

# Practical assignment 3.1

## *Preventing disruptions/malfunctions*

### Activities

Proactively monitoring the information system and the security thereof

Regularly carrying out testing and servicing activities to prevent malfunctions or other problems

Checking whether the information system meets the requirements and delivers the required performance

Making proposals for improvements in order to gain a better prevention of malfunctions or other problems in the future

Reporting, informing and documenting

Maintaining documentation

Qualification dossier	ICT management 2007 - 2008
Position	ICT Manager
Core task 3	Managing (parts of) information systems
Work process 3.1	Preventing disruptions/malfunctions



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#### Activities

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## Introduction

In practical assignment 3.1 you will learn how to prevent malfunctions or other problems in independently managed information systems.

In this practical assignment *Preventing disruptions/malfunctions* 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**

- ▶ Proactively monitoring the information system and the security thereof
- ▶ Regularly carrying out testing and servicing activities to prevent malfunctions or other problems
- ▶ Checking whether the information system meets the requirements and delivers the required performance
- ▶ Making proposals for improvements in order to gain a better prevention of malfunctions or other problems in the future
- ▶ Reporting, informing and documenting
- ▶ Maintaining documentation

**Assignment 1:****Preventing disruptions/malfunctions**

In this assignment you will independently set up a management function in order to prevent malfunctions or other problems in the information system.

Collect reliability and processing data.

Secure data to prevent malfunctions or other problems.

Carry out tests and maintenance.

Determine whether the information system meets the requirements and delivers the required performance.

Check whether documentation meets the requirements of the information system.

If necessary, present for approval a solution to improve performance and to prevent malfunctions.

Implement the solutions and collect reliability and processing data.

Register the data and the solution in the administrative system.

Make a proposal for process improvements.

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. What procedures are used within the organization for the testing and collection of data with respect to the information system?
3. What procedures are used within the organization to safeguard the information system during the research?
4. What application or management tools are used for research?
5. How are security measures implemented?
6. How are results documented in the organization?
7. What system is used to keep documentation up to date?
8. How are users informed about changes in the operation of the infrastructure as the result of problem solving?



## 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 Check whether data is safeguarded, for example with a backup.

Step 2 Test the information system. Consider in relation to this: conflicts between drivers, fragmentation, caches, and settings in the information system.

Step 3 Test the environment's conditions, for example temperature, static electricity, etc.

Step 4 Test for performance, and whether the system meets the requirements laid down.

Step 5 Decide on a solution for any faults that may be discovered, and present this for approval.

Step 6 Implement security measures, considering in relation to this: backup, encryption, and authentication.

Step 7 Decide on a monitoring system and ensure that data is processed.

Step 8 Implement a policy for updates and security, for example.

Step 9 Ensure that documentation is brought up to date and clarify this, if necessary.



## Tips

- Firewall settings can also be the cause of the inability to carry out certain actions, for example downloading updates or installation components via the Internet, which again can lead to malfunctions or other problems.
- Safeguarding data can also mean implementing anti-virus, anti-spam and anti-spyware tools; check this too.
- When implementing a monitoring system, you should consider:
  - Environment monitoring
  - Access control monitoring
  - Service monitoring (falling under service monitoring are all the services that the ICT service department provides.)
  - Process monitoring
  - System monitoring
  - Software monitoring
  - Power monitoring (power monitoring consists of monitoring (mains) supply voltage and the like.)
- Documentation maintenance also means that you should examine the way in which this has been implemented.