

NavKit: fastest, modular, connected navigation engine of tomorrow

Consumer expectations are rapidly changing as a result of the fast moving Consumer Electronics world. For most drivers, smartphones are regarded as the benchmark for the user experience. The challenge for today's automotive industry is to create navigation systems that are compelling and still relevant in the future. NavKit is TomTom's answer for OEMs and Tier 1 suppliers. NavKit is TomTom's off-the-shelf, easy-to-integrate navigation engine, enabling OEMs and Tier 1 suppliers to develop customized Connected Navigation Systems that meet consumer expectations.

WHY TOMTOM NAVKIT?

MARKET TESTED

Almost 80 million users use TomTom navigation software to compute the fastest route every day.

MODULAR ARCHITECTURE

Separation of functional layers enables interchanging and updating of components.

COMPATIBLE

Runs on any Operating System: Linux, QNX, Android, iOS, Windows and Genivi; and on any hardware platform: embedded automotive systems and consumer devices.

FLEXIBLE

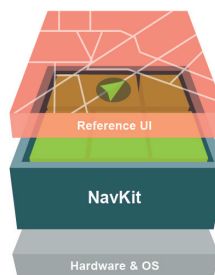
With NDS maps configuration, the latest industry standard.

ADAPTIVE UI

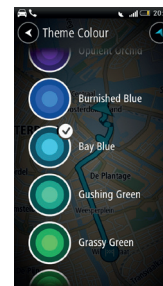
Enabling car-makers to provide a unique and customizable user experience.

RICH API PLATFORM

Provides off-the-shelf main navigation functions such as: Routing, Guidance, Search, Map Matcher and Map Renderer.



Modular architecture insures compatibility and independence of components.



Off-the-shelf and customizable UI with intuitive and map-centric UX



More flexibility with NDS Maps incremental updates and modularity

NavApp: TomTom's complete navigation application with reference UI

NavApp is TomTom's Android-based reference application around NavKit. It has been designed to provide an intuitive and map-centric user experience. Using NavKit's client APIs, NavApp delivers a UI with high-level application logic, enabling for example the visualization of routes, traffic and speed cameras, managing favorite locations, and providing intuitive guidance in more than 30 languages.

This reference application allows OEMs to skin NavApp and the map visualization, or to create a fully customized OEM-specific UI. For non-Android platforms, NavApp acts as a reference UI and a runnable specification that can be implemented on the OEM-specific UI framework.

Connected services: Extended user-experience, easily implemented

To enrich the navigation experience, NavKit can retrieve real-time connected services such as traffic, speed cameras, local search, parking and fuel stations; either from TomTom or 3rd party content providers. NavKit is also pre-integrated with our suite of Online Navigation Services and NavCloud, powering a seamless navigation experience beyond the car.

Modular NDS maps and incremental map updates

NavKit uses the latest industry-standard NDS map format. NDS also enables TomTom to provide incremental updates: only the map parts that have changed are downloaded to the device. This results in much smaller and faster downloads, saving connectivity costs and time. Because of these advantages, incremental updates can be installed with a higher frequency, ensuring that the map is always correct and fresh.

NAVKIT MAIN FEATURES

ROUTING

Fastest Routes and most accurate ETA with the best in-class traffic information.

Using historical, real-time and predictive traffic information, NavKit is constantly searching and providing the best possible route. It calculates fastest, shortest, economical, bicycle and pedestrian routes and supports options to avoid highways, unpaved roads, HOV lanes, ferries and toll roads.

GUIDANCE

Detailed, on time guidance instructions.

Comprehensive voice instructions at the right moment enriched with a clear view of the road ahead is NavKit's Guidance promise. The guidance provides spoken instructions using recorded voices and Text-To-Speech (TTS), real-time triggers for on-time voice instructions, visualization of lane guidance for junctions, ETA, and more. The guidance can be also used on cluster displays and Head-up Displays (HUD).

SEARCH

User-friendly, advanced, text-free search.

Find addresses and points of interest (POIs) with advanced Free Text Search (FTS): suggestions are provided while typing, covering both addresses and POIs, giving results quickly. The search area can be set according to preferred radius, along a route or within the complete map.

MAP MATCHER

Fast and accurate positioning on the map

NavKit Map Matcher is agnostic to the positioning technology used, be it GPS, GLONASS, WiFi or cellular based, resulting in great accuracy of positioning on the map. Information from different sensors is fused, sudden jumps or glitches are filtered out. TomTom Map Matcher enhances the navigation experience, enables 3D positioning support, and provides a position prediction for the near future.

MAP RENDERER

Stylish, interactive, up-to-date and customizable

TomTom enables 2D and 3D map visualization, including 3D buildings and landmarks, as well as traffic incidents, speed cameras, POIs and brand icons. The Map Render offers Advanced Lane Guidance on a fully interactive map, supporting zooming, panning and selecting other icons on the route. Camera view point, map colors and textures can be customized.

TomTom Navigation Engine - top ranking quality

According to the leading Independent Benchmarks TomTom provides the users with the fastest routes and most accurate ETA.



Trusted by a strong customer base



RENAULT



CITROËN



SSANGYONG



smart



PEUGEOT



MAZDA