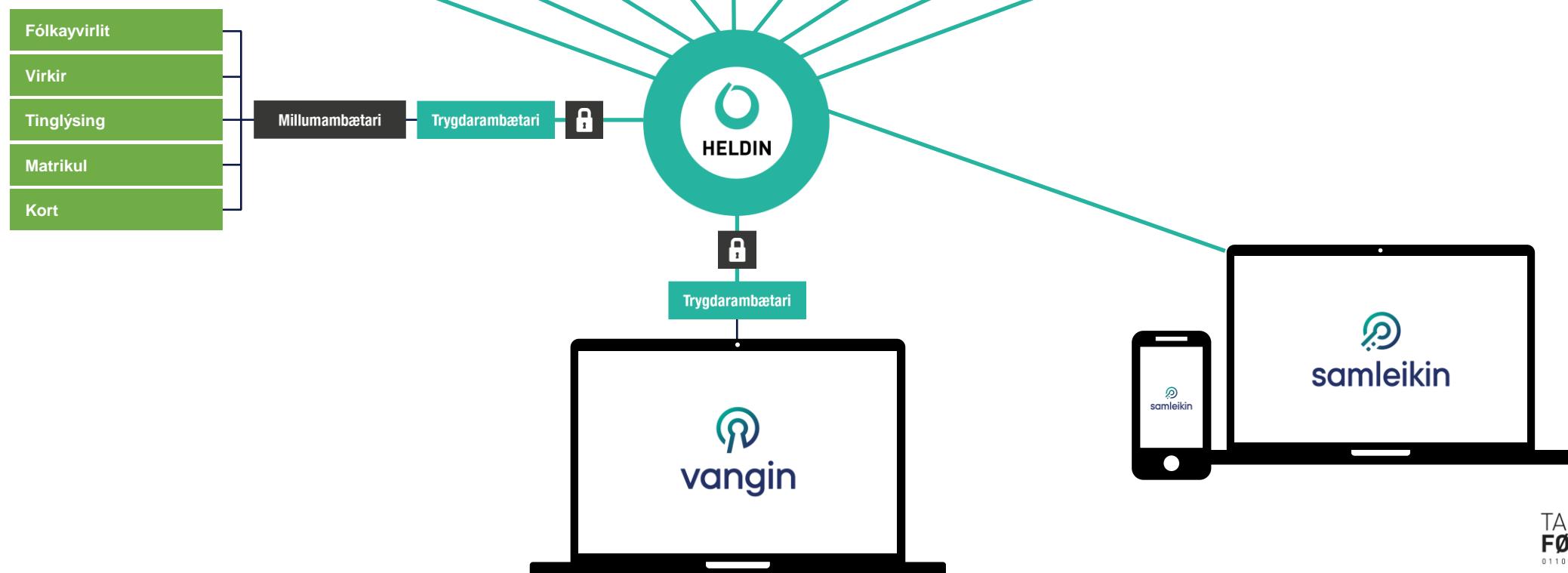
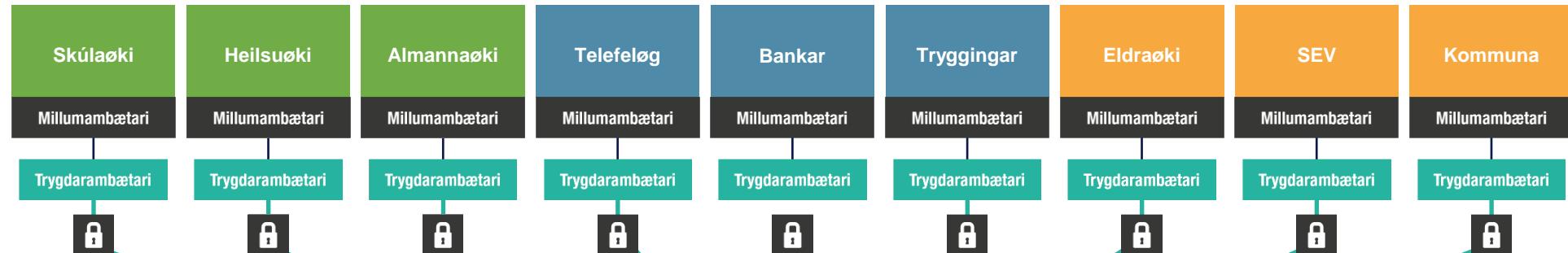
01100110 01101111

Skrá – Dagur 1

- 09:00 Intro
- 09:15 Heldin fyrisiting
- 10:00 Steðgur**
- 10:10 Heldin fyrisiting
- 11:00 Steðgur**
- 11:10 Heldin fyrisiting
- 11:40 Dømi um upsetting frá Vanganum
- 12:00 Døgurðasteðgur**
- 13:00 Umsiting av trygdarambætarum
- 13:50 Steðgur**
- 14:05 Umsiting av trygdarambætarum
- 15:00 Liðugt

Stutt um Heldina

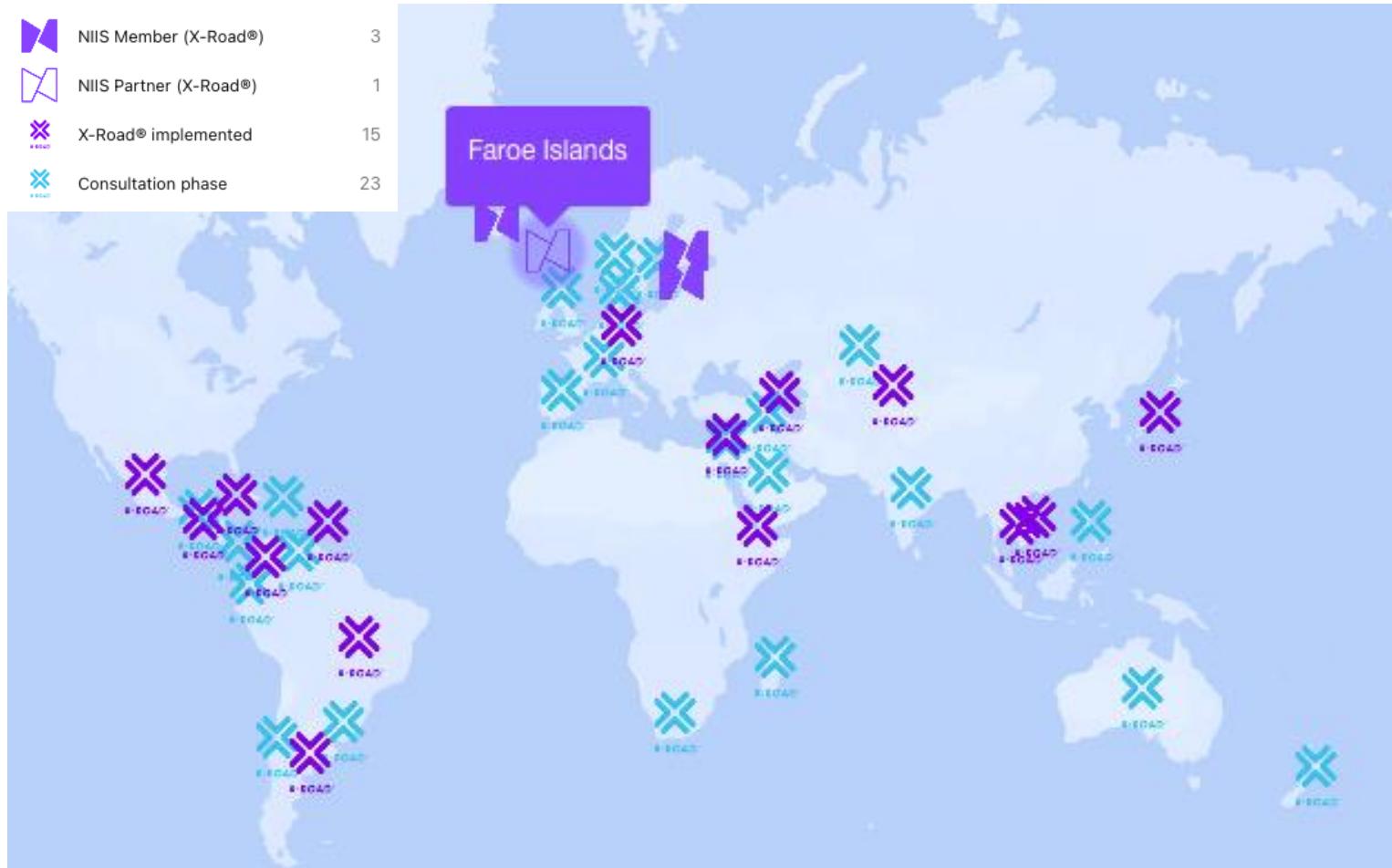
- Tryggur samskiftispallur
- Grundað á estlendska samskiftispallin X-Road
- Bleiv íverksett í Føroyum í 2015
- Í 2016 kom rundskriv um at allir almennir stovnar skulu brúka Heldina til dátusamskifti
- Í dag eru 43 luttkarar og uml. 50 vevtænastur á Heldini



Stutt um Heldina

- Nordic Institute for Interoperability Solutions, [NIIS](#), eigur og víðarimennir [X-Road](#).

Stutt um Heldina



Stutt um Heldina

- Heldin uppstiga
 - Lættari umsiting av trygdarambætarum
 - Nú eisini við REST
 - Grundað á nýggjari tøkni
- Nýggj umsitingarskipan ment

Hví Héldin?

- Trygt samskifti, ið er lætt at íverkseta
- Standardisera samskifti
 - Endurnýtsla av útstillaðum dátum
 - Lættari at knýta í við tíðini

Hugtøk á Heldini

Vevtænasta (Webservice)

Vevtænasta verður brúkt til dátusamskifti á Heldini.

Luttakari (Member)

Ein luttagari er ein myndugleiki, virki ella felag, sum hevur knýtt eina ella fleiri KT skipanir í Heldina.

Heldarábyrgdari (Delegate)

Persónur, ið hevur at gera bindandi avtalur á Heldini vegna stovnin.

KT Skipan (Subsystem/Client)

Fyri at samskifta á Heldini skal luttagarin tilmelda eina KT Skipan (Subsystem/client).

Vevtænastubrúkari (Consumer)

Tá ein luttagari hevur eina skipan, sum kallar eina vevtænastu hjá einum vevtænastuveitara, verður hann umrøddur vevtænastubrúkari.

Vevtænastuveitari (Producer)

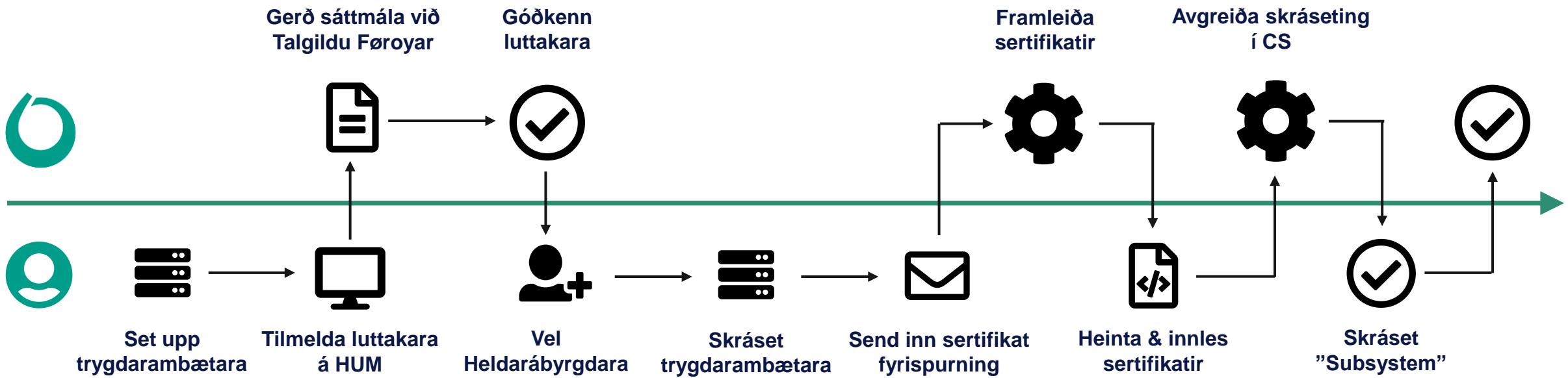
Tá ein luttagari eigur eina vevtænastu, sum umsitur dátur sum aðrir myndugleikar kunnu umbiðja, verður hann umrøddur vevtænastuveitari.

Sí fleiri hugtøk á [heimasíðuni](#)

Ábyrgdir og rollir

	Stjóri	Heldarábyrgdari	Teknisk rolla
Fyrising			
Sáttmála við Talgildu Føroyar	X		
Góðkenna Heldarábyrgdarar	X		
Góðkenna tekniskar rollur	X	X	
Skráseting			
Gera fyrispurningar	X	X	X
Góðkenna fyrispurningar	X	X	
Leggja upp CSR	X	X	X
Heinta sertifikatir	X	X	X

Innlimingar mannagongdin



Mannagongdin – Hvat skal gerast eftir innliman

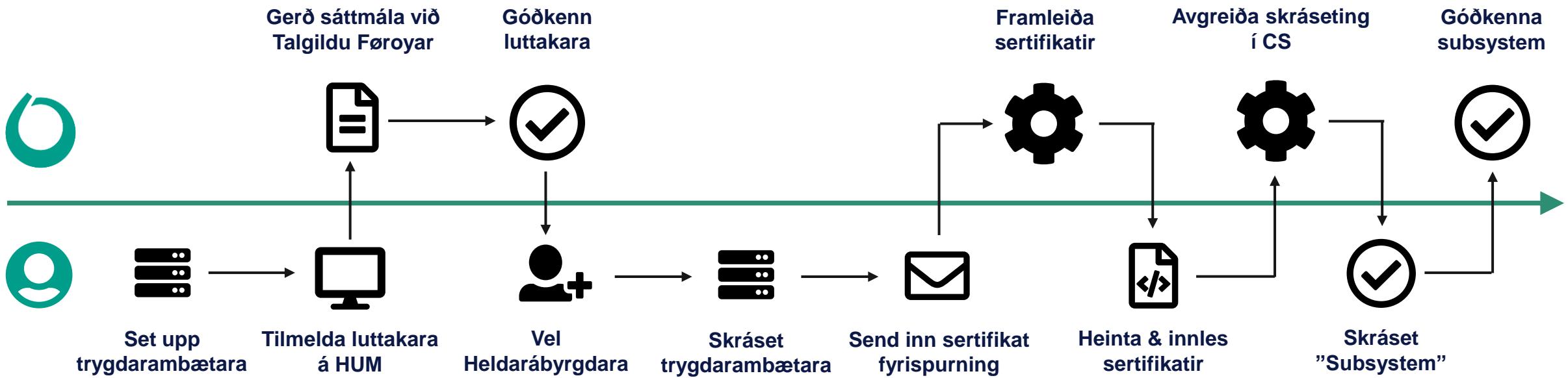
Vevtænastubrúkari

- Avtala við vevtænastuveitara
 - Fyrispurningur um atgongd til vevtænastu sendast til vevtænastuveitara
-

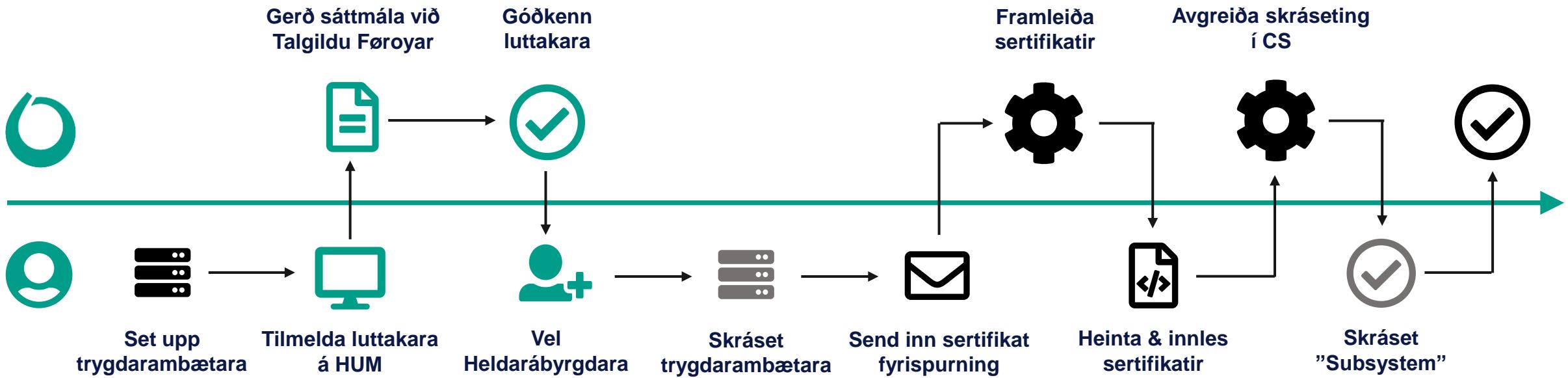
Vevtænastuveitari

- Skráset vevtænastu á KT skipan (Subsystem)

Innlimingar mannagongdin



Innlimingar mannagongdin – fyrisitingarligar uppg.



Fyrisingarligar uppgávur á Heldini

- Skráseting av luttakarum
- Sáttmálaviðurskiftir
 - Talgildu og luttakarin
 - Luttakara til luttakara
- Brúkarastýring
 - Viðlíkahalda av rollum
- Skráseting av servarum
- Skráseting av KT skipanum (Subsystemum)

Logging

- Tað eru einstóku trygdarambætararnir sum logga
- Eingin logging á felags trygdarambætarum
- Sløg av logging
 - Full logging
 - Metadata logging
 - Ongin logging
- Nær er umráðandi at logga?

Les meira um logging [her](#)

Heldarumsitingarskipanin – HUM

- Umsitingarskipan til fyrisitingarligar uppgávur
- Hentleikar
 - Betri yvirlit yvir luttakarar
 - Lættari tilmelding av nýggjum luttakarum
 - Lættari tilmelding av trygdarambætarum
 - Lættari skráseting av nýggjum KT skipanum (Subsystems)
 - Betri brúkarastýring
- Er at finna á www.heldin.fo
- Er tøk frá í dag!

Heldarumsitingarskipanin – Framtíðarætlanir

Vit arbeiða víðari uppá HUM fyrir at skapa eina enn betri uppliving!

M.a. arbeiða vit við:

- Betri brúkarauppliving / nýggjum hentleikum
- Talgild undirskrift av sáttmálum
- Automatisering av ávísum uppgáfum

Heldarumsitingarskipanin – Forsíðan

The screenshot shows the homepage of the Heldarumsitingarskipanin website. At the top, there is a navigation bar with the 'heldin' logo and the text 'Members area'. Below the navigation bar is a large teal circular graphic containing the text 'heldin umsitingarskipan'. A red arrow points from a red-bordered box labeled 'Vel hetta um tú longu ert luttakari á Heldini' to the 'Already on Heldin?' button. Another red arrow points from a red-bordered box labeled 'Vel hetta um tú ert nýggjur luttakari' to the 'Are you joining Heldin?' button. The 'Members' section shows a count of 45 members. Below the main graphic, there are two sections: one for existing users and one for new users.

Vel hetta um tú longu ert luttakari á Heldini

Vel hetta um tú ert nýggjur luttakari

Members 45

The Heldin Management system is a tool for developers, administrators, and users of systems that are connected to Heldin. It provides an overview of the systems and services that are available on Heldin.

The Heldin management system is an addon to Heldin, to keep track of services on Heldin, i.e. keeping track of services available to institutions, municipalities and organizations. o.t.

Already on Heldin?
Click here to go to the self-service area. >

Are you joining Heldin?
Click here to get started with the onboarding process >

Heldarumsitingarskipanin – Skráset nýggjan luttakara

The screenshot shows a membership request form for X-Road. A red box labeled "Alment ella privat?" points to the "Specify your organization code" section. Another red box labeled "V-tal hjá luttakara" points to the "Please enter company registration number (v-tal) below:" input field. A third red box labeled "Hvør er tín rolla?" points to the "What is your role in this organization?" dropdown menu. The form includes fields for organization code, member classification, user information, and role selection.

Specify your organization code

Please enter company registration number (v-tal) below:

You are requesting to join X-Road on behalf of

0

Specify this member's classification:

Please select a Member Type

You are requesting this membership as the following user:

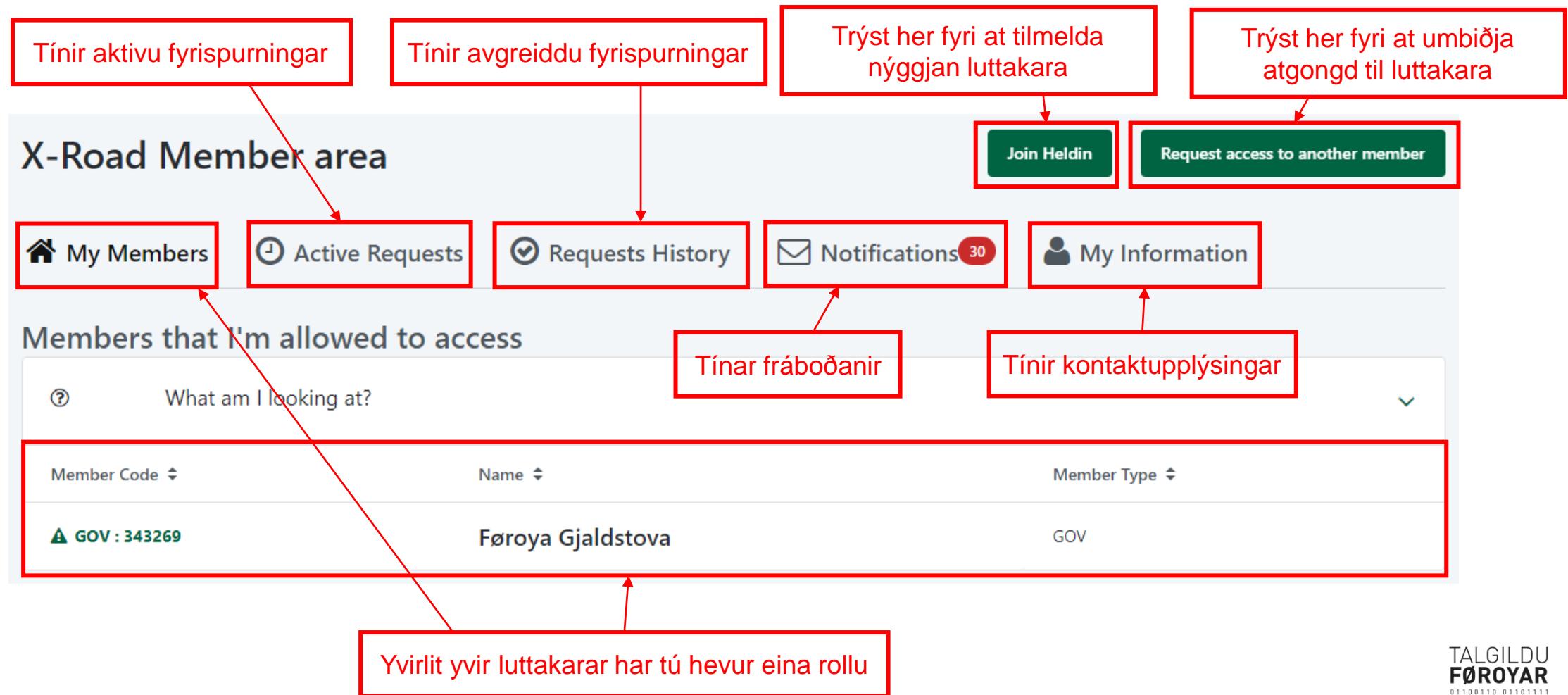
Jens Petur Andreasen (271084099)

What is your role in this organization?

Please select the correct role

Submit membership request

Heldarumsitingarskipanin – Títt yvirlit



Heldarumsitingarskipanin – Bið um atgongd til luttakara

The screenshot shows a web-based membership request form. A red box labeled "V-tal hjá luttakara" points to the input field for entering a company registration number (v-tal). Another red box labeled "Hvør er tín rolla" points to the dropdown menu for selecting a role in the organization.

Specify member code

Please enter company registration number (v-tal) below:

You are requesting access to
0

You are requesting this membership as the following user:
Jens Petur Andreasen (271084099)

What is your role in this organization?

Please select the correct role

Submit membership request

Heldarumsitingarskipanin – Luttakara yvirlit

343269 : Føroya Gjaldstova

No requests waiting for me to take action

General Information Security Servers Subsystems/Clients Webservices Requests

Member Information

Grund upplýsingar

Yvirlit yvir trygdarambætarar

Yvirlit yvir vevtænastur

Yvirlit yvir KT skipanir

Yvirlit yvir fyrispurningar

Start Date
4 Mar 2020

Address Street Name
- KVÍGGJARTÚN 1

Address House No

Address Unit Name

Post Code
160

City
ARGIR

Internet Url

English Name

Is Validated In Public Register

Activated By Approval Flow

Is Validated By Member Manager

Is Validated By Backoffice

Refresh

Heldarumsitingarskipanin – Ambætara yvirlit

343269 : Føroya Gjaldstova

No requests waiting for me to take action

General Information

Security Servers

Subsystems/Clients

Webservices

Requests

Owned Security Servers

Joined Security Servers

Get the anchor files here ↗

Trýst her fyri at tilmelda nýggjan
trygdarambætara

Trýst her fyri at síggja ella knýta í felags trygdarambætara

Create a new security server

Security Server Code ▾

Dns ▾

Heldin Environment ▾

Servara yvirlit

Heldarumsitingarskipanin – Skráseting av trygdarambætara

Please specify the environment that this server will operate in
Umhvørvið (Dev, Test ella Prod.)
FO-DEV

Server Host Name (what is the server's actual OS hostname) *
Hostnavn á trygdarambætara

DNS name (Fully qualified domain name) *
DNS navn, ið er stovnað IP til addressuna

Security Server Code ⓘ *

Eyðmerking av servara

Server Internal IP (for your own reference)
Interna IP addressan

Server Hosting Physical Location *
Hvar verður servarin hýstur?

Server Notes
Intern nota um, hvat hesin ambætarin verður brúktir til

Cancel **Save**

Heldarumsitingarskipanin – Skráseting av trygdarambætara

Trýst her fyrir at mælda nýggja KT skipan til

343269 : Føroya Gjaldstova

No requests waiting for me to take action

General Information Security Servers **Subsystems/Clients** Webservices Requests

Member Clients **Add client/subsystem**

Environment	Subsystem Identifier	On Security Server

Yvirlit yvir KT skipanir (subsystems)

Heldarumsitingarskipanin – Skráseting av KT skipan (subsystem)

Use the form below to request a subsystem for member: **GOV:343269**

Subsystem name: Navn á KT skipan	X-Road Environment: FO-DEV Umhvørvið	Server that will host the subsystem: Hvønn servara hoyrir dev-mss.heldin.fo hetta til?
Description Lýsing av KT skipan		
Subsystem User Friendly Name	<input type="checkbox"/> Hide On Public Site	Skal hetta síggjast á almenna yvirlitinum?
Submit client/subsystem request		

Heldarumsitingarskipanin – Skráseting av KT skipan (subsystem)

Requests waiting for me

Kim Wang is requesting the role of **Delegated X-Road Manager Role** in your company [Show Request](#)

General Information Security Servers **Subsystems/Clients** Webservices Requests

Member Clients [+ Add client/subsystem](#)

Environment Subsystem Identifier On Security Server

No items to show...

Fyrisþuningur um skráseting av KT skipan skal góðkennast áðrenn hann verður sendur til avgreiðslu

Member Client Requests

Date submitted	Environment	Subsystem Name	Request Status	Show On Public Site	Server Host Name
21-09-2022 22:06:43	FO-DEV	Test1	pending	✓	test-av-hum

Confirm client

Heldarumsitingarskipanin – DEMO

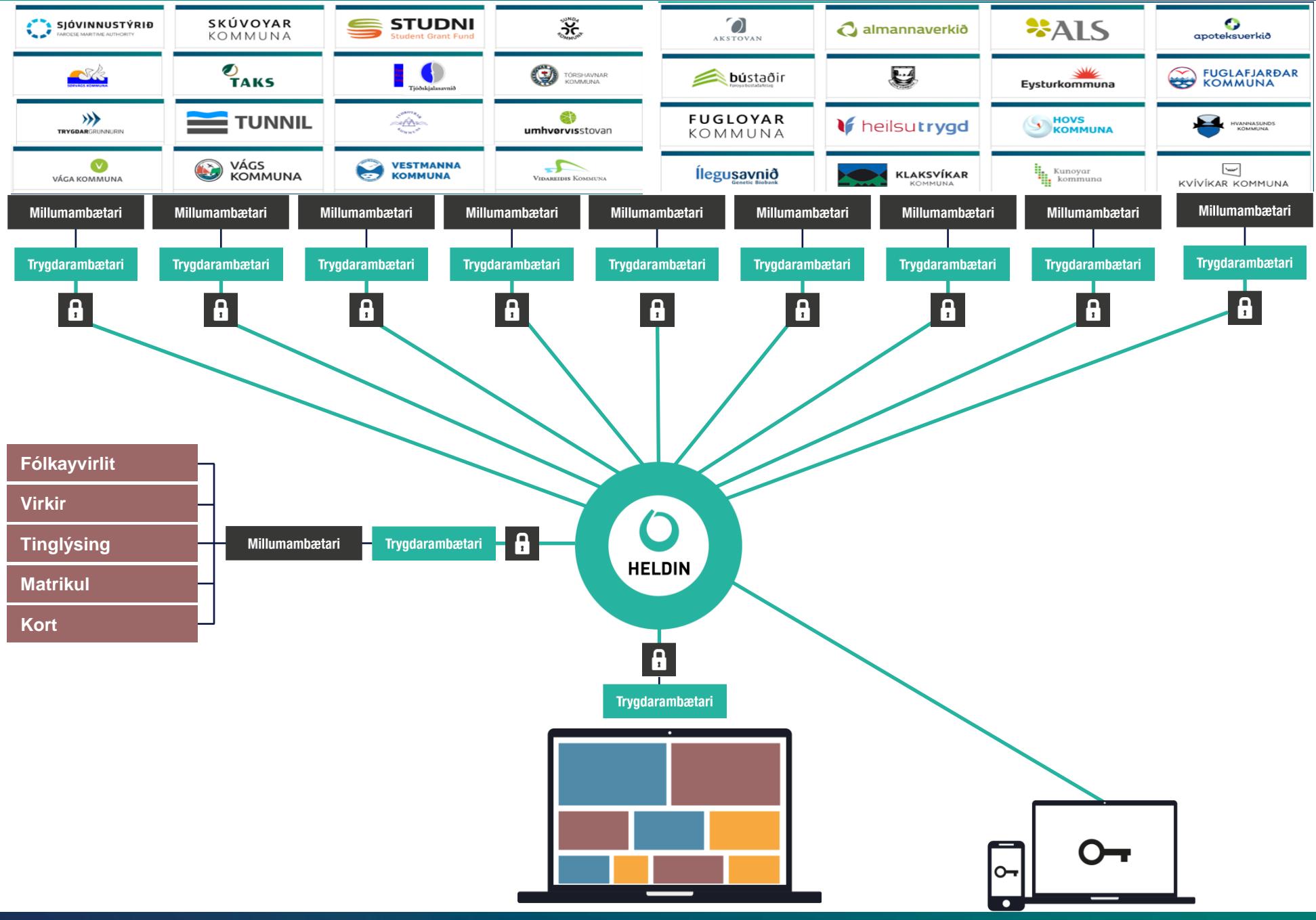
- Sí HUM vegleiðing [her](#)

Vangaumhvørvið & Heldin

Vangin hevur nógv markamót yvir Heldina

Knýti til 36 Tænastuveitarar og vaksandi ☺

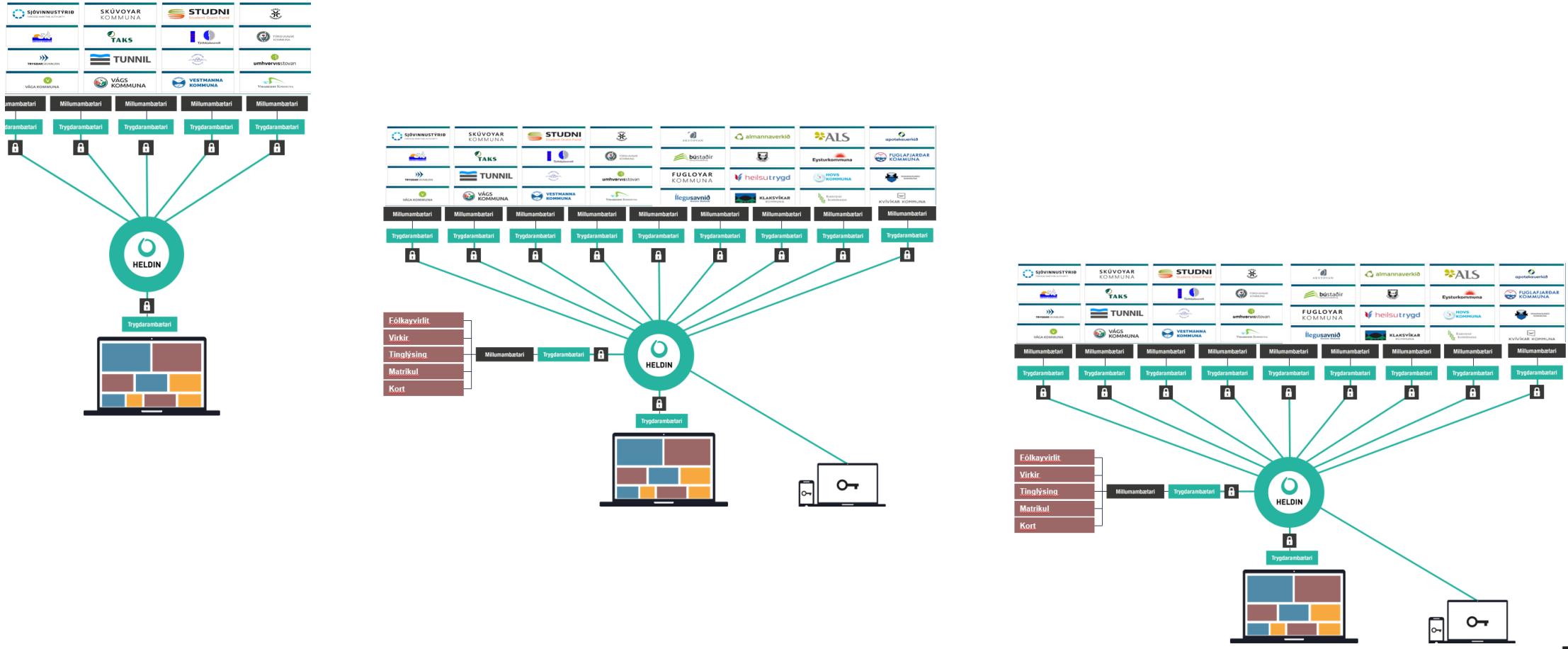
- Ein TV kann hava fleiri skipanir/vevtænastur
- Ein TV kann hava vevtænastur á ymiskum trygdarambætarum
- Vangin sjálvur útstillar 2 vevtænastur
 - Kalendarin
 - Brúkaraskráin



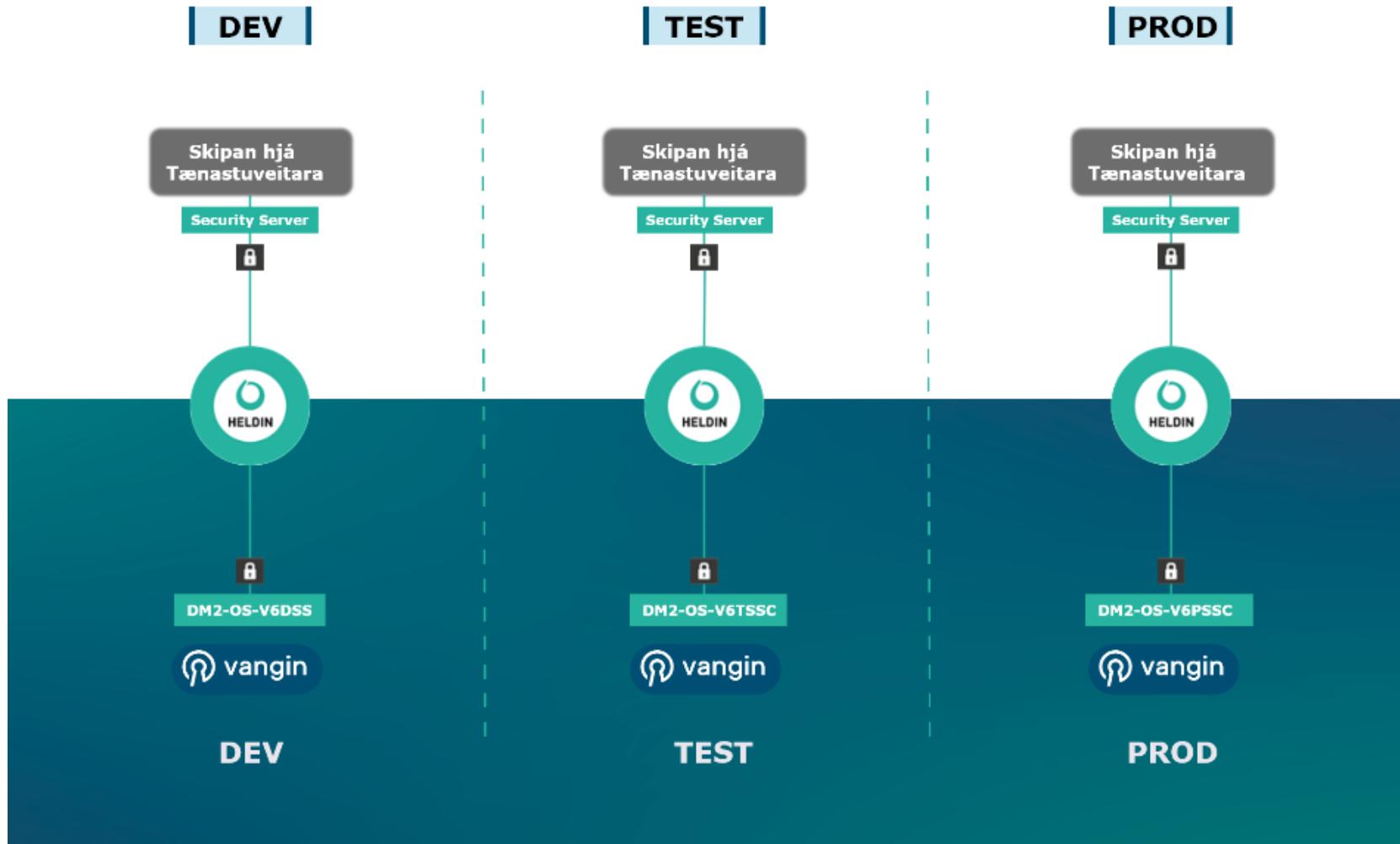
VANGIN

SAMLEIKN

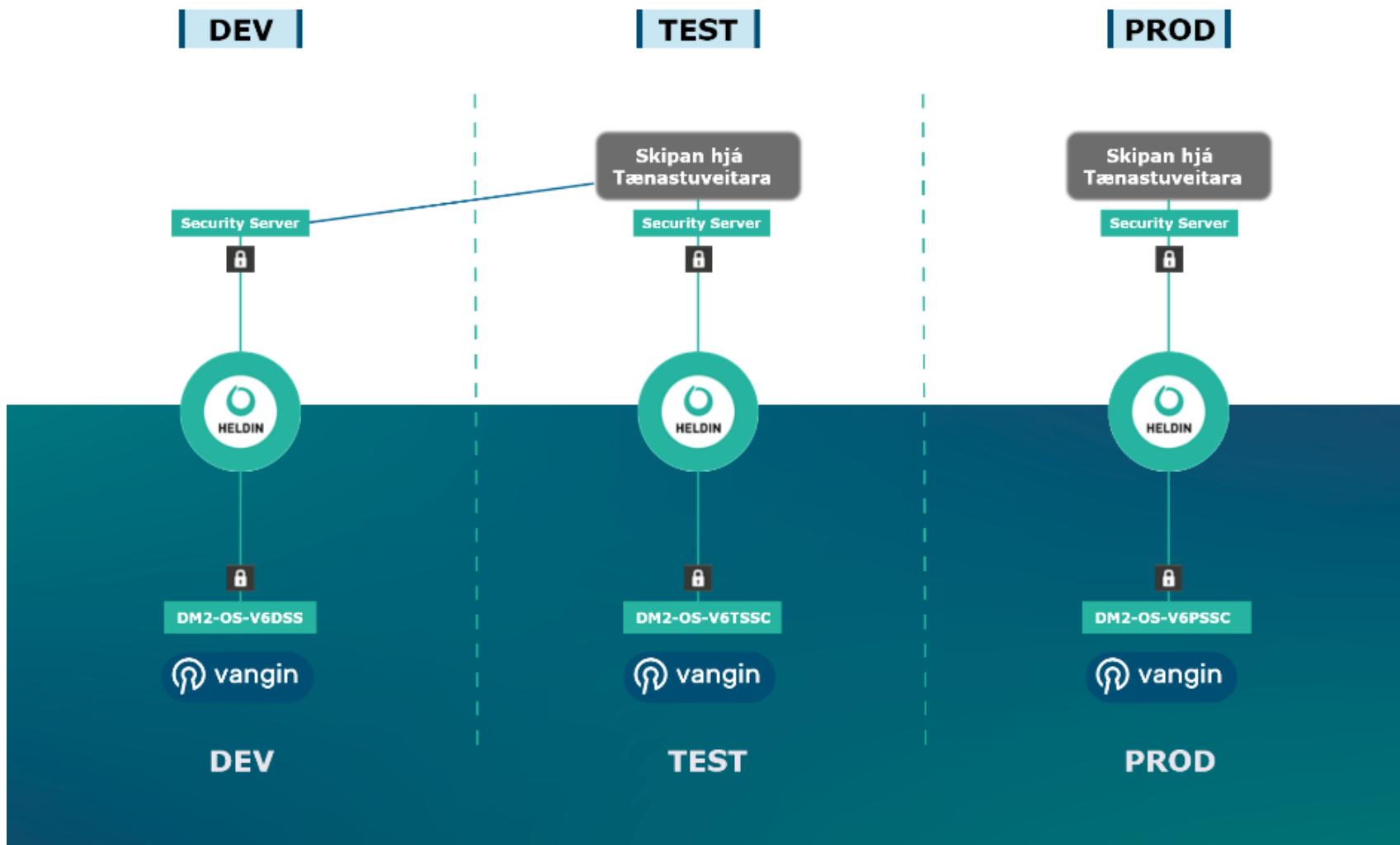
Vangin hevur 3 umhvørvir



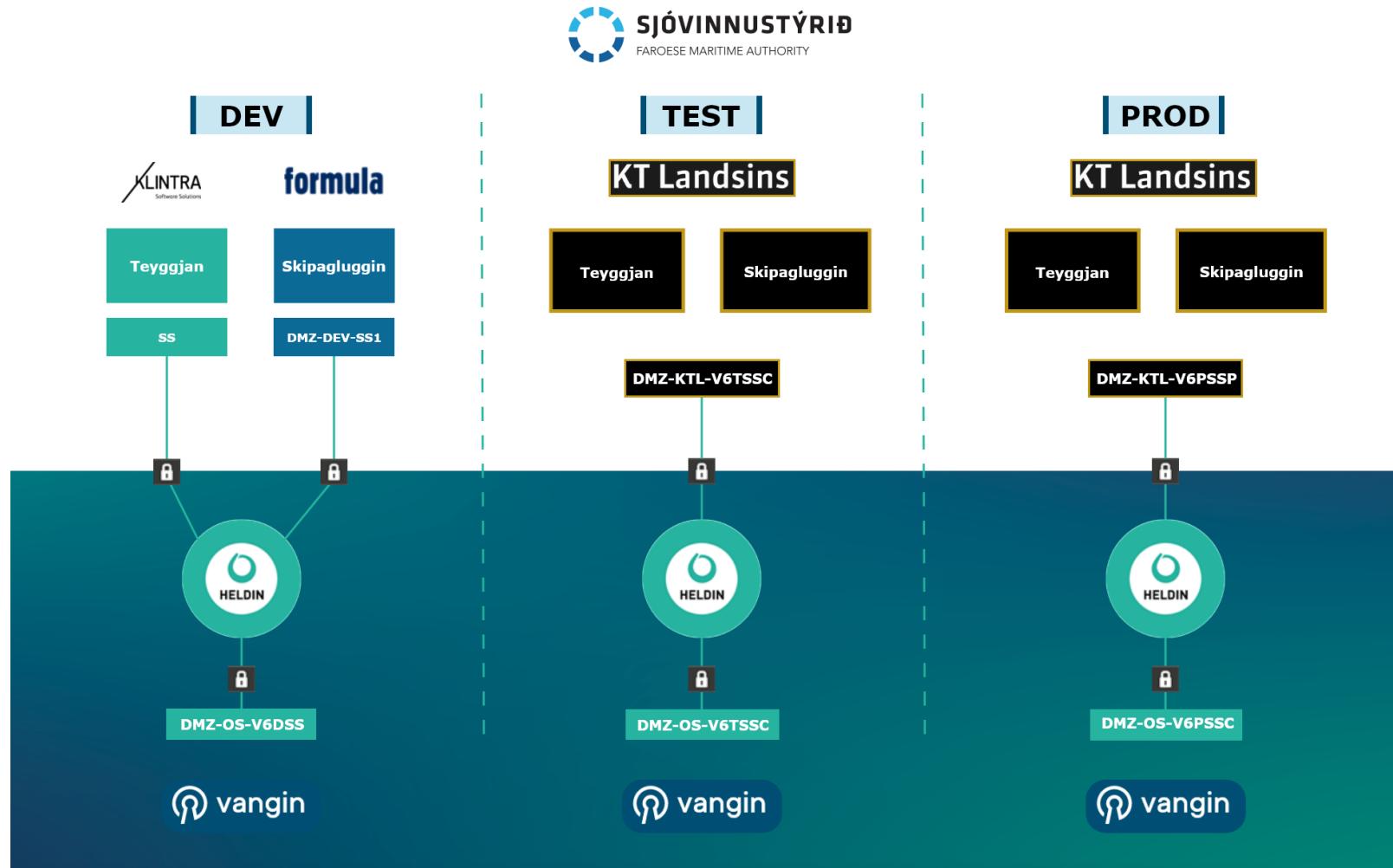
Vangin hevur 3 umhvørvir



Tænastuveitari kann hava 2 umhvørvir

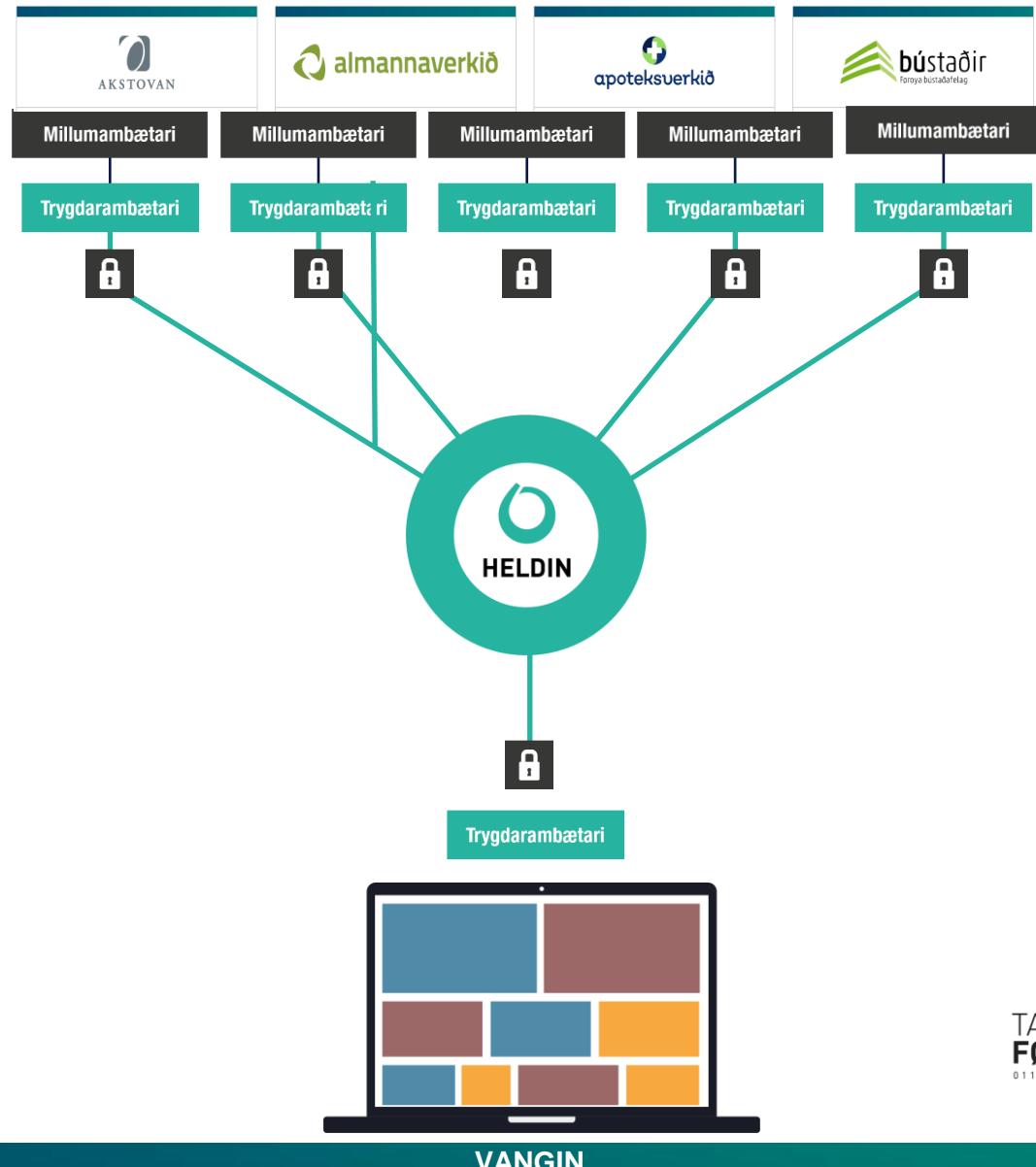


Tænastuveitari hjá fleiri KT veitarum



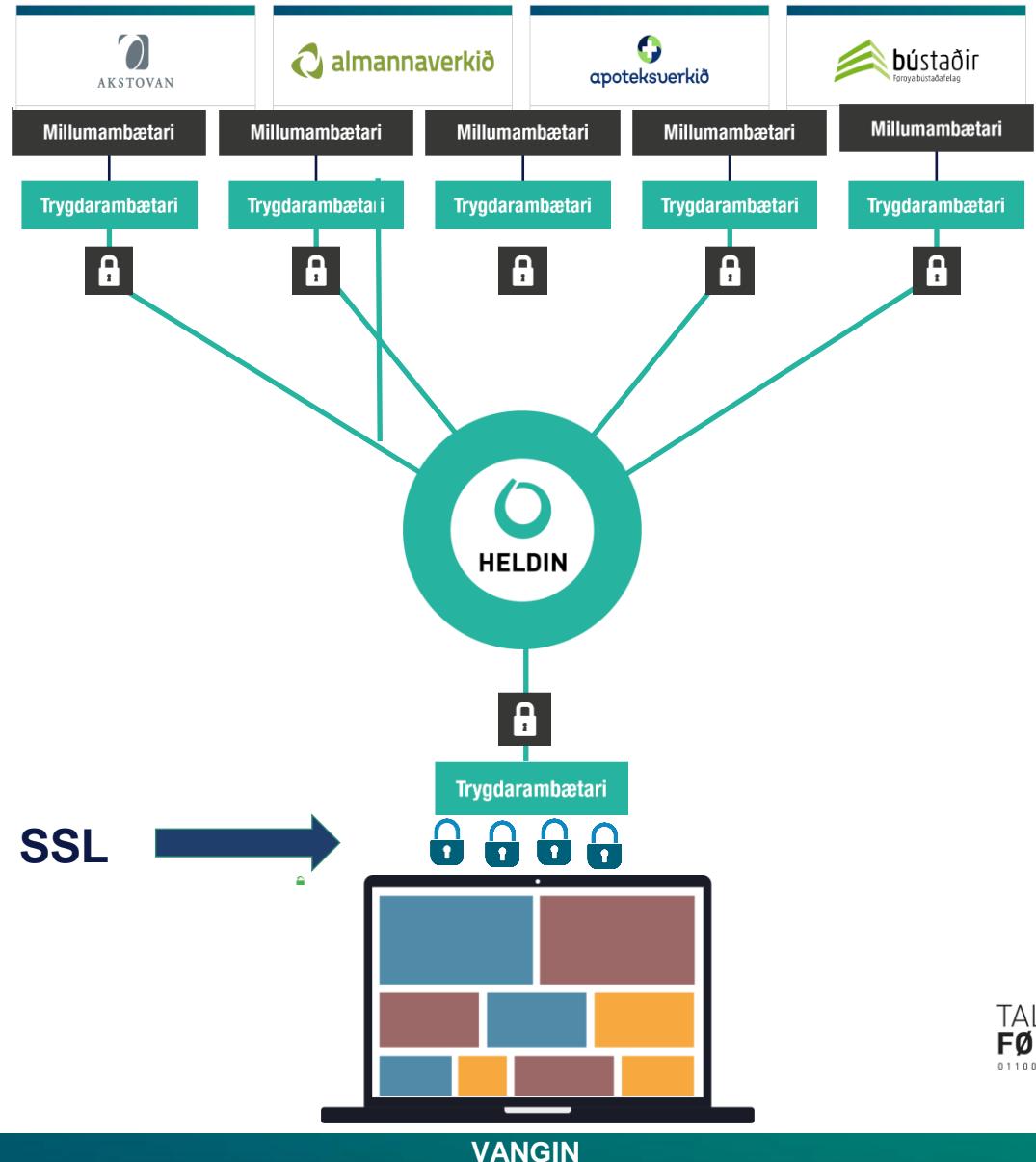
Navnastandardur hjá Vanganum á Heldini

- Góður navnastandardur hjálpir sera nögv í umsiting
- Økir um trygdina
- Luttakari: Gjaldstovan v-tal 343269
- Vangin er skrásett subsystem hjá Gjaldstovuni
- Vangin nýtir ein “unique” brúkara pr. tænastuveitara, fyri at hjálpa uppá umsitingina
- Dømi
- FO-DEV/GOV/343269/vng-folk
 - Vng-folk
 - Vng-tk
 - Vng-suk



SSL Sertifikatir

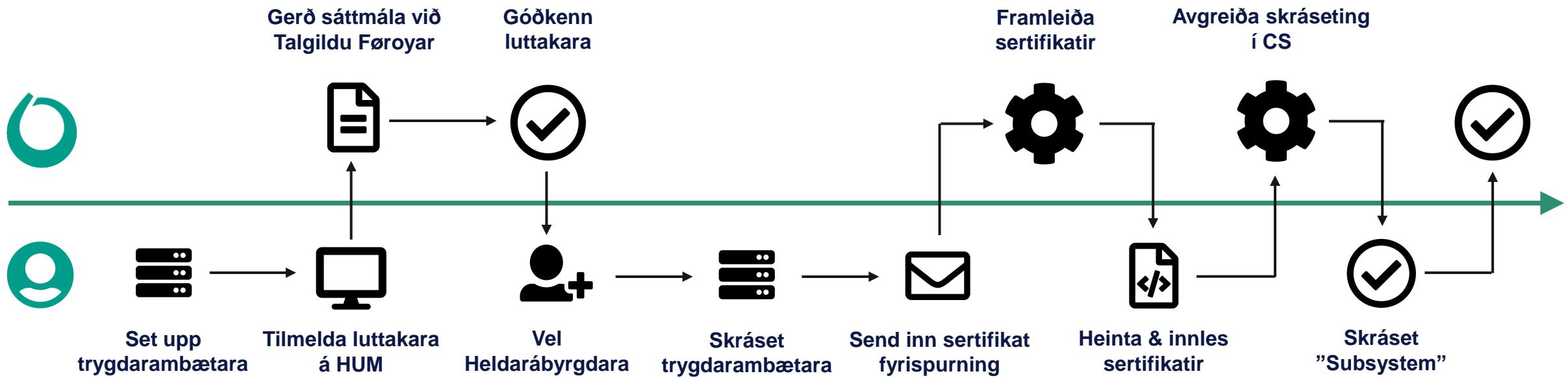
- SSL sertifikat millum Vangan og Vanga trygdarambætarin
- Sertifikat pr. tænastuveitara / brúkara



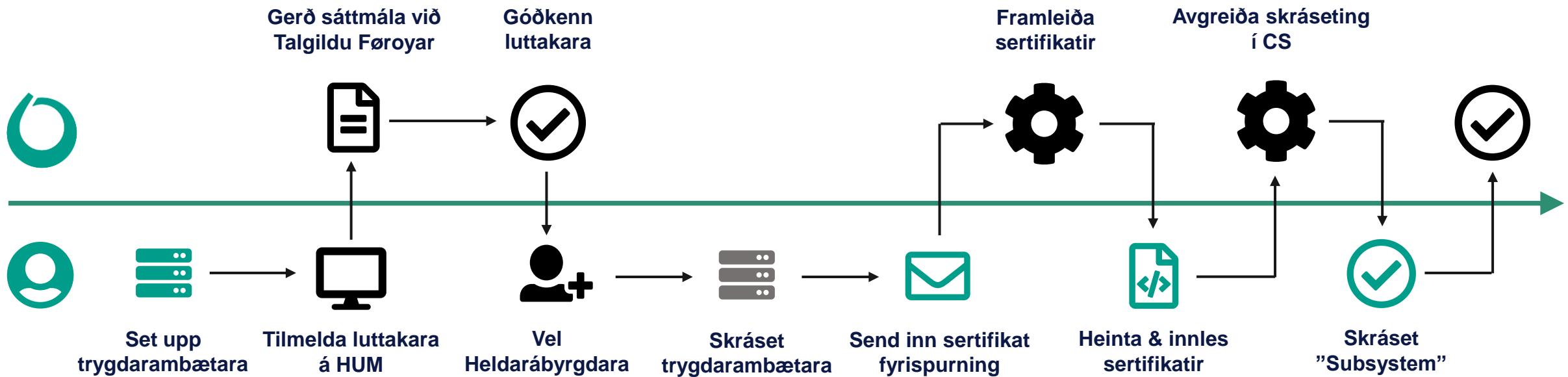
Praktiskt – Rita inn á demo trygdarambætara

- Loyniorð til wifi (Guest): landsnet2022
- url til trygdarambætara
 - <https://heldin-demo.magnussen.fo:4000>
- Brúkaranavn og loyniorð til trygdarambætara
 - heldin-demo/demo2022

Umsiting av trygdarambætarum



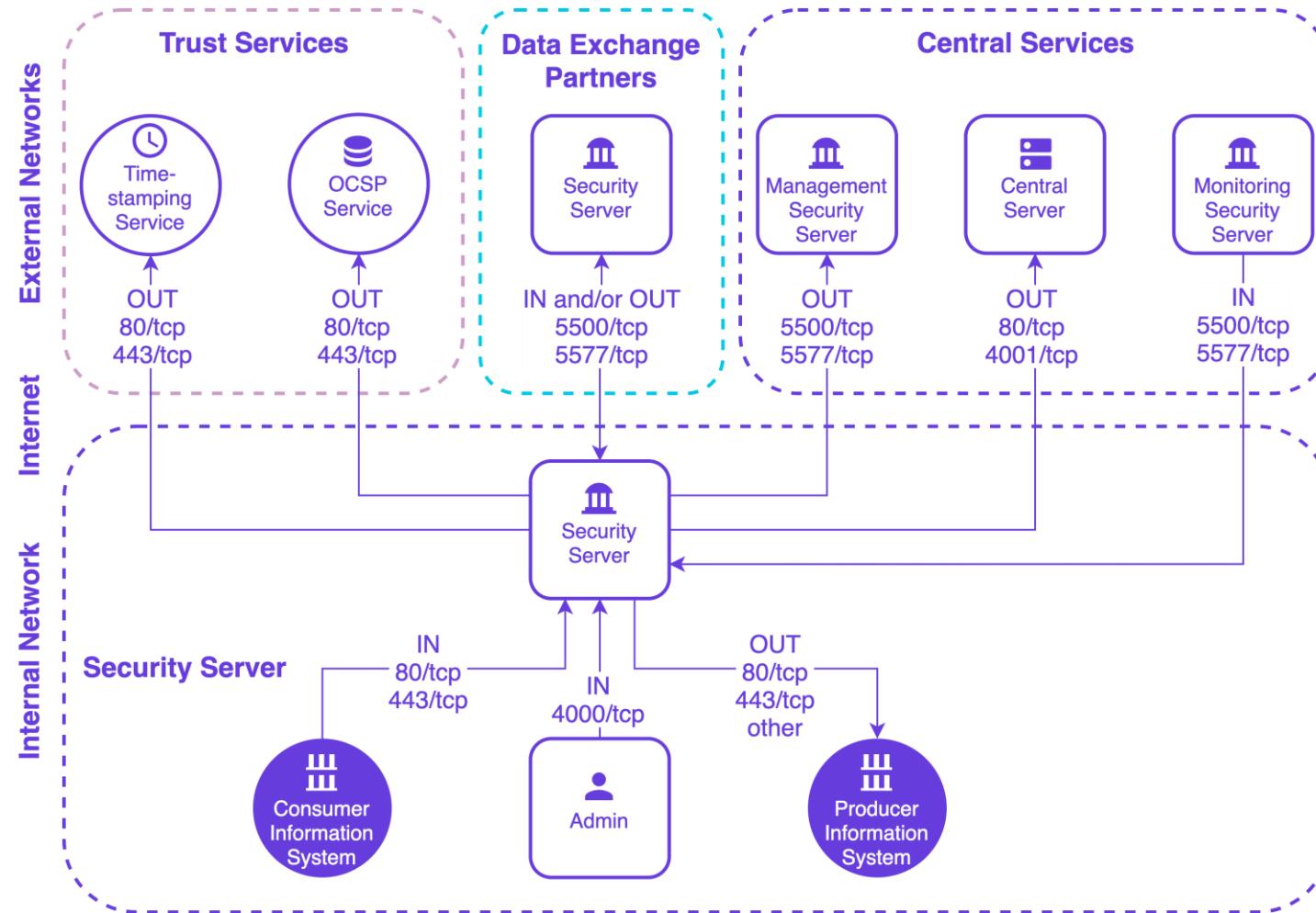
Umsiting av trygdarambætarum



Uppsetan av trygdarambætara – Uppsetan

- Installera trygdarservara sambært [vegleiðing](#)
 - Ubuntu 18.04 LTS og 20.04 LTS eru supporterað í løtuni
 - Minimum 10GB disk 4 GB RAM, og 1 CPU core
 - Velja logging "addon" frá
- Set up trygdarservara sambært [vegleiðing](#)
 - Public IP & DNS
 - Set upp "firewall" sambært vegleiðing
 - Importera Anchor filu eftir umhvørvið ([Dev](#), [Test](#), [Prod](#))
 - Vel tíðarstempul tænastu

Uppsetan av trygdarambætara – Uppsetan



Uppsetan av trygdarambætara – Uppsetan

- Testa at portur eru opin við at brúka curl
 - Ocsp tænastu
 - Timestamping tænastu
 - Ekstern atgongd til egnan servara (5000)

Uppsetan av trygdarambætara - Sertifikatir

- Gerð CSR
 - Auth. Sertifikat
 - Sign. Sertifikat
- Gerð sertifikat fyrispurning á HUM
- Heinta sertifikatir frá HUM
- Innles sertifikatir á trygdarambætaran

Uppsetan av trygdarambætara – Skráset KT skipan (Subsystem)

Add subsystem

Specify the code of the subsystem to be added.

If the subsystem is already existing, you can select it from the Global list.

[SELECT SUBSYSTEM](#)

Member Name [?](#) Føroya Gjaldstova

Member Class [?](#) GOV

Member Code [?](#) 343269

Subsystem Code [?](#)
The Subsystem Code field is required

Register subsystem

[CANCEL](#)

[ADD SUBSYSTEM](#)

Uppsetan av trygdarambætara – Skráset vevtænastu

hello-world (subsystem)

Unregister

Service

OPENAPI3 (<http://192.168.1.226:8082/desc.json>)

Last refreshed: 2022-09-20 13:50

SERVICE CODE	URL	TIMEOUT
hello-world-rest	http://192.168.1.226:8082/	60

WSDL (<http://192.168.1.226:8083/wsdl/ConvertWSDL.wsdl>)

Last refreshed: 2022-09-20 20:51

SERVICE CODE	URL	TIMEOUT
getHelloWorld.v1	http://192.168.1.226:8083/DemoService.asmx	60
getTest.v1	http://192.168.1.226:8083/DemoService.asmx	60

Uppsetan av trygdarambætara – Skráset vevtænastu

hello-world-rest

[Service Parameters](#) [Endpoints](#)

Service URL
The URL where requests targeted at the service are directed

Timeout (s)
The maximum duration of a request to the service, in seconds

Verify TLS certificate
Verify TLS certificate when a secure connection is established

[Save](#)

Access Rights

[Remove All](#) [Add subjects](#)

MEMBER NAME / GROUP DESCRIPTION	ID / GROUP CODE	TYPE	ACCESS RIGHTS GIVEN	
SP/F B. Magnussen	FO-TST:COM:651338:heldin-demo-client	SUBSYSTEM	2022-09-20 20:53	Remove
SP/F B. Magnussen	FO-TST:COM:651338:heldin-demo-client-https	SUBSYSTEM	2022-09-20 16:44	Remove

[Close](#)

Uppsetan av trygdarambætara – Skráset vevtænastu

hello-world-rest

X

Service Parameters Endpoints

Add Endpoint

HTTP REQUEST METHOD	PATH	Access Rights
GET	/Test	Access Rights
GET	/HelloWorld	Access Rights

Uppsetan av trygdarambætara – Skráset vevtænastu

getHelloWorld.v1

Service URL
The URL where requests targeted at the service are directed

http://192.168.1.226:8083/DemoService.asmx

Timeout (s)
The maximum duration of a request to the service, in seconds

60

Verify TLS certificate
Verify TLS certificate when a secure connection is established

Save

Access Rights

Remove All Add subjects

MEMBER NAME / GROUP DESCRIPTION	ID / GROUP CODE	TYPE	ACCESS RIGHTS GIVEN	
SP/F B. Magnussen	FO-TST:COM:651338:heldin-demo-client	SUBSYSTEM	2022-09-20 20:51	Remove
SP/F B. Magnussen	FO-TST:COM:651338:heldin-demo-client-https	SUBSYSTEM	2022-09-20 20:51	Remove

Close

Uppsetan av trygdarambætara – consumer

heldin-demo-client (subsystem)

Unregister

Connection type

HTTPS

Connection type for servers in service provider role is set in the Services tab by the service URL (http/https).

Information System TLS certificate

Add

Certificate Hash (SHA/1)

4B:EA:A9:2C:CA:BB:11:55:84:18:12:68:20:78:A7:1A:69:15:75:A6

Security Server certificate

Certificate Hash (SHA/1)

4A:8A:90:F9:F0:AC:43:9C:13:69:4E:0A:2F:DC:36:FB:EC:CF:1E:E6

Export

The screenshot displays a configuration page for a subsystem named 'heldin-demo-client'. At the top, there is a 'Connection type' dropdown set to 'HTTPS'. Below it, a note states that the connection type for servers in the service provider role is set in the Services tab by the service URL (http/https). The page is divided into two main sections: 'Information System TLS certificate' and 'Security Server certificate'. Each section contains a 'Certificate Hash (SHA/1)' field. For the information system, the hash is listed as '4B:EA:A9:2C:CA:BB:11:55:84:18:12:68:20:78:A7:1A:69:15:75:A6'. For the security server, the hash is listed as '4A:8A:90:F9:F0:AC:43:9C:13:69:4E:0A:2F:DC:36:FB:EC:CF:1E:E6'. There are 'Add' and 'Export' buttons associated with each section.

Uppsetan av trygdarambætara – ssh

- Brúkarastýring
 - Rollir
- Loggar
 - Arkiv interval
 - Uprudding av log arkiv
- Backup
 - Config backup (uppsetan, sertifikatir v.m.)
 - Servara backup
- Monitorering
 - Halda eyga við ram/diskpláss/cpu v.m.

Eftirhyggja tekniskar loggar - ssh

Service	Purpose	Log
xroad-addon-messagelog	Message log archiving and cleaning of the message logs	/var/log/xroad/messagelog-archiver.log
xroad-confclient	Client process for the global configuration distributor	/var/log/xroad/configuration_client.log
xroad-proxy	Message exchanger	/var/log/xroad/proxy.log
xroad-signer	Manager process for key settings	/var/log/xroad/signer.log
xroad-proxy-ui-api	Management UI and REST API	/var/log/xroad/proxy_ui_api.log and /var/log/xroad/proxy_ui_access.log
xroad-monitor	Environmental monitoring	/var/log/xroad/monitor.log
xroad-opmonitor	Operational monitoring	/var/log/xroad/op-monitor.log

Eftirhyggja samkiftis loggar – ssh/postgres

- Samskifti sum ikki er arkivera liggur í databasuni
- Arkivera samskifti liggur í
 - /var/lib/xroad

Pin kota

- Tá servarin verður "re-bootaður" skal pin kotan inntøppast

Feilkotir

- Server.ClientProxy....
 - Feilurin liggur hjá tær
- Server.ServerProxy...
 - Feilurin liggur hjá vevtænastu veitara
- How to Interpret Security Server Proxy Error Messages?
 - <https://nordic-institute.atlassian.net/wiki/spaces/XRDKB/pages/4915550/How+to+Interpret+Security+Server+Proxy+Error+Messages>

Vaelkomin á verkstovu
um Heldina (Dagur 2)

TALGILDU
FØROYAR

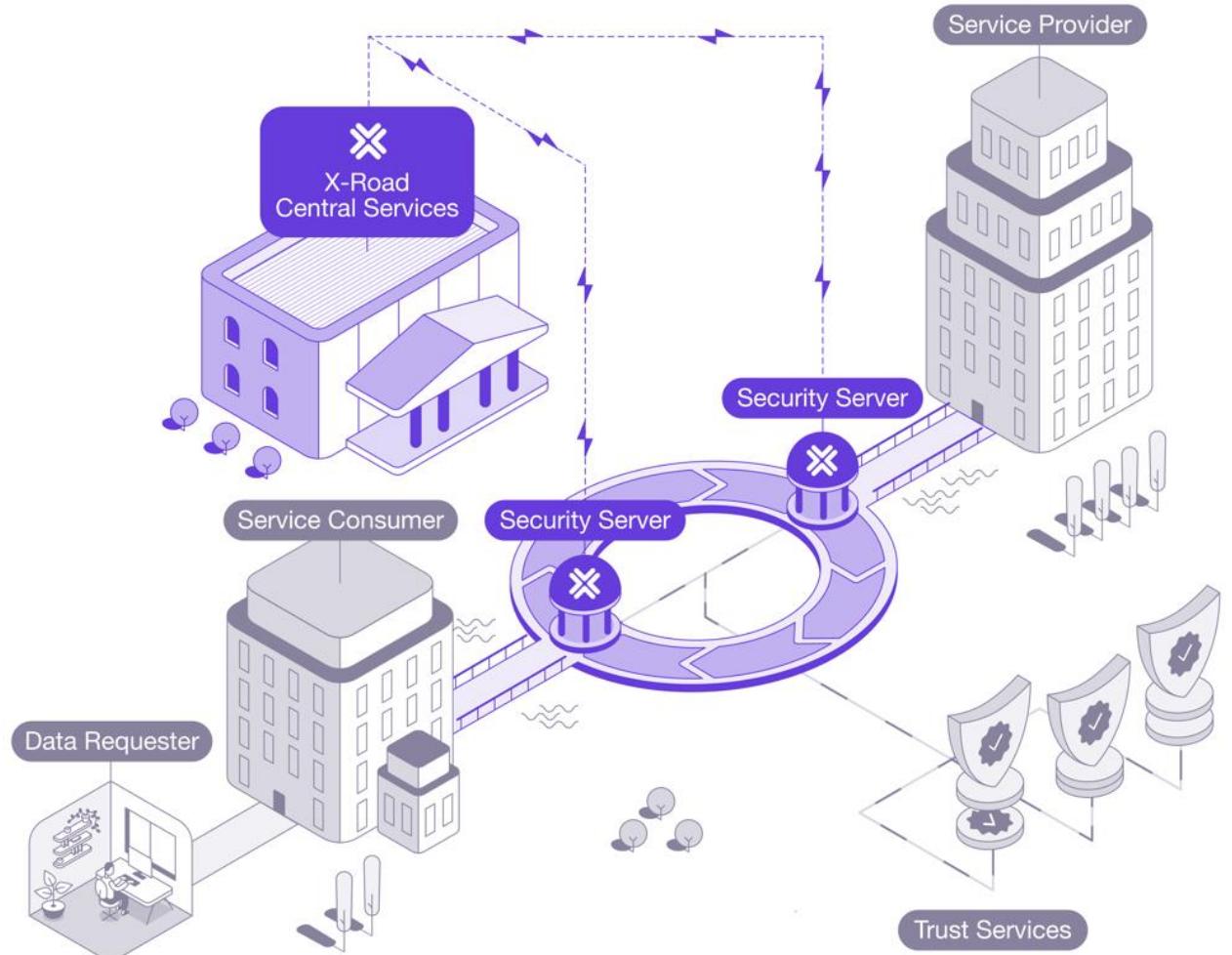
01100110 01101111

Skrá – Dagur 2

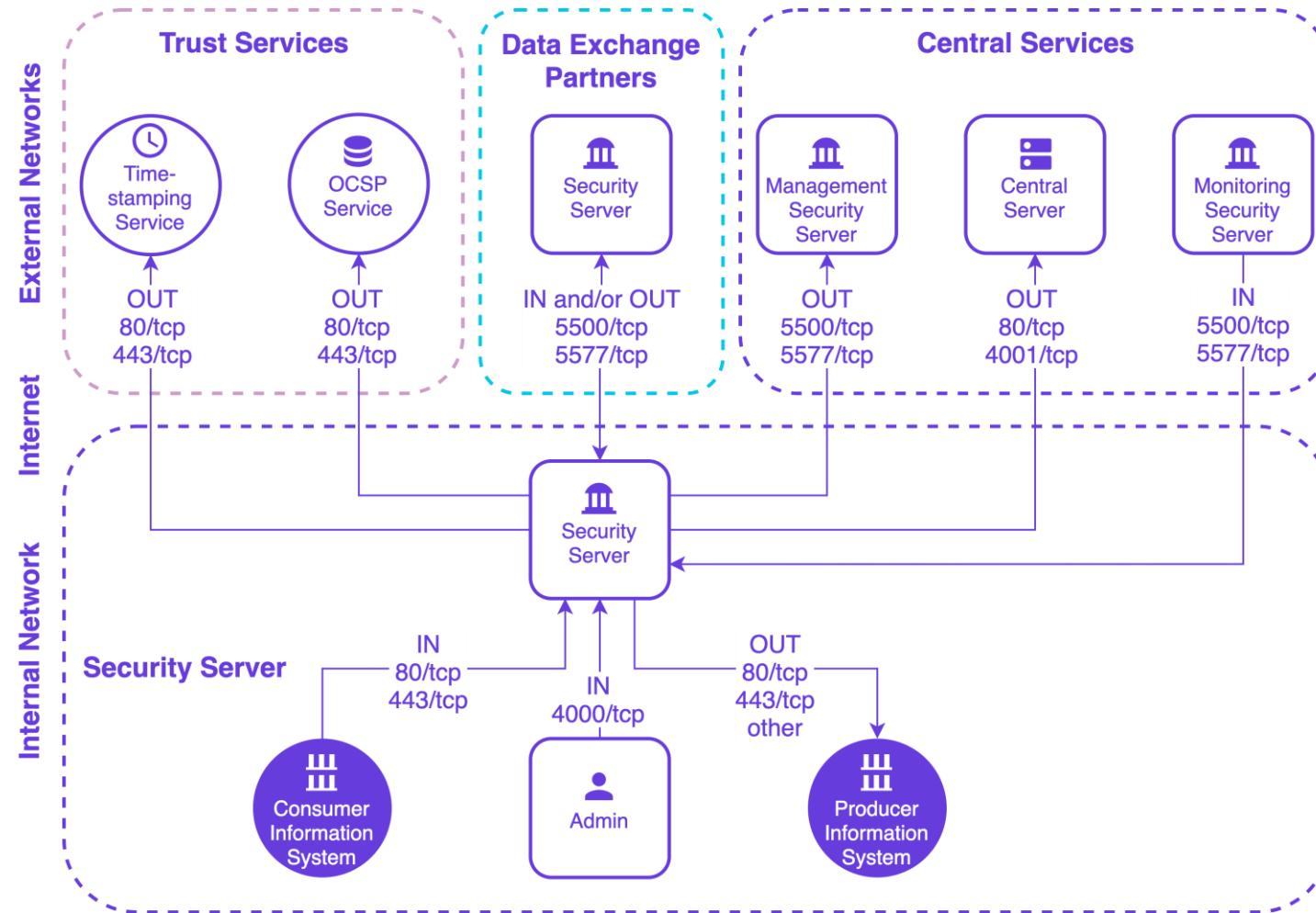
- 09:00 Intro
- 09:15 Menning av vevtænastum - Arkitekturur
- 10:00 Steðgur**
- 10:10 Menning av vevtænastum - Demo
- 11:00 Steðgur**
- 11:10 Menning av vevtænastum - Nýtsla við REST/SOAP
- 12:00 Døgurðasteðgur**
- 13:00 Menning mótvegis FOLK
- 13:50 Steðgur**
- 14:05 Menning mótvegis FOLK
- 15:00 Liðugt**

Menning av vevtænastum - Arkitektur

- Central Service
- Security Server
- Information System
- Time-Stamping Authority (TSA)
- Certificate Authority (CA)



Uppsetan av trygdarambætara – Uppsetan



Uppsetan av trygdarambætara – Skráset KT skipan (Subsystem)

Add subsystem

Specify the code of the subsystem to be added.

If the subsystem is already existing, you can select it from the Global list.

[SELECT SUBSYSTEM](#)

Member Name [?](#) Føroya Gjaldstova

Member Class [?](#) GOV

Member Code [?](#) 343269

Subsystem Code [?](#)
The Subsystem Code field is required

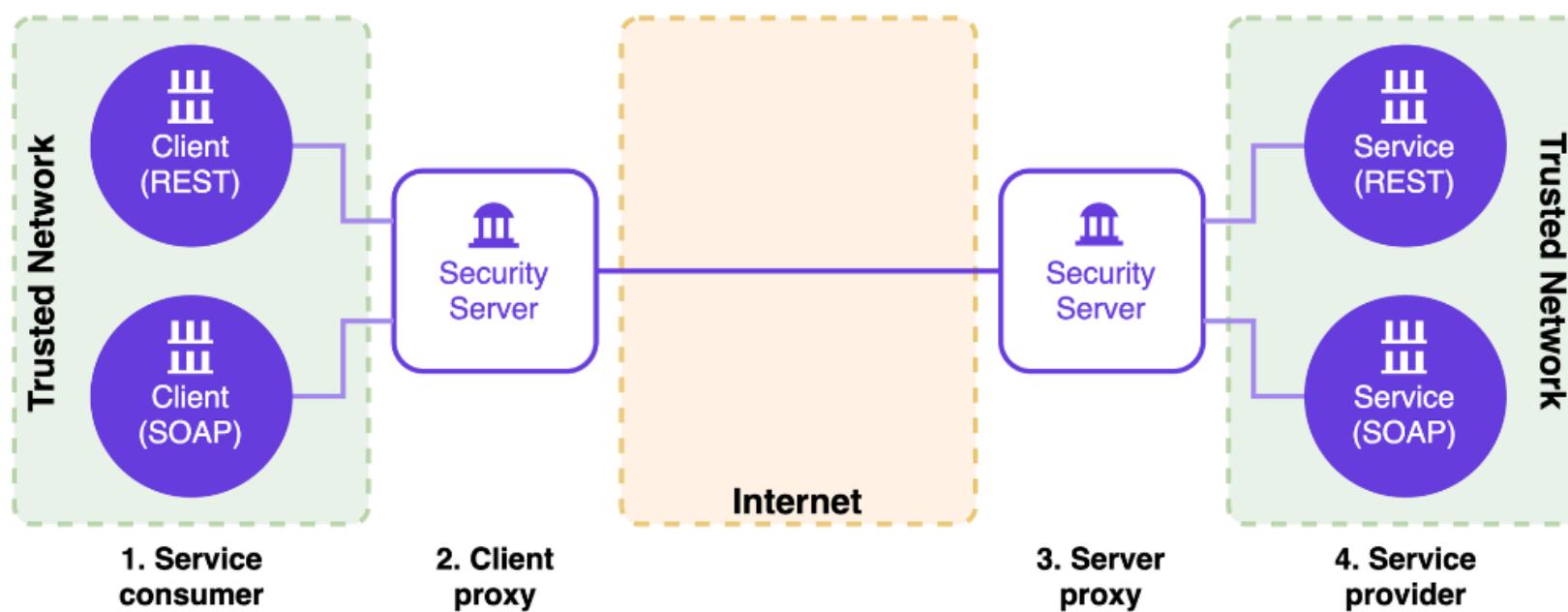
Register subsystem

[CANCEL](#)

[ADD SUBSYSTEM](#)

Feilboð – Hvar liggur feilurin?

1. Service consumer
2. Consumer-side Security Server (client proxy)
3. Provider-side Security Server (server proxy)
4. Service provider.



Feilkotir

- Server.ClientProxy....
 - Feilurin liggur hjá tær
- Server.ServerProxy...
 - Feilurin liggur hjá vevtænastu veitara
- How to Interpret Security Server Proxy Error Messages?
 - <https://nordic-institute.atlassian.net/wiki/spaces/XRDKB/pages/4915550/How+to+Interpret+Security+Server+Proxy+Error+Messages>

Menning av vevtænastum

- Menning eftir vanligum standardum
 - REST
 - Gott at brúka OpenAPI service description
 - SOAP
 - X-road soap header skal verða í svarinum
- Nýggjar tænastur skulu helst mennast eftir REST standard

Menning av vevtænastum

- REST
 - PUT
 - GET
 - POST
 - DELETE
- Fyrispurningar skulu hava ein "X-Road-Client" header

Menning av vevtænastum

- SOAP
 - Vevtænasta (wsdl) skal innihalda SOAP header

```
<soapenv:Header>
  <xro:service iden:objectType="SERVICE">
    <iden:xRoadInstance>-</iden:xRoadInstance>
    <iden:memberClass>-</iden:memberClass>
    <iden:memberCode>-</iden:memberCode>
    <iden:subsystemCode>-</iden:subsystemCode>
    <iden:serviceCode>-</iden:serviceCode>
    <iden:serviceVersion>-</iden:serviceVersion>
  </xro:service>
  <xro:client iden:objectType="SUBSYSTEM">
    <iden:xRoadInstance>-</iden:xRoadInstance>
    <iden:memberClass>-</iden:memberClass>
    <iden:memberCode>-</iden:memberCode>
    <iden:subsystemCode>-</iden:subsystemCode>
  </xro:client>
  <xro:id>l</xro:id>
  <xro:protocolVersion>4.x</xro:protocolVersion>
</soapenv:Header>
```

Menning av vevtænastum - klient

- Menning av vevtænastu klientum
 - REST
 - Downloada service description
 - innlesa service description
 - SOAP
 - Downloada WSDL
 - Innlesa wsdl
- Byrja við at testa í t.d. Postman ella SOAP UI

Menning av vevtænastum - DEMO

The screenshot shows the Microsoft Visual Studio interface with two open projects:

- HeldenDemo**: A .NET Core application containing the following files:
 - Program.cs
 - WeatherForecastController.cs
 - Startup.cs
- HeldenDemoConsumer**: A .NET Core application containing the following files:
 - Program.cs
 - WeatherForecastController.cs
 - Startup.cs

The **Program.cs** file in the **HeldenDemoConsumer** project contains the following code:

```
using System;
using System.Net.Http;
using heldindemoconsumer;

namespace HeldenDemoConsumer
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Hello World!");
            HttpClient client = new HttpClient();
            client.DefaultRequestHeaders.Add("X-Road-Client", "FO-TST/CQM/651338/heldin-demo-client");
            Client c = new Client("https://heldin-demo.magnussen.fo/r1/FO-TST/CQM/651338/hello-world/workshop/", client);
            var reponse = c.WeatherForecast();
        }
    }
}
```

Menning av vevtænastum - DEMO

- Mannagongd
 - Nýtt Visual Studio projekt
 - Web API
 - Template inniheldur endapunkt "WeatherForecast"
 - Hetta er klárt at leggja út
 - Leggja inn OpenAPI dokumentatió (Swashbuckle)
 - [Leinkja til guide](#)
 - "Publish" til web servara
 - Innlesa tænastu á trygdarambætara og geva atgongd
- Consumera tænastu
 - Konvertera Open API service description til klient kotu

Menning av vevtænastum - klient

- Metadata services
 - [REST](#)
 - [SOAP](#)
- Byrja við at testa í t.d. Postman ella SOAP UI
- listClients – allir luttakarir og subsystems (SOAP / REST)
- getWsdl (SOAP)
- getOpenApi (REST)

Menning av vevtænastum - Metadata

- listClients – allir littakarir og subsystems (SOAP / REST)
- getWsdl (SOAP)
- getOpenApi (REST)

Menning av vevtænastum

- Dømi í postman
 - ListClients
 - GetOpenAPI
 - ListMethods
 - GetWsdl
 - Test metodir – helloworld
- Dømi í SOAP UI
 - Test metodir - helloworld

Menning mótvægis FOLK

SOAP Webservices :-)

Security Server:

- [Https://heldin-demo.magnussen.fo](https://heldin-demo.magnussen.fo)

Subsystem:

- FO-TST:COM:651338:folk-community-demo

Services:

- FO-TST:GOV:405388:us-folk-v2
- FO-TST:GOV:405388:us-folk-v3

Menning mótvægis FOLK

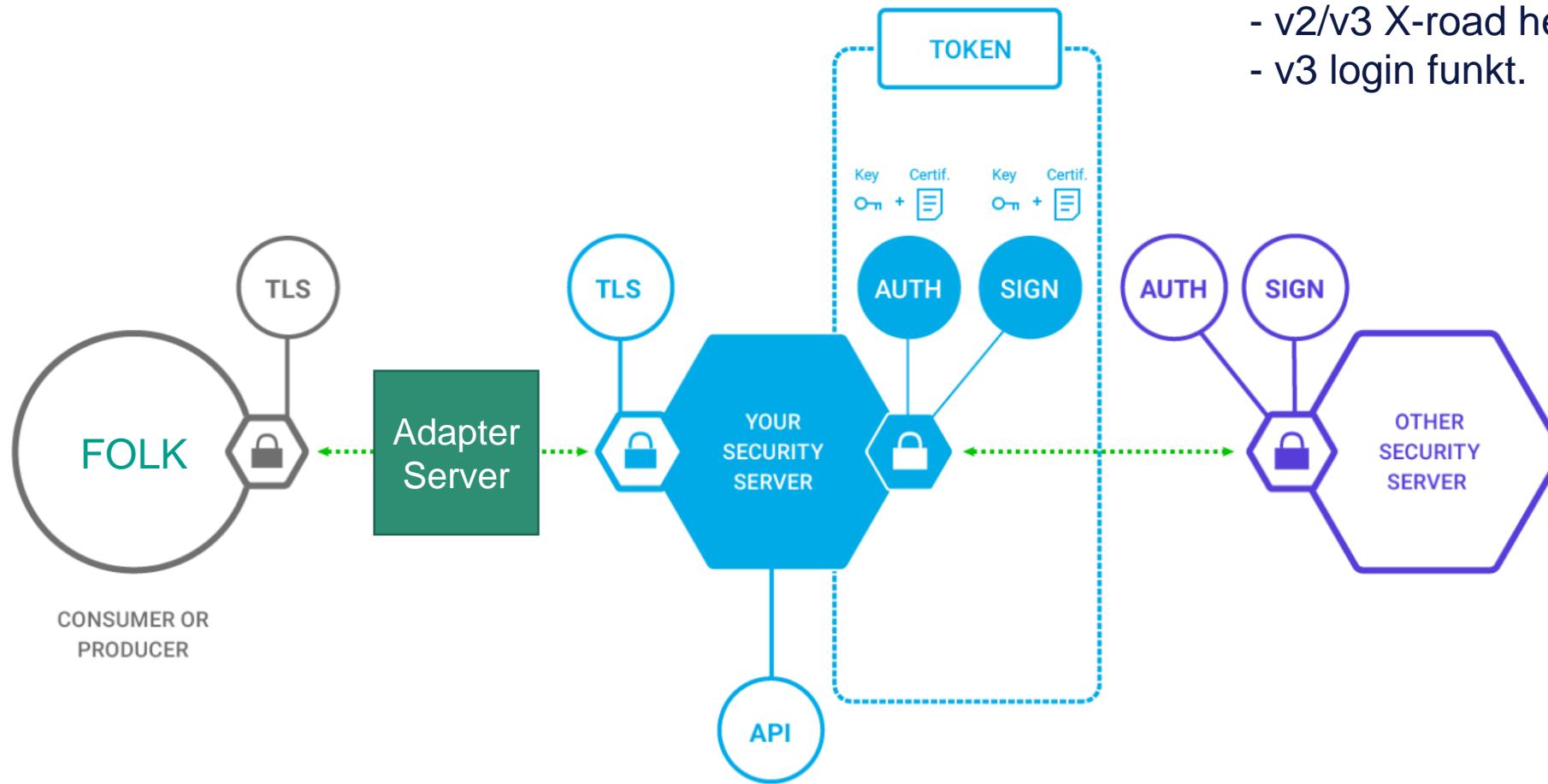
- FOLK
 - KT-skipan hjá Landsfólkayvirlitinum
 - Verður umsitin av Umhvørvisstovuni
 - Ment í 2010 – Silverlight front-end tøkni
- FOLK á Heldini
 - Ein skrá - sleppa undan duplum skrásetingum
 - Verður brúkt nögv, serligt fokus eftir Vangin kom
 - ~ 273.000 innritanir pr. 31/8-2022 (service/UI)
 - ~ 5.000.000 fyrispurningar (service)

Menning mótvægis FOLK

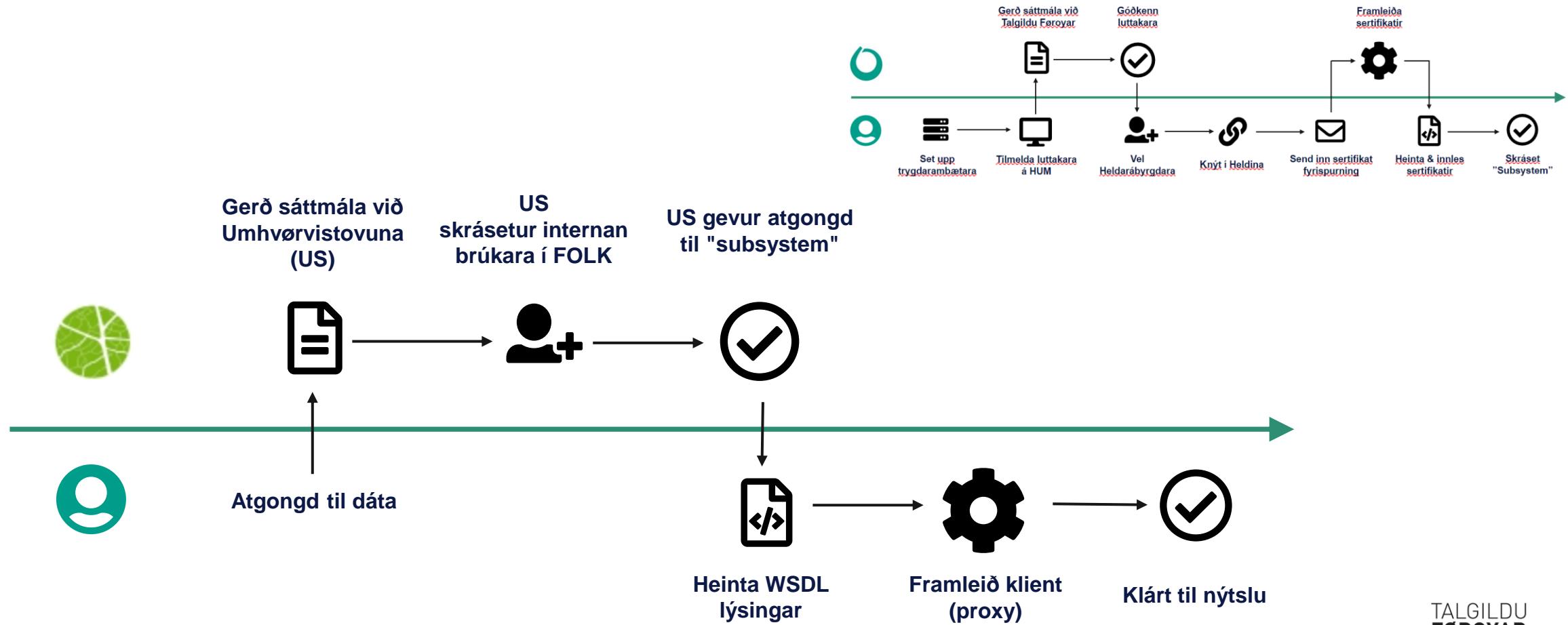
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Menning mótvægis FOLK

Adapter server:
- v2/v3 X-road headers
- v3 login funk.



Menning mótvægis FOLK - Mannagongdin



Menning mótvægis FOLK

- Atgongd til persónsupplýsingar
 - Almennir stovnar (tryggingarfeløg, bankar inkl.)
 - Atgongd til allar upplýsingar, tørvur er á, fyri at útinna virki sítt
 - Partafeløg, smápartafeløg, grunnar, fyritøkur og aðrir lögfrøðiligrar og likamligar persónar
 - Navn, Bústaður, Starv, Frámerki (marknaðarføring), Deyður, Horvin, Fráflyting, Tilknýtisbústaður, Sjálvræði

Menning mótvægis FOLK

- Hvussu kunnu persónar eyðmerkjast
 - Persónstali (p-tali)
 - Navni (núverandi ella fyrrverandi) **og** føðingardegi
 - Navni (núverandi ella fyrrverandi) **og** bústaði
- Um fleiri persónar verða eyðmerktir við hesum, fæst einki úrslit
- Vevtænastur at spyrja við
 - **Fyri V3:** GetPerson[Small | Medium]By[NameAndAddress | NameAndDateOfBirth | PrivateId | ByPtal | ByPublicId]
 - **Fyri V2:** GetPeoplePublicInfo | GetPerson

Menning mótvægis FOLK

- Communities (bólkar)
 - Alt føroyar
 - Kommunur
 - Egin skrá (t.d. kundaskrá e.l.)
- Vevtænastur at spyrja við
 - **Fyri V3:** AddPersonToCommunityBy[NameAndAddress | NameAndDateOfBirth], RemovePersonFromCommunity, Get[Private | Public]Changes
 - **Fyri V2:** AddPeopleToCommunity, RemovePeopleFromCommunity, GetCommunityPeopleIds

Menning mótvægis FOLK

US-FOLK-V2

- Subsystem: FO(-TST):GOV:405388:us-folk-v2
- Umfatandi vevtænastur, uppunaliga mentar til UI
 - Login
 - GetPerson
 - GetPeoplePublicInfo
 - GetCommunityPeopleIds
 - AddPeopleToCommunity
 - RemovePeopleFromCommunity
- Hava m.a. möguleika at veita söguligar upplýsingar

Menning mótvægis FOLK

US-FOLK-V3

- Subsystem: FO(-TST):GOV:405388:us-folk-v3
- Minni í vavi – fleiri í tali
- Eru mentar partvís fyrir lættari nýtslu
 - C# / Java client program
 - Eisini möguligt at brúka vevtænastur beinleiðis (WSDL)

Menning mótvægis FOLK

US-FOLK-V3

- Eingin innritan – atgongd knýtt at vevtænastubrúkara (subsystem)
- Skjótari at koma ígongd - eingin kota (client proxy) nýtist at genererast - Bílagdur av TF
- Github repositories
 - .Net: <https://github.com/umhvorvisstovan/folkv3-api-dotnet>
 - .Net dømi: <https://github.com/umhvorvisstovan/folkv3-api-sample-dotnet>
 - Java: <https://github.com/umhvorvisstovan/folkv3-api-java>
 - Java dømi: <https://github.com/umhvorvisstovan/folkv3-api-sample-java>

Menning mótvægis FOLK

- Samanbera v2/v3 tænastu, GetPerson
 - V3 er reinari
 - V2 hevur nógvar Include* parametrar
- Adapter services

Menning mótvægis FOLK

- **Amboð**
 - SoapUI
 - Postman
- **Leinki**
 - <https://umhvorvisstovan.github.io/FOLK-clients/>
 - <https://x-road.global/resources>
 - <https://x-road.thinkific.com/>

Takk fyri