

This is the export of a building block from the TMC Threat Library. This project aims to propose mitigations for relevant threats to reusable building blocks of modern tech systems. For more information about the project visit <https://threat-modeling.net/library/>

Location tracking

Gains

System Model

-  User (tracked person) - by TMC DACH
-  Follower - by TMC DACH
-  Companies - by TMC DACH
-  Physical tracking device (source of GPS location) - by TMC DACH
-  Third party providers for geo related services - by TMC DACH
-  Mobile app - by TMC DACH
-  Remote data processing unit - by TMC DACH
-  Database - by TMC DACH
-  Live position (GPS) - by TMC DACH
-  Position history (location & timing) - by TMC DACH
-  User identity - by TMC DACH
-  Marketing data / Store or Service location - by TMC DACH
-  Location preferences (derived) - by TMC DACH
-  Movement / Transport preferences (derived) - by TMC DACH
-  Movement pattern (derived) - by TMC DACH
-  Relationship to other users (derived) - by TMC DACH
-  User shares location - by TMC DACH
-  Company advertises location based services - by TMC DACH
-  Invite users to follow GPS tracking - by TMC DACH
-  Confirm sharing - by TMC DACH
-  Confirm following - by TMC DACH
-  Set data retention period - by TMC DACH
-  Set tracking accuracy - by TMC DACH

More info

Threats and Mitigation Ideas

Confidentiality? Integrity? Availability? / Usability? Privacy? Safety? €\$? ...
→ Protect? Detect? Respond? → Follow-up threats?

Stalking - by TMC DACH

-  Approve who sees your data - by TMC DACH
-  Block users - by TMC DACH
-  Do not allow follower requests just invite followers - by TMC DACH
-  Set tracking accuracy - by TMC DACH
-  Add location noise - by TMC DACH
-  Report users - by TMC DACH
-  Monitor for suspicious behaviour - by TMC DACH
-  Enhanced protection for profiles of popular persons - by Richard

Inappropriate privacy intrusion - by TMC DACH

Unsolicited marketing - by TMC DACH

-  Demand marketing information opt-in - by TMC DACH

Oversharing of information - by TMC DACH

-  Provide transparency - by TMC DACH

Provide insider information for malicious activities (social engineering attacks) - by TMC DACH

GPS User Data scraping - by TMC DACH

-  Monitor for suspicious behaviour - by TMC DACH
-  Rate limit user requests - by TMC DACH
-  Enforce maximum number of followers - by TMC DACH