Joint Open-Source Development in Cross-Border Context

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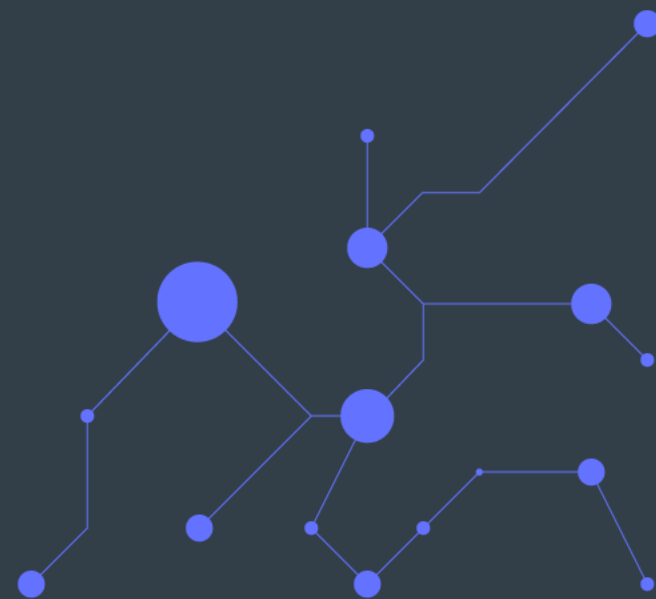
Topics

- ▶ What is X-Road
- ▶ NIIS as The X-Road Core Development Organization
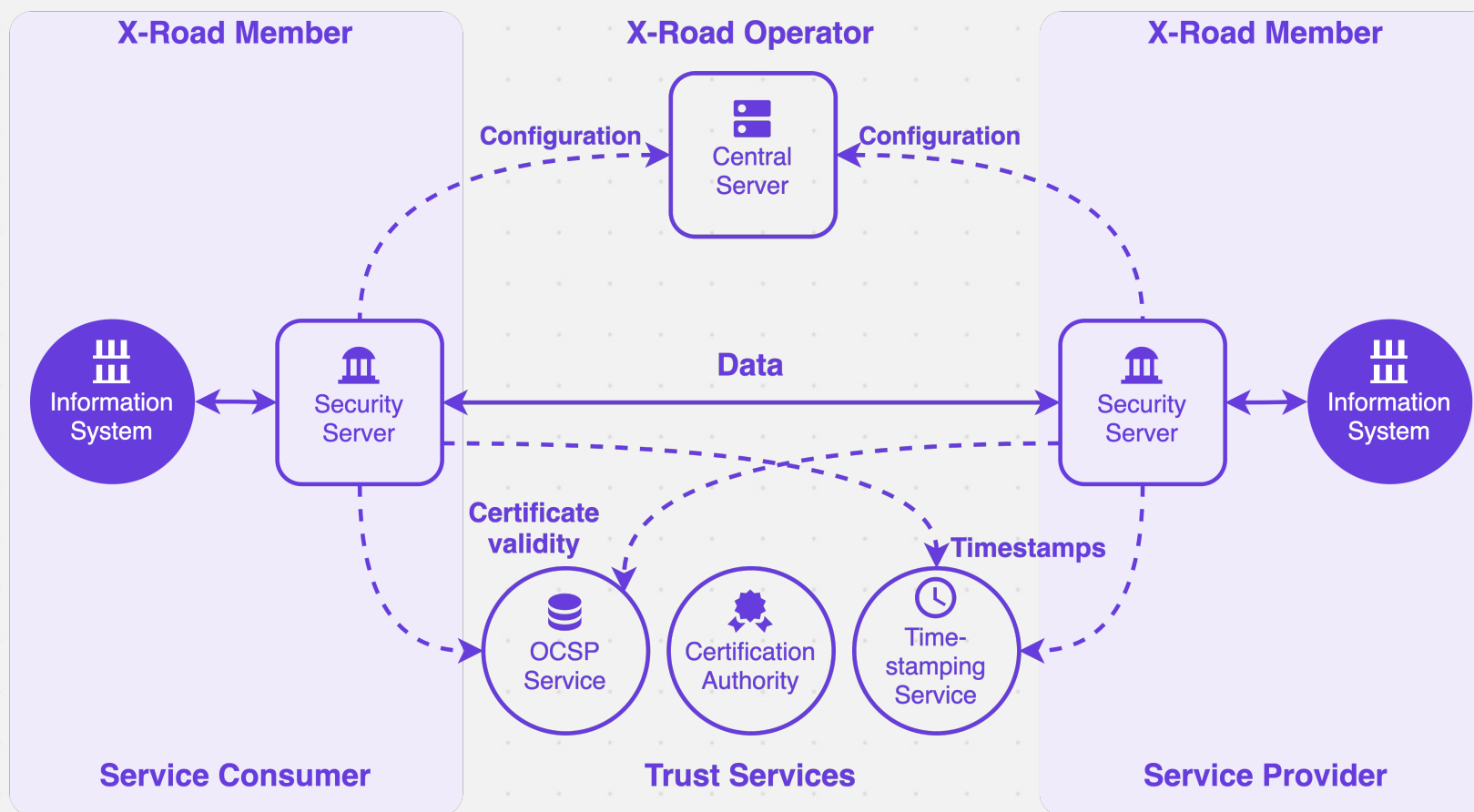- ▶ X-Road Development Model
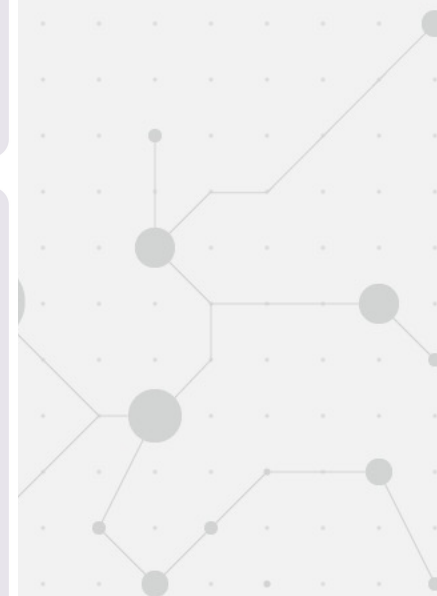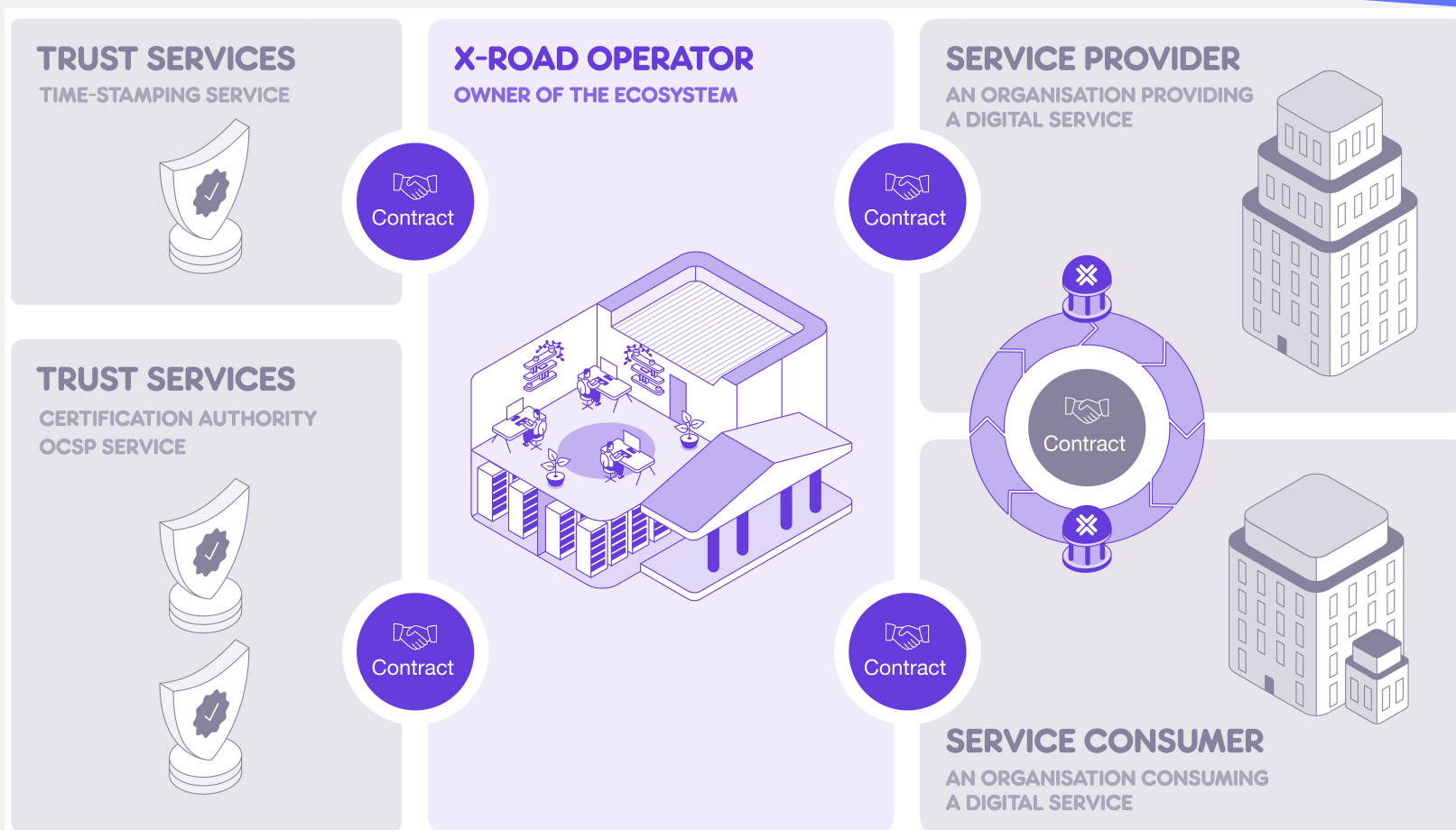- ▶ X-Road Community

X-Road® Data Exchange Layer

▶ X-Road® is open-source software and ecosystem solution that provides unified and secure data exchange between organisations.

▶ The basic idea of X-Road is that members of an ecosystem exchange data through access points (Security Servers) that implement the same technical specifications.

▶ X-Road is a digital public good verified by the Digital Public Goods Alliance, and it's released under the MIT open-source license and is available free of charge.

X-Road

X-Road Member · **X-Road Operator** · **X-Road Member**

Configuration → Central Server ← Configuration

Service Consumer

Information System ↔ Security Server ↔ Data ↔ Security Server ↔ Information System

Certificate validity · Timestamps

Trust Services

OCSP Service · Certification Authority · Time-stamping Service

Service Provider

Organisational Framework

TRUST SERVICES
TIME-STAMPING SERVICE

TRUST SERVICES
CERTIFICATION AUTHORITY
OCSP SERVICE

X-ROAD OPERATOR
OWNER OF THE ECOSYSTEM

SERVICE PROVIDER
AN ORGANISATION PROVIDING
A DIGITAL SERVICE

SERVICE CONSUMER
AN ORGANISATION CONSUMING
A DIGITAL SERVICE

Contract

Contract

Contract

Contract

Contract

NIIS as The X-Road Core Development Organization

Background

- The cooperation related to the X-Road between Estonia and Finland officially started in 2013 when the Prime Ministers signed the Memorandum of Understanding about the co-operation in the field of ICT.

- In the beginning of 2014 Estonia gave X-Road to Finland under EUPL license (currently licenced under MIT licence).

- Cooperation agreement between the Information System Authority of the Republic of Estonia and the Ministry of Finance of Finland was first signed in June 2015 and extended in January 2016.

  - Goal of the cooperation was to continue to develop the X-Road cooperation towards more substantial issues, joint development, and **shared organisation.**

- The Formation and Cooperation Agreement of NIIS was signed by Minister of Entrepreneurship and Information Technology of Estonia Urve Palo and Finnish Minister of Foreign Trade and Development Kai Mykkänen in Helsinki on 7 March 2017.

X-Road Development Responsibilities

	−2017	2018−
Coordination	By country (FI/EE)	NIIS
Resourcing	By country (FI/EE)	NIIS
Management	By country (FI/EE)	NIIS
Source code location	Different branches (FI/EE)	NIIS + local branches
Financing	By country (FI/EE)	Shared (FI/EE)
Communications	By country (FI/EE)	NIIS + by country
Second line support	By country (FI/EE)	NIIS
Community	Volunteers	NIIS

NIIS Products

- X-Road core and X-Road extentions:
  - REST Adapter Service
  - XRd4J
  - Example Adapter Service
  - X-Road Metrics
  - MISP2
  - Security Server Sidecar
  - Security Server Toolkit
- Harmony eDelivery Access

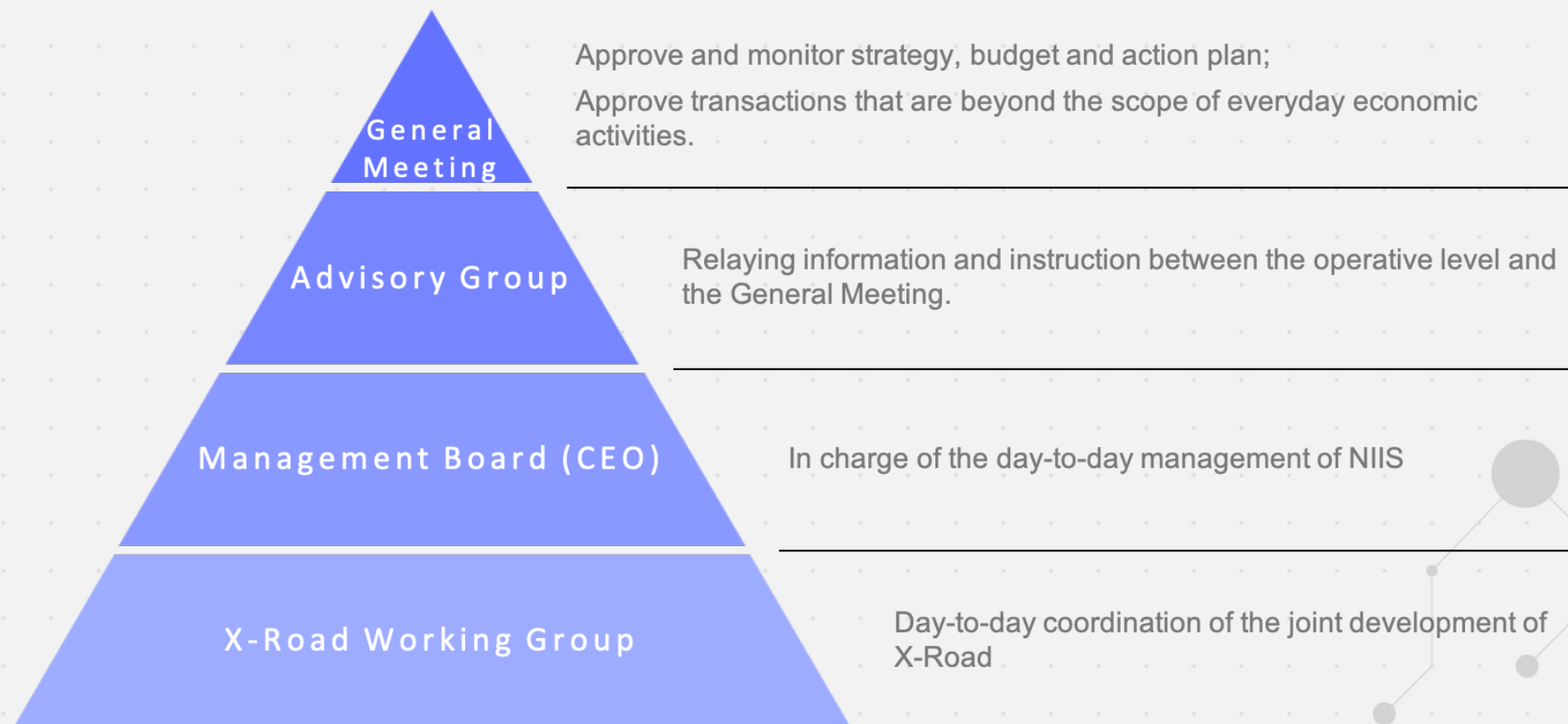# NIIS Responsibilities

▶ Management, development, verification, and audit of the source code

▶ Administration of documentation

▶ Administration of business and technical requirements

▶ Conducting development

▶ Developing and implementing principles of licensing and distribution

▶ Providing second-line support for members

▶ International cooperation.

NIIS Governance Model

General Meeting

Approve and monitor strategy, budget and action plan;

Approve transactions that are beyond the scope of everyday economic activities.

Advisory Group

Relaying information and instruction between the operative level and the General Meeting.

Management Board (CEO)

In charge of the day-to-day management of NIIS

X-Road Working Group

Day-to-day coordination of the joint development of X-Road

X-Road Development Model

Development Model

X-ROAD® DEVELOPMENT MODEL

NIIS – OWNS THE MODEL AND IS RESPONSIBLE FOR EXECUTING IT.

- **BUSINESS FEATURE REQUEST**
- **ENHANCEMENT REQUEST**
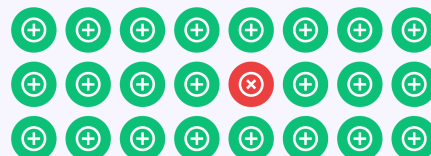- **PRODUCT BACKLOG ITEM**
- **REJECTED FEATURE / ITEM**

EVALUATE
COLLECT NEW FEATURE AND ENHANCEMENT REQUESTS AND SELECT THE BEST ONES FOR DEVELOPMENT.

PRIORITIZE
MAINTAIN AND PRIORITIZE PRODUCT BACKLOG.

DEVELOP
COLLECT NEW FEATURE AND ENHANCEMENT REQUESTS AND SELECT THE BEST ONES FOR DEVELOPMENT.

PUBLISH
PUBLISH AND DISTRIBUTE NEW RELEASES.

NIIS MEMBERS
SUBMIT ENHANCEMENT REQUESTS, SUBMIT CODE CONTRIBUTIONS, PRIORITIZE BACKLOG, USE THE SOFTWARE.

X-ROAD COMMUNITY
SUBMIT ENHANCEMENT REQUESTS, SUBMIT CODE CONTRIBUTIONS, USE THE SOFTWARE.

Working Group

New release

NIIS

X-ROAD COMMUNITY

REQUEST FLOW

PRODUCT BACKLOG

SPRINTS 1–N
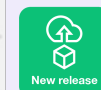
RELEASES X, Y, Z

Development Model

Phases

- Evaluate – collect new feature and enhancement requests and select the best ones for development.

- Prioritize – maintain and prioritize product backlog.

- Develop – agile development of features requested by NIIS members.

- Publish – Publish and distribute new releases.

Interest Groups

- NIIS – owns the model and is responsible for executing it.

- NIIS Members – submit enhancement requests, submit code contributions, prioritize backlog, use the software.

- X-Road Community - submit enhancement requests, submit code contributions, use the software.
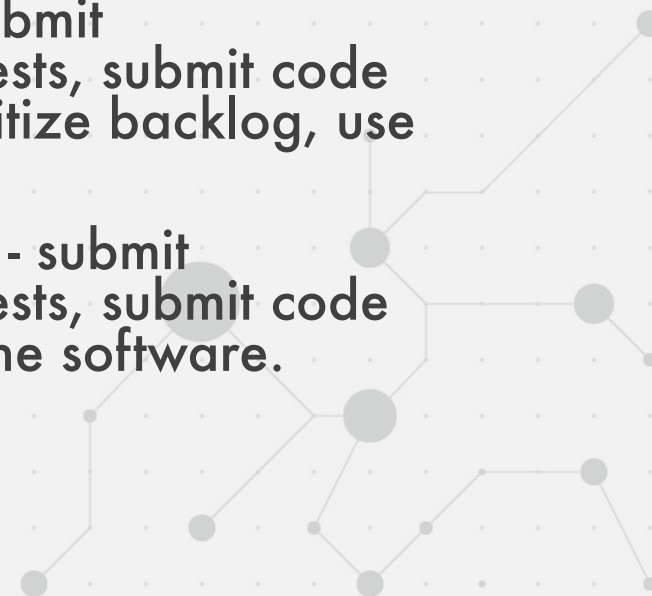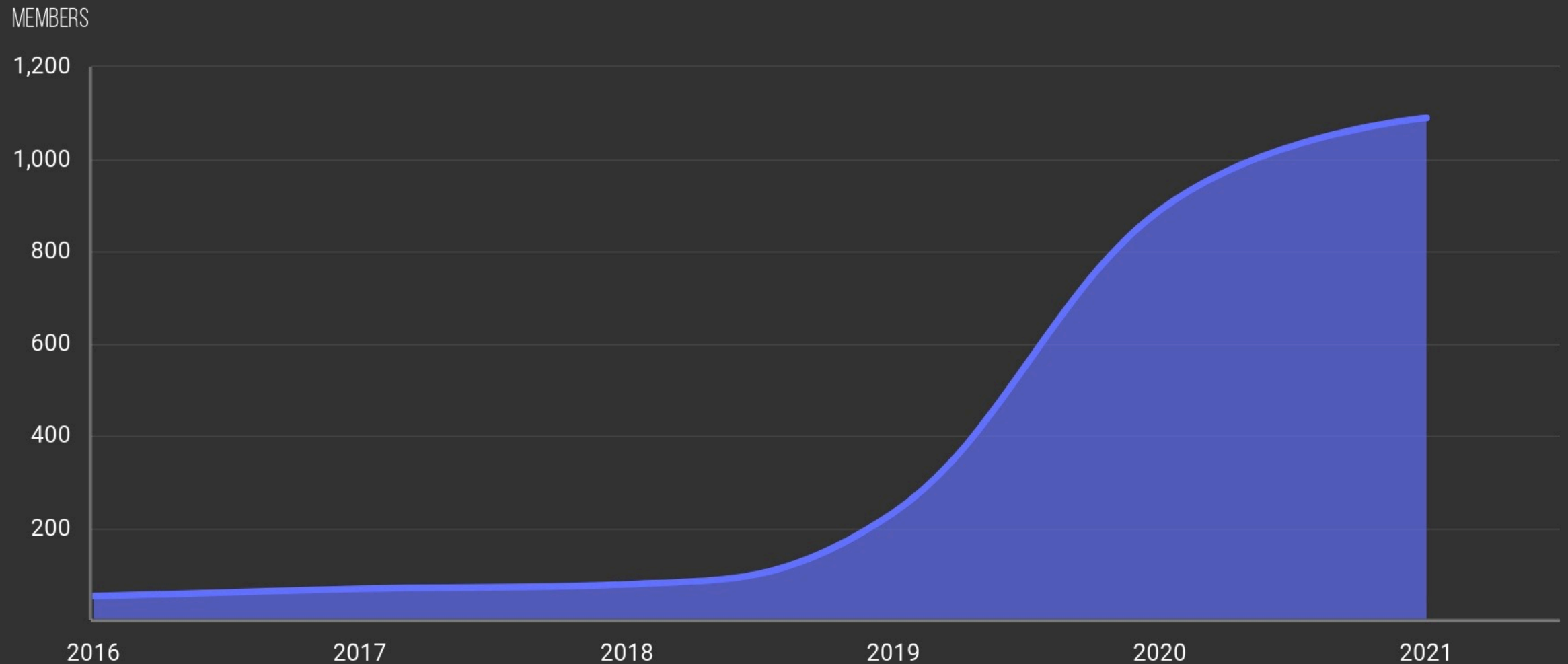
NIIS Member (X-Road®)		3
NIIS Partner (X-Road®)		1
X-Road® implemented		15
Consultation phase		23

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