SMART CITY DATA PROJECT TITLE

Created by: John Smith, Mayor of XYZ city

Date: 19-12-2022

Version: 1.0

Project goals

- The goal of this smart city project is to improve the air quality of the city for the benefit of citizens' health and well-being.
- The results will help decision-makers and urban planners to improve road and transportation in the city.

XYZ City Smart City vision

To achieve a socially responsible, environmentally friendly and economically successful city whilst retaining the city's unique character.

Problem statement

- XYZ City faces many challenges, including traffic congestion, air pollution, and a lack of affordable housing. Transportation is heavily realigned on fossil fuels and account for 37% of global CO2 emission. Furthermore, it leads to increased pollution causing poor outdoor air quality associated to the cause of poor health and premature death.

Lack of affordable housing

Traffic Congestion

Air pollution

Solution

- The objective of the smart city project is to deploy smart technologies to optimise traffic flow to reduce pollution and CO2 emission from car transportation.

- The deployed smart city technologies will collect cellular data from citizens smartphone, road cameras and measurement data on the air quality in the city.

- A predictive model will be developed to predict the air pollution and the risk of traffic based on the identified features.

User Persona

- Meet Sarah, a working mother who lives in XYZ City. She spends hours each day commuting to and from work, and often struggles to find affordable, high-quality childcare for her children.

- The Smart City Project will help Sarah by providing new options for transportation and childcare, allowing her to spend more time with her family and less time stuck in traffic.

Technology and data management

- The Smart City Project will use the latest technologies to improve our city's infrastructure and services.

- For example, we will deploy sensor networks to monitor traffic flow and air quality, and we will use artificial intelligence to optimize the distribution of city services. We will also implement strict data management policies to ensure that sensitive information is protected and used responsibly.

Technology and data management

- **Data collection:** We want to have a large spatial and temporal data coverage in the city for achieving high reliability. Consequently, we use low-cost sensors for obtaining a high data coverage as they are less costly than scientific instruments. Thus, we accept that the deposed sensors have lower accuracy.

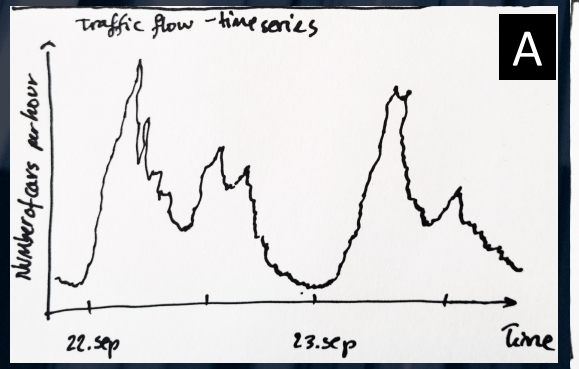
- **Data cleaning:** Location data is provided as GPS coordinates. Missing data will be removed. Timesteps between different sensors and datasets should be synchronised. Air quality sensors and data from cameras should be assigned GPS coordinates in the similar format as location data.

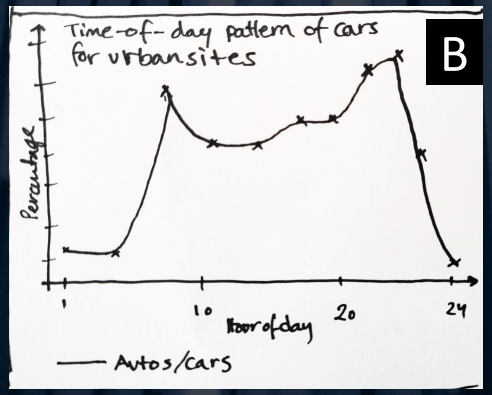
- **Data profiling & wrangling:** We use descriptive and diagnostic analysis to identify relevant features in the data to describe and determine the risk of traffic (e.g., number of cars and time spent in a location). Using diagnostic analysis, we want to investigate the variables affecting the risk of traffic (e.g., time of day, day of the week, weather condition).

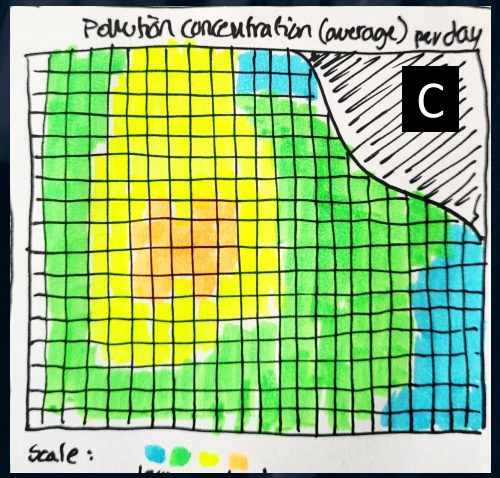
- **Data analysis:** A predictive model will be developed to predict the air pollution and the risk of traffic based on the identified features. The model will be tested and validated to determine its accuracy and reliability. The model will be used to investigate different scenarios for reducing traffic and air pollution.

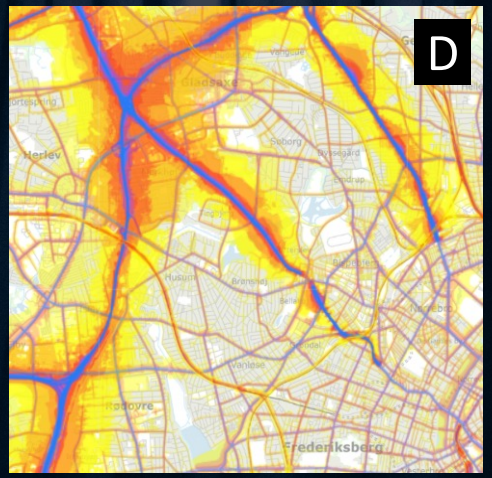
Technology and data management

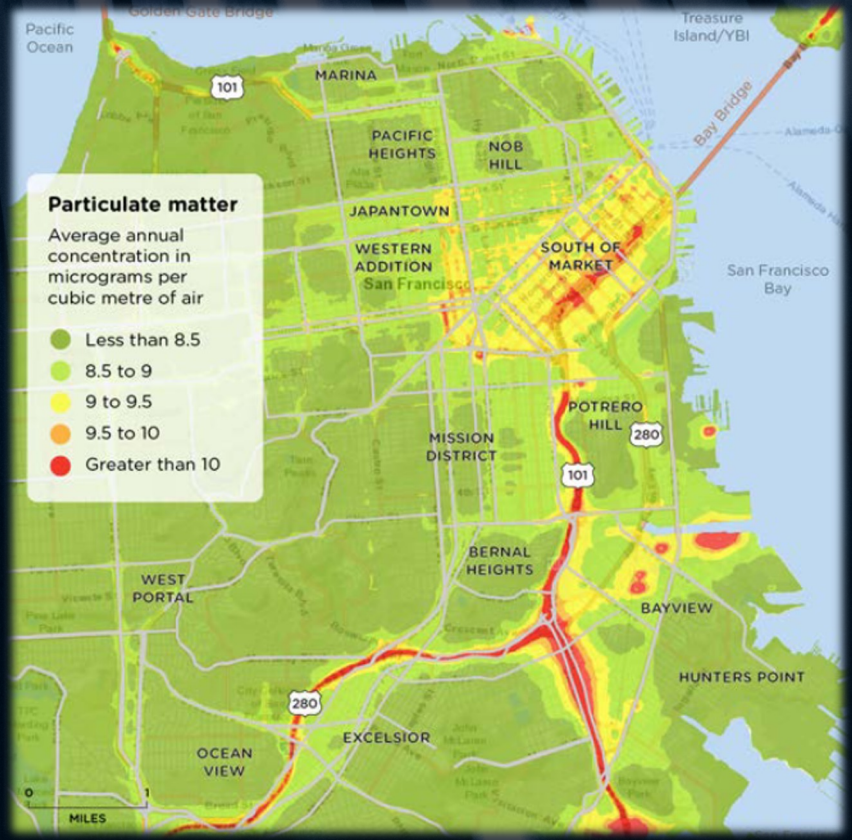
Expected results





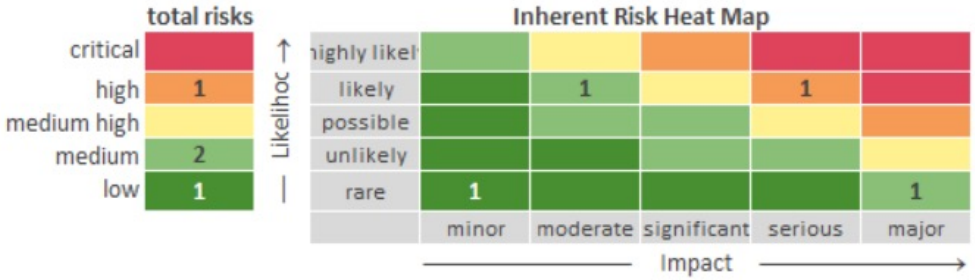




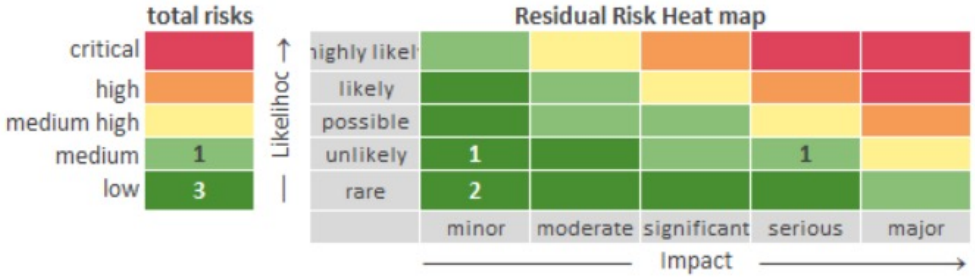


Cyber Security Risks

Inherent vs Residual Risk Assessment Results – Summary



risk types (inherent)	total	low	med	med high	high	critical
1. Data Breach	5					
2. Human Factor	5					
3. Infrastructure	5		1		1	
4. Physical Security	4					
5. Regulatory and Compliance	3	1	1			
6. Supply Chain	3					
	25	1	2	0	1	0



risk types (residual)	total	low	med	med high	high	critical
1. Data Breach	5					
2. Human Factor	5					
3. Infrastructure	5	1	1			
4. Physical Security	4					
5. Regulatory and Compliance	3	2				
6. Supply Chain	3					
	25	3	1			

risk types (risk decision)	total	avoid	mitigate	transfer	accept
1. Data Breach	5				
2. Human Factor	5				
3. Infrastructure	5				
4. Physical Security	4				
5. Regulatory and Compliance	3				
6. Supply Chain	3				
	25				

Implementation

- The Smart City Project will be implemented in phases, starting with a pilot program in the downtown area. We have partnered with leading technology companies and academic institutions to develop and test the project's components.

- We will also engage with the community through public meetings and online forums to gather feedback and ensure that the project aligns with the needs and priorities of our residents.

Budget and timeline

- The total budget for the Smart City Project is $10 million, with funding coming from a combination of public and private sources. The project will be implemented over a period of five years, with the first phase expected to be completed within the next 18 months.

Conclusion

- The Smart City Project is an ambitious and exciting plan that will bring many benefits to the residents of XYZ City. With its focus on technology, data management, and community engagement, the project has the potential to transform our city into a more sustainable, connected, and livable place.

- We hope that you will join us in supporting this important initiative.

Contact information

- For more information about the Smart City Project, please visit our website at www.smartcityproject.xyz.

- You can also contact John Smith, Mayor of XYZ City, at mayor@xyzcity.gov or (123) 456-7890. Thank you for your interest in the Smart City Project!