



Knowledge Work Productivity – definition and measurement

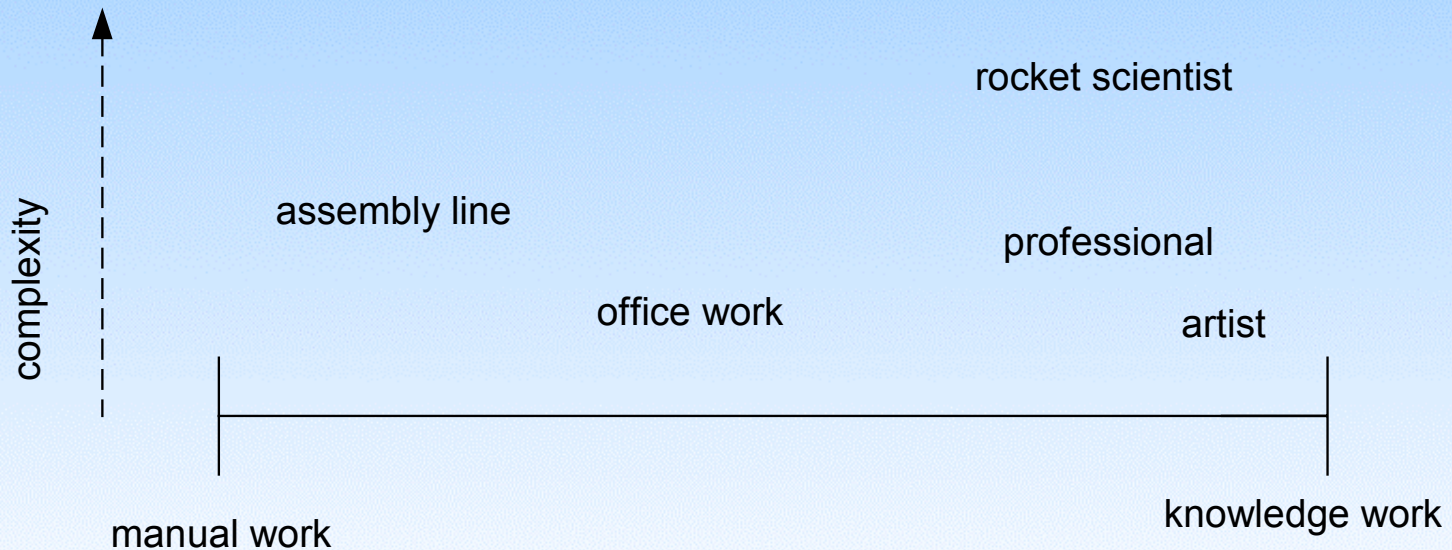
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Idea of knowledge Work



Continuum of work (Okkonen 2003)

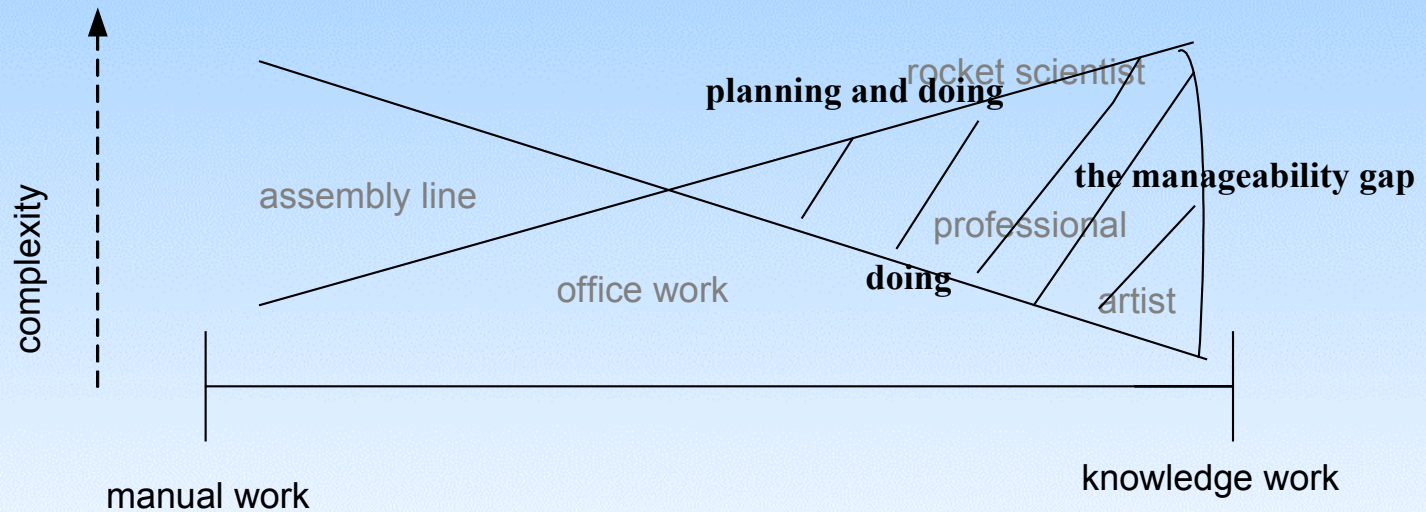


Paradox of Knowledge work

- Knowledge work is as tightly managed (or even tighter) as manual work, but knowledge workers are presupposed to be independent and self-assessed (Blom et al 2001, 210).
- Knowledge workers are hired to solve unique or non-routine problems, thus management has very few points in the work to ‘manage’. According to Blom et al. the management is connected only to goals and profit responsibility.



Managerial gap



Manageability gap (Okkonen 2003)



Performance

Overall performance of a firm (or an organisation) is constituted on seven criteria:

- effectiveness,
- efficiency,
- quality,
- productivity,
- quality of work life,
- innovations and
- profitability (Sink 1983, 36)



Knowledge worker productivity

Drucker gives six factors to determine knowledge-worker productivity:

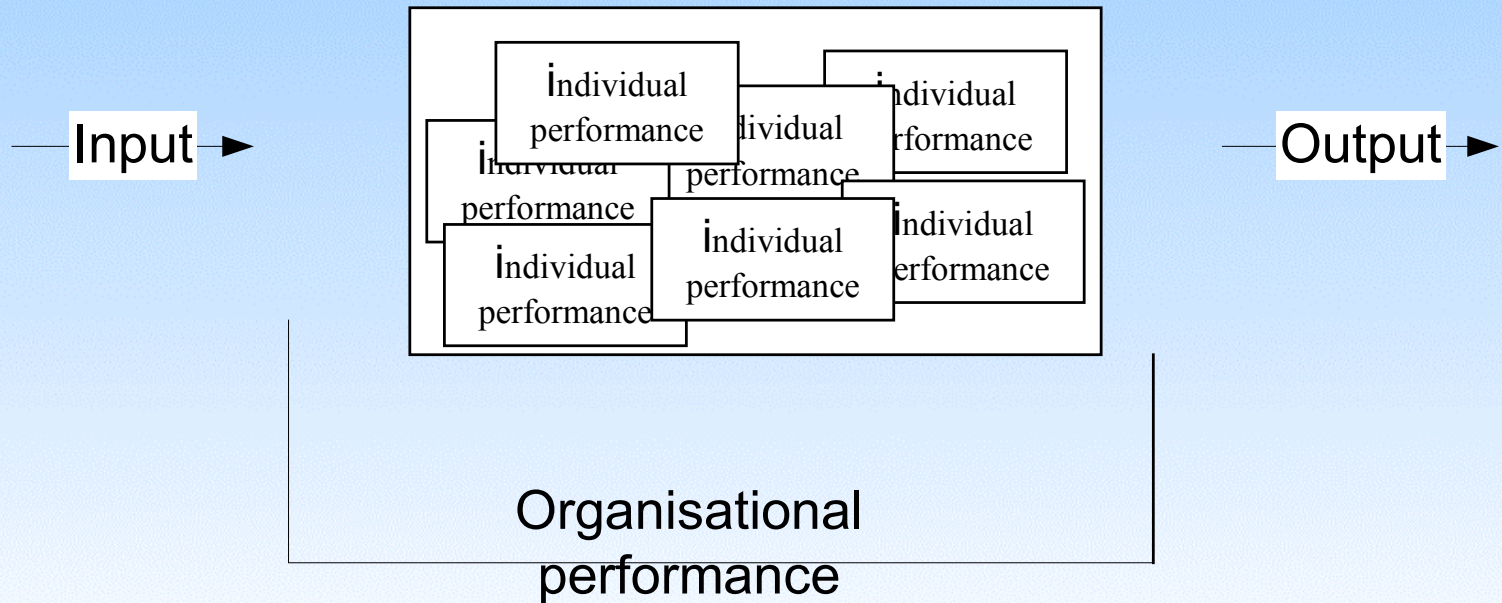
- Knowledge-worker productivity demands that we ask the question. “What is the task?”
- The responsibility for their productivity is on the individual
- Continuing innovation is a part of the work and the workers have the responsibility of it
- Work requires continuous learning for product improvement
- Productivity consist of both quantity and quality, emphasising quality
- The worker is an asset not a cost

Performance Criteria for Knowledge work

- effectiveness means having the right solution on the right scale to a problem defined by a customer.
- Efficiency should be understood in its economical sense, i.e. a solution is produced with a minimum of input.
- Quality refers to the accuracy of a solution.
- Productivity equals the number of the output of accurate solutions.
- the work should be performed under such conditions, which help and encourage workers to do their best.
- Innovations are guaranteed in a state where workers aim to construct new and better solutions to problems rather than mechanically apply old ones.
- Profitability means that revenues must exceed costs.

These are the necessary conditions of performance and the failure to meet even one of them could have a negative influence on performance (Okkonen 2003)

Organisational vs. individual performance



Overall performance and individual performance, a black-box analogy of a knowledge work organisation (Okkonen 2003)



Measurement of Productivity (?)

- In knowledge work measurement of productivity by using traditional means is somewhat trivial.
- The criteria of being productive should be defined (or re-defined) case by case.
- Delicateness of knowledge work often prevents using mechanical measurement, at least without auxiliary component.
- Suggested evaluation method would be using performance measurement.



Performance Measurement

- Individual measures are for quantifying efficiency and effectiveness of actions.
- A set of measures i.e. measurement system combines different measures as a whole for examining organisational performance.
- Supporting infrastructure enables data to be acquired, collated, sorted, analysed, interpreted, and disseminated. (Kennerly and Neely 2002, 145)



Using Performance Measurement

- Performance measurement in knowledge work context does not per se differ from using performance measurement in a more traditional setting, but success factors in knowledge work are more resource orientated.
- The measures considering results, external key stakeholders or processes are somewhat similar to performance measurement in traditional setting.



Using Performance Measurement

- In the knowledge work context the role of employees as the main asset is emphasised. Knowledge worker equals the competencies, i.e. knowledge and skills.
- The notion of emphasised competencies drive the measurement system toward active approach.
- Measures should be designed to control the accumulation of knowledge and skills and drive competency development.



Conclusions 1/2

- In knowledge work there is seldom need to evaluate productivity per se, yet performance evaluation is one of the most used managerial tools.
- Performance measurement is the application of ideas of management by objectives. It is based on the same ideas of motivation, guidance and dialogue.
- Performance measurement helps dialogue as a process it is continuous and planned. If dialogue between management and employees were spontaneous, there might be some issues forgotten or left out.
- As a structural dialogue performance measurement helps to pay attention to critical issues.



Conclusions 2/2

Using performance measurement to structure organisational dialogue has several advantages:

- from the perspective of management and employees it is simple to take set of certain steps and follow them
- the process of performance measurement has role in organisation communication, i.e. communicating objectives and receiving feedback.
- there are several non-specific factors in knowledge work, thus there is need to gain mutual understanding on the contents of success factors by mutual approval.
- performance measurement has a systemic approach, thus objectives, measures, target levels and measurement results are collected to one document, which is communicated through organisation.



References

- Blom, R., Melin, H. and Pyöriä, P. (2001) *Tietotyö ja työelämän muutos Palkkatyön arki tietoyhteiskunnassa*. Gaudeamus, Helsinki
- Drucker, P. F. (1999) *Knowledge-Worker Productivity: The Biggest Challenge*. California Management Review Vol. 41, NO.2, Winter 1999, pp. 79 – 94
- Kennerly, M. and Neely, A. (2002) *Performance measurement frameworks: a review*. pp. 145-156 in Neely, A. (ed.) (2002) *Business Performance Measurement*. Cambridge University Press, Cambridge
- Okkonen, J. (2003) *Use of Performance Measurement in Knowledge Worker Management*. Tampere University of Technology. (unpublished manuscript)
- Sink, D. S. (1983) *Much Ado About Productivity: Where Do We Go From Here*. Industrial Engineering. October 1983, 36-48.