

Responsive Transportation Systems on Public Demand

Challenges in Rural Areas

DI Alexander FÜRDÖS
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Interface for Smart Transport



TEAM

CEO Alexander Stiasny
19 Employees



LOCATION

Conrad-von-Hötzendorf-Str.110
8010 Graz - Austria



IDEA

Transportation Planning
Business Consulting
Operator of Microtransit
IT-Services



HISTORY

Founded in 2013 as part of
an independent project of
Stiasny Mobility Management

Situation in Rural Areas



Hardly any access
to public transport



Dependence on
one's own car



Disadvantage
for immobile groups of people



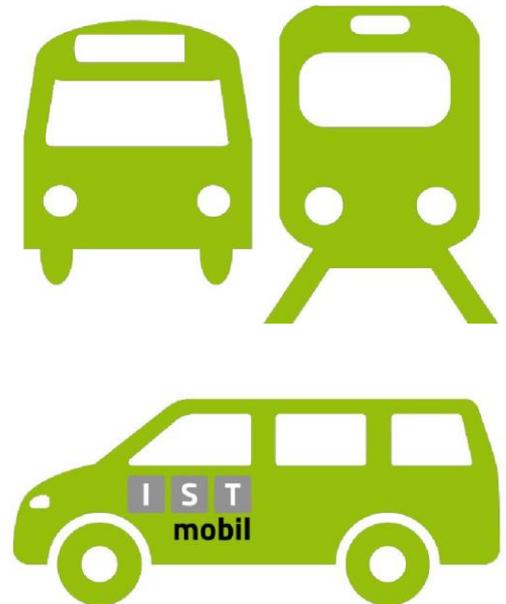
Dependence on pick-up
and drop-off services

Basic Idea



ISTmobil Concept

- * **No competition** to higher-ranking public transport **by ISTmobil**
- * **Connection** to a reasonable **public transport network** (feeder and collector)
- * **Ensuring** a well-structured mobility system within communities

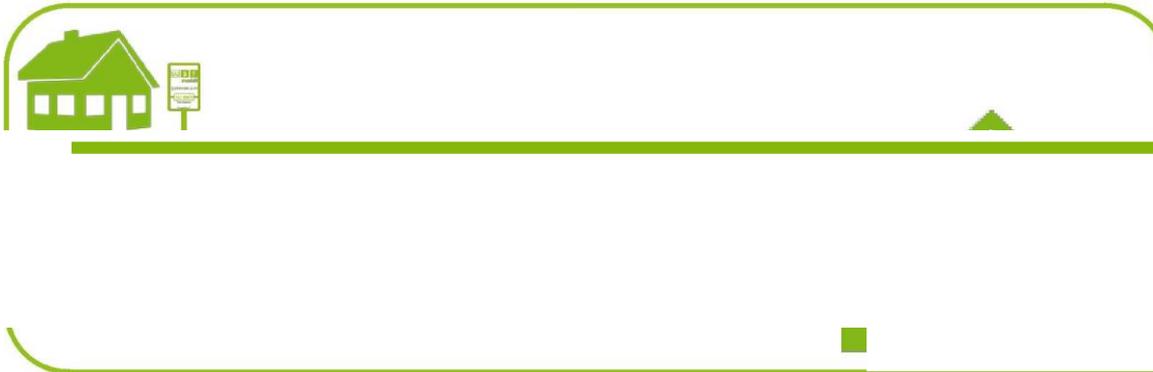


ISTmobil – Distinction to other Transport Systems



Existing Public Transport

- + Affordable
- Inflexibel



Combination of public transport and on-demand public transport

- + Affordable
- + Based on demand
- + Occasional traffic supporting public transport



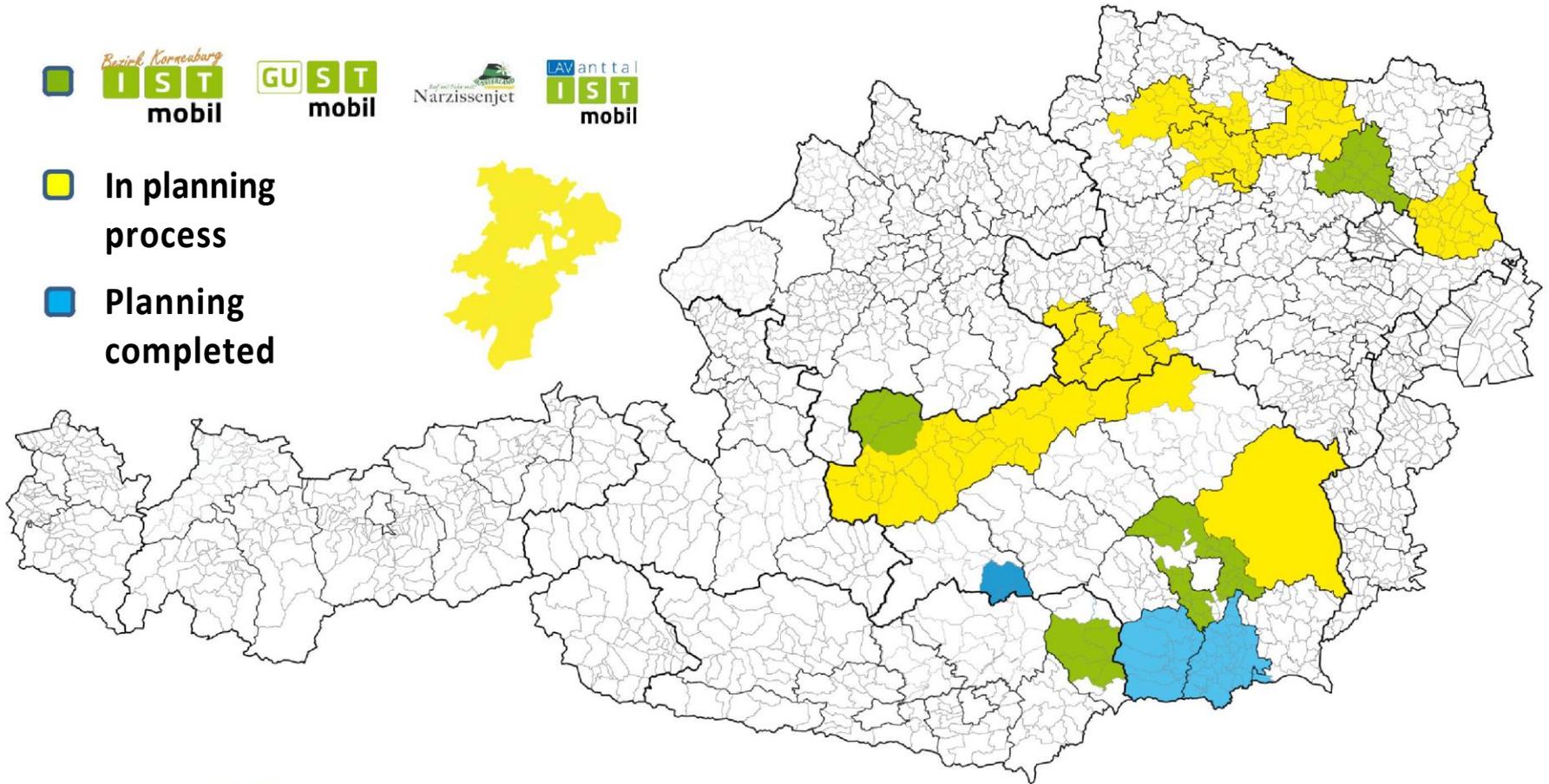
Taxi Traffic

- + Flexible
- Expensive

Overview of ISTmobil Regions



-  In planning process
-  Planning completed



ISTmobil System Design



System Services Adapted to Region

* **Operating Hours**



* **Tariff Structure**



Fixed System Services Components

* **ISTdis Software**



* **Call Center**



* **ISTmobil App**



Operating Hours I

Narzissenjet



Operating Hours

Sunday – Thursday, Holidays 09:00 – 22:00

Friday, Day before a Holiday 09:00 – 24:00



Operating Hours II

ISTmobil Korneuburg



Operating Hours

Monday - Thursday	06:00 – 22:00
Friday	06:00 – 24:00
Saturday	08:00 – 24:00
Sunday and Holidays	09:00 – 18:00

Minimum Lead Time for Booking a Ride

30 minutes 06:00-14:00 Uhr

60 minutes 14:00-24:00 Uhr



Distance-Based Tariff

GUSTmobil



Tariff Structure: Special tariff on short distances up to 5,5 km;
Billing per person

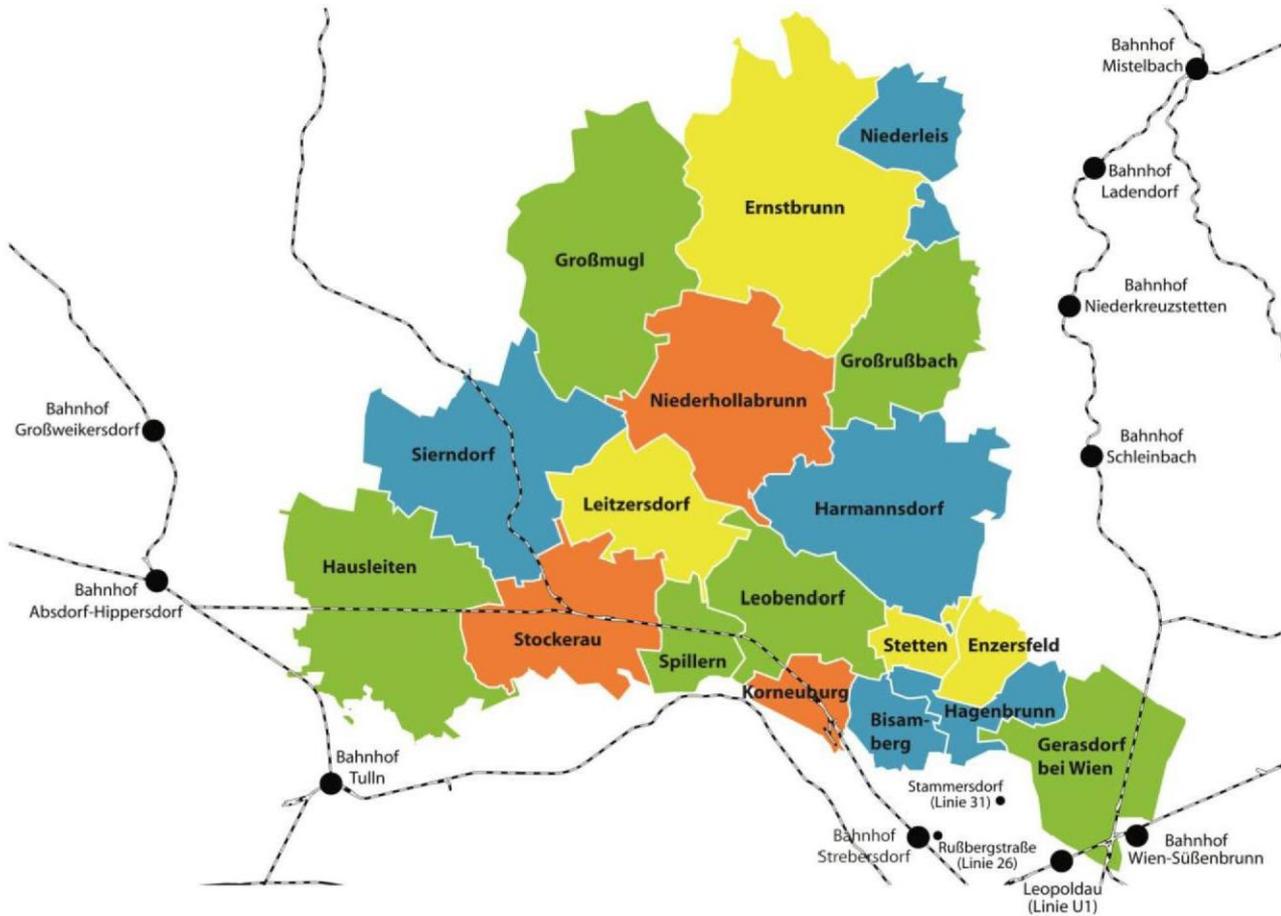
Tariff System			
Distance	1 Person	2-3 People	4 People
up to 3,5 km	€ 3,00	€ 2,00	€ 1,00
up to 5,5 km	€ 5,00	€ 3,00	€ 2,00
up to 7,5 km	€ 7,00	€ 5,00	€ 4,00
up to 10 km	€ 9,00	€ 7,00	€ 6,00
more than 10,00 km	€ 1,10 / km	€ 0,80 / km	€ 0,60 / km

Distances longer than 10,00 will be charged by an exact billing per kilometer.

***Link to public transport hubs will be charged
with a maximum of the 2 tariff intervals***

Tariff Zones

ISTmobil Korneuburg



The **service area** is divided into zones about the same size.

There are defined **fixed tariffs** within a **tariff zone**.

Tariff Structure

ISTmobil Korneuburg



	Bisamberg, Hagenbrunn	Enzersfeld im Weinviertel, Stetten	Ernstbrunn	Gerasdorf bei Wien	Großmugl	Großrußbach	Harmannsdorf	Hausleiten	Korneuburg	Leitzersdorf	Leobendorf	Niederhollabrunn	Niederleis	Sierndorf	Stockerau
Bisamberg, Hagenbrunn	€ 1,7	€ 2,2	€ 5,5	€ 2,2	€ 6,6	€ 4,4	€ 3,3	€ 5,5	€ 2,2	€ 4,4	€ 3,3	€ 4,4	€ 5,5	€ 5,5	€ 4,4
Enzersfeld im Weinviertel, Stetten	€ 2,2	€ 1,7	€ 4,4	€ 3,3	€ 4,4	€ 3,3	€ 2,2	€ 4,4	€ 2,2	€ 3,3	€ 2,2	€ 3,3	€ 4,4	€ 4,4	€ 3,3
Ernstbrunn	€ 5,5	€ 4,4	€ 1,7	€ 6,6	€ 2,2	€ 2,2	€ 3,3	€ 4,4	€ 5,5	€ 3,3	€ 4,4	€ 2,2	€ 2,2	€ 3,3	€ 4,4
Gerasdorf bei Wien	€ 2,2	€ 3,3	€ 6,6	€ 1,7	€ 6,6	€ 5,5	€ 4,4	€ 6,6	€ 3,3	€ 5,5	€ 4,4	€ 5,5	€ 6,6	€ 6,6	€ 5,5
Großmugl	€ 6,6	€ 4,4	€ 2,2	€ 6,6	€ 1,7	€ 3,3	€ 3,3	€ 3,3	€ 5,5	€ 3,3	€ 4,4	€ 2,2	€ 3,3	€ 2,2	€ 3,3
Großrußbach	€ 4,4	€ 3,3	€ 2,2	€ 5,5	€ 3,3	€ 1,7	€ 2,2	€ 5,5	€ 4,4	€ 3,3	€ 3,3	€ 2,2	€ 2,2	€ 3,3	€ 4,4
Harmannsdorf	€ 3,3	€ 2,2	€ 3,3	€ 4,4	€ 3,3	€ 2,2	€ 1,7	€ 4,4	€ 3,3	€ 3,3	€ 2,2	€ 2,2	€ 3,3	€ 4,4	€ 3,3
Hausleiten	€ 5,5	€ 4,4	€ 4,4	€ 6,6	€ 3,3	€ 5,5	€ 4,4	€ 1,7	€ 4,4	€ 3,3	€ 3,3	€ 3,3	€ 5,5	€ 2,2	€ 2,2
Korneuburg	€ 2,2	€ 2,2	€ 5,5	€ 3,3	€ 5,5	€ 4,4	€ 3,3	€ 4,4	€ 1,7	€ 3,3	€ 2,2	€ 4,4	€ 5,5	€ 4,4	€ 3,3
Leitzersdorf	€ 4,4	€ 3,3	€ 3,3	€ 5,5	€ 3,3	€ 3,3	€ 3,3	€ 3,3	€ 3,3	€ 1,7	€ 2,2	€ 2,2	€ 4,4	€ 2,2	€ 2,2
Leobendorf, Spillern	€ 3,3	€ 2,2	€ 4,4	€ 4,4	€ 4,4	€ 3,3	€ 2,2	€ 3,3	€ 2,2	€ 2,2	€ 1,7	€ 3,3	€ 4,4	€ 3,3	€ 2,2
Niederhollabrunn	€ 4,4	€ 3,3	€ 2,2	€ 5,5	€ 2,2	€ 2,2	€ 2,2	€ 3,3	€ 4,4	€ 2,2	€ 3,3	€ 1,7	€ 3,3	€ 2,2	€ 3,3
Niederleis	€ 5,5	€ 4,4	€ 2,2	€ 6,6	€ 3,3	€ 2,2	€ 3,3	€ 5,5	€ 5,5	€ 4,4	€ 4,4	€ 3,3	€ 1,7	€ 4,4	€ 5,5
Sierndorf	€ 5,5	€ 4,4	€ 3,3	€ 6,6	€ 2,2	€ 3,3	€ 4,4	€ 2,2	€ 4,4	€ 2,2	€ 3,3	€ 2,2	€ 4,4	€ 1,7	€ 2,2
Stockerau	€ 4,4	€ 3,3	€ 4,4	€ 5,5	€ 3,3	€ 4,4	€ 3,3	€ 2,2	€ 3,3	€ 2,2	€ 2,2	€ 3,3	€ 5,5	€ 2,2	€ 1,7

Price Quotation
excl. Convenience
Surcharge

Convenience
Surcharge (tariff for
season ticket holder):

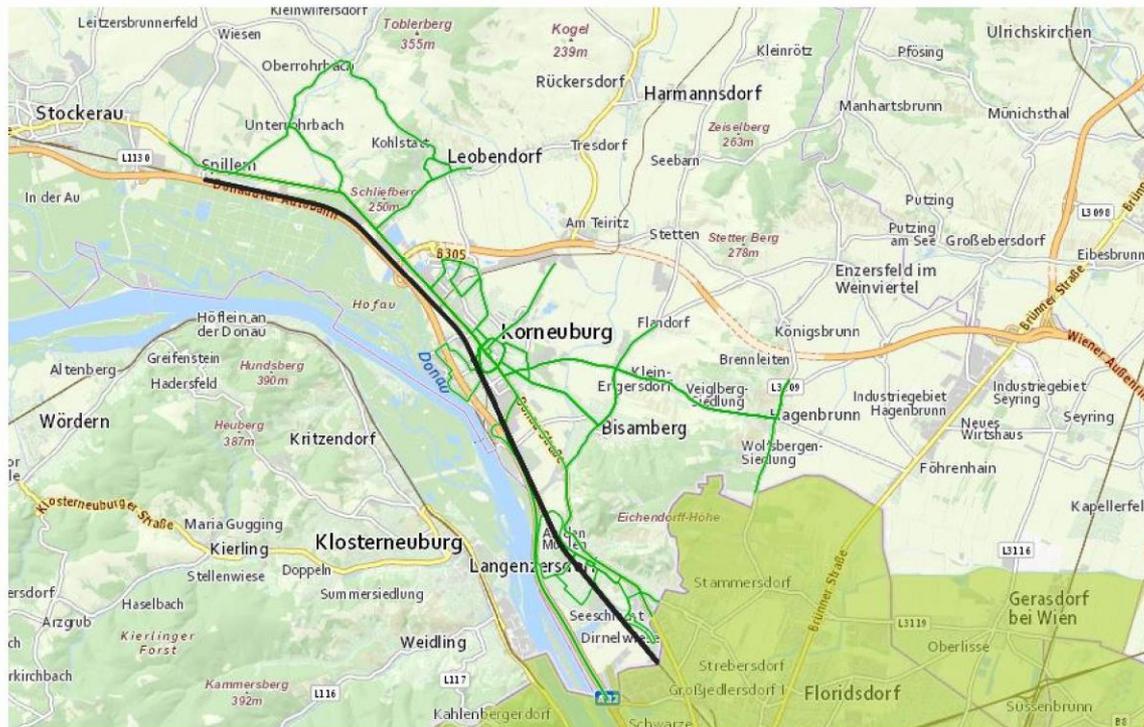
Until 07 pm – € 2,00
After 07pm – € 4,00

Season Tickets I

Example Korneuburg



Mr Smith commutes from Spillern to Vienna on a daily basis and owns an annual pass to Vienna.



Network: Route from Spillern to Vienna(Source: VOR)

Season Tickets II

Example Korneuburg



- **ISTmobil Ride I: Route Spillern to Korneuburg Main Square, 6pm**
 - * Price: **2,00 €** (only comfort surcharge because of season ticket for that very root)
- **ISTmobil Ride II: Route Spillern to Stockerau Town Hall, 4pm**
 - * Price: **4,20 €** (2,20 € basic rate plus 2,00 € comfort surcharge)
- **ISTmobil Route III: Route Spillern to Niederhollabrunn, 8.30pm**
 - * Price: **7,30 €** (3,30 € basic rate plus 4,00 € comfort surcharge)



ISTdis Software

System Components I



Input-Interface

Graphical User Interface
Online Customer Access
ISTmobil App



Output-Interface

Tablet
Smartphone
Analogue Media



Backend

Administration
Controlling



Allocation of Rides

Automated
Manual

ISTdis Software

System Components II



Automised Billing

Customers
Car Companies
Communities



Maps

Mapping
Routing



Customer Management

Customer Data Base Adresses
of Home Pick-up Services
Accounting



Support

Customers
Car Companies

User Interface Service Center (Callcenter)



IST mobil Fahrgast & Mobilcard Management

ZENTRALE

Neuer Auftrag

Aufträge

Informationen

Ausserland - Narzissenjet

	NJAT-1, 8 R, D		NJTG-1, 8 R, D
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Graz Umgebung

	GUEB-4, 8 R, D		GUEW-1, 4 R, D
	GUEW2, 4 R, D		GUSP-1, 8 R, D
	GUTT-1, 4 R, D		GUEB-1, 6 R, D
	GUEB-2, 4 R, B		GURH-1, 8 R, B

Korneuburg

	GB-1, 8 R, D		KL-1, 4 R, D
	WD-1, 4 R, D		WD-2, 6 R, D
	WZ-1, 6 R, B		SA-1, 4 R, B
	SA-2, 6 R, B		

Changing to Public Transport



Criteria

- * **Immobile people** are transported directly **to all stopping points at all times by ISTmobil** (home pick-up service remains unchanged)
- * **No change to public transport within a community** necessary
- * Rides **across communities** are check wheather a **direct ride by public transport** or **multimodal ride** (on demand public transport services) are possible
 - Public transport connection is checked **15 minutes** before and **30 minutes** after the customer's booking time



Changing to Public Transport

Example ISTmobil Korneuburg I



Mr Smith would like to get from **Seyring** (community Gerasdorf) to **Gerasdorf Townhall** at **8.30am** on **weekdays**.

Is it possible that ISTmobil conducts this ride directly or is a change to public transport necessary?

As the route is within one community, ISTmobil can conduct the ride directly to the customer's destination.



Changing to Public Transport

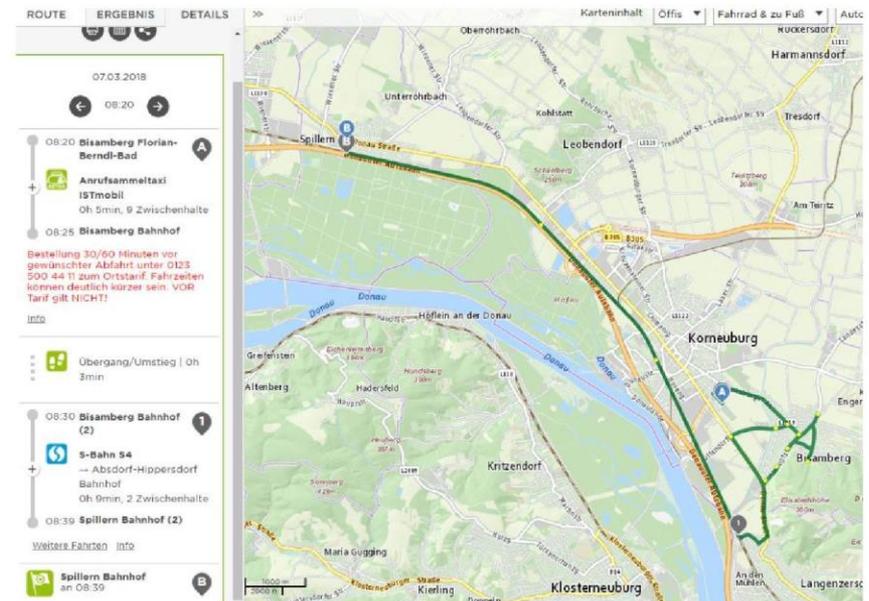
Example ISTmobil Korneuburg II



Mrs Stuart needs a ride from **Bisamberg** (Florian-Berndl-Bad) to **Spillern** at 8.15am on weekdays.

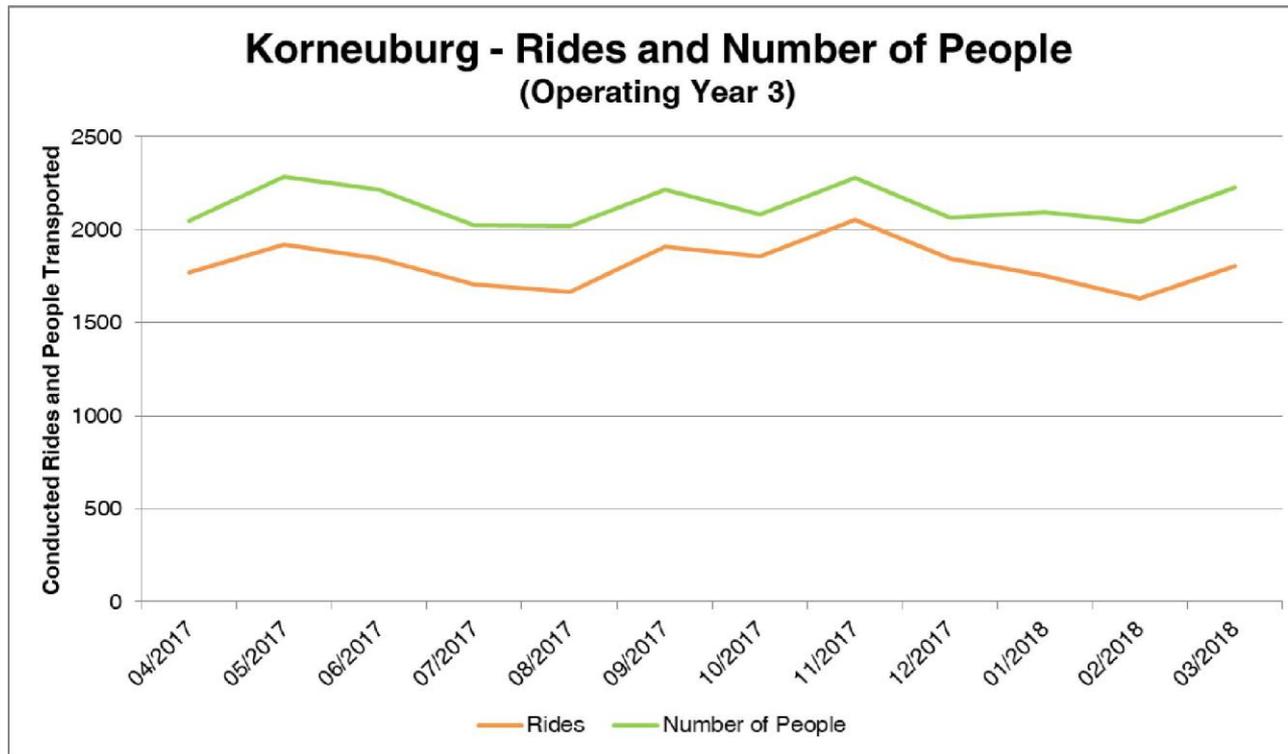
Is it possible that ISTmobil conducts this ride directly or is a change to public transport necessary?

As there is a train connection available at 8.30am to Mrs Stuart's destination, ISTmobil acts as feeder for the public transport.

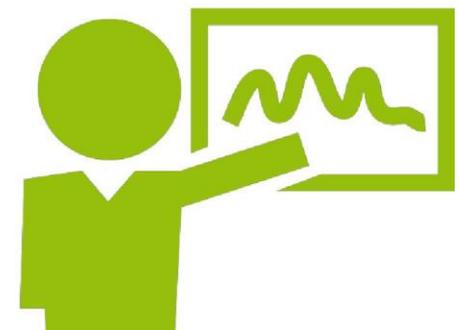


ISTmobil Evaluation

Example Korneuburg



Increase of rides since April 2015 by 50 %



Contact



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