

2021

Annual
Report

 mastodon



CEO letter

2021 was a year defined by deviations from established routines. And I do not mean the ongoing pandemic, though that, too. For the first time since I started working on Mastodon from the bedroom in my parent's apartment in 2016, during my last year of university, we have introduced a clear separation between me as a natural person and Mastodon as a legal and fiscal entity. More people have worked on Mastodon on an official basis this year than any of the previous years combined. For the first time we have invested a major chunk of our budget into design and user experience instead of code. And for the first time we have focused so heavily on something that wasn't the Mastodon backend—our first official iOS app.

2021 review

1. Incorporation

After 5+ years of operating as sole proprietorship, Mastodon finally incorporated as German non-profit limited liability corporation (“gemeinnützige GmbH”). Besides of the conventional corporate law requirements identical to the formation of a profit-oriented LLC, the qualification of a non-profit LLC had to be signed off by the fiscal authority in charge. 50% of the share capital (EUR 12,500) were paid in at the moment of incorporation by Eugen Rochko. Mastodon gGmbH is currently 100% owned by Eugen Rochko.

The incorporation of Mastodon has multiple benefits:

- **Transfer of Mastodon’s assets:** Whereas Mastodon’s assets (such as the domain joinmastodon.org or the instances mastodon.social and mastodon.online) were previously factually owned by Eugen Rochko, the ownership has now been transferred to Mastodon gGmbH.
- **Possibility of adding further people and/or entities to the partnership:** The newly-formed legal structure allows future additions to the partnership in a clean and transparent manner. While Mastodon, as an open-source software project, has always relied on contributions from the community to its codebase, the incorporation creates the basis for governance structures with multiple management board members stirring the direction of Mastodon’s future.
- **Legal risk reduction:** Mastodon has reached a scale in terms of user base but also maturity in terms of product that naturally leads to legal confrontations of some sort. By using a gGmbH as legal entity (vs. the sole proprietorship) Mastodon can enter calculated legal risks more comfortably, while protecting the private capital at risk of its main contributors.

2. Financials

Given Mastodon gGmbH was incorporated only in June 2021, the scope of the financials is from June–December 2021.

1. Income: Mastodon gGmbH earned a total of €55.3k through Patreon and Stripe. As of year-end 2021 we have a donor base of 600 patrons on Patreon and 20 subscriptions via our custom sponsorship portal.

2. Expenses: The total expenses amounted to €23.2k, with €18.4k personnel expenses, €3.8 server & hosting, and €1.0k miscellaneous expenses.

In 2021, Mastodon as a project was able to secure €8.9k from [Prototype Fund](#) (PF), a German open-source fund financed by the [German Federal Ministry of Education and Research](#) and the [German Open Knowledge Foundation](#). The money was received by Eugen Rochko directly because the grant's statutes required a German resident and individual person as grantee. PF will continue to fund Mastodon in 2022.

Furthermore, in December 2021 [NLnet](#) confirmed to fund Mastodon's R&D efforts in 2022 with a grant of €45k in course of the [NGI Zero](#) program financed by the European Commission.

3. Software development

Following the impetus of two UX studies on Mastodon's onboarding process conducted in 2020, in 2021 we focused heavily on improving our user onboarding and retention. The central point of this effort was the development and launch of our own, official iOS app. The starting point for a lot of people in interacting with web services is no longer the desktop, but smartphones and official app stores, a department in which Mastodon was, so far, lacking. While we have cultivated a diverse 3rd party app ecosystem, this ecosystem serves primarily established Mastodon users: those who, already having an account, go looking for specific apps. The majority do not provide an adequate experience for a brand-new user who is learning Mastodon through the app, worse even, most have never implemented the sign-up API allowing users to sign-up through the app in the first place. But even those who did are facing the final obstacle: The modern user has been conditioned to search for "the one" app. To join Twitter, you install the Twitter app. To join Facebook, you install the Facebook app. Not having an equivalent for Mastodon was a source of confusion.

It was clear that we needed an app with our own name, and that not being able to guarantee or influence anything about the onboarding experience in 3rd party apps was a disadvantage. We considered acquiring one of the existing apps but decided against it. Our plans would have changed an existing app significantly, which would have interfered with that app's existing userbase, something we wanted to avoid. Given that we were going to invest in professional UX design anyway, it was better to start with a blank slate.

We partnered up with Lickability, a UX design agency that worked on other well-known social media apps such as Meetup, Houseparty and Clubhouse before, and Sujitech, an app development agency that develops Twidere, a relatively well-known Twitter app. We prioritized making an iOS app first, with plans to follow-up with an Android app later.

Starting development on February 5, the first version of the app went live on the App Store on July 30. A total of 132.5 hours [1] went into meticulously crafting the design, and countless more into implementing it. Work on the app flowed back into work on the server-side as well, resulting in improvements to the sign-up API and new APIs for trends and discovery features.

The app has been downloaded 43.3k times and a total of 9 updates have been released in 2021. At the time of writing, the app has an average rating of 4.3/5 from 473 ratings across all regions. The work paid off: On mastodon.social, the iOS app brings in 15% of new monthly users, compared to 0.08% from the next app that supports sign-ups, Fedilab.

Mastodon's release cycle has slowed down significantly compared to previous years, with one major release and 4 minor releases compared to 2020's 3 major and 7 minor releases, though not for a decrease of overall development activity (which has only decreased somewhat due to the focus on app development and legal restructuring), but rather fewer small features that can be released rapidly and more work on long-term, far-reaching changes.

We've been working on many improvements to the moderation interface. A new dashboard will surface more key-performance indicators (KPIs) that will help admins and moderators judge how their work is coming along, and display warnings for important system checks. Suspended users will no longer be able to create more accounts from the same e-mail address using the + (plus) or . (period) trick. A dedicated server rules system has been added to replace overcomplicated infodumps on the about page, that not only integrates with the onboarding flow of the iOS app, but will also integrate with the report system, allowing simpler categorization and prioritization in the reports queue and more detailed communication with the reported users.

[1] 65.5 hours were incurred to Eugen Rochko (pre-incorporation); 67 hours incurred to Mastodon gGmbH

A redesigned report management interface will make moderation options easier to understand and quicker to execute. Batch suspensions will help clean up spam and bot accounts in conjunction with search by e-mail domain or IP address range. And thanks to the 3.3.0 release from December 27, 2020, a wrongfully suspended account can be losslessly recovered.

Mirroring our iOS app, we've replaced our first-start tutorial in the web interface that explained obvious things like what a "reply" was with a language-specific cold-start follow recommendations system that would help people fill their home feed with something that interests them instead of making them automatically follow the server administrator. In a similar vein, we've been working on adding more discovery methods to Mastodon. Targeting a multi-faceted explore page, we've refined the trending hashtags functionality and added similar APIs and moderation tools for trending news stories, at the same time improving preview card generation for shared links.

Dissatisfied with the limitations of the "Delete & Redraft" approach to mistake correction, and hearing the pleas of our competitor's users for an "Edit" button, we started work on allowing posts to be edited in place—something that required carefully refactoring the "hottest" paths in the code that, until then, relied on posts being somewhat immutable. In-place editing is not to be taken lightly, and so great care must be placed into ensuring that editing is displayed obviously, previous versions remain available for comparison, and people who re-shared the content are notified accordingly.

4. Legal

Mastodon relied heavily on the continued support of the law firms [Dentons](#) and [Frankfurt Kurnit Klein & Selz \(FKKS\)](#). Dentons, one of the world's 10 largest law firms, has advised us on matters such as corporate law (c.f. 1 Incorporation), labour law, privacy law, and telecommunication law, to ensure the proper legal setup on all aspects relevant to Mastodon. FKKS, a L.A.-based media law boutique, has advised us on copyright law and specifically litigation-related topics such as the two cases below.

- **Gab.** The confrontation with Gab that started in 2019 came to a closure in 2021. In October 2021, after Gab failed to publish its up-to-date source code, a cease & desist letter was sent to Gab's legal team. The same day Gab's source code was updated and is now in compliance with the AGPLv3 license.
- **Truth Social.** In October 2021 an early build of Donald Trump's social network Truth Social went online using Mastodon's source code, although not acknowledging so. Mastodon immediately reached out to Truth Social communicating a 30-day time period to comply. Within this period Truth Social added a page to its website, now complying with the license.

Team

Name	Role	Type	Remuneration	Country
Eugen Rochko	CEO/Development	Payroll	EUR 2,400 per month	
Claire	Development	Freelance	EUR 50 per hour	
Felix Hlatky	Finance	Freelance	EUR 25 per hour	
Lickability LLC	UX design iOS/Android	Freelance	USD 175 per hour	
Sujitech LLC	Development iOS	Pro-bono	—————	
Gregory Klyushnikov	Development Android	Freelance	USD 50 per hour	
Dopatwo	Finance	Pro-bono	—————	

2022 goals

- **NLnet funding:** It is key for Mastodon to complete all the R&D effort specified in course of NLnet's grant program. The grant will fund Mastodon's developers and UI designers with a total of €45k. The grant will fund the development of:
 - **Groups:** A feature that would allow people to join and post to separate, moderated, private or public feeds across the fediverse, and create their own.
 - **Filters:** Changes to how filters are applied to posts in the API, the ability to hide individual posts, and to name and group filters by common actions
 - **Flexible user roles:** Defining roles with custom sets of permissions instead of using the three pre-defined "user", "moderator", and "administrator" roles
- **Bug-bounty program:** In 2021 we were selected to receive a €50k bug-bounty grant from the European Commission, escrowed through the security research platform [Intigrity](#).
- **Android:** We're beginning work on our official Android app, mirroring our iOS approach. Lickability will continue to work on its design, while development will be handled by Gregory Klyushnikov, who worked on VKontakte and Telegram and is known in the fediverse for developing Smithereen.
- **iOS:** Work on our official iOS app continues, with the next milestones being first-class iPad support and a brand new discovery screen that will highlight trending hashtags, news stories, popular posts and more.
- **End-to-end encrypted messages:** Brought up for the first time in 2020, it still remains our goal to supplant the awkward "Only people I mention" visibility for normal posts with functionality structured like real instant messaging communication, implemented in a way that does not reveal people's secrets to server administrators unless one of the participants makes a report. While the required server-side "pipes" have actually been completed in 2020, the obstacle up to this day remains the client-side protocol design challenge none of the 3rd party developers showed interest in taking on. Now that we are working on our own mobile apps, we will be able to do this ourselves.

