



SmartGuide

**24th International Joint Conference: Central and Eastern
Europe in the Changing Business Environment**

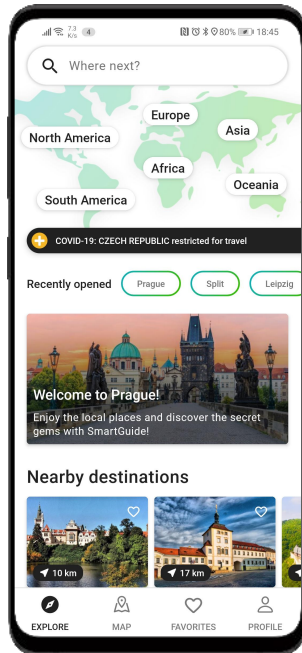
AI-driven Personalized Recommendation for Travelers Contributing to Sustainable Tourism in Hotspot Destinations



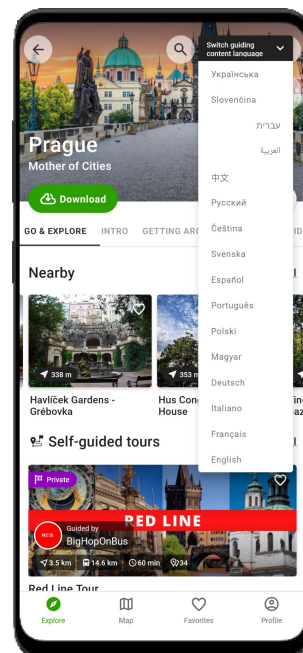
Romana Olexová
SmartGuide CMO
romana@smart-guide.org

SmartGuide is to digital travel guides what YouTube is to videos

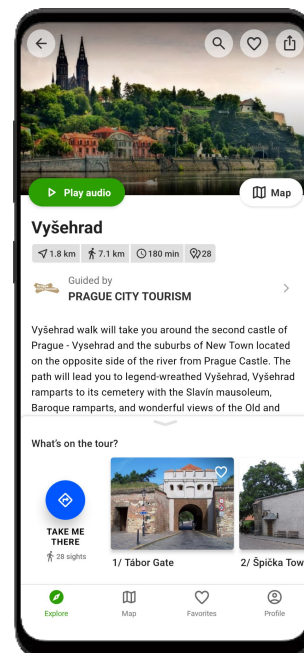
1300+ guides in a single app



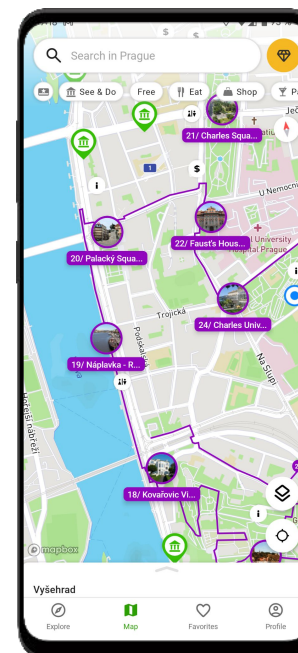
Auto-translation in 30 languages



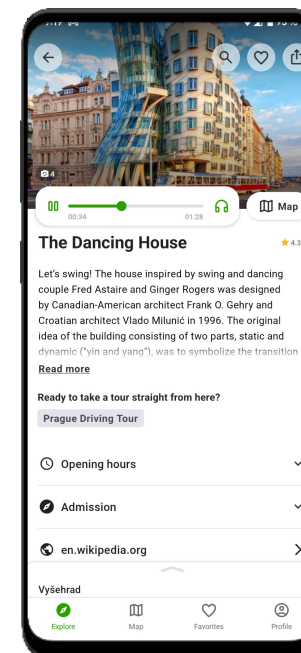
Self-guided audio tours



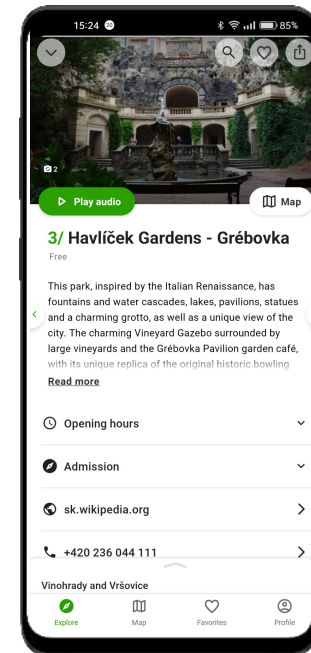
Offline maps and itineraries



Engaging stories play as you walk



Top local experiences

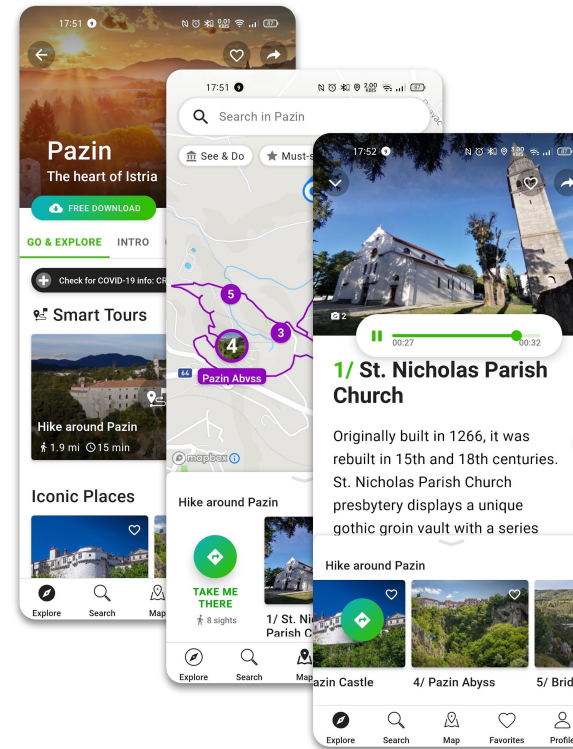


SmartGuide

Ready-made platform instead of expensive development



Automated
maps and
audio



- Simple **web editor**
- Smart **route generation**
- Automatic TTS **audio**
- Easy DeepL **translations**
- Quick content **updates**
- **No IT** development

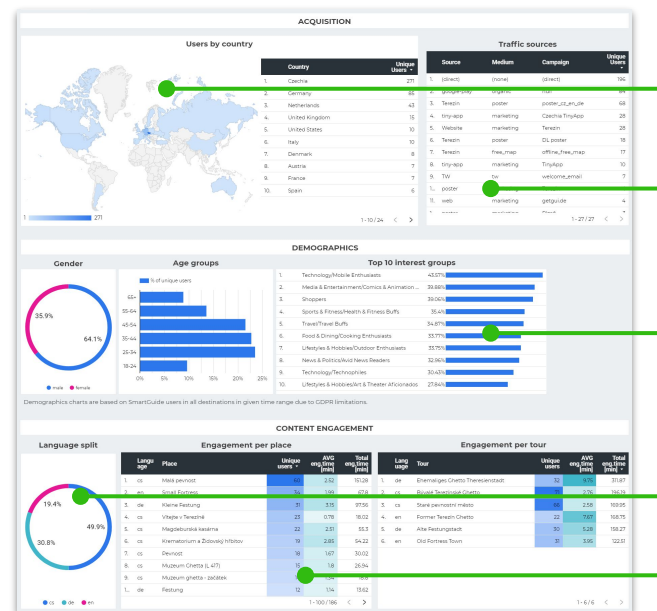


SmartGuide

Big data analytics provides invaluable insights about visitors

Live dashboard with key stats

Included in the Prime maintenance package



Which countries are your visitors from

Which channel did they come from (e.g. your poster)

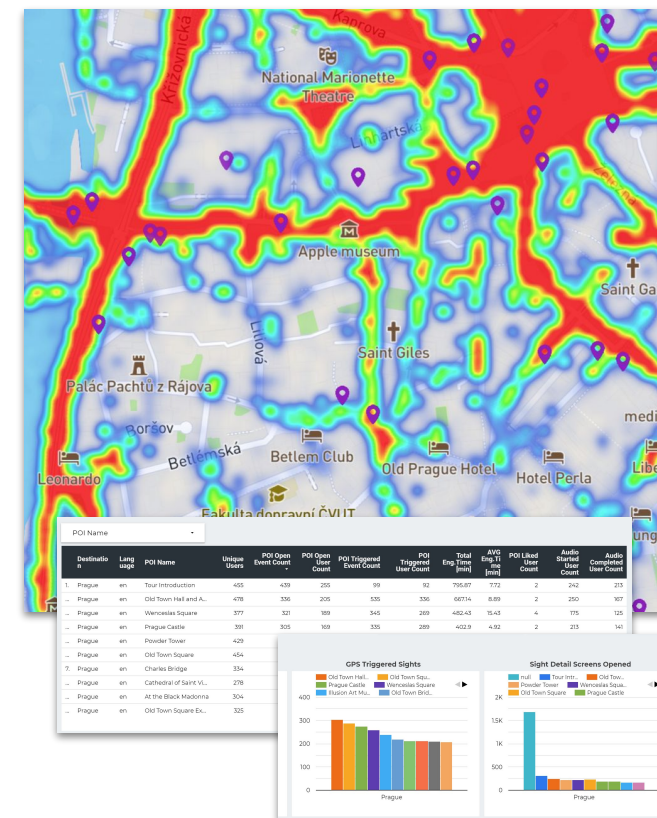
Demographics and interests of all SmartGuide users

In which language they choose to get guided?

How much time they spend interacting with your content. Which places are most popular and where the story is most catchy?

Custom analytics e.g. heatmaps

Pricing based on requested scope

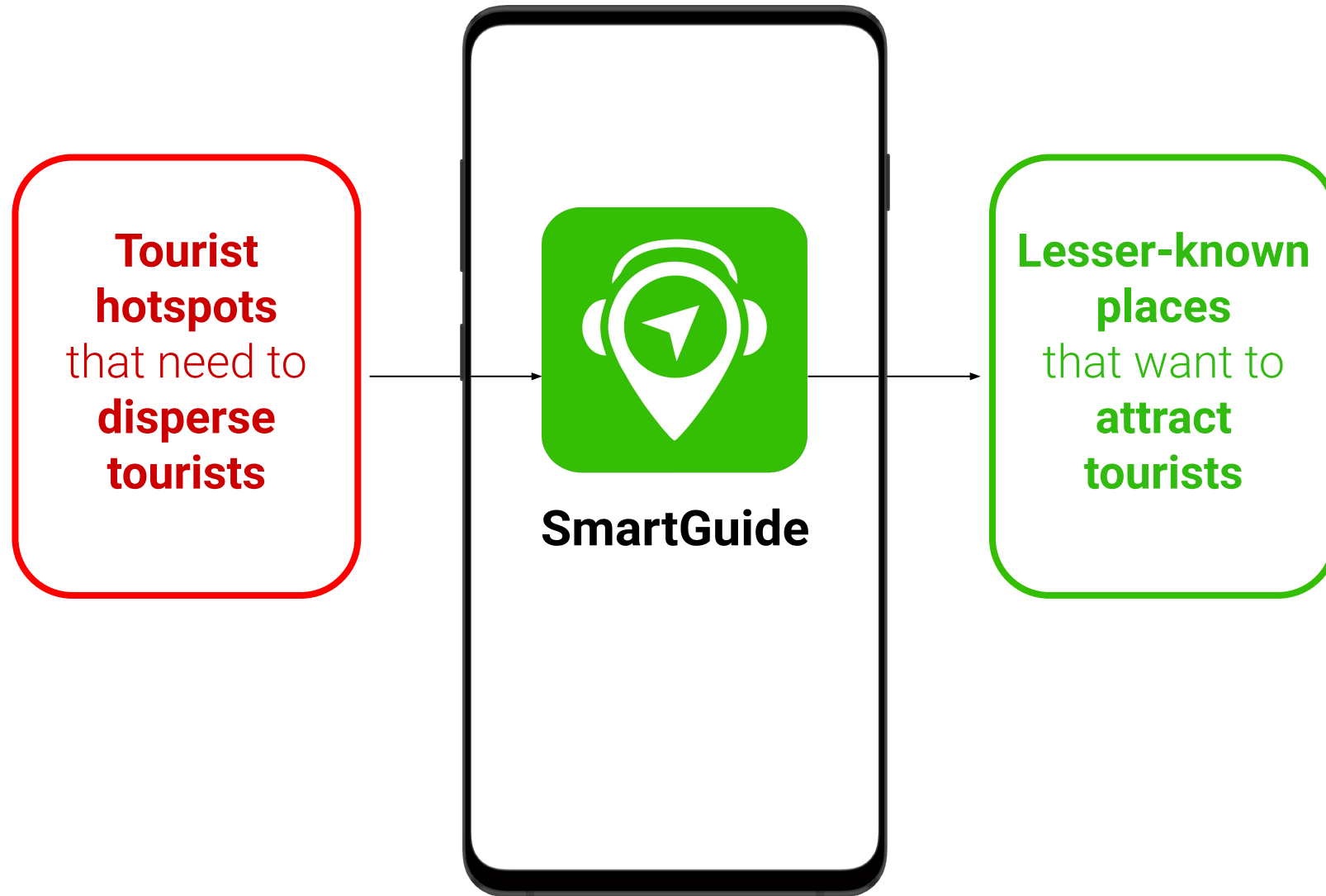


We know a lot about your visitors so we can build custom reports to answer the question you want to know, for example:

- where people go (accurately based on GPS)?
- how much time they spend there?
- how they flow through the destination? What is popular in the morning and where they spend evening?
- Where they get lost and check the map?
- What are the differences amongst demographic groups how they explore destination?

All data is collected in a GDPR compliant way and presented only on an aggregated basis





AI-driven
personalized
recommendations

+

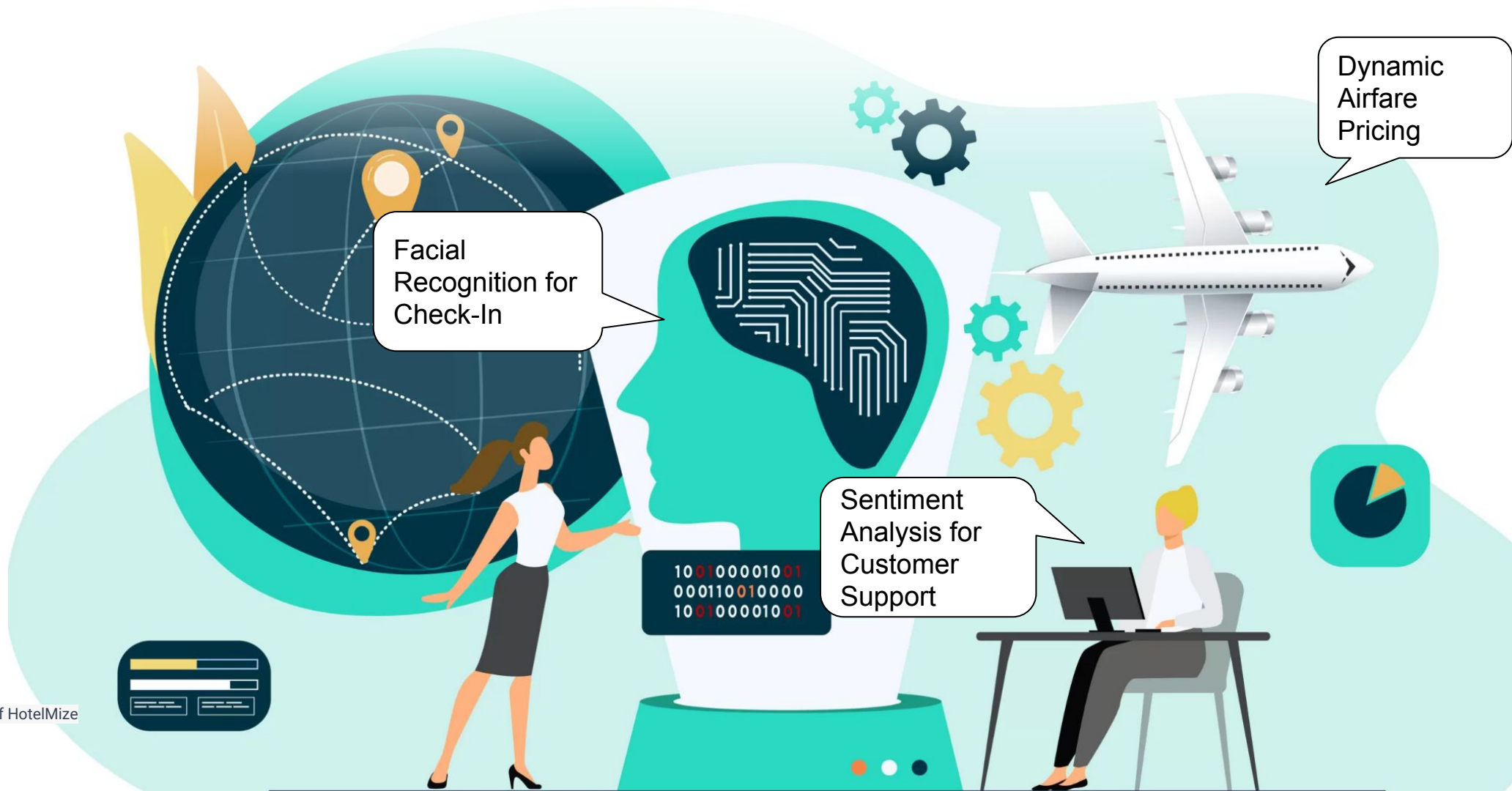
Digital
content
coverage

=

**Working tool to help disperse crowds from
tourist hotspots to lesser-known places**



Artificial Intelligence is Transforming Travel



SmartGuide

Image courtesy of HotelMize

There are many different types of artificial intelligence

Natural Language
Processing

Neural networks vs.
Genetic Algorithms

Decision Tree - Random
forest

Machine Learning
Regression vs.
Classification
algorithms

supervised vs
unsupervised
learning

Support Vector
Machines

Generative AI
Large Language Models

Deep learning vs.
reinforcement learning

Self aware AI



Examples of Using Generative AI by Tourism Stakeholders

Rewriting existing texts in different styles for various visitor groups (e.g., facts for adults, fairy tales for children)

You

you are an experienced writer of fairy tales for children from 5 to 10 years old. retell the following text as an engaging educational fairy tale for children. avoid using foreign words and complicated expressions. The fairy tale should be original and funny for children.

Quiet, please! Close your eyes. Can you hear the soft notes that pour from the strings of the violin of the famous virtuoso Niccolò Paganini? Imagine he played his concert at the Post Office in 1828. But we're getting a little ahead of ourselves...

The Postal Yard - a classical, Empire-style building - served a completely different purpose in the beginning. The building was built in 1792 by Josef Korb, the postmaster of Karlovy Vary. What do you think used to be here? It was a post office for horse-drawn carriages. But Josef Korb appreciated the beauty of his surroundings. He had pergolas, arcades and cosy arbour built in the garden, where all kinds of musicians played. The ordinary post yard gradually became a popular centre of spa society. Despite this, he sold the building in August 1801.

Three years later, Emperor Franz II established the St. Bernard Hospital for poor spa guests. The tenants changed as if on a treadmill and none of them invested in the building. And the Post Office was almost dilapidated. It wasn't until Gotthelf Friedrich Pfitzmeier became its saviour. He repaired the building and in the summer of 1810 he rebuilt it in an Empire style into a touring café called the Posthof. And that's when Paganini also found a famous music venue. However, he concentrated here mainly the Carlsbad Spa Orchestra, founded in 1835, under the baton of conductor Josef Labitzki. One of the halls was named after him.

ChatGPT

Once upon a time, in a land filled with rolling hills and singing birds, there was a grand and stately building known as the Postal Yard. This wasn't any ordinary place; it was a palace for horse-drawn carriages, crafted with love and care by a kind-hearted postmaster named Josef. Josef wasn't just any postmaster; he was an artist at heart. He transformed the Postal Yard into a magical garden, where flowers danced and music floated through the air.

In this garden, Josef built special little houses called pergolas, lovely walkways called arcades, and secret spots called arbours. These weren't just for anyone - they were for musicians to fill the air with their enchanting tunes. Over time, this place, which once was just for carriages, turned into a treasure of the town, a favorite spot for everyone who loved beauty and music.

But, as in all good stories, there came a twist. Josef, with a heavy heart, had to sell his beloved Postal Yard. For a while, the place lost its sparkle. It changed hands more times than a hot potato in a game of catch! Each new owner didn't see the magic that Josef had created. The Postal Yard was sad, its music quieted, and its gardens began to wilt.

Then, like a hero in a shining armor, along came Gotthelf Friedrich Pfitzmeier. Gotthelf wasn't just anybody; he was the one who saw the Postal Yard's true beauty. With a lot of love and a bit of elbow grease, he brought the palace back to life. He transformed it yet again, this time into a marvelous café named the Posthof, where laughter, cakes, and, most importantly, music filled the air.

And then, guess who came to play in this enchanting place? The most famous violin player of all time, Niccolò Paganini! But wait, there's more! Not only did Paganini grace the Posthof with his presence, but this place also became home to the Carlsbad Spa Orchestra, led by the maestro Josef Labitzki himself. Imagine that! A hall filled with the most beautiful music you've ever heard, all because people believed in the magic of the Postal Yard.

And so, the Postal Yard, which began as a simple home for carriages, became a place where dreams came true, music soared, and everyone was welcome to share in its joy. And they all lived musically ever after.



Example of SmartGuide AI copywriter for expanding short descriptions



Hohenwerfen Castle

Description is available in the Salzburg Knowledge Graph:

A tour of the fortress takes you back to the 11th century. Visit the exhibition of weapons, the bird-of-prey flight demonstrations, the falconry museum, the special exhibit, the medieval shop and the historic taverns.

Sample result of AI-supported copywriting



Description

Centuries ago, archbishops assembled the 900-year-old Hohenwerfen Castle, perched atop a 155m tall cliff in Austria. This well-preserved fortress oversees the Salzach Valley, encased within the Berchtesgaden Alps and the Tennen Mountains. It's also a center of falconry, boasting an impressive bird of prey show.

Learn More

Once upon a time, the medieval period to be precise, Hohenwerfen Castle was birthed. We're talking a big, towering fortress overlooking the Salzach Valley from atop a cliff. Picture an accessible island of rocky magnificence, an insurmountable centenarian of sheer class. It truly is a sight to behold, with those Berchtesgaden Alps and Tennen Mountains making quite an impressive backdrop.

The Castle is something of a sibling to the formidable Hohensalzburg Fortress, constructed by Archbishops of Salzburg themselves during the 11th century. Let's just say, they seemed to have a penchant for constructing impressive edifices. Add a dash of intrigue and history to your visit by attending the falconry exhibition; you'll see falcons, vultures, eagles, and other indigenous birds showing off just how well they owned the sky. It's heart-racing, trust me.

The Hohenwerfen Castle has quite the rap sheet; sieges, attacks, and even used as a prison for high-ranking individuals such as Archbishop Wolf Dietrich von Raitenau. It's the medieval equivalent of a maximum-security facility with an excellent view. Did I mention the historically-dressed castle guides? They certainly add a dollop of authenticity to the overall experience; offering tours in 14 languages, no less. That's dedication!

Once you're done with all the touring, drop by the castle tavern for some refreshments. And for our little knights in training, the castle is a living playground that aligns perfectly with their wild imaginations. Who knows, maybe Hohenwerfen Castle might inspire the next generation of archbishops with a passion for fortress construction! Just remember, a visit to Hohenwerfen is not for the faint-hearted - it's a dive into the past combined with a thrilling bird of prey exhibition. So, are you up for an adventure?



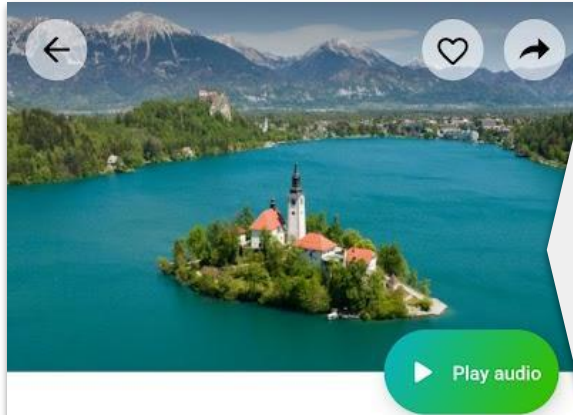
Example of SmartGuide AI Copywriter based on GPT-4



Guided by
SmartGuide AI



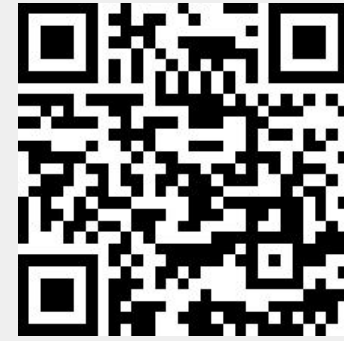
SmartGuide



Bled Island

Perched atop a hill in the middle of an Alpine lake, this enchanting islet known as Bled Island is the only natural island in the country. It's an easy guess why it's a magnet for tourists. With a charming church at its center, the island promises a mix of serenity, history, and folklore. The Church of the Assumption, which dates back to the 17th century, is known for its ""wishing bell."" Legend has it that if you ring this bell three times and make a wish, it will come true.

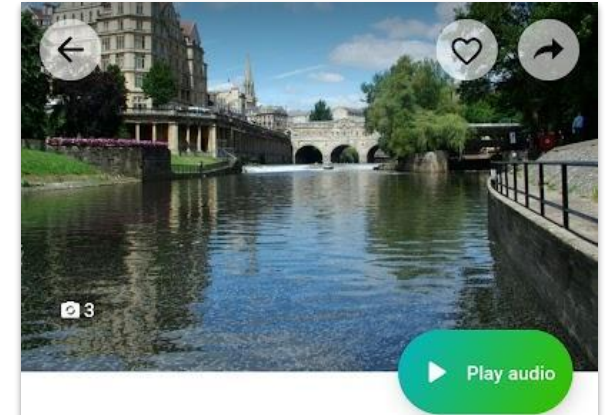
A peculiar tradition also binds the island with weddings. It's



Example of AI guide
in Bled



Example of AI guide
in Bath - comedy



Pulteney Bridge

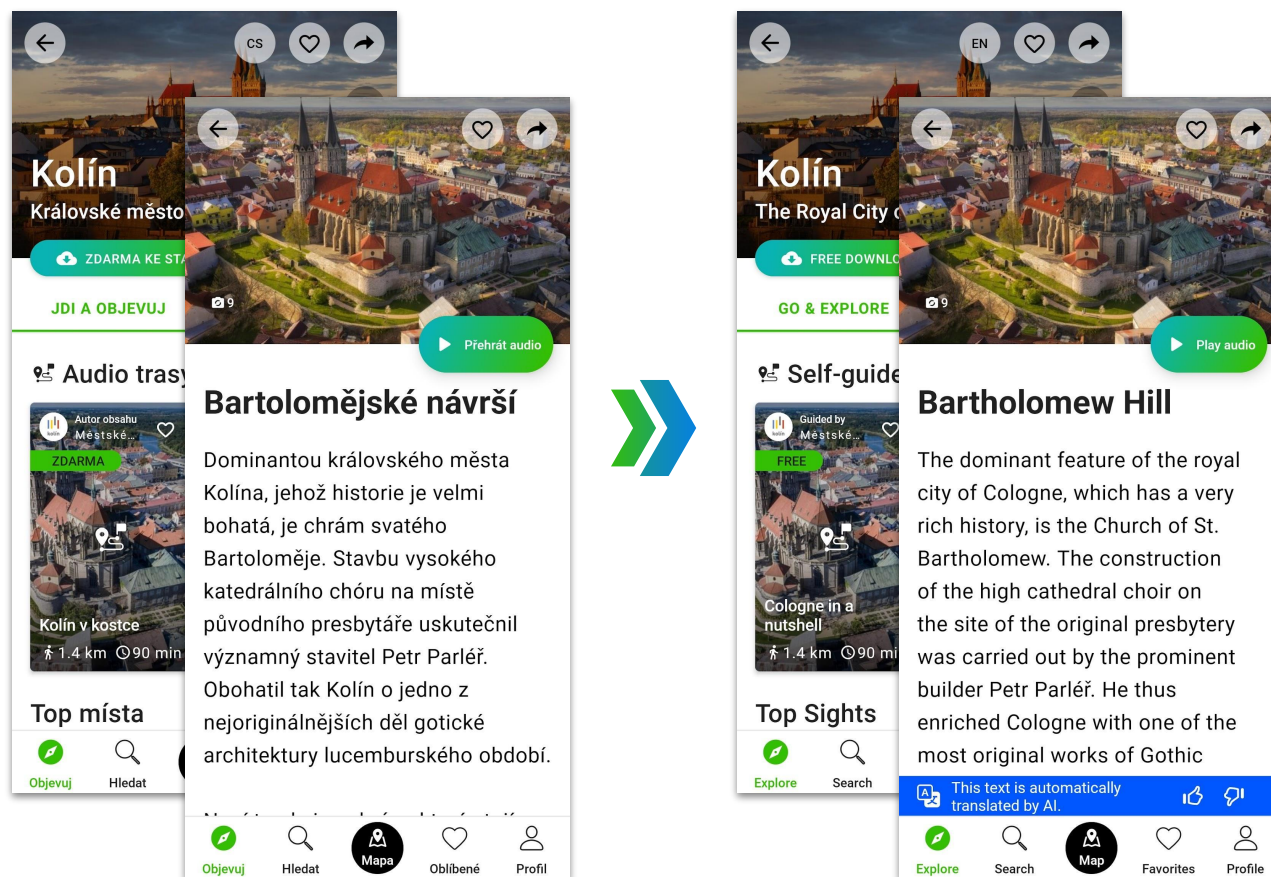
★ 3




Pulteney Bridge: where architecture meets indecision. Designed by Robert Adam in the 18th century, this bridge thought, "Why just be a bridge when you can also be a mall?" It's one of the few bridges globally where you can buy a souvenir while crossing a river. Efficiency or identity crisis? You decide.

Spanning the River Avon with its "look at me" Palladian style, it's the kind of bridge that probably has its own Instagram influencer account. Named after Sir William Pulteney, who probably just wanted



AI Translations of the Entire Destination Including Audio



- AI translation of the entire guide into 30 supported languages*
- Includes AI audio recording
- AI translation is clearly marked
-  This text is automatically translated by AI.  
- Analytics on the usage of each language, allows smart decision-making on where to invest in human revision.
- Published on the website for SEO - attracts visitors seeking information in a specific language



SmartGuide

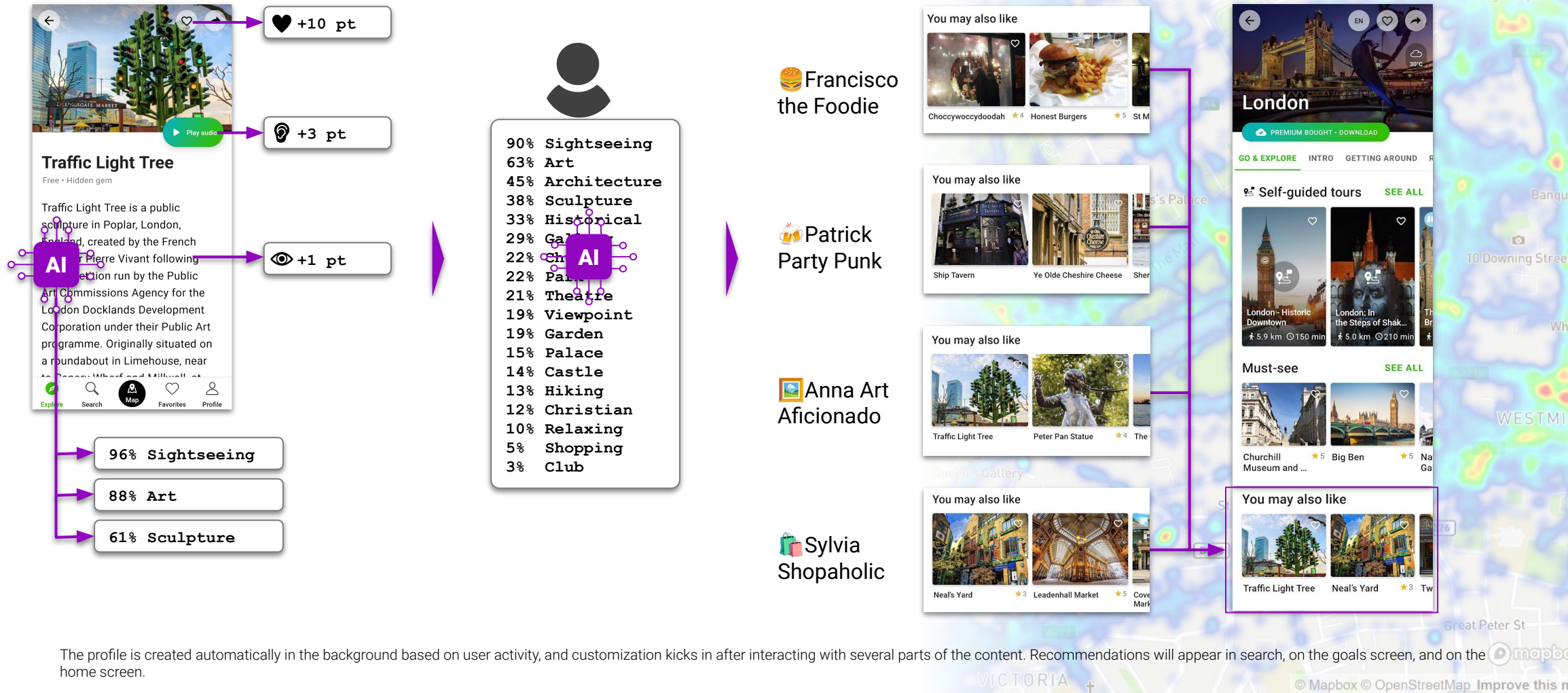
* Supported languages: Arabic, English, Bulgarian, Chinese, Czech, Danish, Estonian, Finnish, French, Indonesian, Italian, Japanese, Korean, Lithuanian, Latvian, Hungarian, German, Dutch, Norwegian, Polish, Portuguese, Romanian, Russian, Greek, Slovak, Slovenian, Spanish, Swedish, Turkish, and Ukrainian.

Personalized Recommendations

- Tailored travel recommendations based on individual preferences (similar to Netflix or Spotify)
- More relevant tourist guides
- Crowd distribution and support for sustainable tourism



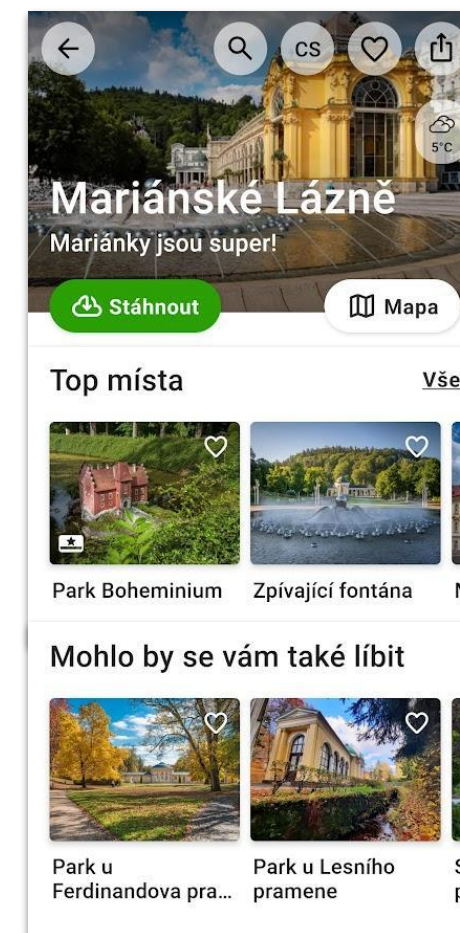
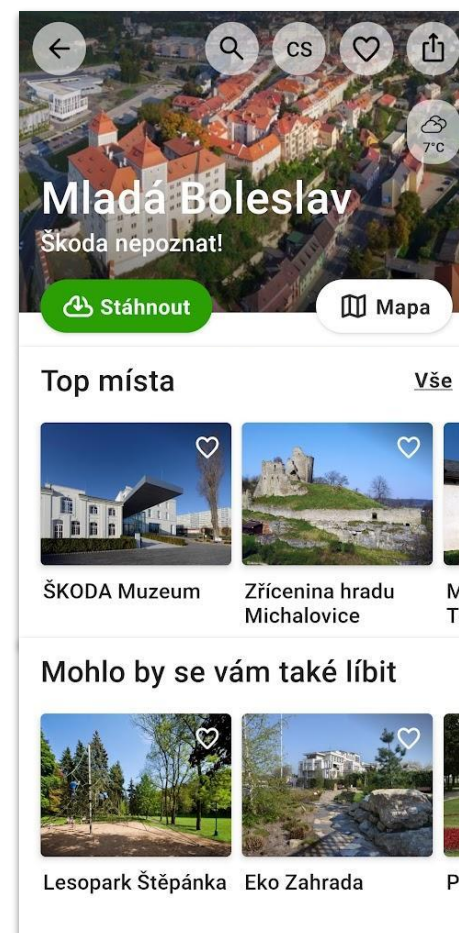
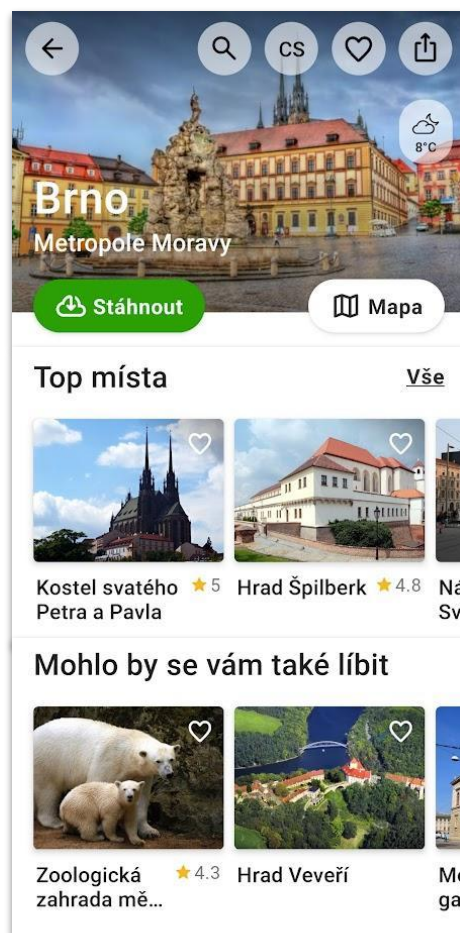
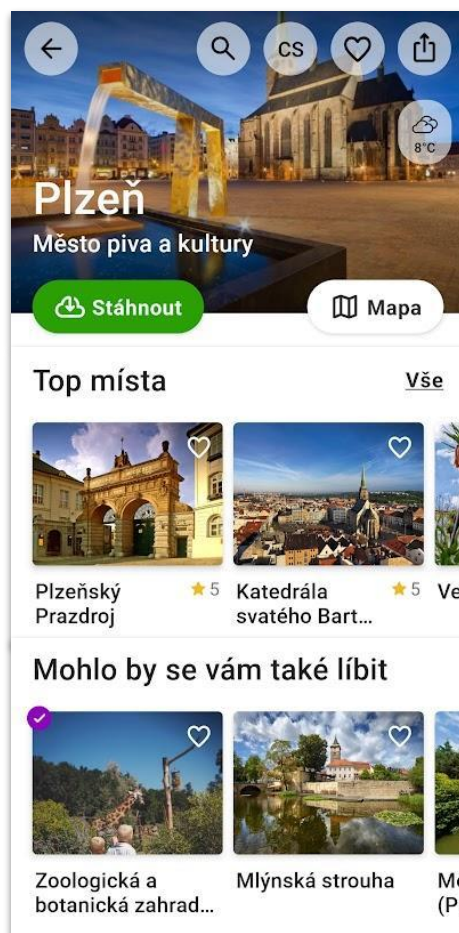
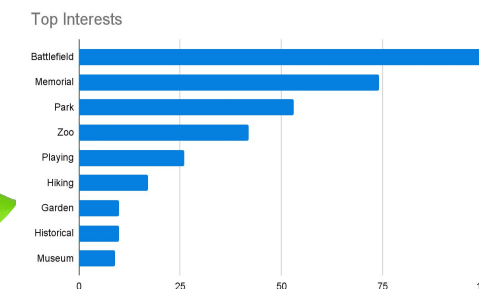
Artificial intelligence recommends different places to everyone based on their interests, helping to disperse crowds.



SmartGuide

The profile is created automatically in the background based on user activity, and customization kicks in after interacting with several parts of the content. Recommendations will appear in search, on the goals screen, and on the home screen.

Example of AI Personalization: Traveling with Children, Especially in Nature



SmartGuide

Itinerary Planner

- Comprehensive travel planning
- Considers multiple variables (interests, locations, weather, etc.)
- Current technological solutions explore various AI approaches



Chat GPT used by 6% of travelers in 2023

ChatGPT 3.5 ▾



You

What should I do in Prague today for 4 hours?



ChatGPT

If you have four hours to spend in Prague, there are several options to make the most of your time and experience the city's highlights:

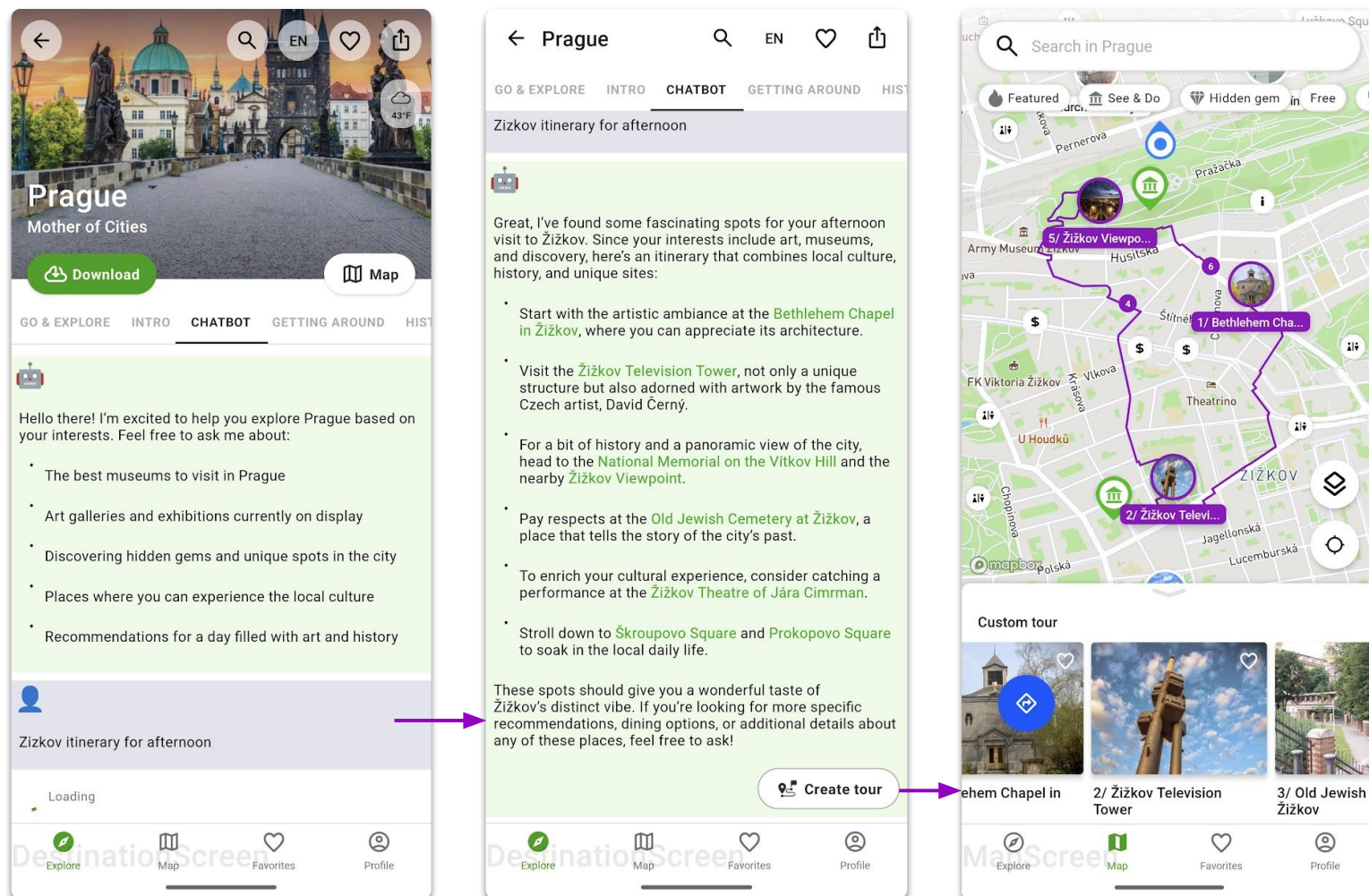
1. **Old Town Square (Staroměstské náměstí):** Spend some time exploring the historic heart of Prague. Admire the stunning architecture, including the Astronomical Clock (Prague Orloj), and take in the bustling atmosphere. You might also consider climbing the tower of the Old Town Hall for panoramic views of the city.
2. **Charles Bridge (Karlův most):** Take a leisurely stroll across this iconic 14th-century bridge. Enjoy the views of the Vltava River, Prague Castle, and the surrounding architecture. You can also stop to admire the various statues and street performers along the bridge.
3. **Prague Castle (Pražský hrad):** While you may not have time to explore the entire complex, you can still visit some of its highlights, such as St. Vitus Cathedral, the Old Royal Palace, or Golden Lane. Be sure to check the opening hours and any ticket requirements in advance.
4. **Wenceslas Square (Václavské náměstí):** Take a stroll along this bustling boulevard lined with shops, restaurants, and historic buildings. ↓ t the Wenceslas Monument and soak in the vibrant atmosphere of one of Prague's main squares.

Message ChatGPT...



SmartGuide

Integrating Chatbots into Destination Online Channels

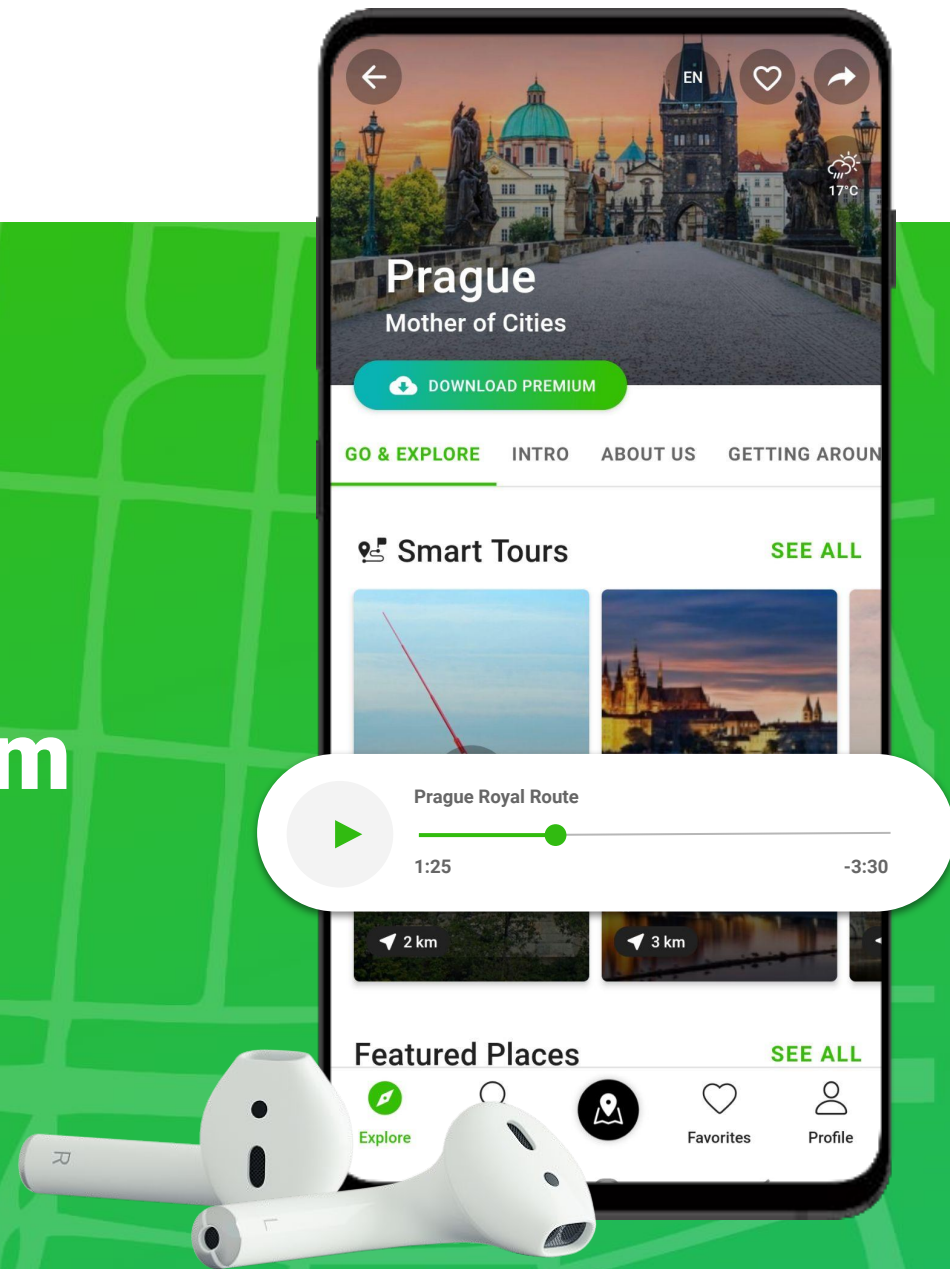


The power of the latest Chat GPT for natural responses to questions about destinations and itinerary planning. In comparison to the output directly from the Chat GPT application, it adds:

- Personalization based on user's interest profile
- Links to verified information about places in the SmartGuide tour guide
- Output with photos and geolocation for easy use

Currently in the concept verification phase.

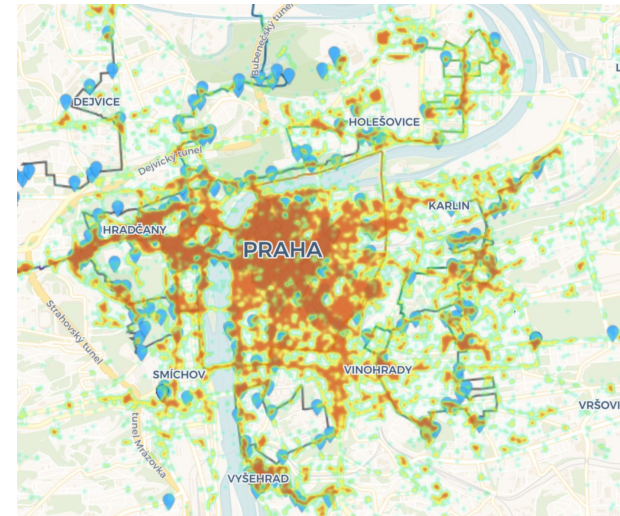
How AI-driven digital guides contribute to sustainable tourism



1 Prague



Example: Lead 30% of guide users out of crowded center



“Publishing 10 walking tours on SmartGuide allowed us to expand the content beyond what fits in paper brochures and it **only took 2 weeks**. But what is even more impressive, SmartGuide tours help motivate **tourists to spend more time outside of most popular crowded places**. This is one of the **keys to sustainable tourism**.”

Petr Soukup, Digital Specialist,
Prague City Tourism

Situation: Overcrowded city center, everyone visiting the same spots.

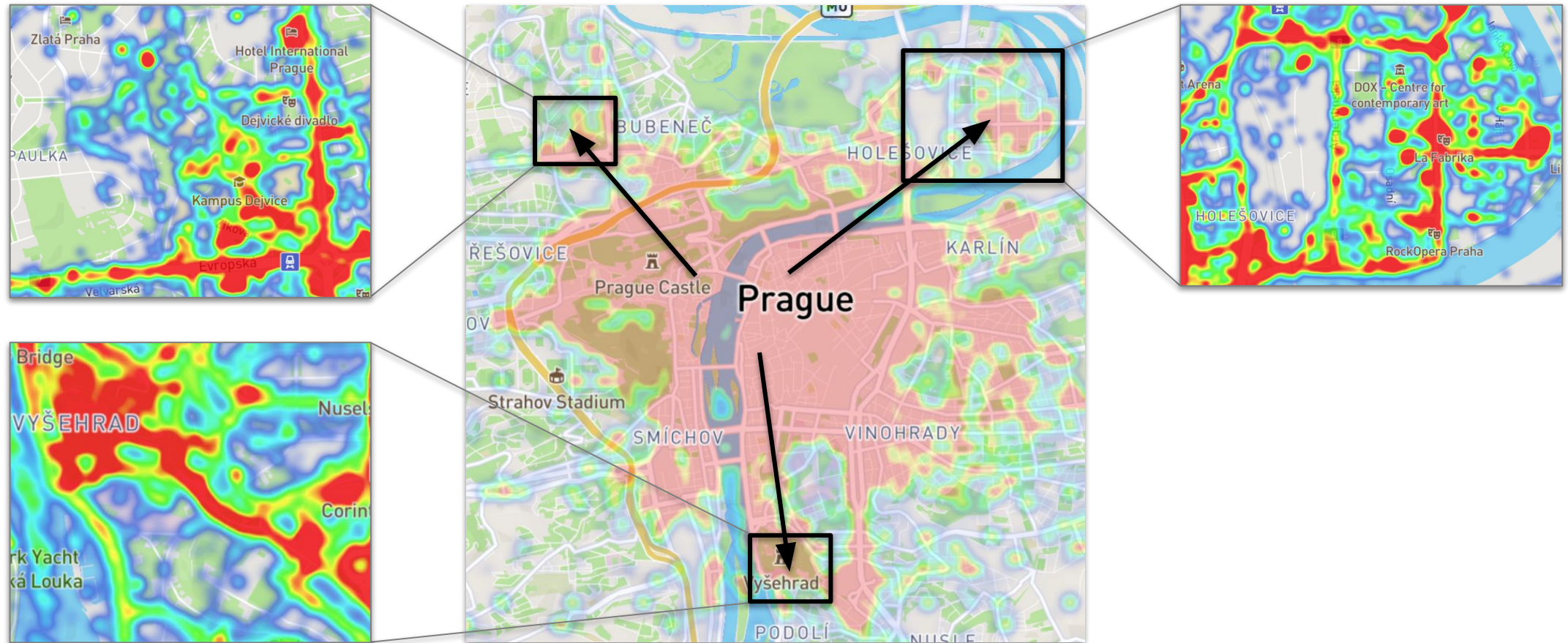


Solution: Tourists spend 30% of time outside of center because we tell them what is exciting to see and do there.









Prague inspired 30% of tourists out of crowded center









17. 11. 1989

Přehrát audio

Mapa

17. listopad 1989

Den, který změnil českou historii

3.5 km 5.0 km 120 min 19

Autor obsahu
SmartGuide

Dnes si připomeneme události
přelomového dne české historie

Co na trase uvidíte?

Vezmi mě tam



Úvod 2 Albertov

Objevuj Mapa Oblíbené Profil

Hledat v destinaci Praha

13. Příprava
12. Atmosféra na
Rašínově nábřeží

8. Příprava
pořádkových složek

6. Vyšehradský hřbitov

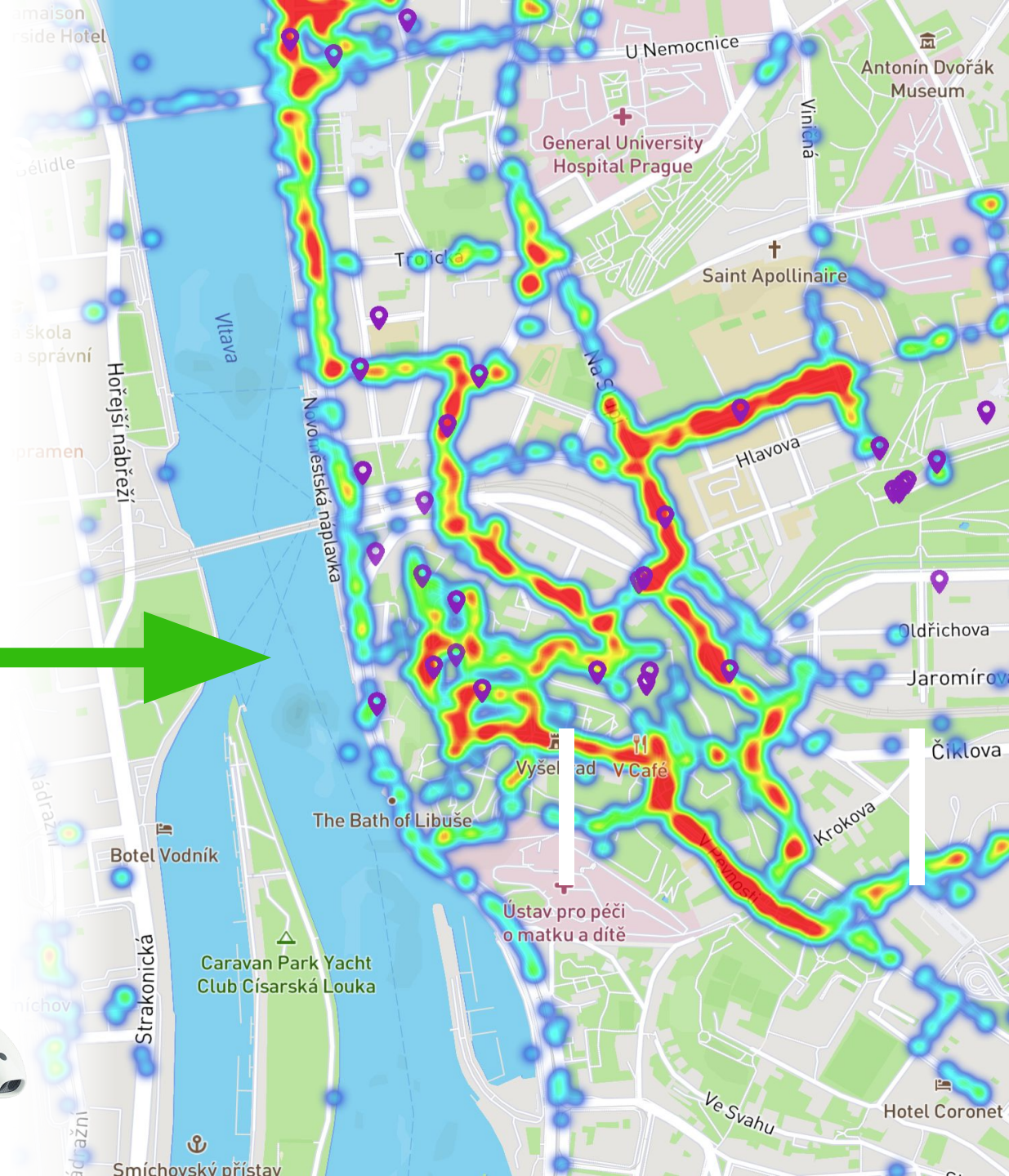
4. Vnislavova

2. Albertov

1. Úvod

17. listopad 1989

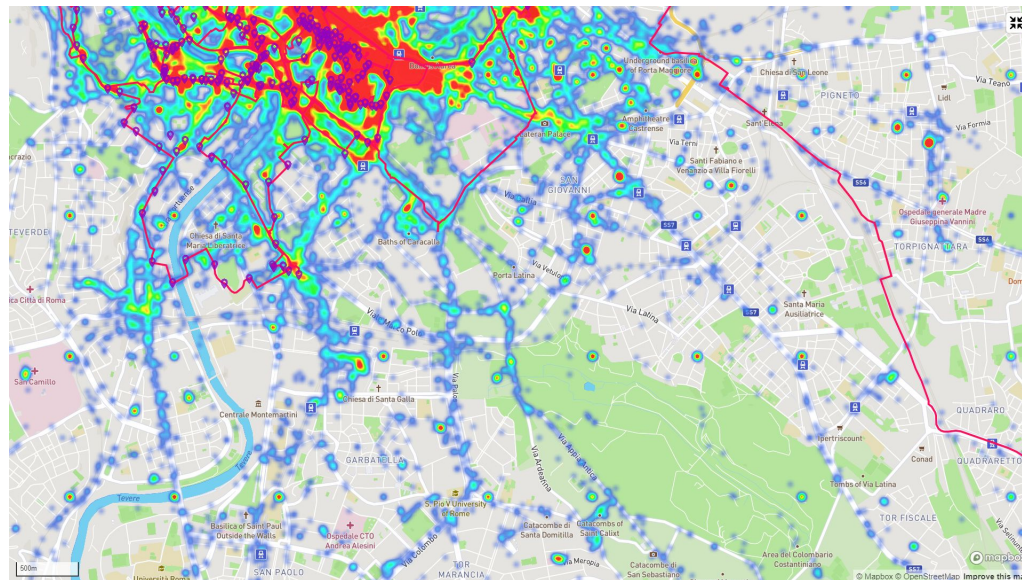
Objevuj Mapa Oblíbené



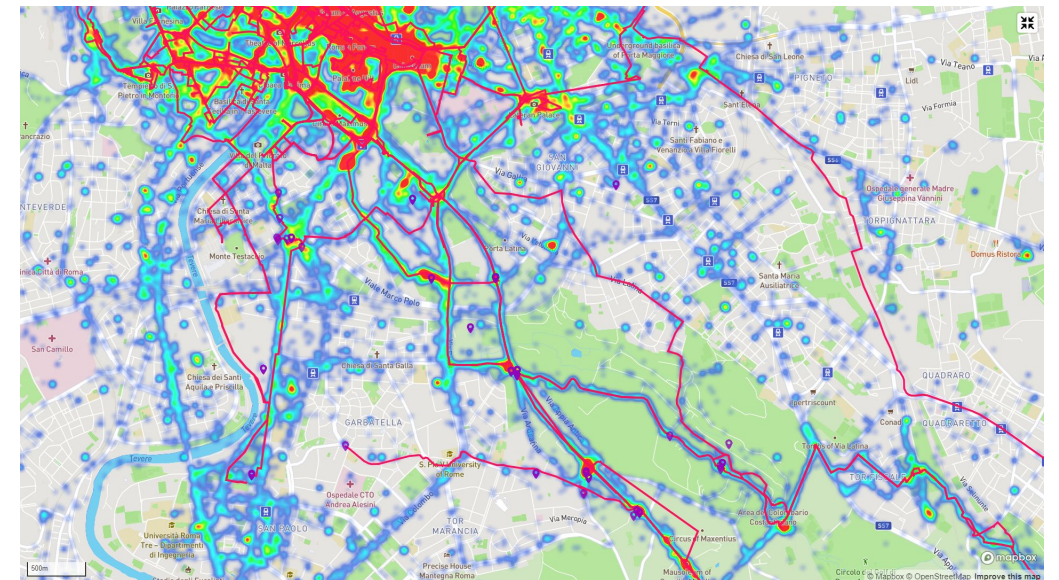
1 Rome

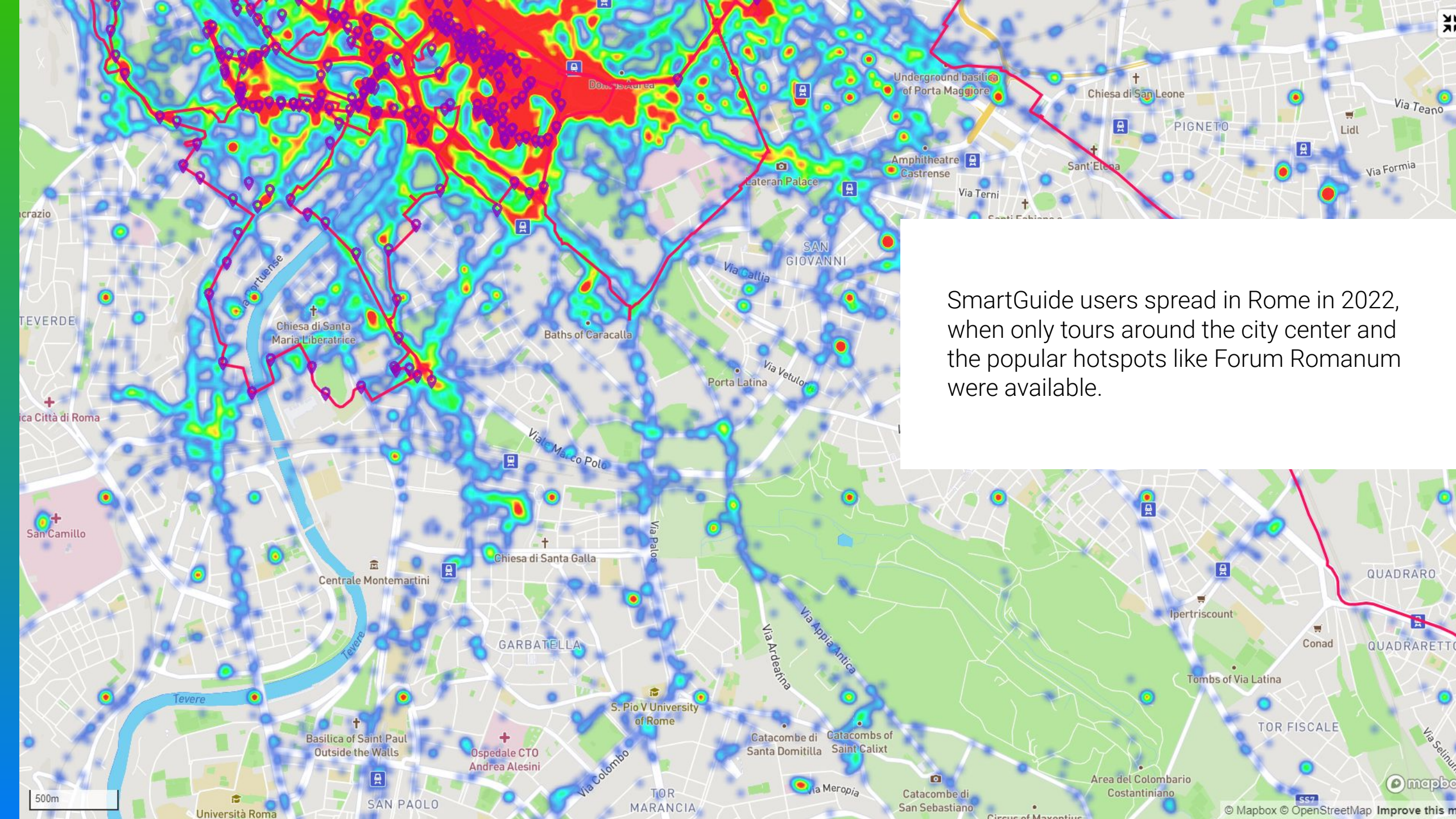
Rome - adding new walking and bike tours leading to interesting places in the outskirts has inspired tourists to venture beyond the overcrowded inner city

Rome before new tours added
(2022)

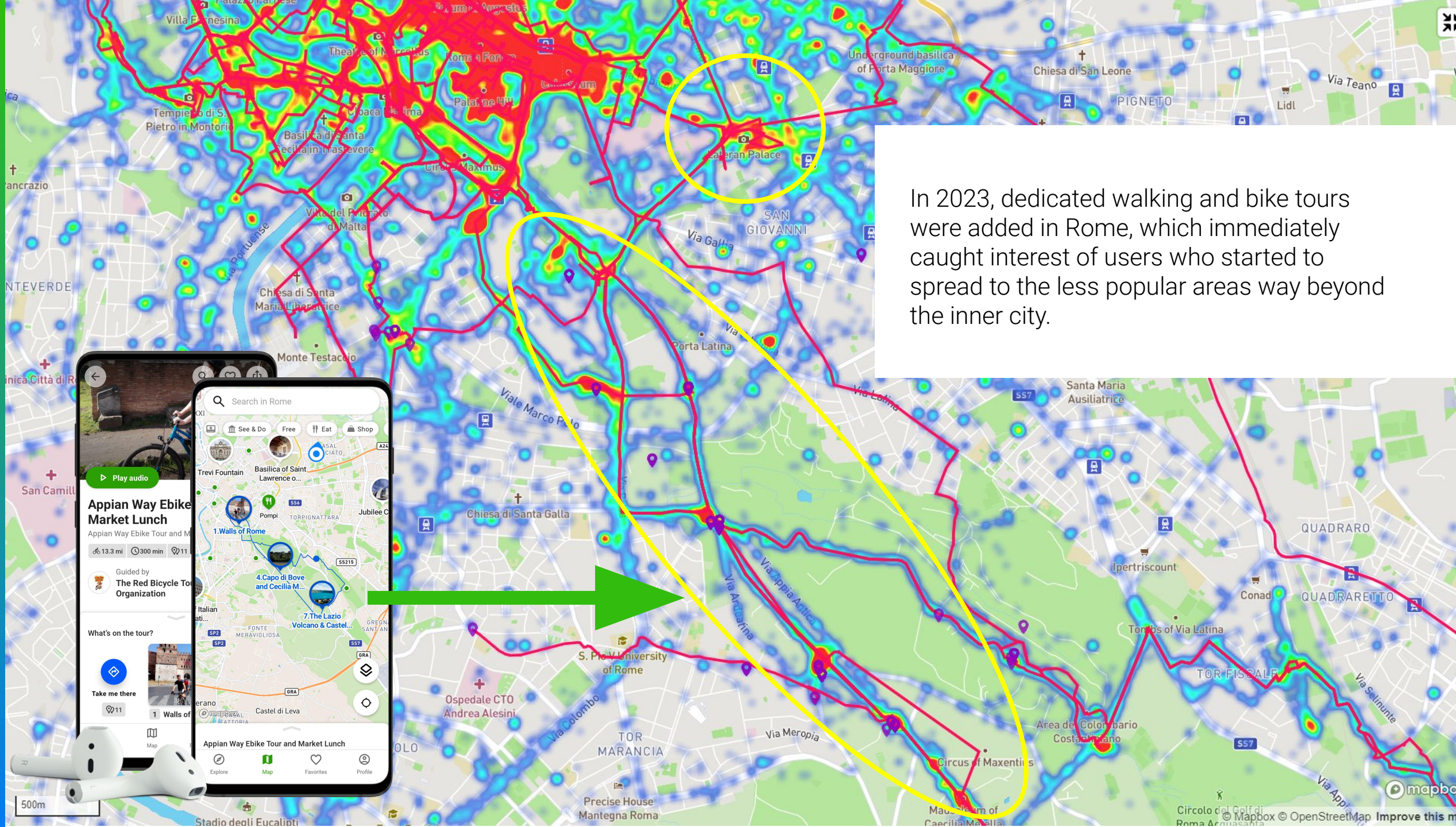


Rome after new tours added
(2023)

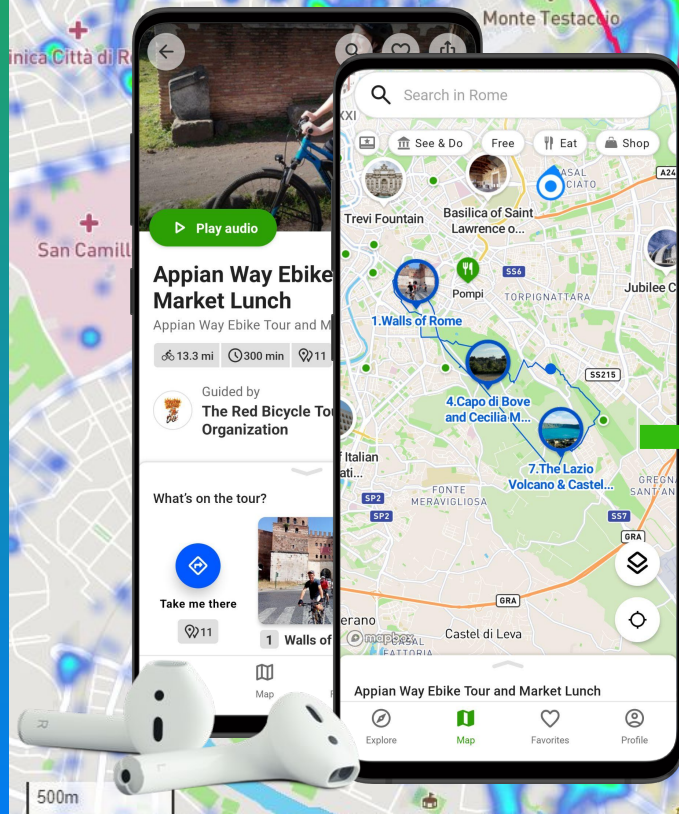




SmartGuide users spread in Rome in 2022, when only tours around the city center and the popular hotspots like Forum Romanum were available.

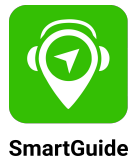


In 2023, dedicated walking and bike tours were added in Rome, which immediately caught interest of users who started to spread to the less popular areas way beyond the inner city.



2 Karlovy Vary

Example: Inspire tourists across nationalities to explore at the outskirts of your destination.



Situation: The town's representative's needed to distribute tourists from the overcrowded Colonnade, the famous tourist hotspot in Karlovy Vary, to its hidden gems at the outskirts



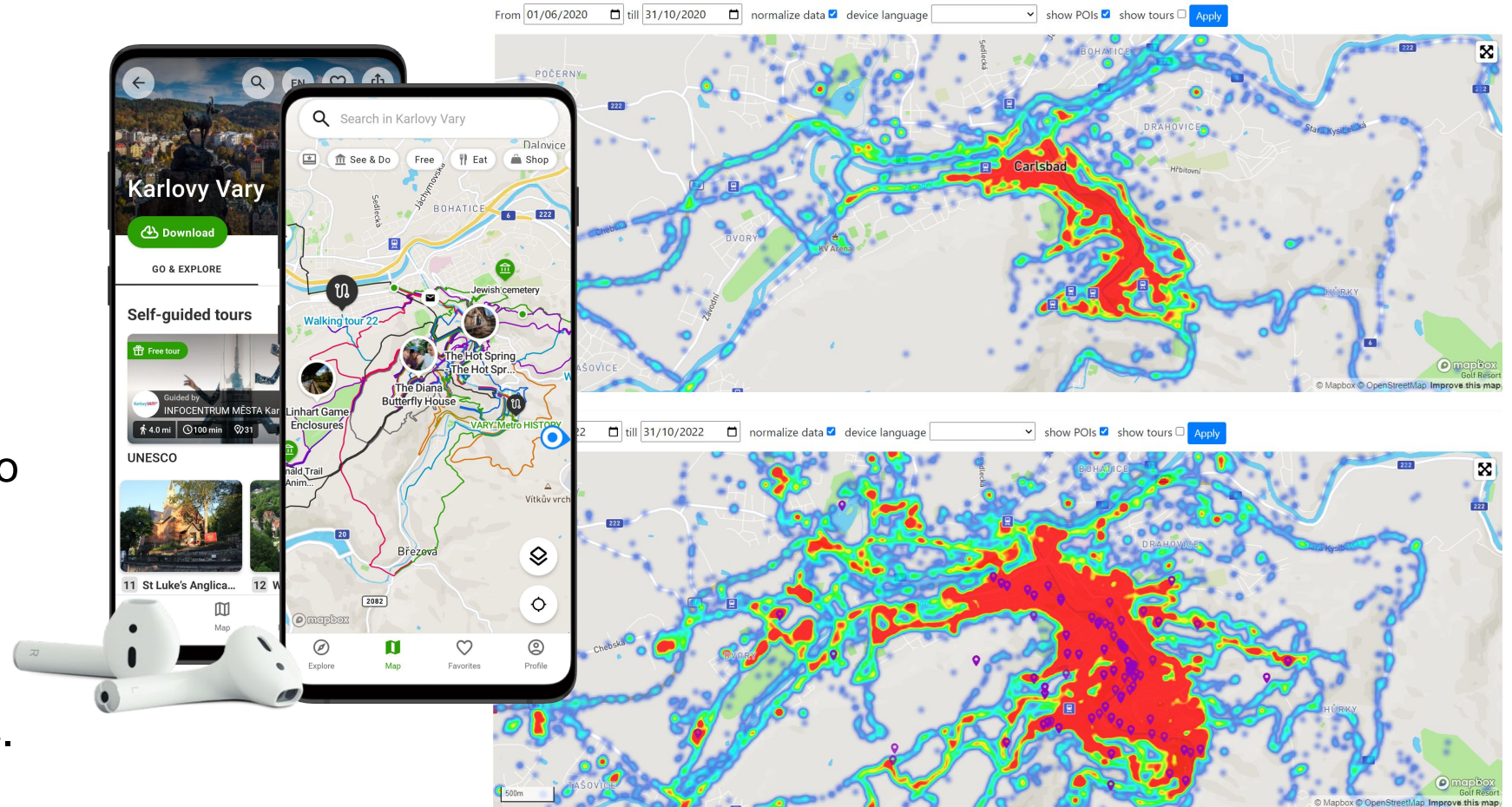
Solution: Karlovy Vary published 4 main thematic tours for different audiences in 5 languages on SmartGuide, and overall almost 30 tours overall, including indoor tours for museums or attractions, or outdoor tours in nature around the city.

Karlovy Vary increased the spread of tourists from the hotspots to less populated areas with dedicated content

Carlsbad -
comparison of
overall tourist
activity before

and after
introducing tours
that were thought
out with an intent to
spread tourists
beyond the
Colonnade.

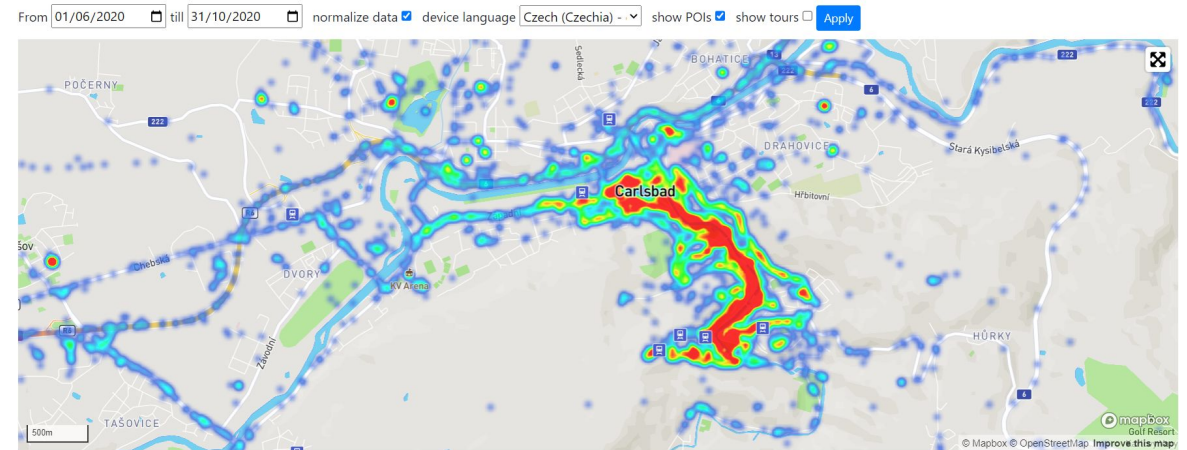
1.6.-31.10.2020 vs.
1.6.-31.10.2022



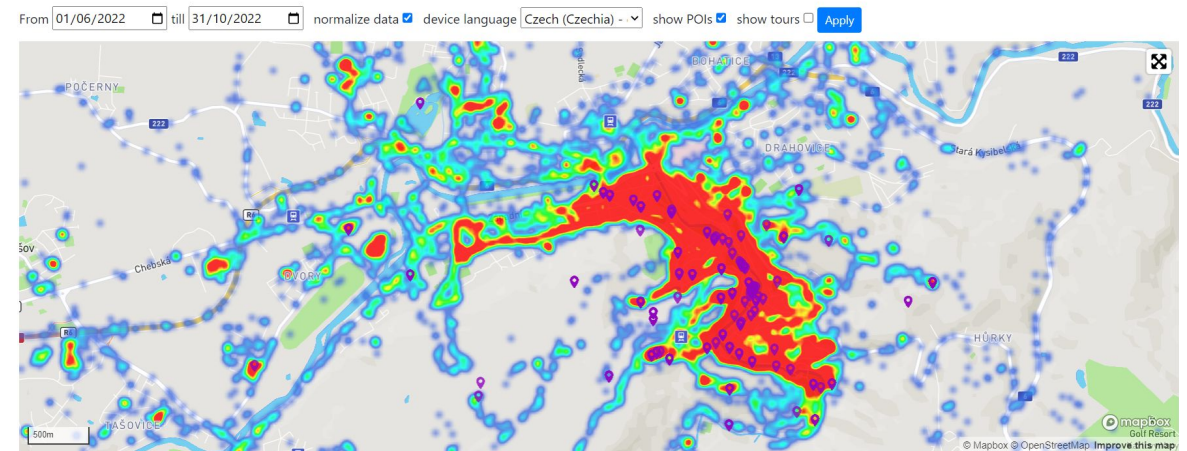
CASE STUDY – POPULAR TOWN

Karlovy Vary increased the spread of tourists from the hotspots to less populated areas with dedicated content

Carlsbad - comparison of Czech tourist activity before



and after introducing tours that were thought out with an intent to spread tourists beyond the Colonnade.

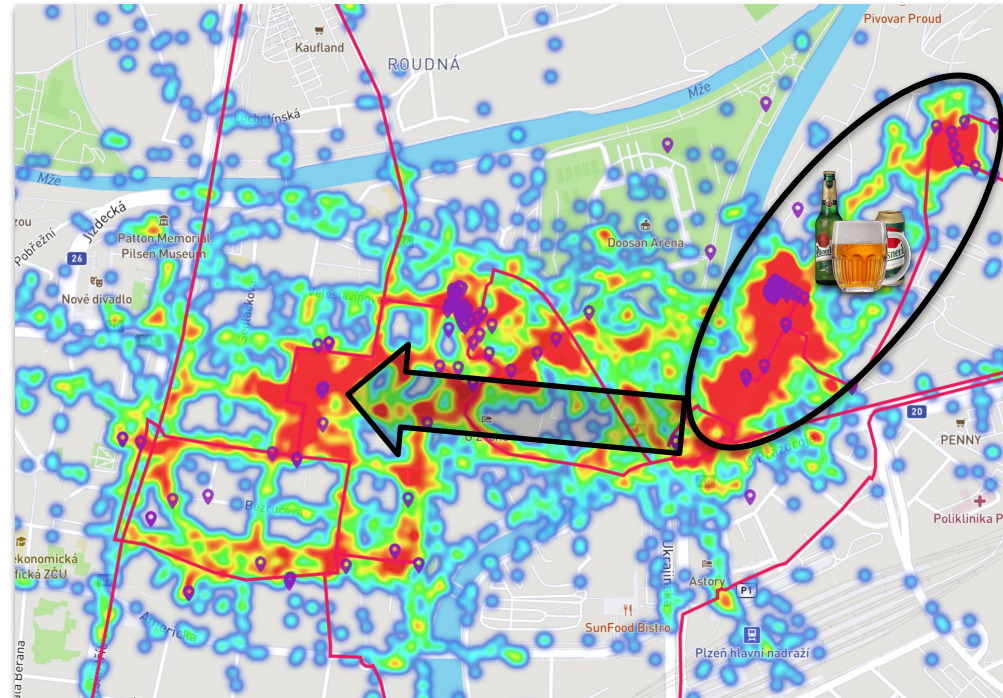


SmartGuide

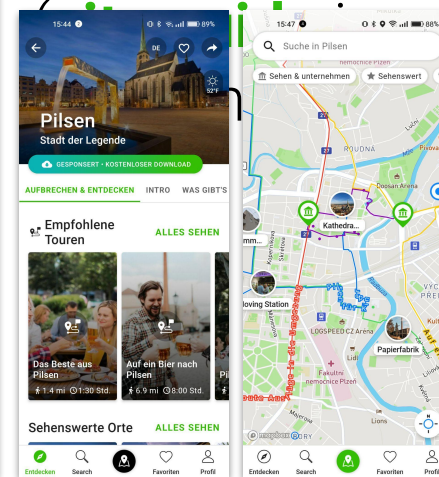
1.6.-31.10.2020 vs.
1.6.-31.10.2022

3 Pilsen

Pilsen: Tours and content provided in popular foreign languages helps disperse visitors from the city's hotspot



German tourists



Situation: Most of foreign visitors in Pilsen visit mainly the Pilsner Urquell brewery, the undoubtful hotspot of the town, but often miss interesting attractions in the city center.



Solution: If tours and content exist in popular foreign languages on SmartGuide and the guide is promoted to foreign visitors, they follow the tours and go explore places beyond the popular hotspots.

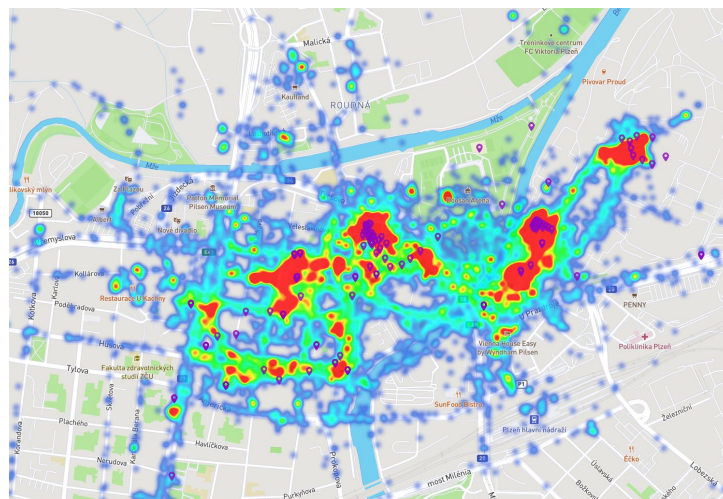


SmartGuide

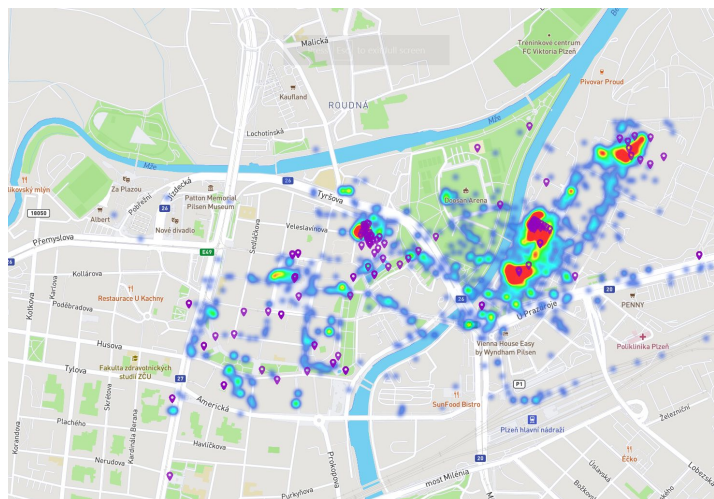
Pilsen city center is visited by SmartGuide users mainly if tours exists in their language

The data supports the assumption that if a guide content exists and is promoted in certain language, tourists spread also to more remote and hidden/less popular places (e.g. by comparing the spread of German tourists with existing and promoted content in Pilsner Urquell that serves as a major acquisition point in Pilsen, vs. Italian tourists where content exists but is not promoted, vs. Spanish tourists where content doesn't exist+is not promoted)

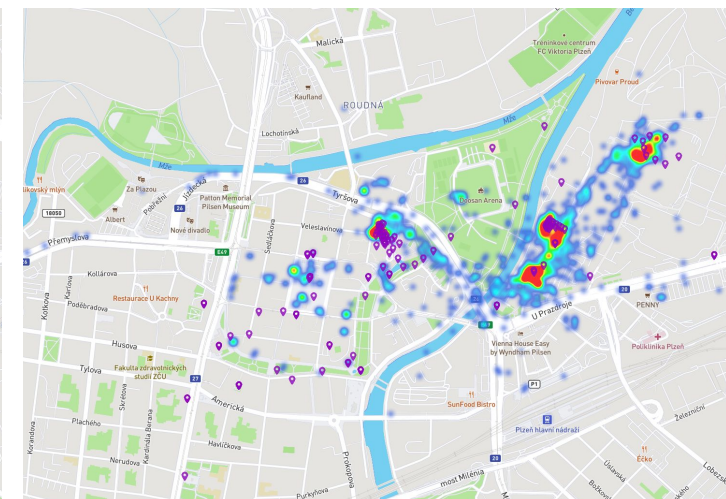
German visitors spread 2023
Content / Promotion



Italian visitors spread 2023
Content / No promotion



Spanish visitors spread 2023
No content / No promotion



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www.smart-guide.org

