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## Knowledge Representation and Management

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### ORGANISATION OF DISABLED PERSONS' TELEWORK AS PART OF PROCESS OF KNOWLEDGE MANAGEMENT

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**Abstract:** *Challenges of knowledge society, knowledge economics change models of management. Work trends, organisational structures are changing. Most of knowledge management processes one way or another are connected with main elements of information management: information technologies and information systems. Knowledge management is new branch of management, the main purpose of that is bigger effectiveness of business applying synergy of humans, processes and technologies. Knowledge management helps for employees single-mindedly to create, share, collect, keep and practice the knowledge. Fundamentals of knowledge management could be used for organisation of telework of disabled persons, solving economical problems of state. Knowledge management could help to increase productiveness of employees, expanding sources of reachable for them knowledge. Improving shapes of disabled persons' education the very important is to pay attention at how educational knowledge is implemented practically. Knowledge management should encourage employees to integrate such educational processes together with their work methods and to apply results of educational processes in their daily activities. For purposeful and beneficial education there should be forecasted what knowledge is the most important. Authors of article analyses the application of knowledge management methods in structure of professional rehabilitation of disabled persons, organising telework of disabled persons. During such process new knowledge should be used not only by disabled persons, but both represents of governmental institutions and consultants.*

**Keywords:** *knowledge society, disabled persons, telework.*

**ACM Classification Keywords:** *K.4.3. Computers and society - Computer-supported collaborative work*

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#### Introduction

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Transformation of modern society to knowledge society originates the absolutely new global social and economical contexts that require different management principles, skills, abilities and competences. Experts, who prognosticate changes of European economy, declare that the main factor of development of European economical space business organizations and economy would be the knowledge, generation of innovative products, perfection of production and management's methods.

Most of knowledge management processes one way or another are connected with the main elements of information management: information technologies and information systems. Information technologies are the main connection of information management and knowledge management too, and it is the main accent. Inquiring objects – information and knowledge, its expression's levels, determine the connections of information and knowledge management.

Information and communication technologies assume huge importance in all spheres of modern society life – in professional life, in education, in daily life, but not for all members of society it is available. Application of information and communication technologies could challenge new forms of social disjuncture. New technologies not only require special skills and competences, but both it becomes dangers of social disjuncture for special groups of employees, for example, for disabled.

Telework and new form of work organization became important aspects of creation of new work's places in European Union. 30 percents of all staff in Europe regularly practise telework. Together with additional telework it would be 36 percents. Big enterprises mostly practise telework. There are more than 3 millions teleworking employees at home in European Union. The alternative telework composes quite big part; it means that such work is performing both at home and at work. 1,4 million of employees we can classify as private teleworkers owning home office. Also 2,3 million of employees are mobile teleworkers [Bergum, 2007].

Problem of employment for disabled persons is partly connected with permanent changes and technical achievements on labour market. One of the tasks of Lisbon strategy is creation of information society, helping to implement knowledge economy and create new work places in states that have the biggest development potential. Spread of new information technologies changes character of work – its quantity, quality, particularity of performing work. Telework at home could supply better opportunity for disabled persons to receive work places.

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### **Practical value of knowledge management**

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Environment of enterprise is changing continually because of globalisation. Expansion of competition, intensification of international economical cooperation, spread of technologies, changing of social priorities, attitudes and values – all are such transformations that cause new phenomenon – knowledge based economy. The main attention in knowledge economy is played to person, his abilities, knowledge and opportunities of its consumption. Information technologies precede revolution in business world: expand computer networks, globalise market, create business environment without borders. Internet and communications become equipment of successful business and bottomless source of information that properly using we can reach competitive advantage in any activity. Types of social economic activity are transferring to electronic environment, e-commerce replaces traditional commerce.

Challenges of knowledge society, knowledge economy are changing models of management, enabling in scientific view basically to analyse the advantages and disadvantages of state or organisation, to establish fields of strategic excellence creation. Elements of information and knowledge management are in every modern field of management: in processes management, in time and space management, in changes' management, in crisis and conflicts management, in organisations' management, in education management, in quality management and etc. Information and knowledge management in system of information and communication sciences composes nucleus of going together manage mental disciplines of information sciences that perfectly fits the modern conception of management.

Knowledge management's essence becomes the management of individuals with particular skills and experience, with purpose to encourage particular behavioural models in organisation and interaction of individual employees – socialisation. The main attention is paid to knowledge based activities and processes that educate abilities of enterprise to work effectively. Effective knowledge management in organisation directly depends on technologies, methods and interaction of persons [Bhatt, 2001].

Practical space of knowledge management realisation is making knowledge economy. Knowledge management becomes strategic discipline, mostly influence development steps of knowledge economy and information society. If prerequisites of knowledge economy would be evaluated successfully, we could scientifically basically to analyse advantages and disadvantages of state, to establish fields of creation of critical strategic excellence and to analyse good practice of successful work.

Modern management as society generally is one-to-many and heterogeneous. Methodological armamentarium of management and variety of methods are changing and increasing. By information attitude, management connects

most scientific elements to holistic space. Management generally is concurrent part of information phenomenon – management always is firstly informational, not formal solution. In information space very different ways and methods of social and economic life are developing and existing [Augustinaitis, 2005].

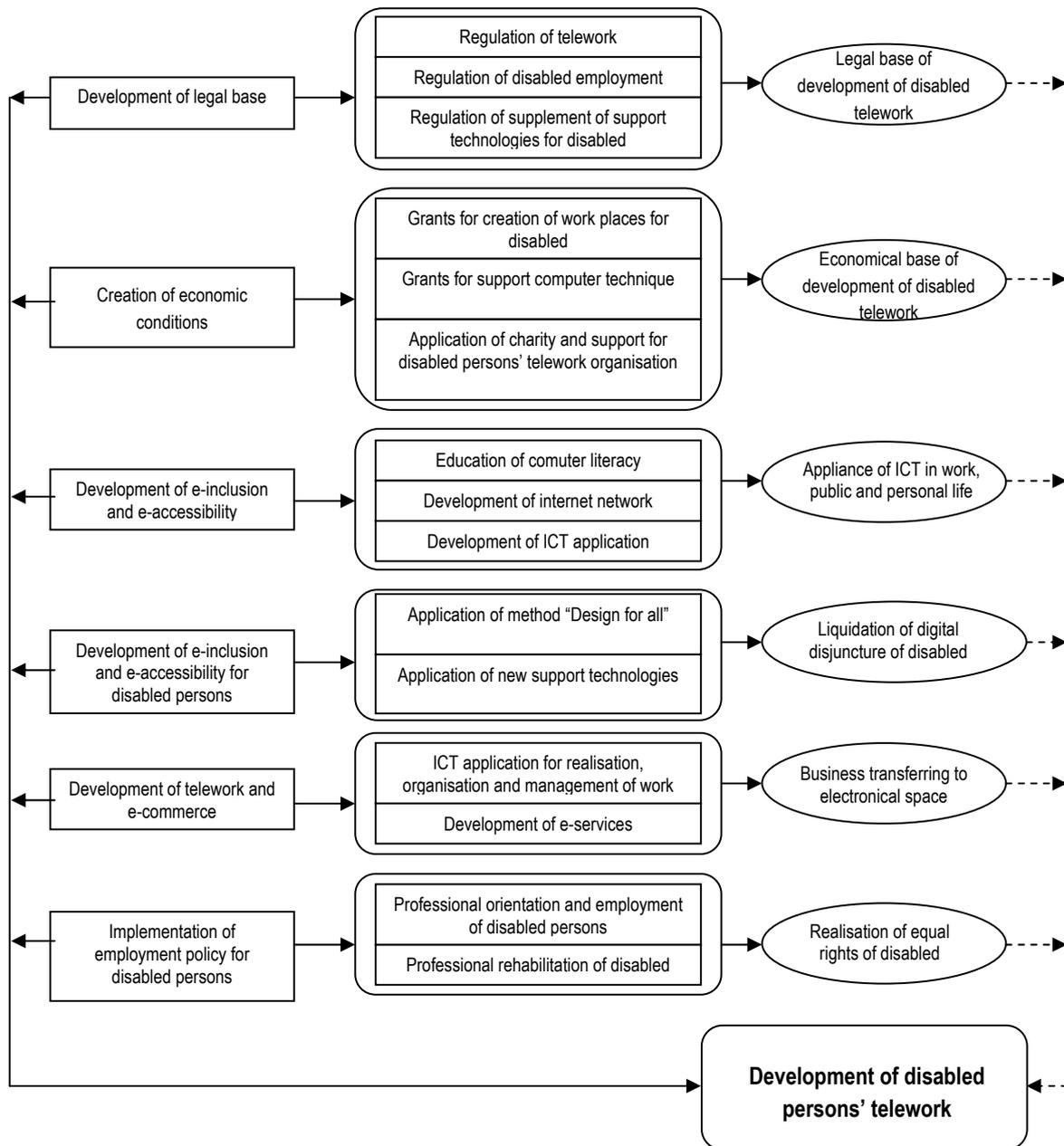


Figure 1. Scheme of development conditions of disabled persons' telework

Knowledge management previously was as attachment for information and technology management, developed in independent branch, essential purpose of which is management of organization sources as intellectual capital, employees' knowledge, organisation's image and others. Development of new information technologies, that relieved types of most global business operations and education, transferred business to new level, supplying the increasing importance for knowledge. Conjunction of different knowledge parts to management of strategic intellectual capital brings people to new practice of management in information age.

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Knowledge management is optimal application of theoretical and practical knowledge in business processes – with purpose to reach durable advantage against rivals and bigger benefit of all shareholders of enterprise – investors, employees, managers, so common state benefit would be implemented [McGinn, 2001].

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### **Model of professional rehabilitation of disabled persons in knowledge management context**

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Development of employment's levels is effective measure causing development of economy and stimulating economy of social inclusion, both securing protection for disabled persons to work. Disabled persons as others members of society have demand to perform significant activity, beneficial for society and themselves.

Together with rapidly developing information technology the economical and social environmental is changing, the new opportunities are starting, so character of work is changing, new work forms are starting. Today often to remove work at employees' place is easier than opposite. Although, properly organised, flexible, mobile and independent of place work could essentially reduce costs, raise effectiveness, it is profitable for employers, customers and employees. Telework commonly is understandable as opportunity to accomplish work or its part at home maintaining connection with work place using technical equipment (internet, fax, and phone). It lets to reduce level of unemployment, to keep specialist with high qualification. Telework and e-commerce illustrate transferring of labour market to information society [Benchmarking, 2000].

According authors, the theoretical united system of development of disabled persons' telework could be presented as sustainable operative structure with related inter-connections (see Figure 1). Creation and sustainable development of such system depend on legal basis development, economical conditions creation, development of e-inclusion and e-accessibility for disabled, development of telework and e-commerce, implementation of policy of disabled persons' employment. Analysing presented scheme, we could predicate that successful organisation of disabled persons' telework is closely connected with the main development processes of information society and highly depends on disabled persons' e-inclusion and e-accessibility.

Seeking to increase disabled person's efficiency, professional competence and potential to participate in labour market professional rehabilitation services are providing for disabled persons. Professional rehabilitation services are the part of professional integration system in European Union, closely cooperating with systems of social services, labour market, medical and educational systems. Professional rehabilitation is coherent process, consisting of several stages that differ in every country but essentially professional rehabilitation composes such stages: establishment of person's working ability; evaluation of work experience and arrangement to work; professional education, training, and cultivation; training of working skills, organization of working test; employment or support in creation of new enterprise or in practise the autonomous activity. Structure of professional rehabilitation processes is presented on Figure 2. Institutions of professional rehabilitation services could play the main role in process of telework development.

Modern organization should comprehend knowledge management and implement it inside. Knowledge management is manage mental instrument supporting by different measures to create working environment in that seeking the best result they optimally create, spread and use their and others knowledge. The main result of knowledge management is environment stimulating employees to create, spread, keep and apply knowledge and consisting of all processes, roles, measures and structures that let to implement it.

Principles of knowledge management rarely are applying in development of disabled persons' professional rehabilitation. Analysing system of disabled persons' professional rehabilitation in context of knowledge management we will use triad that describes the knowledge management as process and as result: knowledge creation, knowledge spread, knowledge appliance.

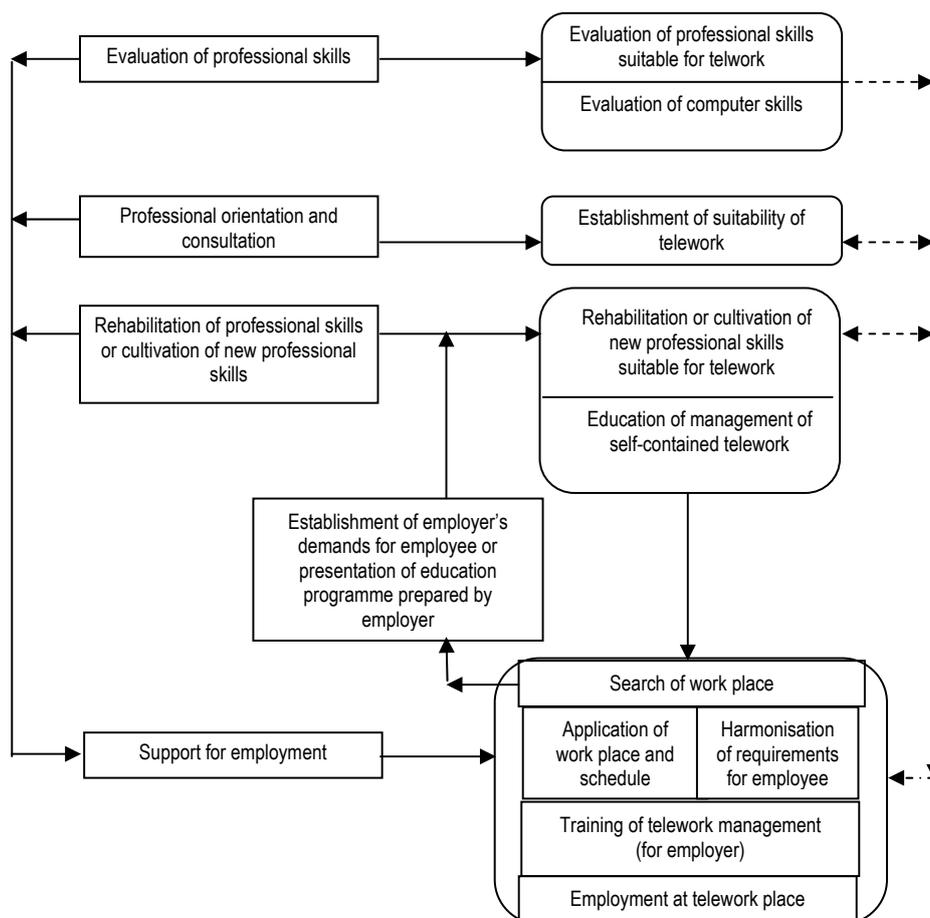


Figure 2. Structure of professional rehabilitation services

**Creation of knowledge.** In our opinion, model of disabled persons' professional rehabilitation applicable in Lithuania, hasn't been discussed in context of its suitability for disabled persons' telework. In February'2009 Tatjana Bilevičienė accomplished interview of experts. Only few specialists in Lithuania could qualitative evaluate the condition of disabled persons' social and professional rehabilitation, quality of disabled persons' employment. So, as experts' representatives of disabled persons' organizations, persons, responsible for disabled persons' professional rehabilitation, social work specialists – scientists, businessmen, were questioned. One of the most important questions supplied for experts was what, in their opinion, changes are needful and possible on every stage of system of disabled persons' professional rehabilitation and employment, on purpose to successfully employ united disabled persons' telework system. Experts solidly determined that new management programmes of disabled persons' professional skills evaluation, establishment of suitability of telework, rehabilitation or cultivation of professional skills and telework are necessary. There is predicated that for successful organization of telework part of employees of professional rehabilitation system should acquire additional qualification.

**Spread of knowledge.** Research of theoretical material and experts' opinion showed that in spite of quite intensive system of professional rehabilitation in Lithuania, organization of disabled persons' telework requires forecasting new methods of professional rehabilitation: professional education should be combining with training of computer literacy. Specialists who working with disabled persons in such way should have not only skills of social work and profession but both good skills in ICT. ICT knowledge is necessary even for medics who evaluating suitability of choosing work for disabled persons, because noxiousness of computer works and necessity of appliance of support computer technique should be evaluated. Doctor should evaluate affections of

disabled persons' health and organism and discuss with ICT specialist the opportunities to compensate such disadvantaged by ICT (using support technologies). Also, ICT specialist should describe possible effect of computer work for disabled person, and doctor should decide if particular person could work particular works (and how long he could work such works). ICT specialist composes list of necessary compensative technique and software for employment of disabled persons.

Medical adviser should have comprehensive description of employee's responsibilities; that such information would be useful the character of work, person, working time, preparation for flexible work, physical requirements of work (stay, intellectual and emotional requirements), intensity factors, forecasted working results, conditions of work contract should be described.

Discussing advantages of telework, both we should describe problems of such work. Employers fear to lose control of work, demands of teleworkers' socialization is hardly satisfied, informal meetings proceed without teleworkers, some of teleworkers overwork, teleworkers could wrongly evaluate the main task of work, leaders have problems in evaluation of work only by results, electronic connection not always successfully displace direct communication, it is complicate to plan meetings, harder to accomplish urgent work, professional unions and others organizations could lose nearness with its members [Coope, Kurland, 2002].

One of the most important problems of telework is management problem, because additional requirements for leaders originate. Leaders should be able to manage in distance, evaluate work by results, not by time, what employee is at his working place. Also leader should be able properly formulate work task. Employee should be able properly plan his work, his activity, properly understand tasks, should be able actively, successfully to find solution in every day small problems. Both, he should be able properly present his activity. Telework could be accomplished only then task is clearly described. Successful telework requires particular management style and good selection of employees [Nilles, 2007].

**Employment of knowledge.** Improving education forms it is very important to highlight how many of training knowledge is used in practice. Knowledge management is part of common management of organization. The main purpose of it is to increase effectiveness of organization, purposely to improve only essential educational processes: knowledge management should stimulate employees to integrate these educational processes with their working methods and to apply educational processes' results in their every day activity. There should be forecasting what knowledge seeking strategic tasks are the most important for organisation [McGinn, 2001].

System of disabled persons' professional rehabilitation should forecast the adaptation of work places for disabled persons and their education preparing specialist for particular work place.

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## Conclusion

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Knowledge management is connected with innovations, inter-connections, ideas, competences, structures. This management supports individual or groups' education, stimulates and enhances spread of experience, distribution of failures and good practises, choice of optimal solutions. Knowledge management technologies could be used for stimulation of dialogues, bargains, communication, but it is not essence of such management.

Accomplished researches show that modern professional rehabilitation system could be conforming for organization of disabled persons' telework only applying principles of knowledge management.

If disabled person has professional, psychological, functional suitability, way of telework could be recommended for him. If disabled person agrees, suitable professional rehabilitation programme would be created for him. In such way, the search of future work place should be oriented particularly at telework method.

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