

NEW KNOWLEDGE WORKGROUP AND NEW DEMANDS FOR CHANGE INFORMATION MANAGEMENT

Разом із змінами, що відбуваються в економіці і організаціях, розуміння природи діяльності і її значення для людей представляє собою критичний інтелектуальний виклик, який має істотне значення для політики і практики. Дебати навколо значення і відносності діяльності в їх сучасному трактуванні утруднені нестачею серйозних наукових результатів.

Ключові слова: знання, робоча група, інформаційне покоління, зміни інформації.

Вместе с изменениями, происходящими в экономике и организациях, понимание природы деятельности и ее значения для людей представляет критический интеллектуальный вызов, который имеет существенное значение для политики и практики. Дебаты вокруг значения и относительности деятельности в их современной трактовке затруднены недостатком серьезных научных результатов.

Ключевые слова: знание, рабочая группа, информационное поколение, изменения информации.

With economies and organizations undergoing change, understanding the nature of work and its significance to people presents a critical intellectual challenge with strong implications for policy and practice. Debates surrounding meanings and relevance of work in its contemporary setting have been hampered by a shortage of solid research findings.

Key words: knowledge, workgroup, information generation, change information.

Problem setting. It is certain that the emergence of the knowledge worker and of the knowledge worker's productivity as key questions will, within a very few decades, bring about fundamental changes in the structure and nature of THE NEW ECONOMIC SYSTEM¹.

Research and publication analysis. Much has been written about managing knowledge in an organization². But what about managing the collective knowledge and collaboration among these workers? That is, how do you manage and empower the role of the new knowledge *workgroup*? Knowledge workers pervade virtually every facet of the current work force. Fueled by technology that renders distances less important than time, today's

«infoworkers» are as likely to work in homes and hotels as within office buildings. And their roles can be as diverse as freelancer, consultant, or partner – in addition to traditional employee. But once networked, their productivity becomes exponential. As Bob Metcalfe, the inventor of Ethernet and founder of 3Com has famously noted in Metcalfe's Law, «*the usefulness, or utility, of a network equals the square of the number of users.*» This new class of worker and new way of working is borne of pervasive networks, new computing technologies and socio-economic trends. Taken in aggregate, knowledge workers represent not only a new way of working, but a powerful competitive weapon – or threat – for organizations of all sizes.

¹ Peter Drucker, *Management Challenges for the 21st Century*. NY. – P. 210-230.

² See Dominique Goupil (2007), *Knowledge Workers, new Workgroups and new Demands for Information Management*, FileMaker, Inc. New York.

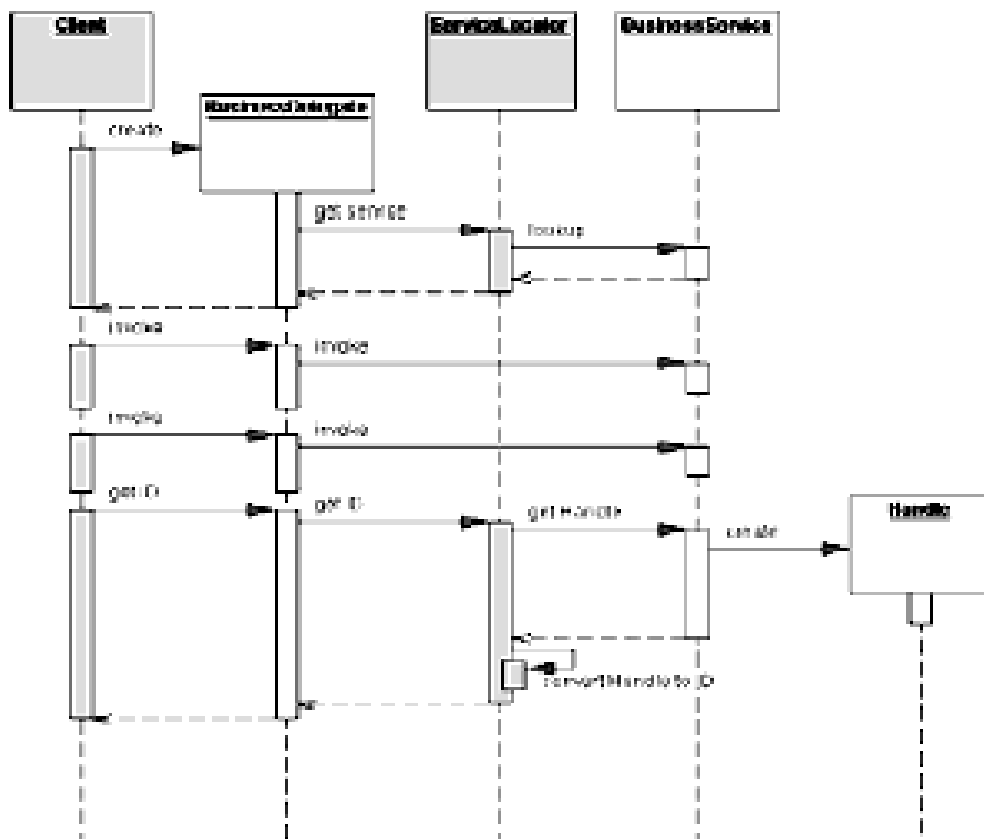


Figure 1. Business Delegate

Source: www.corej2eepatterns.com

A. Korowicki says, today, the notion of «going to work» is defined as much by engaging in a function as it is by commuting to a specific destination. The connected world of cell phones, pagers, wireless devices and high speed Internet connections is transforming the role of workers inside and outside of companies of all sizes. Knowledge workers appear as employees, partners, contractors, freelancers and consultants. Some are mobile, working in hotels, at airports and on the road. Others are stationary, working from home, in office buildings or manufacturing facilities. They populate all industries and job descriptions, from assembly line workers to doctors and scientists. But the one common thread running through this mosaic of knowledge workers is a connection to information. As the number of knowledge workers grows, so too does the information they produce. In fact, in the next three years, we will produce more information than in all of past human history, according a recent study by faculty and students at University of California at Berkeley's School of Information Management and Systems.

On a global basis, we produce between 1 and 2 exabytes of unique information a year, which is roughly 250 megabytes for every man, woman and child on Earth, according to the Berkeley study. And 93 percent of that information is digital. Every

document we create, every email we send, and every movie we record, contributes to the vast sea of digital data. Naturally, this data explosion will create lots of jobs. According to the U.S. Government, the five fastest growing occupations from 1998 to 2008 will all be computer-related (US Bureau of Labor Statistics, November 1999). And our next generation of workers will be even better prepared. More than 60 percent of American households with children have computers with Internet access, according to *The Economist* (Dec 21, 2000 : 67). So how do all these people make sense of all this information? Traditionally, companies grouped workers in organizational structures, according to project, profile and function. These organizations were known as workgroups and were arranged in a structure similar to information silos. But the new model of knowledge workgroups does not lend itself as easily or simply to such strict divisions. W. Abramowicz says, the knowledge migration – today, knowledge workgroups – unlike the traditional workgroups of the past – are more varied, distributed, dynamic and autonomous (tab. 1). What caused these changes³ – the evolution in workgroups – as with most significant changes in today's business environment – is rooted in the adoption of technology, and captured in a series of laws posited by three of the industry's leading pundits.

3 Kevin Kelly speak «Because communication – which in the end is what the digital technology and media are all about – is not just a sector of the economy. Communication is the economy». See Kevin Kelly (2007), *New Rules for the New Economy*. – P. 56. NY.

Table 1

The Knowledge group migration

Traditional Workgroup	New Knowledge Group
Homogenous – Group of like-minded people – Organizationally similar (e.g., finance or engineering)	Heterogeneous – Different people, organizations, specialties – Organizationally disparate (cross-department)
Stable – Structure, participants firmly established – Slow to add and delete members	Dynamic – Change is integral to the process – Membership is fluid, based on need
Focused on the Organization	Focused on Productivity
Centrally Managed – Connected through a hierarchy	Distributed – May or may not be connected to hierarchy
Predefined Boundaries – Group is pre-determined – Inflexible approach (start another group)	Self-Defined, Organic – Knowledge defines the group – Adaptive to tasks
Reliant on Technical Expertise – Complex to set-up – Sophisticated management, maintenance	Self Sufficient with Technology – Rapid adoption – Learn as you go enhancements
Geographically Fixed – Few locales	Mobile – Anywhere, anytime

Source: Dominique Goupil (2007), *Knowledge Workers, new Workgroups and new Demands for Information Management*. NY.

Research results. First, according to Moore’s Law, computing power doubles every 18 months. Second, predicts Gilder’s Law, network capacity grows three times faster than computing power. And third, states Metcalfe’s Law, a network’s usefulness is exponential to the number of users. Given the power of computers, the breadth of network connections and the advantage of group dynamics, it’s no wonder people have responded according to the universal Law of Nature – creating new

applications, services and job descriptions that work to their own natural advantage. W. Chmielarz speak, making the connections – digital connections are now commonplace. Networks – once the domain of specialists confined to wiring closets and data centers – have become accessible to anyone with a modem and a browser. And traditional networked applications were quickly eclipsed by the popularity of Internet software services like Hotmail, Yahoo and Amazon.com. Almost instantaneously, more networked information existed outside the firewall than within. Pervasive computing prevailed.

Table 2

Evolution in workgroups

Foster Self Reliance	– While groups grow as a result of combined interaction, they often disintegrate based on individual failings; – Familiarity with technology reduces reliance on hard-to-find experts, thereby mitigating possible losses in productivity;
Celebrate Diversity	– Accommodate differences in people, places and platforms; – Plan to communicate different platforms (Mac, PC, Linux), devices (desktops, PDAs) and connections (dialup, broadband or wireless);
Be Exclusive and Inclusive	– Small knowledge groups often feed larger initiatives; – Be mindful of future compatibility with larger systems, structures or companies; – Adopt ways of working that can be exclusive now, but inclusive later;
Maintain the Connection	– Technologies that connect people and information are as valuable as relationships; – Cultivate methods of keeping people connected with you and you to them;

Source: Dominique Goupil (2007), *Knowledge Workers, new Workgroups and new Demands for Information Management*. NY.

According to the Giga Group experts, build it and they will come – once the connections were in place, the people followed. Between 1990 and 1996, the number of people employed in manufacturing tangibles decreased 1 percent, while people employed in providing intangibles services increased by 15 percent. Along with this shift from atoms to bits, came an always-on work force. Work went from a classic 9 to 5 to veritable 24 by 7. Freelancers, once the eclectic domain for artists and

writers, poured into the job market, as companies sought to outsource many of the support services and non-core competencies. According to a *Fast Company* magazine cover story in 1997, the U.S. alone had more than 25 million people making their living as what they termed «freeagents». And of the workers still tethered to the corporation, more and more of them are now working outside the walls through telecommuting and flexible hours. Naturally, work involves collaboration, so networked workgroups of all sizes began to appear. Virtual companies – freed from the expense of traditional physical assets – populated many of the services industries, such as advertising, public relations.

Team Accura says the evolution in workgroups – as with most significant changes in today’s business environment – is rooted in the adoption of technology, and captured in a series of laws posited by three of the industry’s leading pundits (tab. 2). First, according to Moore’s Law, computing power doubles every 18 months. Second, predicts Gilder’s Law, network capacity grows three times faster than computing power. And third, states Metcalfe’s Law, a network’s usefulness is exponential to the number of users. Given the power of computers, the breadth of network connections and the advantage of group dynamics, it’s no wonder people have responded according to the universal Law of Nature – creating new applications, services and job descriptions that work to their own natural advantage. Digital connections are now commonplace. Networks – once the domain of specialists confined to wiring closets and data centers – have become accessible to anyone with a modem and a browser. And traditional networked applications were quickly eclipsed by the popularity of Internet software services like Hotmail, Yahoo and Amazon.com. Almost instantaneously,

more networked information existed outside the firewall than within. Pervasive computing prevailed.

Organizations: A Whole Lot Greater Than the Sum of Its Parts – the productivity engendered by this onslaught of knowledge workers is a double-edged sword for many organizations grappling with the irreversible change in work style and direction.

Conclusion. While the autonomy of the groups is – in many cases – what enables innovative and rapid decision-making, questions of corporate structure abound. How do organizations benefit from the productivity of knowledge group, while reducing disruptions⁴? Specifically, how do they (fig. 2):

- eliminate redundancies;
- protect assets;
- coordinate with the corporate direction;
- provide access to larger enterprise applications;
- track progress;
- conform with corporate standards and guidelines;
- manage training (see Olson E.E., Murdoch S., Espinos V. (2000), *Facilitating Organization Change: Lessons from Complexity Science*, Portland, p. 310-321).

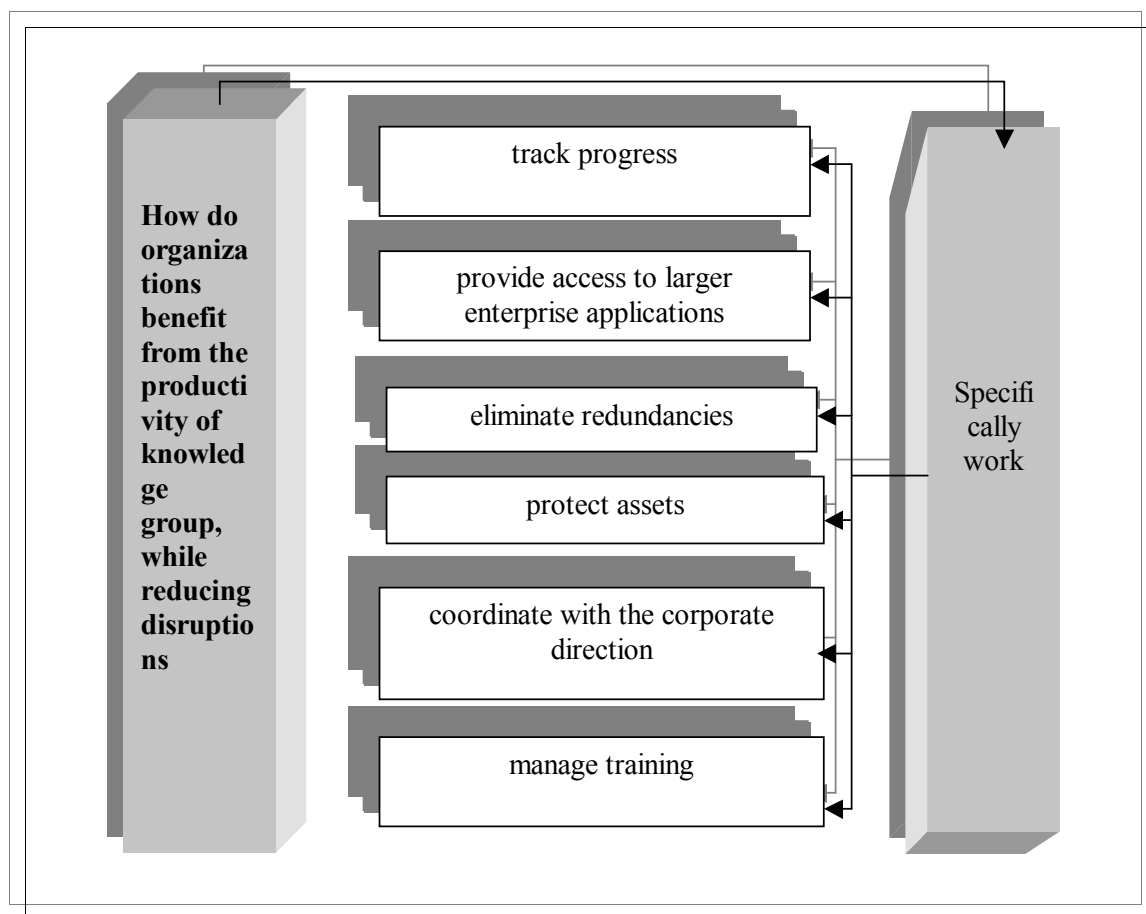


Figure 2. Specifically organizations reducing disruptions

Source: Own elaborate

⁴ Doumeibgts G., Vallespir B., Marcotte F. (1995), *A Proposal for an Integrated Model of a Manufacturing System: Application to the Re-engineering of an Assembly Shop*. Control Engineering Practice, no 3. – P. 45-78 and Herbst T.; Stoll, R. and R. Westermayr (1991), *Terminologie der Sprachbeschreibung*. Ismaning. – P.76.

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