

Building Efficient Pricing Model

How making data-driven decisions can help successful business become even more successful

Customer

Leading ground transportation company with 90+ transportation routes and 500,000+ monthly passengers.

Industry

Transportation

Challenge

Pricing mismatches

Some tickets sold at higher prices than passengers were willing to pay while other sold at lower prices than passengers were able to pay.

A blue bus is shown on a street, completely covered with passengers sitting on the roof. The bus is also heavily loaded with large bundles of goods, including what appears to be harvested crops, tied to the roof and hanging from the sides. Several people are standing around the bus, some handling the goods. The scene illustrates a common mode of public transport in developing regions where the pricing model is often inefficient, leading to overcrowding and limited business growth for the operator.

**Inefficient ticket pricing model
limited Client's business growth**

Challenge

Pricing mismatches

Some tickets sold at higher prices than passengers were willing to pay while other sold at lower prices than passengers were able to pay.

Company operators manually setting ticket prices

Manual process of setting prices resulted in a number of mechanical mistakes, where prices were often not adjusted when policies required an increase.

The combination of overly simplistic price setting rules and operator errors created unnecessary revenue losses.

A bigger picture

To tackle the challenge ELEKS decided to split project to number of steps, looking at the project not as a purely modeling work but as **a business problem** – a wider look, that **helped to better understand** core reasons of poor results and eliminate them.



Solution

Market analysis

Analyzing current market and micro economic situation

- 01 The company operates in a monopolistic-rivalry market
- 02 Limited number of vendors and consumer options
- 03 The market for tickets was formed by aggregating supply
- 04 Inefficient marketplace for tickets

The market for tickets was formed by aggregating **supply, rather than **demand**. Passengers will purchase tickets at **any reasonable price**, assuming no alternative means of transportation is available.**

Solution

Historical data analysis

Data Analyzed:

- Tickets sold, including information on the departure date and time.
- Purchase location.
- Destination city.
- Ticket price.
- Other related data

Dependencies between input data and the number of passengers willing to travel:

74.7%

Late ticketing
purchased tickets
less than 10 days
prior to trip

46.7%

Morning trips
passenger departed
before 11am

41.9%

Sunday & Friday
traveled on these
days

77.1%

Terminal stations
as point of departure

Solution

Enriching dataset

After better data understanding we've realized a need to enrich data set with additional data, such as distance between travel points, cost for single passenger transportation, average revenue per 1 km, etc.

EXISTING DATA

- departure date
- departure time
- ticket price
- purchase location
- destination city

...



NEW DATA

- distance between travel points
- cost for single passenger transportation
- average revenue per 1 km

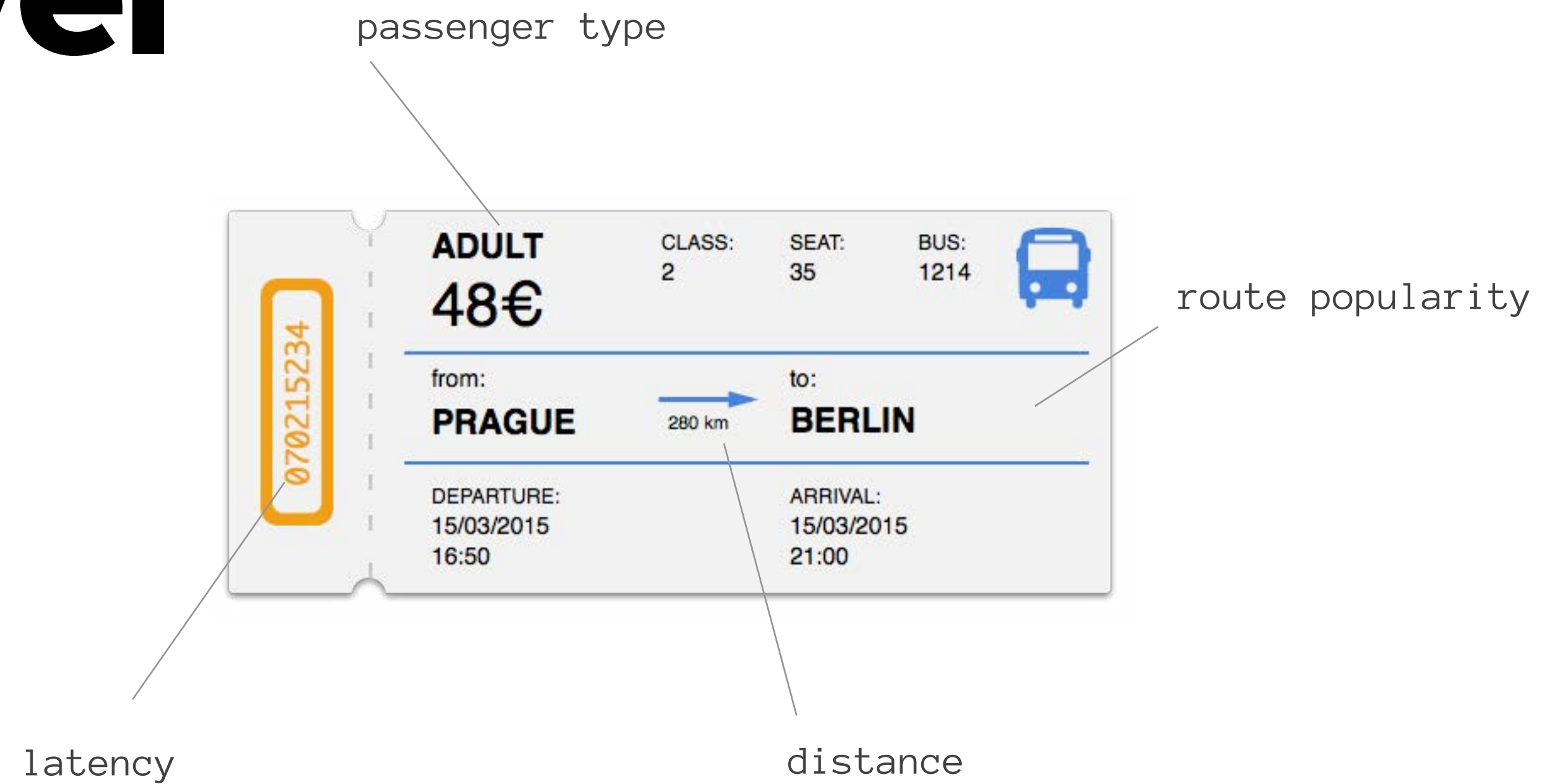
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Solution

Understanding the nature of individual travel

Every ticket/travel is described by a number of parameters, defined at the moment of purchase. These parameters, analyzed in a proper way, represent passengers readiness to purchase a ticket at specific price.

The existing pricing model did not consider input parameters to set individual ticket prices.



Solution

Building a pricing model

The model was implemented leveraging ELEKS software engineering experience as a [comprehensive software solution](#).

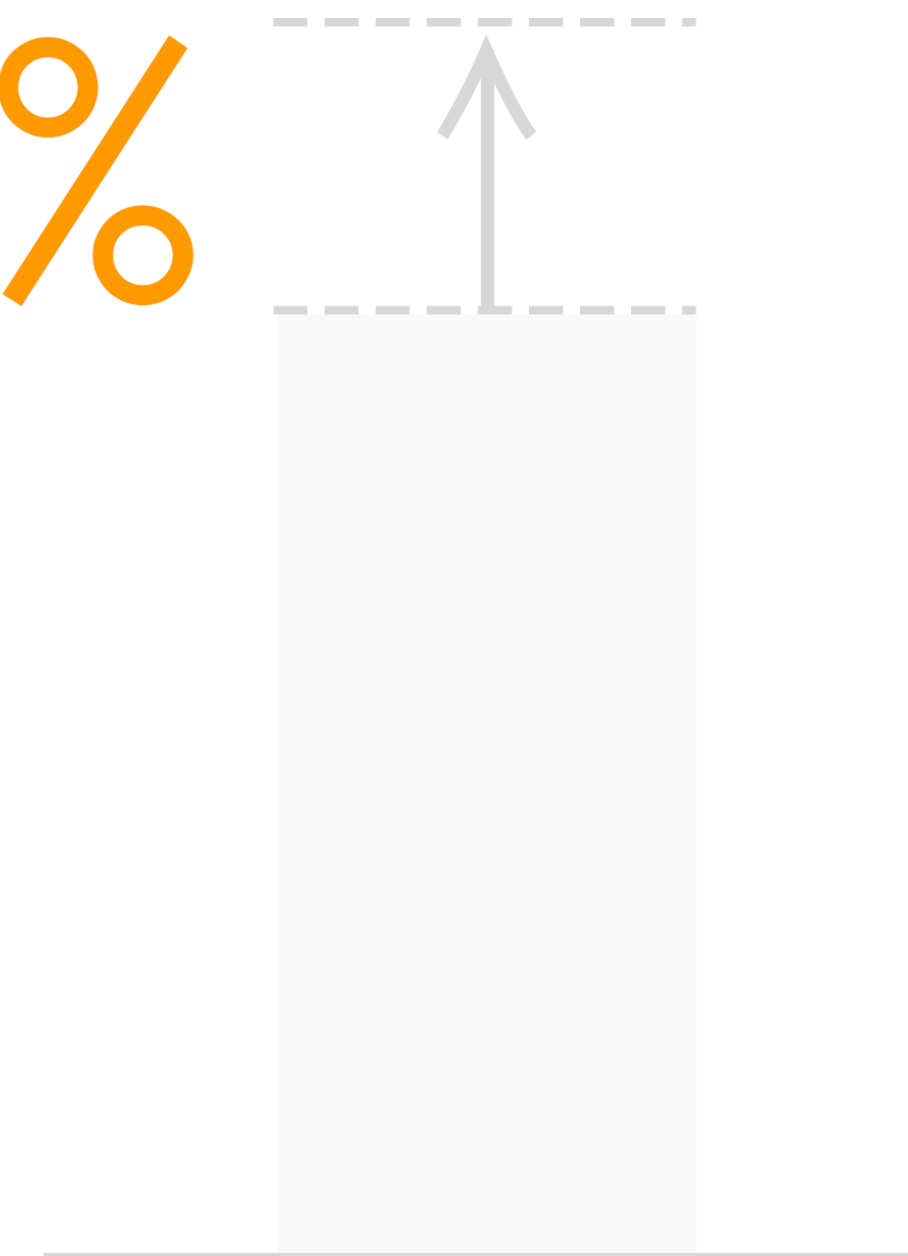
Delivered solution enabled automated ticket pricing based on desired travel parameters, consumer behaviors, and demand.



Business benefits

- Increased number of tickets sold.
- Significant revenue increase - up to 21% revenue increase for specific routes.
- The solution also helped decrease operating costs due to the automation of price setting and allowing the company's employees to concentrate on other important tasks.

21%



Success factors

- Market and economic factors analysis and deep problem understanding
- Considering input parameters for modeling rather than only demand
- Dataset enrichment
- Complex software solution



About

Named a Top 100 Global Outsourcing Company, ELEKS is a global organization providing software engineering, technology consulting and quality assurance services.

Since 1991, ELEKS innovative and award-winning solutions have significantly contributed to the customers' unparalleled business growth to include Data Science, Mobility, Digital and Financial solutions.

Contact us

ELEKS Headquarters

Eleks, Ltd.
7 Naukova St., Building G
Lviv 79060, Ukraine
phone: +380 32 297-1251
fax: +380 32 244-7002

UK Office

ELEKS Software UK, Ltd.
5 Harbour Exchange
South Quay
London, E14 9GE
phone: +44 203 318-1274

Find us at **eleks.com**

Have a question? Write to **eleksinfo@eleks.com**