

FileSender Side Meeting TNC 2023 - Tirana

News from the Board

Guido Aben, Rogier Spoor, Jan Meijer

www.filesender.org

<https://github.com/filesender>

<https://github.com/filesender/governance>

Agenda

- Round table
 - Who are you, where are you from, what is your interest in FileSender, what do you hope to get out of this side meeting
- News from the FileSender Board
 - What is FileSender
 - The current team
 - Deployments in NREN space
 - Finances and contributor contracts
 - Current strategic roadmap
 - State of development
- Update on new UI
 - Process with Marleen (Rogier)
 - Dev update (and demo?) RNP
 - Timeline towards production release (audit)
- Future strategic roadmap
- Discussion on topics of most interest

New to FileSender?

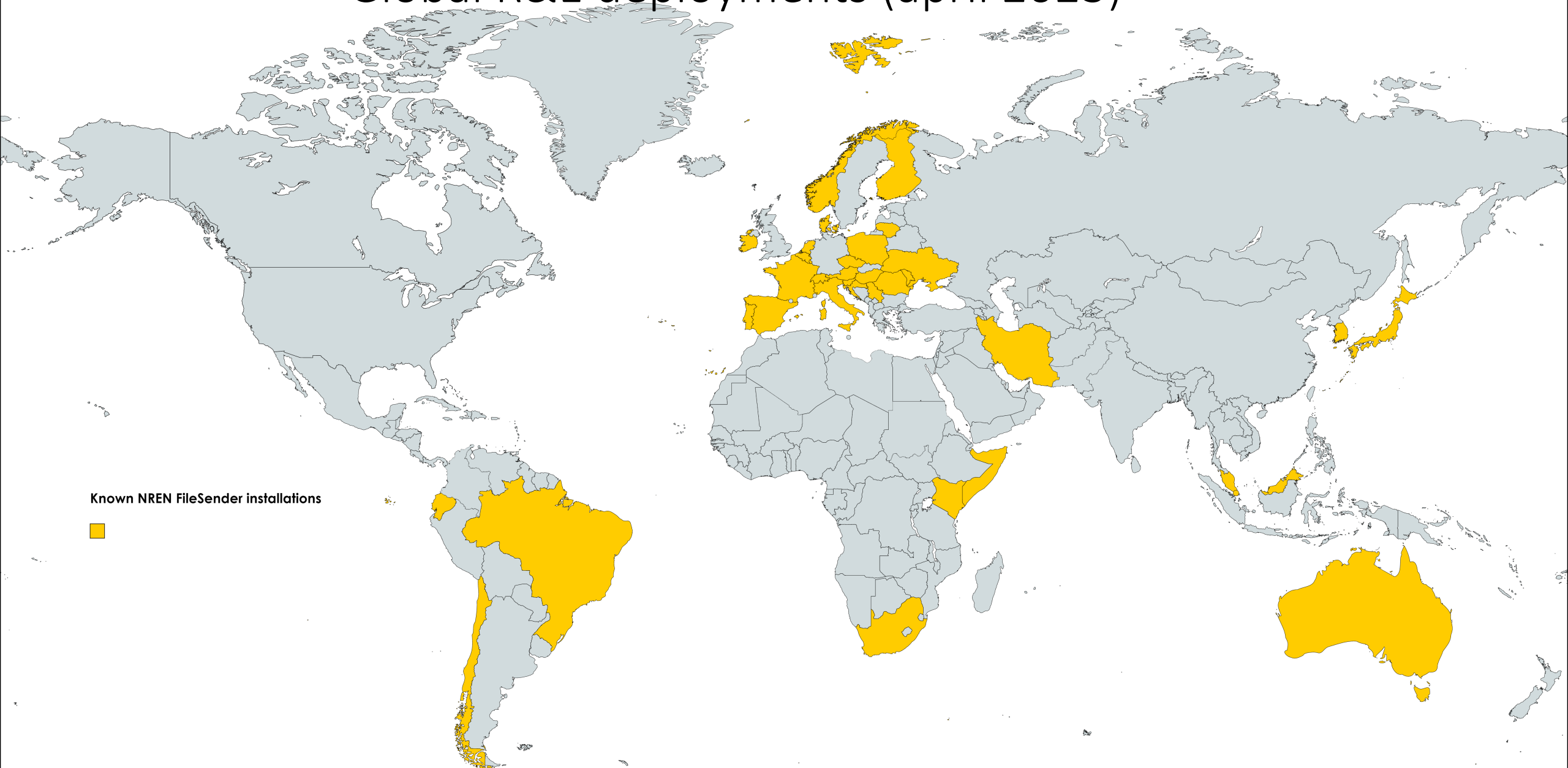
- Quick intro-slide
- **Value proposition:** simple and secure sharing of arbitrarily large files through a trusted intermediary
- **Tech:** php + javascript
- **Strategy:**
 - targeting usage by the masses
 - simple for user, simple for service provider, secure, open standards
- BSD licensed, native federated AAI
- **Development:** one lead dev/lead maintainer, in-kind contributions Aves-IT, RNP, others
- **Funding:** community funded, larger number of smaller contributions
- **Governance:** FS is programme in TCC, “vote-with-your-feet”
- No-frills approach

Active people and organisations

- **Guido Aben, Rogier Spoor, Jan Meijer:** board, strategic roadmap, coordination,
- **Ben Martin:** Lead developer/maintainer (paid)
- **Nils Vogels, Aves IT:** commit rights
- **Marleen Velthuis:** redesign UI (paid)
- **Olga Popcova:** communication
- **SURF** (William van Santen): in-kind security audit results
- **RNP** (Sergio with team): in-kind development – currently UI

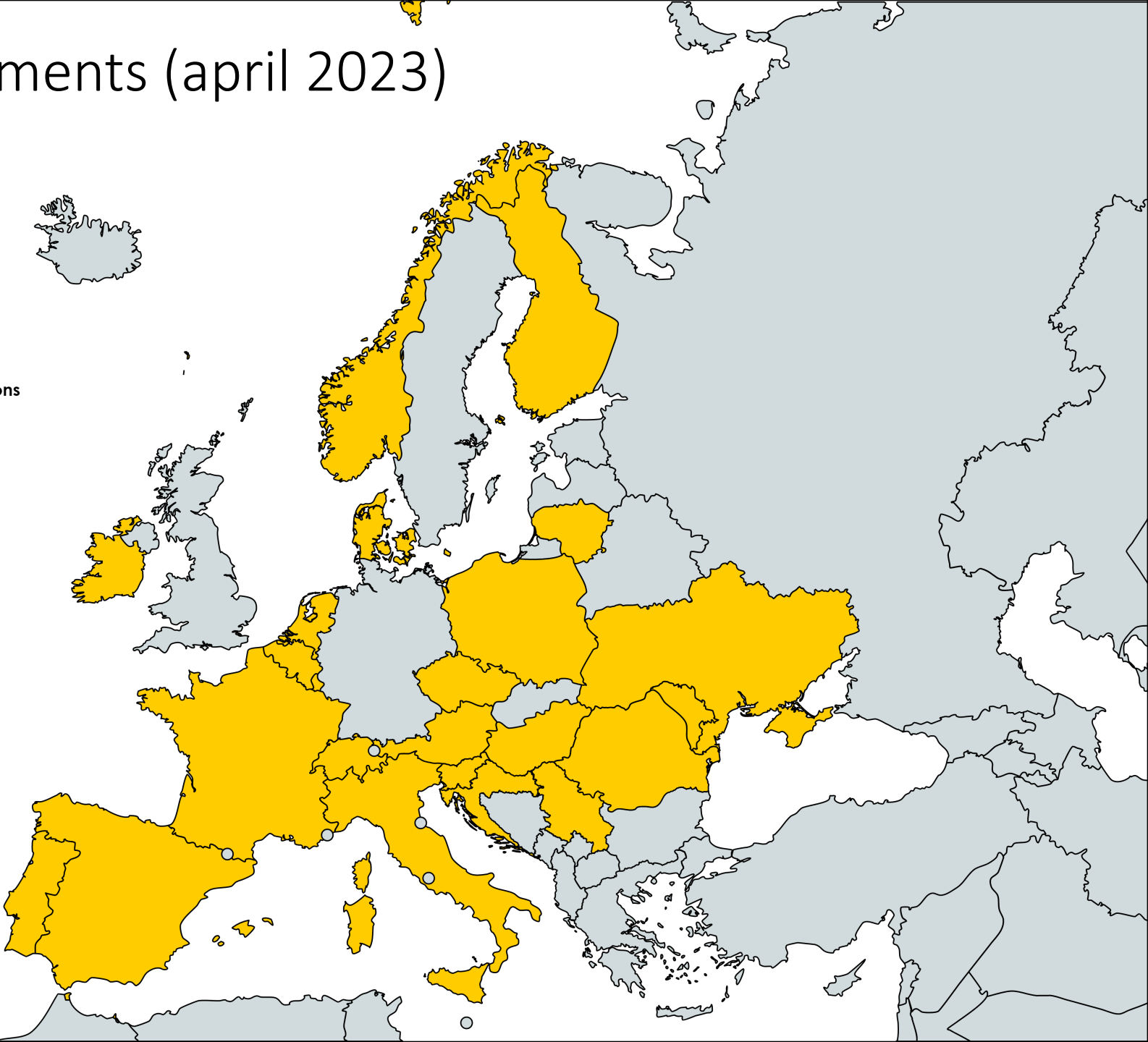
Global R&E deployments (april 2023)

Known NREN FileSender installations



GÉANT community deployments (april 2023)

Known NREN FileSender installations



Finances and financial contributor contracts

- Main current cost: lead dev (Ben Martin)
- 2nd half of 2022 – out of cash – no engagement with lead dev
- Moved to financial contribution contracts
 - Policy choice by board: enough money in bank to pay for 1 year of minimum maintenance
 - Minimum maintenance currently defined at 55K, gives part-time lead dev / lead maintainer

Contributions not (yet) backed by agreements

Actual paid ad-hoc contributions	2024	2023	2022	2021	2020	2019	2018	2017
SURF			€ 15,000	€ 5,000		€ 10,000	€ 10,000	€ 5,000
HEAnet	€ 0	€ 0	€ 10,000	€ 15,000	€ 15,000	€ 15,000	€ 15,000	€ 15,000
AARNet	€ 0	€ 0		€ 10,000	€ 10,000	€ 9,200	€ 15,000	€ 15,000
Cesnet			€ 10,000	€ 15,000	€ 19,000		€ 5,000	€ 3,000
Switch	€ 0	€ 0	€ 10,000	€ 5,000	€ 5,000	€ 5,000		€ 5,000
Belnet			€ 5,000	€ 5,000				€ 0
Arnes								€ 0
DeiC			€ 7,500	€ 7,500		€ 7,500	€ 7,500	€ 5,000
CSC	€ 0		€ 5,000	€ 0	€ 5,000	€ 5,000	€ 5,000	€ 0
Aconet	€ 0	€ 0	€ 5,000	€ 5,000	€ 5,000	€ 5,000	€ 0	€ 0
Singaren			€ 1,400				€ 1,200	
GARR	€ 0	€ 0	€ 5,000	€ 5,000	€ 5,000			
APAN		€ 10,000						
Ad-hoc income per year	€ 0	€ 10,000	€ 73,900	€ 72,500	€ 64,000	€ 56,700	€ 58,700	€ 48,000

In-kind contributions:

SURF – annual partial security audit

Aves-IT – maintainer/dev

RNP - development

Current status finances

collecting money in 2023 to pay bills in 2024

To prevent the fall 2022 scenario

Active contribution agreements (4 under discussion)

Budgeted (financial expectations)	2024	2023
Cash reserve (per 1 January)	€ 68,300	€ 67,000
Total expected income from contributor contracts	€ 50,000	€ 40,000
Total expected ad-hoc income	€ 0	€ 17,500
Total expected expenditure	€ 55,000	€ 56,200
Difference expected income - expenditure	-€ 5,000	€ 1,300

Organisation	Level	Annual amount
AARNet	Silver	€10,000
ACOnet	Bronze	€5,000
CSC	Silver	€10,000
GARR	Bronze	€5,000
HEAnet	Silver	€10,000
SWITCH	Silver	€10,000

Note: in-kind «glue» time to keep everything together is *not represented*

Note: budget should probably be 2 to 4 times this amount (either in-kind or cash)

Current strategic roadmap

- Integrating community contributions, fixing bugs, security audits + issues, minimum level of continuous development
- **UI-update**
 - Update UI-plumbing to Bootstrap (done in 3.x code)
 - Modernise UX (ongoing)
 - Modernise UI (ongoing)
- **TeraReceiver**. Improve download speed of large encrypted and unencrypted transfers alike

UI update (demo!)

Process with Marleen (Rogier)

Dev update (and demo?) RNP

Timeline towards production release (with security audit)

after: future strategic roadmap and other wishes

Strategic roadmap – FileSender vision

- FileSender aims to be a **widely deployed** platform enabling **anyone** to **easily and securely** transfer files of **any size** from **any person or machine** to **any person or machine**.
- **FileSender explicitly targets mass-usage and is built to service the 99% of users who have better things to do with their time than figuring out how to do large file transfer**
- **Strategy:**
 - Long term engagement with financiers and contributors
 - large installed base allows sharing the development cost over many at low support cost per contributor (financial or in-kind contribution)
 - Main target market is R&E, in particular NREs/national deployments
 - Secure: regular security audits etc.

long term budget needs to cover:

A healthy minimum level of activity for a good quality relevant product:

a well-maintained, secure, well-documented product that is easy to install and operate for service providers

- with a UI that is sufficiently modern and easy to use and adheres to universal access standards
- with existing features, technology and project infrastructure kept up-to-date to modern standards
- ability to absorb community contributions and address community reported issues in a timely fashion
- a level of community-management activity that is adequate to ensure that key community members retain a sense of affiliation and solidarity with the project
- sufficient fund-raising

Advancing the strategic roadmap with larger new developments:

- larger product developments
- larger project infrastructure developments

There are two ways to achieve larger new developments:

1. divide them in smaller pieces to be realised in the time available for “a minimum of continuous improvement”
 2. split such a development out as a separate activity with its own budget and e.g. do a kickstarter-style process: development starts once the necessary budget is collected, a budget that comes in addition of that required for the minimum healthy level of activity.
- Experience shows larger items can be achieved using the first method, but with a long lead time.

Estimate in 2020 of work required and cost

Current budget & in-kind contributions:

- 75K realistic (previous years)
- 100K perhaps
- RNP, RENATER in-kind coding & testing
- RENAM in-kind comms
- board & coordination in-kind
- 1 partial security audit in-kind

Work item	Priority	Budget required (2022 estimate)	Current status	Current source of funding
1. Governance (board work)	1	value not estimated yet	sufficient	In-kind contribution
2. Development infrastructure	1	value not estimated yet	good	In-kind contribution (Github, free)
3. Ensuring maintained code and a minimum of continuous improvements	2	€20.000	sufficient, trending upward	stakeholder funding
4. External security audits	2	€25.000	needs more	In-kind contribution
5. Capacity to fix security issues, especially after planned audits	2	€15.000	sufficient	stakeholder funding
6. A continuous minimum level of continued improvement	2	€50.000	insufficient	stakeholder funding
7. An up-to-date automated testing infrastructure	3	€25.000	insufficient	stakeholder funding and in-kind (tech infra)
8. External crypto subsystem security audits	3	?	insufficient	not executed
9. Up-to-date documentation	4	€ 10.000	insufficient	limited executed
10. Up-to-date UI	5	cost not estimated yet		
11. Multi-language support infrastructure	5	€ check POeditor pricing	good	In-kind contribution by POEditor (free for open source projects)
12. Community management	6	€10.000	insufficient	not executed
13. Public demonstrator	7	€?? What would it cost to run this?	insufficient	not executed
12. Business development and fund raising	8	unknown	insufficient	not executed

Main scenarios future strategic roadmap

- “as is” -> will cause issues in a couple of years due to too low quality
- “as is” but improve quality of core functionality -> more budget, coordinator?
 - Compliance (Cyber Resiliency Act)
 - Ensure UI stays up-to-date
 - Improve documentation, ease of installation, upgradability
- New security features “secure sender” -> more budget, coordinator?
 - Leverage aggregated 100,000 users
 - Integrate data sealing/timestamping/signing functionality to stimulate good secure data hygiene
- FileSender R&E federation -> more budget, coordinator
 - Addressable data repositories, other send/receive targets
 - Present as a single infrastructure rather than 40+ disconnected (EOSC-relevant!)
 - Common policies and standards
- Increase footprint (and funding base) inside R&E, and/or outside R&E (more budget)

Some benefits with an R&E FS federation

- Present one coherent infra to users and stakeholders
 - Some ideas that may or may not be more feasible:
 - A joint community policy, e.g. privacy policy, security policy
 - A coherent UI experience across FS federation instances (towards single-pane-of-glass)
 - Feature and version consistency (e.g. all nodes run same version)
 - Clear quality expectations on maintenance, upgrade, etc.
- Show the aggregated use and value of the FS infrastructure to our stakeholders
 - Show deployment map with some numbers
 - Concrete: gather automated aggregated basic stats on total infra
 - Transfers, sizes, encrypted transfers, number of users/month
- Addressbook
 - Cross-community addressable destinations: research data repositories, HPC facilities, archives, x-cloud drives, Office 365 etc.
 - Authenticated download at larger scale
 - **must_be_logged_in_to_download** (boolean): To download the files the user must log in to the FileSender server. This allows people to send files to other people they know also use the same FileSender server.
 - E.g. common eduTeams
 - Perhaps in some future: addressable source destinations?
- Technically interesting: "upload nodes" and "data movement" optimisation
 - Facilitate larger uploads
 - Facilitate using FS as a command&control node for moving data directly from A to B