

4th International Conference

An Enterprise Odyssey: Tourism - Governance and Entrepreneurship

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An Enterprise Odyssey: Tourism – Governance and Entrepreneurship

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IS/IT Basic Application Element of 4PLTM Model in Hotel Management

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Supply Chain Management (SCM) encompasses planning and management of all activities included in choosing of source and procurement, conversion, and activities of logistics management. Supply Chain Management integrates supply and demand management in one and across several companies. We can say that this is actually a network of interrelated but independent organizations which mutually and coordinately control, manage and improve material flow and information flow from vendor to end user. Today's global world economy is unimaginable without the support of information technology such as business information systems, decision-making support systems and data analysis, exchange and storage information systems.

Logistic services Fourth Party Logistics (4PLTM) model is an organization with resources, capabilities and technology to supply and deliver an all-encompassing supply chain management solution. 4PLTM is able to plan, design and build integrated and all-encompassing supply chain solutions. 4PLTM implements the best possible approach when offering services and technology to its client. Fourth party service suppliers use third party logistic services, technological services and business process management services in the best possible manner to achieve the goal of implementing an all-encompassing supply chain management solution through a centralized contact. They consolidate client's supply chain activities with their own capabilities offering a solution that is in one location.

Out of four key components contained in a 4PLTM, focus of this scientific research is on information as the main „nervous system“. These information include: integration of IT system, purchasing the IT infrastructure, real-time data processing, conversion of data into information, problem situation information delivery, and technical support. Based on which parameters can one define the metrics necessary for evaluation of IT application efficacy in material management process? How to use the IT effectively through the application of 4PLTM model in hotel management?

The idea is to compare the material management process in different service industries belonging to productive branch, by comparing the real documents from their material management processes, the parameters that were thus obtained and analyze the results by using the same parameters. Hence, a standard will be obtained that will later be used as the basis for evaluation of efficacy of information system by analyzing the fourth party logistic services (4PLTM). According to this, the main problem of this work was applicability of this research to hotel management. Methods used in our work were interviews, benchmarking and callback measuring of certain IS/IT parameters, analysis and synthesis of results, and critical thinking.

Many old processes needed to be transferred to a new mode of processing, new connections were established between different departments within the company, data now need to be checked on several levels, system now warns of mistakes and, therefore, human factor has less and less influence on individual problem solving. Each change automatically generates itself to the next user which means that each user needs to be informed of the changes that are to be done and amendments to processes. Renewal of business processes and implementation of integrated solutions is closely connected.

The assumption that implementation of ICT shortens the time needed to complete a business process, is thus confirmed. The communication errors that can occur are extremely lessened and the coherence of business processes is significantly enhanced which has a large influence on business and increases the profit. We also need to stress that the documents that circulate within these processes and their numbers, are lowered because the integration caused by informatization creates transparency and clarity of „material management” process where different departments control them in a common database. This also makes multiple copying, review and approval of a process by different departments unnecessary.

Degree thesis named „Estimation of Production Company Informatization Success Based on ERP Solution Application” was used as the basis for this research. In this thesis, the process of material management was discussed in two companies and the acquired measurable parameters were used in this research for purposes of hotel management, service industry. It would be interesting to see the results when more than two companies would be included in the study and what the parameters would say about the service industry as a whole.

IS/IT BASIC APPLICATION ELEMENT OF 4PLTM MODEL IN HOTEL MANAGEMENT

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Abstract:

Global world economy, as well as efficient local entrepreneurship, cannot exist today without the support of IT and its application in the form of integrated business-information system (IBIS). In this paper, we will describe the 4PLTM model components which are the basis of Supply Chain Management (SCM), with a special reference to the component of information as the main nerve system of the model comprised of: IT system integration, IT infrastructure procurement, data processing in real time, conversion of data into information, provision of information for disputable cases, as well as technical support. Based on which parameters can one define the metrics necessary for evaluation of IT application success in material management process? How to use IT effectively via application of 4PLTM model in hotel management? Answers to these questions are based on the research of authors who studied real documents of material management process in economic organizations, which result in defined parameters of success estimation. These are going to be used for a comparative analysis in hotel management and as the basis for efficiency estimation of the informatization by analysis of 4PLTM model application. The confirmation of the thesis that the same parameters are applicable for productive and service organizations will be elaborated on an example of a Croatian hotel.

Key words: IT, information system, hotel management, material management, 4PLTM model

Introduction

Running a company without a system that manages preparation, production and services, can be compared to navigating a ship without a navigation system; it is only a question of time when the winds will blow us out of the market. Globalization has caused, and the Internet and e-business enabled, the need for closer connecting of all players within the chain of market demands as well as the need for preparation and procurement of resources and production. This can be called a global integration in that it horizontally connects more companies in the same area of business (virtual companies) via a common production and business management system, and on vertical level connection is established with clients – customer relations management (CRM) and vendors, i.e. subcontractors – supply chain management (SCM). Despite the information revolution, the entrepreneurial success still depends on ideas, shrewdness, persistence, diligence, creativity and quality business plans. Each individual and organization will be forced to faster and more dramatic changes, questioning the bases of their

businesses and delivering more and more of the newly made values. Information need to be transferred, not people or goods.

As an example of ICT implementation, material management processes were chosen. The reason behind this is in the compatibility. Within the material management process model, the advantages and disadvantages of ICT integration in productive companies were shown. This research is structured to be the continuation of the problem theme with the purpose of evaluation of possibility to compare the parameters obtained in production companies as opposed to service industry – more precisely a hotel. Having in mind the goal of having a firm practical background, an application in practice, for this research we chose Alstom LLC company together with Adriadiesel LLC, both of which are in the same branch of industry and are, therefore, similar in their processes. They both use the same ERP solution, Baan, which was an additional reason for the choice. In addition, the obtained data will be compared to the data from Grand Hotel “LAV”- Split. This company uses SAP solution in its material management processes.

Enterprise Resource Planning systems - ERP systems

Company resources planning systems (ERP - systems) make an integrated application as support to business activities of the entire company together with enabling integration of company's activities and processes in an information system that offers an insight into all of its business aspects. No matter what problems may possibly occur when implementation of such a system is started, it becomes a necessity to implement it in modern companies. Starting point is a business system without an ERP solution and one that is not using e-business. If a company intensely invests into e-business, the development path in a coordinate system will be more horizontal, while with the companies oriented toward ERP solutions this path of development will be steeper.

Connection between business processes and information system/technology

A business process is a planned, defined and measurable set of tasks that leads to fulfillment of defined business result via accomplishment of market results. A business process is a set of logically connected tasks that need to be performed in order to accomplish a defined business result and the process is a structured, measurable set of activities designed to create a specific output for a specific customer or a specific market. Business processes according to *Martin, Harrington and Davenport* can be described as a line of logically connected activities that use the resources of a society and whose key objective is satisfying the needs of customers with products or services of adequate quality and price, within acceptable time and with simultaneous generation of value. *Hammer* considers information technology to be the key performer of reengineering of business processes. He proscribes usage of information technology to challenge the assumptions that were inherited with work processes and were present a long time before the development of modern computers and communication technologies. *Davenport & Short* claim that reengineering the business processes demands a wider perspective, and information technology needs to be observed as something more than a mere automation of the way the job is done. Business processes and information systems are linked to one another in many ways: information system enables faster and simpler running of business processes and it can also help redesign the business processes and their flow in different segments, or as a whole.

Information technology is one of the most important carriers of reengineering of business processes. Namely, the challenge that information technology brings solves problems that

exist in business processes for a long time, enabling their total redesign and effective, rational, up-to-date and timely performance. Reengineering of business processes and information technology depend one upon another: the possibilities of information technology back business processes and business processes must be tuned to the possibilities that information technology can offer.

The Fourth Party Logistics (4PLTM)

Outsourcing is the buzzword today. It has become a readily accepted means of increasing performance of non-core supply chain activities. Outsourcing allows organizations to focus on their core competencies, to provide a differentiated level of customer service, and to take advantage of greater operational flexibility. While outsourcing often provides solid one-time cost reductions, it does not deliver the continuous ongoing savings that businesses desire. Business process outsourcing is traditional outsourcing and more. It is often taking a set of work, tasks, responsibilities or functions and transferring them to an outside service provider. Business Process Outsourcing (BPO) involves that and more. A BPO service provider brings a different perspective, knowledge, experience and technology to the existing function and can and will work with the firm to reengineer it into an improved or new process. The next significant evolution outsourcing in the context of supply chain management has emerged, and it is called Fourth Party Logistics or 4PLTM. Instead the BPO provider seeks incentives and metrics to define the relationship and collaborates with each customer as to goals and outcomes.

A 4PLTM wants to position itself as an extension of and part of its customer. This BPO provider recognizes the role of and need for information technology in managing the process. The Fourth Party Logistics provider is a supply chain integrator that assembles and manages the resources, capabilities, and technology of its own organization with those of complementary service providers to deliver a comprehensive supply chain solution. Central to the 4PLTM s' success is the "best of breed" approach to providing services to a client. The development of 4PLTM solutions leverages the capabilities of 3PLs, technology service providers, and business process managers to provide the client organization with greater cross-functional integration and broader operational autonomy.

Providing Comprehensive Supply Chain Solutions

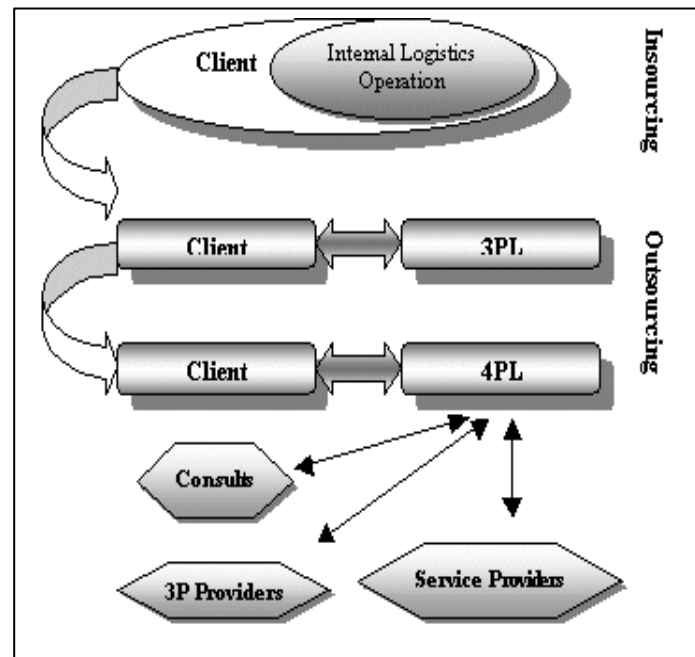
First key distinction between 4PLTM and current approaches to supply chain is that former should be considered in the broader context of improvements across the entire supply chain, which includes three phases of work: Reinvention, Transformation, and Execution.

- At the highest level of the 4PLTM solution is Reinvention. This leverages traditional supply chain management consulting skills, aligning business strategy with supply chain strategy, to creatively redesign and integrate the supply chains of the participants.
- Reinvention, however, requires Transformation. Transformation efforts focus on specific supply chain functions, including sales and operations planning, distribution management, procurement strategy, customer support, and supply chain technology.
- At the tactical level is Execution. A 4PLTM provider takes on operational responsibility for multiple supply chain functions and processes. The scope goes well beyond traditional transportation management and warehouse operations logistics outsourcing.

The second key distinction between 4PLTM and current approaches to supply chain outsourcing is 4PLTM 's unique ability to deliver value to client organizations across the entire supply chain. The 4PLTM approaches the concept of supply chain integration through four key drivers of value:

- Increased revenue,
- Operating cost reduction,
- Working capital reduction, and
- Fixed capital reduction.

Figure 1: Greater functional integration



The Future...

Fourth Party Logistics is the next generation of supply chain outsourcing. Supply chain activities are information-rich, complex and increasingly global. At the same time, technology and e-enabled capabilities are racing ahead. To enable a company to capture all the benefits of supply chain collaboration and synchronization, a new generation of integration must be deployed, which is currently beyond the capabilities of traditional sourcing methods.

Given such a scenario the need for an integrated solution provider is indispensable and this is what will make the 4PLTM provider a winner in the evolving business paradigms.

Information system – industrial/service sector

Information system used by productive companies must as any other information system, integrate all business processes and functions and enable a transparent and fast data and information flow.

Business processes are:

- Computer integrated production
- **Purchasing**
- Finances and accounting
- Control function
- Human resources management and implementing IT into the department
 - Personnel policy
 - Payroll

Information system of a tourist company comprises of several subsystems that are made of specific modules:

- Financial and accounting information subsystem
- Reception information system and accommodation department
- Catering information subsystem
- General data subsystem

But we must not forget that in the information system of a hotel the obligatory modules are: reception, sales of accommodation capacities, food and beverages management, warehouse, **purchasing** and all other functionalities necessary for business: cash desk, finance and accounting, payroll, basic means, small inventory. Each module must produce exact and timely information to create a quality background for decision-making.

The importance of implementing IT into business operations - market success

ICT can help produce a product of higher quality, product that can be delivered faster and cheaper. Similarly, the existing products can with very small additional costs, be enriched with extra benefits that fulfill demands of customers. The companies today need to ask themselves if they can add electronic support service to its product and raise or add value to that package in this way – that is, product that is packed with a service. Innovative use of *ICT* enables creation of hybrids between products and services that have a new value, a new quality and make an offer that customers hardly resist. These new products are oftentimes followed by risk of loss of investments and are usually priced at a lower price. *ICT* can improve the ratio of quality and price and also introduce completely new products. *ICT* becomes the engine of business when we talk about modern Internet economy companies. In this new era of electronic commerce and e-business many multinational companies such as *SAP, Baan, Oracle, PeopleSoft*, have identified the need to create a solution that will ensure not only integration within an organization but also integration between companies, customers, buyers, vendors and partners, using the possibilities that Internet offers to their full extent.

Grand Hotel "LAV" – Split

The purpose of implementation of Material Management module (MM) to Grand Hotel “LAV” – Split, was covering the transactions and functions needed within the material and services purchase, stock management and verification of all inbound invoices with reference to Purchase orders (logistic invoice verification). Material Management module supports the functions and processes occurring in everyday business transactions when it comes to materials and/or services.

For purchasing processes, broad functionality was implemented with the purpose of optimizing certain operations ranked by:

- Purchase requisition start,
- Purchase order creation,
- Purchase order release.

SAP R/3 simply copies items from one document to another. For instance, from Purchase requisition ? Purchase order. Logistics information system and other standard SAP R/3 reports enable a purchasing organization to acquire information on vendors, purchasing history, and the quantity of open orders. Material master record and service master record are the only basic master data in Material Management module.

Apart from material master record and vendor master record purchasing uses a so called purchasing info record. This record contains all the necessary data connected to a certain vendor that provides a certain material. Prerequisite for this is having vendor and material master records previously defined in the system. When creating the purchasing info record, it is necessary to enter company code and purchasing organization, and after that enter the vendor general data, producer data, and country of origin of the material. Among the data tied to purchasing organization are data on delivery time, purchasing officer code, purchasing price, data on quantity that can be ordered, order measuring unit, as well as data on percentage of allowed quantity variance when delivered. Condition data make the conditions that can be negotiated with vendor and they are concerned with price, and the texts can be used for further explanation of each purchasing info record. Standards for purchasing info record are used for regular purchase of materials to stock.

Purchasing info record contains all necessary data connected to vendor for a specific material. Precondition is that vendor master record and material master record are both created in the system previous to creation of purchasing info record.

When creating purchasing info record, company code and purchasing organization need to be entered, followed by vendor general data, producer data, and country of origin of the material. Among the data tied to purchasing organization are data on delivery time, purchasing officer code, purchasing price, data on quantity that can be ordered, as well as data on percentage of allowed quantity variance upon delivery.

Condition data are negotiable with vendor and they mostly consider the price. Texts can be used for additional explanation of each purchasing info record.

Document – Purchase order

Purchase orders for material and/or services are produced in Purchasing department of Grand Hotel “LAV” – Split. Purchase order as a document represents the formal and final approval of purchasing transaction from a vendor. At 4LAV project the process of Purchase order creation is with reference to previously created Purchase requisition but Purchase order can also be created manually and automatically. The system allows tracking of Purchase order history, overview of delivered quantities of material and/or quantities of delivered services, quantities that remain to be delivered and quantities that still need to be invoiced.

If supply source exists, Purchase order will be created from Purchase requisition. Besides reference to Purchase requisition, a Purchase order may be created manually or copied from a formerly created one.

If a Purchase order is manually entered, then vendor, material, quantity and unit of measure, price, dates and overhead costs that influence the value of warehouse material, payment

methods, etc. are entered. When creating a Purchase order with a reference to a Purchase requisition, person responsible can change the quantity and unit of measure as well as write additional comments to header and/or Purchase order individual items.

Estimation of Productive Sector – Purchasing Process Informatization Success Based on ERP Solution Application

ALSTOM d.o.o. – Purchase order document before implementing the ERP solution – great possibility for mistakes because of manual rewriting from purchasing list to Purchase order, loss of time to correct mistake and rewrite it several times.

Figure 2:
Purchase order before IT implementation

ALSTOM POWER Ltd.
 Matla Svarča 155
 47000 KARLOVAC / Croatia
 tel. +385 (0)47 685-138
 fax. +385 (0)47 685-252
 E-mail: darko.rendulic@power.alstom.com



WERKZEUGMASCHINEN BERNHARD EBLE
 LUDWIGSBURGER STRASSE 85
 71696 MÖCKLINGEN
 GERMANY

Order No. TMP1.NA.TM.1653

Herewith we order according to Your offer dated 2003-03-19.

Conditions of delivery (time, way, parity, etc.):
 FCA SUPPLIER FULL LOADED,
 INCOTERMS 2000

Payment: DEM 61.600,00 BEFORE DELIVERY
 DEM 5.400,00 - 4 WEEKS AFTER DELIVERY AS
 PERFORMANCE BOND

| Item | Description | Unit me. | Quantity | Unit price | Amount |
|------|---|----------|----------|------------------|------------------|
| 1 | SHARPENING MACHINE SAACKE UW II, NR. 20095/88 | SET | 1.00 | 64.000,00 | 64.000,00 |
| 2 | ACCESSORIES | SET | 1.00 | 1.000,00 | 1.000,00 |
| 3 | TRIAL RUN | | 1.00 | 3.000,00 | 3.000,00 |
| | | | | | 0,00 |
| | | | | | 0,00 |
| | | | | | 0,00 |
| | | | | | 0,00 |
| | | | | | 0,00 |
| | | | | | 0,00 |
| | | | | | 0,00 |
| | | | | | 0,00 |
| | | | | | 0,00 |
| | | | | | 0,00 |
| | | | | | 0,00 |
| | | | | TOTAL DEM | 68.000,00 |

OTHER CONDITIONS:

- If it is not stipulated in the above text GENERAL PURCHASING CONDITIONS printed on the opposite side are binding.
- All referent documents related to this order must contain its number.
- QA/QC REQUIREMENTS: HSN 8460.31; 3 COLLIS; CERTIFICATE OF ORIGIN EUR.1

RESPONSIBLE PERSON

STAMP AND SIGNATURE

KARLOVAC
10/05/2004
1/1

0103

ALSTOM d.o.o. - Purchase order document after informatization – by choosing a vendor in a database, all conditions are automatically visible due to the integration with all business processes which can influence the order, significant reduction of time required for the process finalization.

Figure 3: Purchase order after informatization



COMEL D.O.O.
g.Denis Tomašić
M. VRHOVCA 11
47000 KARLOVAC

ALSTOM HRVATSKA d.o.o.
za proizvodnju, trgovinu,
inženjering i usluge
Mala Svarča 155
47000 Karlovac / Hrvatska
Telefon: +385(0)47665157
Telefax: +385(0)47665219
e-mail: antonija.hrelić@power.alstom.com
JMB: 3629104 DJELATNOST: 29110
Nabavljač: HRELJIĆ ANTONIJA
Karlovac, 07/06/26

Naš broj:
Broj dobavljača: TMP219

NARUDŽBA BR.: 271219


| Rbr. | Naziv robe - usluge | Količina | J.m. | Jed.cijena | Popu -% | p.p | Isporuka Datum | Tj | Iznos [HRK] |
|---|--|----------|------|-------------------|---------|-----|----------------|---------------|-------------|
| 10 | 3004002 DIJEL.INFORM.OPREME DO 1000 KM MT: 1040 Konto: 4003 | 1,00 | kom | HRK/kom 254,10 | 7,0 | 22 | 07/06/29 | 26 | 236,31 |
| DVD snimač ASUS DRW-1814BL crni retail - prema Ponudi broj 271317 | | | | | | | | | |
| SVEUKUPNO: | | | | | | | | 236,31 | HRK |

UVJETI PLAĆANJA: 60 dana po isporuci

UVJETI ISPORUKE: CPT Karlovac

OSTALI UVJETI:

- 1.U svim odnosnim dokumentima navesti broj narudžbe, jer u protivnom račun neće biti plaćen.
- 2.Ukoliko nije drugačije određeno ovom narudžbom, primjenjivati će se OPĆI UVJETI NABAVE otisnuti na poledini.
- 3.Dobavljač je, sukladno članku 31. Uredbe za provedbu Carinskog zakona, obavezan za isporučenom robu dostaviti Kratkoročnu ili Dugoročnu izjavu dobavljača za robu s podrijetlom proizvedenu u Hrvatskoj ili nekoj drugoj zemlji temeljem originala potvrda o podrijetlu pošiljatelja.
- 4.Svi narudžbom zahtijevani zapisi kakvoće obvezno moraju biti izdani i na engleskom jeziku.
- 5.DOSTAVA ZAHTIJEVANIH ZAPISA KAKVOĆE JE PREDUVJET ZA PLAĆANJE UGOVORENOG OPSEGA ISPORUKE.



ALSTOM
ALSTOM HRVATSKA d.o.o.

Figure 4: Purchase order before informatization

Žig i potpis dobavljača


Adriadiesel d.d. - Purchase order document after informatization – by selecting a vendor who is in a database, all conditions are automatically visible due to the integration with all business processes which can influence an order, significant reduction of time required for the process finalization.

Figure 5: Purchase order after informatization

| L ORANGE PORSCHESTRASSE 30 70435 STUTTGART Germany | | ADRIADIESEL d.d. Mala Švarča 155 47000 Karlovac, HRVATSKA/CROATIA tel: +385 47 843 300 fax: +385 47 434 380 adriadiesel@adriadiesel.hr www.adriadiesel.hr | | | | | | | | | |
|--|------|--|------|----------|------|-------------|-----|--------------|----------|------|--------------|
| Purchase order No. :NN0000678 | | Karlovac, 11/04/2007 | | | | | | | | | |
| Buy-from BP :IN0000039 Buyer :Ivana Hižak tel :353 fax :843-353 Reference :REZ 315,316- P20000126,1 : | | Delivery address ADRIADIESEL D.D. MALA ŠVARČA 155 47000 KARLOVAC Republika Hrvatska | | | | | | | | | |
| Miss Gutgesell we are ordering following items: | | | | | | | | | | | |
| Pos. | Seq. | Item Description | Rev. | Quantity | Unit | Price [EUR] | PPU | Discount [%] | Rec Date | Week | Amount [EUR] |
| 1 | 1 | 1634220-1 FUEL PUMP External code: PYO-G073B | 1 | 3,000 | pcs | 809,64 | pcs | 2,00 | 07-07-10 | 28 | 2.380,34 |
| 2 | 1 | 1634220-1116 REGULATING ROD External code: PYO-T381A PYO-T381A | 1 | 3,000 | pcs | 64,35 | pcs | 2,00 | 07-06-06 | 23 | 189,19 |
| 3 | 1 | 1634220-1069 PLUNGER AND BARREL External code: PYO-U872 PYO-U872 | 1 | 3,000 | pcs | 466,74 | pcs | 2,00 | 07-05-15 | 20 | 1.372,22 |
| 6 | 1 | 1696287-3 NOZZLE COMPLETE External code: LTO-BPJ/E LTO-BPJ/E | 3 | 14,000 | pcs | 147,90 | pcs | 2,00 | 07-05-15 | 20 | 2.029,19 |


Grand Hotel "LAV" – Split – Purchase order document before informatization. The ordering is done by phone, and the required goods and material are entered into a table. Possibility of significant errors due to multiple copying, and error caused by human factor.

Figure 6: Purchase order before informatization

| | | | | | | | |
|---|------------------------------------|---|---------------------------|---|---|------------------------------------|----------------------------|
|  LAV, SPLIT 21312 Podstrana, Croatia-Grijevacka 2a, Tel. +385-21 500 500, Fax. +385- 21 500 705, E-mail: lemeridien@grandhotellav.com, www.lemeridien.com / Split | | NARUDŽBENICA | | NARUDZBENICA BROJ/Purchase order no. | | | |
| | | Purchase order | | No: <input type="text"/> | | | |
| Odjel nabave/Purchasing Office Tel. +385-21 500 343, Fax.385-21 500 705 mario.barac@lemeridien.com | | DATUM: <input type="text"/> Date: | | Boj narudzbence se mora pojaviti na svim racunima PO number must appers on invoices and all packages | | | |
| GRAND HOTEL LAV D.O.O. C/O LE MERIDIEN GRUJEVACKA 2a, 21312 PODSTRANA, HRVATSKA, Porezni broj: 1641859 | | Naziv dobavljača /Supplier name | | | | | |
| Redni broj/ No. | Šifra artikla Item code | Naziv Item description | Jed.mjere Unit | Kolicina Quantity | Cjena po jedinici Unit price | Ukupna vrijednost Total | Napomena Remark |
| 1 | | | | | | 0 | |
| 2 | | | | | | 0 | |
| 3 | | | | | | 0 | |
| 4 | | | | | | 0 | |
| 5 | | | | | | 0 | |
| 6 | | | | | | 0 | |
| 7 | | | | | | 0 | |
| 8 | | | | | | 0 | |
| 9 | | | | | | 0 | |
| 10 | | | | | | 0 | |
| 11 | | | | | | 0 | |
| 12 | | | | | | 0 | |
| 13 | | | | | | 0 | |
| 14 | | | | | | 0 | |
| 15 | | | | | | 0 | |
| 16 | | | | | | 0 | |
| 17 | | | | | | 0 | |
| 18 | | | | | | 0 | |
| 19 | | | | | | 0 | |
| 20 | | | | | | 0 | |
| | | | | | Ukupno/Sub total | 0 | |
| Odjel/Department | | Narucitelj/Ordered by | | Popust/Discount | | 0% | |
| Izravno odjelima Direct Department | | Datum dostave / Delivery date | | Porezna osnovica/ Taxable amount | | 0,00 | |
| Za skladišta F-B-G Store | | | | PDV / VAT % | | 0,00 | |
| Novi projekt Project release | | | | Sveukupno/Total amount | | 0,00 | |
| | | | | | Uvjeti placanja/Terms of payment | | |

Grand Hotel "LAV" – Split – Purchase order document after informatization. Database is used for the generation of required material and goods, unambiguousness, transparency, possibility of error reduced to a minimum.

Figure 7: Purchase order after informatization



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GRAND HOTEL D.O.O.
 LE MERIDIEN LAV
 GRljevačka 2a, 21312 PODSTRANA, HRVATSKA
 Porezni broj: 1641859

Narudžbenica

Odobrena za slanje dobavljaču

Broj/datum narudžbenice
4500001441 / 15.01.2008

Broj narudžbenice se mora pojaviti na svim računima

Dobavljač:
 Market SVAGUŠA
 Matoševa bb
 21210 SOLIN

| Rbr. | Šifra | Opis artikla | JM | Količina | Cijena/jed | PopustCij.s pop | Ukup.vrij. |
|-----------------------------------|-------|--------------|----|----------|------------|-----------------|-----------------|
| 00010 | 10305 | Kruh svijezl | kg | 280,00 | 8,60 | 0,00 % | 2.408,00 |
| 00020 | 10305 | Kruh svijezl | kg | 20,00 | 10,50 | 0,00 % | 210,00 |
| 00030 | 10305 | Kruh svijezl | kg | 70,00 | 10,50 | 0,00 % | 735,00 |
| 00040 | 10305 | Kruh svijezl | kg | 70,00 | 6,50 | 0,00 % | 455,00 |
| 00050 | 10305 | Kruh svijezl | kg | 1,00 | 7,50 | 0,00 % | 7,50 |
| 00060 | 10305 | Kruh svijezl | kg | 71,00 | 8,20 | 0,00 % | 582,20 |
| 00070 | 10305 | Kruh svijezl | kg | 1,00 | 9,90 | 0,00 % | 9,90 |
| 00080 | 10305 | Kruh svijezl | kg | 70,00 | 6,50 | 0,00 % | 455,00 |
| 00090 | 10305 | Kruh svijezl | kg | 29,00 | 10,50 | 0,00 % | 304,50 |
| 00100 | 10305 | Kruh svijezl | kg | 28,00 | 6,70 | 0,00 % | 187,60 |
| 00110 | 10305 | Kruh svijezl | kg | 29,00 | 6,70 | 0,00 % | 194,30 |
| 00120 | 10305 | Kruh svijezl | kg | 28,00 | 6,70 | 0,00 % | 187,60 |
| 00130 | 10305 | Kruh svijezl | kg | 30,00 | 9,70 | 0,00 % | 291,00 |
| 00140 | 10305 | Kruh svijezl | kg | 1.120,00 | 2,95 | 0,00 % | 3.304,00 |
| Ukupni iznos bez PDV-a HRK | | | | | | | 9.331,60 |

Results of Application Solution Implementation

Baan in Alstom d.o.o. company

The advantages of Baan are reflected in the reduction of the number of people necessary for the purchase operations. Furthermore, the time necessary for an actual process to end is significantly shortened because in *Baan* system all the data are in one base which makes the search much easier and more transparent. The number of errors is reduced as well because there is no more multiple copying. In order for the finished goods specification to be completed, the knowledge of technology was necessary so that it can be clear which material is dealt with. In *Baan* this problem is solved by a technologist entering each article in a database with several specifications describing a single object which makes the operation easier.

It is very important to stress that the software requires a user to be disciplined and to update data, and all due to organizational distribution, i.e. distribution of tasks between people and processes in the purchase system, the result of which is the documentation from the database, and not questioning and wandering from one department to the other. Due to logic sequence inconsistency, which has significantly accelerated the data flow.

Baan in Adriadiesel d.d. company

It is necessary to stress that a longer period is required in order to see absolutely all changes and advantages brought by *Baan* implementation, and that is why I can specify only the basic ones, such as: database is transparent after the data have been entered, thus reducing the search time. Purchase has a better insight in the planning requirements. In the departments of engineering, sales and calculation there is an excess of workforce, which resulted in a redirection to other activities within a company.

SAP in Grand Hotel "LAV" – Split

Before the implementation, the ordering process was mainly done orally, which means that all required goods and materials were ordered by phone. It is futile to mention and compare past and present ordering process, starting from the possibility of error, errors in communication, process performance speed, time savings enabled by the new functioning method.

An automatic creation of a Purchase order is a consequence of material receipt to stock without a reference document. This means that in practice we already have a case when goods

is received in the warehouse without previously creating a purchase document, and the system automatically generates the Purchase order document number in the moment of a receipt posting. The Purchase order is used as a reference document during material receipt to stock and for Logistics invoice verification. The system enables the tracking of Purchase order history, i.e. the display of delivered quantities, quantities to be delivered, invoiced quantities and quantities to be invoiced.

Goods receipt processing is accelerated due to referral to a Purchase order and values in goods receipt (materials and quantities) are proposed for confirmation, but can be changed if necessary.

Research Goals

The main goal of this research is to see to what extent an actual research in the sector of economy and with parameters obtained from actual documents can be applied and implemented in service industries, i.e. in this case in hotel industry. The starting point has been the degree essay by the co-author of this article, on the subject of "Estimation of Production Company Informatization Success Based on ERP Solution Application" in which, by a comparative analysis of two companies, one in foreign and other in domestic ownership, the advantages and the defects of informatization connected only to the process of "material management" have been shown. So, disregarding the fact that they come from completely different industries, their common grounds lie in the fact that they have ERP system and it is thus possible to track specific parameters in the system and compare them with previous values, or in our case with parameters obtained from the used ERP system, and there is also a shared process of "material management" which is actually very similar to the one required for our research. It is similar because during the realization of any segment of "material management" process within ERP system, one can track specific parameters which will serve for the analysis of the situation, as well as for the estimation of IT application success. Thus, the main hypothesis of this paper is the success estimation of metrics and parameters obtained in economic organizations and the attempt to apply them in hotel industry. It is necessary to mention the difference between ERP systems - Baan has been implemented in production organizations, and SAP system in the hotel industry example, so the next hypothesis would be that certain parameters can be compared no matter the ERP solution.

The parameters which were the subject of the research are the following: the time a purchase employee spends in the system, the quantity of data that he/she manages to process in his/her working hours, the time required for creating an order from the system, the time required for invoice creation. We assume that the research will show that the informatization makes the processes better and faster, no matter the business segments or industries, which has been proved by parameter comparison. Also, even the responses of single parameters in hotel industry were shorter, i.e. more productive, which resulted in the usage of 4PLTM model, while SCM is used in the sector of economy.

Methodological Procedures

The sample has been made in two production companies, one in international and the other in domestic ownership. Interviews and measuring of responses of specific parameters from IT systems were the applied methods. The data have been processed by questioning, analysis and

synthesis, as well as by a critical evaluation leading to specific conclusions where advantages and defects of the informatization before and after ERP application support implementation have been shown. After that, the results were compared to a company in service industry, and then we repeated the analysis which showed which industry was more successful in using ERP support.

The results of the comparative analysis of economic and service organizations

At the global level, the usefulness of informatization occurs in the form of merging single business departments, which created a saving in work force and processes which single departments have been working on, and the time required for the processes to be finished. The informatization creates a transparent database that can be searched from any location within the system which leads to time saving, coherence within single functions within companies and eventually to a high-quality performance of set tasks.

The usefulness is, above all, reflected in an organized coding in the warehouse where objects are unambiguously described by a BOM. Database is transparent after the data have been entered, thus reducing the search time.

There is no more doubling of functions, and adhesion within companies is gone, which eventually leads to better utilization of the work force. Purchase has a better insight in the planning requirements.

It should be mentioned that the number of documents circulating as a constituent part of a specific process in companies has decreased because an integration caused by informatization creates a good layout of material management processes which single departments have to control via shared database, which terminates multiple copying, reviewing and approving on the part of single departments.

Discussion

We believe that the performed research incites to considering ERP systems as one of the specified factors, i.e. resources, representing a competition source. Having one or more of such rare resources or capabilities, which are difficult to imitate, is a safe source of competitive advantage, both on domestic and global market. Also, the excellence in one area of work creates the excellence in other areas as well, so the companies with 2, 3, 4, 5...forms of such "strategic assets" are immeasurably more successful and ready for competition than the companies having one strategically important resource, i.e. capability, or none. The task of the further research, as well as practice, is to define, and then put into effect, the adjustment of ERP system to specific demands of Croatian economy, and set such a process of their implementation (which, surely, includes the (re)engineering of business processes) which will build up export capacity and the competitiveness of Croatian national economy.

Conclusion

The advantages of applying ICT technologies can be recognized on both global and local levels. Their implementation leads to department merging, savings in workforce, time

required for single processes to be performed, which eventually results in a better quality of doing business and of products, as well as in a more competitive position on the market.

We are witnessing a fast progress of big changes in the world economy. The changes include purchase as well, which, until recently, had to struggle with operative and administrative tasks of purchasing, first of all with writing order and tracking their execution. The purchase in well organized companies becomes a strategic function, a moderator of a supply chain, with the goal of saving and increasing the share to value creation. Virtual companies, in which partners jointly plan and realize production, as well as logistics processes for specific product groups, are created. IT systems supported by IT devices and networks for data transfer become the crucial factor for the value creation in the supply process chain of virtually integrated companies, both in production and service industry.

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