

Cluster opportunities for business eco-mobility

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Abstract □ Rising pressure on the economical system, the ecological equilibrium and the public support due to the exponential growth of mobility issues requires innovative actions from companies, government and public. Regarding business mobility, shuttle and goods transport are commonly tackled within the company borders. Transcending these borders, however, a variety of efficient collaborative mobility approaches is gained. Yet cooperation implies to concede standard managerial practices and move towards complex, cross-border, long term activities. Although initial investments may be higher, numerous case studies indicate a reduction of costs and risks in transport activity as a result of cooperative actions and, moreover, a better service to customers and employees is proven. Hence, policy support is a next step to take. A balanced commitment between company clusters and authorities may unfold challenges and opportunities.

Keywords □ interfirm cooperation, shuttle movement, goods transport

I. INTRODUCTION

Mobility issues are of all times; the traffic intensity, though, has risen noticeably in the last decades. It causes concern on various levels, from local to global, regarding shuttle traffic as well as goods transport. Business produces and consumes transport and thus contributes heavily to the mobility subject: industrial areas are infected by access problems (Wommelgem-Noord near Antwerp; Blauwe Toren and Wagelwater in Bruges) and traffic jams in the environs (John Kennedylaan, Seaport Ghent), frequently causing heavy traffic in residential areas (De Prijckels in Deinze-Nazareth); they often suffer from bad connections with the public transportation system (Skalden-park, Seaport Ghent); sign posts often lack simplicity (Technology Park Ghent-Zwijnaarde) and traffic areas are space consuming. Hence, business traffic was considered as a welcome study object for screening its prospect of interfirm collaboration.

II. TRANSCENDING THE ISSUE

Upon ten years of implementing environmental care within companies, the internal approach has reached a worthy level. With the entry of the 21st century, companies are challenged to extend their reach and look across the company borders. Here, mobility is regarded as a pioneer cross-border matter, concerning shuttle movement and goods transport. The broadening look originates from the need for convergence of the many initiatives in mobility questioning and in the eco2-surplus value of interfirm collaboration (Van Eetvelde, Vlaams parlement, June 23rd 2006). Company commuter

transportation plans are a successful initiative, yet their potential is limited if compilation isn't aimed at. Supply chain management can be broadened in a sustainable way by fusing multiple chains of different companies. Economic pressure on logistic services may lever this approach and enforce in situ solutions such as collective docking platforms (WES, [1]), joint parking area (Greenbridge Science Park in Oostende-Plassendale), combining transfers (WES, [1]) and even eliminating transport through mutual exchange of (rest)products (Kalundborg - Denmark, [2]).

Interfirm collaboration is regarded as a trigger for SME's to handle the mobility issue, since they often lack the critical mass to fund far-reaching measures, e.g. to promote alternative commuter connections. A cluster of businesses, whether or not organised round a (multi)national, can send out a powerful signal, even initiate collective transport itself.

III. CLUSTER MOBILITY

Enterprises – even competitive – can unite their forces in numerous areas. Joint objectives cause co-competition (Luo, [3]), fusing cooperation and competition. Reduction of expenses for example in production, organisation, materials, transport, etc. is one of the main reasons, but improvement of product and service quality, exchange of knowledge and technology, risk management in innovation, time savings in efficiency raising and quality control, share holding with respect to external parties, a larger strategic flexibility, even image building; it all are objectives that add to the cooperation intention. Clustering activities ever originate from a need, a duty or a wish to collaborate (Van Eetvelde et al., [4]).

The study of interfirm collaboration can be illustrated by an anthology of cluster projects focusing on mobility. It merely concerns business areas that are already involved in collective actions and are characterised by physical vicinity. The latter, however, is no prerequisite.

A. Commuter campaign at Drogen I and Skaldenpark

To shift the modal split of the employees at the business park Drogen I (1500 employees; 64% car single; 20% carpool, bus and train; 9% bicycle; 7% motorbike and motor) further to low energy consumption, an extensive transportation study has been set up on a site level. Simultaneously, a promotion campaign supported alternative commuter connections such as bicycle tracks, public transport, carpool and even a testing flexible minibus shuttle to the nearby train station. 81 different people signed up: 41 tried the bicycle, 33 the shuttle bus, 19 started carpooling and 8 used public transportation. The interest in the shuttle bus levelled the critical mass required for continuation of the shuttle service at the end of the project.

The survey study and campaign was an initiative of the Ghent city government, acting as a park management entity. Only by uniting their forces, a telescope vision of the site was

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obtained, a large-scale campaign could be launched and an economic feasible action plan was set up. Hence, the role of a pioneer or a park manager is proven crucial in cluster (non core) business activities.

This project could benefit from experiences from a similar project on the industrial area Skaldenpark in the Port of Ghent. Here, the shuttle bus concept is started in December 2003 and now is extended to a large part of the Port of Ghent, even inducing further eco-services such as renting commuter-bikes.

B. Goods transport scheduling at Wommelgem-Noord

The business area Wommelgem-Noord near Antwerp competes with aggravating access difficulties. A narrow meandering access road connects the frequently jammed Antwerp circular with an exit complex of the E313. Traffic congestion is standard. With no infrastructure investments in view, the sited logistic firms combined forces in a joint time schedule: mutually they agreed upon timing their truck transport movements from the business site. This voluntary time-based agreement is successful in an economic and social way.

C. Regional Transfer Centre in Beerse

Four enterprises in the municipality of Beerse – Campine, Leysen, Metallo Chimique and Wienerberger-Terca – caused a 15000 trucks load per annum in the city centre. Whilst located along the waterway Dessel-Schoten, water transport was suggested as an alternative route. Yet the investment cost of a docking platform was too high for each individual company. Through combined forces, their enquiry was recognised by the municipality, adding the social aspect of unloading the city centre. When the common platform proved to be economically and technically feasible in a study by the Flemish Institute for Logistics, the project was selected for public-private financing and is at present being carried out.

D. Clustered parkings at Greenbridge Science Park

Greenbridge Science Park is a 20 ha business area in Oostende-Plassendale, profiling as a sustainable high tech and high quality business park. Since new to be developed, it offered the possibility to fine-tune spatial and mobility aspects amongst other requisites of sustainable management. The spatial design outlines buildings with clustered docking platforms and clustered parking lots. Furthermore, a parallel road separates destination from through traffic. Cf. supra, this approach concerns priority management decisions.

Similar spatial and mobility design measures are observed at Ecopark Emmeloord in the Netherlands (WES, [1]). In general, new business sites are open to merge economic views with efficient spatial design, e.g. to rationalise building space (business mass), merge it with ecologic design (green areas) and with safe and limited traffic models (mutual use).

IV. LEGAL AND FINANCIAL VENTILATION

Alternative / collective transportation requires engagement of managers. Site developers, authorities, etc. are welcome to join the park managers in their common approach of clustering (non core) businesses at industrial sites. Research, however, indicates the need for a thorough scrutiny of legal, economic, spatial, technical and social aspects of joint projects (Van Eetvelde et al., [4]).

However, cooperation initiatives often fail when it comes to responsibilities and financial costs. The design of a solid legal framework appears to be an essential step in the setting up of collaborative activities (Van Eetvelde et al., [4]). The establishment of a (public-)private partnership, the drawing of a solid financial and strategic plan (the "pipeline") and an engagement chart of the involved companies is a conditional factor too with respect to common business projects. Often social broadening of the project opens up new opportunities extending the economic objectives of the collaboration. Mobility matters are a characteristic example of this statement.

V. WISH OR DUTY?

Often the transcendence to cooperate in joint projects is initiated by an external pressure, whether an intolerable situation (e.g. Wommelgem-Noord) or – often – a governmental push (e.g. Beerse). Yet pressure can be elicited. Combining forces is a major way to evoke reaction.

More and better infrastructure or public transportation is the most common way to tackle a mobility issue, yet it is not always the most cost-efficient way. It is stressed that clustering mobility matters serves a double goal. It offers the opportunity for companies to reduce their expenses and it provides a better social service to customers and employees. For authorities it is important to feel and meet the surplus value of joining in – financially or organisationally – in order to add a social worth to a collective mobility project.

A balanced commitment between business clusters and local authorities may unfold new opportunities. It is believed as a countering prospect, bearing the knowledge that transportation costs will continue growing (Maes, T., [5]).

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