

## Chapter 9

# The WORK FLOW GAME: a new method for developing office work

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### ABSTRACT

We have designed the WORK FLOW GAME for participative development of office and administrative work processes. The WORK FLOW GAME is a tailored, action-oriented simulation game, in which the participants simulate their own real work activities. This chapter describes the WORK FLOW GAME method: planning the game, the game session, and debriefing. The WORK FLOW GAME has been successfully applied to ten cases as part of organizational change both in public and private sector organizations.

### INTRODUCTION

In this chapter, we present a new method for developing administrative and office work – a simulation game called the WORK FLOW GAME. It is adapted for use in both the public and the private sector. The main focus is on developing information work, which often involves social interaction and processing information rather than physical goods. It includes managerial, professional and clerical work, and it may be either the main or a support function of the organization (Davis, 1991). Below, we shall call this type of work ‘office work’.

The background of the WORK FLOW GAME is multidisciplinary. It has been influenced by different approaches to participative development (eg, the Scandinavian tradition of participative design of information systems, Ehn *et al*, 1990, Eriksson, 1990), sociodrama (Fox, 1987), group work methods, as well as practical dilemmas of developing office work (Piispanen and Pallas, 1991). Generally, the WORK FLOW GAME can be applied to different development traditions, in which development activities are carried out in a participative way.

The results of administrative work processes are seldom concrete products but, more often, services based on personal contacts. The knowledge and skills used in the work often rest upon long experience and interpretation of the situation. This kind

of knowledge is often hard to externalize and generalize (this has been called tacit knowledge, knowing in action eg Polanyi, 1967; Schön, 1983; 50–54). The visible parts of the work process consist of documents, computers and communication equipment. However, by studying only the physical office environment, it is difficult to analyze and develop office work tasks and processes.

In spite of implementing information technology, the productivity in office work has not grown as much as in industrial work (the 'productivity paradox', eg Landauer, 1995, 15–45). The methods used for developing industrial work may not be efficient or applicable in an office environment. They are often too quantitative, neglecting the social nature of office work and the local knowledge of employees (Wynn, 1979; Vehviläinen, 1991). These methods are usually used by experts (system analysts, consultants), not by employees. Therefore, there is a need for more qualitative and interpretative methods for analyzing office work in order to increase its productivity and quality.

## **PARTICIPATIVE DEVELOPMENT OF OFFICE WORK PROCESSES**

One of the most recent approaches to developing work processes is business process re-engineering (BPR), the analysis and design of cross-functional business processes. The approach focuses on radical and rapid redesigning of work processes by utilizing information technology (Hammer, 1990). However, the latest discussion has pointed out the risks of radical change (Davenport, 1994). Some 70 per cent of re-engineering projects in the USA have not reached the goals set (Champy, 1995).

Process re-engineering orientation could be an answer for improving office work, but there is a need for more holistic and participative approaches, where the well-being of personnel is also taken into consideration (Mumford and Beekman, 1995; Caron *et al*, 1994). There has been a lack of such methods – therefore we have designed the WORK FLOW GAME method, which combines participative development, redesigning of work processes and interactive learning (Piispanen and Pallas, 1992; Ruohomäki, 1994, 1995; Piispanen and Ruohomäki, 1995).

Re-engineering projects are usually carried out by managers and experts (top-down approach). When using the WORK FLOW GAME, we apply an opposite change strategy: the change process is carried out in a participatory way so that various professional groups and hierarchical levels of the organization get involved in the project (bottom-up approach). This kind of change strategy seems to promote both the productivity and well-being of the personnel (Teikari, 1994).

For the WORK FLOW GAME, only one typical cross-functional work process is selected as the object of the development activities (eg personnel administration, salary payment process, order-delivery chain), according to the goals of the development project. This process can be either intra-organizational or inter-organizational (Figure 9.1).

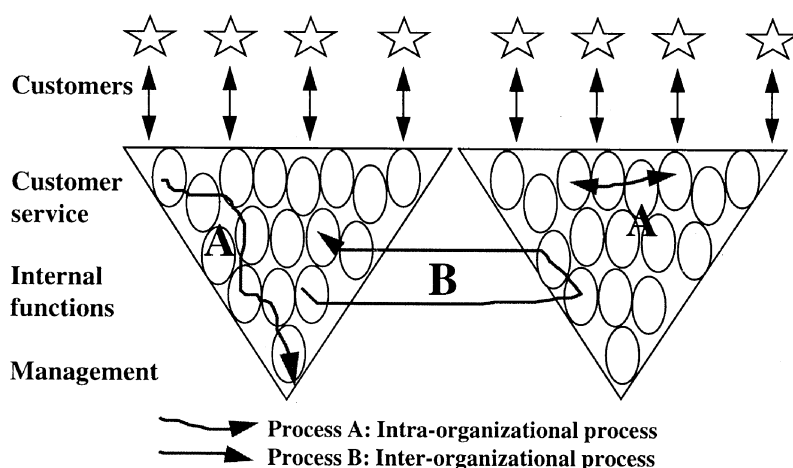


Figure 9.1 Different types of work processes

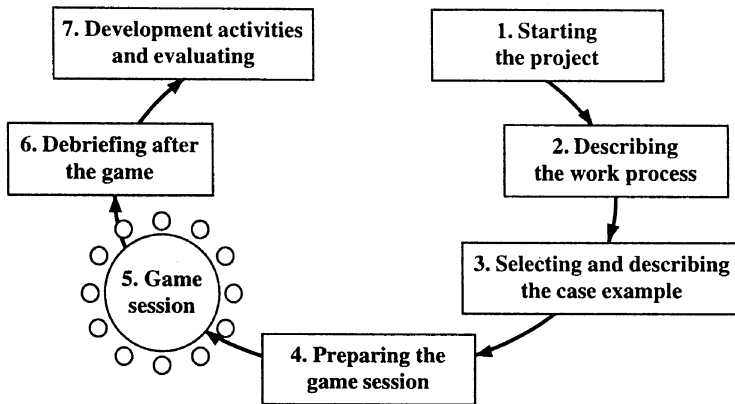
## THE WORK FLOW GAME METHOD

The WORK FLOW GAME combines the features of simulation with those of a game. The WORK FLOW GAME is based on a simplified model of the selected work process, which will be simulated in accelerated time during the game session. It is an action-oriented simulation, where the participants simulate their own real work activities together. It also has the features of a game, eg roles, rules and game material (Ruohomäki, 1994, 1995).

The WORK FLOW GAME is tailored to a specific organizational context and needs. It is usually applied as part of a larger development project to increase productivity and quality as well as human well-being. The WORK FLOW GAME can be used for analyzing the present work flows and procedures, to develop and redesign new work process models, or to test and practise new ways of action. It can also be used for designing and implementing information systems. The objectives of the WORK FLOW GAME are to promote organizational change, participation and communication, to improve employees' skills and knowledge, and to help the participants understand the work process as a whole (Ruohomäki, 1994,1995; Piispanen and Ruohomäki, 1995).

The WORK FLOW GAME is based on a real case representing a typical work process in the organization (eg handling of a typical invoice or an insurance claim). The case is like a sample of the organization, including all the systemic parts of the selected work process. It is possible to reach an understanding of the structure and functioning of the work organization from a single case, providing that all the important characteristics of the system are represented in the case example (Gummesson, 1991). The WORK FLOW GAME method also has features of action research or action science, where the participants involved in the development work are active researchers of their daily work assisted by the game facilitator (Argyris *et al*, 1990; Gummesson, 1991).

The WORK FLOW GAME method consists of three parts: (1) designing and planning the game (phases 1–4 in Figure 9.2); (2) the game session (phase 5); and (3) debriefing and development activities (phases 6–7).



**Figure 9.2** The phases of the WORK FLOW GAME

The WORK FLOW GAME has the following underlying features:

- it is tailored for the specific needs of an organization;
- the design is participative;
- there is no hidden agenda;
- managers participate in the game session and take responsibility for development activities;
- it is based on cooperation, not on competition;
- it is not suitable for reduction of personnel;
- it is not suitable for severe conflict situations.

## THE PLANNING OF THE WORK FLOW GAME

The planning phase requires from one to three months, for the process is carried out in a participative way. Usually a group of 5–8 people is responsible for the planning. The group members represent different parts of the work process, eg all functions in the order-delivery chain or in the salary payment process. The planning group works with the assistance of a consultant or a researcher, who acts as a facilitator in the development process.

During the planning phase, work flows are analyzed and modelled (by using, for example, wall diagram techniques, interviews, flow charts, etc), case examples are selected, members of the organization are informed and discussions held, and concrete plans and preparations are made for the game day.

The criteria for the case example are, for example: (1) it has already happened; (2) it is a representative sample of the work process; (3) customer(s), employees and managers are willing to join the game; (4) it crosses borders between various organizational functions and units (Figure 9.3).

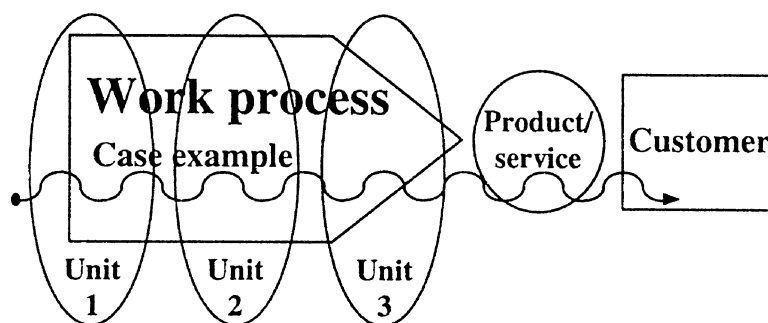


Figure 9.3 A typical work process and a case example

The case example includes all the systemic elements of the whole work process: customer, tasks, employees, hierarchy, organizational units, tools and rules. During the game, it is also possible to analyze both the horizontal and the vertical dimensions of the organization (management strategies, organizational structures, coordination, cooperation). For employees, the case example makes it possible to be involved in the planning and to participate in the game session by using their own experience and concepts.

## THE GAME SESSION

In the WORK FLOW GAME, the selected work process is studied from the customer's point of view. For those who work in different departments and at different levels of the organization, the standpoint of the customer is usually not known. They cannot see the other parts of the work flow, only their own. The consequences of their actions occur in the distant future or in a distant part of the organization, not related closely in the same time and space (Senge, 1990, 23, 63). In the game session, all the actions and their consequences can be seen by everyone at the same time.

The participants of the WORK FLOW GAME are seated in a circle, which forms the game setting. The setting represents the official structures and professional relationships of the organization. Even so, all the participants sit the same level in the game setting, because they are regarded as equal in spite of their hierarchical roles. The circular shape of *the game setting* symbolizes the cooperation within the work process as opposed to the traditional way of depicting organizations as pyramids using organizational charts (Figure 9.4).

There are two types of participants in the simulation game: *players and observers*. The players are all those employees, managers and customers who have participated in the selected case example in reality. They sit in the inner circle of the setting. The players have their real professional roles in the simulation, so the game is not a role play. They talk aloud, about what they do, how they perform their tasks, which equipment and documents they use, what kinds of problems occur, and who the next person is that they contact or send the documents to. The observers sit in the outer circle of the setting. Their task is to follow the game events and make notes about problems like bottlenecks and unnecessary repetition as well as improvement ideas they have observed.

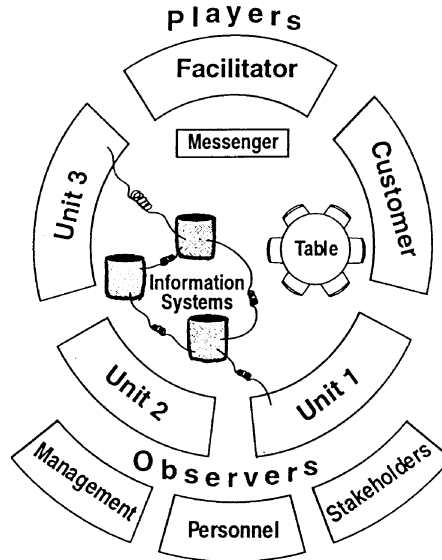


Figure 9.4 A typical game setting

In the middle of the circle is one person who acts as a *messenger*. During the simulation, each participant sends original documents to the next person in the work flow with the help of the messenger. This is a concrete way to visualize the work flow to everyone.

*The game facilitator* works in every phase of the game process from its planning to the game session and debriefing. In the simulation, the facilitator sees that the process goes according to the manuscript and timetable. The facilitator also needs to have the competence to deal with possible conflict situations. For the participants the game situation can be demanding and exciting, creating tension before and during the game. It is one of the facilitator's tasks to release the tension.

*The game material* consists of the same equipment and documents as needed for performing real work tasks. It is often necessary to make concrete the use of different information systems and networks by having either the real computers and information systems as a part of the game setting, or by using their symbols. There can also be a negotiation table, if the work process includes meetings and group discussions.

The game session is *documented* on a videotape in order to analyze the events and action afterwards eg in the debriefing. This makes it possible for the participants to reflect on their own activities as well as the game situation in general.

*The rules* of the WORK FLOW GAME make sure that everyone working in the work process has equal possibilities to describe his or her work activities. During the simulation, only the players in the inner circle are allowed to talk. The game facilitator can also make comments and ask some questions. The observers may not speak; they are supposed to be taking notes during the game session. In the simulation, the focus is on the work process as a whole, not on individual tasks or persons.

The simulation game usually proceeds in the same manner as the events of the selected case example. Each game is divided into acts according to *the manuscript*.

The acts can be chronological, parallel or episodic, depending on the case. Between the acts, the participants discuss the events up to that moment.

The design characteristics of the WORK FLOW GAME are presented in Table 9.1.

**Table 9.1** The design characteristics of the WORK FLOW GAME

The object of the game	A typical work process, a real case example
The participants of the game session	All persons working in the work process, the customer and other stakeholders
The roles in the game session	Players and observers in their own professional roles, the messenger and the facilitator
The game setting	Round table: the players in the inner circle, the observers in the outer circle
The course of events in the simulation game	According to a manuscript, which includes acts
The rules of the game	Specified
The game material	Documents, files, computers and other pieces of office equipment used in daily work
The game facilitator	An outside researcher or consultant or an experienced change agent from the organization
The documentation of the game session	By videotape recording

## DEBRIEFING AND DEVELOPMENT ACTIVITIES

After the game session, there is an intensive debriefing session organized in the form of small groups and general discussions. The development work will continue several months after the game day, depending on the development needs of the work process. The project will continue until the concrete improvements have been implemented. Some of the improvement ideas can be put into practice immediately, while others require long-term planning and cross-functional decision making. The new organizational models (eg team-based processes), responsibilities and ways of action can be tested and practised by having, for instance, another simulation game.

## PRACTICAL EXPERIENCES

We have been applying, testing and developing the WORK FLOW GAME for several years. We have applied the WORK FLOW GAME in ten reported cases, both in the public and private sector, including service organizations as well as an industrial company (Table 9.2). Our practical experiences, as researchers and consultants, of using the WORK FLOW GAME have been encouraging. The WORK FLOW GAME method seems to work well in different kinds of organizational settings and contexts as a part of broader organizational development.

Empirical experiences have been collected with questionnaires, interviews, observations and video analysis. From the game facilitators' point of view, experiences have also been collected using a diary method. We have conducted follow-up studies with two cases, including data concerning productivity of labour and quality of the work process. Other follow-up studies are still in progress in order to obtain more information of the effects of the WORK FLOW GAME.

**Table 9.2** Reported case studies, where the WORK FLOW GAME has been used.  
(Pu = public sector, Pr = private sector; 1 = present state simulation game,  
2 = new model/vision simulation game)

Reporting year	Organization	Pu/Pr	Object of the WORK FLOW GAME	1	2
1991	National Board of Forestry	Pu	Land purchase process	x	x
1993	Finance Department of the University of Helsinki	Pu	Handling of a typical invoice	x	x
1994	A laboratory of the Technical Research Centre of Finland	Pu	A research and development project	x	x
1994	Personnel administration of the University of Helsinki	Pu	Salary payment process	x	
1995	Finance Department of the Provincial Government of Turku and Pori	Pu	Salary payment process	x	
1995	Retirement pension insurance company	Pr	Handling of a retirement pension insurance proposal	x	
1995	Insurance company	Pr	Handling of an insurance claim, updating customer information	x	
1995	An employment office of the Ministry of Labour	Pu	Administrative tasks in labour market training	x	
1995	Training organization	Pr	Starting a new labour market training course	x	
1995	Industrial company	Pr	Salary payment process	x	x

Our experiences have shown the following practical benefits of the WORK FLOW GAME (see also Ruohomäki, 1994, 1995):

- Participants' practical and experience-based work action can be externalized, which enables participation at the grass roots level.
- Work processes can be visualized in a concrete way to present an overview of the process to everybody.
- Problems and need for improvement can be seen, and common understanding of them can be reached.
- Communication and interaction can be facilitated.
- Participants' interactive learning can be promoted.
- Participants become motivated for development activities.
- The game experience encourages participants to express a number of improvement ideas, which can be put into practice.
- Organizational change can be speeded up.
- Long-term effects of the development project can be seen in better productivity and quality of the work process.



## DISCUSSION

More and more people these days work in offices and administration. New development methods are needed in order to solve problems in office work productivity and in human well-being. The WORK FLOW GAME is a practical and concrete method for improving office work. The method is described in the handbook (Piispanen *et al*, 1996), which includes practical guidelines of how to plan and conduct a game. We have also prepared a videotape presenting the game method, and a set of transparencies for the game facilitator. A training programme for game facilitators will be planned to spread knowledge of the WORK FLOW GAME. The competence of the facilitator has proved to be crucial to the success of the development activities.

Our experiences have shown that the participative approach has proved successful but sometimes time-consuming when carrying out changes. The WORK FLOW GAME method is applicable to administrative and office work, where the work processes are multifunctional and complicated. It has also been used for development in situations where the work processes are more complicated. The future challenge is to create new variations of the method.

## Note

The WORK FLOW GAME method has been designed in cooperation with the Finnish Institute of Public Management and the Laboratory of Work and Organizational Psychology at Helsinki University of Technology, as a part of The Finnish National Productivity Programme. The authors work for the Productivity Programme in the project called Proffice (Productive Office) at the Laboratory of Work and Organizational Psychology. The project has been funded by the Ministry of Labour, the Ministry of Finance and The Finnish Work Environmental Fund.

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