

Nordic Institute for
Interoperability
Solutions



Joint Open Source Development in Cross-Border Context

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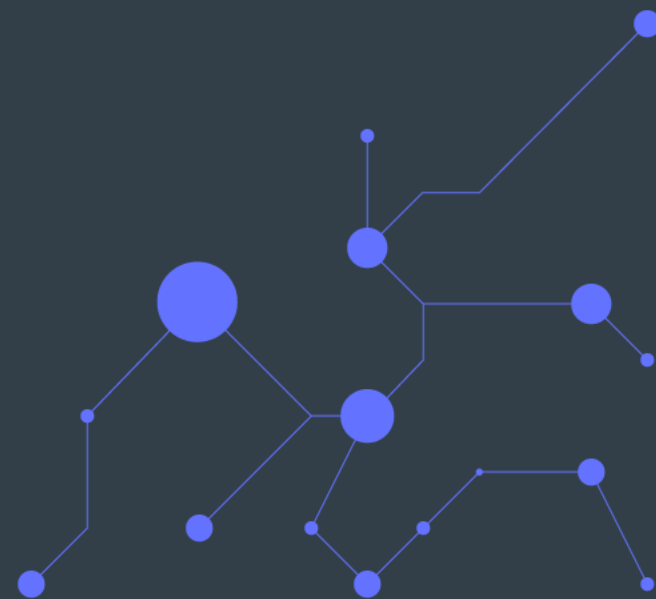
16 November 2021





Topics

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





X-Road® Data Exchange Layer

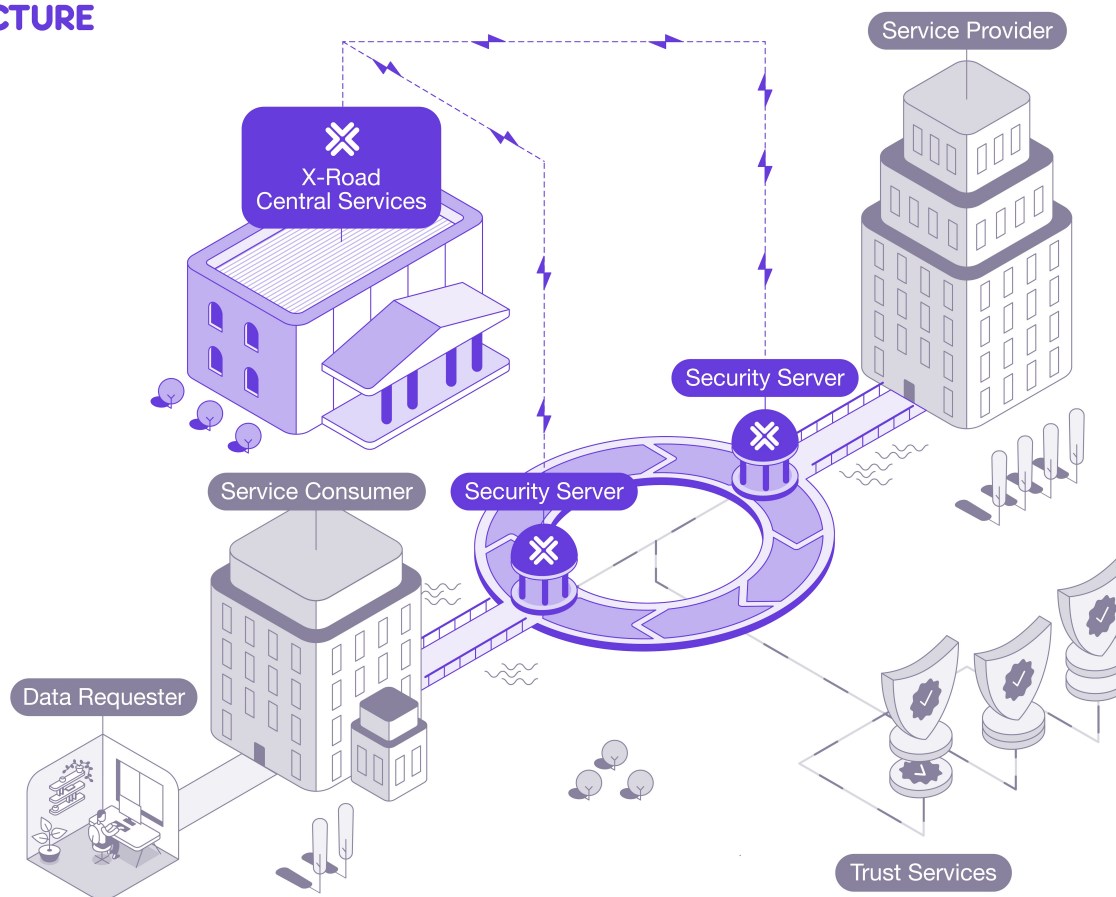
- ▶ X-Road® is open-source software and ecosystem solution that provides unified and secure data exchange between organisations.
- ▶ The basic idea of X-Road is that members of an ecosystem exchange data through access points (Security Servers) that implement the same technical specifications.
- ▶ X-Road 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.



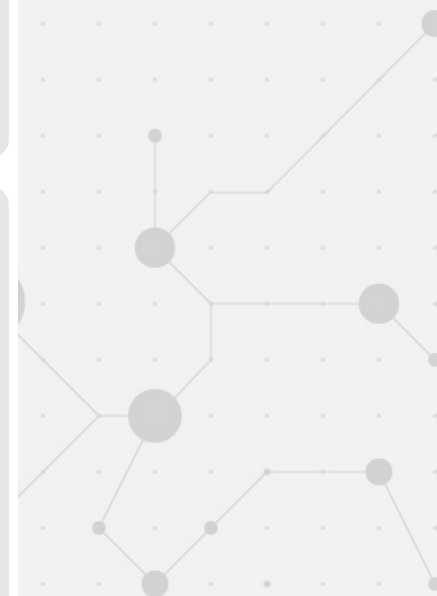
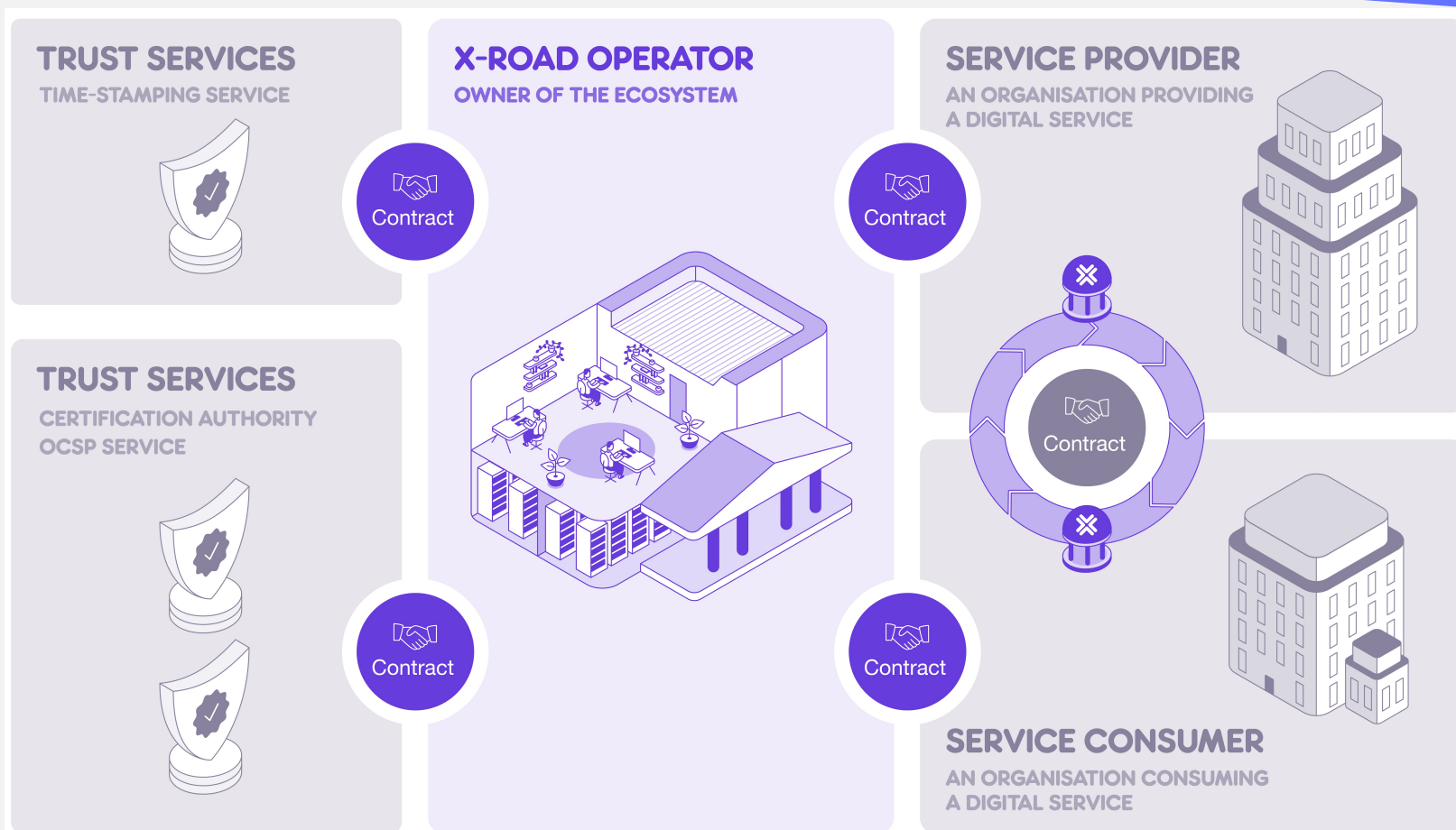
X-Road Architecture



X-ROAD ARCHITECTURE



Organisational Framework





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 |

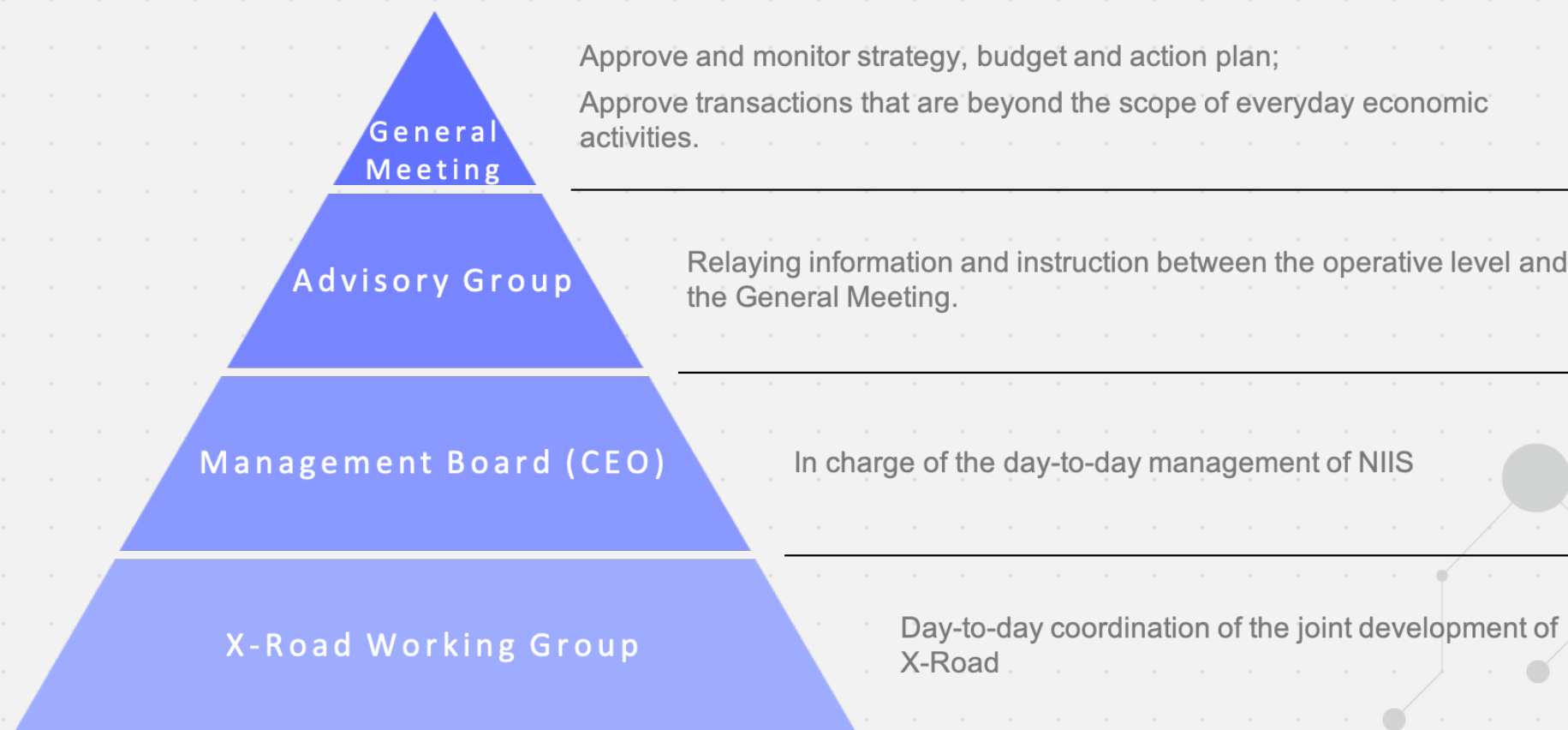


NIIS Responsibilities

- ▶ 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





X-Road Development Model



Development Model



X-ROAD® DEVELOPMENT MODEL

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



NIIS MEMBERS

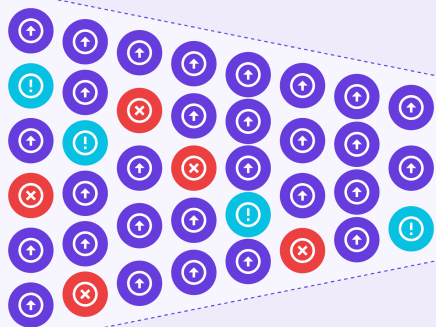
SUBMIT ENHANCEMENT REQUESTS,
SUBMIT CODE CONTRIBUTIONS,
PRIORITIZE BACKLOG, USE THE
SOFTWARE.

X-ROAD COMMUNITY

SUBMIT ENHANCEMENT REQUESTS,
SUBMIT CODE CONTRIBUTIONS,
USE THE SOFTWARE.

EVALUATE

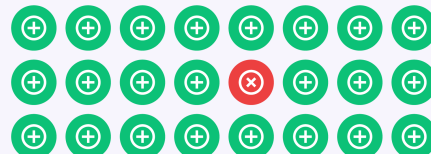
COLLECT NEW FEATURE AND ENHANCEMENT REQUESTS
AND SELECT THE BEST ONES FOR DEVELOPMENT.



REQUEST FLOW

PRIORITIZE

MAINTAIN AND PRIORITIZE PRODUCT BACKLOG.



PRODUCT BACKLOG

DEVELOP

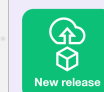
COLLECT NEW FEATURE AND ENHANCEMENT REQUESTS
AND SELECT THE BEST ONES FOR DEVELOPMENT.



SPRINTS 1-N

PUBLISH

PUBLISH AND DISTRIBUTE NEW RELEASES.



NIIS

X-ROAD COMMUNITY

RELEASES X, Y, Z



Working
Group





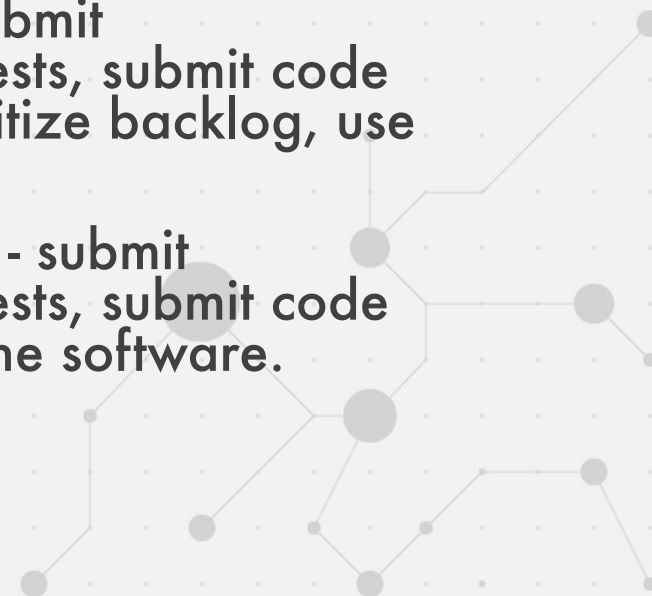
Development Model

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.



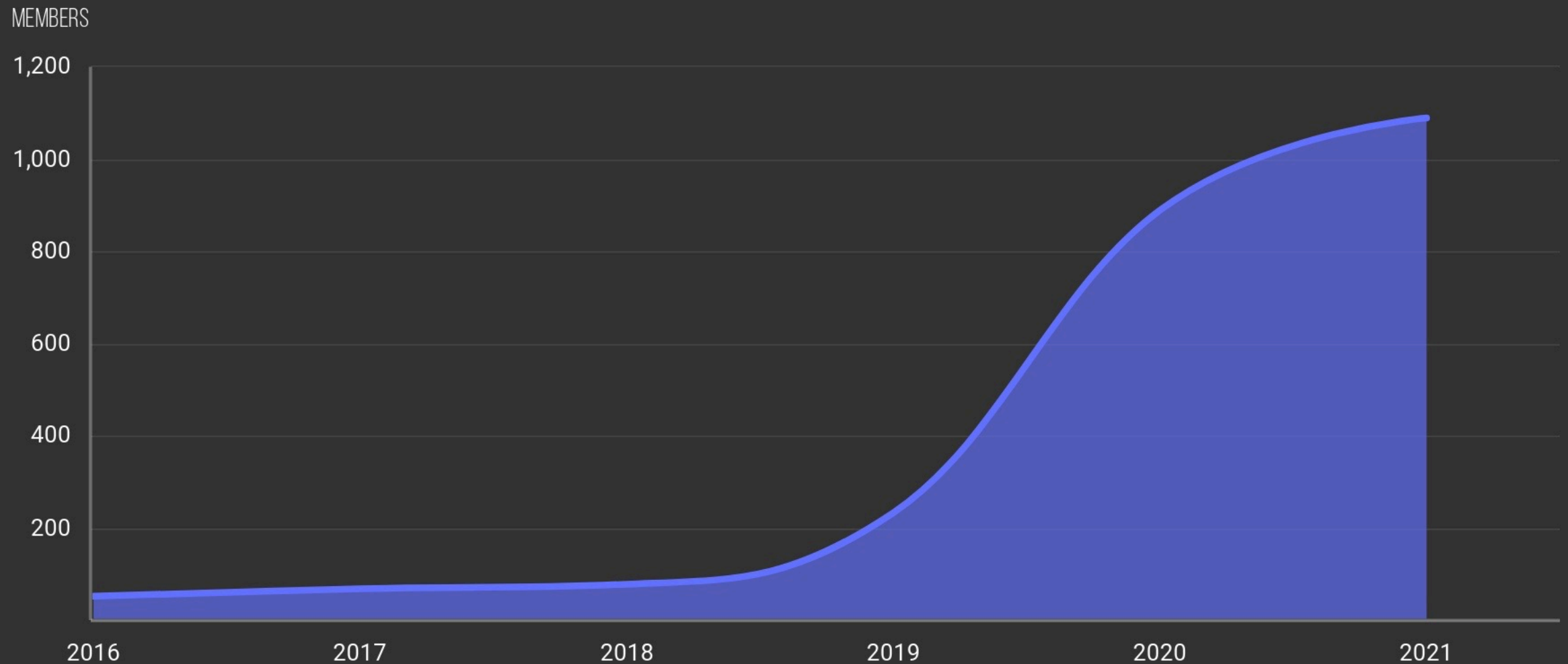


X-Road Community









X-ROAD COMMUNITY MEMBERSHIP DEVELOPMENT







| | | |
|---|------------------------|----|
|  | NIIS Member (X-Road®) | 3 |
|  | NIIS Partner (X-Road®) | 1 |
|  | X-Road® implemented | 15 |
|  | Consultation phase | 23 |



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