

ROTTERDAM SCHOOL OF MANAGEMENT, ERASMUS UNIVERSITY

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# Materials handling centre: making business more efficient

by Brian Bollen

**The aim of the Materials Handling Forum at RSM is to narrow the gap between research and practice by promoting and disseminating academic knowledge, sharing innovative ideas, generating research questions, and co-developing new research themes with industry partners.**

The work of the Material Handling Forum (MHF) has begun in earnest. The practical phase of the first significant project undertaken by the body set up to bridge the gap between science and the business world concluded in the middle of November. The next stage is to study and analyse the data gathered during what was a significant order picking experiment, with publication of the results and findings expected to appear by the middle of 2013.

The MHF, which is comprised of academic and company partners, provides a meeting platform for academics, industry partners, and administrations. Company partners can co-develop the research agenda with respect to both applied and more fundamental research.

'We have provided speakers for seminars organised by the MHF, and we find these seminars are very effective in communicating information about the logistics industry to our members,' says Pieter van der Base, who is responsible for consultancy matters at the Zoetermeer-based logistics industry trade body EVO.

'The MHF is an important and excellent information distribution channel for the sector.'

'Logistics services have to deliver products on time and at the lowest cost,' says Arjan Dibbink, manager of warehouse operations at Nissan, which supplies car parts to the Nissan global network out of the Netherlands. 'You can only do that if you know what is going on in the market. The MHF keeps us up to date with new thinking, new tools and new projects. I personally have learnt a number of valuable lessons, starting with the commonality of elements across major projects. You will find the same problems occurring in different projects,' he says.

'You find you need to look for other opportunities to change things significantly to get results,' Dibbink believes. 'It is reassuring, even stress-reducing, to know that other people with experience of running major projects encounter similar problems. The MHF allows industry players to discuss problems and opportunities with one another, to see those problems from a different perspective, and to identify solutions you might not otherwise think of.'

## Research funds

Part of the function of the MHF is to help lobby for additional research funds ▶

# Materials handling centre: making business more efficient (continued)

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from international bodies, redressing the research funding imbalance that the industry sees between transport and logistics. Under the Horizon 2020 programme, the EU has budgeted around €80bn for research in transport and logistics starting from 2014, notes Professor René de Koster, the MHF's leading academic figure and its chairman.

Transport research currently consumes the lion's share of those funds, Prof. de Koster says. This is partly because of the greatly fragmented nature of the logistics industry. 'There are many small companies in different sectors that need information and help with improving their logistics,' he says.

Logistics is in total one of the largest industries in the Netherlands. It comprises an estimated 400,000 people in ten thousand companies working in an estimated 50,000 warehouses. This inevitably makes

it difficult, even impossible to lobby effectively for the industry's greater good. The MHF can increase the industry's capabilities, influence and profitability by channelling efforts through a single focal point.

'No-one currently recognises material handling, or facility logistics, in its own right as an important area for academic research, and this has consequences in terms of accessing research funds,' says Prof. de Koster. 'We want to change that by raising awareness of facility logistics as an industry, and by keeping track of innovative thinking and practical developments in logistics around the world.' The MHF's programme of regular seminars and round tables to discuss selected issues are already proving popular.

Dedicated research could, he argues, help the logistics industry develop new ways to tackle the problems caused by the growing

shortage of space and suitably trained staff in important areas like the Netherlands, as well as the problems presented as staff grow older and become less physically able, and the ever-growing emphasis on safety.

## Practical perspectives

Arjan Dibbink notes that there are three distinct elements to the MHF: users, suppliers and science/education. Nissan's status as a user colours his views with a very practical and business-oriented perspective. 'We helped establish the MHF and are one of the first users of it. One of our prime goals is to keep track of developments around the world, but if science can also demonstrate an objective understanding, then it's also a platform to improve appreciation of our discipline. Scientific proof of gut instinct would be very helpful.'

Dibbink also says of the MHF: 'It could be of genuine practical help in maximising the performance of our logistics operations not just in terms of delivering on time but in doing so at a lower cost. You can only do that when you know what is going on elsewhere in the market. The MHF keeps us up to date with new thinking, tools and projects. It is an effective way to observe theory and practice operating side-by-side.'

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## Practical research

MHF's first major experimental project, the Order Picking Experiment (OPE) referred to earlier, was conducted on Nissan's premises and serves as an excellent example of the forum in action. Says Dibbink: 'RSM and the MHF studied not only productivity enhancements but also looked at how to make economic improvements and heighten job satisfaction.

Devised in the spring, and launched in September, the project came to the end of its practical phase in mid-November, and it will take six months or so to study and analyse the results.

The OPE focused on practical experiments using four principal order picking tools: picking by light, picking by voice, picking by paper, and picking by radio-frequency terminals, in combination with three order picking methods: parallel picking, zone picking and dynamic zone/bucket-brigade picking. Three populations carried out the experiments: RSM students, students from vocational logistics training, and professional warehouse workers. Preliminary results show differences between these populations and some clear differences between tools and methods.

Looking ahead, Anton van Loon, director of BMWT (Bouwmachines, Magazijninrichtingen, Wegenbouw-machines en Transportmaterieel), with

responsibility for organising the triennial Logistica trade fair for the Benelux countries, points to the MHF's rolling four-year research calendar to demonstrate its longer-term credentials. At a time of deep recession, when markets are struggling and revenues are weak, it is nothing short of remarkable that the MHF already has 12 partners and 30 members. This reflects his belief in the merits of methodical and sustained study of the dynamics of internal logistics.

'There are clear benefits to be gained from improving internal logistics, and

those improvements will in due course help improve corporate revenues,' he states. If he is correct, then bridging the gap between academia and the corporate world will deliver commercial returns as well as intellectual returns. Progress so far, he suggests, indicates that the MHF is a move in the right direction. ■

More information about the Materials Handling Forum, including an overview of research themes, MHF members and partners, and future events, can be found at: [WEB www.erim.eur.nl/mhf](http://www.erim.eur.nl/mhf)

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