



BICYCLE RESEARCH REPORT NO. 122

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CALL A BIKE Mobility Systems PLC

Mobility system CALL A BIKE

Electronic reservation system facilitates extensive coverage of privately financed cycle-hire at telephone boxes

Key Facts

Since April 2000 in Munich high-tech design CALLBIKES can be borrowed at phone boxes and given back again by means of a simple telephone call. As a mobility system in large cities with over 100,000 inhabitants CALL A BIKE patents were applied for in Europe, Japan and the USA.

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The mobility system CALL A BIKE available in Munich since 19.4.2000 should fill a physical, transitory and inexpensive gap (fig. 3) in the mobility offer. 2,000 hire bikes (CALL BIKES) have been part of the street scene since then in the area of operations in Munich city centre within the inner ring road. High-tech design and colouring make them distinctive (fig. 1). The bicycles should be faster than walking, cheaper than a taxi, more closely-integrated than buses and trains, more flexible than one's own car, more readily available than one's own bicycle and more able to combine with other forms of transport. Since half of the 3.4 million journeys made every day in Munich are shorter than 5 km (fig. 21) CALL A BIKE is expecting a big demand.

Those who would like to hire a bicycle parked at a telephone box have only to ring a free hotline number, give a customer and bicycle number to receive a 4-figure combination code which opens and locks the bicycle. After use the customer taps in "FINISHED" at the lock and gets a receipt code shown on an LCD [display screen] which he passes on by phone over the hotline. When he rings back after every journey he is informed of the actual outstanding travel charges and the total costs that have arisen since the last booking.

Using the new type of key is a way of physically borrowing and returning objects distributed on loan irrespective of time and place. CALLBIKES are secured by robust electronic locks. They are fitted directly on to the bicycles and need no radio contact. Nevertheless, every time a lock is used it is centrally registered and each customer is identified. By this means the central control office for the fleet of hire bikes is made feasible and the profitable



investment and business of hiring bikes becomes possible for the first time on a large scale.

CALLBIKES are maintained and made available round the clock by mobile service teams. Fixed stops in the road are not applicable. Telephone boxes form an ideal network owing to the proximity, visibility and an extensively covered distribution service. Constant distribution-flows are compensated through optimised vehicle logistics aimed at large organisations supplied with bicycle pools.

In order to reduce damage through vandalism, wear & tear, loss and the scrap ratio robust components were chosen for the CALLBIKES which are not compatible with normal bicycle models and can only be dismantled with special tools. The bikes are also distributed decentrally and positioned conspicuously. With the electronic lock in place the code to open it changes every time a bicycle is hired. If a CALLBIKE gets lost whilst on hire the customer is liable to a fine of 80 DM (41 EUR).

During registration before he makes his first journey the customer has to choose whether to pay by credit card or by bank account. Credit card customers receive their customer number straightaway and can then use a CALLBIKE. For customers who want to pay through their bank account the company deducts 1 DM (0.51 EUR) and sends the required customer number. In this way bank accounts and user information are checked and the customer number is delivered in three to five days time.

The basic charge for the period of hire if you book by direct dialling is 1.80 DM (0.92 EUR) per journey and 2.80 DM (1.43 EUR) via the operator. The first five minutes are included in the basic charge, each further minute costing 3 Pfennig and from the seventh hour 1 Pfennig. When returning the bike outside the actual area of operation 0.50 DM (0.26 EUR) is charged for each kilometer away from the city centre. When a customer borrows a bike from outside the area and brings it back into the city centre he is credited with 0.50 DM (0.26 EUR) per kilometer. Customers who pay 40 or 80 DM (20 or 41 EUR) in advance receive a bonus of 25%.

According to a telephone survey, subsidised by the city of Munich and which was made by the IJF-Institute of the Roland-Berger Group with 800 people from the residential population of Munich in April 97, 50% of the 15-70 year old inhabitants of the conurbation would use CALL A BIKE on average 2.1 times a month. With reference to the population figures for the municipal area of Munich there is a potential of about 1 million journeys per month. In addition, Munich has 12 million tourists every year as well as 52 million long distance commuters and day trippers.



To be on the safe side the economic calculation for the year 2002 (plan scenario) only starts at 10-20% of the potentials ascertained in the survey. After that each CALLBIKE in Munich is used on average 2.4 times a day and the whole fleet is used to capacity (MI average up to 37%. The planned turnover doubles itself when an additional 20% of day trippers or tourists use CALL A BIKE. As far as costs are concerned personal costs in particular are included involving a high proportion of freelance workers in the call centre, service centre, maintenance and planning. About 500 DM (EUR 255) in personal costs will be allotted to each bicycle every year. In an average year 70 employees will be working at CALL A BIKE, that is: 36 in the call centre, 20 in service/maintenance/planning, 7 in sales and 7 in management. The following were also calculated: 40% of the bicycle-hardware must be renewed every year because of wear & tear, scrap and vandalism; in the call centre there are about 3 million operator conversations costing 1.50 DM (EUR 0.77) per call and expenditure for marketing and sales 1.5 Mio. DM (EUR 0.8 Mio.)

According to research carried out by the "Süddeutsche Zeitung" [South German newspaper] CALL A BIKE has had after the first four months between 500 and 1,000 users per day every day. About a third of the 28,000 customers who registered had never hired a bicycle before. Numbers peak at weekends with 1,400 customers on Sundays. The worst day (151 customers) was a Sunday when it rained all day long. On weekdays the weather is less decisive. On rainy days about 500 journeys are made and on Sundays about 1,000. Because of the high media interest and because the products are visibly good, they are also very well known without advertising. Most customers of CALL A BIKE are between 25 and 35 years old; more than 70% are men.

In the next few years CALL A BIKE is going to open branches in other cities - very possibly Cologne, Hamburg, Frankfurt am Main, Berlin, Vienna and Zurich. With moderate expansion CALL A BIKE could settle in 15 cities within 5 years and achieve an annual turnover of about 200 million DM (about 102 Mio EUR). The target market has a volume of 3-4 thousand million DM (1.5-2 thousand million EUR). Also included in these would be cities with more than 100,000 inhabitants in Germany, Switzerland, Austria, the Benelux countries and Scandinavia.

The CALL A BIKE Mobility System PLC as supplier is a private limited company. The stock exchange operation has been planned. Shares should be placed in the volume of EUR 520,000, where the minimum subscription sum comes to 250 shares at 6.50 EUR, therefore 1,625 EUR.

In 1999 CALL A BIKE expected a loss of about one million EUR with a turnover of 1.8 million EUR. For the year 2003 the company predicts 9.3



million EUR and a turnover yield of 38%. The share price could indeed go up from 6.5 to 44 EUR (cf. 1 Table 1).

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Tab. 1 Expected results up to 2003 in Munich

Source : alterra consult, www.alterra.de

[in 1000 EUR]	1999	2000	2001	2002	2003
Turnover	516,8	5.266,3	8.149,4	9.356	9.853,4
Result of the usual business activity	-1.515,6	535,7	2.194,2	2.914,4	3.020,8
Turnover yield		9%	24%	28%	27%
Share price (Estimated, KGV=10)	6,5 EUR	8 EUR	32 EUR	42 EUR	44 EUR



Fig. 1 CALLBIKE in high-tech design

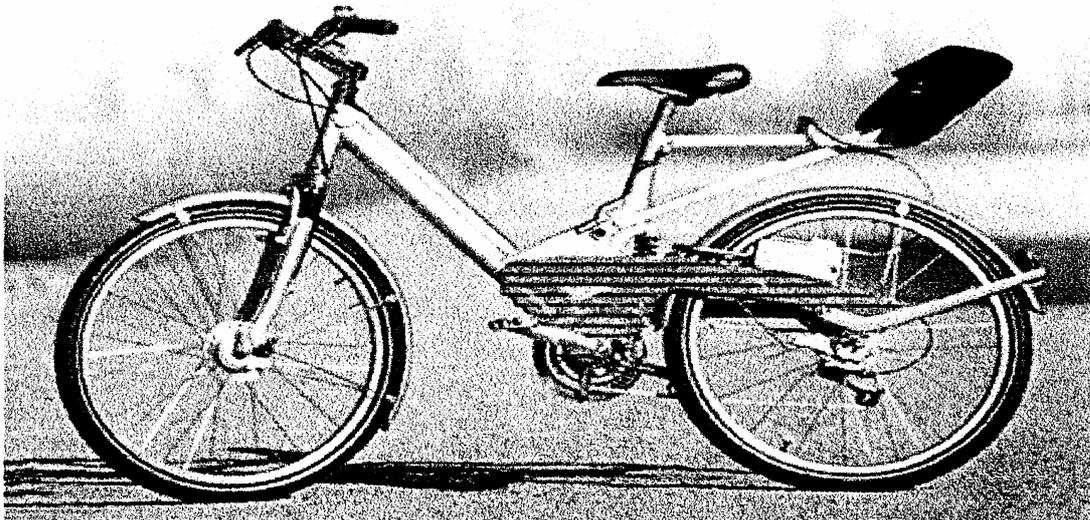
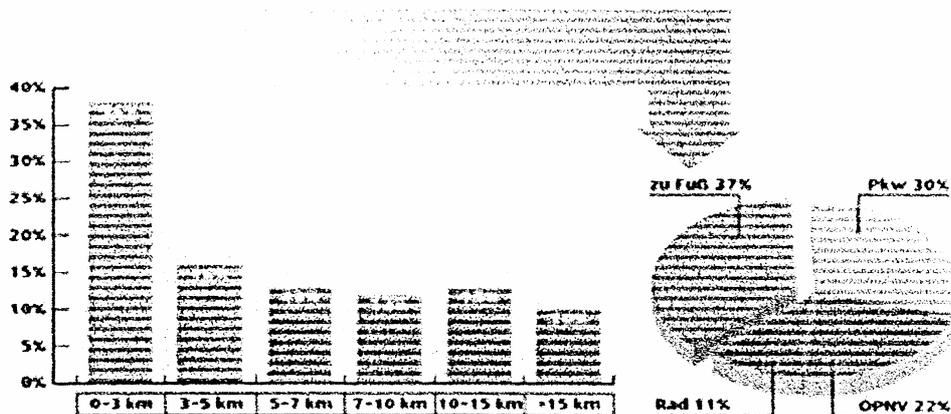


Fig. 2 Use of transport, modal split of journeys up to 5 km

Source: KontiMuc-Untersuchung 91, Infratest, on behalf of the planning department of the city of Munich.



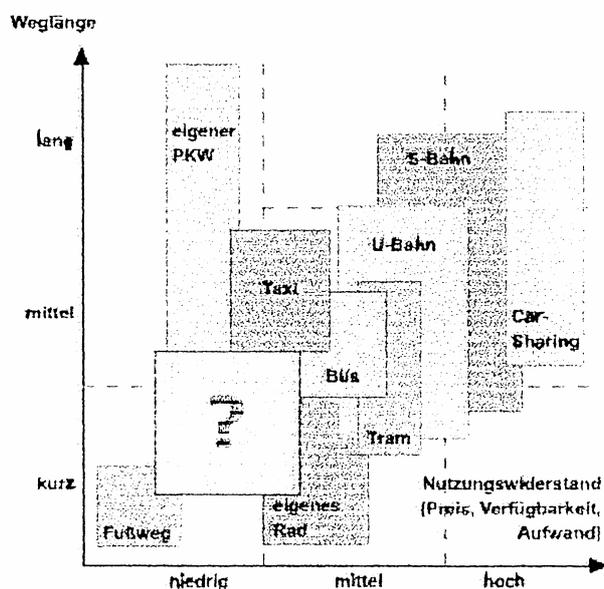
Zu Fuss 37 % = on foot 37 %
Rad 11 % = bicycle 11 %

PKW 30% = (private) car 30 %
OPNV 22 % = public transport 22 %



Fig. 3 Journey lengths and use resistance by means of transport

Quelle: Abb 1-3: www.callbike.de



Weglänge : length of path/track
 Lang = long
 Middle = medium
 Kurz = short

Fussweg = footpath
 Niedrig = low
 Middle = medium
 Hoch = high

Eigener PKW = (one's) own car
 U-Bahn: = underground
 Nutzungswiderstand = use resistance
 Preis/Verfügbarkeit/Aufwand = price/availability, expenditure