

## Course Outline

### **1. Introduction to RFID Technology**

Discusses the essentials of radiofrequency identification including tags, readers, frequencies as well as benefits and applications.

### **2. Introduction to RFID Middleware**

Introduces RFID middleware and underlines its importance. Furthermore it surveys main RFID middleware projects/products including OSS initiatives.

### **3. Introduction to EPC and EPC Architecture**

Provides a close overview on the EPC Protocol, its architecture and its capabilities.

### **4. EPC Middleware Standards**

Analyzes the EPC-related standards and the corresponding key concepts, giving a functional and technical area overview.

### **5. ASPIRE and AspireRfid**

Provides a high-level overview of the ASPIRE project and the related open-source AspireRfid project.

### **6. ASPIRE Architecture and Middleware**

Provides an in-depth discussion about the modules that comprise the ASPIRE architecture, their interfaces and internal functions.

### **7. ASPIRE Programmable Language and Engine**

Presents the concept of programmability in the project. Analyzes the programmable language developed in terms of the project and the engine responsible for implementing the described actions.

### **8. ASPIRE Tools and IDE**

Presents the functionality offered by the tools developed in the scope of the project, the IDE and describes how all these together can offer complete RFID solutions.

### **9. ASPIRE Pilots**

Presents the use cases that were designed and demonstrated in the scope of the project, outlining the respective objectives, main observations and conclusions.