

DEFINING THE OBJECT OF LOGISTICAL MANAGEMENT IN THE INFORMATION TECHNOLOGY SERVICES SECTOR

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This article covers the object of logistical management in the information technology service market, provides a drill down of services by type, and identifies the area of logistical management corresponding to each service link. The article also gives an overview of how information service types evolved, enabling to identify the need for logistics approach in IT services management as a business tool for market participants.

The article aims to identify the object of logistical management with reference to a possible taxonomy of services in the information technology field (hereinafter: IT services) and the established market structure.

IT services are part of the information technology sector, which, in turn, is included in the broader information and communications technology area (hereafter - ICT), illustrated below in fig. 1.

It should be noted here that a different and simpler taxonomy of the ICT market is used internationally to analyse the market structure and situation.

Let us consider a few of these categorisations proposed by the world's most renowned consulting companies studying the ICT sector.

Thus, for instance, the European Information Technology Observatory breaks down the ICT market into seven segments:

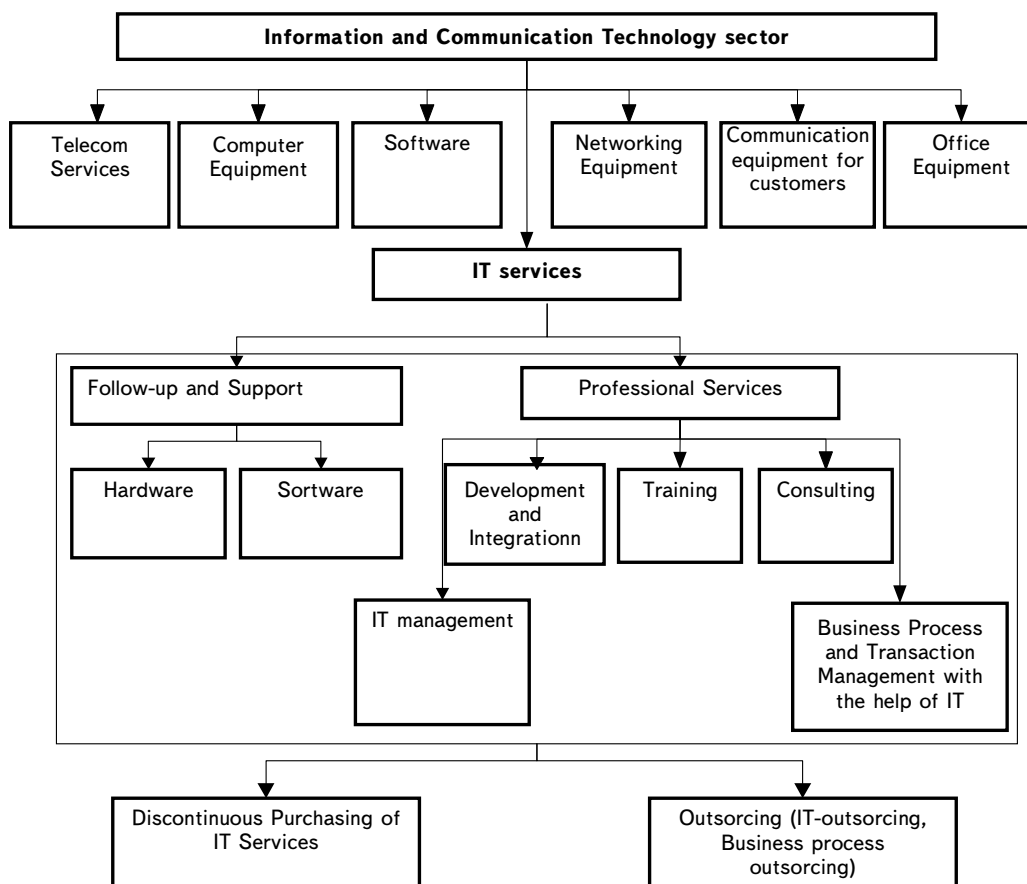


Fig. 1. ICT Market Structure

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- 1) telecommunications services;
- 2) IT services;
- 3) hardware;
- 4) software;
- 5) networking and data transfer equipment;
- 6) customer communications equipment;
- 7) office equipment.

In 1998 the Committee for Information, Computer and Communications Policy (ICCP) adopted a definition of the ICT sector, which has been adjusted on an ongoing basis to reflect the changing market conditions with new technologies appearing on the scene and existing technologies improved. This definition is used in international practice. The principles on which an economic activity is identified as belonging to the ICT sector are universal. The ICT sector includes economic activities that result in the following:

1. Products meeting one of the following criteria:

- ◆ those designed to support telecommunications and process information, including information transmission and display;
- ◆ those using electronics to display, change and/or describe physical phenomena or to control and manage physical processes;
- ◆ those created as stand-alone components designed primarily to enable the utilisation of the products defined above.

2. Services enabling information transmission and processing with electronic means, including those related to sales or lease of technical equipment, and direct utilisation of ICT.

However, to identify the object of logistical management, we have focused on the definition of an IT service proposed by Gartner (fig. 2).

In his reports Gartner uses the term “pure services”, i.e., according to them, this sector does not include sales of equipment required to support the services provided.

Within the broad types of services identified above, the following sub-types of product support services are included:

1. **Hardware Support:** customer’s hardware servicing and maintenance, management of document workflow hardware, organisations’ hardware servicing and maintenance, management of data storage (archiving) systems’ hardware.

2. **Software Support:** software applications support (back office, Enterprise Resource Planning, Supply Chain Management, Customer Relationship Management), infrastructural software support services, operating systems support services.

3. **Consulting:** business consulting, IT consulting.

4. **Development and Integration:** programme suites (applications) development, commissioning, and integration.

5. **Training.**

6. **IT management:** applications management, help desk management (technical support department), operational services.

7. **Business process management.**

Let us consider in greater detail the core object of logistical management and its modifications in relation to IT service market.

Thus, in terms of methodology, the central part of logistical management theory is the abstract cycle model of continuous organisational and economic processes.

Establishment of an ideal object of that kind is the necessary step in designing logistical management theory, and this is taken in a unique

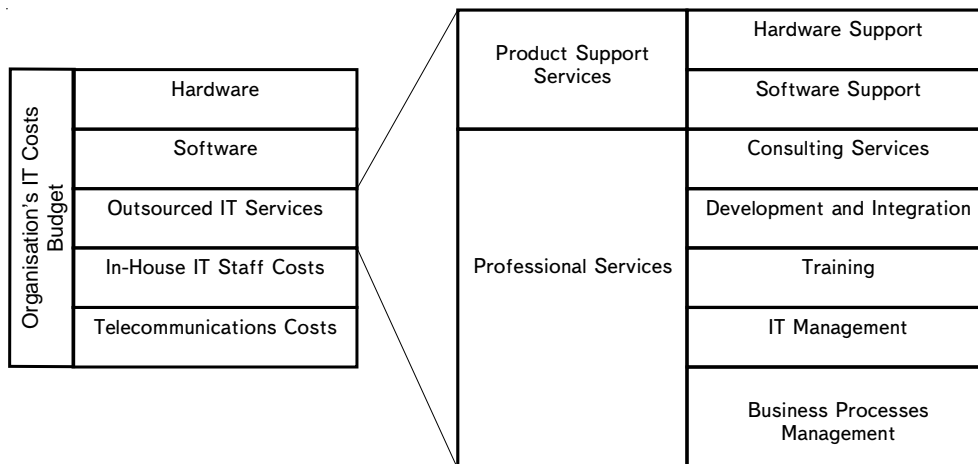


Fig. 2. Gartner Classification of IT services

field of knowledge: organisational, economic and business activities of man.

Based on the identified service provision options, it has been found that the material component of an IT service is “absorbed” by the dealer who communicates directly with its customer to provide information services.

To analyse further the continuous processes in the IT services market at both the micro and macro-level, let us assume that we shall treat the IT services as both the product support (hardware and software support) services and the professional services (consulting, systems and networks integration, training, outsourcing, and management).

We have to mention here that in the course of their evolution information services were treated differently at various stages, whereupon the concept of using logistics to optimise service management as a business tool has only very recently become applicable.

To support this argument we present various stages in the development of information services summarised in table below.

In the light of this evolution, different approaches to IT services as an object of commerce can be classified as follows:

◆ Level 1 services: the service is regarded as a product and is measured in units (sales of equipment);

◆ Level 2 services: the so-called “intermediary” service (creation of data processing systems - DPS, and data processing centres - DPC);

◆ Level 3 services: service as a business tool (performance of works).

The main trend is therefore moving towards reducing of the share of goods and intermediary services and maximising the share of works in information service performance and provision.

If we correlate these taxonomies, we should note that Level 1 and Level 2 are support services, whereas Level 3 is professional services.

Obviously, the logistical approach in this situation should be differentiated:

1) in the case of logistical optimisation of product support services, this is the domain of service logistics;

2) in the case of professional services, logistics will include all functional areas, because the information service is regarded as a *thing-in-itself* and covers the whole resource potential of an organisation.

Let us in accordance with this logic emphasise the key logistical tasks for service logistics. Our analysis of the term “service”, which we have done to identify its key aspects for logisticising purposes, is based on a research by Boris Anikin whose position in this respect we fully share. We have therefore come to the following conclusions:

Stages in the Development of Information Services

Timespan	Information Services
From mid-1950s to mid-1960s	Services included information publications distributed by subscription (also abroad), which contained bibliographic information, reference and analytical reviews. Other services include library service and copies of original source documents available upon request
From mid-1960s to mid-1970s	Data bases (DB) became the most important class of services available in the market. They initially contained bibliographic information, abstract information, factual data, scientific and technical reference information, and at a later stage commercial and economic data, statistical data, professional textual and numeric information, and software were added
From mid-1970s onwards	National and global data transfer networks were created. The leading class of information services was the online information search in remote DBs. Intermediary companies started to provide information services in the form of on-line information search in remote DBs, complementary services, source document copies and consultations
Second half of the 1980s	The market was characterised by new information service providers: centres specialising in providing BDs on CDs, teletext and videotext broadcasting companies, telecommunications networks uniting personal microcomputer users, multi-input gateway services with access to centralised BDs, which enabled customers to search easily and comfortably in a dozen CBDs simultaneously. Taken together, they were providing access to thousands of BDs
the 1990s	Commercial utilisation of the Internet, email, broadband connections, multimedia etc., which significantly enhanced the availability and attractiveness of remote DBs. Development and application of IT services
From 2000 till present day	Global use of the Internet, mobile devices, new network access methods, voice transmission, virtual space development etc. The IT services market has an established structure: consulting, integration, start-up and commissioning management, training, service and maintenance)

1) in Russian, the word “service” can be perceived as a static term - “a package of services”, and as a dynamic term - “act of servicing”;

2) “service” can be interpreted globally, as a set of actions of benefit or of assistance to another person, and in a narrower sense: as a set of actions related to the sales and utilization of machinery, equipment and other manufacturing and technical products.

Hence, 2 classification features are identified:

1) the state of logistical process (logistical flow):

- ◆ static (service as a set of services);
- ◆ dynamic (service as an action of servicing);

2) the type (level) of logistical system:

- ◆ micro-level;
- ◆ macro-level

enable us to identify the four main areas of service logistics (fig. 3).

Thus, the key concept in service logistics is the service logistic system; we will use the term hereafter to define a system of service flow management aiming to adjust the flows’ qualitative and quantitative parameters in response to the changing external environment.

In this context, the flow of IT services is regarded as a logistic flow, in which the objects of logistics are the ways and means of creating customer values related to business process execution, where these processes facilitate accomplishment of the customer’s objectives, including physical, financial and contractual elements. Similarly to any other logistical flow with varying types of objects, it represents a body of specific objects, which travels through time and adjusts to the quantitative and qualitative transformations imposed by the subject of logistic system management. Regarding IT services the flow is valid as a logistic flow because the following requirements are met: appropriate response to customer demand, assurance of competitive advantages, the link to specific logistic system.

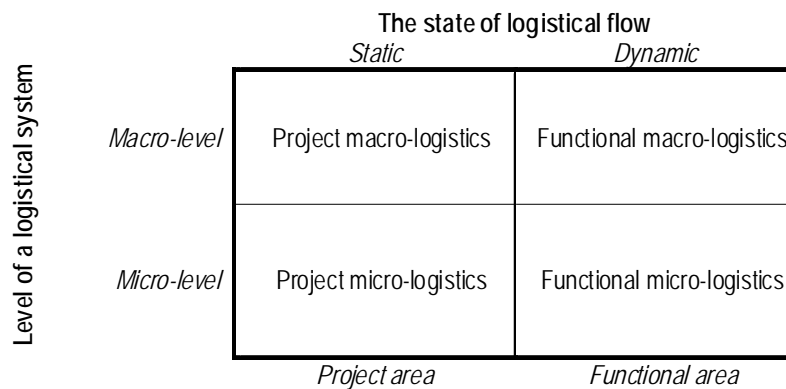


Fig. 3. Main Areas of Service Logistics

Hereafter in this thesis, the information presented in the figure above serves to identify the main areas of service logistics in terms of their objects and developing competitive advantages.

Project service logistics is an area within service logistics covering design, establishment and optimisation of micro-, meso-, and macro-logistical concentration and distribution systems.

Functional service logistics is an area within service logistics covering operational management of resource flows in micro-, meso-, and macro-logistical systems.

Macro service logistics is an area covering design, establishment and optimisation of macro-logistical concentration and distribution systems, and their effective utilisation in the management of logistical flows internally and externally.

Micro service logistics is an area within resource traffic logistics, which covers service flows managements in micro-logistical concentration and distribution systems.

In turn, the management of IT services is defined as a combination of continuous targeted actions of the subject of management influencing the assembly of isolated objects to be managed in order to obtain the desired results from their movement and transformation in time and space and create value for the customer.

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