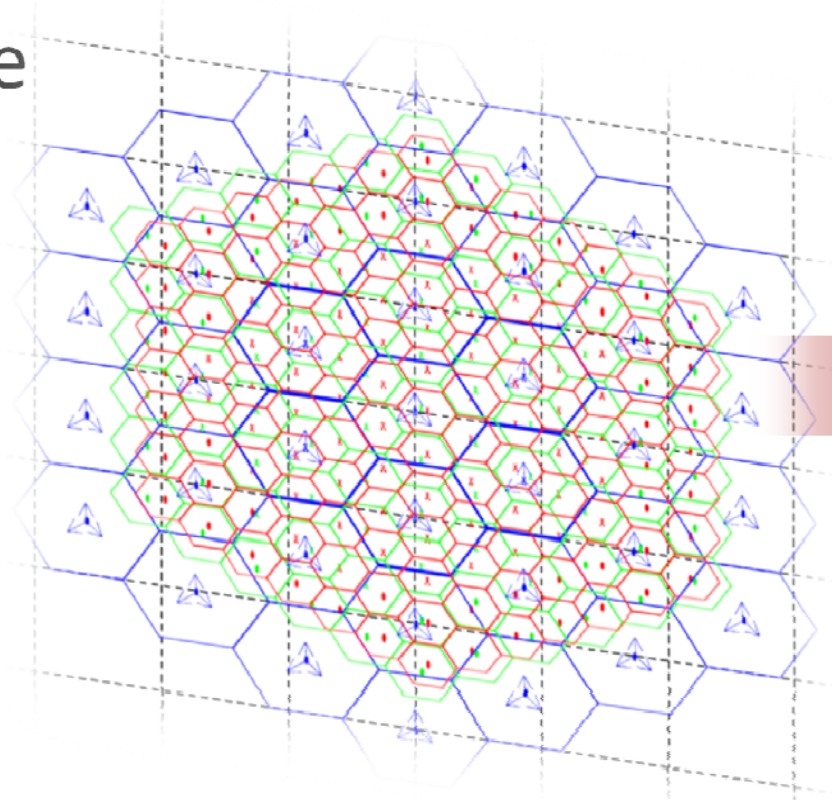


Seamless Wireless Access to the Future Internet

Christian Mannweiler, Andreas Klein, Joerg Schneider

Today's Wireless Access

- Heterogeneous wireless access landscape
- Insufficient mobility support
- Inefficient spectrum usage
- Significant energy limitations
- New bandwidth-intensive services

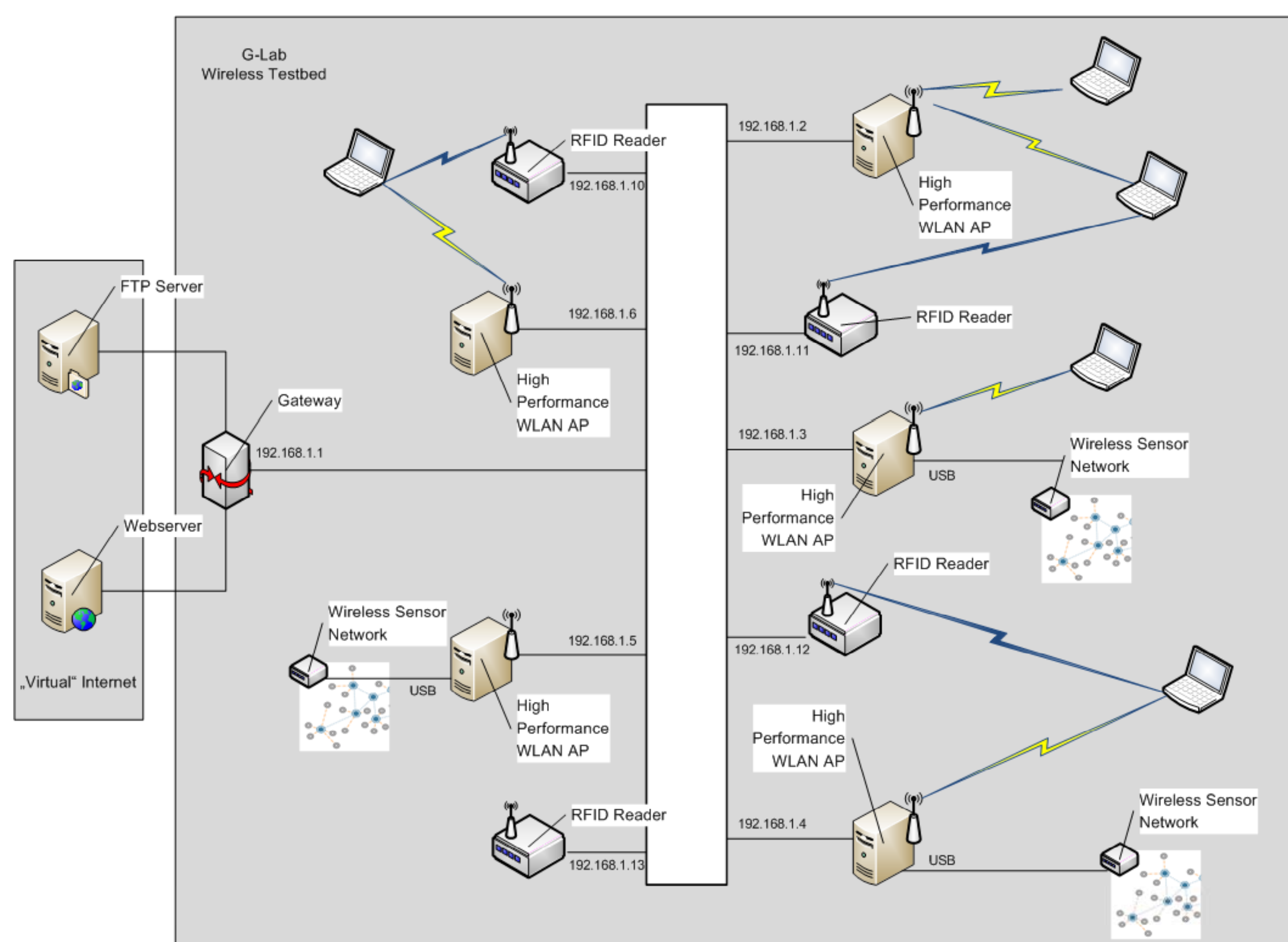


Requirements for Future Wireless Access

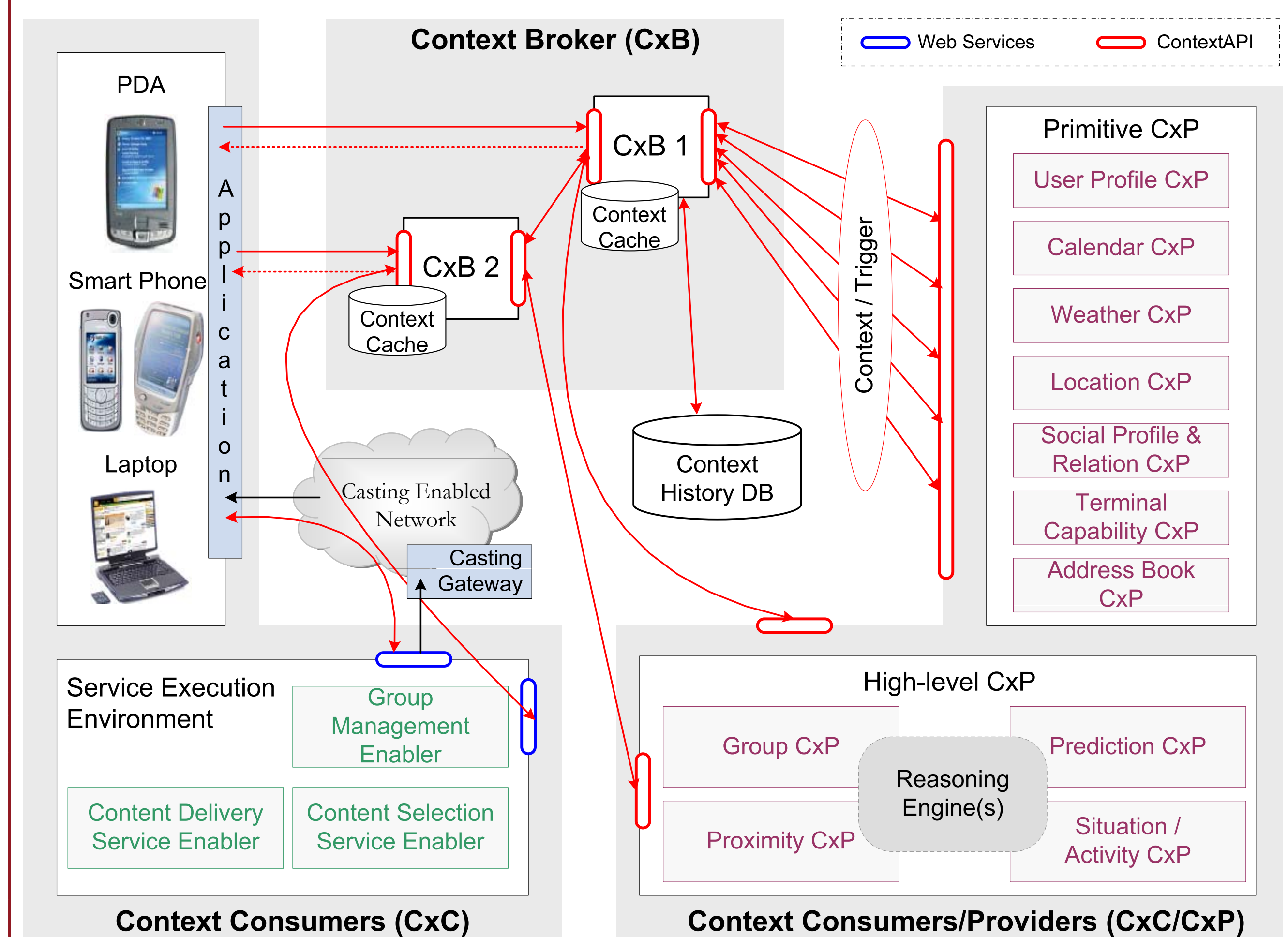
- Converged wireless infrastructures
- Seamless mobility
- Intelligent cognitive access
- Self-organizing networks
- Context-aware network services



Heterogeneous Wireless Testbed



Context Management



Core functionality of the components include

For the Context Consumer

- Means to discover structure of context data or context model
- Publish/Subscribe and Request/Provide Mechanisms for Context Data
- Context-aware Adaptation

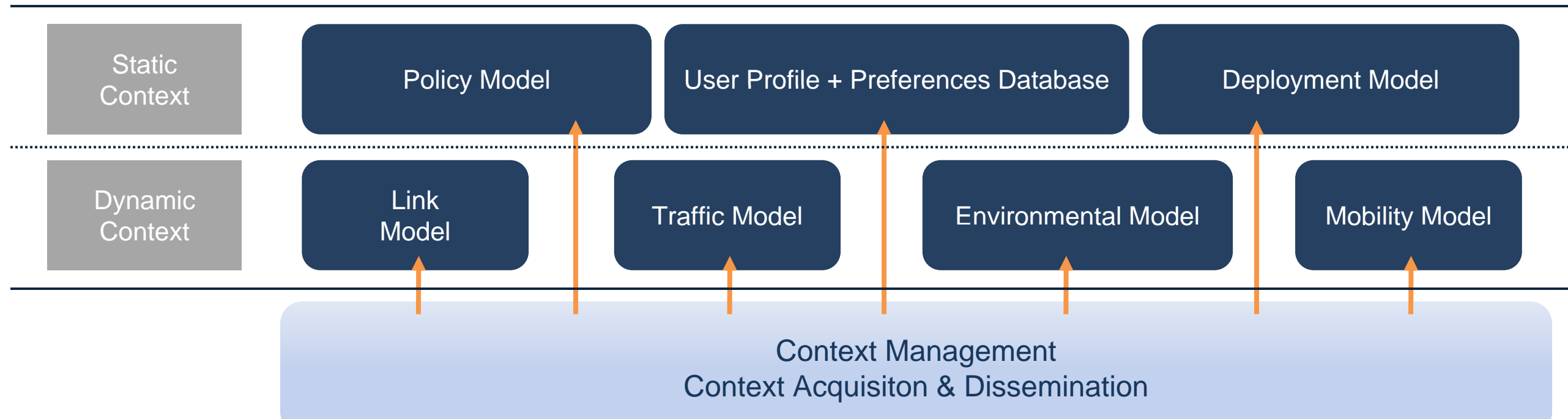
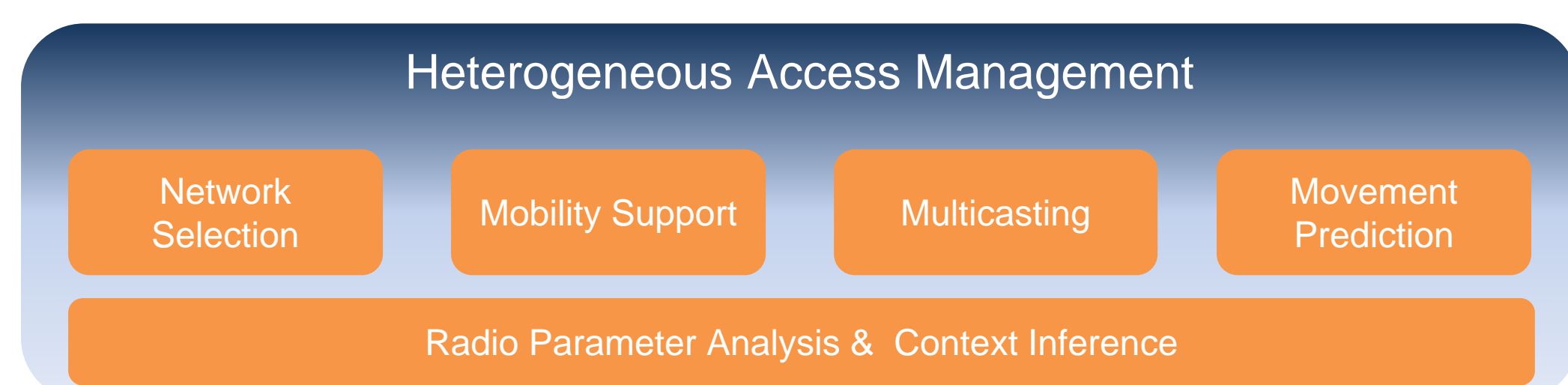
For the Context Broker

- Distributed Architecture
- Publish/Subscribe and Request/Provide Mechanisms for Context Entities
- Subject based Lookup Service for Context

For the Context Provider

- Context Acquisition
- Publish/Subscribe and Request/Provide Mechanisms for Context Data
- Availability of Context History
- Context Aggregation and Fusion
- Context Inference
- Context Prediction
- Group and Management
- Multicast Management

Intelligent Radio Access



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