

C A S E S T U D Y

  
**HeiGIT**

HEIDELBERG INSTITUTE  
FOR GEOINFORMATION  
TECHNOLOGY

 **Tyk**



# Let me ~~google~~ “openroute” that for you

Using Tyk to serve millions of complex route maps to consumers, and enable innovation amongst commercial and academic users.



## What is the openrouteservice project at Heidelberg University?

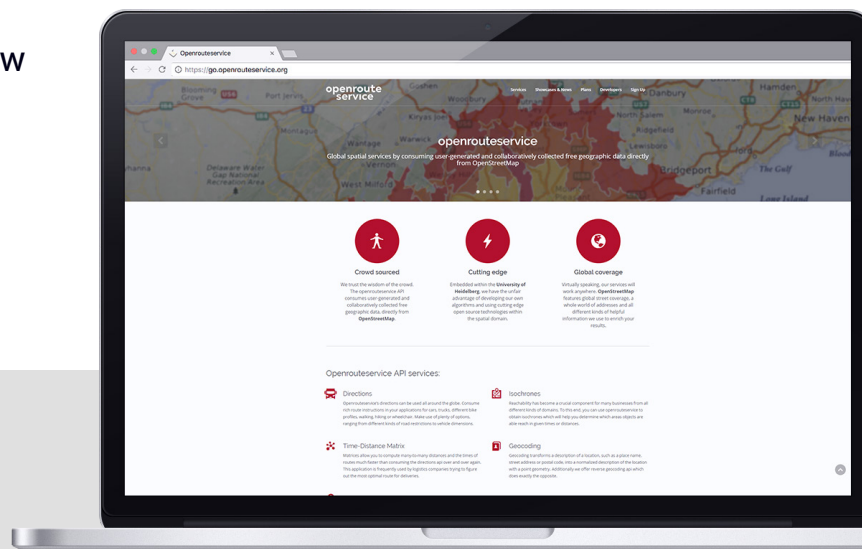
Heidelberg University is one of the world's oldest universities, and now enrolls over 30,000 students every year.

The University's focus on cutting-edge research means that 56 Nobel Prize winners are associated with Heidelberg, and around 1000 doctorates are completed every year.

Within the research domain GIScience, the Heidelberg Institute for Geoinformation Technology focuses on the investigation on the investigation and development of new web-based geographic

InformationServices (GIS) in different application domains, which include disaster management, eHumanities, agriculture, traffic, energy and environment.

The Heidelberg Institute for Geoinformation Technology (HeiGIT) deals with a number of public facing and internal APIs, with traffic of approximately 1m requests per month. The team introduced Tyk to increase their capability, reliability and scale, whilst minimising costs.



## What challenges did Heidelberg University's HeiGIT face?

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One of the prominent research projects for HeiGIT is [openrouteservice.org](https://openrouteservice.org), which provides an alternative to Google Maps directions. Rather than use Google data, the service is provided using open, crowd-sourced and free geographic data from [openstreetmap](https://openstreetmap.org).

In order to ensure that the project is as open as its name, HeiGIT and the [openrouteservice.org](https://openrouteservice.org) project opened up their route and map APIs to the public. As the project grew in scope and popularity, though, HeiGIT faced numerous challenges with managing their API using XML.

First of all, response times were slow and requests difficult to engineer. This meant a poor user experience and limits on innovation. On top of this, gaining access to the API and an API key was a manual process dependent on the [openrouteservice](https://openrouteservice.org) team - if someone was working on other projects, users might have

to wait a long time. Not only did this impact the work of the project, it affected the innovative reputation of the research group.

The [openrouteservice](https://openrouteservice.org) API also often experienced downtime owing to stability issues. When those consuming the API are designing services around real-time locations, this drastically impacts the effectiveness of the software and might make developers hesitant to use the API.

All of these challenges needed to be solved, and in a way that was quick to implement, easy to manage and low cost. With exciting new features in the works, HeiGIT felt it was the right time to explore using a new API Gateway and API Management solution.

## What led HeiGIT to use Tyk's Open Source API Gateway, API Management Platform and API Developer Portal?

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After doing some research into possible API Gateway and Management solutions, HeiGIT quickly determined that Tyk would be the best fit for this project.

The most compelling reason? Tyk is one of the leading Open Source API Gateways and API Management Portals, and openness is integral both to the mission of HeiGIT and the openrouteservice product itself. It was important to the HeiGIT team that they put their money where their mouth is and committed to keeping the project open in every sense of the word.

Next up - Tyk's host of features. HeiGIT needed a product that could scale with minimal cost, whilst providing full enterprise API Management features including a fully customisable self-service portal, swagger support and versioning. Compared to others on the market, Tyk was able to provide all the fea-

tures required and with the best value for money.

Which brings us to the third reason that Tyk's API Gateway and Management solution stood out. For a product that solved HeiGIT's requirements and allowed it to remain true to its core Open Source ideals, Tyk required low financial investment compared to other products on the market.



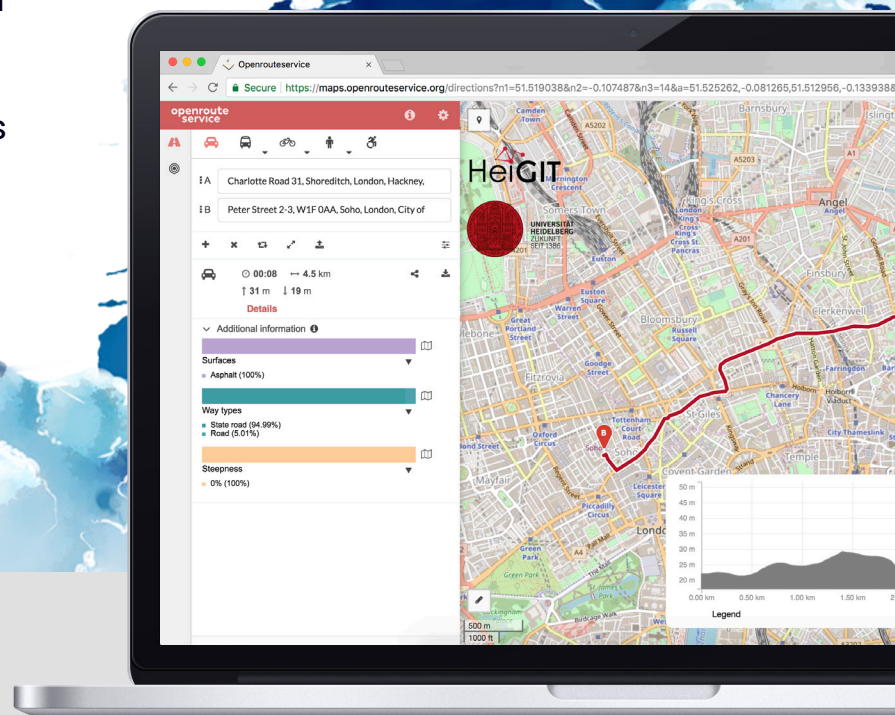
## How easy is Tyk to implement and use?

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Owing to Tyk's simplicity and excellent documentation, HeiGIT were able to implement Tyk API Gateway on their servers within 2 days. For times when support was needed, HeiGIT were able to draw on the collective wisdom of the Tyk Community, Tyk GitHub, and, of course, the Tyk engineering team who provide tech support to all users.

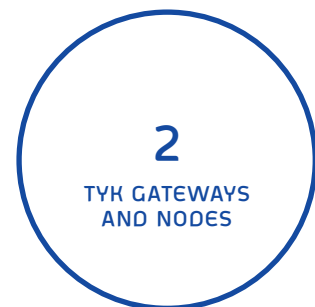
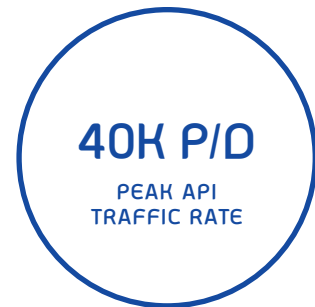
What's more, as soon as the initial API Gateway setup was complete, HeiGIT could begin to manage and monitor their APIs using the dashboard. As well as those need-to-have features that formed part of HeiGIT's initial product investigations, most-used features include API definition, API traffic graphs and token management.

In addition, HeiGIT have used the customisation abilities of the Tyk developer portal to quickly produce and publish an engaging and accessible interface that helps them better serve the 1000+ developers using the openrouteservice API.



## Vital Statistics

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## FAQ

In one word or sentence, what is the number 1 benefit to you or openrouteservice users / API Developers of using Tyk?



Save us a lot of time to rebuild the API gateway.

