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| **TIL4030 Design – 2 - Requirements** | | | | |
| **Group number:** | 14 | **Student names:** | Femke Mureau  Haoyang Chen | |
| **Requirements** | | | | |
| **Constraints**  *Must comply, cannot be part of trade off.*  *Develop as:*   * *Atomic  (1 idea, 1 part)* * *Describe what,  not how* * *Can be functional (to do)  or non-functional (to have, to be)*   *Example areas:*  - legal  - safety  - costs (budget)  - … | **Functional constraints** (must *do,* has to *do*) | | | **Non-functional constraints** (must *have*, has to *have*, has to *be*) |
| The system must transport passengers from the Campus Station to the campus | | | The cost of the implementation and of the system must not be too high |
| The system must protect users from precipitation. | | | It must be approved by the government |
| The system must protect users and non-users from serious injures in case of an accident | | | It must be easily implementable and must not have a long construction cycle |
|  | | | It must make use of mature technologies |
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| **Objectives**  *Goals, aims; should ideally comply, can be part of trade off.*  *Develop as:*   * *Atomic  (1 idea, 1 part)* * *Describe what,  not how* * *Can be functional  or non-functional*   *Example areas:*  - technical  - economical  - political  - cultural  - social  - ergonomic | **Functional objectives** (could *do,* would preferably *do*) | | | **Non-functional objectives** (could preferably *have/be*, nice to *have*/ *be*) |
| The system would reduce travel time to no more than 10 minutes. | | | The system should not be bothering to the residents |
| The capacity and frequency should meet the demand | | | It should be affordable for all users. |
|  | | | The system should be compatible with the existing infrastructure |
|  | | | The maintenance costs should be considerable among all the means of public transport |
|  | | | It should be user friendly to people with disability or the elderly  The system should run without using fossil fuels. |
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