



Advancing Al-driven IoT: Enabling Proactive Adaptation of IoT Systems with Multi-agent Reinforcement Learning

Georgios Bouloukakis, georgios.bouloukakis@telecom-sudparis.eu Houssam Hajj Hassan, houssam.hajj Hassan@telecom-sudparis.eu

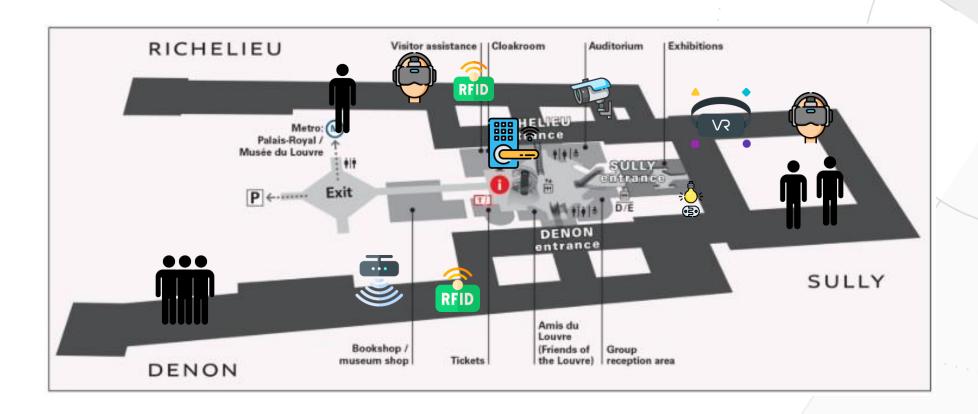
IPParis HPDA/PDS Master projects 2023-2024







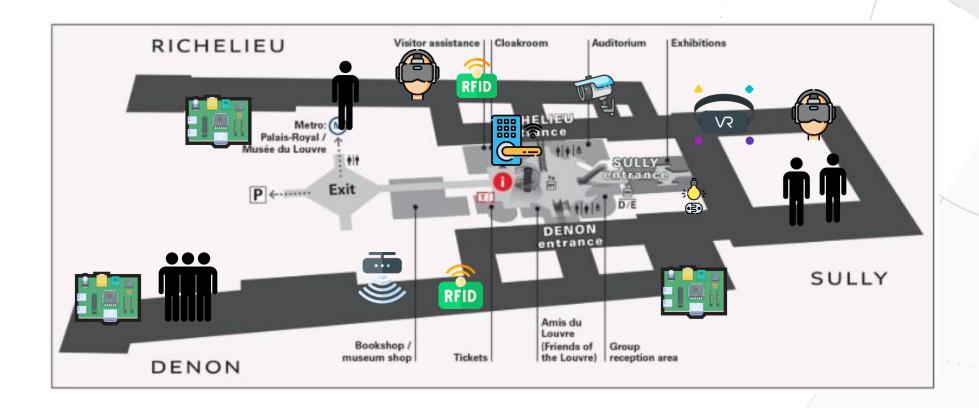
Smart Museum Use Case







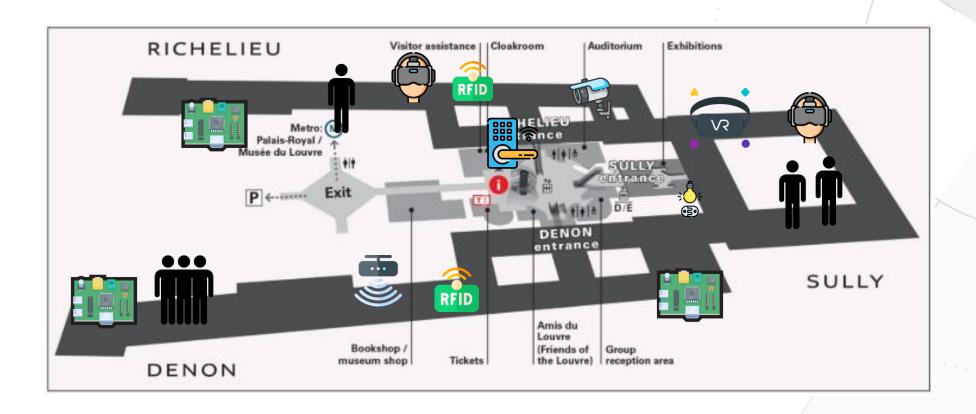
Smart Museum Use Case

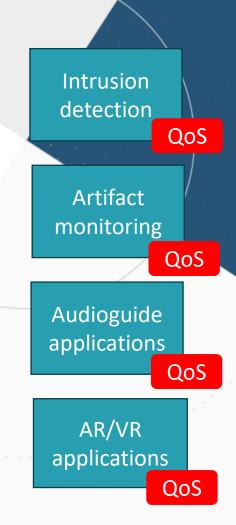






Smart Museum Use Case



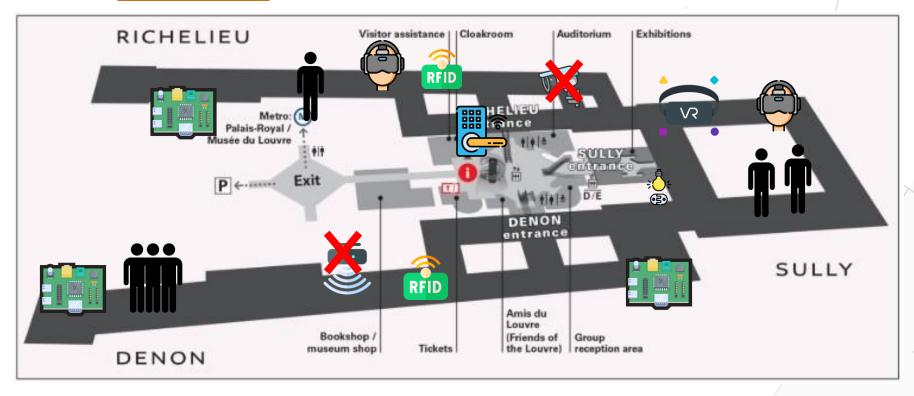


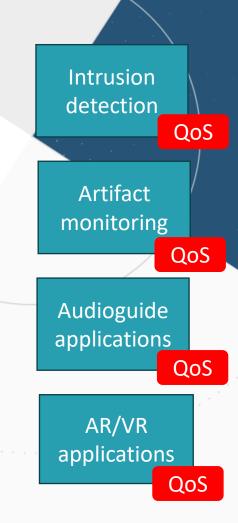


The Need for Adaptive IoT Systems



Device unavailability





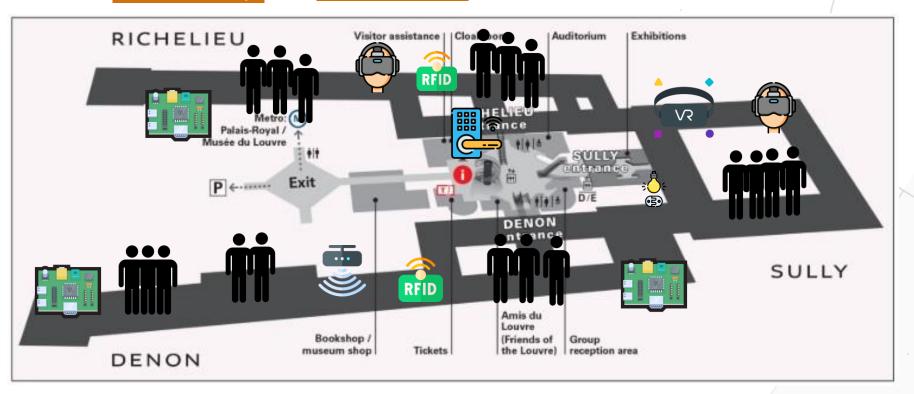


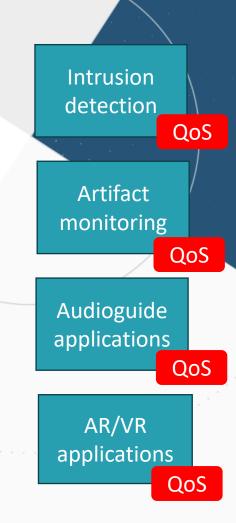


The Need for Adaptive IoT Systems



Workload spikes







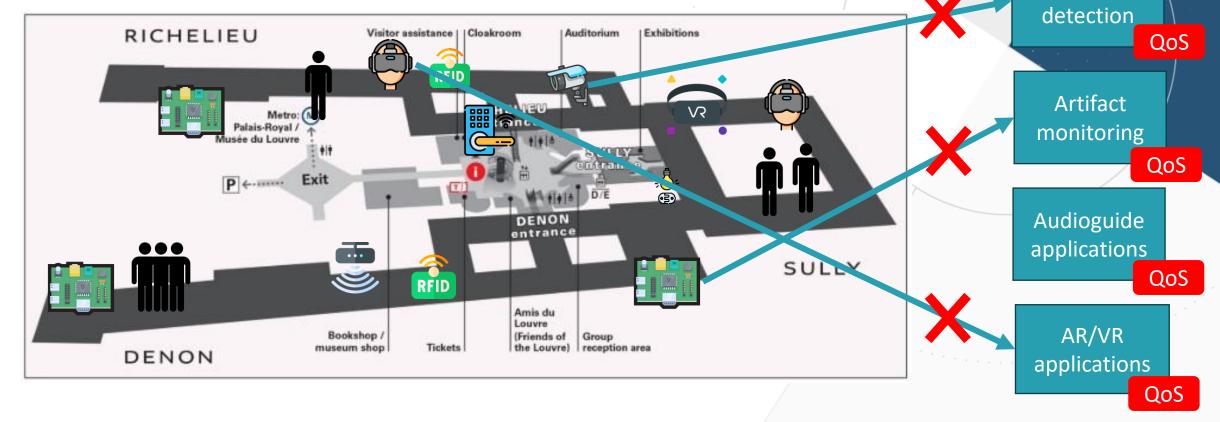


The Need for Adaptive IoT Systems

Device unavailability

Workload spikes

Network failures



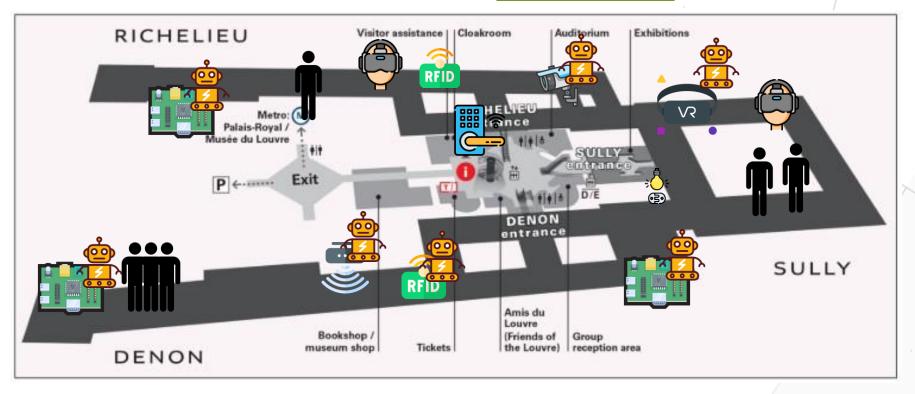


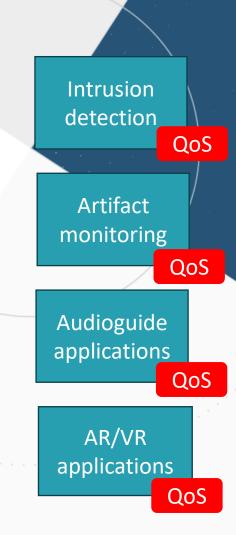
Intrusion



A Proactive Adaptation Approach

Performance Adaptation prediction decisions











Advancing Al-driven IoT: Enabling Proactive Adaptation of IoT Systems with Multi-agent Reinforcement Learning

Georgios Bouloukakis, georgios.bouloukakis@telecom-sudparis.eu Houssam Hajj Hassan, houssam.hajj Hassan@telecom-sudparis.eu

IPParis HPDA/PDS Master projects 2023-2024



