

Requirements

Cohort 1, Team 4:

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Our requirements were acquired via Cohort 1 Product Brief - Auber.pdf and our initial client meeting. Most of our requirements came from the brief, the client meeting was used to clarify those requirements and gather new ones.

The brief can be seen as a single statement of need (albeit a long and detailed one). After the meeting all of the gathered requirements were gathered into an informal requirements document (Similar to user requirements), this document was then formalised and converted to the user requirement table below (shall priority requirements are needed for the game to function, should priority requirements aren't needed for a functional game but greatly improve the game and cause it to fulfil the brief).

These user requirements were then converted into multiple technical and verifiable software requirements (both functional and non-functional).

These software requirements were also classified into basic categories (denoted by the second part of the id) to make requirements related to a single aspect easier to locate.

The tables with the software requirements are over the next few pages.

User Requirements

| ID | Description | Priority |
|-------------------------|--|----------|
| UR_OPERATIVES | Game must include 8 operatives who sabotage systems | Shall |
| UR_SABOTAGE_NOTIFCATION | Player must be notified when a sabotage is attempted (includes location of sabotage) | Should |
| UR_OPERATIVE_ARREST | Player must have the ability to arrest operatives (and beam them to the brig) | Shall |
| UR_ROOM_TYPES | There must be at least 4 types of rooms in the station | Should |
| UR_TELEPORTERS | Rooms can have teleportation pads from which the player (but not infiltrators) can teleport to any other teleportation pad in the station | Should |
| UR_OPERATIVE_ABILITIES | There must be at least 3 distinct special abilities (which make arresting them harder) within the group of infiltrators | Should |
| UR_SYSTEMS | There must be at least 15 critical systems, when 15 are destroyed the game is lost | Shall |
| UR_INFIRMARY | The player can teleport to the infirmary to heal | Should |
| UR_WIN_CONDITION | The game is won when all eight infiltrators have been arrested | Shall |
| UR_REAL_TIME | The game must be real-time (not turn-based) | Shall |
| UR_MULTIPLATFORM | The game must be cross platform and be able to run on many different systems | Should |
| UR_AUDIENCE | The game must be appropriate and appealing to the intended users (UoY Communications Office + ENG1 peers) (e.g. the game must not include any extreme violence, must have appealing graphics etc.) | Shall |
| UR_SCALABLE_UI | The games UI must be scalable (because of UR_MULTIPLATFORM and UR_AUDIENCE, as well as client specifying this) | Should |
| UR_RULES | The games rules/instructions must be quick for a player to learn, assuming minimal prior knowledge | Should |

Software and Functional requirements

| ID | Description | User requirement |
|---------------------------|---|--|
| FR_GAME_WIN | When all operatives are arrested the game is won | UR_WIN_CONDITION |
| FR_GAME_LOSE | When 15 systems are destroyed the game is lost | UR_SYSTEMS |
| FR_GAME_REALTIME | The game must be a real-time game, not turn based | UR_REALTIME |
| FR_OPER_NUM | Game must start with 8 AI | UR_OPERATIVES |
| FR_OPER_ABILITY | At least 3 operatives must have unique useful abilities | UR_OPERATIVE_ABILITIES |
| FR_OPER_SYSTEM_ATTACK | Operatives must be able to damage/destroy systems | UR_OPERATIVES |
| FR_PLAYER_HEALTH | Player must have health which can be damaged | UR_INFIRMARY |
| FR_PLAYER_ARREST | The player must be able to arrest operatives | UR_OPERATIVE_ARREST |
| FR_PLAYER_HEAL | The player must be able to heal their health | UR_INFIRMARY |
| FR_PLAYER_TELEPORT | The player must be able to use teleport pads to move between them | UR_TELEPORTERS |
| FR_PLAYER_NOTIFIED | The player must be notified when a system is under attack | UR_SABOTAGE_NOTIFICATION |
| FR_PLAYER_SYSTEM_LOCATION | The player must know the location of systems (at least when they are attacked) | UR_SABOTAGE_NOTIFICATION |
| FR_MAP_SYSTEMS | The map must contain at least 15 systems | UR_SYSTEMS |
| FR_MAP_ROOMS | The map must contain at least 4 room types | UR_ROOM_TYPES |
| FR_MAP_LAYOUT | All systems on the map must be reachable by operatives (without the use of teleport pads), and thus by the player | UR_SYSTEMS/UR_OPERATIVES/UR_OPERATIVE_ARREST |

| | | |
|--------------------------|--|----------------|
| FR_MAP_TELEPORTERS | The map must contain at least 2 teleport pads | UR_TELEPORTERS |
| FR_MAP_INFIRM | The map must contain an infirmary room | UR_INFIRMARY |
| FR_MAP_INFIRM_TELEPORTER | The infirmary must include a teleport pad | UR_INFIRMARY |
| FR_MAP_INFIRM_HEAL | The infirmary must contain some way to heal the player | UR_INFIRMARY |
| FR_UI_SCALABLE | The games UI must be scalable (set to different resolutions) | UR_SCALABLE_UI |

Non-Functional requirements

| ID | Description | Fit criteria | User requirement |
|------------------------------|--|---|------------------|
| NFR_PLAYABILITY_FRAMES | The game should run at a high enough framerate to not impede gameplay | Game framerate is always >25fps | UR_AUDIENCE |
| NFR_PLAYABILITY_INSTRUCTIONS | A new player, with minimum prior knowledge, must understand the objectives and controls of the game quickly (be able to attempt to play) | < 1 minute spent on giving player instructions | UR_RULES |
| NFR_APPROPRIATE | The game should be suitable for use at open days and UCAS days by the UoY communication office | Game must be appropriate for at most a PEGI 12 rating | UR_AUDIENCE |
| NFR_PLATFORMS | The game must run on the platforms required by the client and UoY communication office | A runnable version must be producible for Windows, MacOS, Android, and Linux (at least) | UR_MULTIPLATFORM |