

# “bubi” concept

## Info Meeting



### The “bubi” concept

An **Information Day** is to be held by the future system operator (BKK) in Budapest, on Wednesday, **21 March 2012**. The one-day event will be structured in the form of a roundtable discussion about the most important aspects of the implementation and operation of a public bike-sharing system in Budapest.

Due to the limited number of attendees, we would like to invite companies who operate or produce such bike-sharing systems. Please find further details at the bottom of this document.



The **Centre for Budapest Transport (BKK)**, a company fully owned by the Municipality of Budapest in charge of organising and managing the capital’s public transport system has received EU funds from the National Development Agency (NFÜ) for the implementation of a public bike-sharing system. The main goals of the project are:

- Introduction of a new, fast and green public transport service in Budapest
- Implementation of an integrated subsystem of the existing public transport system
- Promotion of urban cycling
- Reducing car traffic downtown Budapest

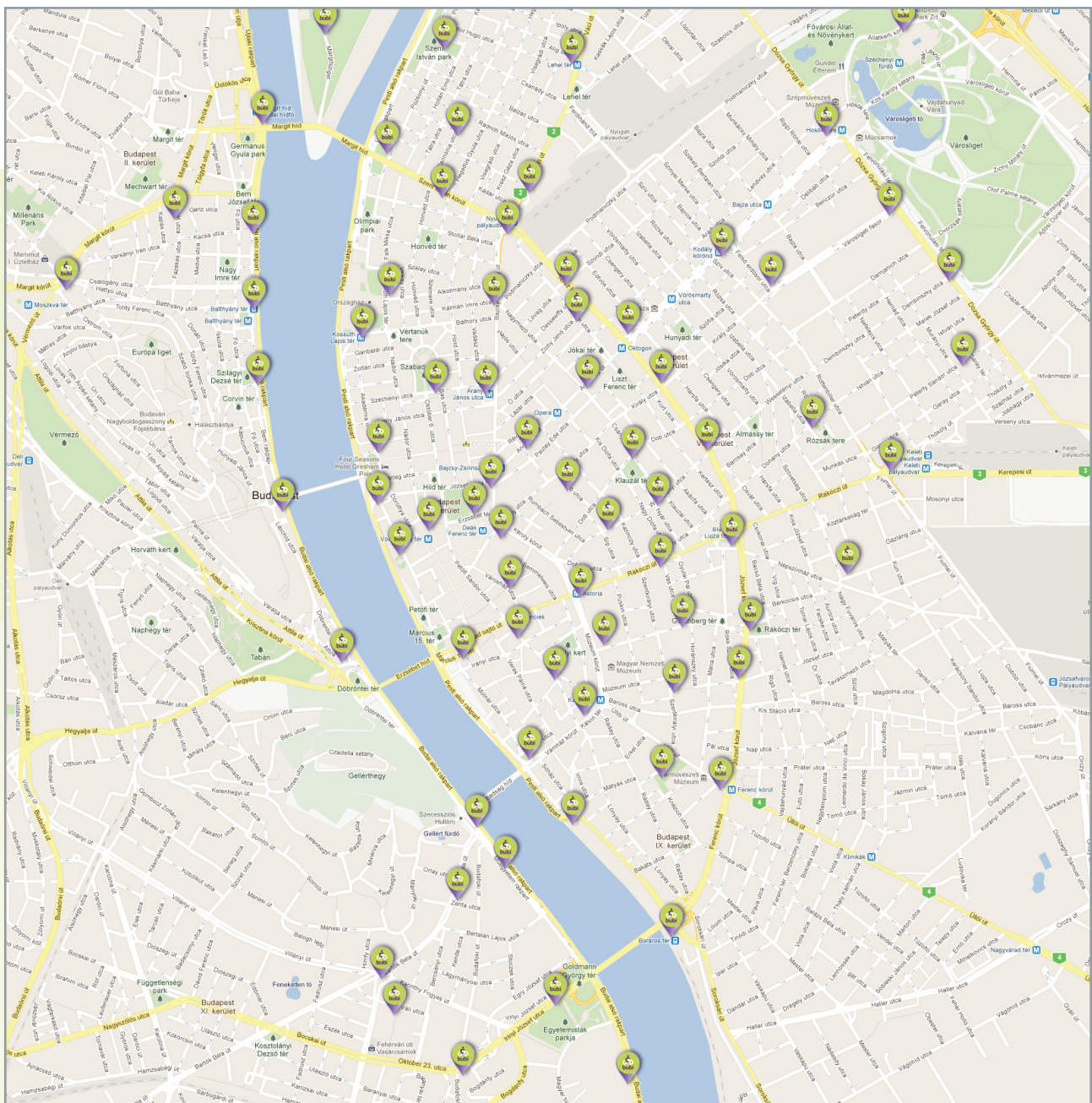
Operation is to be commenced in Q2 of 2013.

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“bubi” project area with future location of docking stations is illustrated by the following map:



<http://g.co/maps/872ct>



BUDAPESTI  
KÖZLEKEDÉSI  
KÖZPONT

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### Main characteristics of the system

- The project area of “bubi” is 12.75 km<sup>2</sup> covering the central districts of Budapest with the highest population density, trip density and a mixed land use.
- “bubi” is considered to be a station-based system with docking stations not further than 300-500 metres from each other on average.
- “bubi” is scheduled to start with 60-80 docking stations and 1,000-1,100 bicycles initially. The system is planned to be expanded in the future.
- Self-service bicycle pickup and return at fully automated docking stations.
- On-site and/or preliminary identification, state-of-the-art electronic identification and payment methods.
- Year-round 24/7 public service for short trips (one-way trips are possible).
- Progressive fare-structure with the first 30 minutes for free.
- The whole system is planned to be operated by BKK.
- BKK is to pay the costs of operation and collect revenues (customer fees and revenues from advertising).
- Priority requirements of the operator are high reliability, low operation cost, durability against vandalism and the capability for future system expansion.

### Information Day

- The Information Day is organised by COWI Hungary Ltd. (the consultant in charge of the preparation of the “bubi” EU-project) with the cooperation of the future operator (BKK). For further details of the Information Day contact:

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e-mail: kerekpar@cowi.h.

### Background

- Feasibility studies and a market research to define the target market and customer demands were carried out in the phase of preparation of system implementation.
- The potential synergies between “bubi” and the existing public transport system are outstanding.
- There is a dynamically evolving urban cycling culture; however, there is a lack of available objective data on the cycling modal share in Budapest.
- There is a high number of short trips realised in the future project area in the centre of Budapest as a result of mixed land use, high population density, high number of population and numerous workplaces.
- The complete area of downtown Budapest is ideal for urban cycling as far as urban structure is concerned but the cycling-friendly development of the road network is an issue yet to be addressed by the Municipality. A three-phase Action Plan was elaborated in the preparation process of the “bubi” project in order to:
  - Reduce the volume and speed of car traffic
  - Improve the cycling-friendliness of the bridges across the river Danube
  - Reallocate the layout of transport corridors/ carriageways especially on the main downtown arteries and boulevards. Design and implementation of the tasks defined in the first phase of the Action Plan are underway (partly within the connecting urban development projects) and implementation of phase 1 is to be completed by the launch date of “bubi”.

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## Main Features and Technical Specifications of the System

### Stations

- Stations (each one consists of a terminal and several docking stands) provide a location for bicycle parking as well as on-street security and easy customer access. Stations are durable, weather- and vandal-proof.
- The number of docking stands at each station was defined according to local circumstances and needs forecast. Stations are to be mounted with three different numbers of docking stands (15, 22 and 30 bicycles). The easy variability of the number of docking stands at each station is a main requirement of the future operator (BKK).
- Stations are connected online with the central computer system for customer identification and real-time management of docking stands and bicycles. Data connection is wireless (GSM). Data transfer by wire is not planned in any part of the system.
- Docking stands are connected to the central computer system through the terminal. Each bicycle is individually identifiable by the central computer system through the docking stands thus the location of each docked bicycle can be tracked.
- Bicycles are secured to the docking stands by an automatic locking mechanism controlled by the central computer system.
- Installation of the stations is the supplier's responsibility.
- Surveillance cameras at stations are planned to be installed in order to prevent theft and vandalism.

### Bicycles

- Bicycles have a unique design.
- Bicycles are appropriate for a wide variety of customer demands, local needs and domestic regulations.
- Bicycles can be easily docked in and picked up at the stations.

### Back-end system

- System functions, such as data communication between system elements, customer registration, usage data collection, bicycle rental, bicycle distribution, maintenance and financial settlements are supported by the back-end system.
- The IT system consists of server-side as well as client-side hardware and software equipment (e.g. mobile communications tools).

### Maintenance

- The planned maintenance system of the future operator (BKK) includes workshop and on-site maintenance activities by service vehicles.
- The continuous operability of system elements (bicycles, stations, surveillance, traffic management and IT-background) is assured by the maintenance system.
- In addition to normal usage failures, breakdowns caused by vandalism and accidents, bicycle supply needed after thefts are managed by the maintenance system.