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Personnel-oriented ways to increase productivity in municipal services

1. Starting points and the aims of the paper

The paper addresses the enhancement of productivity in the development of municipal services and especially, the personnel-oriented ways to increase productivity. Improving the productivity of public services is widely seen as an essential target in Finland, and there have been programmes at both the state and local level to increase productivity. There are currently many ongoing projects aimed at finding ways to provide services more efficiently, with municipalities forced to balance their budgets and make extra gains. In their efforts to improve productivity, municipalities have largely followed the practices of private firms. Private-sector enterprises normally endeavour to enhance their productivity as a part of improving competitiveness and profitability. The efficient workplace is always seen to be worth striving for. Nobody wins if the processes are slow, wasteful, complicated and poor quality. Productivity helps save taxpayer money and provides extra room in the budget to improve services.

In a public sector unit, productivity is producing public services in an efficient way. The attitude of municipal staff towards productivity is often twofold. Each individual worker may gain something from high productivity if it means extra bonuses, more flexible working hours or improved working conditions. On the other hand, the actions taken to achieve higher productivity may be budget cuts, a too-rapid working pace and the risk of overload. The degree to which the advantages and disadvantages of high productivity are acknowledged highly depends on the principles and management of the organization in question. This challenge makes the theme of productivity highly attractive, also for the scientists researching public administration and management. Any reforms in organizing and managing methods can also be seen as avenues to productivity gains. In the literature of human resource management (HRM), there are many illustrations of “high productivity” or “high performance”

organizations. A commonly shared understanding is that only an organization that is healthy in the methods of management can be highly productive in the long run.

What is the role of personnel in enhancing productivity? In the public discourse, personnel cuts are often identified with productivity enhancement. What methods are available and useful when enhancing productivity planned by staff? Using development project material from the city of Lahti, this paper aims to study how productivity-enhancement and personnel-orientation methods are linked together in project initiatives made by staff. To what extent is productivity enhancement personnel-oriented?

The research material consists of project reports from a total of 17 projects. All the projects were part of the competition to improve working life organized by the city of Lahti in 2012, and they all recorded their impressions on the link between their initiatives and productivity. In addition, all the projects can be localized to a specific service unit of the city. The method of study is case-oriented qualitative document analysis.

2. What do we know about raising productivity and personnel-oriented ways to do it?

Raising productivity means changing the relationship between inputs and outputs. Different ways and means can be used to bring about a change in this relationship. Figure 1 shows five “technical” variations in improving labour productivity.

	a	b	c	d	e
Outputs	↑	↑	–	↑	↓
Labour inputs	–	↑	↓	↓	↓

Figure 1. The five “technical” variations in enhancing labour productivity.

Improvements in productivity can be made in situations where both the amount of available services and labour change or in situations where only one of these factors

changes. For example, in variation (a) above, labour productivity improves when more services are produced while the amount of labour available remains fixed; the unit produces more services using the same amount of resources. In variation (c), the number of services remains the same, but the services are produced using less labour. In the literature of productivity, the strategies of increasing outputs or increasing cost effectiveness are mentioned as the main strategic variations in improving productivity (see Jääskeläinen & Lönnquist 2009; Simpson 2009; Saari 2006: 154; Brinkerhoff & Dressler 1990; Mark 1980).

What kind of concrete instruments are available in improving productivity? There are plenty of studies of the issue (Lumijärvi 2009), and this indicates a great variety of important factors. The starting points for high productivity in a unit are vision, strategies and the main principles of management. A clear vision and future plans unquestionably lay the groundwork for productive service production. Clear instructions and fluently organized processes are necessary as well. The significance of fitting technology, the division of labour, and specialization are mentioned as early as in the time of classical liberalism. Well-functioning management helps productive working, as do up-to-date tools and means of production. On the other hand, insufficient, lacking or poorly functioning tools and disruptions in workflow tend to hinder productive work. The regular maintenance of tools and equipment reduces the amount of unnecessary disruption, damage and accidents, which tend to increase the cost of production. Taking good care of the environment supports the sustainable development of society, but also helps units to avoid environmental damage and the cost of remediating it later. Cooperation and nodal work are also good ways to enhance productivity, while different networks contribute well to managing multi-professionalism.

Finally, it is the personnel who ensure productive working. Staff ability to supply it can be fostered by training or improvements in working conditions or incentives. A higher frequency of sick leave and work accidents tend to lessen productivity. A highly productive organization generally functions well socially and culturally, whereas a quarrelsome workplace seldom reaches the highest levels of productivity (Laitinen 2001; Piispanen & Mononen 1995; Salminen 1994).

In recent years, especially information management and technology (including e-services) have improved conditions that enhance productivity in services. Fusions and mergers of local-level organizations and municipalities have taken place to obtain advantages of scale (see *Julkisten palvelujen tuottavuusseurannan kehittäminen 2011: 12–13*; *Uuskasvua ymmärtämässä 2010*; *Beirne 2007*). Factually, it seems to be just information management, know-how and intellectual capital that are seen as key elements in enhancing today's productive working (Coulson-Thomas 2010: 252-).

Continuous revolutions in information and communications technologies encourage units to utilize them as much as possible.

Improvements to the capacity (knowledge, ability and motivation) of personnel come from a combination of different sources, which can be illustrated in the following way (Figure 2):

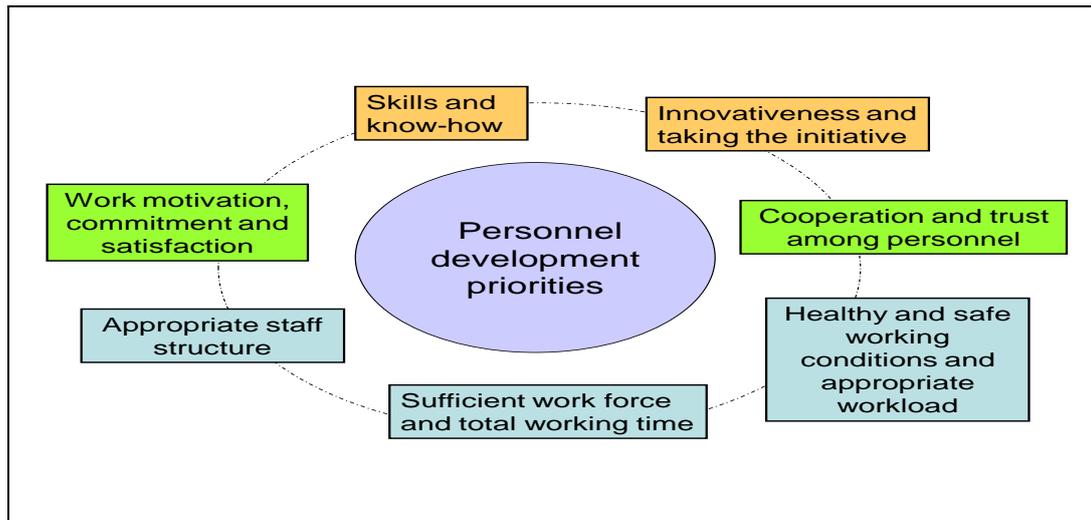


Figure 2. Priorities in enhancing human capacity.

Training, personnel planning and occupational health and safety are important practical areas. Recently often-mentioned ways to improve the efficiency of working life are flexibility, personally motivating incentives, trust capital and empowerment (Kauppinen & Utriainen 2004: 234–242).

It is also possible to seek personnel-oriented methods to improve productivity by studying cases of “high-productivity organisations”. What methods are they employing? Several descriptions can be found in the literature of management. Finnish researchers Antila and Ylöstalo (1999) conducted a large-scale comparison of Finnish companies. The qualities that separate efficient businesses from inefficient ones are:

- The capacity for innovative working
- Active and wide cooperation between civil servants and their partners
- Active use of new information and communications technology

- The use of teams, work rotation or quality circles
- Multi-professionalism and varied tasks
- Good personnel opportunities for personal growth and participation in decision-making
- Well-planned personnel training

Alasoini et al. (2002: 18) mention, by referring to different empirical studies, that especially those organizations which have similarly implemented technological and organizational reforms have succeeded. Studying the development of productivity in the Finnish metalworking industry over a decade, Kemppilä et al. (2002) recognize the following features to be significant indicators of high productivity:

- The creation of a shared goal (vision and strategic choices)
- Good adaptability and flexibility to changes in demand (and to declining demand as well)
- Plenty of investment in technology and the necessary training and cooperation
- Motivating pay (without the hindrance of informal contract “ceilings”)
- A safe and comfortable physical environment
- The active use of training (incl. orientation, ergonomics, mentoring and briefing)
- The active promotion of the ability to work
- Good cooperation and trust between management and workers

Studies of high-productivity organizations support the assumption that the enhancement of productivity is actually the sum or combination of many things. Various technical, organizational and personnel changes can produce productivity enhancement: changes in the work itself (context, division or organization), improvements in technical facilities (processes, tools or materials), or adaptation of the mental, social or cultural surroundings of a workplace to better suit productive work. It is not much of an exaggeration that, in principle, any alteration to a workplace can enhance its productivity – either directly or indirectly. The increase in productivity is often the result of the combination of several changes, for example if new technology is taken into use, orientation training is provided and work is reorganized. The organizations that reach high levels of productivity are sound and successful in many respects (Lumijärvi & Ratilainen 2004: 62–66; Nakari & Valtee 1995: 29–37).

The short overview of the research on productivity refers to the assumption that at a workplace there are various potential means available to improve productivity. There are plenty of empirical findings, but still no coherent theory or model to tie the different findings together into one model. Such a model could help explain the

reasons for productivity enhancement in practical development situations and projects.

4. Personnel orientation in enhancing productivity in services

Development projects

A total of 17 project teams took part in the competition held by the city of Lahti to create a better working life. The key ideas and the sectors of the projects can be briefly summarized as follows:

Projects (cases)	Municipal sector
1. From individual to team work	Social and Health Services/ Social work
2. The skills of a subordinate	Social and Health Services/ Services for the Elderly/Medical rehabilitation
3. The passport in aseptics	Social and Health Services/ Services for the Elderly/ Rehabilitation
4. The preventive and rehabilitative chain of services in physical exercise	Education/Sport services
5. The introduction of e-prescriptions	Social and Health Services/ Health Centres
6. The use of an electronic process model	Technical and Environment Services /Property formation/Land use
7. Electronic resources planning system and electric door opener	Social and Health Services/ Services for the Elderly/Outpatient services/Home care
8. Skills development through multi- professionalism and improving job satisfaction	Education/Primary schools
9. A new unit of initial assessment	Social and Health Services/ Protection of children
10. The new division between tasks and personal nurse teams	Social and Health Services/ Services for the Elderly/ Rehabilitation/Lahti Central Hospital

11.	The delegation of responsibility and management to service units	Social and Health Services/ Services for the Elderly/ Supported housing
12.	From paper to bits: The use of the electronic action plan folder	Education/Early Childhood Education/Nursery
13.	Reforms in young people's oral health	Social and Health Services/ Oral health
14.	The Health Kiosk	Social and Health Services/ Outpatient services
15.	Performance-related pay	Technical and Environment Services
16.	The new groups of the experienced and professionals	Social and Health Services/ Rehabilitation of young people to work
17.	Electronic scheduling	Technical and Environment Services/Cleaning services

Projects were allocated to all administrative sectors of municipalities. However, most of them clearly started in social and healthcare services, especially in services for the elderly. From a cost point of view, it is easy to see that most initiatives come from exactly those sectors of social and healthcare services that are presently under heavy pressure to save money, whereas in the school sector, for example, it is not easy to see where similar savings potential or productivity improvements could be found. The number of elderly people seems to be growing and elder services can be considered one of the most important municipal sectors when it comes to savings in the near future.

Sources of productivity improvement

The most often mentioned sources of productivity improvements are structural reforms, especially the shift in focus from inpatient to preventive services. For example, it seems to be generally understood that the public sector will be unable to respond to the future needs of the services for the elderly on the basis of the present service structure. It is largely believed that productivity will be enhanced by shifting the focus in two ways. Firstly, a focus on outpatient or preventive services means that the need to offer heavy and expensive inpatient services will decrease or at least grow more slowly in the future. The cost of preventive and outpatient services is lower than the cost of inpatient care. Secondly, productivity increases as a result of controlling the increase in personnel. Both ways are viewed as leading to a future situation in

which fewer euros are needed to produce the services provided by the entire social and healthcare services sector.

The objective is to prevent an increase in the need for expensive specialized healthcare and institutional care of the elderly...and this for its part reduces the growth pressure on personnel in the healthcare services. (Case 4)

In the project, the promotion of health and the prevention of illnesses were preferred. The project produced social media directed towards young people and, as a new tool, a health questionnaire for public health nurses in the schools to use for physical examinations of students and pupils. (Case 13)

The idea behind setting up the Health Kiosk was to move the focus from care of patients to the promotion of health and prevention of illness. (Case 14)

Increased cooperation between the clients and the closest partners is also seen as a source of productivity enhancement. A higher efficiency level is achieved because service processes become more fluent and the allocation of labour and information improves. Cooperation enables a better exchange of ideas and know-how:

We are cooperating with all the drugstores in the Lahti area, which has proved to be especially important from the viewpoint of success in the matter. (Case 5)

The initial stage of child protection is networked especially with the schools to gain a shared understanding....The similar cooperation has been now extended to day care...from the cooperation partners we received good feedback on the clarity of the way of action....The reason for agreeing on common practices is so that the grounds for directing the clients are clear to all parties. (Case 9)

The enabling of e-services was also seen to bring indirect productivity benefits while improving the situation of clients and others in many ways. This is described in a report on one project as follows:

Previously, the disappearances of prescriptions kept the staff busy. Falsification of paper prescriptions has been a problem. Several paper prescriptions have been written for the same medicine. Drug

abusers have been able to search for medicines using several paper prescription. The general understanding of the pharmacies of the client's medication has been defective. The new e-prescription model has reduced the above-mentioned problems. The use of the doctor's working hours intensifies when prescriptions are renewed because the prescriptions are ready directed. It improves patient safety and lessens abuse of prescriptions. The new operational model cuts queuing time of the clients (Case 5)

In an initiative to reform home care, productivity was optimized by reorganizing travel management. This resulted in cost savings while allowing home nurses to spend more time with patients:

The relative share of care work during working hours had to be expanded. In 2009, 46.9% went to the nursing and in 2010 50.5% of working hours. In April 2012 the relative share of the client work was already 61%. Cost accounting showed 1.8 million euros in 2010 for moving from one place to another (in the home care). The savings are 350,000–400,000 euros. More attention can be paid to the nurses' skill profile and to clients' needs. At the same time, it is a question of the real meeting of resources, clients' demand and predictability of clients' need. (Case 7)

At least three projects aim at higher productivity through reforms in management and leadership systems. Also the increase in the participation and influence of the staff, especially by including staff in the planning process, is seen as a key source of productivity improvements – either directly or indirectly:

The new management model supports medical know-how in assisted living. A manager (a nurse) who is familiar with the basic work and the functionality of the work community can clarify and help the functioning of the work community. Shift planning, the suitable use of substitutes, listening to the work community and developing work procedures have facilitated job satisfaction and the functionality of the work community. The manager encourages the staff to enroll in training programmes. Several managers have developed their own management capabilities by taking various management training programmes. (Case 11)

The objective of the Technical and Environment Services project was to prepare a proposal for how to apply the principles of results-based

pay in all parts of the city....The results-based pay system enables a constant follow-up and evaluation of set objectives. As a collective reward it encourages participants to progress towards the realisation of objectives and promotes solidarity within the work community, the ability to cooperate, and social skills. (Case 15)

With the documentation produced by the new working time system, the quality of the managers' work has improved: it is possible to generate reports for the spreadsheet even at the individual worker level. Developing of a pay system has been successful...which has reduced the amount of payroll calculation work the city's financial services has to provide. The new system produces information to support management... (Case 17)

It is typical for the projects that more than one reason is generally mentioned as the reason for the rise in productivity, including structural, management-related and social factors in the work communities. Most of them have been summarized in Figure 4 below as causes of the increase in productivity.

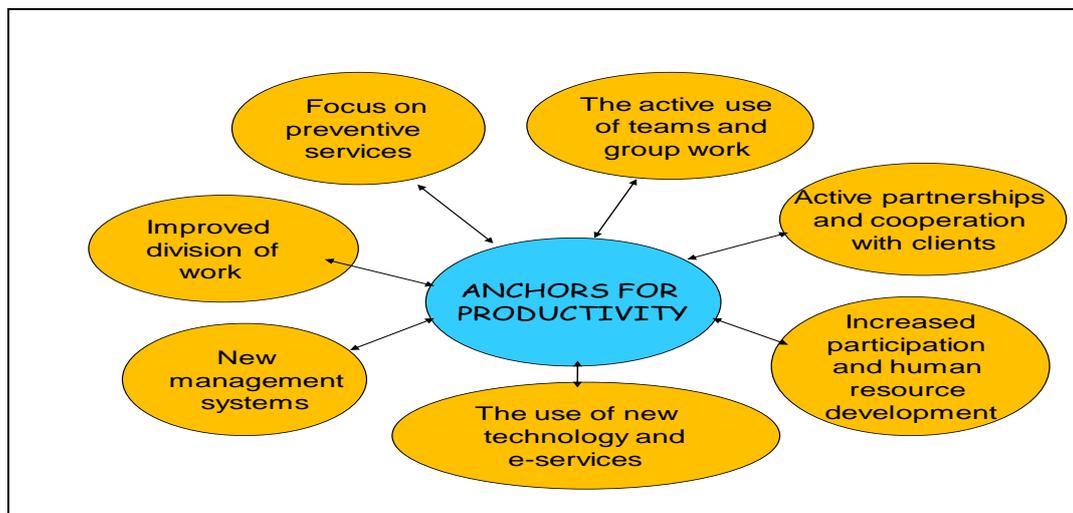


Figure 4. Often-mentioned sources of improvement in productivity.

Personnel-oriented ways to improve productivity

In nearly all the projects, the improvement of productivity was somehow related to the personnel. Some projects simply referred to the fact that the initiatives were

planned and implemented by staff and that this increased their awareness of thinking in economical terms (Projects 2, 7 and 12).

The increase in know-how, job orientation and on-the-job training were among the staff-oriented actions mentioned most often as methods to improve productivity. It seems to be a rule than an exception that the initiatives included some kind of training and personal development. The methods used to increase know-how were varied, as can be seen from the following references:

Earlier, the subsistence allowance process was slowed down by the lack of skilled temp workers. A new training programme was developed and the job orientation period of groups...improved the initiator's know-how and keeps the available know-how up to date. (Case 1)

Workers are encouraged to take supplementary training, especially the long-term educational programme (the specialized studies and the degree programme). (Case 2)

In addition to the training in handling electronic prescriptions, data protection training was rapidly arranged before the introduction of the e-prescription system. (Case 5)

...crisis and legal training were organized in 2011 into a systematic training programme. The staff has taken the various training programmes to maintain and improve professional skills at the same time in accordance with complementary educational requirements. The new workers of the unit have been ordered ...to take training curses. (Case 9)

Often-mentioned staff-oriented sources of increasing productivity are also reforms in how temporary positions are filled, job rotation and a flexible use of working hours:

There is now more flexibility in the functioning of the unit, which has manifested itself in, among other things, the flexible transfer of resources between positions (for example, filling in for people on leave or holiday). The functions have been ranked and the transfer of resources process now takes this rank and the changing need for the different positions into account....[T]he right people are put in posts are suitable for them....Job rotation is seen as one factor which increases workplace welfare and the sense of community....[W]orkers

have an opportunity to determine their own working hours within office hours. The flexible working hour arrangements make for a better link between a worker's working hours and time off. (Case 2)

Nurses' tasks have been changed so that nurses can begin and finish their work with clients directly from their own home. The nurses' arrival at work has been scaled by paying attention to clients' needs. This is an attempt to balance peaks in the work to be done...This allows a more flexible deployment of standby personnel to where the need is greatest. (Case 7)

Furthermore, the increase in group work is seen as one source of productivity improvement – either directly or at least indirectly. Group work tends to increase work motivation and well-being at work, which is the basis for working efficiently:

More collaboration between different occupational groups in teamwork and the daily contact with shared premises make for a shared understanding of the overall service needs of customers. It also makes it possible to gain a better overview of the content of the work performed by other occupational groups. The shared responsibility and know-how in the client service process are improved. The specialized know-how of the different workers is shared and utilized in a teamwork, which increases the shared know-how....The management skills of managing personnel improved....The staff that had taken part in implementing the changes saw the final result as successful and as having improved workplace welfare. (Case 1)

It is essential to empower the staff in planning their work. This increases the workers to get better control over their own work... On the other hand, operative teams bring the advantages of cooperation, a collegial culture and the shared use of know-how. The quality and safety of the nursing provided to patients increases through a better division between control and know-how. (Case 10)

Improvements in working conditions, recognition for work done, the energy to perform work, workplace welfare are also seen often as the ways to create a favourable atmosphere for efficient work:

Personal growth, commitment, work management and workplace welfare have been raised... The multiform know-how of the department has been collected into one document in cooperation with

the whole staff of the department.. The know-how of the staff, workplace welfare and work management are being systematically developed. We want to create an atmosphere of community in the department in which everyone supports each other going forward. (Case 3)

Home care as a job can be made to look more attractive with a clear picture of the work and with an efficient control of operations. The newly organized processes will improve workplace welfare and expand the lure of home care as a job. (Case 7)

The most frequently mentioned staff-oriented measures for higher productivity have been collected in Figure 5 below.



Figure 5. The most often mentioned staff-oriented measures for high productivity.

When the role the personnel in increasing productivity is discussed, it should be noted that the conclusions are drawn on bases of the reports and observations of the project teams themselves. The project teams were instructed to report on the effects of their recommendations, also from the point of view of the personnel. So the big question is, how the project teams understood the consequences of their initiatives,

what they believed the reasons are for the improvements in productivity and what their evidence to support it is. Supposedly, the exact reasons behind growth in productivity are highly challenging to determine, requiring the use of an experimental approach. That was neither possible in the projects nor in this study.

5. Summary and conclusions

In recent years, municipalities have increasingly developed methods of improving productivity. Cuts in municipal budgets have brought the need to keep up a high level of productivity to the fore. Resources are not to be wasted.

This paper was aimed at finding out and analysing staff-oriented ideas of development projects to enhance productivity. A total of 17 project reports were analyzed. What is the role of human resources in enhancing productivity? Previous studies of the subject refer to many potential ways to enhance productivity at the workplace.

When taking into account of all the projects studied here, perhaps the most commonly seen source of productivity improvement was the use of new technology, either in the form of innovations in the management of processes or in e-service reforms. Although municipal services are typically highly labour-intensive, technology is needed in many ways. Technological reforms have been a source of high productivity in manufacturing for a long time, but technical systems have also become a focus of public services today. Information management systems, for example, are seen to provide new technical ways to improve services. It may prove difficult for public service units to keep up in using new information technology because they lack the necessary expertise. All the opportunities for new technical tools are not known; this may hinder the optimal utilization of new innovations. (see *Palvelualojen kehitys, tuottavuus ja kilpailu 2005: 225-*). When the fluency of processes increases, there is less pressure to add human resources, but fluent processes require more group work, better skills and more training. Public servants can target their working time more towards providing client services and, as a result, the experiences clients have will also be improved. One important finding of the projects was that when staff was included in the planning process, it was seen to indirectly increase productive working (see Siltala 2010).

Besides the use of new technology, work reorganization and the redivision of labour were also often-mentioned sources of enhanced productivity, along with new

structures and management systems of the units. More collaboration (teamwork) and participation was also connected with these reforms.

In several projects, growth in productivity was seen to be achieved by indirect reforms in quality and workplace welfare (see Lumijärvi 2009: 95-97). Improvements in quality brought savings, for example through shorter treatment times. In the hospital development project (Case 10), it seemed to be just the increase in know-how that made for more efficient work while, at the same time, the experiences of patients and the quality improved, among with fewer infections. The quality remained at a high level as a result of personal growth. Quality-oriented civil servants tend to be more cost-conscious. Personnel development will be reflected in better workplace welfare (energy, motivation and skills), and this in turn produces improvements in productivity.

Many of the development projects were characterized by the feature that the number of clients was seen to be somewhat fixed. This feature is typical of the public sector: there is normally no need to use marketing to add to the rate of clients. Increasing the number of pupils in schools or patients in hospitals through marketing is seen as neither reasonable nor even possible. The number of people using public services rises or falls along with the natural changes in the population. Only changes in regulations or major sectoral cuts can cause changes in clientele and often without a unit being able to react to these changes with their own actions. The legal foundation for public services largely defines the allocation of services and sometimes even forces a unit to allocate services within certain time limits (e.g. in child protection). As a result, the policy decisions regarding productivity improvements stress cost savings or at least preventing cost increases. This explains also why the focus in service allocation is shifted towards preventive services. The productivity strategy of public organizations seems to be a combination of cutting costs and trying to cope with a larger population.

What role did the personnel then play in enhancing productivity? It could be said that human resources played a central role nearly in all of the projects. Especially personal growth (in skills and know-how) seemed to link every technological reform in the projects. Improvements in working conditions or time management were also behind the improved productivity. Staff were empowered or included in the planning process. Shared responsibility and teamwork were seen to improve productivity. Cooperation and increased well-being brought better productivity indirectly: they meant a reduction in sick leave and this in turn raised productivity.

Enhanced productivity was often linked to improvements in work satisfaction and client satisfaction. Only one of the projects saw insufficient staff as the reason for low

productivity at the time, and it emphasized the need to hire more staff and cope better with the work load.

The staff orientation in enhancing productivity in the projects can be summarized from two different points of view. Firstly, the initiatives were created by the staff themselves, although there was also some pressure from the environment or a legal obligation to make changes. Participation and empowerment seemed to be a very important source of efficient work processes. Secondly, the projects saw staff as a resource in a more productive workplace rather than an obstruction. One remarkable finding was that cutbacks were not seen as a way to improve productivity. The focus was on working environment improvements, division of work, and the skills and training of the personnel. These used sources of higher productivity can be seen as sustainable ways of enhancing productivity. They have an effect in the long run. The problem with cutbacks is that, although they may be financially necessary in the short run, they seldom make real progress in the ways services are produced. Forcing cuts onto a unit often mean that staff are less willing and motivated or do not have time enough to make their workplace more innovative. Such forcing tends to encourage a dislike of new things and an atmosphere of fear. Sustainable improvement in productivity calls for voluntary developments and innovation.

The study questions were illustrated here by using project material from the city of Lahti. Could these results be generalized? Though the conditions for improving productivity are always somehow linked to the situation, time and place, there are good reasons to presuppose that the ways to improve productivity can be generalized to development projects in other Finnish cities (see Lumijärvi 2009: 13-14). The project teams seems to believe in the staff's ability to find innovative ways to enhance productivity, and see staff as the prime mover. The examples given here serve to inspire other municipalities to trust in the innovativeness of their personnel when attempting to enhance productivity.

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