



# Integration of RFID in Enterprise Platforms

## The Internet of Things

RFID and sensors bridge the gap between virtual and real world

### Barcode



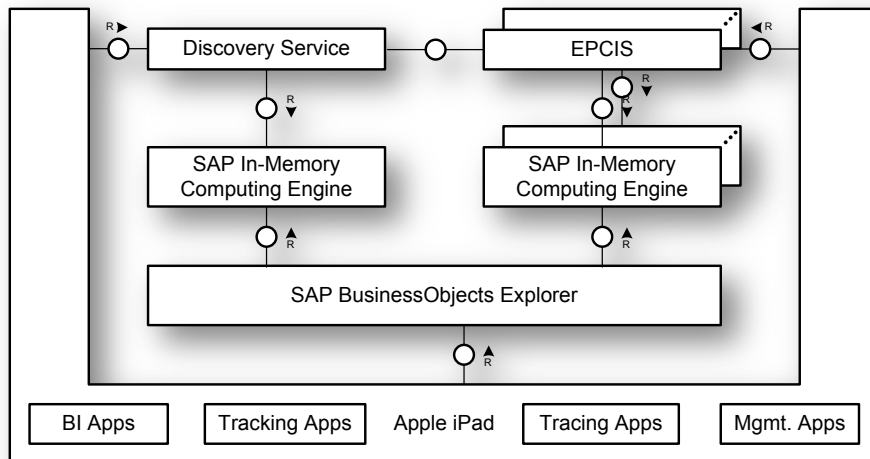
Version      Company Reference      Product Reference      Serial Number

**Electronic Product Code** 01.004324.0234234.000002321

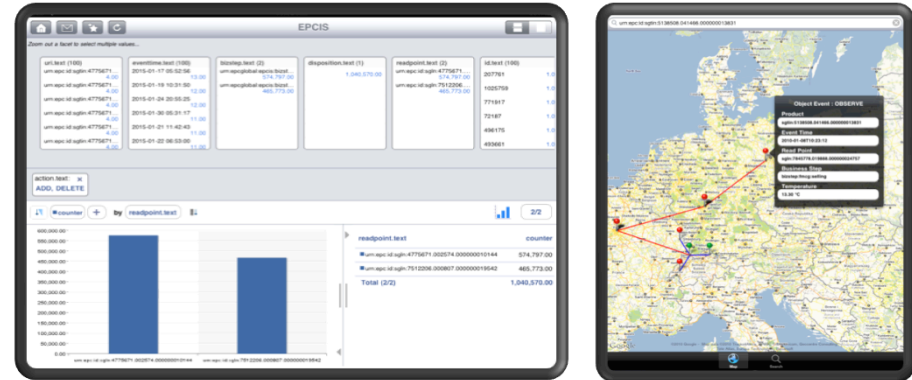
## EPC Network

- Read events are locally stored in companies' EPC storage
- Event history can be queried at the Discovery Service
- Enable track & trace for compliance, anti-counterfeiting, etc.
- We develop a benchmark using our supply chain simulator

## In-Memory based EPC Network Components



## Business Intelligence and Supply Chain Visualization



### Use Case: European Pharmaceutical Industry

- 15 billion packages of pharmaceuticals per year to be tracked
- Ca. 5k/2.5k Discovery Service notifications/queries per second
- Containment-relationships have to be resolved
- Other use cases: tobacco, high-value goods, ...

### Current Research Topics

- Analyze different **Discovery Service architectures**
- **Reduce** necessary **storage space** for EPC-data
- Increase **write** and **read performance**
- Define **business intelligence scenarios** for EPCIS servers
- Develop **visualizations for supply chain management**