# MANGROVE

**Partnership proposal for Qwant Maps**

Provide more value to Maps users by joining an open data ecosystem for reviews

March 2020

# Mangrove hopes to contribute to Qwant's success

## Who we are and what we aim for

- Mangrove is a **global non-profit initiative** rooted in Europe. We stand for open source software development, open data, and innovation in privacy-respecting identity technology.
- **Our aim is to create an open data ecosystem for reviews** of places, companies, websites, books, and more. Word-of-mouth is a fundamental form of human collaboration, and people should have a place on the internet where they can share their insights freely, to be useful to others at scale.
- We provide **free infrastructure that enables any application or website to integrate a reviews layer**, and to allow their users to read/write reviews.
- You can use your own **identity** service or Mangrove's cryptographic solution.
- Reviews are stored in an open dataset, licensed under **CC-BY-4.0**, allowing individuals, innovators, researchers, and more, to use the data freely.

## Why we want to contribute to Qwant's success

- **Qwant's values**: strong commitment to protecting its users freedoms; neutrality and impartiality in serving results, unbiased by commercial, political or moral interests; high standards in user experience; open source; innovation in privacy technology.
- **Qwant Maps** is built on other open data projects (OpenStreetMap and Wikipedia) and provides an alternative to proprietary data silos, making the web a better place. But to be more competitive, **a reviews layer is missing** that would allow users to read/write reviews directly in the web app.
- **Qwant Masq** is a privacy technology that is built on similar principles as Mangrove, and **can be easily integrated**; both together could lead to interesting developments in privacy-preserving, preference-based recommendation systems.

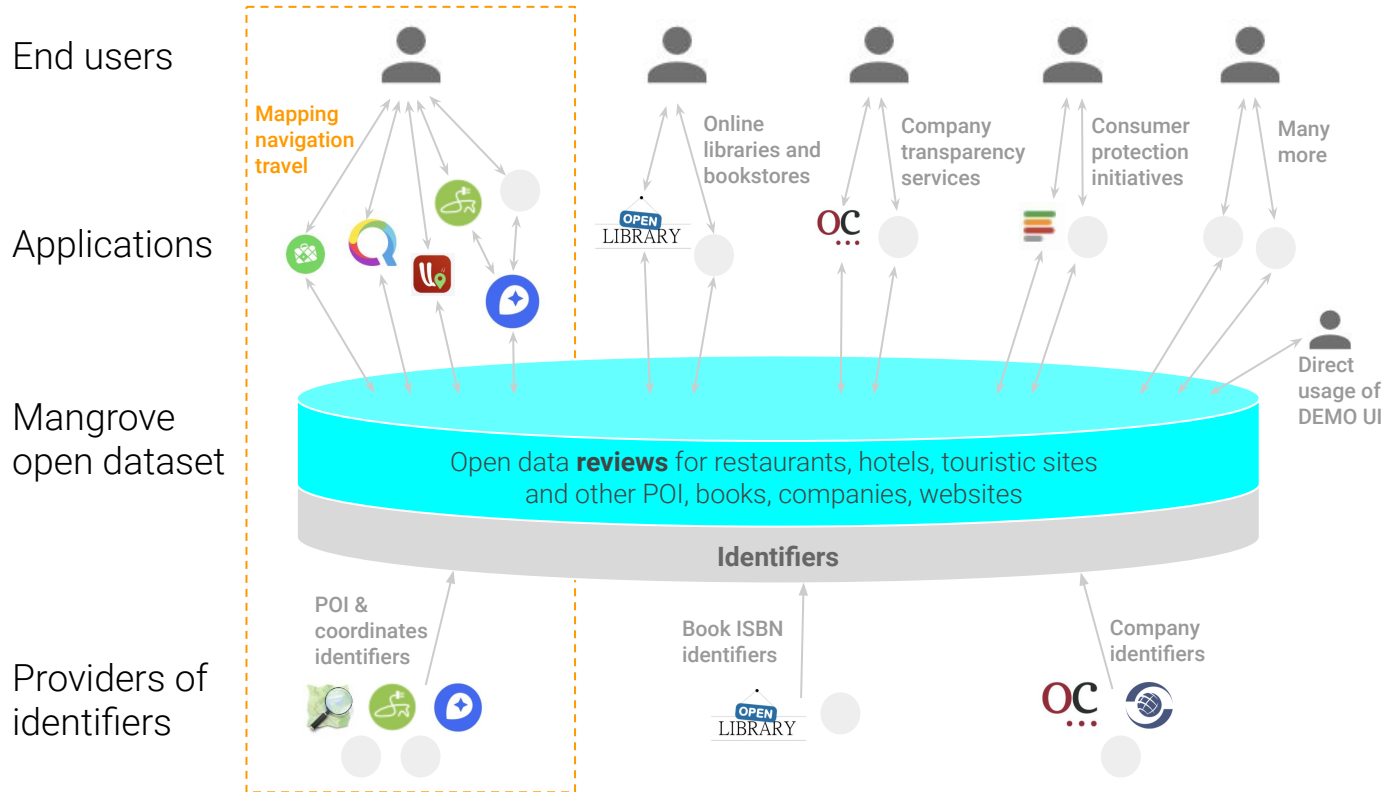# Reviews could fill an important gap to competition
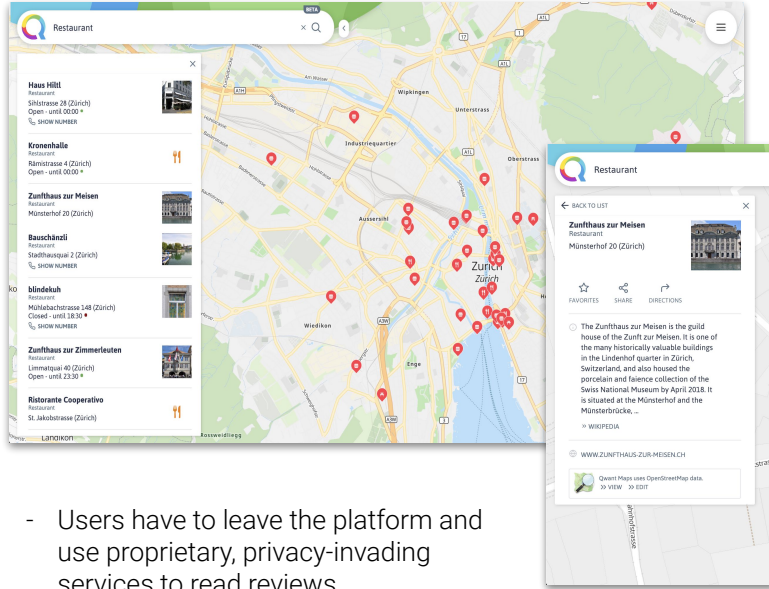


- Users have to leave the platform and use proprietary, privacy-invading services to read reviews
- Without reviews, results cannot be displayed by order of popularity or relevance
- Users cannot contribute or interact within Qwant Maps, making it harder to grow the community
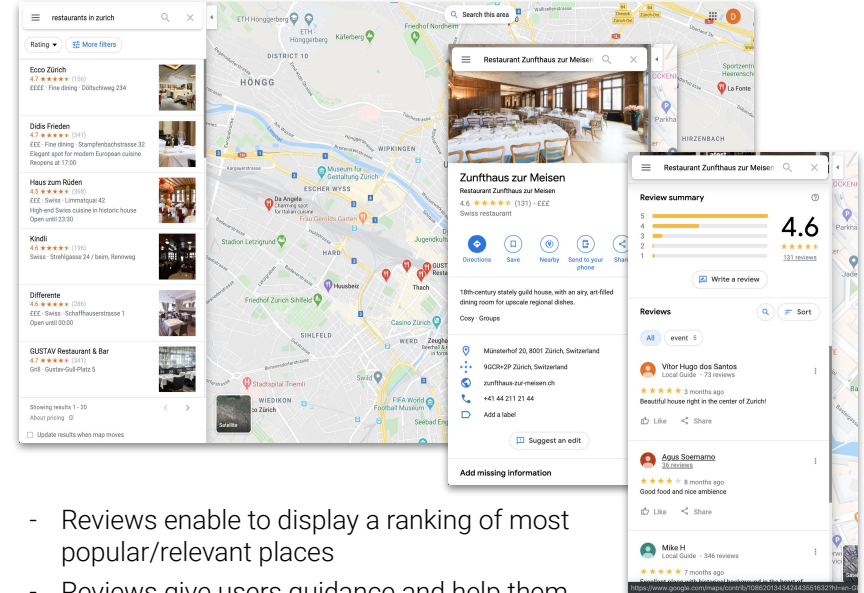
- Reviews enable to display a ranking of most popular/relevant places
- Reviews give users guidance and help them in their decision-making
- Reviews allow for interaction and participation: sharing of insights as word-of-mouth is a fundamental form of human collaboration

# How to get to a critical mass of reviews



End users

Mapping navigation travel

Online libraries and bookstores

Company transparency services

Consumer protection initiatives

Many more

Applications

Mangrove open dataset

Open data **reviews** for restaurants, hotels, touristic sites and other POI, books, companies, websites

Identifiers

Direct usage of DEMO UI

Providers of identifiers

POI & coordinates identifiers

Book ISBN identifiers

Company identifiers

## Collaborate to build a shared reviews database at scale

- **Reviews pose a network effect**: the more reviews a platform has, the more attractive it is for users to come to read/write reviews

- With today's incumbents keeping reviews proprietary it is **very hard for any new player to accumulate a critical mass** of reviews on their own; this stifles competition and inhibits innovation based on the data

- **By joining forces** and building a shared pool of reviews as open data, **ecosystem participants can** jointly overcome this barrier and achieve a more level playing field

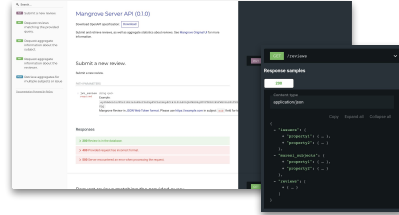# Use a set of free tools to join the reviews ecosystem

**Technical standard to ensure interoperability**



https://mangrove.reviews/standard
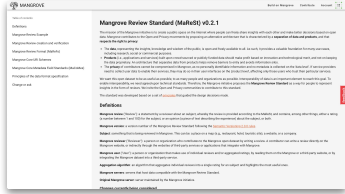
- Ensures that all reviews can be analyzed programmatically
- Allows for high integrity assurance without a central server

**Open-source API and documentation**
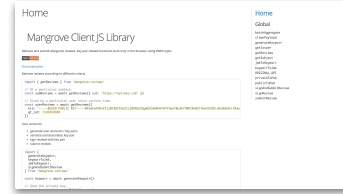


https://docs.mangrove.reviews/

- REST API with an OpenAPI specification
- Allows for easy submission and retrieval of reviews

**Identity solution without central identity server**



https://js.mangrove.reviews/

- A client-side JS library for interacting with the API and managing of the identity
- Makes use of public key cryptography for serverless identity
- Integrators are free to use own identity solution

**Probabilistic aggregation algorithm**



https://gitlab.com/plantingspace/mangrove
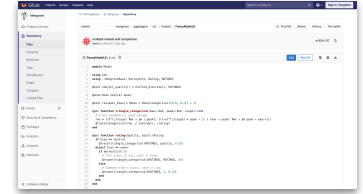
- To ensure high reliability of the data, we are building an open source probabilistic aggregation algorithm with the ability to learn and perform at scale
- Integrators are free to use their own filters and algorithms

The Mangrove team provides **free support** and works with your developers to make the integration work.

# The benefits for Qwant in a nutshell

### Attract and retain more users and customers

- Offer your users the possibility to read/write reviews within your app, without them having to leave your platform
- Offer businesses profile pages and possibility to interact with reviewers
- Become more competitive with the dominant players
- Use reviews to market your service, attract more advertising customers, and increase your reach

### Collaborate to jointly grow the pie

- Tap into a global data pool that is much larger than what any single participant could create if relying on their user base alone
- Minimize your effort by using and sharing already existing open source infrastructure instead of building something from scratch
- Reap benefits of open data at scale that can be used for research and technological innovation
- Benefit from free and open source software that you can customize

### Participate in improving the web

- Further strengthen the open data movement to help make the web more inclusive, improve free market competition, and foster open innovation
- Help creating a place on the internet where people can freely share insights with each other, for the whole of humanity to benefit freely
- Strengthen another privacy-respecting technology

# Get in touch with us to discuss your requirements

## Founders of the Mangrove initiative

Peter Czaban
- Founder and co-CEO of PlantingSpace
- Worked on ML approaches based on probabilistic programming; built and lead teams as a CTO
- Holds a Master's in Engineering from the University of Oxford
- [Website](#)

Dina Carabas
- Founder and co-CEO of PlantingSpace
- Held COO roles in two technology startups
- Spent >6 years as a management consultant with McKinsey & Company
- Holds a Master's from Karlsruhe Institute of Technology and an MBA from INSEAD
- [LinkedIn](#)

## About and Contact

Mangrove is a non-profit service hosted and supported by a community of businesses, developers and interested parties around the world. Its finances are managed transparently as an [Open Collective](#).

Visit the [web app](#) for a demo of the infrastructure.

Recent blog post
- Intro and overview of the Mangrove web app: [https://hackernoon.com/heres-why-we-built-a-web-app-for-open-reviews-with-open-source-infrastructure-7ng538v7](https://hackernoon.com/heres-why-we-built-a-web-app-for-open-reviews-with-open-source-infrastructure-7ng538v7)

Contact
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- Join our chat: [Riot](#)
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