

graphmasters

collaborative routing



NUNAV Navigation



NUNAV Bus





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Directly to your final destination

Without search directly to a free parking lot



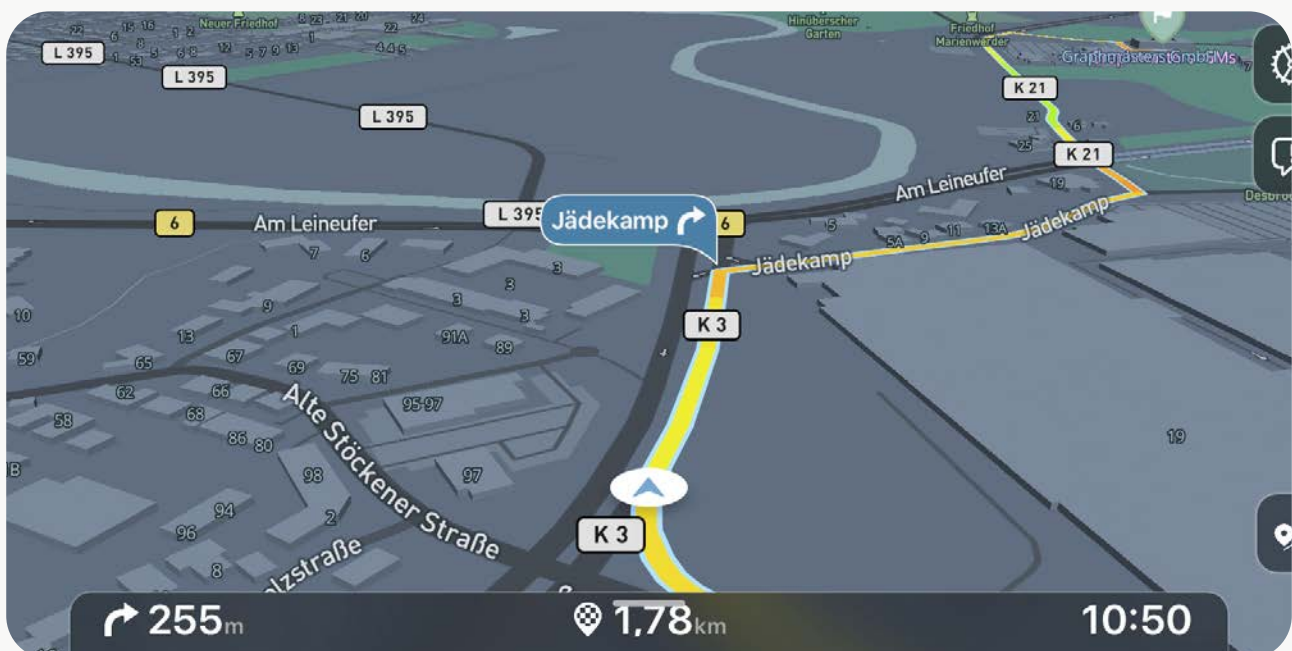
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Customer success and smart mobility services

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Almost everyone uses them, points of interest (POI). Yet, behind every POI there is always an address, the on-site parking space and the entrance that leads to it. With conventional navigation systems, the address is often only the starting point for the upcoming search for a parking space. This stressful situation can be avoided with NUNAV technology. NUNAV lets users drive straight to their parking destination in a managed free parking space.

The free navigation apps NUNAV Navigation and NUNAV Bus take visitors, for example, directly to Graphmasters GmbH in the Digital Hub in Hamburg or to GITI Tire Deutschland GmbH, at the Tire Technology Expo 2021, at Koelnmesse. This event-based navigation is made possible with the NUNAV - Venue Manager. Reaching your final destination is easy!





„Udo Lindenberg“

Hamburg, Volkspark-Arena, 2019

2

Philip gets in his car. Today he is going to a concert in Hamburg. Before leaving, he scans the NUNAV QR code printed on his concert ticket with his smartphone.

This opens the free, anonymous and ad-free NUNAV navigation app.



Philip presses the „Navigate“ button in the app. Concert goes, organizers, artists, security - the app asks Philip to indicate in which role he is coming to the concert. He decides on the type of parking space „visitor“. Then he drives off.

3

The NUNAV navigation app on his smartphone now becomes a navigation device for Philip. Unlike conventional navigation devices, NUNAV does not just guide Holger roughly to the entrance of the site. NUNAV does a lot more: it guides Philip via the best route to the correct access route to the parking space reserved for him.



4

Hamburg

Philip arrives relaxed and on time at his concert. The event organizers even had the opportunity to intelligently control access points and routes, even with these large volumes of traffic.





NUNAV Navigation



NUNAV Bus



Event-tickets and apps



Download



Users download the free NUNAV app.

Use of the app



1. Users search the event-name directly in the app
2. or a NUNAV QR-Code is scanned and opens the NUNAV navigation app
3. or a link within an event app opens the NUNAV navigation app

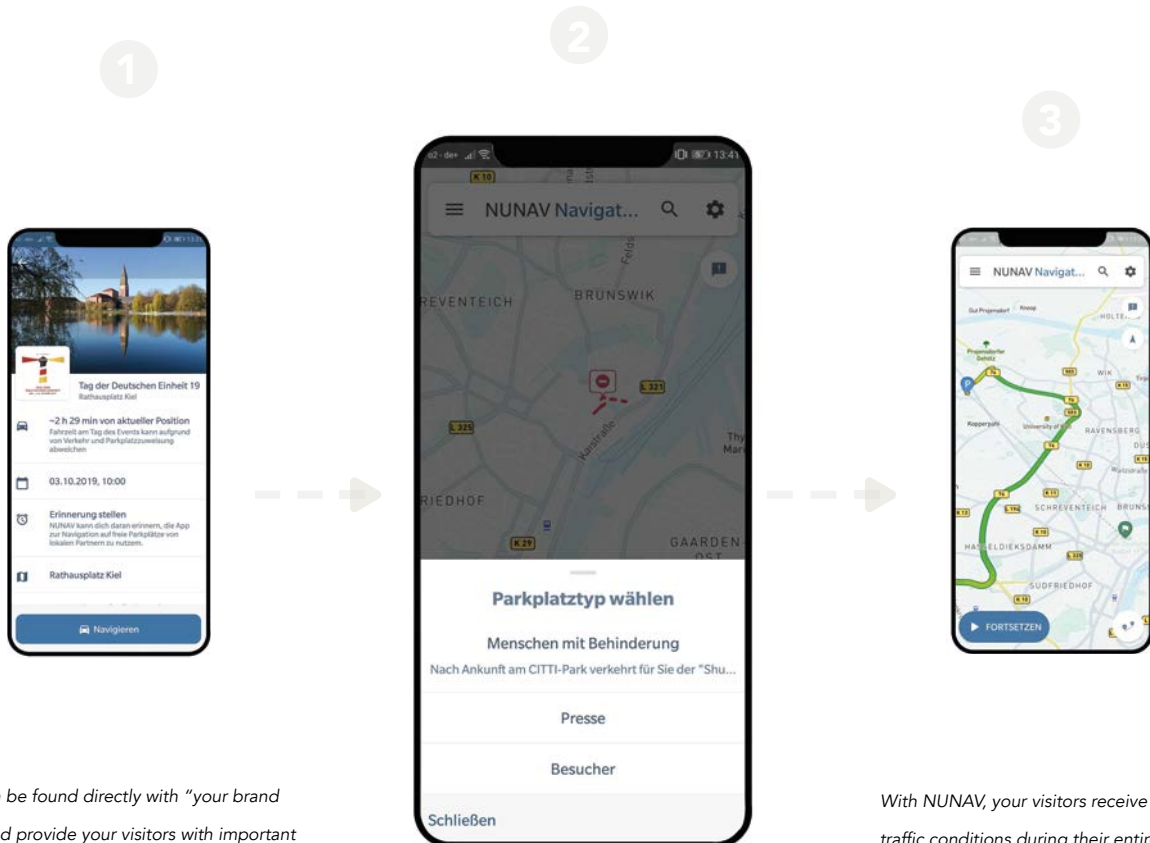
NUNAV Venue Manager



This is where the users' dynamic route guidance is managed.

Mobility as a customer-journey

Put yourself in a digital spotlight



You can be found directly with "your brand name" and provide your visitors with important travel and arrival information. An information screen starts the customer journey to your company headquarters, your event, your trade fair or anything else.

It is well known that many roads lead to a destination. Design the way to your destination as individually and precisely as possible. Visitors arrive on time, the press drives directly to the front door and service providers bring goods just-in-time to the service gates.

With NUNAV, your visitors receive real-time traffic conditions during their entire journey and coordinate with all other road users their routes. Collaborative routing actively avoids traffic jams on the streets.



Jil Martha Baee, Marketing

„Design the contact and the route so that your guests are enthusiastic“



Jonas Tillmann, Logistics

„Determine digitally and according to their needs who, when and where will reach its designated destination.“

NUNAV Venue-Manager

With our NUNAV technology, your event already has a star before anyone starts driving.
The NUNAV Venue Manager provides everything that is needed.



The Venue Service can:



put in place arrival / departure settings digitally.



provide ad-hoc parking space (by order of the police).



manage parking space in real time.



prepare access routes and parking areas, manage them in real time and evaluate them afterwards.



connect private transport with local public transport.



digitize sports event tracks, show residents a way out, visitors, athletes or service members a comfortable arrival.



offer planned parking space.



offer QR codes of the event.



service new venue services.

More service, more comfort, better acceptance

NUNAV brings various user roles to their destination

The NUNAV technology “collaborative routing” helps to optimize road traffic around events and to control it in real time. NUNAV distributes traffic evenly in the available road network and avoids actively the formation of traffic jams through swarm intelligence.

The technology helps with individual access information and

provides a meaningful method to manage large vehicle visitors crowds during arrivals or departures. Be it VIPs, visitors, artists you name it.

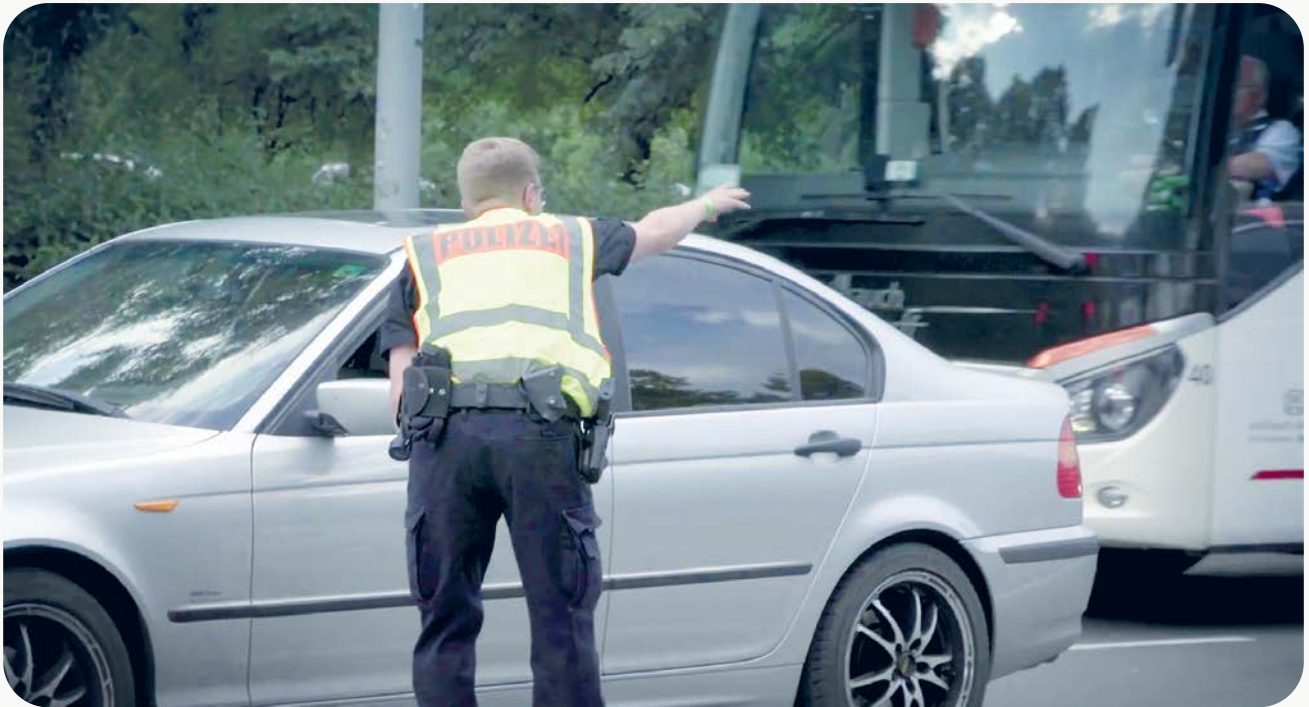
Managed venues & events are all within our NUNAV apps and bring all users directly to their final destination. This reduces the volume of traffic on site and creates space for a relaxed stay.

Advantages for NUNAV users:

- arrive relaxed
- real-time navigation
- automatic guidance to the free parking space
- information on arrival / departure routes that are only for your car park access / departure
- without detours directly to the event



Digital park & guidance system



NUNAV, as a service of the organizer, can be used for different user roles. Every visitor who uses the NUNAV navigation app is allocated to a corresponding area that is intended for this user role. This digital traffic control management makes road traffic better for all participants and everyone arrives more relaxed.



Digital value added services

Each of us benefits from traveling with NUNAV. From individual visitors who suddenly arrive at their destination much more relaxed, to organizers who can plan better, to society as a whole, who can benefit from avoiding traffic jams and thus lowering CO₂ emissions.



NUNAV in use

Whenever people want to get from A to B quickly and purposefully, they need free roads. Usually this only works to a limited extent because there are too many people using the same roads at the same time. This can be prevented with NUNAV. By integrating the NUNAV navigation into your processes, you become part of the NUNAV World.

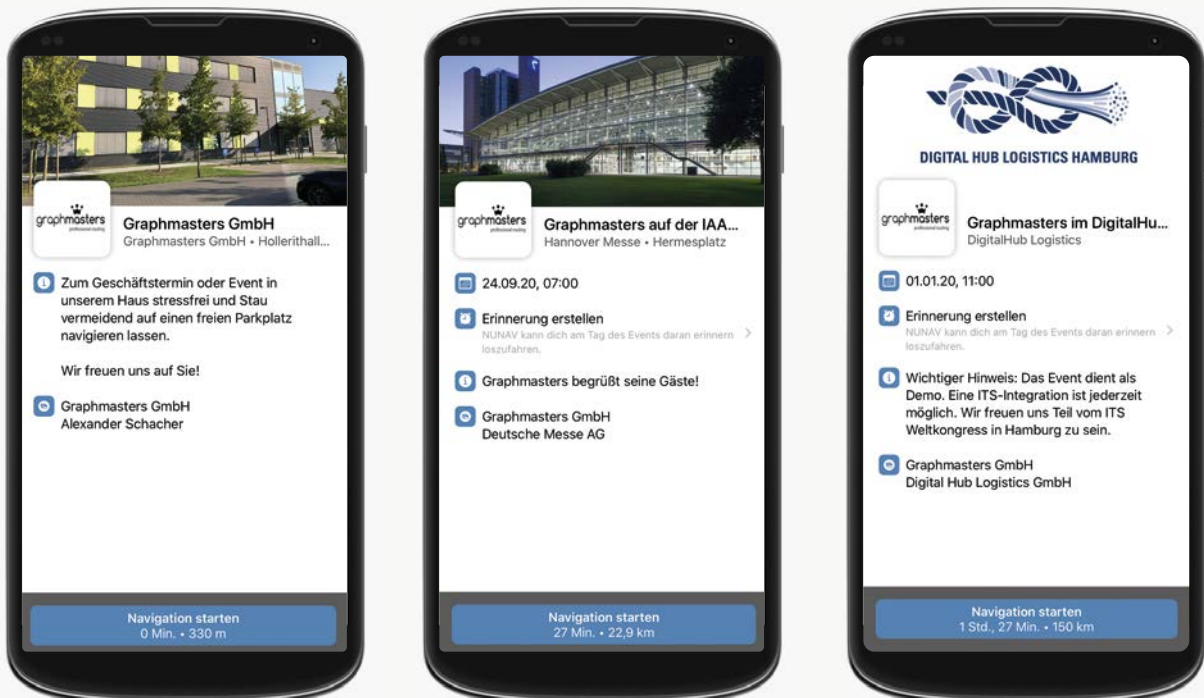
In contrast to standard routine procedures, NUNAV gives organizers and users the advantage of a Venue Manager and traffic management. Every application that prefers NUNAV to a standard routing method gives itself and its users the opportunity to take advantage of the NUNAV Venue Service or NUNAV Traffic Management.

Part of digital mobility

One technology, many faces

With NUNAV everyone will find you.

1. Create your destination in the NUNAV Venue Manager and make it visible in the NUNAV apps.
2. Send QR codes - driving directions have never been easier.
3. Communicate directly with your audience and use our templates at nunav.to/deinevent.



With NUNAV Venues, you can manage from one parking area to an unlimited number of parking spaces or slots.

No matter whether the arrival / departure is applicable to the entire public road network or via P&R.

NUNAV creates a fully digital & automatic parking and guidance system right to individual navigation advice.

www.nunav.to

Eight different communication scenarios
with the following possible uses:



Effective navigation to your company headquarters

Where can the visitors find the car park entrance, the exact visitor parking space/slot and where can you charge your electric car?



Venues

Personalize your venue experience and tell your visitors what is happening and what can be expected of you.



Office in the co-working space / pop-up sales point

Show yourself as part of the community - you know best which P&R parking lot you can drive to or where the best parking garage is in your area or where your pop-up sales store is located and where your visitors can park.



Your own trade fair participation

Show your audience that you are participating in a trade fair and which parking areas can best be used for a visit.



Location on unfamiliar terrain / pop-up sales point

Sometimes you are a guest in external buildings yourself and still want to be found by visitors directly.



Public parking & guidance

Show where NUNAV is used as part of public traffic control and how traffic is controlled digitally and fully automatically.



Event-location

Show what is going on at your event and how everyone reaches their desired destination.



Sports event

People can be mobile, even when many streets are temporarily closed or parking is prohibited due to an ongoing sports event like a marathon, cycling races etc.



Reliable mobility

"Global traffic congestion is a \$ 267 trillion problem worth solving"

Roland Berger - Strategy Consultants 2013

The world of Graphmasters is all about professional routing services. With our award-winning routing engine NUNAV - Microsoft Imagine Cup finalist, Australia 2012 - we offer drivers unparalleled swarm intelligence throughout their journey. Our "collaborative routing" algorithms use the power of distributed cloud computing and enable unparalleled efficiency in terms of traffic flow. All of this brings us closer to our goal of "no more traffic jams". We enable traffic management centers to take control of their roads at a strategic level and combine them with their existing physical road infrastructure.

In this way, traffic management becomes a customer journey for the citizens of a city, event attendees or road users right down to turn-by-turn instructions in your infotainment system or in our smartphone apps.

Whenever you have to explain to someone where to go, NUNAV's Venue Service offers the possibility to do this quickly and easily.

Create a venue / event in NUNAV Venues, send a QR code or communicate an event and arrive relaxed.

NUNAV as part of local public transport



1



Before driving, users open the NUNAV Navigation app. The search in the app brings you to the info screen, where the destination is entered.

2



With "Start navigation" different user roles can be chosen: visitor, VIP, service provider and also the selection "via P + R".

3

Users choose their role as "via P + R".

You will then be navigated to the parking space requested by the organizer, such as P12, P13 or P14. VIPs can be directed to a privileged parking space at gate D on P13.



4

When you arrive at the P + R car park, the app automatically opens the timetable with the available lines 3, 7 or 9 to reach the event location.



5

Continuing the journey by train lets visitors arrive relaxed, reduces the volume of traffic in busy areas and avoids problems on areas with a small number of parking spaces on site.



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