



## 1. Publishable Summary

The Spoke 2 (SP) in the D.A.R.E. Project advances primary prevention initiatives through pioneering digital innovations and meticulous protocol formulations. The efforts are directed towards pioneering an advanced interoperable surveillance system, an epitome of innovation integrating administrative, clinical, health, and environmental data sources. As the primary aim is to develop a robust digital infrastructure capable of not only aggregating different data streams at both individual and population levels, but also leveraging these insights to formulate targeted interventions and risk assessments, we herein describe the strategic design of digital functions, protocols, and Application Programming Interface (API) models, central to establishing an interoperable layer among the different pilot projects in WP2. At its core, this endeavor integrates different data source models and logical data architectures, ensuring a unified and secure internal data structure. Leveraging established technologies, this layer facilitates seamless data consolidation while upholding crucial aspects like isolation, modularity, and stringent access control.

The user-centric nature of the pilot proposals advocates decentralized or federated digital function models, fostering adaptability and tailored functionalities. This approach ensures agility, autonomy, and context-specific operations across diverse initiatives. Adopting an Agile methodology, particularly employing the Kanban approach for protocols, will reflect the commitment to dynamic and iterative processes. This methodology ensures streamlined operations, responsiveness, and continual improvements, aligning seamlessly with evolving initiative needs.

The pivotal role of the API model in translating functions and protocols into practical endpoints underscores our dedication to user accessibility and service-oriented design. These endpoints democratize access while ensuring ease and efficiency in interacting with our advanced digital infrastructure.

In conclusion, this collective effort signifies a significant stride in redefining healthcare strategies. By pioneering digital solutions, fortified by meticulous protocols and agile methodologies, we are poised to usher in a transformative era marked by adaptability, responsiveness, and impactful healthcare strategies.