



research bulletin

September 2003

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Welcome New Members

As logistics and supply-chain management rapidly gain acceptance as critical business concerns, it is perhaps surprising that so few university business schools have developed significant research and teaching capabilities in these fields.

There are of course some shining exceptions to that rather sweeping statement, but the fact remains that logistics and supply-chain issues are seen primarily as a subset of operations management.

One of the main reasons for the existence of the Logistics Research Network (LRN) is the encouragement of a wider academic involvement in these key areas. A further role of LRN is to bring together practitioners and researchers to enable a greater cross-fertilisation of ideas. In the

eight years of its existence, LRN has grown in membership and its annual conference is now regarded as Europe's premier meeting place for academics and reflective practitioners in logistics and supply-chain management.

It is particularly encouraging to see new members join LRN and I would like to encourage as many of you as possible to attend the upcoming annual conference to be held on 11th and 12th September at City University, London. Dave Menachof, this year's conference host, has organised an impressive programme in terms of both academic content and social possibilities.

I look forward to seeing as many of you as possible in London in September.

Professor Martin Christopher
Chairman, LRN

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LRN Annual Conference

Thursday 11th and Friday 12th September 2003

Cass Business School, City University, London

Wednesday 10th September, PhD Workshop

11.00am-3.45pm

Thursday 11th September, Conference Day 1

Registration from 8.45 – 9.30am-4.45pm

Conference Dinner

7.00pm-10.30pm

The Medieval Banquet, St Katherine's Dock

Friday 12th September, Conference Day 2

9.00am-3.00pm

Farewell Drinks Reception

3.00pm

For queries regarding registration for the conference, contact: Membership Services,
Corby Office. Tel: 01536 740135. Fax: 01536 740101. Email: membership@iolt.org.uk
Conference Web site: www.logistics100.com/lrn2003

SUCCESS Project

The Supply-Chain Effectiveness and Swift Service (SUCCESS) project was born out of a discussion between the members of the Institute who are practising managers working in different facets of the supply-chain. The need identified was for a methodology and a set of tools that would help practitioners to identify and cost waste in supply-chain processes and to understand the implications of different improvement alternatives.

The project is led by a multidisciplinary team that comprises the Warwick Manufacturing Group at the University of Warwick, the Centre for Logistics and Supply-Chain Management at Cranfield School of Management, The Institute of Logistics and Transport (ILT) and leading food manufacturers, including Masterfoods, McCormick and Bernard Matthews. The research is funded by the industrial partners and by the EPSRC, for a period of three years.

The main output of the research is the Diagnostic Methodology Toolkit (DMT), a framework that combines elements

of time-based methodologies – to determine the key wasteful activities in the process– and activity-based costing techniques –to cost key areas for improvement. This is intended to assist companies and their supply-chain partners in evaluating process waste and the associated costs, providing a methodology that can be managed in-house.

After two years of research, the DMT has already been developed and validated through six case studies with the collaborating companies. In these initial tests, the DMT has proved to be effective in improving visibility of waste and cost across supply-chains, leading to bottom-line improvements. During the final year, the research team will concentrate on expanding these benefits to other organisations by disseminating the findings and helping more companies to implement the methodology.

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Uncovering the Cost of Retail Returns

The Institute of Logistics and Transport, in partnership with The Cranfield School of Management and Sheffield Hallam University, has been awarded an eight-month contract by the Department for Transport to investigate: *The Efficiency of Reverse Logistics Systems in the UK Retail Sector and the Impact on Sustainable Transport*.

Recent EU legislation is pushing reverse logistics up the agenda for all manufacturers of electrical and automotive products. However, in the retail sector unsold or damaged consumer goods returned into the logistics chain are not new. The problem, although unquantified, is not insignificant. For example, it is estimated that up to 40% of newspapers, journals and books by volume are returned.

Integration of reverse logistics processes presents a significant opportunity to improve operational efficiency and reduce environmental impact. These are the key aims of the Government's Sustainable Distribution Strategy, published in 1999.

Changing attitudes to waste and packaging disposal, extended warranties and no questions asked returns policies as part of the customer service offering have led to the recent interest in reverse logistics. Companies recognise that it is costing them money. As returns flow back through the logistics chain they are contributing to the number of vehicles on our roads and so to environmental pollution. The latter is a key concern to the Government in its drive for sustainable distribution. So far, the costs are unknown. The aim of this project is to examine the size of the problem and the causes and to identify areas for improvement.

Retail supply-chains have been driven by on-shelf availability and customer satisfaction. The mechanisms by which products flow through to the retail store are well understood and managed to a high degree of sophistication. However, return flows are often overlooked and not managed in the same integrated way. Many retail supply-chains have not adopted a 'cradle to grave' approach, with reverse logistics remaining a low priority. For a number of products the economics of manufacturing and distribution are low compared with the lost revenue from not having on-shelf availability, particularly in those sectors where markets are characterised by unpredictable demand, promotional activity and short product lifecycles, such as music CDs, books and clothing.

The results will be published in 2004.

Mike Bernon, Director of Public Programmes, Cranfield Centre for Logistics and Supply Chain Management (CCL&SCM), and Professor John Cullen, Head of the Centre for Supply-Chain Accounting Research, Sheffield Hallam University, are undertaking the research on behalf of the Institute. The CCL&SCM has an established reputation for its logistics/supply-chain research and teaching. The Centre for Supply-Chain Accounting Research is unique in combining management accounting and supply-chain expertise.

Further information: Jonathan Bullock, Director of Faculties and Policies, ILT. Tel: 01536 740160. Email: jbullock@iolt.org.uk
Mike Bernon, Cranfield School of Management, Cranfield Centre for Logistics & Supply Chain Management. Tel: 01234 751122. Email: M.P.Bernon@cranfield.ac.uk
Professor John Cullen, Sheffield Hallam University, Centre for Supply-Chain Accounting Research. Tel: 0114 225 5098. Email: J.Cullen@shu.ac.uk
Reference: Sustainable Distribution: A Strategy (1999), Web site: www.freight.dft.gov.uk

EVENTS

2nd October 2003

The Kinnock Lecture
Logistics in an Expanded Europe
and the Need for Policy
Leadership

Cavendish Conference Centre,

Duchess Mews, London

Speaker: John Allan, President,
 Freight Transport Association and
 Chief Executive, Exel plc

The free movement of goods is a founding ideal of the Treaty of Rome. It also matters a lot to those in the logistics industry. This lecture will examine the barely acknowledged role that logistics will need to play in making an expanded Europe work and the blind spot that the European policy makers seem to have about what they need to do to ensure it does work. We enter the greatest era of expansion of the EU at a time when its vision and policies for goods transport have reached an all time low.

Booking information: Membership Services, Corby Office.
Tel: 01536 740135. Fax: 01536 740101. Email: membership@iolt.org.uk

31st October 2003

Achieving Resilience in the
Supply-Chain
Identifying Risks and Managing
Them Effectively

A one-day conference, followed by an optional one-day workshop.

Cranfield School of Management
 Supported by the Department for Transport

With supply-chain networks becoming ever more complex, risk and contingency planning is not simple and consequently the issues of vulnerability and resilience planning should be at the top of every business agenda. Risks are an inherent part of all life – business or otherwise. However, it is the approach to risk that can make the operational difference between potential organisational dysfunction or failure and the smooth running essential for continued success.

Some critical issues and priorities facing supply-chains and supply-chain management are:

- Risk classification, risk assessment and risk management
- Perception of what risks are, where they come from and how to avoid them
- Levels of risk awareness and risk criticality may differ according to the nature of the product/service being supplied

This conference will provide you with a realistic and comprehensive overview of supply-chain vulnerability and how it can be identified and managed. It is aimed at all those who are responsible for business planning and contingency, risk management, as well as those with strategic and operational responsibility for the supply-chain.

Booking information:
www.cranfield.ac.uk/som/conferences
Or, Jackie Hall, Conference Client Co-ordinator,
Cranfield School of Management Tel: 01536
754505. Email: jacqueline.hall@cranfield.ac.uk

17th/18th November 2003

European Forum on Market-
Driven Supply-Chains – Creating
the Responsive Supply-Chain

Cranfield School of Management
 Professor Martin Christopher and
 Professor Dan Jones will be co-chairing this inaugural event, the theme of which is how supply-chains can be designed to enable higher levels of responsiveness to be achieved. The focal point will be the search for practical ways in which the so-called lean and agile paradigms can become mutually supportive. There will be a mix of presentations and breakout sessions and the emphasis is on knowledge generation and the sharing of ideas. If you would like to lead one of the sessions by presenting a short paper, or to lead a breakout session, contact Martin Christopher. Email: m.g.christopher@cranfield.ac.uk

Booking information:
www.eiasm.org/frontoffice/event_announcement.asp?event_id=
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Warehouse Automation

Research into warehouse automation has been undertaken under the auspices of the Institute's Warehousing and Materials Handling Forum. This research was conducted by Zaheed Halim as his MSc thesis project at the Centre for Logistics and Supply-Chain Management, Cranfield School of Management.

The research commenced with semi-structured interviews with consultants, system suppliers and end-users who have been actively involved with warehouse automation projects. The results of these interviews identified the key steps of such projects and provided an understanding of the key issues involved. This information was used to compile a survey questionnaire that was sent out to Institute members who had already indicated their interest in assisting with research in this area.

Results from the survey included:

- The main concerns about warehouse automation projects centre on whether the technology will work in practice and on the high capital costs involved
- Over half of automation projects involve new Warehouse Management Systems – in addition to new Equipment Control Systems
- About half of the companies experience minimal or no disruption to ongoing operations, whilst half experience moderate or extensive disruption
- Information technology issues comprise the largest cause of the disruption
- Most – but not all – projects are completed on time and within budget

The findings of the research are currently being written up into a Guidance Note to help Institute members who are considering the option of warehouse automation or who are implementing such a project. It will comprise three parts to assist with the three main stages of any project: Pre-project; During the project; Post-project.

The Guidance Note will be available online on the ILT and Cranfield School of Management Web sites later this year.

Further information: Peter Baker, Lecturer, Centre for Logistics and Supply-Chain Management, Cranfield School of Management. Email: peter.baker@cranfield.ac.uk
Jim Rowley, Faculty and Forum Manager – Logistics, ILT Corby Office, Email: jrowley@iolt.org.uk

Seed-Corn Research Projects

2002-03 Project – Meeting the Rail Freight Growth Target

In October 2002 Dr Allan Woodburn at the Transport Research Institute, Napier University received ILT support under the Seed-Corn Funding Initiative to undertake a one-year research study: *Meeting the Rail Freight Growth Targets*.

In addition to a literature search the project has involved interviews with the key rail freight providers and logistics service companies, including those with customers that have moved back from rail to road. The researchers aim to examine key attributes, e.g. volume, commodity types, urgency/reliability issues, to identify the characteristics associated with successful rail freight movement and equally those that have been unsuccessful.

A presentation will be given at the LRN Conference and the report published by the ILT at the end of this year.

2003 Multimodal Freight Transport in Great Britain: Requirements for a Multimodal Rail Terminal Network

The report, prepared by Dr Tony Whiteing, University of Huddersfield, presents a review of the rail freight scene, with particular reference to the period since the opening of the Channel Tunnel and the development of terminals capable of handling distribution related rail freight. The emphasis of the report is on the warehousing and handling systems required to handle such traffic.

The report concludes: 'Channel Tunnel terminals appear to be in a position to contribute to the emerging domestic network [even

though some] have relatively low provision of handling equipment [and] little or no warehouse provision.' It is here that the 'Open Access' operations in the distribution sector are providing strong competition to the established rail freight companies. However, in Dr Whiteing's view, to achieve the government's targets for rail freight growth a partnership between independent operators, e.g. Potter Group, and rail freight operating companies will be necessary.

2004 Award to Cardiff University

The 2003-04 Seed-Corn grant has been awarded to Dr Stephen Pettit and Dr Anthony Bereford, Cardiff Business School, to research: *The Development of Emergency Relief Logistics Response Model*. A paper will be presented at the LRN Conference 2004 and the report published in December 2004.

The award will enable the researchers to continue to develop their work in this area, and reinforces the LRN's support of work in this area, which began with the Seed-Corn-funded project, *Logistics for Humanitarian Aid: a survey of aid organisations* undertaken in 2001-02 by Dr Richard Gray and Richard Oloruntoba, Institute of Marine Studies, University of Plymouth – see below.

Available from the ILT Bookshop

Humanitarian Aid Organisations and Logistics, Richard Oloruntoba and Richard Gray, Institute of Marine Studies, University of Plymouth
The Aftermath of the Foot and Mouth Crisis in Agricultural Logistics: The Case of the UK Fat Lamb Chain, Michael Bourlakis and Johanne Allinson, Centre of Rural Economy, School of Agriculture, Food and Rural Development, University of Newcastle Upon Tyne.

Hard copy –Members £20.00, Non-Members £35.00. Plus P&P – UK £3.00 First item, £1.50 additional items; overseas £10.00 per item

Information about the Seed-Corn Funding Initiative: Vicky Keeble, Faculty & Forum Executive, ILT Corby Office. Email: vkeeble@iolt.org.uk

Strategic Operations Management Centre

The Strategic Operations Management Centre (SOMC) at the University of East Anglia has launched with an interactive Web site: www.somc.mgt.uea.ac.uk, and is home to a number of new and exciting projects.

Funded research projects and forthcoming research proposals

1. Quick Response Diagnostic Programme

The SOMC has formed a partnership with Business Link to deliver a three-year diagnostic study to assist small to medium-sized enterprises (SMEs) to enhance competitiveness and long-term sustainability. The project is funded by the European Regional Development Fund and is the fourth regeneration project the Centre has conducted.

The diagnostic review covers all aspects and functions of an organisation to pinpoint factors that may threaten an SME's longer term viability. Following this diagnosis, SMEs are recommended a holistic specialist solution-provider to offer assistance free of charge. Whilst still in the preparatory stage date, the project has been met with much success and enthusiasm from SMEs nationally.

2. Total Acquisition Cost Model

A study of the UK retailing, manufacturing, and SMEs sectors to understand better the reasons for sourcing and outsourcing goods, inputs and services from offshore – typically low-wage economies – as opposed to using more flexible, responsive and agile firms in the UK. What are the advantages and disadvantages of this approach and can a model be developed to better understand and quantify the total cost of sourcing from offshore?

3. Flexibility in Fast Moving Consumer Goods (fmcg) Sectors

An investigation into how retailers and manufacturers, including SMEs, can become more flexible and responsive to the complex and fast moving demands of current consumer markets.

4. Reality Case Studies

A project to develop live case studies has recently been approved by the Learning, Teaching & Quality Committee, UEA. This exciting project seeks to test the feasibility of developing reality case studies for undergraduate and postgraduate students.

Why make learning live?

Research has shown that the more realistic or 'live' a case study becomes, the greater the potential for learning (Easton, 1992), largely as a result of increased motivation and participation. However, by necessity most case study work is conducted in a classroom setting using the rather sterile medium of a textual narrative.

To make learning live, we are exploring the possibility of developing reality case studies with local businesses in Norfolk. Furthermore, we are looking to explore the possibility of facilitating an interaction between small groups of students and their 'case', i.e. a local firm.

If it is proved feasible to make case study learning live, enormous benefits will be reaped by students and participating firms. Students will benefit from a more inspiring learning and teaching environment; firms will benefit from increased exposure to young, bright students and, in some cases, an international publication of the case study.

Further information about all these projects and others past and present, tel: 01603 592812. Email: somc@mgt.uea.ac.uk Website: www.somc.mgt.uea.ac.uk
Nicola Burgess, Centre Co-ordinator, SOMC

Operations Audit

Today, companies can choose from a wide range of methods for checking, monitoring, measuring and optimising their business processes. Whether ISO 9001, TQM, EFQM or SCOR, companies are constantly engaged not only in acquiring the necessary improved methods, techniques and software, but also in implementing them into day-to-day operations. Despite their helpfulness,

these methods are largely based on theoretical knowledge and data obtained from spot checks, short interviews, hypotheses, self-evaluations and subjective perceptions.

Operations audit relies on the complete practical sampling of all business processes. An audit team (whose composition depends on the size and structure of the business) observes all staff at work during a predefined period of one to two days, from the warehouse operative on the factory floor right up to the branch manager in the top floor office. They conduct the necessary interviews, noting both weak points and strengths. All information and data available, such as job descriptions, familiarity with directives, communication between branch offices, overtime and infrastructure, are collected for analyses. Most staff members cope well with the idea of being under permanent observation for a limited and clearly defined period of time. The statements from the staff are treated in strict confidence and remain confidential.

The data collected are analysed and recommendations are drawn up, with a time line laying down cut-off dates for their implementation discussed in detail directly with the management on the spot. A final inspection after an agreed period of implementation marks the end of the audit.

The audit time outlay is very modest and the costs minimal compared to the savings, which are at least 10 times more.

An operations audit offers an attractive alternative to conventional methods for anyone who is serious about tackling operational problems immediately and with rapid results. Internal weak points are identified with a minimum investment of money and time. Proposals to rectify shortcomings are established, discussed with the manager in question and a schedule for their implementation arranged. With operations audit, information is obtained directly from practice and

therefore reaction is much faster – a big advantage compared to other quality assurance methods.

Furthermore, for due diligence, operations audit is a powerful instrument giving insight into the operation of the company.

Beat Schlumpf, Expert for Logistics Systems, CH-4528 Zuchwil, Switzerland

Email: beat.schlumpf@bluewin.ch

Web site: www.beat-schlumpf.ch or www.operations-audit.ch

Logistics and Operations Management (LOM) Section

The LOM section is part of the Cardiff Business School, Cardiff University.

At the last Research Assessment Exercise the Business School was rated 5 while the manufacturing research, undertaken by LOM was highlighted as making a 'significant impact'. We are proud of our reputation of undertaking a range of research activities from fundamental, blue sky programmes all the way through to applied, industry-relevant programmes. We have gained an international reputation and have strong links with other universities and organisations worldwide.

We have a number of research groups and units within LOM. The three primary groups are: The Lean Enterprise Research Centre; The Logistics Systems Dynamics Group; The Transport and Shipping Research Group. The three groups work together on a number of research programmes, as well as undertaking individual projects. We are running joint programmes sponsored by the Engineering and Physical Science Research Council, the Department for Transport, Faraday Packaging Partnership and the Royal Academy of Engineering, as well as a number by individual companies.

We cover a very wide range of topics and subjects. Current research projects include:

- E-commerce and transport research in the retail and steel sectors
- Quality, postponement and late configuration in the packaging industry

- Home shopping and last-mile distribution
- Manpower and employment of seafarers
- Food processing supply-chains
- Networks in logistics and supply-chain management
- Reverse logistics
- Health care logistics
- Defence logistics
- Aerospace aftermarket supply-chain management

Further information: www.cf.ac.uk/carbs/lom

Freight Future

The fourth edition of the TransportEnergy BestPractice newsletter *Freight Future* is now available. Over 80,000 copies of each issue are printed and inserted into various industry publications, including *Logistics & Transport Focus*. This twice yearly monthly newsletter aims to provide up-to-date information and advice to the haulage industry, from looking at ways to reduce fuel consumption to improving operational efficiency that in turn will help increase profits.

Freight Future 4 describes how a company has increased its efficiency and saved money by the use of moving deck double-deck trailers. In 2002 Focus (DIY) Ltd undertook a feasibility study to find ways to move its goods more efficiently across the UK. As a result, it opted to trial a double-deck semi-trailer with a moving deck built by Don Bur Trailers and Bodies Ltd. The trial was successful and Focus undertook an extensive fleet replacement programme, introducing 20 moving deck double-deck semi-trailers.

The Road Haulage Modernisation Fund projects are also showcased. With only six months left for the Fund in England, time is running out for the industry to apply. Projects covered in this newsletter include the truck driver training simulator, safe and fuel-efficient driving (SAFED) training and the fuel economy advisors (FEA) scheme.

TransportEnergy Helpline. Tel: 0845 602 1425. Web site: www.transportenergy.org.uk/bestpractice