

# *Holistic Approach to Research in WWI*

## *Cross Issue System Interfaces*

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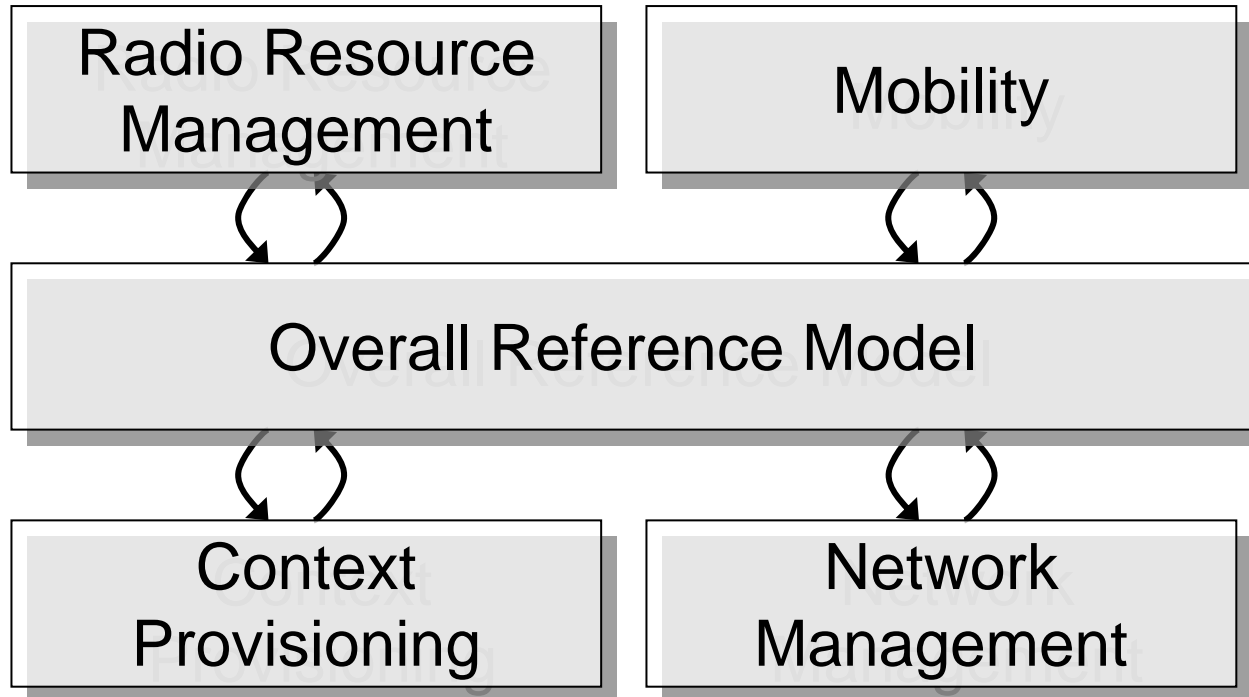
# Objectives & Approaches

- ❖ Increase awareness of architectural components developed in the different WWI projects
  - Functional Architectures presented and discussed in the CI Team
  - CI workshops organized to discuss joint interfaces and common functionalities
  - Bi-lateral workshops organized to discuss specific topics
- ❖ Develop a common network architecture
  - High-level architecture agreed between the CI delegates of the projects
  - Functional architectures developed jointly for four functional areas

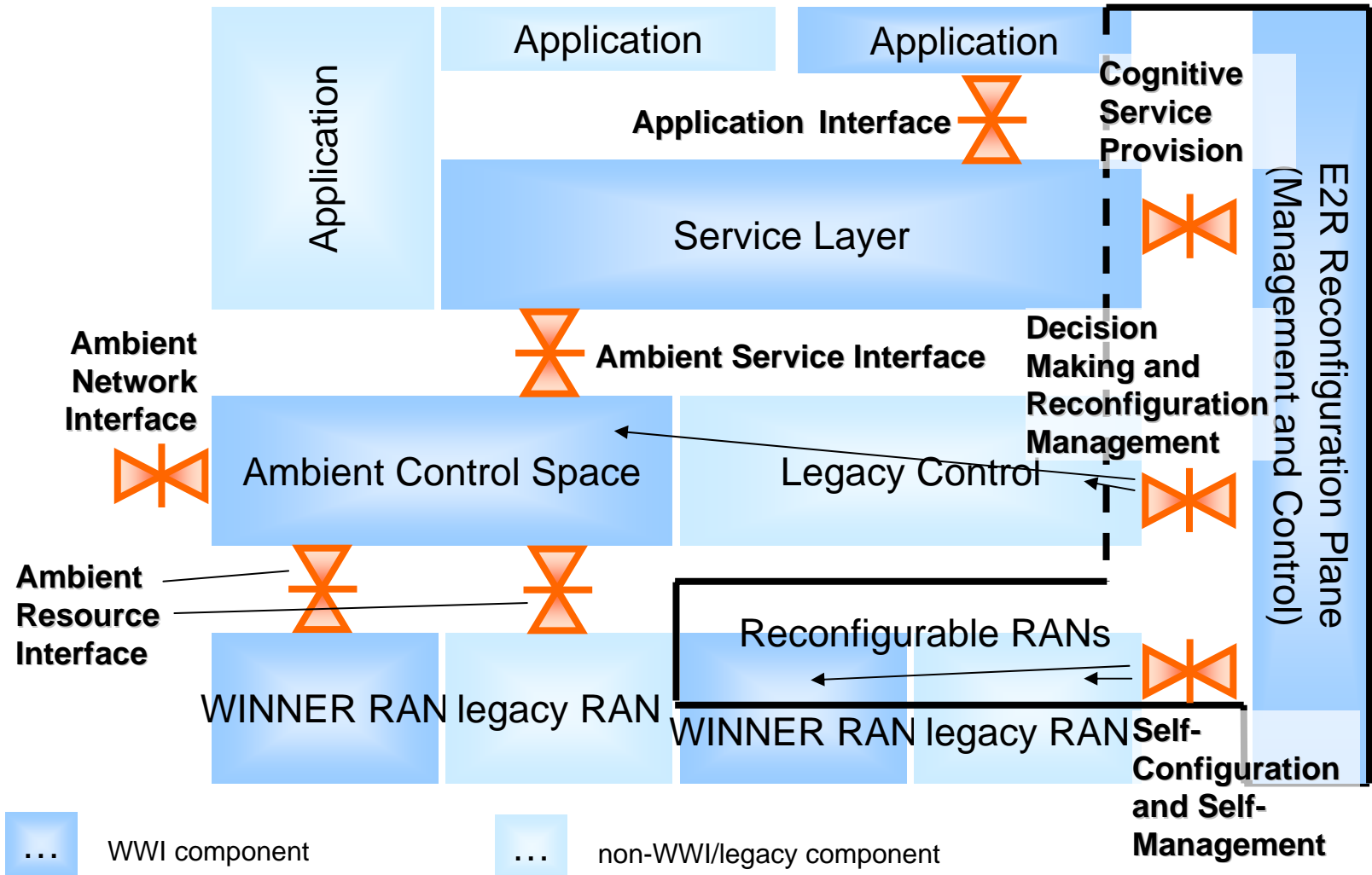
# Objectives & Approaches II

- ❖ Disseminate the WWI Architecture and strengthen the European position
  - Key dissemination channel is the WWRF (Wireless World Research Forum)
  - A couple of joint papers were published
  - Two whitepapers are published
    - Service Layer Architecture
    - WWI Network Architecture
  - The WWI architecture will be included in the **Book of Vision** of the WWRF

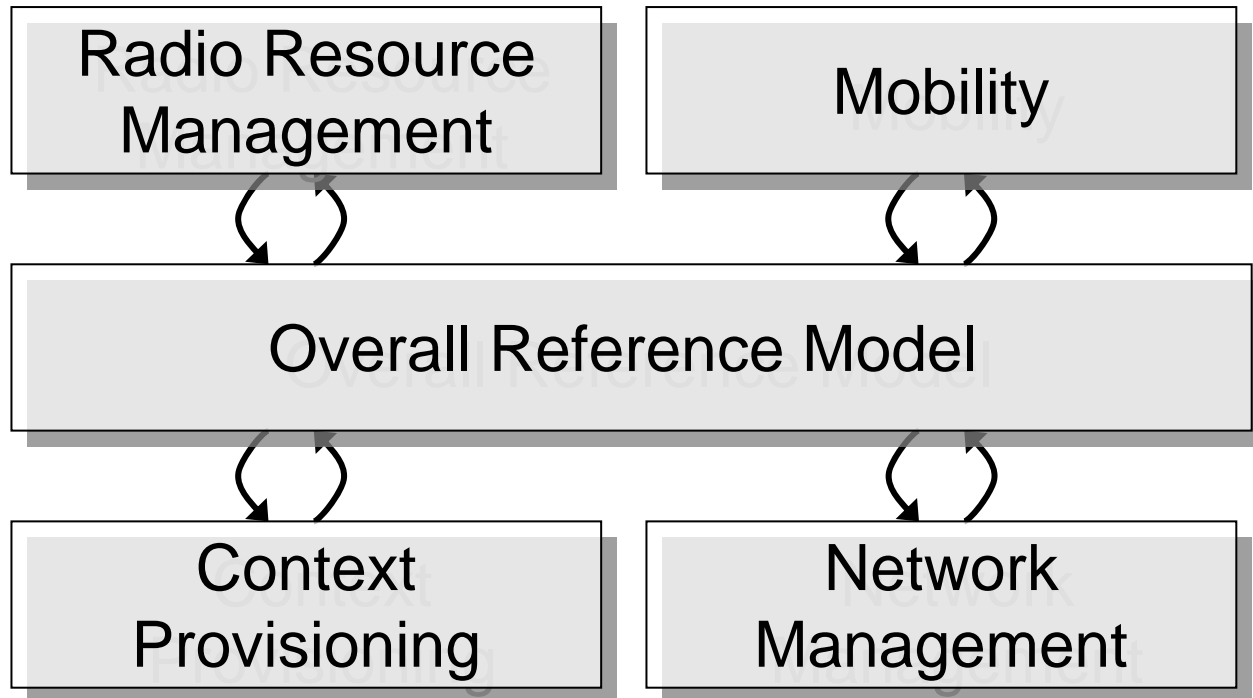
# Work approach



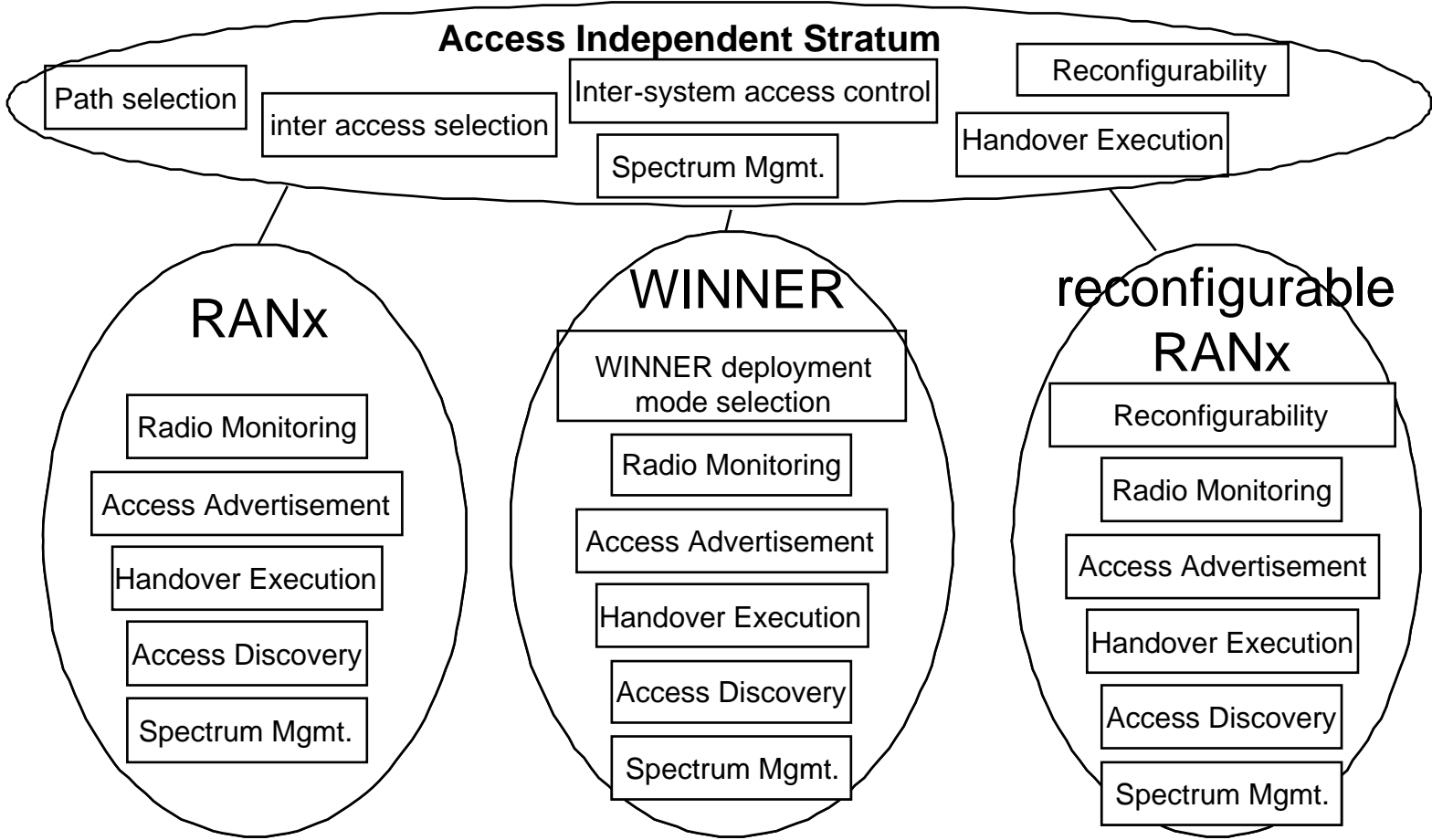
# Overall WWI Reference Model



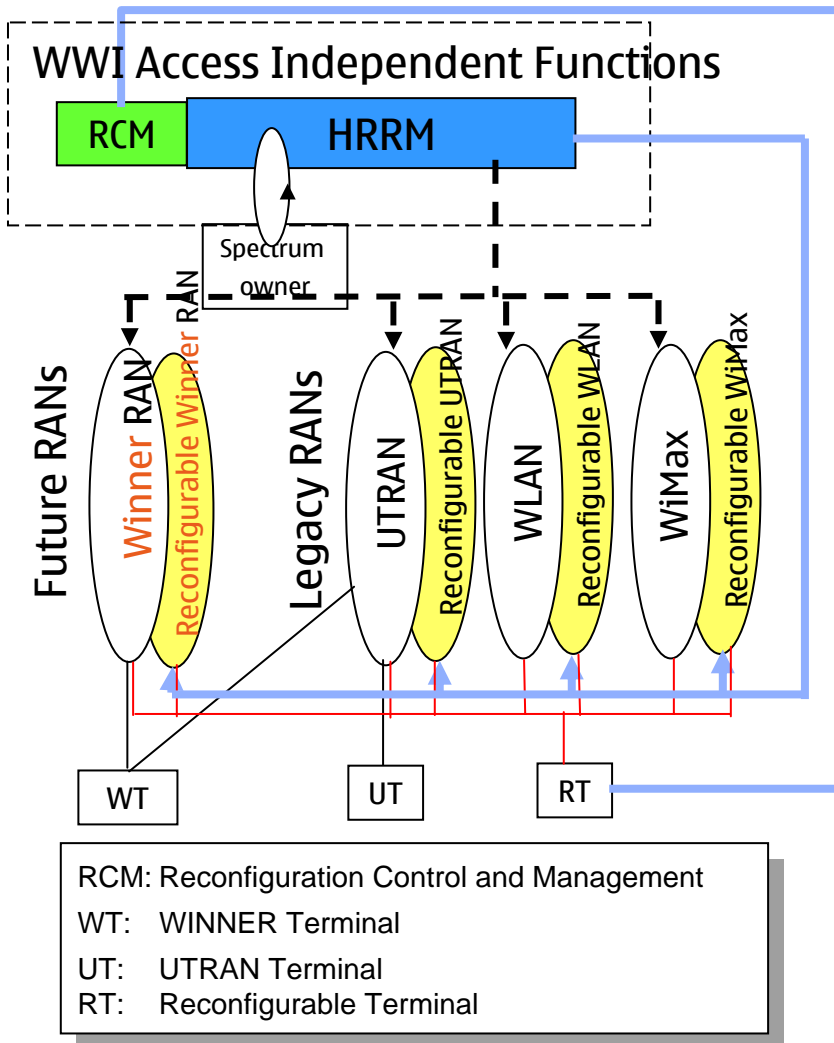
# Work approach



# Radio Resource Management functions



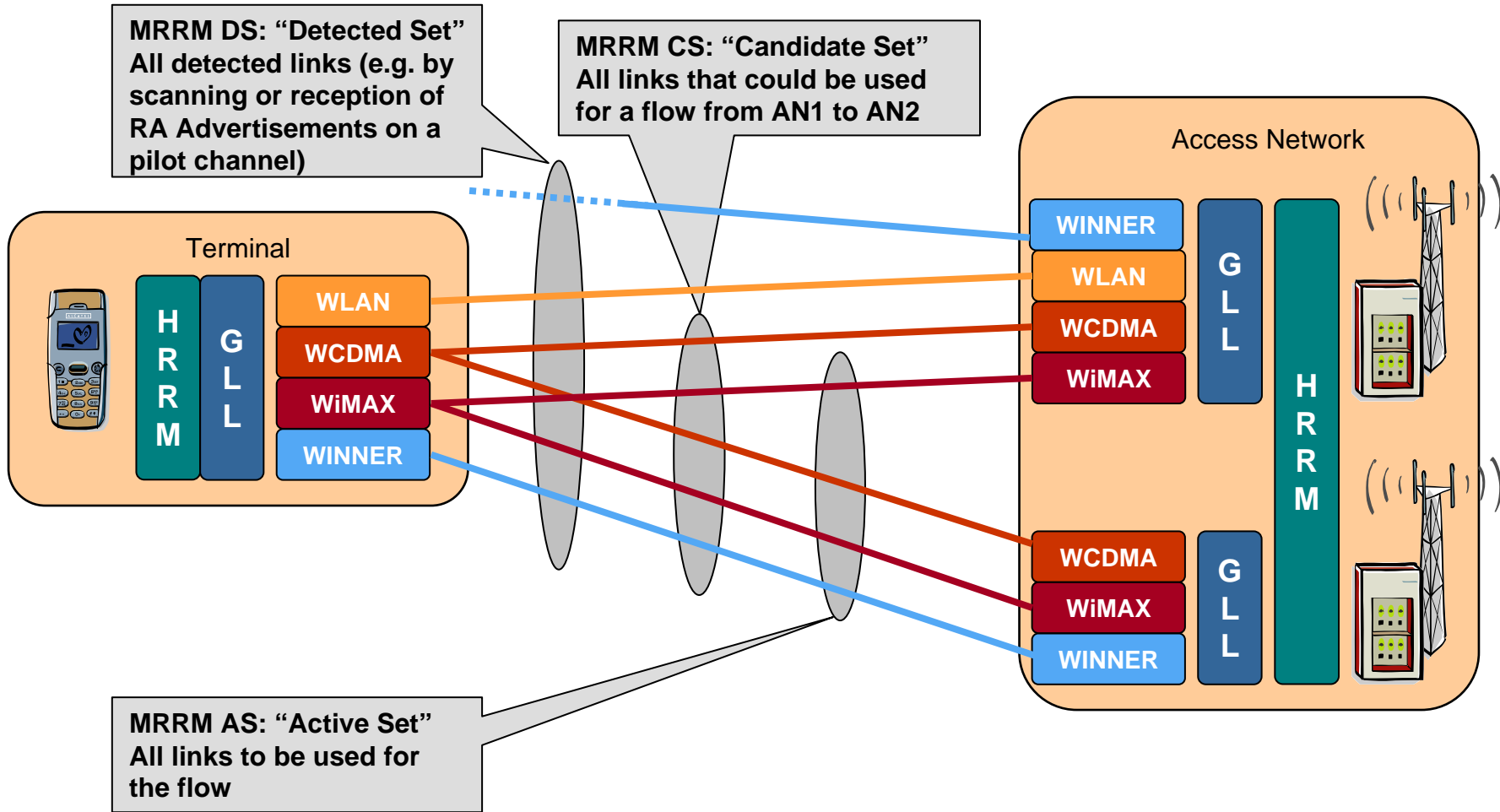
# RRM Use Cases



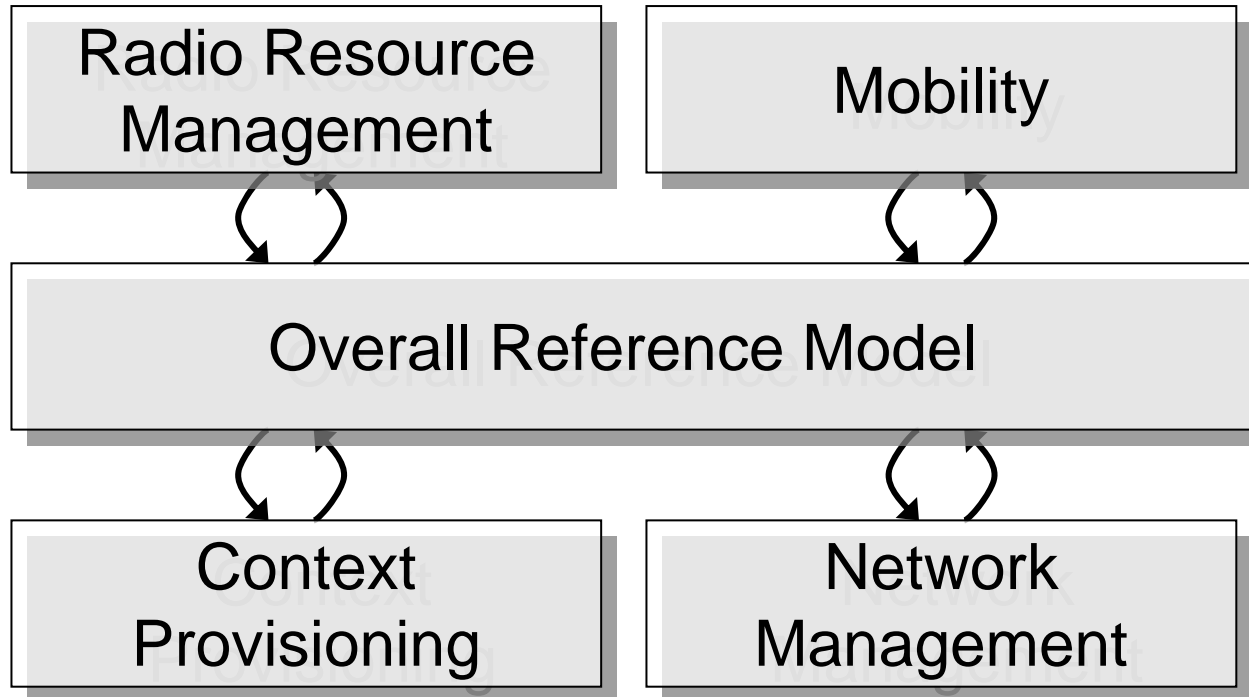
## Scenarios under study

- ❖ HRRM selecting and invoking the WINNER RAN
- ❖ WINNER RAN and reconfigurable RAN HO request to HRRM for Inter System HO
- ❖ Spectrum coordination between WINNER RAN and reconfigurable RAN
- ❖ HRRM/RCM radio reconfiguration of reconfigurable RANs
- ❖ HRRM/RCM request for access to additional operator resources
- ❖ Reconfigurable Terminal roaming with reconfiguration from one type of network to another

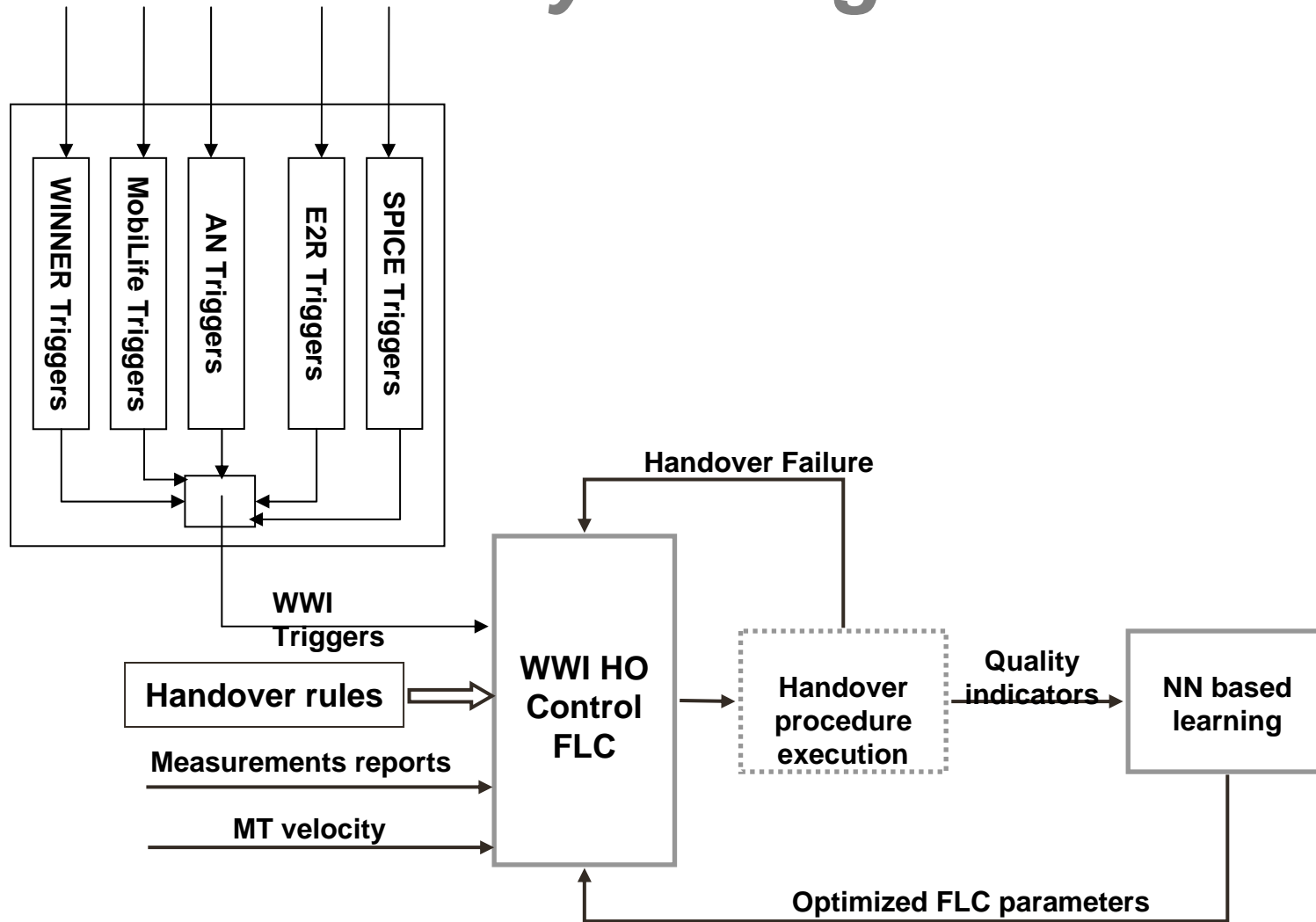
# RRM Access Sets



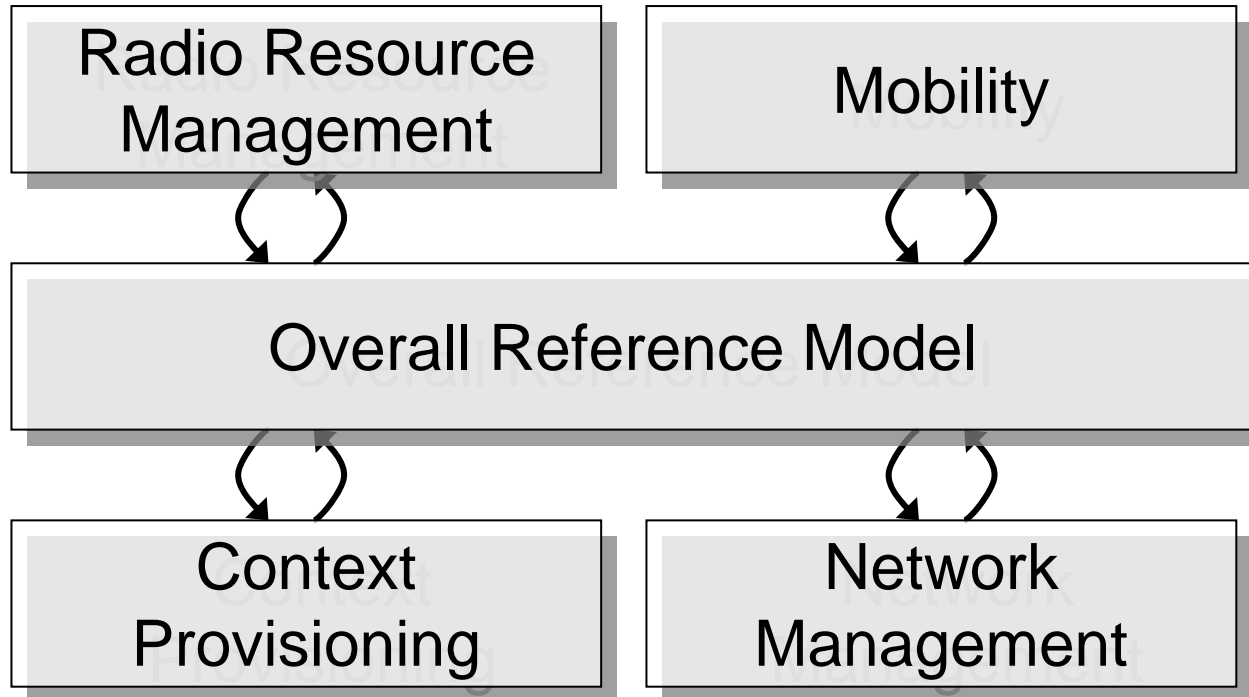
# Work approach



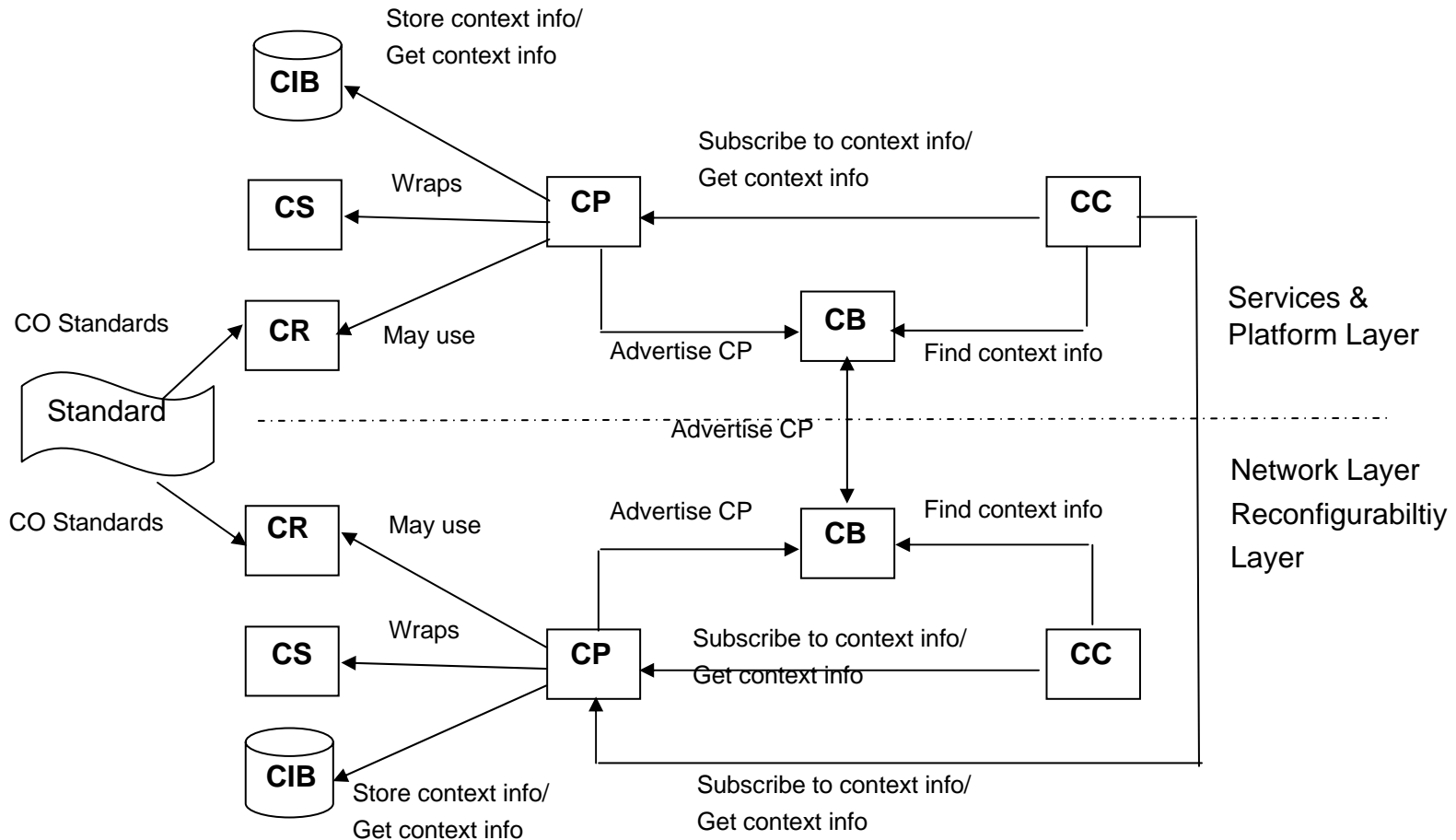
# Mobility Management



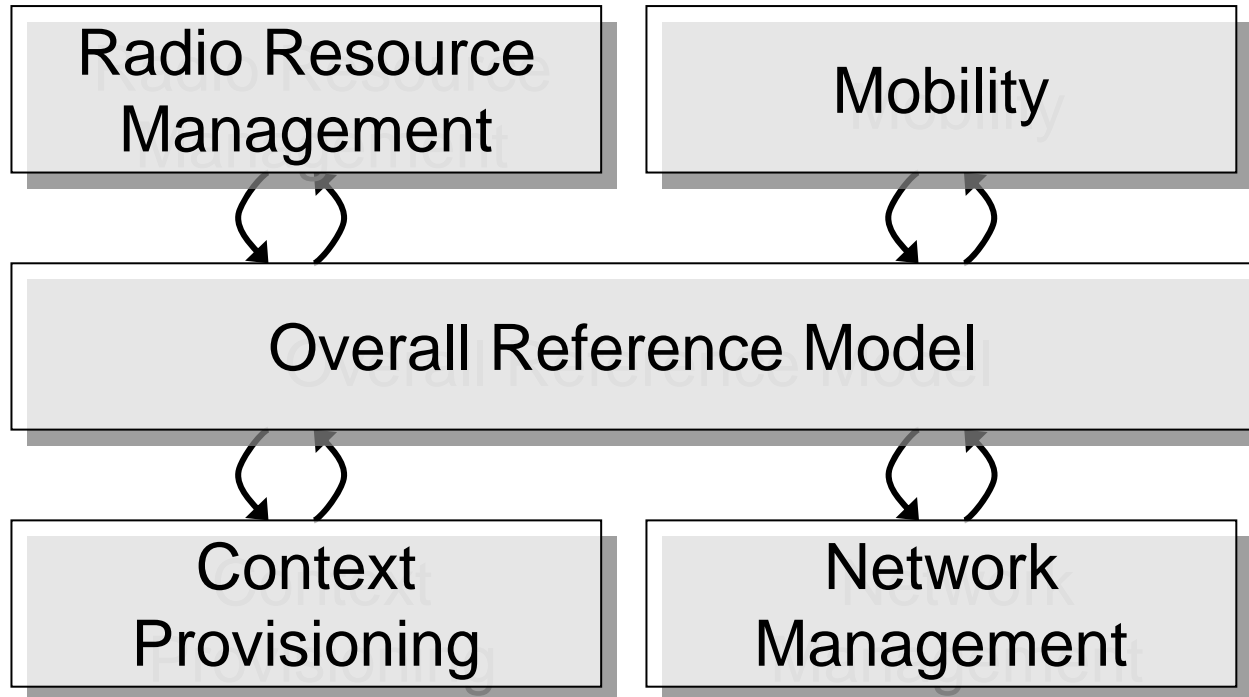
# Work approach



# System level architecture for context-awareness



# Work approach



# *Network Management*

- ❖ Analysis of approaches addressing recent challenges in Network Management
  - Approaches from Ambient Networks and E2R are compared
- ❖ Network Management planes of E2R and Ambient Networks are compared

# Conclusions

- ❖ Projects share a common vision of a future network architecture and prioritize research challenges similarly
- ❖ Still, approaches to those challenges can be rather diverse
  - Solutions to network challenges are sometimes quite similar, sometimes complementary, sometimes completely different
  - Understanding differences and commonalities is very helpful
  - A resolution of architectural differences is not easily possible (and probably not helpful)
- ❖ Identification of commonalities and differences is regarded beneficial for the assessment of the strategic directions taken in the projects
- ❖ Similar approaches/interests easily led to joint activities and publications

*Thank You*

