**Requirements**

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| Institution Name | Date |
| Fachhochschule Dortmund | 30.11.2023 |
| Project Name | Created By |
| Smart City | Luis Fernando Rodriguez Gutierrez |

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| Executive Summary | * *Briefly note the key points of the business requirements document.* |

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| Needs Statement | * *Explain the problem or opportunity and how the project will address it.* * *Define the context / use cases of the system* |

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| Project Scope | * *List the specific goals of the project, including all tasks, deliverables, costs and deadlines, plus the team that will execute the project.*   *SC – SmartCity*  *ED – Electronic ID*  *PS – Power System*  *SS – Surveillance System* |

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| Requirements | *Describe every action, listed by priority and critical importance, which must be completed to successfully deliver the project.*  General scenarios.   1. The system shall facilitate an infrastructure to provide a reliable communication between the vehicles and the system, enabling autonomous cars to share information about their current location, destination & road conditions. 2. The city should already have an appropriated infrastructure to facilitate the system, such as:    * Traffic lights    * Sensors, such as:      + Cameras      + Light sensors    * Infrastructure for wireless communication 3. The system should be able to adapt and provide the highest priority to emergency vehicles. This being from allowing the emergency vehicle route to be blocked from other vehicles, so this can reach its destination at the earliest time possible. 4. The system shall be scalable to accommodate a growing number of autonomous vehicles. 5. The system shall have security measures to protect itself from unauthorized access & data breaches. 6. The system should comply with the local data privacy compliance laws. 7. The system shall be able to detect faults within itself and react accordingly.   Electronics ID’s   1. Every citizen shall have a valid and unique ID issued by the government. This issued ID may be added to an electronic form, restricting one per citizen.   This electronic ID will have limited information visible to the user.  Every government issued ID must have the personal information of the citizen. This information can be for example:   * + Biometric Photo.   + Date of birth.   + Nationality   + Etc...  1. Each electronic ID shall be linked to the government citizen records. 2. Each citizen shall have an electronic ID to interact with the public transportation system. 3. Electronic IDs shall be able to integrate with third party services. 4. Electronic IDs should have a physical form.   Smart City Lightning   1. The power system shall detect the presence of persons or/and cars to switch on streetlights when needed to provide appropriate illumination to the area according to the amount of traffic in the area. 2. The system shall be able to adjust the luminosity of the streetlights to an appropriate level. 3. The system shall be able to provide a logging system and transmit this log to the specified server. This log shall have information regarding the energy consumption of the specific streetlight with the corresponding timestamp. 4. The system shall be able to recover in case of a failure, report or in a critical scenario, access a system “turn off” state. 5. The system shall redirect power to critical areas in case of general power failure. |
|  | City Surveillance System   1. The system shall integrate different monitoring systems under one infrastructure. 2. The system shall surveil busy areas. 3. The system shall comply with privacy rights. 4. The system should detect natural disasters and consequently alert citizens in the area and report to emergency systems. 5. The system should make use of available resources to aid police by looking for wanted criminals. |

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| Project Stakeholders | * Luis Fernando Rodriguez Gutierrez * Hazhir Amiri * Leander Hackmann * Mohammed Al-Salihi |

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| Project Schedule | * *Indicate the project timeline, from start to finish, including necessary resources.* * Task 1 * Task 2 * Task 3 * Task 4 * Task 5 |