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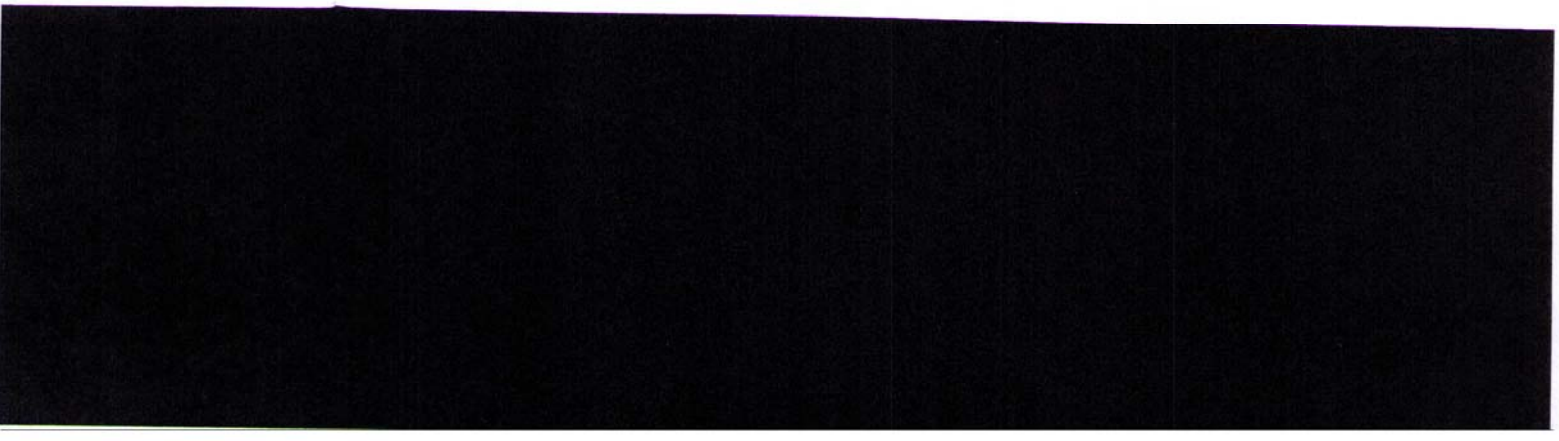

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Florence, September, 2007

Dear MITIP 2007 participants.

It's a great pleasure to welcome you in Florence and to thank you for attending the 2007 Modern Information Technology in the Innovation Processes of the Industrial Enterprise (MITIP) conference.

The conference is patronized by the Florence University, one of the oldest University of the world. It was founded in 1364 by Emperor Carlo and today it counts almost 64000 students distributed in 12 faculties.

As every year, also for this edition, we have received papers from a lot of "old friends": I'm looking forward to meeting each and every one of them. Nonetheless, many first-time comers are attending the conference, and a very special welcome goes to them as well. We have a significant number of participants from Germany, France, Czech Republic, Poland, Romania, and of course, from Italy. Almost 15 different countries all over the world are represented.

We are really satisfied also for the scientific content of the conference. We have received more than seventy contributions. After the review process, 64 papers have been accepted for presentation. All of them are included in these proceedings, and classified according to 9 different research topics (corresponding to the conference tracks). As a result, we have 12 panel sessions to be attended. The quality of the final program is outstanding and I am sure you will find lots of interesting sessions to attend.

These results confirm that our community, involved in important researches in the field of IT-driven business innovation, is very active. In my opinion, the MITIP is more and more representing a fundamental trait d'union between two different worlds (but not different people): the world of computer science and the world of the industrial and managerial engineering. Here in the MITIP we have set the stage for the birth of a new species, composed by undoubtedly very vital researchers and we're sure that it will be more and more appreciated in the scientific community.

In conclusion of this brief introduction I want to thank the people that have contributed to organizing and promoting this edition of the MITIP conference.

I thank the Scientific Committee as a whole, which helped us promoting the conference and reviewing the papers.

I thank professor Alberto Tesi, Dean of the Engineering Faculty at Florence University, for his welcome speech, and professor Andrea Arnone, Director of my Department, for accepting the proposal to organize this event in Italy and for the collaboration that the department's Administrative staff has provided us.

I thank the keynote speakers, professor Hamideh Afsarmanesh, from Amsterdam University, and to dott.ing. Sergio Romoli from SAP: the proposed keynotes on Information Systems for networked enterprises will be surely precious to guide our future researches. A warm thank goes also to Flavio Tonelli for his tutorial "Qualitative and quantitative research methodologies in operations management": our PhD candidates and researchers will find it significantly valuable. I thank also Romeo Bandinelli for having greatly managed the special tracks on the networked enterprises.

I offer my "big thanks" also to the Organizing Staff: Marie Helen Piette, and Guido Galanti from the Polo Biomedico e Tecnologico; Elisa Del Sette, Silvia Papi, Valentina Gamberi and Simona Lo Nardo, alumni of the Managerial Engineering course. All of them have worked enthusiastically and effectively.

Last, but not least, a special thanks goes to my colleague Filippo Visintin, conference co-chair. Without his constant and valuable support, the MITIP 2007 would not have been possible: he deserves the main credit for this success. I hope that your attendance will be pleasant professionally rewarding. Have a great conference!.

Mario Rapaccini,
MITIP 2007 conference chair

TABLE OF CONTENTS

INFORMATION EXCHANGE AND ENTERPRISE APPLICATION INTEGRATION

INTELLIGENT MANUFACTURING SYSTEMS AND PRODUCTION MANAGEMENT

PRODUCT TRACEABILITY SYSTEMS & RFID

QUALITY AND MAINTENANCE ENGINEERING AND MANAGEMENT

SIMULATION MODELING AND ANALYSIS

CHANGE AND INNOVATION MANAGEMENT

PRODUCT DEVELOPMENT AND PROCESS DESIGN

SERVICES FOR AUTOMOTIVE SUPPLIER PARKS

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Abstract:

Multi Customer Supplier Parks (MCSP+) are a new service model paradigm for reducing logistic costs, utilising economies of scale and service improvements within the automotive industry. A MCSP+ includes the provision of buildings, infrastructure, as well as business services, within a clearly defined geographic area. The suppliers inside the park deliver parts not only to one OEM (Original Equipment Manufacturer), such as the traditional supplier park, but to many customers and first Tier suppliers in order to improve the economies of scale. For designing the service model, the operator needs a systematic approach to select the most useful park services. We have developed a method for selecting services in an MCSP+.

Keywords:

Supplier Parks, logistics, services, automotive

1. INTRODUCTION

Due to increasing globalisation automotive manufacturers and automotive suppliers have increasingly been setting up new locations in regions known as low-wage-countries over the past few years [5][3]. Central and Eastern Europe (CEE) is a preferred target region for the automotive industry in this respect.

The question about the CEE location for setting up new production plants is not only being dealt with by large-scale enterprises as well as OEMs and large Tier 1 suppliers [2]. On the one hand, it is increasing cost pressure in the industry that challenges suppliers of all Tier-levels to exploit the cost factor differences in low wage countries; on the other hand, the pressure on the suppliers of already established plants is increased on account of higher logistic costs of transport across Europe.

The concept of the Multi Customer Supplier Park (MCSP+) developed by Fraunhofer-Gesellschaft, presents a feasible onset for a solution in order to support supplier's establishment of all Tier-levels within CEE. The objectives of the concept are to achieve cost savings and service improvements by means of a comprehensive service offer. The service offer is provided by a park operator that delivers an "all-in-one" product. The park operator now faces the problems as to what kind of services it is to offer suppliers.

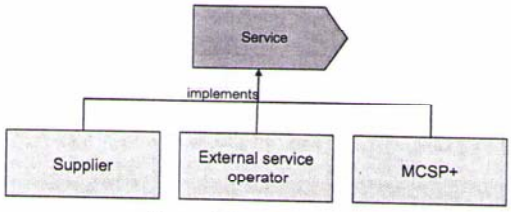

Figure 1 Service implementation.

In principle, a function (Fig. 1) can be implemented by the enterprise itself or an external service operator or by the MCSP+ operator. The operator faces the question especially regarding the concept of a new supplier park. What services they can provide to create a distinct competitive advantage for external service operators and internal services of the supplier. Subsequently, a method is presented in this article which enables the operator to select the functions (service) for the supplier park.

2. MULTI CUSTOMER SUPPLIER PARK

The fundamental idea of the MCSP+ is the supply of several clients (mainly OEMs) of a region (e.g. within a radius of 400km) from an intelligent supply structure where several suppliers with component plants are established (Fig. 2). The MCSP+ concept can be defined as a hybrid service cluster consisting of payment in kind and services for the solution of clients' problems and the meeting of their demands where not only services but also problem solving suggestion are offered [4]. The aim of the service is the time-, cost-, quality- optimal and risk minimal setting up and operation of production plants in CEE for suppliers of the automotive industry.

The two fundamental ideas, which the concept is based on, are:

- a spatially concentrated structure where suppliers establish themselves and
- a hybrid "all-in-one" service cluster (complete service).

Due to the establishment of several suppliers in a spatially concentrate structure higher productivity, compared to the further compartmented structures can be achieved on account of the lower transaction costs (see cluster effects [6]). First of all, the structure of the MCSP+ makes it possible to transform all concepts that only make economical sense in concentrated structures. Due to the offer of a hybrid "all-in-one" service cluster, further synergy effects can be achieved compared to the utilisation of individual service operations [1].

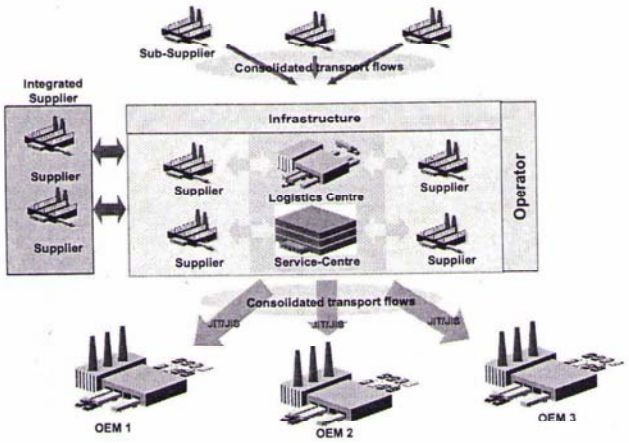

Figure 2 MCSP+ Structure.

The complete "all-in-one" service offer of the park is provided by the park operator – one stop shopping and one stop billing. The individual services are proved by the operator himself or by a sub-contractor (service operator). The operator is for the client the only point of contact and contractual partner; furthermore, they are liable towards the client for quality and conditions of an operation of the entire service offer, including that of the sub service operator. Apart from the established suppliers within the park, the MCSP+ integrates suppliers who are not established in the park in order to achieve further synergy effects with a higher volume in the park and also to improve the service and costs of the integrated suppliers outside the park: a win-win situation arises.

The formulation of the services concept comprises two aspects under the influence of system theoretical bases. On the one hand structures need to be built, on the other hand, processes need to be formed. The structures of the services can further be divided into the layout of the park, the setting up of the organisation (operator sub-service-operator, organisation units) and the technical infrastructure. Moreover, the services related to the function method (what), process (how) and required resources (with what, respectively with whom) must be defined.

A particular challenge for the operator is the setting up of cost-intensive structures such as a shared deport or a shared IT-infrastructure. If the operator directly builds this structure in the development phase, significant synergy effects can be realized for all suppliers. If, however, the risk concerning the cost-intensive setting up for the park operator is too high, the supplier is forced to implement these structures and the connected processes themselves. In most cases, a subsequent setting up of such services cannot be implemented anymore, once structures and processes on the part of the suppliers are set up, they can only be modified with great difficulty. The exchange costs and especially the sunk costs (costs for specific investments that no longer exist after the exchange) are normally too high.

3. APPROACH

The following method is supposed to support the operator to define services for a MCSP+, especially in the concept phase (in the operation phase direct requirements on demand and workshops take place). The services of the park must bring about an added value through better services and/or cost reduction, compared to an independent accomplishment by the supplier, respectively an external service operator, who is not established in the park. On the other hand, investments and the offer for the operator must be advantageous.

Table 3 Criteria (real value analysis).

Criteria	Description	Scaling
Scale effects (scale and scope)	Higher personnel-, space-, machinery-utilization, measurement of experience effect, implementation of more efficient recourses is possible	8
Investment expenditure	Decrease in investment expenditure through e.g. joint investment into capital-intensive equipment	2
Flexibility	Flexible accessibility to services which are being offered (no fixed costs)	2
Optimized interface tuning	Few respectively optimized interfaces (physically and especially organizationally) to the client, among the service operators, internally and to the suppliers.	4
Fewer transaction costs	Cost reduction in the launch agreement-settlement and control phase	4
Quality of service	Higher quality of the services e.g. caused by the concentration of core competencies	8
Access to otherwise possibly inaccessible resources	Access to resources such as market and competition information, marketing and countries know-how.	4

The **first step** of the selection process is based on a decision-matrix (Table 3) where potential services with scaled criteria are evaluated (if necessary, the values can also be assessed without an analysis). The potential services in this case can be made accessible by suppliers through existing service offers of existing supplier parks [7], service catalogues of the Facility Management agent and personnel service operators and the analysis of special requirements and arising problems. It is important that potential services are not only accepted by the supplier but also by park customers, such as OEMs and suppliers (e.g. in terms of control, existing contracts, etc.). If procurable, the operator has to thoroughly analyse the potential services with the park customers. Prior to valuating the frame conditions of the park (amount of suppliers, staff, etc.), as well as a brief description of the individual service operation with a rough functional method (processes and structure), an evaluation of a coherent understanding must be outlined.

The **second step** of the selection method serves the valuation of the realizability of the service implementation (profitability, probability of acceptance of the park supplier). In the **third step** the services are registered in a portfolio with the established economic value as well as the assessment of the realizability (Example in Fig. 3).

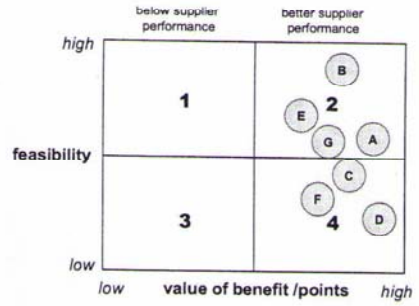

Figure 3 Portfolio.

The 4 norm strategies can be derived from the portfolio as follows:

Strategy 1: The implementation of an analysis how a higher benefit compared to an individual implementation of the service on the part of the supplier can be generated. If no optimization is possible the service is not be offered.

Strategy 2: The service should be offered. Before that, however, a detailed analysis of the profitability and the form is recommended.

Strategy 3: Services of this strategy should not be offered unless a substantial optimization of the value of benefits for the supplier can be achieved.

Strategy 4: Ways need to be found for these services as to how feasibility can be achieved. A thorough analysis is necessary.

4. EXAMPLE

Within an industry project the method relating the selection of service for a MCSP+ was applied (see Fig. 3.1). With the aid of the method the operator can evaluate the services swiftly. It is particularly obvious that the services merge primarily into strategy 2 and 4. This is caused by the fact that the operator intuitively integrates services in the selection where they have hopes of profitability.

Furthermore, the portfolio explains that the services in strategy 2 are defined as established (e.g. in other supplier parks), respectively classical services which can be implemented easily (provided that there is a critical mass of the park suppliers). The portfolio quickly presents the services in strategy 4 which can only be implemented with higher expenditure. Those services, however, can gain a distinct advantage in the competition if implemented successfully. A joined distribution can be quoted as an illustration which generate

considerable advantages; however, on account of the high costs and the uncertainty as to if they are accepted by all park suppliers, is difficult to implement accordingly (the pressures of OEMs is not applicable in this concept).

5. CONCLUSIONS

Operators of supplier parks face challenges in the conception phase to provide a comprehensive service offer for the potential park supplier. In this article a method was presented as to how the operator classifies services quickly for an offer in the park. Furthermore, the operator is supplied with an action recommendation for the services caused by the classification. The method is helpful, especially in the concept phase, in order to get focused on the critical (challenging) services. Operators should in particular focus on services during the conception that cannot be simply implemented such as standard services (e.g. the facility management), in order to offer the potential park suppliers a substantial surplus value.

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