Sam, Antonio, Omar, René

Problem 1:

- **Question 1**

Availability: the primary security property enforced by the system is access control. The gates make sure that only vehicles with a valid time-stamped ticket can enter or leave, thus regulating the access to the parking garage. This is a matter of availability, as it ensures that the service is available only to those who follow the process.

Integrity: the confirmation of time-stamped ticket at the entry and its requirement at exit ensures that a record is kept of each vehicle's entry and exit times. This method enforces integrity as it prevents drivers from misusing their parking duration.

Confidentiality: it is not a concern here as the system does not handle sensitive personal information.

- **Question 2**

Recommendation on eliminating the entry gate:
We would not recommend eliminating the entry gate. While it's true that drivers need a validated ticket for exit and therefore have an incentive to collect a ticket at entry, removing the entry gate could lead to several issues.
Security risk: the entry gate acts as deterrent against an unauthorized entry. Its removal could increase the risk of unauthorized or even malicious access.
Record keeping: the current system ensures an accurate record entry of time, which is important for calculating parking fees and managing parking space availability.

- **Question 3**

We do not recommend implementing the suggestion because it would make little difference to the current method. It would not improve the efficiency or safety of customers. In fact, it arguably adds extra steps as the customer would have to stop the car first anyway to press the button therefore making this function less accessible (which would affect the availability of this system).

- **Question 4**

We do not recommend implementing this suggestion because in theory people could park their cars between 20:00 and 9:00 without a ticket, then stay parked until after 9:00, and then be required to have a ticket they would not have. In security policy language this would hurt the integrity of the system as it could lead to erroneous parking that negatively affects the customer and the wider system as a whole. It also affects the

availability of the system as customers would not be able to get out of the garage without a ticket if they parked before 9, making it so the exit function of the garage is unavailable to these customers.

Problem 2:

Selecting randomly among all passengers may be the suitable searching choice with the fixed budget. The justification for this is that it can catch terrorists who are outliers of potential predefined profiles, as we're not relying on possibly faulty prejudices for what a terrorist looks like. There are some moral implications in searching passengers satisfying certain predefined profiles, and this may not be fair for passengers who satisfy predetermined profiles and are not terrorists. Having predefined profiles could also have the negative consequence of terrorists knowing about these profiles and finding other ways to bring bombs and other potentially dangerous materials by for example planting these on passengers who do not fit these profiles, as the terrorist would know that these would not be stopped for a search.

Problem 3:

- **Question 1:**
  The proposed law might have undesired consequences in these ways:
  - *Impartiality in the news:* OmaWho is in charge of the news and why do they know which ones are fake news and which are not? This is something we have to ask ourselves as political parties of certain ideologies will slant the news in their favor and those that are not will be labeled as fake news.
  - *Integrity risk*: How do we know that the person who has written the news is who he claims to be and is not impersonating someone else? This is an issue that could result in individuals who had nothing to do with the publication of the news item being fined.
  - *Assurance risk*: How true is the authenticity of a story if it is only supported by people and not by evidence? The person vouching for the authenticity of the story could somehow lie or believe that he or she saw something that did not actually happen.
  - *Confidentiality risk*: What could happen if a news item harms a certain person or group of people with power or money to harm them for publishing that information? The person who endorses the story is espousing the bad intentions of those who have been harmed by the news coming to light. Because the person's address and name are posted with the news item then these people could maliciously attack them in some form.

- **Question 2:**
  The law might be modified to eliminate undesired consequences in these ways:
  - *Attempting to eliminate political impartiality*: One could try to create one or several groups outside any political party but the biggest problem would be that this group must receive money from somewhere and this money usually comes from the government in power, so there would be a great conflict of interests. Therefore, it would be necessary to look for subsidies in other ways without dependence on the government.
  - *Add a strong verification system*: In order to know with certainty who is writing the news, a complex verification system should be developed at the time of publishing the news, either with facial recognition or with a Two-factor authentication, for example.
  - *Proof based news*: To guarantee the authenticity of the news, there should be material evidence to support it in addition to the person's own story in which his or her name and address will appear.
  - *Encrypting sensitive information:* Instead of putting address and name someone who is posting a news story has some kind of (id) number that only the government can decrypt so that the integrity of the news can still be checked and the person fined without the person's personal information being available to the public.