



SOLE France Letter



the International Society of Logistics – Europe – French District

May 2002

Logistic Engineering: a Chance of Europe?
RAMD, Logistics and Information Technology
From λμ 13 to QUALITA 2003 Conference
Munich, October 6-9 2002
Support SOLE 2002
the HOMEDOOR Project:
Material Flows – Information Flows Management
the PERFEL Survey

OPINION

Logistic Engineering: a Chance for Europe from Corporate Strategy to Executive Policy (0&S)

European industry might create the surprise by coming back to economic right practices quickly and surely, having understood more clearly that EBIDTA is quickly and efficiently significantly increased when skills are re-enforced through the use of IT.

Whatever the interest of market-places might be for trading activities, the spotlights focused on these places might hide the efficient support brought to the whole business activities by the use of electronic networks, available since 20 years and of information technologies now available at low cost.

Logistics determines the shape of the project in space and time.

At the time, we see too many ‘corporate.com’ websites, at the most, some trading places, demonstrating the deep misunderstanding of IT.

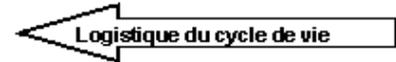
Now full e-business (i.e. business activities processed within an integrated digitalized environment) achieves full efficiency only if the manufacture core-activities can be operated at the higher speed required, the focus point of life-cycle logistics application from early design to servicing, ensuring economic management of materials and resources. The most spectacular increases of EBIDTA are obtained on e-engineering and e-manufacturing jointly, an European specialty.

Logistic continuum gives the company the capability to offer customer service economically.

Anyhow, engineers are still few who have the capability to set the isomorphism between product architecture and

relative logical shared data bases that brings continuous progress.

e-Mail
e-Trading
e-Commerce
e-Engineering
e-Manufacturing
FULL e-Business



For to succeed, they must reconcile both architectural vision and perfect control of (object-oriented) software functions, in other words, merge a good experiment and a clear understanding of the available technologies. Forgetting not that from the early stage of the project to the final step, technology capabilities might significantly change (but not the information structure). From which, the importance of architecture, the condition of the application of ‘Rapid Acquisition Development’ methodology; from which, the ‘Systems Architects’ in the US who address skill issues and up-date business process through the high level activity modeling. As a consequence, the pre-eminence of UML/XML/Java on the more conventional C++ (the target is clearly now the function to automate).

Just when software-providers often still offer products of the 80s on the market, basing their re-looked advertising only on some new words. When implemented, these products paralyze companies, which is the result of a great rigidity coming from excessive parameterization. Then, companies get all the ‘benefits’ of proprietary systems ...without being proprietors, that means they have not the control of the main functions, a very uncomfortable and ruinous position from which precisely the use of IT should have been able to protect them.

Now the industrial culture of Europeans with the legacy from the Venice Arsenal, Northern Italy and Southern Germany, is at least more ancient and might-be stronger than the industrial culture in the US. Europeans get an advantage in the changes introduced by the use of IT for they have ...nothing to change, but only to re-enforce the

Groupe de travail ingénieur logisticien certifié

Les membres qui souhaitent participer au projet de Sole France pour la Certification professionnelle de l'ingénieur logisticien en Europe doivent prendre contact avec le président (dir.france@soleurope.org).

La langue de travail du groupe est le français mais les documents produits seront en anglais et en français..

Sylvain NOËL, président de Sole France

18th International Logistics Congress
Munich October 6-9

ILC 2002
18. International Logistikkongress
München 6.-9. Oktober

XVIII^e Congrès Logistique International
Munich 6-9 octobre

logical links between the core-business skills (precisely described by the HLAM) in accordance with the product life-cycle in particular at the point between systems engineering and manufacturing, following the consistency axis, the 'neutral fiber' where changes require the minimum of energy.

Logistics know-hows are the success keys in the use of IT.

Therefore, Europeans have the opportunity to take the spot within the industrial leadership through IT as available today. A way to do that is to cover the industrial operational chain of a product (as a vehicle) up to down, sharing a logical information database. The architecture of the database is functionally the reflex of the logical links between systems engineering and manufacturing, the true source of logistics!, upper than e-trading, purely commercial. Then, the information data safety is ensured and consequently pressure within the supply pipe increased (even on e-trading as a segment of the process). Then the supply chain stream is controlled not in quantity or in just-in-time, independently on the market, but in speed and linked to the market (=agile enterprise). Sustaining the speed generates employment at the right step within the cycle, true Business Process Empowerment, the basic finality of Business Process Re-engineering.

Applied to a vehicle program, the setting of a consistency axis from the furnisher of the furnisher to the customer of the customer, using only available networks, internal and external, should cost less than 6M€ for two languages, (putting in service not included). I speak French on one side and the correspondent read directly in Japanese, I don't even need to use simplified English. I could even read Japanese pictograms on one side and French on the other one.

As when the new practices are introduced, skills are re-enforced (on the condition that information is circulated at least at the same speed than materials) within a seamless process and above the software islands inherited from the past, then saved hidden times are re-invested in the change process itself. The balance is positive as early two islands are linked! For a second type of vehicle, the costs become marginal if the material-data logistic graphs are super-imposable! If not, you have only the difference to pay. As Logistics is fractal and scaleable, progress will diffuse naturally along the consistency axis (a so-called clean room process). Therefore existing systems are preserved as much as possible and cut out only when it is convenient. On the peripheral systems as e-trading systems, the evolution is natural.

Considering industrial history since the beginning of the last century, any situation is never protected. Oscillations between the three great cultural blocks, Asia, Europe, North America, are the efficient source of progress from which only the universal companies (I don't say global, for these companies naturally kill initiative and block evolution) will be able to take benefits on the long term.

e-Business is primarily human intelligence. Men internetworking are the inventive base of business

intelligence. The progress is settled on human respect within the enterprise, and outside. In this respect, European vision is an advantage, given by the industrial tradition coming from the Venice Arsenal: a cycle process design - production - service distributed along the supply chain. A collaborative model by construction, for a model overarched by a distributed architecture.

The weakest loose their ranks on each round. The question is what is the better strategy to keep surfing on the stream and not what is the best technology at the time, or the best market place!

When Clement Ader have his fist plane flying propelled by a steam-engine, the mistake was to calculate that it should never work in regards of the engine, instead of anticipating some progress on the engine. Now, as architecture of airplane made the structure independent on the motorization, scientific progress made the concept available. Scientific progress is often such processed.

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RAMD

RAMD, logistics et information technology

It might be thought that internetworking and IT will ensure a better sharing of business models and will significantly improve metrics and stochastic analyses that are the basing of the RAMD and Logistics sciences. Today the reality seems to be the exact contrary and the so-called 'New Economy' might be erasing the general optimization of resources, paradoxically.

The multiplication of dogmas such as 'Real Time' (as if time might be unreal)¹, as 'Flow Logistics' (as if Logistics might be something else than the science of flow management), 'Total Traceability' (as if a product's – or service's - breakdown were a marriage of mysteries and even of miracles) is the direct consequence of two illusions.

RAMD, Reliability, Availability, Maintainability, Durability

FDMS, Fiabilité, Disponibilité, Maintenabilité, Sûreté de fonctionnement

Firstly, illusion on the actual capability of networks to capture, circulate and distribute information data wittingly without a shared and stable activity model.

The second one on the abilities of IT to process logical linkages without a scientific basing (universal by construction) that facilitates the local languages to be gone over.

As an example, all the information data produced by the operational logistics of a large automotive constructor or by the logistics of a battlefield (Fayolle and Citroen demonstrated in their time how much these logistics have common functions) are so multiplied and offer so many combinations that CRAY-1 processors are unable to predict the effects at the instant following immediately without any shared model. As the networks actually have the capability to centralize information data into huge "data-warehouses" where logical files are intermixed and lost. A combinatory problem so little finite it's almost infinite. A superb pictogram of the 'Back Office' will allow to distribute information data to another superb pictogram called 'Front Office' through an arrow printed 'Real Time'.

Nevertheless, cars run and battle are conducted.

Today, material flows can be almost completely legible, due to IT, even within the most complex logistic systems. Therefore, we have a debate on the use of RAMD techniques during the design of support systems and reciprocally on the impact of information logistics on the practices of RAMD sciences.

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from $\lambda\mu$ 13...

On last March 19 and 20, within their biennial meeting $\lambda\mu$ 13, our colleagues of ISDF, the French Safety and Reliability Association hosted the 13th European Conference on Systems Dependability and Safety, ESREL 2002, sponsored by ESRA, the European Safety and Reliability Association.

¹ Even Schroedinger (Erwin Rudolf Josef Alexander 1887-1961) should not have thought of !

Our colleague Jean Lafont chaired the workshop on the 'integration of the support systems design within the development process : benefits for user and providers', in the frame of the two relative SIGs

The method is based on two complementary approaches:

- Firstly, a selection of possible design solutions on the criterion of the total cost minimized;
- Secondly, a further selection based on the optimization of cost/ efficiency/ availability, applying a heuristic easy to process.

The method is of special interest for furnishers who have to complement pre-existing support systems with their own support elements and in the same time to satisfy low total cost requirements.

On the whole, a large number of sessions were organized. Some of them addressed the use of RAMD techniques in the following areas:

- Life-cycle cost improvement,
- Inspection and maintenance versus degradation and ageing,
- Design and assessment of maintenance policies, logistic support design...

In the last mentioned sessions several speakers described specific methodologies to design the support systems within the supportability studies: CEA, ALSTOM-Transport and LGM-Consultants, RATP (design of new RATP underground line 13 Trains Control System) and some algorithms for combined optimization of systems (SOFRETEN).

Receiving more than 500 delegates, the congress underlined the interest and the large scope of the topic; facilitated experts and practitioners coming from very different horizons to share science and experiment. (www-assoc.frec.bull.fr/isdf/lm13-bilan.htm in French only)

... to QUALITA 2003

Alternation rules adopted by French societies imply that QUALITA 2003 will follow $\lambda\mu$ 13.

The biennial international event dedicated to systems safety and quality is organized under the care of RUFEREQ, the French Academic Network for Education and Research in Quality and Dependability.

The event will be hosted next March 19-21 at Nancy by the Industrial Safety Institute of the European Academic Federation (*pôle universitaire*) of Nancy-Metz.

Communications have to be proposed before September 16

www.isi.u-nancy.fr/qualita2003/index.html

The congress is both in English and in French but the organizers recommend the articles and slides be in English to facilitate the interpreters to easily translate.

Among the scientific topics addressed by the Congress, logisticians will find particularly interest in RAMD studies, systems diagnostic and systems maintenance.

<http://www.isi.u-nancy.fr/qualita2003>

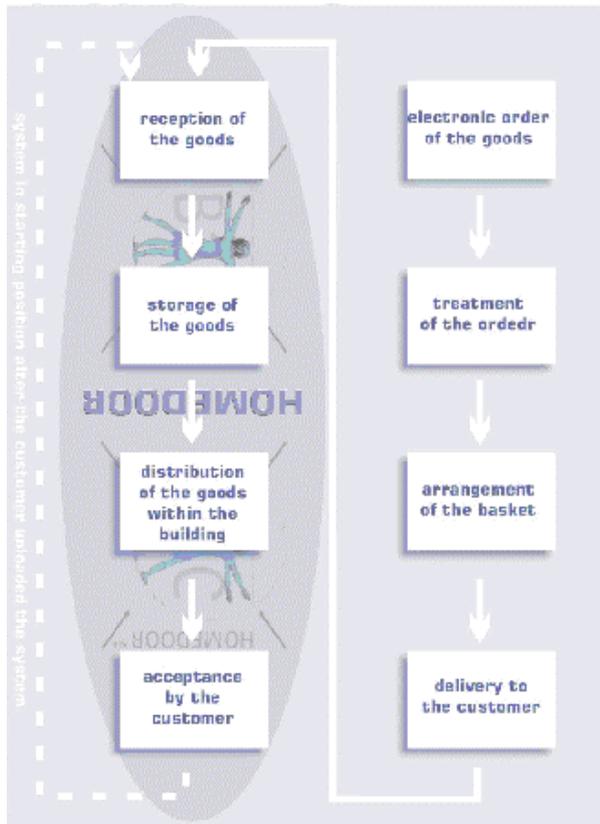
ACADEMIC RESEARCHES

**the HOMEDOOR Research Project
Material and Information Management**

The scope of HOMEDOOR, an ambitious research program, is to study how modern local (urban) logistics and TI might impact the houses building.

What structure of functions and what physical modes may construct the necessary link between the physical flows (the goods to be delivered to the final consumer) and the information flow (order, delivery receipt, payment, propriety transfer).

Paris XIII University is represented within the research team. To contribute to the need analysis or to get more information, you can contact Pr. Michel Steers, michel.steers@tec-sa.com



by courtesy of Paris 13 University

PERFEL

PERFEL is the acronym of an international research project on Logistics in the larger acceptance. The scope of the research is to evaluate and determine how

- the **management** of a company and;
- the **creation of value** (financial for **corporate** level, added value for **executive** level);

are impacted by Logistics policies, basing on a large international survey.

The performance factors investigated will mainly be:

- **competencies**;
- **production**: rate of sub-contracting and outsourcing of Logistics; rate of centralization of logistic functions, requirement for specific logistic resources

or modular capability, information logistic, reporting, autonomy of working posts, remote-working, etc.;

- **power relationship** within logistic organizations: partnership with furnishers (or customers) versus conflict policies, management of the economic dependence;
- **logistic manprint** (manpower integration): training plans, vertical organization, empowerment, rate of integration of logistic functions, etc.;
- **integration** of companies around the products manufactured together (reduction of useless interfacing and added-value increasing).

The program is under initialization. Planned on a full year, it will make government, industrials who would like to validate scientific knowledge which their deployment strategies are based on, and academic researchers working together.

In France, the University of Aix-Marseilles (CRET-LOG) and the Audencia Business School (Nantes) belong to the founders of the project.

www.perfel.org

SOLE CONGRESSES

**the 18th International Logistics Congress
Munich October 6-9, 2002**

The 18th International Logistics Congress will be held in Munich from October 6 to October 9, 2002 with the jingle:

**Outsourcing Life-cycle Support,
Sharing the Risks, Sharing the Opportunities.**

Tutorials will be divided between October 6 and October 9.

Technical conference and relative exhibition will be on October 7 and 8.

To exhibit, please contact the congress secretary Mrs. Jelke Jaskiola, sole@i-plan.de, before June 28.

Information on the congress preparation are regularly updated on www.ilc2002.de. Online registration is already open on:

www.i-plan.de/formulare/sole

Up to August 9 fee are reduced (early registrations).

**the International Society of Logistics in the US
SOLE 2002**

**37th International Logistic Symposium
Phoenix, August 11-15, 2002**

The next annual Symposium of SOLE International in the United States will be held at Phoenix, AZ from August 11 to August 15, 2002 on the federating theme: **21st Century Logistics: the Global Bridge.**

SOLE 2002 program is on the website of SOLE International at :

www.sole.org/conference.asp

Online registration is open.

That is the tentative translation in English by SOLE France of 'la Lettre de Sole France', issued in French. Original:

www.soleurope.org/servicesupport/pages/2002-05-LSF.pdf