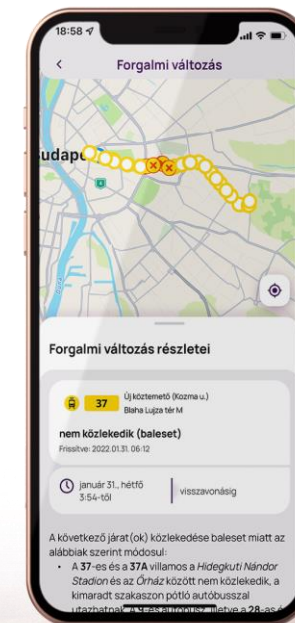
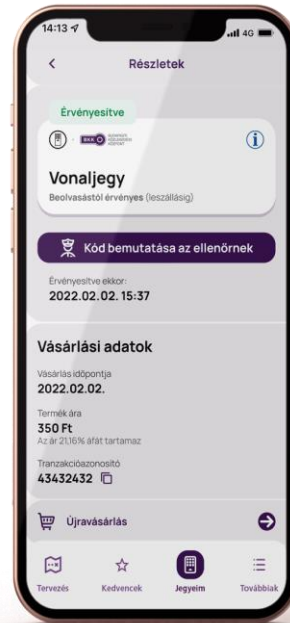


# BudapestGO: Small step or giant leap in the digitalisation of Budapest's mobility services?

Bence Nagy  
30.11.2022.



# BKK had apps only for journey planning in 2021, and has experienced an unsuccessful e-ticketing project

## 1 Fragmented and underdeveloped BKK apps

- **Separated apps** for journey planning (BKK FUTÁR) & traffic changes (BKK Info)
- **No digital tickets available** in the BKK apps nor account management
- Only smaller refinements in the past 7 years
- On-premise infrastructure



## 2 Failure with e-ticket implementation

- BKK started working on e-ticketing system in 2012 (**similar to Oyster card**)
- 10+ bn HUF was spent
- Project was unsuccessful, **contract was terminated after 6 years of work** in 2018, BKK filed a lawsuit



## 3 Competitors

- Competitors had **significant developments** both in journey planning (Googlemaps – covering the whole country & the most important providers) and mobile tickets (~8+ companies – providing mobile tickets)
- Although not specialized in public transportation



## 4 Budapest vs commuter belt

- **Fragmented market** with several providers (train, suburban train, interurban & local buses)
- **Missing providers** both in mobile ticketing system & journey planning
- Significant obstacle for migrating into digital ticketing



# BKK has faced several challenges during strategic planning

## 1 Scarcity in resources

- **Revenues** of BKK has **decreased by ~35% (-25.5 bn HUF)** due to pandemic in 2020, while no significant cost cutting is possible, level of sales still not reached pre-covid level
- No extra subsidization from Budapest
- EU funds are not available / only in long term

## 2 Time pressure

- Clients
- Owner (Budapest)
- Competitors
- BKK - biggest potential for client impact
- Long procurement process
- Existing vendor contracts, 3rd party constrains

## 3 Constraints in payment system

- We have to sell our products via National Mobile Payment Platform
  - **Dependency, less flexible, unique developments are slower**
  - **5% (!) commission (out of which 2,5% goes to the sales platform)**
- **No clear legal environment** - high level of uncertainty
- QR code reading – top 3 client complaint

# BKK decided to develop an integrated mobile app with an agile approach, in several phases

1

Not hardware based but mobile

- Infrastructure-heavy projects tend to be long & requires enormous financial need
- **Technology development** enables us to rely on mobile
- **Once renewed, we moved the infrastructure to cloud**

2

Integrated solution

- We don't want to have one more app rather one-stop-shop approach: **client should be able to manage all his/her public transport related issues**
- Customer experience & needs
- Current client base should be utilized

3

„Agile” approach

- Ultimate goal: enable clients to use **new functions as soon as possible**
- Long projects tend to have bigger delays and budget overspending
- **More phases, step-by-step approach** – moderate timing, sprints (1-2 months)
- „Try-test-learn” approach
- Rigid public procurement processes obstructs this solution

# The journey planner app of Budapest was renewed in 1 year and introduction of new functions are still ongoing



## Main steps

- **Strategy review**
- Strategy roadmap
- Technical specification
- Procurement, contracting

- Migrating to **cloud-base infrastructure**
- Integrating HÉV **(suburban railways) & MÁV (interurban railways)**
- Other refinements

- New functions
- **Mobile ticketing**
- **Integrating traffic changes**
- Renewing journey planning
- Totally renewed UX/UI
- **Rebranding**

- **Developing in more phases, continuously**
- 1) Mobile ticketing (buying and validating)
- 2) Private & public sector
- 3) Shared mobility providers
- 4) Travellers with special needs
- 5) Seamless, personalized UX

# BudapestGO is an integrated mobile app (trip planning – mobile ticketing – current traffic information) for public transportation



Journey planning



Mobile ticketing



Traffic changes



# The new app is more than successful: activity doubled – tripled, ~900k active monthly users and 500k ticket buyers in 9 months



**1,9 mn** downloaders  
**~900k** active monthly users  
**~730k** registered users  
**~500k** ticket buyers

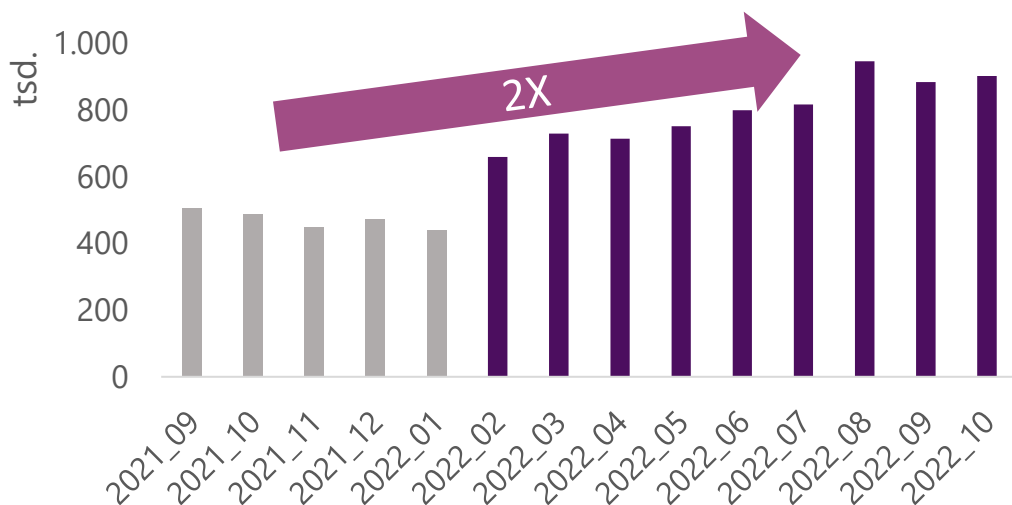


**3,7 mn** ticket & passes  
**2,4 mn** single ticket

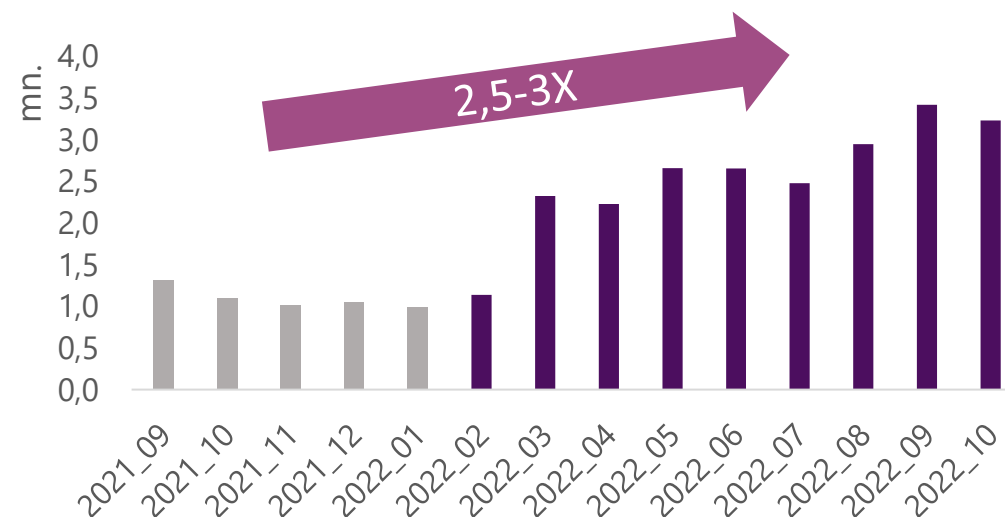


**25+ million** Journey planning  
**3 mn** monthly

Active monthly users<sup>1</sup> of BudapestGO vs FUTÁR ('21 Sept – '22 Oct)



# of journey planings in BudapestGO vs FUTÁR ('21 Sept – '22 Oct)



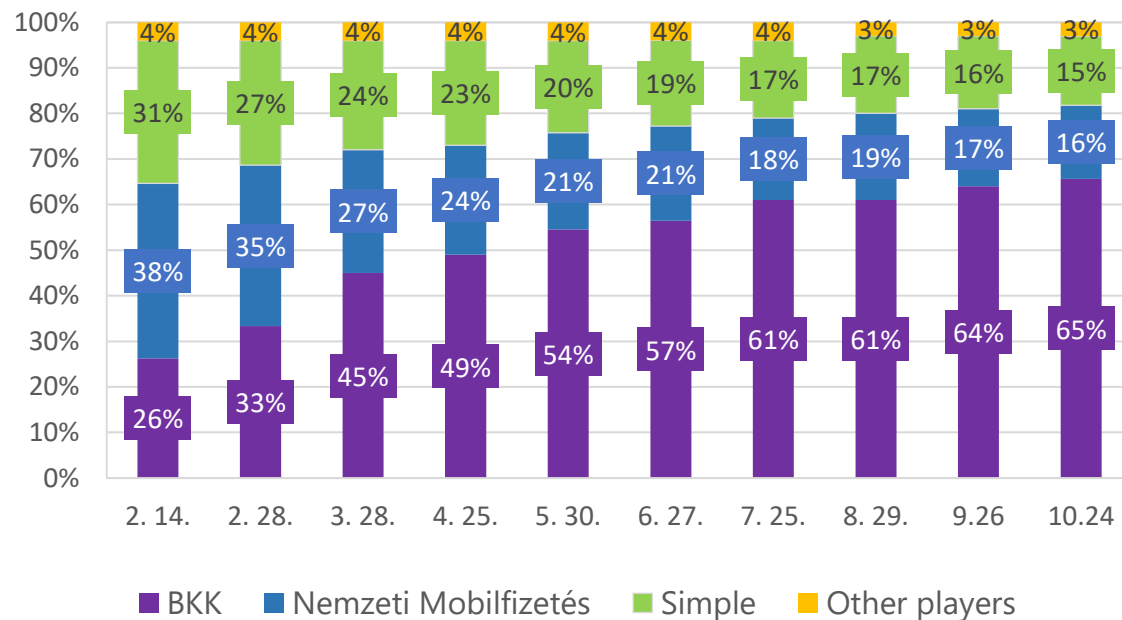
1: users having at least 1 interaction in BudapestGO in the given month



# 15% of total revenue of BKK already steams from BudapestGO, and we became leaders in the mobile ticketing market only in 1 month

**BudapestGO has become an undisputable market leader in mobile ticketing market (60%+ market share)**

**Thanks to BudapestGO mobile ticket share in BKK's revenue has almost doubled**



	2022. February	2022. October
<b>Mobile ticketing / Total revenue (%)</b>	<b>13%</b>	<b>22,6%</b>
<b>BudapestGO / total revenue (%)</b>	<b>3,4%</b>	<b>14,7%</b>
<b>BudapestGO / Mobile ticketing (%)</b>	<b>26%</b>	<b>65%</b>



# Our goal is to develop a customer-friendly and smart app which serves Budapest and its commuter belt, integrates MaaS providers

**BUDAPEST GO**



**Journey planning**

- Totally renewed UX/UI: client-friendly, modern, clear design
- More convenient processes, easy-to-use
- Refining favourites function
- Integrating MÁV & HEV



**Mobile ticketing**

- Introducing mobile ticketing with most important tickets & passes (40 BKK products, ~150 Hungarian provider)
- Time-based tickets as new product
- Widget
- Automatic repurchase, notifications



**Traffic changes**

- Integrating BKK Info app into new app
- Notifications about planned and actual traffic changes
- Push notification about favourite lines / stops
- Customizable



## Digital ticketing (buying and validating)

- Improve the buying & validating process (e.g. automatic renewal)
- NFC
- New products (BKK, commuter belt, combined tickets)
- EMV
- Other innovative ticketing solutions (e.g. check-in/be-out)
- ABT, integrating other providers, using caps, etc.



## Private and public transport

- Commuter belt (interurban & local buses), ticketing
- Parking
- Multi modal journey planning & public transport



## Shared mobility providers

- Integrating every relevant shared mobility provider
- Multi modal journey planning
- Calculating potential price?
- Deeplinking for renting & buying products



## Travellers with special need

- Improving accessibility
- Tourists
- Special information about the lines (e.g. specific pricing, A/C available, congestion on vehicles)

**5. Seamless, personalised UX**



## Agile vs waterfall approach

- **Have the vision but go step by step**
- Be as flexible as possible
- Pilot projects, try-test-learn approach



## Be flexible in procurement

- Many times biggest obstacle is the rigid public procurement
- Avoid long and rigid contracts with fixed functions since you cannot predict customer needs
- **3rd party integration and good performance requires planning, thus expert pool required**
- **Frame contracts**



## Dont be afraid of clients

- Pareto+ principle (90/10) - **you cannot and shouldn't meet all the expectations**
- **Bad reviews / feedbacks help you the most in prioritization, still you have to check the big picture**



## Rebranding helps

- Even with a very limited budget much more attention could be attracted



## Just a small brick in the wall

- We are not a fully digital service provider (infrastructure, other service providers, legislation, etc.)
- **Focus on integrated approach & on the whole process / customer lifecycle to maximize customer experience**



## Priorization

- Huge longlist of potential developments
- **What will be the most impactful / useful feature**, how to prioritize
- **What is too much (BKK resources, client education)?** E.g. introducing EMV & check-in/be-out ticketing parallelly



## Public procurement

- Future trends, customer needs cannot be foreseen easily, customer needs rapidly change
- Public procurements tend to be long & rigid process, doesn't support agile approach, flexibility
- **How to be flexible in public procurements & work with 3rd party service providers?**



## Integrating public travel & micromobility players

- Many providers in Budapest commuter belt, lack of clear structure and authority
- Unclear ticket system for many users
- **How to integrate several smaller & not important players in journey planning efficiently?**
- **Is mobile ticketing / direct link enough or seamless ticketing systems needed which can be integrated?**



## How to migrate motorists

- Biggest challenge for Budapest (+30% in last 10 years)
- **What digital value propositions attracts people to use public transport instead of cars?** E.g. MaaS / ticketing / motorists functions (parking, car sharing, navigation) / rewarding app (separate or fully integrated?)



## Seamless, proactive UX

- More data, more functions, **performance is a key** issue
- **Personalization** is essential to filter „noise” from user and educate them effectively
- **Predictive instead of reactive** functions (How to think ahead of customers?)

**Thank you for your attention!**

**Q&A**