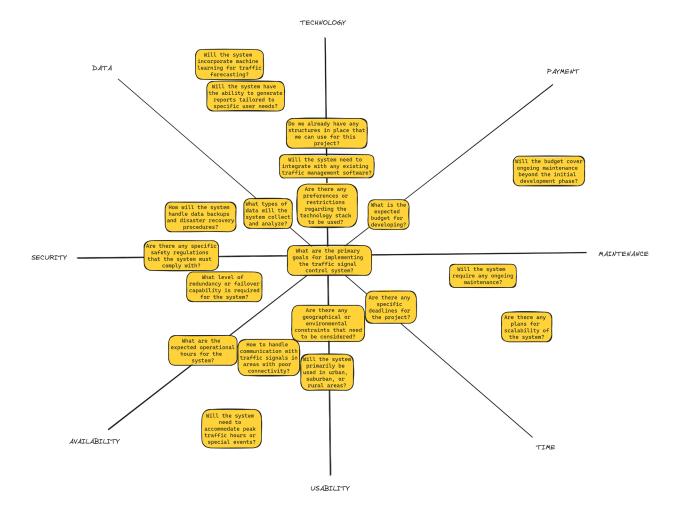
#### **Responses from Teams**

#### Team 01

- 1. What is the expected budget for developing?
- 2. Will the system primarily be used in urban, suburban, or rural areas?
- 3. Are there any specific deadlines for the project?
- 4. Do we already have any structures in place that we can use for this project?
- 5. Will the system need to integrate with any existing traffic management software?
- 6. What are the primary goals for implementing the traffic signal control system?
- 7. Are there any specific safety regulations that the system must comply with?
- 8. Are there any geographical or environmental constraints that need to be considered?
- 9. Will the system require any ongoing maintenance?
- 10. Are there any preferences or restrictions regarding the technology stack to be used?
- 11. What level of redundancy or failover capability is required for the system?
- 12. Will the system need to accommodate peak traffic hours or special events?
- 13. How to handle communication with traffic signals in areas with poor connectivity?
- 14. Are there any plans for scalability of the system?
- 15. What are the expected operational hours for the system?
- 16. What types of data will the system collect and analyze?
- 17. How will the system handle data backups and disaster recovery procedures?
- 18. Will the system incorporate machine learning for traffic forecasting?
- 19. Will the system have the ability to generate reports tailored to specific user needs?
- 20. Will the budget cover ongoing maintenance beyond the initial development phase?
- 21. How will the system handle potential conflicts with emergency vehicles?
- 22. How will the system be tested and validated before deployment?
- 23. What are the options for data anonymization and privacy protection?
- 24. What are the potential ethical considerations of using AI in traffic management?
- 25. How will the public be informed about the system and its benefits?
- 26. What are the acceptable latency requirements for detection and signal changes?
- 27. How will the system differentiate between different types of vehicles (e.g., cars, trucks, bicycles, pedestrians)?
- 28. How will the traffic signals communicate with each other to coordinate timing?
- 29. What specific sensors will be used to detect oncoming traffic, and how will they be installed?
- 30. Will the system be able to provide real-time data on traffic conditions to drivers or other stakeholders?
- 31. Are there any regulatory or legal requirements that the system needs to comply with?
- 32. What is the expected lifespan of the system, and how will maintenance and upgrades be handled?
- 33. Are there specific performance metrics or goals that the system needs to meet?
- 34. How will the system address potential security threats or vulnerabilities?

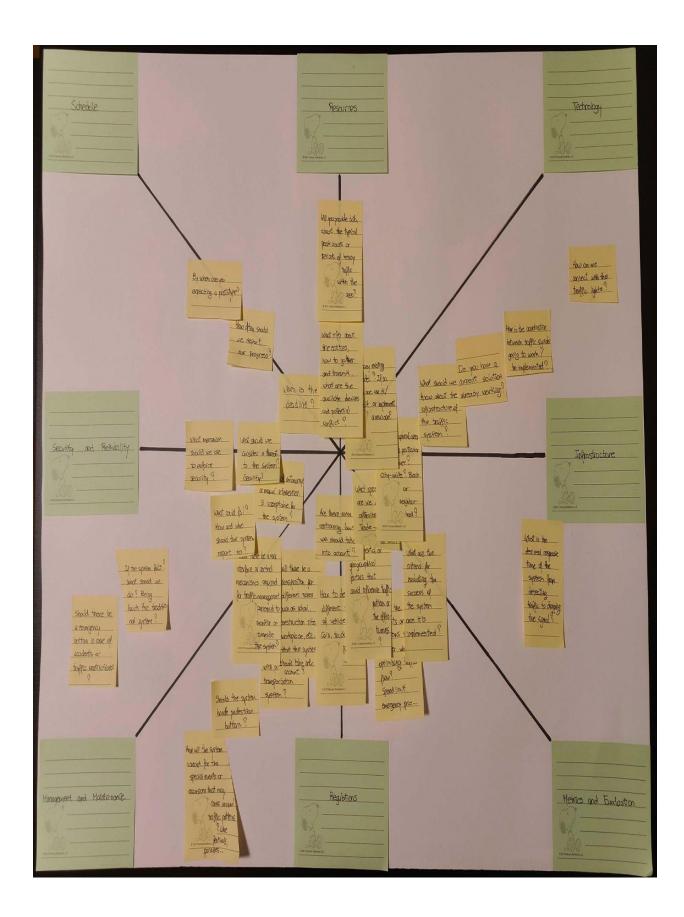


#### Team 02

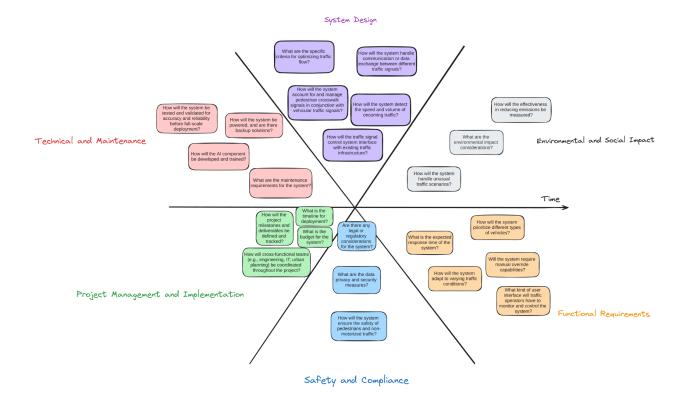
- 1. How frequently should the information be collected and updated? Regarding the data retrieved from the sensors
- 2. Where should the information retrieved be saved? And in which format?
- 3. In what countries is this system going to be implemented?
- 4. Will this system be implemented in streets with pedestrian crosswalks?
- 5. What kind of safety benefits will this system provide?
- 6. How will the system react in case an emergency vehicle, like an ambulance, needs to take the street where it is implemented?
- 7. What kind of safety measures will be implemented to ensure the system does not create dangerous traffic situations?
- 8. How should the system react in case of a power outage and other technical failures to ensure the safety of all drivers?
- 9. What will be the main source of energy for the system? (Ex.: Solar, power grid, etc.)
- 10. Should areas of high-intensity traffic only be considered? Or is the system going to be implemented in all traffic areas?
- 11. Can the system be implemented on a multiple-lane road?

- 12. What kind of technologies/sensors (for example cameras, radars, infrared, etc.) are going to be used for detecting the speed and volume of incoming traffic?
- 13. In case maintenance is needed, what state should the system assume to prevent disruption in the traffic flow?
- 14. Does the system need to take into account the non-motorized vehicles? (Ex.: bicycles, scooters, etc.)
- 15. How will the system, if it should, differentiate between various types of motorized vehicles? (Ex.: cars, trucks, motorcycles, etc.)
- 16. What kind of algorithms and models should we implement?
- 17. How will the system learn and adapt the traffic patterns over time?
- 18. What kind of information the sensors need to retrieve to accurately optimize the traffic flow?
- 19. Does the system need to be designed to easily change the traffic regulations, in case of change in the future?
- 20. Should the system be aware of weather conditions and work with that information to optimize the traffic flow maintaining the safety of the drivers?
- 21. What kind of infrastructure will we need for this type of system? Does this new infrastructure need to be built?
- 22. How should the systems communicate with each other?
- 23. What 's the budget?
- 24. Should the system be operated/managed remotely?
- 25. Should the system work without any connection to the Internet?
- 26. What's the predicted project time frame?
- 27. Should the system include features to support autonomous or semi-autonomous vehicles in the future?
- 28. How will the system handle traffic flow during special events or holidays that significantly alter normal traffic patterns?
- 29. How will the system prioritize traffic flow from different directions during peak and off-peak hours?
- 30. How will the system detect and respond to vehicles that do not comply with traffic signals, such as those running red lights?
- 31. What are the potential impacts of the system on public transportation?
- 32. Will the system offer any functionalities to support road maintenance and construction work zones to minimize traffic disruptions?
- 33. How will the system communicate with the remaining traditional traffic lights?
- 34. What is the benchmark, i.e., how efficient is the current solution and what will be a good measure to determine if this system is better than the existing one considering traffic flow, time, fuel and the environment?

- 1. When is the deadline of the project?
- 2. Do you have a current solution already working?
- 3. What specific metrics are we aiming to optimize with this traffic signal control system and the trade-offs between them?
- 4. What should we know about the infrastructure of the traffic signal system?
- 5. How are we supposed to deal with different types of vehicles, such as cars, trucks, bicycles, and pedestrians? (impact of different types of vehicles)
- 6. What information is provided about the entities, including details on gathering and transmitting methods, available devices (such as cameras or speed registers), and potential conflicts among them?
- 7. Are there any environmental or geographical factors that could influence traffic patterns or the effectiveness of the system?
- 8. What are the constraints and regulations we need to consider when optimizing traffic flow? Like speed limits, emergency vehicle prioritization
- 9. How is the coordination between traffic signals going to work/be implemented?
- 10. How can we connect with the traffic lights?
- 11. What are we expected to see failing? Who should the system report to?
- 12. What mechanisms should we use to enforce security?
- 13. Security wise, what should we consider a threat to the system?
- 14. Are there some restraining laws we should take into account?
- 15. Will you provide data about the typical peak hours or periods of heavy traffic within the target area?
- 16. How will the system handle interactions with public transportation systems?
- 17. Should the system handle pedestrian buttons?
- 18. Should there be an emergency button in the case of accidents or traffic restrictions?
- 19. What level of autonomy or manual intervention is acceptable for the system?
- 20. What are the criteria for evaluating the success of the system once it's implemented?
- 21. What geographical area should this particular system cover? Is it intended for a city-wide implementation or focused on a smaller scale, such as a block or neighborhood?
- 22. Will there be a classification for different zones such as school, construction, workplace, etc, that the system should take into account when optimizing the traffic?
- 23. How will the system account for special events or occasions that may result in unusual traffic patterns, like parades and festivals?
- 24. In case of a system failure, should the traditional system be temporarily brought back to function? Is there a protocol to follow?
- 25. Is there an existing AI model? If so, should we use it/improve it or implement a new one?
- 26. What is the desired response time of the system from detecting traffic to changing the signal?
- 27. Should there be a user interface or control mechanisms required for traffic management personnel to monitor or override the system?
- 28. How often should we report our progress?
- 29. By when are you expecting a prototype?

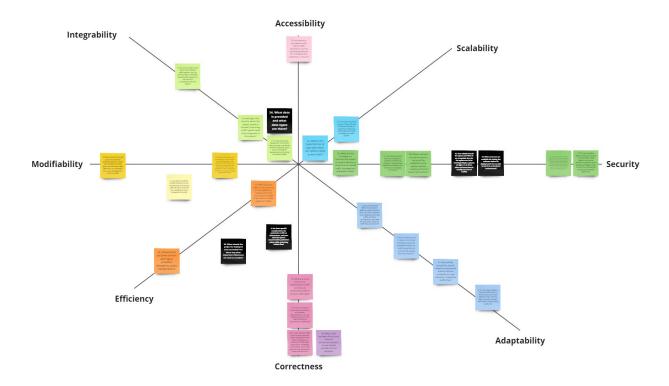


- 1. What is the budget for the development and implementation of the system?
- 2. What is the timeline for the deployment of the system?
- 3. How will the system detect the speed and volume of oncoming traffic?
- 4. How will the traffic signal control system interface with existing traffic infrastructure?
- 5. What are the specific criteria for optimizing traffic flow?
- 6. How will the system prioritize different types of vehicles (e.g., emergency vehicles, buses)?
- 7. What is the expected response time of the system in changing traffic signals?
- 8. How will the system adapt to varying traffic conditions throughout the day?
- 9. Will the system require manual override capabilities for traffic operators?
- 10. How will the system ensure the safety of pedestrians and non-motorized traffic?
- 11. What are the data privacy and security measures for the collected traffic data?
- 12. How will the AI component of the system be developed and trained?
- 13. What are the maintenance requirements for the system?
- 14. How will the system be powered, and are there backup power solutions?
- 15. How will the system handle communication or data exchange between different traffic signals?
- 16. How will the system handle unusual traffic scenarios or accidents?
- 17. What are the environmental impact considerations for the system?
- 18. How will the effectiveness of the system in reducing emissions be measured?
- 19. Are there any legal or regulatory considerations for implementing such a system?
- 20. How will the system account for and manage pedestrian crosswalk signals in conjunction with vehicular traffic signals?
- 21. What kind of user interface will traffic operators have to monitor and control the system?
- 22. How will the system be tested and validated for accuracy and reliability before full-scale deployment?
- 23. How will the project milestones and deliverables be defined and tracked?
- 24. How will cross-functional teams (e.g., engineering, IT, urban planning) be coordinated throughout the project?



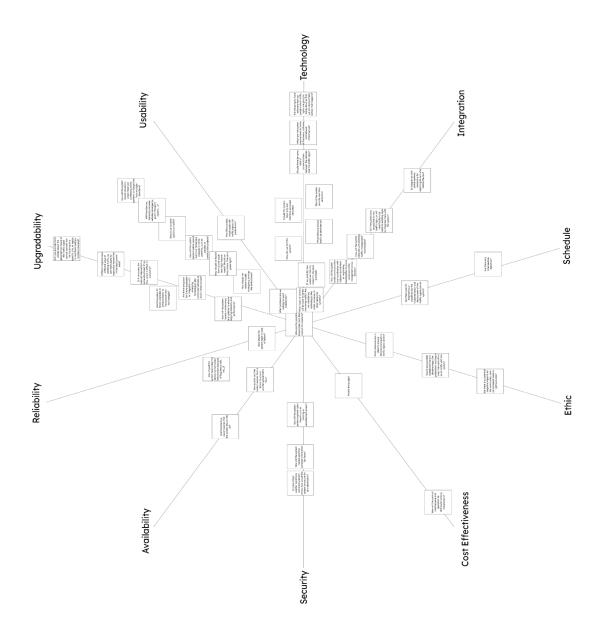
- 1. How will the system differentiate between different types of vehicles (e.g., cars, trucks, bicycles) when detecting oncoming traffic, and what considerations are made for each type's impact on traffic flow optimization?
- 2. Can the system adapt to changing traffic patterns, such as rush hour versus off-peak times, and how does it ensure consistent optimization under varying conditions?
- 3. What measures are in place to prioritize emergency vehicles' passage through the traffic signals while maintaining overall flow optimization?
- 4. Are there specific considerations for pedestrian traffic at intersections, and how does the system accommodate pedestrian safety while optimizing vehicle flow?
- 5. How does the system handle intersections with multiple lanes and varying traffic densities, ensuring fair and efficient signal changes for all lanes?
- 6. How quickly should the system adapt to unexpected events, such as accidents or road closures, to optimize traffic flow?
- 7. Can the system provide real-time feedback or data analytics on traffic flow patterns and optimization effectiveness for continuous improvement, and what tools or interfaces are available for traffic management authorities to monitor and adjust system parameters?
- 8. How big is the area for which the system needs to include? How many traffic signals need to be integrated in the system?
- 9. Is the system expected to grow in future? Should the system be open to expansion in future by adding additional areas and additional traffic signals?

- 10. How reliable should the system be? What is an acceptable time for the system not to be working? (Maybe updates at night, or at times where we know there is usually not a lot of traffic)
- 11. Is there an existing dataset with information about the area, the vehicles and their velocities, which you can provide for development and training of the data model?
- 12. What is the expected size of data with which our system needs to work with?
- 13. What type of crossroad junctions should the system be able to consider and manage with traffic lights? Are there also traffic lights with no crossroads? E.g. to only let pedestrians cross the street?
- 14. Where are the sensors for detecting the traffic and velocity positioned relative to each traffic light? (Having the velocity of the vehicle and the distance between the sensor and the traffic light it's important for decision making when to switch the traffic lights)
- 15. Should there be some vehicles with higher priorities? E.g emergency, public transportation?
- 16. When having big traffic on the street and a lot of pedestrians waiting, which one should be prioritized? (If we have to consider pedestrian traffic)
- 17. Can you provide a default traffic light system? In case of failure of the data model at the moment it's good to have a backup with default settings to use, so the whole transportation system doesn't fail.
- 18. How will the system handle atypical situations, e.g. parades, demonstrations, or road maintenance, which may require temporary adjustments to traffic flow?
- 19. How does the system take into consideration potential cybersecurity threats or vulnerabilities, especially considering the reliance on AI and data connectivity?
- 20. How does the system address potential weather-related challenges, such as reduced visibility due to fog, rain, or snow, and should it adjust signal timings accordingly? Furthermore, can the system detect and respond to hazardous road conditions, such as ice, to optimize traffic flow and enhance safety during changing weather?
- 21. As cultural and/or social factors may influence traffic behavior, such as driving habits or attitudes towards traffic regulations, are there any considerations for this aspect?
- 22. What are the strategies to minimize the impact of system failures or downtime on overall traffic management and public safety?
- 23. (If we have to consider pedestrian traffic) Are there any considerations for special needs populations, such as accessibility features for individuals with disabilities or seniors?
- 24. What data is provided and what data types are there?
- 25. In what ways do traffic lights communicate both locally and globally? What factors influence the operation of traffic lights beyond their immediate surroundings, and to what extent should these factors impact their function?
- 26. What methods should be used to carry out the validation of the system and the reliability of the Al based optimization?
- 27. What resources are available for testing the software before its deployment? Are we able to test it in a simulated environment?
- 28. What is the average velocity and interval (minimum/maximum) we should consider for the vehicles?
- 29. When should the project be deployed and concluded? Are there any other important milestones we need to consider?



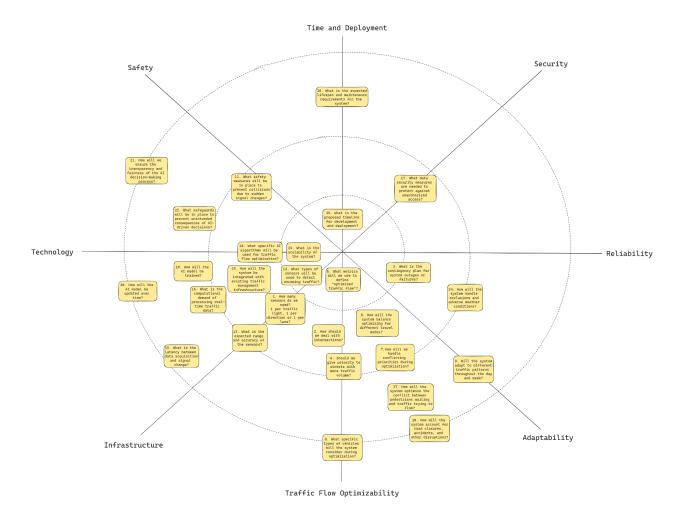
- 1. What types of sensors will be used to detect oncoming traffic? Are we considering technologies like radar, cameras, or other detection systems?
- 2. If we used AI, how would we train the model? Is the data provided?
- 3. How can we test the system?
- 4. What distance should traffic be detected at?
- 5. Should the system have any user interface accessed remotely?
- 6. Should the system provide real-time analytics?
- 7. Should there be some kind of communication between the vehicles and the traffic signs?
- 8. Are we going to have software that can predict which traffic lights are going to break down so that we can replace them before that happens?
- 9. What are the system requirements in terms of hardware, software, and network infrastructure?
- 10. How will the system integrate with existing traffic management technologies?
- 11. Are there plans for future upgrades or enhancements to incorporate new technologies?
- 12. How will the system handle communication and coordination with adjacent jurisdictions or neighboring municipalities to ensure consistent traffic management across borders?
- 13. 13. Will the system only be applied to new traffic signs, or will modifications be made to existing signs to integrate them with the system?
- 14. Is integration with Police systems necessary for reporting drivers who violate the law?
- 15. How should the system react in case of failure?
- 16. How should the system react when the sensor cannot collect information (because of fog, heavy rain, etc...)?
- 17. How should the system handle emergency services like ambulances?

- 18. How should we handle low-volume roads near high-volume roads, should we have a max. time on a green light?
- 19. How will the system accommodate special events or temporary changes in traffic patterns, such as parades or construction projects?
- 20. Should we consider cyclists as traffic?
- 21. Will there be any hierarchy between vehicles (emergency, public transport, cyclists, ...)?
- 22. How will the system handle situations where there are conflicting traffic patterns or congestion from multiple directions?
- 23. How will the system handle maintenance and updates to ensure ongoing reliability and performance?
- 24. Are there any plans for future expansion or integration with emerging technologies like connected vehicles or smart infrastructure?
- 25. Is it necessary for manual intervention in some situations? If so, how would it affect its scalability?
- 26. Different places have different ways of handling traffic, so are there plans for expansion beyond the initial deployment area?
- 27. Can you provide more details about the geographical scope of the traffic signal control system? re we focusing on a specific city or region, or are there multiple locations involved?
- 28. Who are the possible stakeholders and their roles in this scenario?
- 29. What problems are we solving for each stakeholder?
- 30. How this scenario would scale with traffic signals for pedestrians?
- 31. How quickly can the system recover from a failure to ensure uninterrupted traffic flow?
- 32. Are there backup power sources that the system should rely on?
- 33. How will the system handle sensitive personal information like faces?
- 34. In case of bad weather conditions and measurement errors, how would, this system, be secure for all stakeholders?
- 35. How will the system protect against cyber threats such as hacking or unauthorized access?
- 36. What's the budget of this project?
- 37. How will the costs of maintenance and operation be distributed among stakeholders?
- 38. What measures are in place to ensure fairness and equity in traffic signal control?
- 39. Are there any potential negative impacts on the community, such as increased noise or light pollution?
- 40. Resolving this problem, would any possible stakeholder be at a disadvantage, like pedestrians waiting to cross the road with a lot of traffic?
- 41. Are there specific timeframes or deadlines for the implementation and deployment of the traffic signal control system?
- 42. Are there any intermediate deliveries?



- 1. How many radars do we need? 1 per traffic light, 1 per direction, 1 per lane?
- 2. How should we deal with intersections? Traffic lights in opposite directions should be in the same state (green or red)?
- 3. What is the contingency plan for system outages or failures?
- 4. Should we give priority to streets with more traffic volume? So that we can ease the traffic congestion
- 5. What metrics will we use to define "optimized traffic flow"? (e.g., minimize wait times, maximize throughput, prioritize specific vehicle types)
- 6. What specific types of vehicles will the system consider during optimization? (e.g., cars, buses, bicycles)

- 7. How will we handle conflicting priorities during optimization? (e.g., prioritize emergency vehicles while minimizing overall wait times)
- 8. How will the system balance optimizing for different travel modes? (e.g., cars vs. public transport)
- 9. Will the system adapt to different traffic patterns throughout the day and week? (e.g., rush hour, weekends, events)
- 10. How will the system account for road closures, accidents, and other disruptions?
- 11. What safety measures will be in place to prevent collisions due to sudden signal changes? (e.g., minimum green times, yellow light extensions)
- 12. What types of sensors will be used to detect oncoming traffic? (e.g., cameras, radar)
- 13. What is the expected range and accuracy of these sensors?
- 14. How will the system handle occlusions and adverse weather conditions? (e.g., rain, snow, fog)
- 15. What is the latency between data acquisition and signal change? (e.g., for safety and responsiveness)
- 16. What is the computational demand of processing real-time traffic data? (e.g., edge computing vs. centralized processing)
- 17. What data security measures are needed to protect against unauthorized access?
- 18. What specific AI algorithms will be used for traffic flow optimization? (e.g., reinforcement learning, neural networks)
- 19. How will the AI model be trained? (e.g., historical data)
- 20. How will the AI model be updated over time? (e.g., real-time feedback)
- 21. How will we ensure the transparency and fairness of the AI decision-making process?
- 22. What safeguards will be in place to prevent unintended consequences of Al-driven decisions?
- 23. How will the system be integrated with existing traffic management infrastructure? (e.g., existing traffic lights, communication protocols)
- 24. What is the scalability of the system? (do nearby systems interact with each other?)
- 25. What is the proposed timeline for development and deployment?
- 26. What are the expected lifespan and maintenance requirements for the system?
- 27. How will the system optimize the conflict between pedestrians waiting and traffic trying to flow?



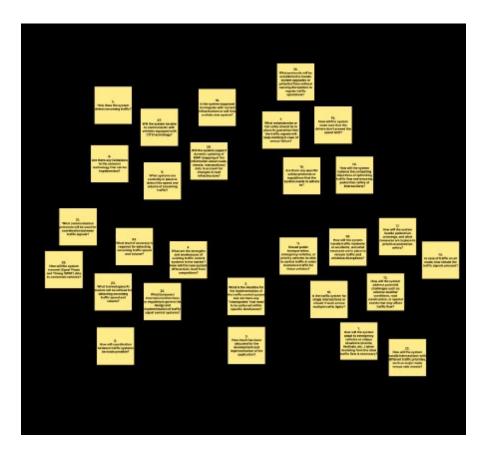
- 1. Is there any due date for the project?
- 2. Are there any budget constraints?
- 3. What are the deliverables?
- 4. How many people are going to be needed in order to implement this system (e.g. civil engineers, computer scientists, electrical engineers, etc.)
- 5. What methodology is going to be used?
- 6. Can the system differentiate between various types of vehicles to tailor signal timings accordingly? Should it do so?
- 7. How do we calculate when to change signals so that flow is optimized?
- 8. What's the estimated annual downtime of the system?
- 9. What strategies will be implemented to minimize disruptions during system maintenance or upgrades, ensuring continuous operation of traffic signals?
- 10. Which redundancy measures will be in place to ensure the system's reliability in case of sensor failures or other technical issues?
- 11. How will the system handle intersections with limited visibility due to environmental factors such as fog, heavy rain, or snow?

- 12. How will the system handle intersections with high pedestrian traffic, ensuring their safety and efficient crossing?
- 13. How will the system address potential security threats, such as cyberattacks targeting traffic signal operations?
- 14. Are there any regulatory requirements or standards that must be fulfilled by the system?
- 15. How will the system address privacy concerns related to traffic data collection?
- 16. What level/depth of user interface or control will be provided to local authorities or traffic management personnel to override or adjust system settings manually? Is it viable to have any?
- 17. Will the system provide real-time feedback or status updates to users or authorities?
- 18. Will the information be displayed to the user and if so how will it be displayed (in this case a driver or a pedestrian)?
- 19. Are there any preferences regarding the technological stack we should use?
- 20. What technologies will be used for detecting oncoming traffic, and how will they be integrated into the system?
- 21. Should we provide an API for external applications such as Google Maps.
- 22. Will the system integrate with existing traffic management systems or require entirely new infrastructure?
- 23. In case we need to implement this system on top of a brand new infrastructure, are we required to do the research and prototyping of that infrastructure or will that be outsourced?
- 24. What's the estimated cost of the new infrastructure, if it is required?



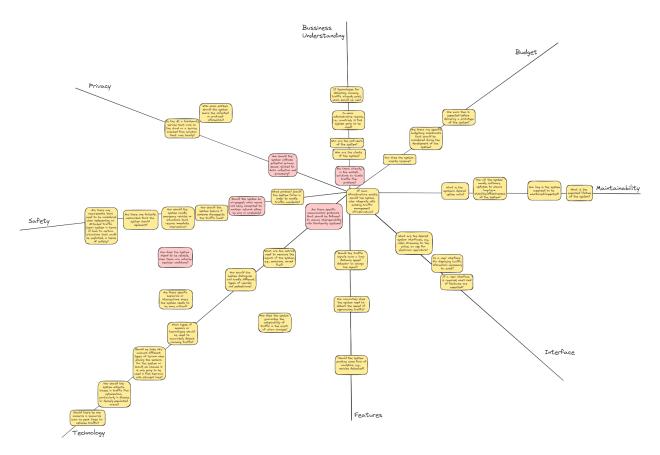
- 1. How will the system adapt to unique situations (events, festivals, etc..) when deviating from the ideal traffic flow is necessary?
- 2. What is the deadline for the implementation of the traffic control system and are there any "checkpoints" that need to be achieved within specific timeframes?
- 3. How much has been allocated for the development and implementation of the application?
- 4. What are the strengths and weaknesses of existing traffic control systems in the market? How will this new system differentiate itself from competitors?
- 5. How does the system detect oncoming traffic?
- 6. Are there any limitations to the sensors that can be implemented?
- 7. What redundancies or fail-safes should be in place to guarantee that the traffic signals will keep working in case of sensor failure?
- 8. How will coordination between traffic systems be made possible?
- 9. What systems are currently in place to detect the speed and volume of oncoming traffic?
- 10. Is the traffic system for single intersections or should it work across multiple traffic lights?
- 11. Should public transportation, emergency vehicles, or priority vehicles be able to control traffic in order to improve traffic for these vehicles?
- 12. How will the system address potential challenges such as adverse weather conditions, road construction, or special events that may affect traffic flow?
- 13. In case of traffic on all roads, how should the traffic signals proceed?
- 14. How will the system balance the competing objectives of optimizing traffic flow and ensuring pedestrian safety at intersections?
- 15. How will the system make sure that the drivers don't exceed the speed limit?
- 16. Is the system supposed to integrate with current infrastructure or will it be a whole new system?
- 17. How will the system handle pedestrian crossings, and what measures are in place to prioritize pedestrian safety?
- 18. What protocols will be established to handle system upgrades or potential fixes without causing disruptions to regular traffic operations?
- 19. Are there any specific safety protocols or regulations that the system needs to adhere to?
- 20. How will the system handle traffic incidents or accidents, and what measures are in place to reroute traffic and minimize disruptions?
- 21. What communication protocols will be used for coordination between traffic signals?
- 22. How will the system handle intersections with different traffic priorities, such as major roads versus side streets?
- 23. What technologies/AI models will be utilized for detecting oncoming traffic speed and volume?
- 24. What level of accuracy is required for detecting oncoming traffic speed and volume?
- 25. What European/International directives or regulations govern the design and implementation of traffic signal control systems?

- 26. How will the system transmit Signal Phase and Timing (SPAT message that the traffic lights send to cars, to tell them when it's safe to go or when to stop in advance) data to connected vehicles?
- 27. Will the system be able to communicate with vehicles equipped with CITS (smart cars and roads that talk to each other to make driving safer and easier. Helps cars share important information, like where they are and if there's traffic ahead.) technology?
- 28. Will the system support dynamic updating of MAP (mapping of the information about roads, streets, intersections) data to account for changes in road infrastructure?



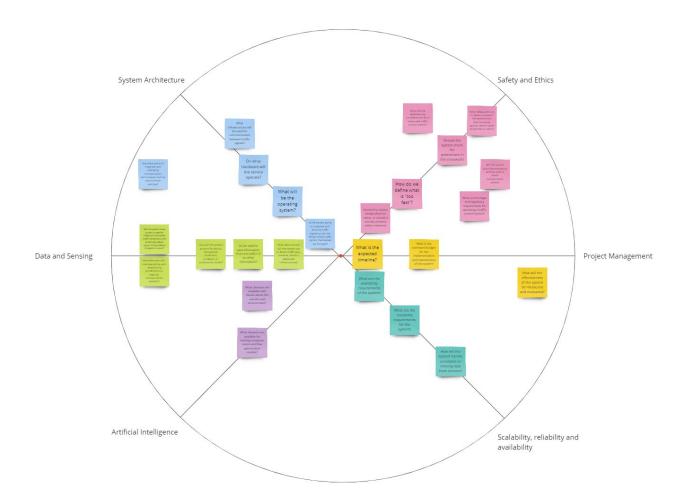
- 1. How does the system guarantee the adaptability of traffic in the event of urban changes?
- 2. Are there already, in the market, solutions geared towards controlling traffic?
- 3. If technologies for detecting oncoming traffic already exist, which should we use?
- 4. How accurately does the system need to detect the speed of approaching traffic?
- 5. Should the traffic signals have a long-distance speed detector to change the signal?
- 6. Should there be any concerns in scenarios such as peak times to optimize traffic?
- 7. How should the system behave if someone disrespects the traffic laws?
- 8. What protocol should the system follow in order to handle traffic accidents?
- 9. What types of sensors or technologies should be used to accurately detect oncoming traffic?
- 10. How does the system intend to be reliable, when there are adverse weather conditions?

- 11. How should the system distinguish and handle different types of vehicles and pedestrians?
- 12. How should the system address potential privacy issues related to data collection and processing?
- 13. Should we take into account different types of terrain when placing the sensors for the system or should we assume it is only going to be used in flat terrains with straight lines?
- 14. How should the system handle emergency vehicles or situations that require immediate intervention?
- 15. Are there any requirements that need to be considered when implementing an AI-based traffic signal system in terms of bias to certain situations that could be exploited, in terms of safety?
- 16. Are there specific communication protocols that should be followed to ensure interoperability with third-party systems?
- 17. If such infrastructure exists, should the system also integrate with existing traffic management infrastructure?
- 18. Are there any specific budgetary constraints that should be considered during the development of the system?
- 19. How should the system mitigate biases in traffic flow optimization, particularly in diverse or densely populated areas?
- 20. How will the system handle software updates to ensure long-term stability/effectiveness of the system?
- 21. Should the system be air-gapped, which means not being connected to another network either by wire or wirelessly?
- 22. Are there any failsafe mechanisms that the system should implement?
- 23. Are there specific scenarios or intersections where the system needs to be more critical?
- 24. What are the metrics used to measure the impact of the system, e.g., emissions, saved fuel?
- 25. Is a user interface for displaying traffic information necessary to exist?
- 26. If a user interface is required, what kind of features are expected?
- 27. Who are the clients of the system?
- 28. Who are the end-users of the system?
- 29. With which entities should the system share the collected or produced information?
- 30. What are the desired system interfaces, e.g, should it have video streaming to the police or an app for electronic operators?
- 31. How much time is expected before delivering a prototype of the system?
- 32. What is the system's desired uptime ratio?
- 33. What is the expected lifetime of the system?
- 34. How long is the system expected to be maintained/supported?
- 35. In which administrative regions, i.e., countries, is this system going to be used?
- 36. Should the system produce some form of analytics, e.g., vehicles detected?
- 37. How does the system create revenue?
- 38. Is the AI a third-party service that runs on the cloud or a service created from scratch that runs locally?



- 1. What is the expected timeline for development and deployment?
- 2. What are the legal and regulatory requirements for operating a traffic control system?
- 3. What will be the operating system?
- 4. How will the system handle unreliable or missing data from sensors?
- 5. How will the system account for factors like weather conditions, accidents, or construction zones?
- 6. What safeguards are in place to prevent the system from discriminating against certain types of vehicles or users?
- 7. Do we need to save information from the traffic? If yes, what information?
- 8. Should the system simply allow for safety by avoiding scenarios like having all traffic lights green simultaneously, or should it actively enhance safety measures, such as triggering a red light when a vehicle exceeds a specific speed limit?
- 9. What are the scalability requirements for the system (e.g., number of intersections, traffic volume)?
- 10. How will the effectiveness of the system be measured and evaluated?
- 11. What is the estimated budget for the implementation and maintenance of the system?
- 12. What are the specific metrics we will use to define "optimized traffic flow" (e.g., average speed, wait times, emissions reduction)?
- 13. Should the system check for pedestrians in the crosswalk?

- 14. What data sources will the system use to detect traffic (e.g., cameras, sensors, dedicated infrastructure)?
- 15. Is the system going to integrate with existing traffic signals or can the design of the traffic signals themselves be changed?
- 16. What are the availability requirements of the system?
- 17. What are the cybersecurity considerations for a networked traffic control system?
- 18. Will the system prioritize emergency vehicles and/or public transportation access?
- 19. What datasets are available for training computer vision and flow optimization models?
- 20. What datasets are available with details about the overall road environment, including details on speed limits, road layouts, and other pertinent factors?
- 21. How do we define what is "too fast"?
- 22. Are there plans to integrate with emerging transportation technologies such as autonomous vehicles?
- 23. Are there plans for interoperability with neighboring jurisdictions or regional transportation systems?
- 24. Will the system have access to satellite imaging to anticipate traffic bottlenecks and proactively adjust signal timings before congestion occurs?
- 25. On what hardware will the service operate?



# Categories of Questions:

- 1. T 01: Technology, Payment, Maintenance, Time, Usability, Availability, Security
- 2. T02: Implementation, Evaluation & optimization, Regulations, Maintenance, Environment, Management, Safety, Traffic Detection
- 3. T03: Resources, Technology, Infrastructure, Metrics and Evaluation, Regulations, Management & Maintenance, Security & Reliability, Schedule
- 4. T04: System Design, Functional Requirements, Safety and Compliance, Technical and Maintenance, Environmental and Social Impact
- 5. T05: Accessibility, Scalability, Security, Adaptability, Correctness, Efficiency, Modifiability, Integrability
- 6. T 06: Reliability, Upgradability, Usability, Technology, Integration, Schedule, Ethic, Cost Effectiveness, Security, Availability
- 7. T 07: Time and Deployment, Security, Reliability, Adaptability, Traffic Flow Optimization, Infrastructure, Technology
- 8. T 08: Safety, Availability, Efficiency, Costs/Management, Interoperability, Technology, Usability, Privacy
- 9. T 09: Security, Behavior, Project Budget/Guidelines, Implementation Design, Infrastructure
- 10. T 10: Business Understanding, Budget, Maintainability, Interface, Features, Technology, Safety, Privacy
- 11. T 11: Safety and Ethics, Project Management, Scalability, reliability and availability, Artificial Intelligence, Data and Sensing, System Architecture