

# E-Process - a Game to Help Governments Prepare for E-Government

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## Introduction

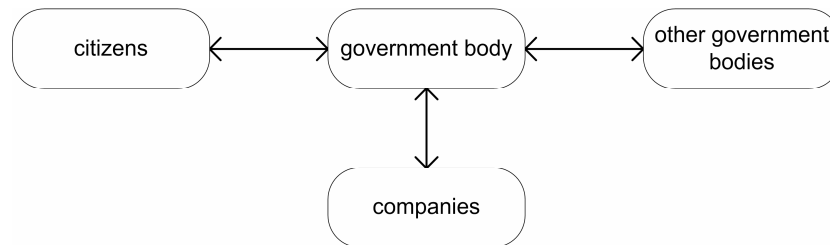
### E-Government

Governments in many countries are preparing for the implementation of e-government. This concept implies:

- electronic contact between government bodies and their clients (citizens, companies, other government bodies etc.);
- electronic delivery of public information products and services;
- electronic participation of citizens in various stages of decision making.

E-government means not only a new mode of communication that might prove to be more efficient for citizens, companies, institutions and/or government itself. It also means a new level of service delivery:

- clients will have a single point of access to a variety of government services (one-stop shopping) and will enjoy a variety of communication channels,
- services will be delivered faster than before and with less visits to offices.



**Fig. 1.** e-government – electronic relations of government body with external parties

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## Organisational Impact

E-government might have a tremendous organisational impact. Possible effects are: redesigned service delivering processes (further called business processes), restructured internal organisation, and changed boundaries between various government bodies. As well as these business-process effects, e-government will also have internal and external social effects, not to mention technical effects.

## Tools

Government managers will have to become more process-oriented in their thinking. That could be difficult for organisations with a mainly function-oriented structure. Tools to explore process orientation in a safe environment could prove very useful. The E-Process Game has been developed as such a tool.

## Requirements

Table 1. the requirements the E-Process Game is designed to meet

Category	Description
Subject	Business-process redesign for the delivery of electronic services by government bodies. The focus is on collaboration between different organisational units and/or their clients.
Purpose	The purpose of the E-Process Game is to help participants learn: <ul style="list-style-type: none"><li>• to make inventories of business processes in terms of inputs and outputs;</li><li>• to experiment with changes to these business processes;</li><li>• to translate these changes into organisational reality.</li></ul>
Intended Use	Frame game (= to be loaded with a case) for use during the initial stages of decision making on e-government. The scope of the cases can be inter-organisational, intra-organisational or intra-departmental.
Participants	Participants with a professional background, such as government managers or internal consultants. The number of participants can vary from 7 – 14.
Resources	The resources needed to play the game are minimal: <ul style="list-style-type: none"><li>• a conference room large enough to accommodate twice the number of participants; moveable furniture;</li><li>• five game boards (A0 posters); some print output and standard office paraphernalia;</li><li>• an accessible photocopier (or digital camera) to record intermediate results for future reference.</li></ul>

## **Frame of reference**

### **Government Processes**

In many countries government is not a single central organisation, but a network of perhaps hundreds of loosely connected, more-or-less independent government bodies. When viewing government services from a client perspective (citizens, companies etc.), one often finds more than one government body involved in delivering a particular service.

Government bodies themselves usually have a hierarchical structure. They are made up of internal departments and sub-departments. Each of them fulfils a specific specialist function. Business processes are seldom the responsibility of a single department. More often than not, one department executes one part of a business process, while other departments execute the rest.

A single department might be involved in various business processes at the same time. It might produce dozens of different half products to be further processed by other departments (or by itself) until they become final products to be delivered to the outside world.

### **Information Logistics**

Logistics is a concept that originates from the military and is now frequently used in economic sectors like industry and transport. Logistics deals with the flow of materials and material products within production organisations, and between production organisations and the final product destinations. There now exists a broad body of knowledge on the organisation, planning, execution and control of these material flows.

Information logistics is a relatively new concept. It applies the body of knowledge developed for material logistics to organisations that produce information products. The concept seems very promising for the study of business processes within government:

- It stresses the importance (and the benefits) of taking a business process as a whole.
- It offers a language to describe and analyse business processes.
- It introduces new and useful notions like push-production, pull-production and the custom order penetration point.

## Conceptual map

The conceptual map describes the mapping of the real world onto a simulated world.

### Game versus Reality

The real world of e-government is highly complex. To make a game based on e-government that can be played by a limited number of participants within a limited amount of time, requires that complexity to be simplified. The simplifications that we apply are:

- The scope of the game can be inter-organisational (more than one government body involved), intra-organisational (a single government body with more than one department) or intra-departmental (various sub-departments or even individual functions). The external parties, such as citizens, can be divided into categories. But the total number of these 'organisational units' should not be more than 7.
- The number of products that a single organisational unit produces is likewise limited to seven.
- The contribution of any one organisational unit to a specific business process is regarded as one atomic activity, which cannot be further divided.
- The game does not deal with single requests from citizens. It gives focus to the flow of requests.
- In reality, an organisation will usually link each business process to two other processes: a control process (for monitoring and regulating the business process) and a planning process (for elaborating a plan and setting norms). The game concentrates on the business process alone.
- The concept of information logistics is still too new to be 'hardwired' into the game. However, the Facilitator may use appropriate Event Cards during the game to introduce this concept in a 'soft' and flexible way.

### Cases

The E-Process Game is basically a frame game. It can be loaded with different cases, such as a (simplified) real world case, a case based on the client's organisation or a symbolic case.

The Case Description presents an organisational context and a drive (or a need) for change. The organisational context consists of:

- the scope of the simulated world;
- the level of detail;

- a verbal description of its characteristics;
- a list of the organisational units involved (i.e. the roles in the game).

The drive for change could be one or more statements like the following:

- Shortened processing time
- One-stop shopping
- Multi-channel communication
- 7 x 24 hour availability
- Increased operational efficiency.

The Case Description should conform to the restrictions listed under the previous heading.

**Table 2.** E-Process – a frame game that can be loaded with three different case types

Case type	Description
Real-world case	<p>One simple real-world case has been prepared for the game. More cases can be added in the future.</p> <p>The subject of the real world case is the application procedure for licenses to drain effluent water into open water. In this case the clients are companies. The government bodies involved are a Ministry of the Environment and a Ministry of Water with separate Licensing and Finance Departments. The current application procedure is based on paperwork and takes 6 weeks to complete. The drive for change is to make the procedure electronic and to shorten the time from six weeks to real-time (80% of the requests) or one day (20% of the requests).</p>
Client's case	<p>There are two options for constructing the client's own case. The first is that the client briefs the Facilitator, who then prepares the Case Description. The second is that the Facilitator organises a workshop or pre-game with staff members from the client organisation, from which a Case Description emerges.</p>
Symbolic case	<p>The symbolic case is an abstraction of a real world case. It does not talk about specific ministries, but about Agency A and Agency B, delivering products X and Y. Although a symbolic case might look cold and inhuman, it has the advantage that participants in the game are not distracted by details and can focus on the re-engineering effort.</p>

## Game System

The Game System consists of the following game components: initial state, roles, events, 3 game board(s), and 2 forms.

### Initial state and Roles

The initial state is the state of the simulated world at the start of the game. The roles to be played by the participants (or teams of participants) are those of managers and/or representatives of organisational units. The client is considered to be an organisational unit as well. Initial state and roles are derived from the Case Description.

### Events

Event Cards are tools used by the Facilitator to influence the game process. They 'launch' new information at the participants, as if by chance. This game comes with two sets of Event Cards. The first set triggers the re-engineering of the business process. The second set triggers the consolidation of the new organisational structure. The Facilitator has to select relevant events in advance and prepare their launching sequence.

The first set of events consists of instructions from some higher authority. Some examples are:

1. Reduce (or even eliminate) the number of physical client contacts needed for a given business process.
2. Shorten the total turnaround time for a business process.
3. Introduce a new communication channel, making it possible for clients to use this channel at one moment and another channel at another moment.

The second set of events contains guiding principles for restructuring organisational units. Some examples are:

1. Redefine the allocation of activities to government bodies.
2. Concentrate all communication with clients in a front office.
3. Coordinate front offices through a mid office.

### Game Boards.

Game Board 1, 'As Is', is like an empty poster. Game Board 2, "Process Playground", looks like a "Scrabble board", and Game Board 3, "To Be", shows so-called "swim lanes". The preferred size for all is A0 (1m<sup>2</sup>).

### Activity Card

The Activity Card describes a single activity with its input and output. The card is created during the game by cutting up the Unit Form.



**Fig. 2.** Activity card: input – activity - output

### Unit Form

The Unit Form describes the activities of a single organisational unit. The form contains a title section and seven activity sections. During the game this form will be cut into 8 pieces: the title section and the seven activity cards. The colour of the form should be different for each organisational unit. The preferred size of the form is A4 (vertical/portrait). Each role uses its own colour.

## Game Process

### Preparation

The preparation of a game session by the Facilitator consists of the following activities:

1. Discussing the organisational context of the game session with the client;
2. Selecting or preparing the Case Description;
3. Selecting roles and events;
4. Preparing the gaming room and installing the game.

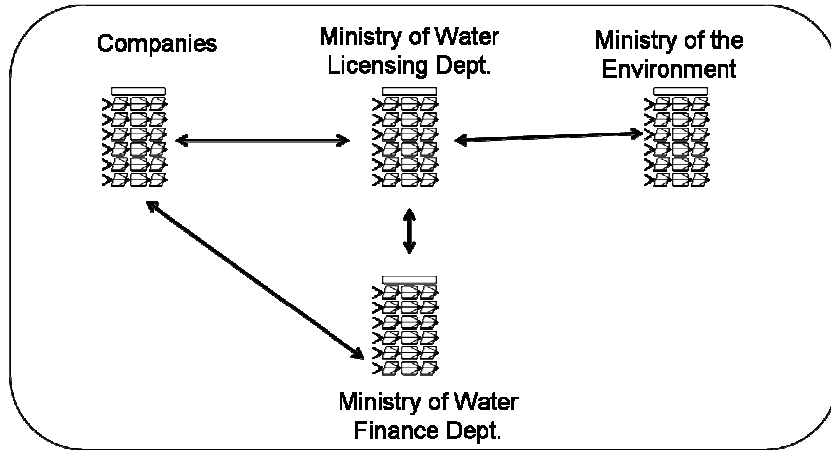
### Macro Cycle

#### ***Start-up [30 minutes]***

The Facilitator welcomes the participants, explains the purpose of the meeting and the time schedule, and invites the participants to introduce themselves.

The Facilitator gives a general briefing on the game and the selected case. He/She then allocates roles: 1-2 participants per role.

**Micro Cycle 1 – ‘As Is’ [1 hour]**

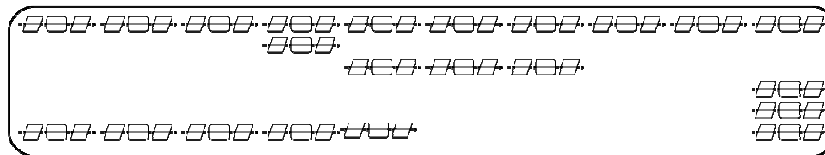


**Fig. 3.** Game Board 1 “As Is” after Micro Cycle 1

During the Micro Cycle 1 the roles (teams) analyse the Case Description that defines the current situation (‘As Is’). The roles identify the inputs, activities and outputs of their unit and crosscheck their findings. Each role fills in a Unit Form and places it on Game Board 1. Using arrows they indicate the units which exchange information. At the end of the micro cycle, Game Board 1 displays a ‘system view’ of the state ‘As Is’.

**Micro Cycle 2 – ‘Process Playground’ [1 hour]**

During the Micro Cycle 2 the roles (teams) cut a (copy of their) Unit Form into pieces. The resulting Activity Cards will be placed on Game Board 2 (‘process playground’). As in a game of Scrabble, the participants try to combine the Activity Cards to build the longest possible chain. The Facilitator might then launch some events, prompting the participants to start experimenting with changes in the chain. At the end of the micro cycle, Game Board 2 will show one or more redesigned chains of activity cards in the colours of their organisational units.



**Fig. 4.** Game Board 2 “Process Playground” after Micro Cycle 2

**Third Micro Cycle – ‘To Be’ [1 hour]**

During the Micro Cycle 3 the participants try to re-group the activities and re-assign them to the organisational units that will have to execute them in the future. The Activity Cards will be now placed on Game Board 3 (‘To Be’). This game board contains ‘swim lanes’, one for each organisational unit. By placing the activity cards in one of the lanes, the activity is allocated to the corresponding organisational unit. If the Facilitator launches more events, the participants can move activities to other swim lanes. At the end of the game, Game Board 3 will show the redesigned business process and the recommended allocation of activities to organisational units.

Companies	Ministry of Water		Ministry of the Environment
	Licensing Dept.	Finance Dept.	
<del>BOB</del>	<del>BOB</del>		
	<del>BOB</del>	→	<del>BOB</del>
	<del>BOB</del>	←	<del>BOB</del>
	<del>BOB</del>	<del>BOB</del>	
<del>BOB</del>	→	<del>BOB</del>	
<del>BOB</del>	←	<del>BOB</del>	
	<del>BOB</del>	<del>BOB</del>	
<del>BOB</del>	<del>BOB</del>		

Fig. 5. Game Board 3 “To Be” after Micro Cycle 3

**Shut-down [30 min.]**

The Facilitator freezes the game and asks the roles to give a factual description of the results. Next, the participants can step out of role and give their personal comments on the results. The Facilitator then discusses the possible consequences that the game results might have in their real lives. Finally, the participants are invited to comment on the session and on the game itself.

**Follow-up**

The follow-up of a game session by the Facilitator consists of the following activities:

1. de-installing the game and releasing the gaming room;
2. summarising the results and meeting the client for feedback;
3. planning new activities.

## Conclusion

By playing the game, the participants will learn to:

- develop an output-oriented view of organisational units by describing their outputs, activities and inputs (Micro Cycle 1);
- perceive business processes as chains of activities transcending the boundaries of organisational units (Micro Cycle 2);
- analyse possible changes to business processes (Micro Cycle 2);
- explore alternative allocations of activities to various organisational units (Micro Cycle 3).

The game offers a lot of flexibility via the adaptable sets of Event Cards and via the option of loading with new Case Descriptions. The application of the game need not be restricted to government bodies, but could be extended to any information-producing organisation.

The game has passed through several preliminary test runs and is now ready for field tests.

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