

Qworum

Premium Web browser features
for business and consumer applications

Doğa Armangil, EPFL software engineer
d.armangil@qworum.net • +41 76 681 2196
Web: Qworum.net • Twitter: @QworumNet



Problem & Opportunity

- **Problem:** The Web was not initially conceived for applications but for content. As a result it still does not support applications as well as it could. **Web browsers still have big features missing for applications.** There is still no module system for Web applications for example. This translates into **lost productivity for developers and limited integration possibilities between Web applications.** Also, browsers are typically non-profit and can't act as an aggregator for 3rd party services for instance. This limits the browsers' usefulness for software developers and vendors.
- **Opportunity:** A commercial entity can radically enhance the capabilities of free **Web browsers.** Computing has two aspects: data and applications. Pre-Web, in terms of business, there was Oracle for data and Microsoft for applications. But on the Web there is Google for data yet nothing for applications (free Web browsers are comparable to Linux not Windows). So the business opportunity I am seeing is in complementing the existing Web standards and providing easy access to crypto and fiat payment services and to free and paid Web APIs, and making these and other **premium browser features** available to software vendors and developers.
- Market size: 1.5 billion active websites, potential revenue >\$30B including payment intermediation.

Value Proposition

○ **Premium Web browser features** provided by Qworum's browser extension and services marketplace:

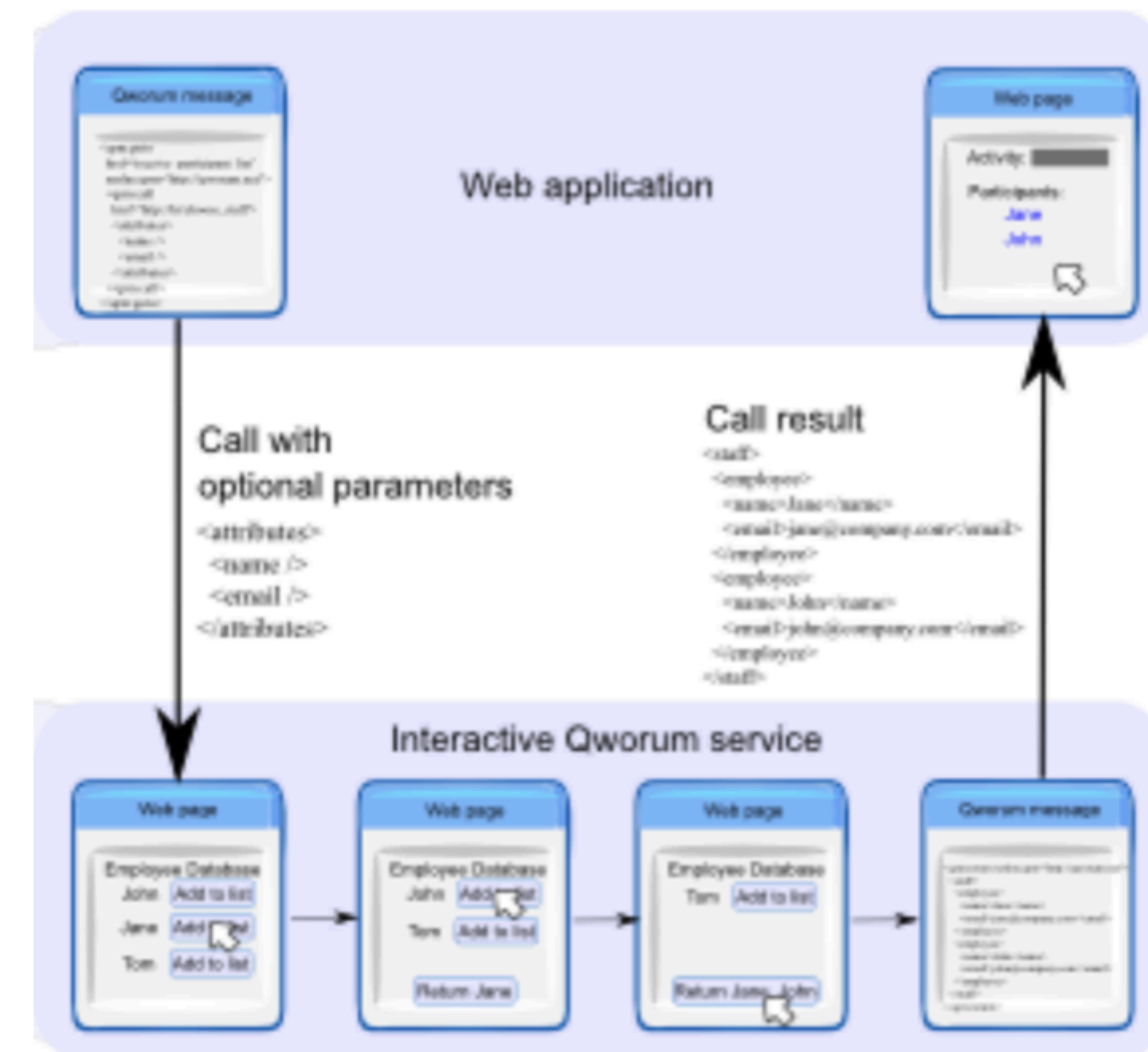
- ▶ A **module system for Web applications**. More technical description: Web-scale platform for micro-frontends and microservices. This is a deep tech invention. Build Web applications by mixing and matching local and third-party interactive modules/services. **Increased developer productivity, better integration between applications.**



- ▶ Easy access to crypto and fiat payment services.
- ▶ Easy access to free and paid Web APIs that are available on API marketplaces and elsewhere.
- ▶ Easy end-user authentication and access to authorised end-user data.
- ▶ Some features also available for mobile and desktop applications.

The Invention

- A deep tech module system for **distributed Web applications**:
 - ▶ Applications can span many websites and are composed of one or more Qworum services.
 - ▶ US patent US8266632, expired. 2nd patent probably obtainable.
 - ▶ A call stack is attached to each browser tab.
 - ▶ Qworum is implemented as a browser extension.
 - ▶ Our specification supports both dynamic backends and Jamstack.



Compared to the current Web, the user experience is very similar.

Business Model

- Our customers are the operators of business and consumer applications worldwide. In the case of white label software or branded software that is installed on the buyer's servers, our customer is the software buyer. In case of SaaS our customer is the software vendor. Amongst our suppliers are cloud hosting providers and patent lawyers.
- We provide frontend addons and libraries for applications, and we will operate a **marketplace** for Qworum modules/services. **B2B freemium** model:
 - ▶ Call local Qworum services within your own website for free.
 - ▶ **Website subscriptions.** Buy a subscription for your website for calling remote Qworum services. Some remote Qworum services may be free to call, but both free and paid Qworum services require a website subscription.
 - ▶ **Commission on service subscriptions.** Subscribe your website to paid remote Qworum services in order to call them.
 - ▶ **Commission on crypto and fiat payments.** Easily receive payments from your end-users.
 - ▶ **Commission on paid Web API calls.** Easily call free and paid remote Web APIs.
 - ▶ Easily authenticate end-users and access authorised end-user data for free.

Go-to-market plan

- Acquire developer mind-share (build a developer community):
 - ▶ Attract the attention of software development services companies and software product vendors through online events, conferences, workshops, newsletters, participating in **IT communities** (InfoQ...).
 - ▶ Partner with **Web hosting companies** such as Netlify, Vercel to gain visibility. Integrate with their toolchains, be present in their marketplaces.
 - ▶ Enter bundling agreements with **browser vendors** (Google, Apple...) in order to benefit from their PR & marketing capabilities (and spare software installations to end-users).
 - ▶ Can partner with **Web API marketplaces** (RapidAPI, APILayer...).
 - ▶ Can partner with **payment services providers** (Stripe...)
- Bootstrap the marketplace for Qworum modules/services:
 - ▶ Develop and publish **our own Qworum services**.

Competitive Analysis

Our competitive advantages:

- ▶ Our distributed Web application technology is **a world-first**.
- ▶ We are fully leveraging the newest possibilities of browser extensions. In my opinion most developers are still largely unaware of the wide range of functionality that browser extensions are able to provide.

Competitors (with whom we intend to compete mainly on the basis of improved developer productivity, ease of use and improved distribution capability through the bundling of several features):

- ▶ Zero competition in the distributed Web application space.
- ▶ **Value-added browsers** (Brave, Opera, Island island.io...). We are bringing a new deep tech feature to browsers, we are targeting web developers, and we are augmenting all browsers.
- ▶ **Systems integrators** (Fivetran, Zapier, Airbyte, Talend, Informatica, Starfish ETL, Boomi,...). They mainly do data integration not process integration, except Zapier.
- ▶ **API marketplaces** (RapidAPI, APILayer...). They offer no interactive services. Also, we can distribute their services.
- ▶ **Identity providers** (Okta, OneLogin...). OAuth2/OpenID Connect login services (Facebook, Google, Twitter, Apple, Microsoft....).
- ▶ Password managers, **digital vaults**, form fillers (1password, LastPass, Bitwarden...).
- ▶ Crypto **wallets** (Metamask, Bitkeep...).

Team



Doğa Armangil
Solo founder
CEO & CTO

- ▶ EPFL software engineer.
- ▶ Author of a microservices & micro-frontends patent.
- ▶ Project manager.
- ▶ Software developer for mobile, desktop & web.
- ▶ Software architect.



Software developers



PR & Community managers



Sales & marketing

Financials & Metrics

“The most reliable way to predict the future is to create it.”
— A. Lincoln

	Year 1	Year 2	Year 3
Sales [CHF]	100K	2M	3.5M
Cost [CHF]	280K	560K	1.4M
Earnings [CHF]	(180K)	1.4M	2.1M
FTE	4	8	20
Qworum services buyers	200	3K	8K
Web API buyers	500	7K	15K
Payment services buyers	1K	15K	50K

Status & Timeline

Accomplishments:

- ▶ US patent US8266632B2 (expired):
"Method and a system for the composition of services". ✓
- ▶ 2nd innovation (Qworum objects for stateful services), which I've decided to disclose. ✓
- ▶ 3rd innovation, probably patentable. ✓
- ▶ Deliverables: Qworum module system **specification** (✓ published), browser extension (late alpha), **JavaScript library** ✓ and related documentation ✓, online demo (late alpha), Netlify build plugin ✓. **Demo video** on qworum.net showing the user experience when using a Qworum-based Web application that spans several websites ✓.

Check Twitter (@QworumNet) for the latest software release announcements.

- | | |
|---------|---|
| Month 0 | ▶ Ltd company founded. |
| Month 0 | ▶ Start hiring developers. |
| Month 2 | ▶ Beta version. |
| Month 4 | ▶ Start hiring community managers and PR people. |
| Month 5 | ▶ First commercial version including service marketplace. |