

## Practical assignment 1.2

### *Producing a design for (part of) an information system*

#### Activities

Studying the information needs that have already been established  
Delivering a functional design  
Expounding a functional design  
Translating a functional design into a technical design  
Delivering outline plans and overviews of costs  
Reporting, informing and documenting

Qualification dossier	ICT management 2007 - 2008
Position	ICT Manager
Core task 1	Developing (parts of) information systems
Work process 1.2	Producing a design for (part of) an information system



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Praktijkwijzer is produced by ECABO on behalf of Stichting Praktijkleren

QD ICT manager 2007 - 2008  
Position ICT manager  
Core task 1 Developing (parts of) information systems  
Work process 1.2 **Producing a design for (part of) an information system**

**Activities**

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## Introduction

In practical assignment 1.2 you are going to make a functional design for (a component of) the information system on the basis of the information analysis you carried out. After having presented this design, you will work it out into a technical design.

In this practical assignment *Producing a design for (part of) an information system* you will find the following components:

- an overview of the qualification dossier (QD);
- assignments;
- support in the assignments:
  - *questions;*
  - *the step-by-step plan that you can use in preparing and carrying out the assignments;*
  - *tips carrying out the assignments.*

## Overview of the qualification dossier

### ICT management

Core task Work process		ICT Manager	Network Manager
<b>1 Developing (parts of) information systems</b>			
1.1	Determining the information needs	x	x
1.2	Producing a design for (part of) an information system	x	x
1.3	Drawing up a plan of action	x	x
1.4	Creating a test environment	x	x
<b>2 Implementing (parts of) information systems</b>			
2.1	Drawing up an implementation plan	x	x
2.2	Carrying out an implementation plan	x	x
2.3	Providing support for acceptance tests	x	x
2.4	Evaluating an implementation	x	x
<b>3 Managing (parts of) information systems</b>			
3.1	Preventing disruptions / malfunctions	x	x
3.2	Localizing and remedying disruptions / malfunctions	x	x
3.3	Dealing with and rounding off incidents reported	x	
3.4	Drawing up and monitoring procedures	x	x
<b>4 Setting up and organizing a service desk</b>			
4.1	Making a service desk operational	x	
4.2	Managing a service desk	x	
4.3	Drawing up users' instructions	x	

#### Activities

- ▶ Studying the information needs that have already been established
- ▶ Delivering a functional design
- ▶ Expounding a functional design
- ▶ Translating a functional design into a technical design
- ▶ Delivering outline plans and overviews of costs
- ▶ Reporting, informing and documenting

### Assignment 1:

## Producing a design for (part of) an information system

In this assignment you will make a functional design for (a component of) the information system within the organization. You will base this on the information needs (requirements, wishes, complaints) that you established in practical assignment 1.1.

It might be apparent from the information analysis that, for example, a widely used web application causes the web server to go down at regular intervals. Any other services provided by that server will then also not be available. An upgrade to a more recent version of the web server application (for example from IIS 5.0 to IIS 6.0) could provide a solution to this. A dedicated server for the web server might also solve many problems.

It is possible that the management might require PDAs. Examine whether this would be possible to achieve this in the existing mail system, and what might be necessary to make this possible.

Complaints about spam and e-mail viruses could be solved by the implementation of a (new) anti-spam/anti-virus system.

Create a design for the new situation you are proposing. In this design, make recommendations with respect to hardware and/or software that you think should be replaced or purchased, and with respect to changes (modification, expansion) of the network infrastructure.

Explain this design to your in-house mentor and ensure that you make a good case for your choice.

Then translate the functional design into a technical design, in which you provide a complete description of the new configurations of the network infrastructure, servers and applications.

Support in the assignments



## Questions

You can use these questions in preparing the assignments. The subjects will come up again in the review discussions with your practical tutor.

1. You might be confronted with all sorts of matters that make it difficult to carry out your assignment well. These could be what the work actually involves (for example dealing with confidential information), contacts with others (colleagues, clients) and the circumstances under which you have to work (for example working against the clock). What plays a role in your work situation, and how do you deal with it?
2. Who in the organization is responsible for inventorying the users' wishes and the organization's wishes and requirements with respect to the expansion of, adaptations to and/or optimization of the network system?
3. What are the different ways in which information relevant to their work is made available to the users, and in what manner is the data necessary to this collected and processed?
4. How in the organization does the decision-making process work with respect to proposals concerning change and investments?
5. Are there available within the organization any functional and technical designs of the present information system?
6. Are there within the organization any manual procedures that in your opinion could be computerized quickly and without involving additional investment? If so, what would be the possible consequences of these changes to the use and management of the network system? What would the advantages over the current system be to the organization?
7. What security systems are in operation within the existing information system?



## Step-by-step plan

You can refer to this step-by-step plan when preparing and carrying out the tasks required for this practical assignment.

Step 1 Study the existing network infrastructure.

Step 2 Collect and study relevant information about the components and operating systems in use. In doing so, take note of innovational and reliability aspects of the information. Also study very carefully any new developments in this field. Pay particular attention to the following points:

- performance
- capacity
- reliability
- availability
- security
- user-friendliness
- integration opportunities with respect to existing systems
- economic aspects.

Step 3 Study the existing functional design of (the relevant component) of the information system.

Step 4 Examine what modifications must be made to this design in order to meet the requirements and wishes of the users and to eliminate any problem areas.

In this respect, think about:

- upgrading the web server to a more stable version
- installing a dedicated server for a demanding or unstable application
- installing an anti-virus/anti-spam system
- replacing an old, slow switch with a new, quick version.

Step 5 Examine what consequence these modifications would have for the hardware and software currently in use.

Step 6 Incorporate your findings in a functional design, and furnish this with an explanation as to the necessity for the proposed changes and for the new hardware and software.

Step 7 Present your design to your in-house mentor, providing a clear verbal line of reasoning for your recommendations.

Step 8 Translate your functional design into a technical design, in which you document completely the configuration of the various components (network infrastructure, servers, workstations and applications).

Step 9 Make an outline planning of the various activities to be carried out, together with an overview of the costs, in which you should include the costs of the hardware and software to be purchased and the costs emanating from any downtime of the network and servers.



## Tips

- Search the Internet for software that meets your requirements and wishes. Download demos and try them out.
- Much time and hardware can be saved by first of all carrying out tests in virtual environments.
- For example, virtual PC can be downloaded free of charge from the Microsoft site.
- Network configurations can also be built in a virtual environment, and this can help you to discover quickly whether certain configurations work as well as you thought they might.