



From privacy to cybersecurity

The [ikusa.one](#) project

Previously at ESNOG

ePrivo

ESNOG 30/32 · 2023/2024

Online tracking observatory continuously crawling websites



Based on UPC research: TrackSign¹ / ATrack² detect JavaScript tracking code



Surgical blocking: Remove tracking code preserving functionality

GuardXP

ESNOG 34 · 2025

The same algorithms but online, while users are browsing



Browser extension for real-time detection and blocking



Network proxy: Any browser, any OS, despite Manifest V3



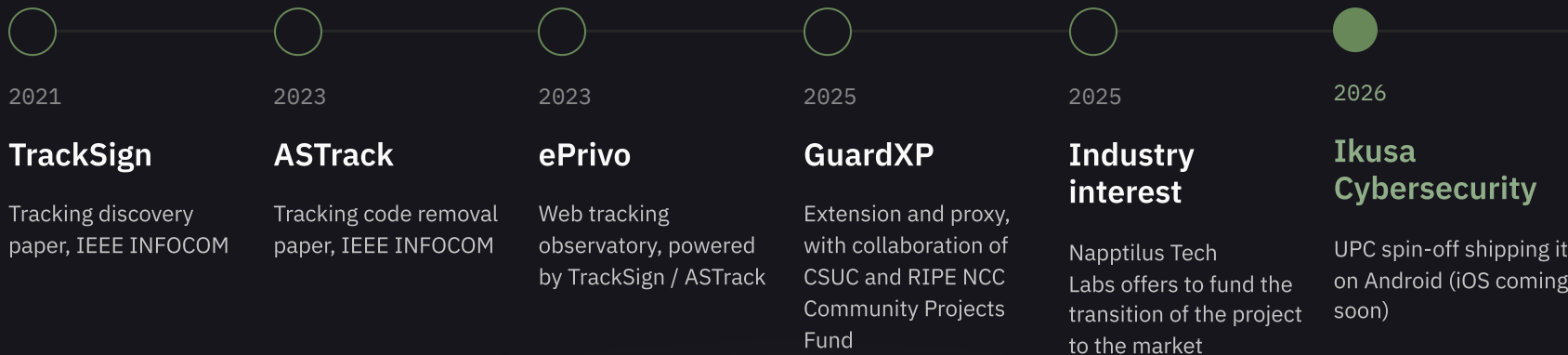
Available on Firefox Add-ons

addons.mozilla.org · GuardXP

¹ TrackSign: Guided Web Tracking Discovery. IEEE INFOCOM 2021.

² ATrack: Automatic Detection and Removal of Web Tracking Code with Minimal Functionality Loss. IEEE INFOCOM 2023.

From a research project to UPC spin-off



Privacy alone did not make a market

People value privacy, but rarely pay for it. Investors found it **interesting, not compelling**

Previous approach

Privacy tools for the web

Anti-tracking for browsers and networks



New approach

Unified mobile security

Security first, our privacy algorithms included

Our most sensitive data lives on our phones



Sensible apps

Banking, contacts, messaging, social media



Full of sensors

Camera, microphone and GPS, a few permissions away



Poorly protected

Outdated systems, unvetted apps, broad permissions



Second factor

2FA codes and authenticator apps live on the phone



Always connected

Constantly online, often on untrusted Wi-Fi



Blurred boundaries

Personal and work life share one device

If phones represent a huge security risk, why do so few people protect them?



Fragmented ecosystem

A separate app for each threat, nothing unifies them



Platform reliance

Built-in Android and iOS security is assumed to be enough



Enterprise focus

Mobile threat defense is sold to companies, not people



Complex and expensive

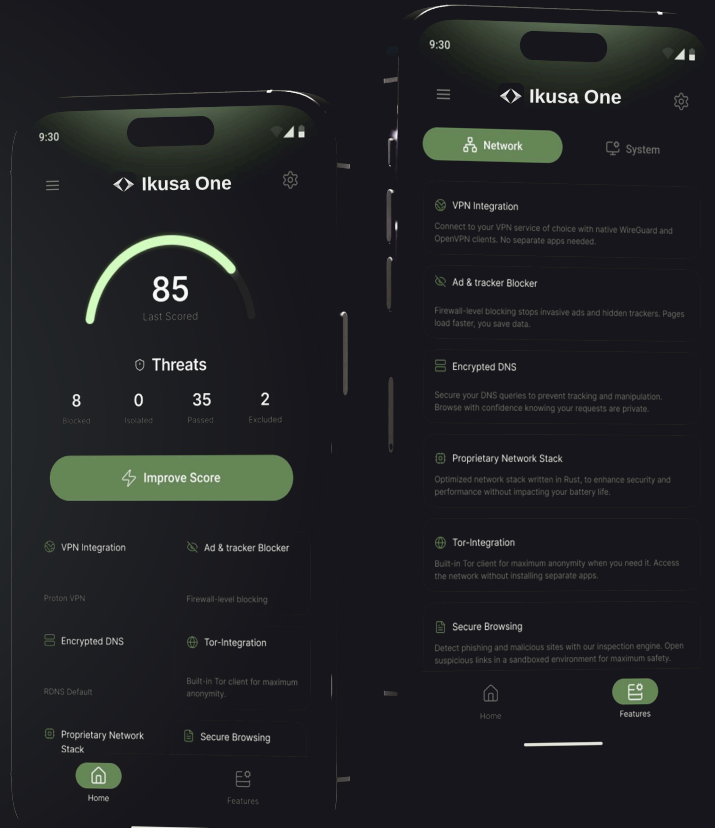
Needs a team to run it and handle false positives



Centralized, not private

Traffic and data are analysed in the vendor's cloud

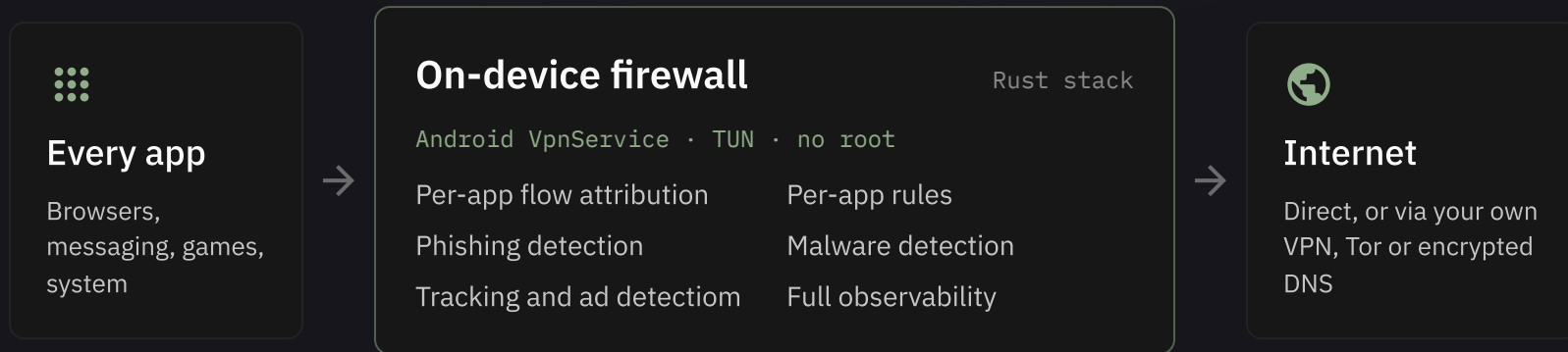
Ikusa One: Advanced mobile security in one app



-  On-Device Processing
-  Firewall
-  Security Assistant
-  Network Visibility
-  Tracking/Ad removal
-  Phishing Detection
-  Malware Detection
-  Secure Browsing
-  VPN Integration
-  Tor Integration
-  Encrypted DNS
-  Parental Control

Powered by our own network stack, written in Rust

Private by design, free to scale



Not a real VPN: **no tunnel to our servers**. Every connection the phone makes passes the firewall but is never shared with Ikusa or any other party

Google Play limits what a firewall may block

Google Play Developer Policy · Device and Network Abuse

“We don’t allow apps that interfere with, disrupt, damage, or access in an unauthorized manner the user’s device, other devices or computers, servers, networks, application programming interfaces (APIs), or services, including but not limited to other apps on the device...”

Examples of common violations:

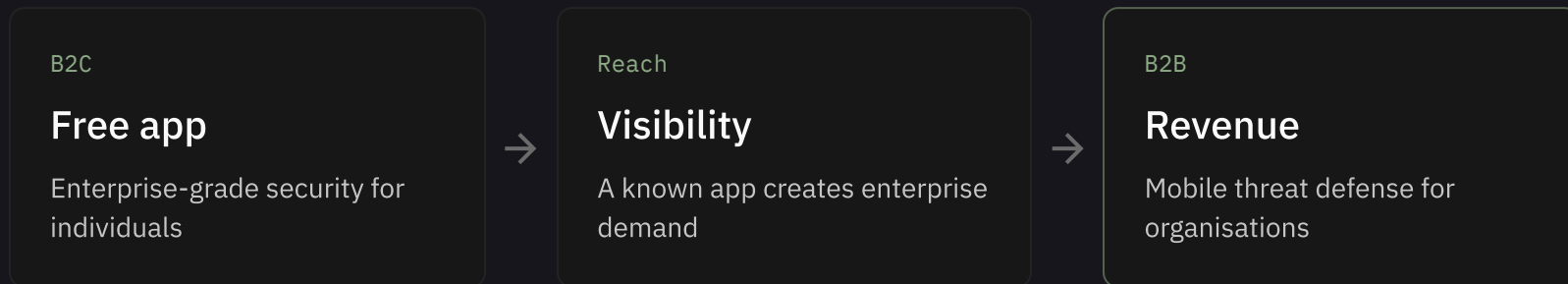
“Apps that block or interfere with another app displaying ads.”

Technically possible on Android. Not allowed on its main store

One app, two builds

	 Google Play	 Sideload APK
Blocks	Phishing, malware, malicious endpoints	Security threats, plus ads and trackers
Per-app tracking rules	Not allowed	Included
Imported lists	Not allowed	Included
Distribution	Play Store (iOS coming soon)	https://ikusa.one

Free for individuals, paid by enterprises



+ **Premium tier:** paid add-ons where we carry a real cost, such as our own VPN service

Towards an open community for rules



Open source

Under evaluation, alongside the business model



Rewarded rules

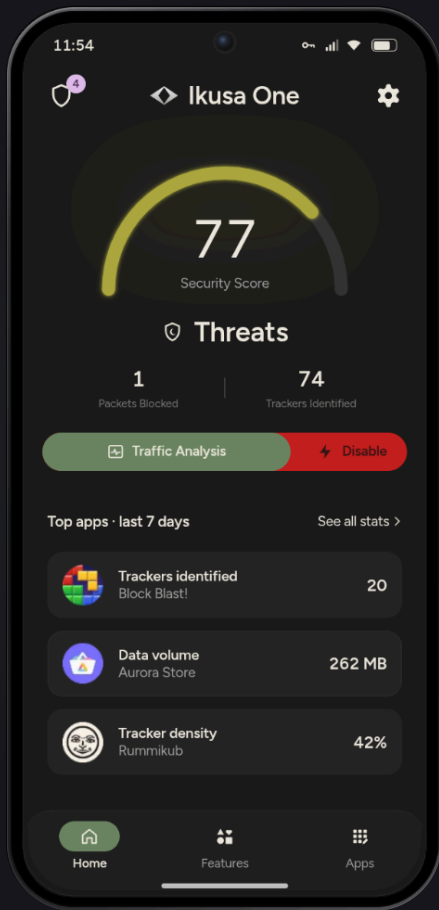
Contributors write per-app rules and get paid for them



Open platform

A generic base for mobile security features

Know a model that works? We would like to hear about it



10 · Demo

Ikusa One Demo

The same phone, with and without Ikusa One

📊 Security Score and Assistant

🚫 Tracking blocking

🚫 Ad blocking



Thank you

Try it at ikusa.one



Scan for Google Play

Google Play · early access

Fully featured APK



Scan for the full APK

Pere Barlet · UPC BarcelonaTech · Ikusa