

TARGET: Carpool Ridematching Service, Bremen

Report on experiences in marketing and transformation from a Full-Service-Package for companies to an open Internet based service

1. Initial situation

In Bremen employers are wary of tackling the issues of "Travel Plans", perceiving there is too much time and difficulty involved. Bremen has therefore focused on "how to take the worry out" by subsidising the commercial development and promotion of 'quality' specialist services. It is accepted that perhaps only 5% of companies are potential customers for specific single services (with the potential to reach 20% in special circumstances).

Through the workpackage Bremen subsidised the marketing of a Carpool Ridematching Service (in the following CRS; German firm name: 'Fahrgemeinschafts Service') by a private company. A software package, advertising campaign and administrative framework support the scheme. Successful implementation is dependent on achieving a critical mass of at least 6,000 people within companies who are customers of the service and located with their working places in contiguous areas or neighbouring territories. Marketing concentrated on attracting larger employers.

CRS was created as a firm-external, ridematching service for public and private workplaces. The service is based on a special software package developed by the provider. This software can be characterised as follows:

- 1) It enables to find optimum routing suggestions for carpool ridematching within the greater vicinity of Bremen. The area it serves comprises the residential areas of the employees commuting to work in Bremen covering an area of 120 km x 180 km (approx. 22,000 km²).
- 2) The service is effected at an inter-company level for the employees of all the companies located in the town of Bremen (540,000 inhabitants) who register to join the carpool.
- 3) The assessment of the suggestions is supported by a large number of variables which can be utilised in the program according to need.
- 4) Furthermore it is based on a routing system geared to travelling times using a road model that differentiates between six categories of street (according to speed) and is defined by the travelling time between the network nodes. Residence and working address are entered onto the screen by mouse-click and the program supplies the route for the passengers or drivers in question.
- 5) The system also enables carpool ridematching for partial stretches of a journey (with passengers getting in or out), for specific days of the week or for a limited period (e.g. holiday time or only for the winter, etc.).
- 6) The software was not offered as an open system reachable for "just anyone". It has been designed as a working tool for the service provider only.

The advantage of the service is obvious: Even if there is only a small number of employees working in a firm or with an authority, that are interested in joining a carpool, there are still chances of finding a matching commuter outside the company within the address pool. However, this requires a sufficiently large pool of potential participants seeking or offering a journey with specific wishes (driver/passenger). The following rough formula was developed as an hypothesis for the market introduction strategy: With an expected share of approx.10% of the potential car-sharing participants of all the employees (assessed from questionnaires)

a total number of at least 6,000 employees (from this or several neighbouring companies) can be regarded as the critical mass for guaranteeing a car-sharing probability of about 20%. The service should not be commenced before reaching this "critical mass".

As an obligatory "add on" CRS provides the business company with "Mobility Guarantee Services": Employees who commute to and from work with the carpool system should not be at a disadvantage if the carpool service should not function for some unforeseen reason. In certain cases, the employees can hire a taxi up to a maximum of DM 50 without having to pay cash, for their journey home, to work, or to a convenient train station, etc. Guaranteed mobility is valid if, for company reasons, overtime is necessary, the work has to be terminated earlier due to an acute illness or due to the illness of a family member, or the commuting partner fails to go on this journey as intended.

The market introduction of this service package was tackled, supported by the TARGET project.

2. Special problems in the pilot area Bremen

In spite of all efforts there has been little success in selling the CRS during the reporting period. Failure to make progress revolves principally around the role of the largest employer in Bremen: This company's participation would guarantee the critical mass. Other employers wary of risk in supporting key safety-net measures have held back commitment awaiting this one company's participation. This company was initially supportive, driven by the interest of a key manager. Changes in personnel and in global corporate policy, directed at reducing commitments in social provision, have stalled a decision. Participation is not now a company priority.

There are some important findings resulting from the trial of market introduction:

- 1) From the viewpoint of smaller and middle sized companies the promise of success was obviously not perceived as very attractive. Based on experiences with a lot of projects CRS never promises a "rose garden": For the first step of co-operation, the possible reduction of car parking at workplaces (and/or in the vicinity) was predicted in a range of approx. 3% of the total number of daily parked cars, i.e. companies with 1,000 employees can save 13 parking spaces (hypothesis: 50% car usage and average occupancy rate 1.15 persons/car = 435 cars in total), companies with 100 employees can save 1.3 parking spaces etc. This is realistic but the potential customers expect wonders.
- 2) In smaller companies the expectancy of effects of CRS is relatively low when companies think about their own potential. Non-profitable co-operation is the exception from the rule in the commercial sector. Participation in CRS requires change of behaviour because it works only on the basis of a pooling of addresses and interest. This applies for the company as well as for the individuals.
- 3) Big companies with labour forces close to or beyond the "critical mass" are complicated partners in negotiations because every new service idea is in competition with many other plans and has to be defended and enforced against the general trend of reducing commitments in social provision.
- 4) Reaching the "critical mass" has become more and more a problem under the specific circumstances in Bremen. It was a finding of the project that only such addresses can be allocated to the "critical mass" of an address pool, that have a high affinity with correlated parts of the road network in the service area. From the spatial structure of Bremen (mainly a slim strip 40 km along the river Weser) it results that more than one address pool must be generated (with the "critical mass" of 6,000 employees each): one pool for each sector with specific affinity to respective parts of the existing road network, connecting the city with the surrounding area and using different "portals" to the city. The

consequence is that CRS has found compelled to acquire a multiple amount of addresses for the CRS-pool(s). This was not in concordance with the plan and overstresses the CRS service provider. The locations of interested customers on the company level are scattered over Bremen. Getting customers with 6,000 employees in total seems to be possible, but reaching that "critical mass" repeatedly in different sectors has not been accomplished in the running time of the project.

- 5) Wait for completion of pools reaching the "critical mass" was too long for the individual companies. No one likes to be in the role of a pioneer without exact feeling for the time of possible success and no one likes to be dependent on the participation of others.
- 6) Negotiations with companies took such a long time that personal contacts often must be renewed due to rotation, alternation or replacement within the companies as far as restructuring or cancellation of departments responsible for transport planning, mobility management or commuter traffic.
- 7) For initialising a Bremen-wide acquisition campaign the big Daimler Chrysler company with 18,000 employees was designated for the role of pioneer which could pull others into the service. The service contract was well prepared. After alternation of the top director the negotiation on participation in CRS stopped abruptly. New priorities in the company's policy did not include the CRS any longer. Without this kind of pioneer partner the advertising campaign was extremely aggravated, especially because there was no really compensation available and CRS has lost many time. (To make matters worse: it was not easy to explain, why the pilot companies from the initial MOVE-project, which has taken part in the development and testing of the CRS service package, are also absent from the project in its introduction stage.)
- 8) In addition, also the negotiation with the formally "Senatskommission für das Personalwesen" (The Central Minister's Commission for Personnel Management, responsible for 40,000 servants; now renamed into PERFORMA) was not very successful. Some individual authorities, that are located at scattered buildings, do in fact have great interest in the ridesharing service, but don't find a way of financing it, due to the fact that they have no autonomy over their households in issues concerning social provision and personnel policy.
- 9) Without Daimler Chrysler and the public servants, CRS was coming under a "vicious circle", i.e. synchronisation - better: simultaneousness - of appointments and service management for several smaller companies with very different character (banks, hospitals, steel works, electronics, wholesale trade, insurance companies etc.) scattered over Bremen and linked to incoherent parts of the relevant road network.

Even if many of the above mentioned problems are specific for Bremen, all the evidence seems to indicate that some of the essential experiences and findings can be generalised.

3. Constrictions resulting from the inherent structure of the Full-Service-Package

The experiences with the CRS-marketing leads to the understanding of some problems that are inherent in the structure of the service package. These problems have motivated the CRS-provider to transfer the system from a full-service-package for companies/employers to an open Internet based service for everyone (see chapter 5). This transfer was the major part of work in the last quarter of the TARGET involvement.

- 1) The Mobility Guarantee which was developed as an instrument for attracting the service for the potential carpoolers has been identified as an obstacle for selling the service. The idea of "taking out the worry out of ridesharing" has become the "taking in the worry into the negotiations with the management". Due to the fact that main parts of the advertising campaign was built on that marketing element, the whole strategy was called into question.

- 2) The map used for routing and matching, which was created by the service provider itself, is not transferable to other regions. Therefore a piloting of the system in other test areas was impossible, although many requests have reached the provider. A solution must be found which enables an easy transferring of the CRS system to any map.
- 3) The system was not prepared to serve individual requests for carpooling in the meaning of personal applicants without backing of a company's membership. Considering the problems with selling the service on the institutional level (see above), this has to be seen as a deficit.
- 4) The same applies for the fact that the ride-matching service was only designed for one direction: from outside of the city to workplaces located in Bremen (targeted companies). This results from the expectation of high efficiency of marketing within the clientage of companies located in Bremen. Now it has to be seen as a hindrance regarding flexibility and further development.
- 5) As a problem it also has been identified that the companies were asked to sign a contract some time before the service was starting. This was required as a keystone for the collection of definitely commitments before reaching the "critical mass". The companies are reluctant to agree with such kind of "conditional nexus".
- 6) Due to the necessity to proceed the marketing campaign without an attractive pioneer partner which pulls other companies into the pool the work load for the service provider becomes unacceptable. At the same time the experience has shown that it is not easy to spread the work to more colleagues because the marketing tour through the companies is a very special thing. The conception of a Full-Service-Package causes a strong dependence from the knowledgeable person(s) who are handling the management consulting and the respective contacts, which is in fact a confidential matter. In case that the marketing strategy will not overcome the status of arduous efforts (no "self-running" process of increasing demand on the companies site), small service providers will not have a real chance of success.

4. Problems resulting from general trends

A fundamental lesson is that existing transport 'pressures' are not of a magnitude to push companies towards the purchase of the service, and the service is not sufficiently attractive in itself to compensate.

The context of general political conditions is constraining:

- 1) There is no real national political priority set in favour of questioning the dominance of the car.
- 2) Use of the private car for commuting has been cemented by the historic encouragement given by Income Tax law (the revision of flat mileage rate within the income tax from beginning of 2001 gives cause for hope on some positive impetus).
- 3) Employee representation enjoys a significant influence in workplace negotiations, and is often protective of existing conditions of employment.
- 4) Land Use Planning offers limited scope to control workplace parking provision.
- 5) Due to the decrease of employment in the companies (general structural trend: reduction of personnel) the run on the parking space at workplaces is going back.
- 6) On account of legal requirements bigger companies are mostly well equipped with parking lots. With the background of decreasing employment in the companies the need for solutions on the level of mobility management diminishes. This is true at least in the understanding of the management.

- 7) There is a general trend of reducing commitments in social provision. Therefore chargeable Full-Service-Packages in the field of commuter transport are increasingly difficult to implement.
- 8) The problem of taxation of social provision as perks is still existing. This reduces the willingness of companies to participate in Full-Service-Packages.
- 9) It must be stated that there is a general "roll back" in the field of Mobility Management in Germany. After the phase of optimism we have now the phase of disillusionment.

5. The new Approach: Further development to an Internet service

Based on the lessons described in the previous chapters the following approaches has been considered for a re-launch of the Carpool Ridematching Service:

- Revising the charging structure to cut out, or preferably postpone, the financial risk element
- A role for a Mobility Consultancy service at an inter-company level allowing small and medium sized enterprises to be incorporated
- A return to a more integrated Travel Plan package approach with Ride Share as specialist service
- Development of an self-service platform on the Internet, overcoming barriers of language, routing maps and with optional tools for individual contracting with companies (with hierarchical user rights)
- Widening participation by attracting individuals to the service - possibly via Internet application

In the last quarter of TARGET the efforts were mainly concentrated on the migration of the CRS software from a (local) server-client application to a purely web based application. In the period before the software was not offered for use by everyone. It has been programmed as a working tool for the service provider (not as an end user programme).

Since the software was developed the 'internet has taken over' quite a bit. E.g. today it is acceptable to assume that all participants can be reached via e-mail or have Internet-Access in general (private or at work). Also many people are simply accustomed to certain standard internet applications (using browsers etc.). Therefore the idea to make the software purely web based was seeming to be an adequate solution.

The new version has been changed in such a way that

1. it requires a minimum of local support
2. can be used without the necessity of some local "knowledgeable" person
3. costs of operation are minimised by
 - centralising service of software distribution and application (in current terminology: offer it as an Application Service Provider - ASP)
 - stripping the service down to a degree that it can function more or less automatically, i.e. without need of operator intervention during normal operation. E.g. notification of participants is done via e-mail (optionally fax).
 - renunciation of the combination with mobility guarantee issues
4. allows access (in technical terms) by anyone who has access to the internet without having to worry what software to install etc.
5. integration of different locations is simplified by using standard maps by TeleAtlas or NavTec (however, in case of the Bremen pilot project the available - self-constructed - map will be used)

6. adaptation of new languages is simplified (overcoming language barriers) by using databank based text provision

While it was possible more or less to take over the core of the origin programme (route and time matching algorithms, structure of data etc.) some work was necessary to migrate to purely web based standards, simplifying the user interface GUI and handling notifications automatically. Totally innovative is the map based test-user surface (for guests) and the definition of routes for registered "members" on a map. The last two of the above mentioned points are important for the possible expansion of the system beyond the greater Bremen region, e.g. to other German regions as well as to other countries. In case of expansion vector maps will be used for the routing. These maps are worldwide available.

The new Internet version of Carpool Ridematching Service should be brought into test operation in September 2001.



Figure 1: Start page of Carpool Ridematching Service

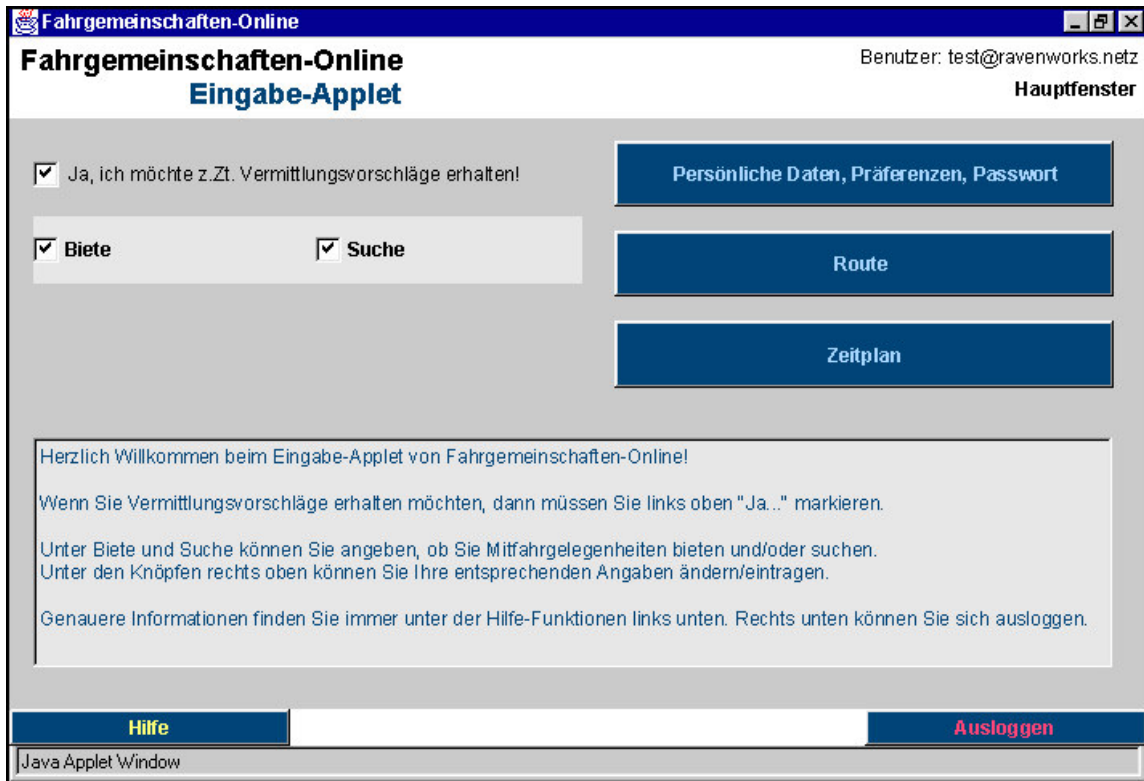


Figure2: Second level after clicking "login" on the start page. Here you can key in your wishes and preferences (next levels)..

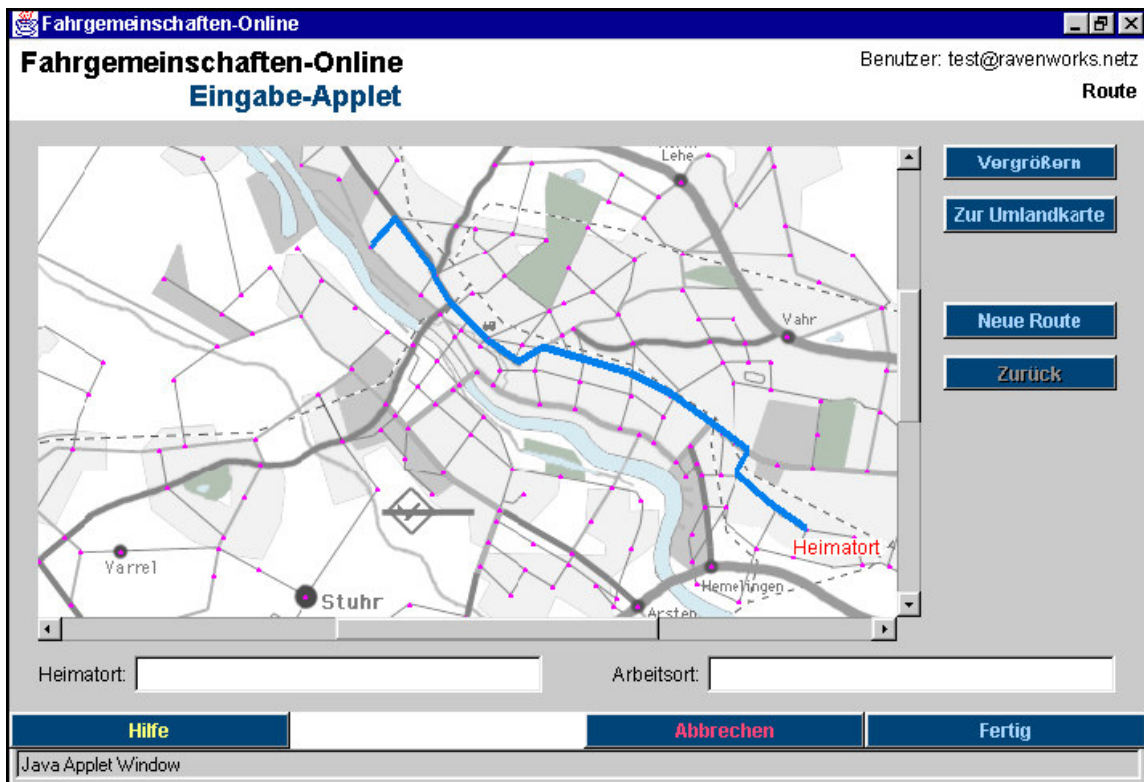


Figure 3: Example for an input window for your route (clickable map).

Fahrgemeinschaften-Online Benutzer: test@ravenworks.netz

Fahrgemeinschaften-Online
Eingabe-Applet Zeitplan

Das Angebot/Gesuch ist gültig vom bis zum

Das Arbeitszeitmodell entspricht

Arbeitsstag	Vorgabe	Arbeitsbeginn		Arbeitsende		Biete	Suche
		von	Uhr	bis	Uhr		
<input checked="" type="checkbox"/> Mo	<input checked="" type="checkbox"/> ja	von Mo	<input type="text" value="08"/> : <input type="text" value="00"/> Uhr	bis Mo	<input type="text" value="16"/> : <input type="text" value="00"/> Uhr	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Di	<input checked="" type="checkbox"/> ja	von Di	<input type="text" value="08"/> : <input type="text" value="00"/> Uhr	bis Di	<input type="text" value="16"/> : <input type="text" value="00"/> Uhr	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mi	<input checked="" type="checkbox"/> ja	von Mi	<input type="text" value="08"/> : <input type="text" value="00"/> Uhr	bis Mi	<input type="text" value="16"/> : <input type="text" value="00"/> Uhr	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Do	<input checked="" type="checkbox"/> ja	von Do	<input type="text" value="08"/> : <input type="text" value="00"/> Uhr	bis Do	<input type="text" value="16"/> : <input type="text" value="00"/> Uhr	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Fr	<input checked="" type="checkbox"/> ja	von Fr	<input type="text" value="08"/> : <input type="text" value="00"/> Uhr	bis Fr	<input type="text" value="16"/> : <input type="text" value="00"/> Uhr	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Sa	<input checked="" type="checkbox"/> ja	von Sa	<input type="text" value="08"/> : <input type="text" value="00"/> Uhr	bis Sa	<input type="text" value="16"/> : <input type="text" value="00"/> Uhr	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> So	<input checked="" type="checkbox"/> ja	von So	<input type="text" value="08"/> : <input type="text" value="00"/> Uhr	bis So	<input type="text" value="16"/> : <input type="text" value="00"/> Uhr	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Um wieviel können Sie früher oder später anfangen (aufhören)? Minuten

Java Applet Window

Figure 4: Example for an input window for your time schedule (different time schedules possible, e.g. five different weekly shift work schemes in sequence)