PetPal

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LIKELIHOOD TABLE

LIKELIHOOD RANK	RISK DESCRIPTION
1	**Animals Refusing to Wear Sensor Collars:** Some animals may refuse to wear collars or they may lose them while roaming. This would reduce tracking accuracy and make it harder to monitor their vaccination status.
2	**Removal or Relocation of Sensors:** The RFID sensors that are deployed can be stolen or tampered with. If the sensors get lost, the system's ability to effectively track animals will be compromised, leading to inaccurate data. Given the accessibility of these devices, this is a moderately likely risk with significant impact.
3	**Overpopulation of Feeding Stations:** If too many stray animals gather around feeding stations, it may lead to territorial aggression, fights, or an imbalance in food distribution. Some animals may dominate the area, preventing others from accessing food and water, which could undermine the project's goal of fair resource allocation.
4	**System Integration Failure:** Integrating various components such as RFID sensors, and smart bowls may result in compatibility issues. This could lead to incomplete animal location data, non-functional alert systems, or unreliable feeding stations, impacting the project's effectiveness.
5	**Data Overload & System Lag:** The app and tracking system may struggle to process large amounts of real-time data from RFID sensors, GPS trackers, and user reports, leading to slow updates or crashes.
6	**Panic Button Usage in Animal-Dense Areas:** The panic button can display several animals that look like the one that just harmed the user if the area has a high animal population.
7	**Animal Abusers:** There is the potential for the information in the app to be used for illegal animal traders to find dogs with high trade value, and kidnap or request to adopt them, only to sell them for profit. In addition, bigger animals can be singled out through the profiles, adopted, and forced into illegal animal fighting rings. Administrators should be vigilant to prevent this from happening, and authorities should be alerted should any suspicious activity occur.
8	**Device Failure Risk:** Technical malfunctions in smart collars, sensor-equipped food bowls, or QR code systems.

LIKELIHOOD RANK	RISK DESCRIPTION
9	**Trolls:** During the adoption process, users may provide false or fraudulent information, and as a result, this could waste the time of administrators tasked with checking profile creation / update requests.
10	**Internet-Network Failure:** If Wi-Fi is unstable, real time notifications and syncing will be affected.
11	**Power Outage:** In the event of a power outage, devices that aren't capable of producing their own energy (e.g: solar panels) will not be able to operate. Although unlikely, this event could cause serious issues if it happens.
12	**Cyber Attacks:** People with bad intentions, or simply people who want ransom, could attempt to disrupt the system via attacks such as DDoS. As they don't stand to gain much money, as there are no transactions performed within the app, or even fame, as someone who hacks an app meant for helping animals would be widely hated, this is highly unlikely.

IMPACT TABLE

IMPACT RANK	RISK DESCRIPTION
1	**Power Outage:** In the event of a power outage, devices that aren't capable of producing their own energy (e.g: solar panels) will not be able to operate. Although unlikely, this event could cause serious issues if it happens.
2	**Removal or Relocation of Sensors:** The RFID sensors that are deployed can be stolen or tampered with. If the sensors get lost, the system's ability to effectively track animals will be compromised, leading to inaccurate data. Given the accessibility of these devices, this is a moderately likely risk with significant impact.
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5	**System Integration Failure:** Integrating various components such as RFID sensors, and smart bowls may result in compatibility issues. This could lead to incomplete animal location data, non-functional alert systems, or unreliable feeding stations, impacting the project's effectiveness.

IMPACT RANK	RISK DESCRIPTION
6	**Animals Refusing to Wear Sensor Collars:** Some animals may refuse to wear collars or they may lose them while roaming. This would reduce tracking accuracy and make it harder to monitor their vaccination status.
7	**Data Overload & System Lag:** The app and tracking system may struggle to process large amounts of real-time data from RFID sensors, GPS trackers, and user reports, leading to slow updates or crashes.
8	**Overpopulation of Feeding Stations:** If too many stray animals gather around feeding stations, it may lead to territorial aggression, fights, or an imbalance in food distribution. Some animals may dominate the area, preventing others from accessing food and water, which could undermine the project's goal of fair resource allocation.
9	**Internet-Network Failure:** If Wi-Fi is unstable, real time notifications and syncing will be affected.
10	**Animal Abusers:** There is the potential for the information in the app to be used for illegal animal traders to find dogs with high trade value, and kidnap or request to adopt them, only to sell them for profit. In addition, bigger animals can be singled out through the profiles, adopted, and forced into illegal animal fighting rings. Administrators should be vigilant to prevent this from happening, and authorities should be alerted should any suspicious activity occur.
11	**Panic Button Usage in Animal-Dense Areas:** The panic button can display several animals that look like the one that just harmed the user if the area has a high animal population.
12	**Trolls:** During the adoption process, users may provide false or fraudulent information, and as a result, this could waste the time of administrators tasked with checking profile creation / update requests.

COMBINED TABLE

LIKELIHOOD RANK	IMPACT RANK	COMBINED RANK	RISK DESCRIPTION
2	2	4	**Removal or Relocation of Sensors:** The RFID sensors that are deployed can be stolen or tampered with. If the sensors get lost, the system's ability to effectively track animals will be compromised, leading to inaccurate data. Given the accessibility of these devices, this is a moderately likely risk with significant impact.
1	6	7	**Animals Refusing to Wear Sensor Collars:** Some animals may refuse to wear collars or they may lose them while roaming. This would reduce tracking accuracy and make it harder to monitor their vaccination status.
4	5	9	**System Integration Failure:** Integrating various components such as RFID sensors, and smart bowls may result in compatibility issues. This could lead to incomplete animal location data, non-functional alert systems, or unreliable feeding stations, impacting the project's effectiveness.
8	3	11	**Device Failure Risk:** Technical malfunctions in smart collars, sensor-equipped food bowls, or QR code systems.
3	8	11	**Overpopulation of Feeding Stations:** If too many stray animals gather around feeding stations, it may lead to territorial aggression, fights, or an imbalance in food distribution. Some animals may dominate the area, preventing others from accessing food and water, which could undermine the project's goal of fair resource allocation.
11	1	12	**Power Outage:** In the event of a power outage, devices that aren't capable of producing their own energy (e.g: solar panels) will not be able to operate. Although unlikely, this event could cause serious issues if it happens.
5	7	12	**Data Overload & System Lag:** The app and tracking system may struggle to process large amounts of real-time data from RFID sensors, GPS trackers, and user reports, leading to slow updates or crashes.

LIKELIHOOD RANK	IMPACT RANK	COMBINED RANK	RISK DESCRIPTION
12	**4**	**16**	**Cyber Attacks:** People with bad intentions, or simply people who want ransom, could attempt to disrupt the system via attacks such as DDoS. As they don't stand to gain much money, as there are no transactions performed within the app, or even fame, as someone who hacks an app meant for helping animals would be widely hated, this is highly unlikely.
7	**10**	**17**	**Animal Abusers:** There is the potential for the information in the app to be used for illegal animal traders to find dogs with high trade value, and kidnap or request to adopt them, only to sell them for profit. In addition, bigger animals can be singled out through the profiles, adopted, and forced into illegal animal fighting rings. Administrators should be vigilant to prevent this from happening, and authorities should be alerted should any suspicious activity occur.
6	**11**	**17**	**Panic Button Usage in Animal-Dense Areas:** The panic button can display several animals that look like the one that just harmed the user if the area has a high animal population.
10	**9**	**19**	**Internet-Network Failure:** If Wi-Fi is unstable, real time notifications and syncing will be affected.
9	**12**	**21**	**Trolls:** During the adoption process, users may provide false or fraudulent information, and as a result, this could waste the time of administrators tasked with checking profile creation / update requests.