



The Swedish Stop Registry

A common, national coordination leading to benefits for travel and cost savings locally and nationally.

April 2024

Content

Summary.....	2
Introduction	2
Usage of stop data	3
The challenges with the current handling	4
How has Samtrafiken solved this?.....	4
New conditions.....	5
New possibilities.....	5

Contact

Håkan Östlund, product owner Data Handling
hakan.ostlund@samtrafiken.se

Johan Hammar, product owner Standards
johan.hammar@samtrafiken.se

The Swedish Stop Registry

Summary

As several Public Transport Authorities (PTAs) are preparing procurements for new planning systems, we want to highlight the possibilities for national coordination of stop data in a national stop register and the benefits it would provide for travel throughout Sweden.

For a long time, the question of stop data has been a local issue for each region. This has made it challenging to manage stops at a national due to the lack of coordination of identities, etc. As the handling of traffic data becomes increasingly digitised and thus connected, new challenges arise.

Through its mandate to collect all traffic data in Sweden, Samtrafiken has created a national database for public transport stops and station areas. Here, they solve problems such as the same stop having different identification numbers in different systems and several different stops having the same identification number in different systems. This is achieved by assigning each bus stop in the entire country a unique, national identification number, while also storing data from various local systems connected to these stops.

To reduce unnecessary costs for managing various data about Sweden's stops both locally and nationally, the industry would benefit from utilising the new opportunity provided by the Swedish Stop Register (SHR) and gradually transitioning to allowing SHR to be the primary source for stop data and using this data in their own systems. Samtrafiken is actively working to develop SHR's capabilities to be a reliable source that serves the industry, thereby facilitating climate-smart travel in Sweden.

Introduction

Stops and stations of the Swedish public transport network have, except for train stations, long been a local and municipal concern. With the Public Transport Act that came into force in 2012, the responsibility for public transport was transferred to the former county councils, which are now regions. Along with this came a regulation from the Swedish Transport Agency (Swedish Transport Agency's regulations and general advice on reporting obligations and traffic information; Swedish Transport Agency's regulation collection; **TSFS 2012:2**), where in § 10 it addresses the obligation of transport companies towards the regional Public Transport Authority.

(Translation from Swedish regulation text)

Information shall be provided about the stop or other similar facility where the vehicle stops for boarding or disembarking passengers and where, if applicable, transfers between different lines can occur. The information shall, where applicable, include details about the location's

- 1. name,*
- 2. number,*
- 3. geographical coordinates,*
- 4. municipality code, and*
- 5. the minimum recommended transfer time for transfers between lines operated by the public transportation company.*

With this follows that PTAs shall maintain a register of all stops in the region, including those not served by its own services.

This is now happening all around the country and serving its purposes locally in the regions.

As society becomes increasingly digital and interconnected, new challenges arise in managing this when aiming to facilitate easy travel across the entire country. This white paper aims to shed light on these challenges and serve as a basis for dialogue within the industry on how we can further develop the management of stops.

As several PTAs are now preparing procurements for new planning systems, we want to highlight the possibilities for national coordination of stop data in a national stop register and the benefits it would provide for travel throughout Sweden.

Usage of stop data

The stop data naturally plays a central role in the local systems of the PTAs and traffic operators for traffic planning and traffic information, etc. However, stop information is also used outside of their own organisation. It is used, among other things, by Google's and Apple's map services to show where the stops are located. There are also other organisations that offer services based on national data.

Another important use is to enable combined trips across the entire country. That is, a journey that includes segments with multiple traffic operators. Here, the coordination of stop data plays a key role in simplifying for travellers to get all the way from origin to destination smoothly. (See further under New conditions.)

The challenges with the current handling

All PTAs (Public Transport Authorities) and transport companies are obliged to make traffic data, including timetables and stop information, available via the National Access Point (NAP) for open data. Samtrafiken has a mandate from the Swedish Transport Agency to collect this data from all public transportation in Sweden and publish it in the NAP, a process facilitated through Samtrafiken's platform Trafiklab. This data is also used by Samtrafiken to enable combined traveling across Sweden, where one can make the entire journey using multiple transport providers in combination through the Resplus service.

In connection with this, some challenges with current solutions are clarified, where each actor separately manages the stops they are responsible for but also the stops they operate in other regions:

- Without coordination, there are no unique stop identification numbers. When data is collected from different regions, several different stops in different parts of the country can have the same identification number.
- Stop names are not unique either. For instance, there are local names that occur in multiple places across the country. This is not as serious an issue but requires coordination if one wants to establish a national system for trip planning (which 'Kungsgatan' are you heading to?).
- The same stop can occur in multiple different systems. If a bus stop is located within one region, it will be present in that region's system. However, if the same bus stop is serviced by a neighbouring region, it will also be included in their system, often with a different identification number and name but (hopefully) the same coordinates. Additionally, if the stop is serviced by another public transport company, information about the same bus stop may come from yet another system.

How has Samtrafiken solved this?

In the current solution for combined travel (Resplus), Samtrafiken has limited the number of "sellable" stops and assigned them unique identification numbers in a separate system. Much of this work is done manually and requires resources. This has worked because the system has not been linked to any of the travel companies' own systems, and all tickets issued from Samtrafiken's solution are validated and checked manually by the transport companies.

When Samtrafiken was tasked with collecting all digital traffic information and publishing it in a national access point via Samtrafiken's service Trafiklab (see the

Open Data project), there was also a recognised need to be able to display unique stops without overlap created by the challenges outlined above. To address this, Samtrafiken created the Swedish Stop Register (Svenska hållplatsregistret, SHR). In this register, stop data from all actors are brought together and unique stops are identified using their coordinates. Each unique stop is assigned a national, unique identification number. Additionally, each traffic operator's own identification number and stop name are also stored. In this way, we can publish data about all stops and station areas in the country in one system while still being traceable in each PTA's and traffic operator's system.

New conditions

During spring 2024, Samtrafiken will launch a new solution for combined travel in Sweden. It will consist of a national distribution service that combines tickets from the traffic operators' own ticketing systems. The service will receive travel queries based on stop information from SHR. This means that when the service then calls the traffic operators' booking and ticketing systems, it will do so with the national identification numbers of the stops. This, in turn, will require the traffic operators to consult SHR to link these to their own identification numbers to then handle requests for prices and tickets in their systems.

In the European Commission's strategy for smart and sustainable mobility, a review of the ITS Directive 2010/40/EU is stated to commence in 2021. The review has been completed and the directive was adopted at the end of 2023. In Annex III to the directive, there are mandatory requirements for data types to be published, such as "Localisation of identified traffic nodes for all timetable-based modes of transport, including information on accessibility for traffic nodes and transit paths within an interchange facility (e.g. lifts, escalators)." In 2024, a revision of the ITS Directive's work program is underway, with one of the proposed activities being the development of "multimodal access nodes identifiers," which is directly linked to the need for harmonisation of stop identification numbers. The activity is intended to commence in 2026.

New possibilities

Sweden is at the forefront of digitising public transportation. This also means that each PTA and traffic operator are becoming increasingly digitally connected with the outside world, placing higher demands on the data they handle. What is done within one's own system has consequences outside of the organisation. Avoiding bridging current shortcomings in handling data in various ways is preferable in the long run and should also be more cost-effective for the entire industry.

One way to do this is to, instead of submitting stop data from one's own organisation to Samtrafiken, utilise the new Swedish stop registry to add and update data about stops and station areas and use this as the main source for their other systems. This means that all PTAs/actors use and update the same stop registry, which is, in turn, managed and maintained by Samtrafiken.

This would, in such case, entail that:

- PTAs can exchange data with each other and traffic operators without needing to ensure that they communicate about the same bus stop; the national identification number guarantees that it is the same bus stop being referred to.
- All operators can receive price and ticket inquiries from third parties based on the national identification numbers without having to translate them into an internal identificatory.
- Instead of having to enter stops that are under the responsibility of others (for example, in other regions) into their own systems, one can easily retrieve these from the national bus stop registry.

This is in line with how this issue has been handled in Norway, where EnTur now manages a national stop registry.

To achieve this, it is important for all stakeholders to include in their development plans the future utilisation of the Swedish bus stop registry to add and update data about stops and station areas, using it as the primary source for stop data in their other systems.

Currently, there are also a few PTAs planning to procure a new traffic planning system and will simultaneously specify requirements for the new systems to retrieve stop data from the SHR.

To achieve this goal, Samtrafiken will also need to further develop SHR with new functionality.

About Samtrafiken

Samtrafiken is a collaboration and development company operating in the public transport industry. By connecting public transport authorities as well as public and private transport operators in Sweden, we create added value for the entire public transport industry. With our services, we make it easy to search, buy and travel by public transport in Sweden. For over 30 years, we have enabled multi modal

Title: The Swedish Stop Registry
Date of publication: 2024-04-16



and multi carrier ticketing. Our Vision is to make Sweden a leading country within sustainable travel. We are owned by all regional public transport authorities as well as many of the commercial travel operators running a national service. www.samtrafiken.se