# Analysis – 9 Marks

Analysis is difficult, that is why Systems Analysts get paid lot of money! However if you get the analysis right you are much more likely to get the rest of your project right. The analysis allows you to **gain a deeper understanding of the problem**; enabling you to **identify the objectives for the project**, **giving** a clear **purpose and direction for your design and solution development**.

It is important that at this stage a well-defined set of measurable objectives are written so that you and the assessor have a common understanding of what you hope to achieve and so that the assessor can gauge your progress.

# AQA’s requirements overview

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| **1. Analysis** |  |
| **Topic** | **✓** |
| * 1. **Introduction** | |
| * + 1. Background   An overview of the company/organisation/investigation idea that you are creating the system for. What is it, what do they/does it do, size, turnover, your involvement etc. |  |
| * + 1. Project Scope     A clear statement that describe the problem area and the specific problem being solved / investigated.  An analysis of the critical path of the project in terms of identifying the main stages and the sequence which these should be done and the dependency between the stages – **must include CPA table & network diagram**. |  |
| * + 1. The Client/Supervisor   ~~Who is/are the client(s)/supervisor(s)? What do they do in the organisation? If self-employed, what do they do? What is their IT experience (define, compare to yourself as an expert user)?~~  The third party might be a **potential end-user of the software**, such as a friend, relative, employee or teacher or somebody with knowledge, interest or expertise in the problem area. Their role is to support the student in investigating the problem, deciding upon the objectives and to give feedback, particularly at the end of the project.  For an *investigative* project, the third party is most likely to be the person who has agreed to act as the student’s supervisor.  *The objectives should be established early on and fixed at a point in time agreed with the third party and the teacher responsible for monitoring the student’s project. \* Conduct interview to get go ahead from client/supervisor - signoff sheet.* |  |
| * + 1. Prospective users /target audience   Describe all other users of the system. What do they do (in the organisation)? What are their ~~IT experience a~~nd how do they use the current system and how will they use the new system.  Consider an organisation chart (if they are part of an organisation). |  |

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| * 1. **Investigation of System, User Needs & Acceptable Limitations** | |
| * + 1. **The Current System Analysis / Investigative Project** | |
| This section should be in sufficient detail for a third party to understand the problem being solved / investigated.  You cannot create a new system until you know the current system well. It may only be a manual system but you must make sure you have a clear understanding of it.  Document any contact with the user, including emails (*screenshots*) and telephone calls (table documenting *date, duration, discussion*).  ***Methods and source* -** You should use a range of appropriate methods and sources to research and investigate the problem, including:   * websites * existing software * books * interviews – *client/supervisor* * questionnaires – *target audience/prospective users* * prototyping.   Relevant and genuine evidence should be presented in the report (most likely in an appendix ***(evidence of analysis)***, but referenced in the main report). You should not generate evidence unnecessarily or artificially. | Screen shot  5 game  , place  Game  comparison inside  Questionair  What type  Feature  What wnjot  What feature don’t like  How to improve 3D  Map 3D |
| * + - 1. ~~Interview (twice at least). / Supervisor meeting~~   ~~Use the first interview to look at the current system; document that in this section.~~  ***~~Note:~~*** *~~The second interview is to look at the requirements of the new system - put that in the next section.~~* |  |
| * + - 1. Questionnaire   Best used when there are several users. Consider creating a graph or chart to show the results. | Graph and chart  Propose  Discuss purpose og questions and result – leading on to if this would be an objective |
| * + - 1. ~~Observation (if there is an existing system)~~ |  |
| * + - 1. Investigation of documentation / websites / books / existing software   You should include a log/diary of research collection if you have maintained one. |  |
| * + - 1. Prototyping.     Show screenshots of your prototype and explain them. |  |
| * + 1. **DFD of current system (up to Level 1) –** ***if applicable*** | Not to be done |
| * + 1. **Data Sources and Destinations table (create this in conjunction with the DFD)** |  |
| * + 1. **Entity-relationship diagram and entity descriptions of current system (if no db, create a flowchart)** |  |
| * + 1. **~~Discussion of problems with current system~~** |  |

**NOTE:**

Diagrams needed to model the problem could include: a graph / network model of Facebook connections or an E-R model, state diagrams, scientific / mathematical models or formulae, data flow diagrams (DFDs).

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| * + 1. **~~The Proposed New System Analysis~~** | |
| * + - 1. ~~User Needs~~   ~~You may want to include the~~ ***~~second interview~~*** ~~here.~~  ~~Also include any other work from your investigation which relates to the new system.~~  ~~This section should be a detailed discussion with a~~ ***~~bullet point summary at the end identifying the user’s needs/requirements~~***~~.~~~~These needs are solely form the user, your objectives will take the user’s needs into consideration, as well as your requirements for the system as well.~~  ~~You should clearly explain areas which will not be included in the computerisation and areas considered for future computerisation.~~ |  |
| * + 1. **~~DFD of proposed new system –~~*****~~if applicable~~***   ~~To Level 1.~~ |  |
| * + 1. **~~Data Sources and Destinations~~**   ~~Create this in conjunction with the DFD.~~ |  |
| * + 1. **Entity-relationship diagram and entity descriptions of new system - – *if applicable*** |  |
| * + 1. **Analysis Data Dictionary / Possible Variables & Methods**   This is from the perspective of the end user.  Use the table format below:  ***Note: If creating DB, DD is based on the tables. Otherwise, it is based on important variables in program.*** | Not need for now |
| * + 1. **Data Volumes** (old system and new system discussion)   How much data will the new system have to hold? Why?  \*How long does old data need to be kept? How is old data stored?  \*\*if possible add MB size for storage of data.  How long user detail  How many record  Talk about the data onlycom  Enter one record can check how large is the data stored | Space needed |

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| * 1. **Objectives** | |
| * + 1. **Specific Objectives**   A **numbered list** of **measurable**, "appropriate" specific objectives, covering all required *functionality of the solution or areas of investigation* (‘appropriate’ means the specific objectives are single purpose and at a level of detail that is without ambiguity).  ***Think: Inputs, outputs, processing, storage and performance/security.*** Each objective must be SMART (and you will lose marks if they are not).   |  |  | | --- | --- | | **S**pecific | Objectives should specify what they want to achieve. | | **M**easurable | You should be able to measure if you are meeting the objectives or not. | | **A**chievable | Are the objectives you set achievable and attainable? | | **R**ealistic | Can you realistically achieve the objectives with the resources you have? | | **T**ime | When do you want to achieve the set objectives? |   In your Evaluation you will evaluate what you have achieved against these objectives.  You must get a written agreement from your user on the objectives - signed off agreement.  **Notes:**   1. ***If a student sets objectives that go beyond the scope of what is required at A-level, these should be indicated as extension objectives by the student, in consultation with the teacher responsible for the student’s project. If the objectives were not achieved, this would not prevent a student from achieving the highest available marks for the final developed system.*** 2. [***Appendix C – for example***](http://filestore.aqa.org.uk/resources/computing/AQA-7517-NEA-GUIDE.PDF)   ***Additional objective***  ***Comment time to scale***  ***Main objective, find the exit***  ***Can be prove.***  ***The player can use controller*** | Specidfic  Measurable  Achieveable\validation  To register user must enter, of |
| * + 1. **Additional Objectives**   List and explain any additional objectives (additional functionalities) that are not part of your main specific objectives. Your project solution marks will not be affected if you do not meet these objectives. |  |

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| * 1. **Proposed solution** | |
| Explain how the system will be implemented. In your explanation, you should justify your reason for the solution with reference to:   * Client / supervisor * User * Target audience * Your skills * Data volume |  |

**This section is marked according to 4 main criteria:**

* **How well the problem has been scoped and whether it has been explained in a way that is easy to understand.**
* **Whether there is a fully documented set of measureable and appropriate specific objectives.**
* **Whether the requirements were identified though proper research and dialogue with the user.**
* **Whether the problem has been sufficiently well modelled to be of use in subsequent stages.**