

WWRF Service Architecture

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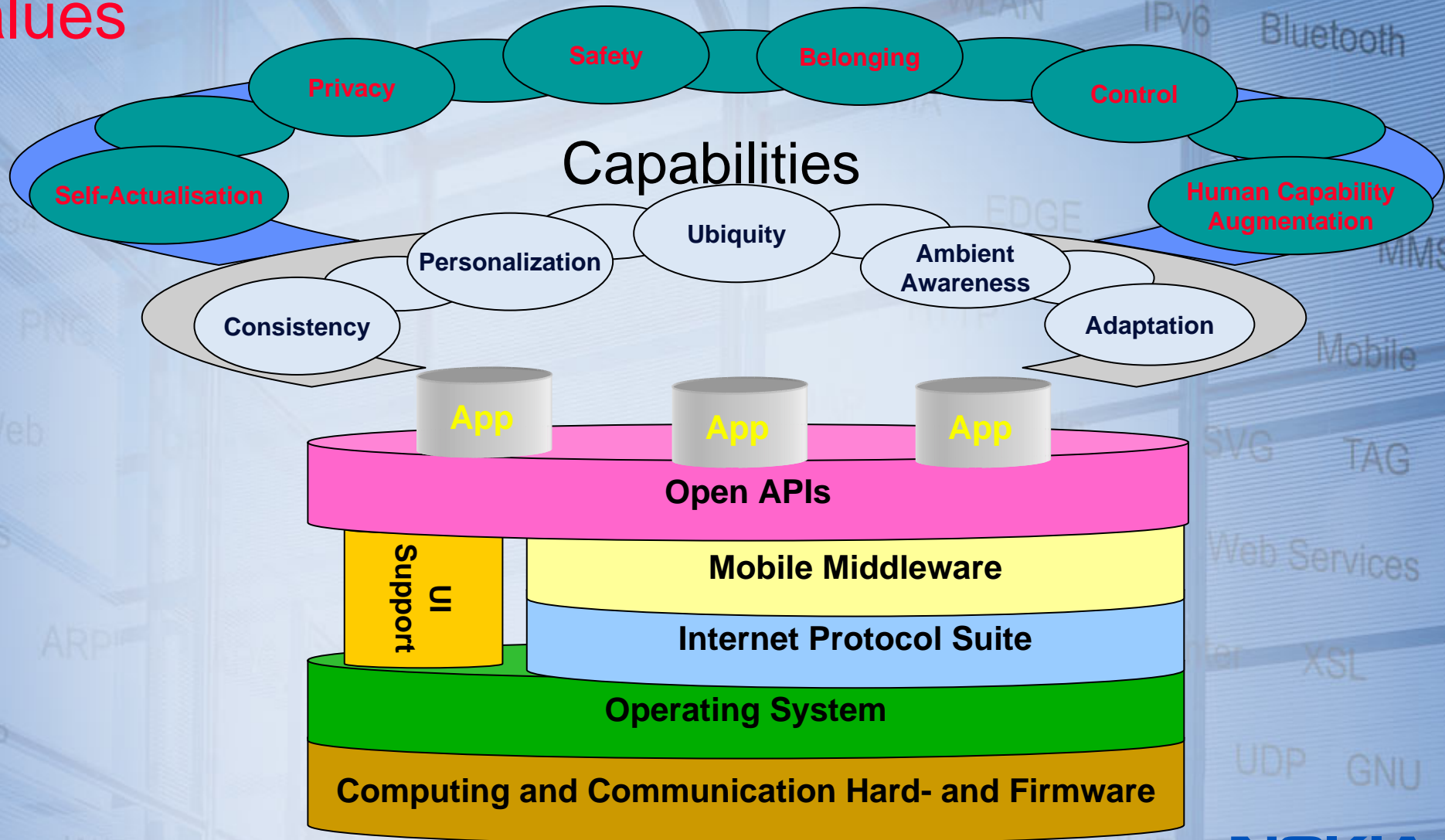
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Actions to be taken

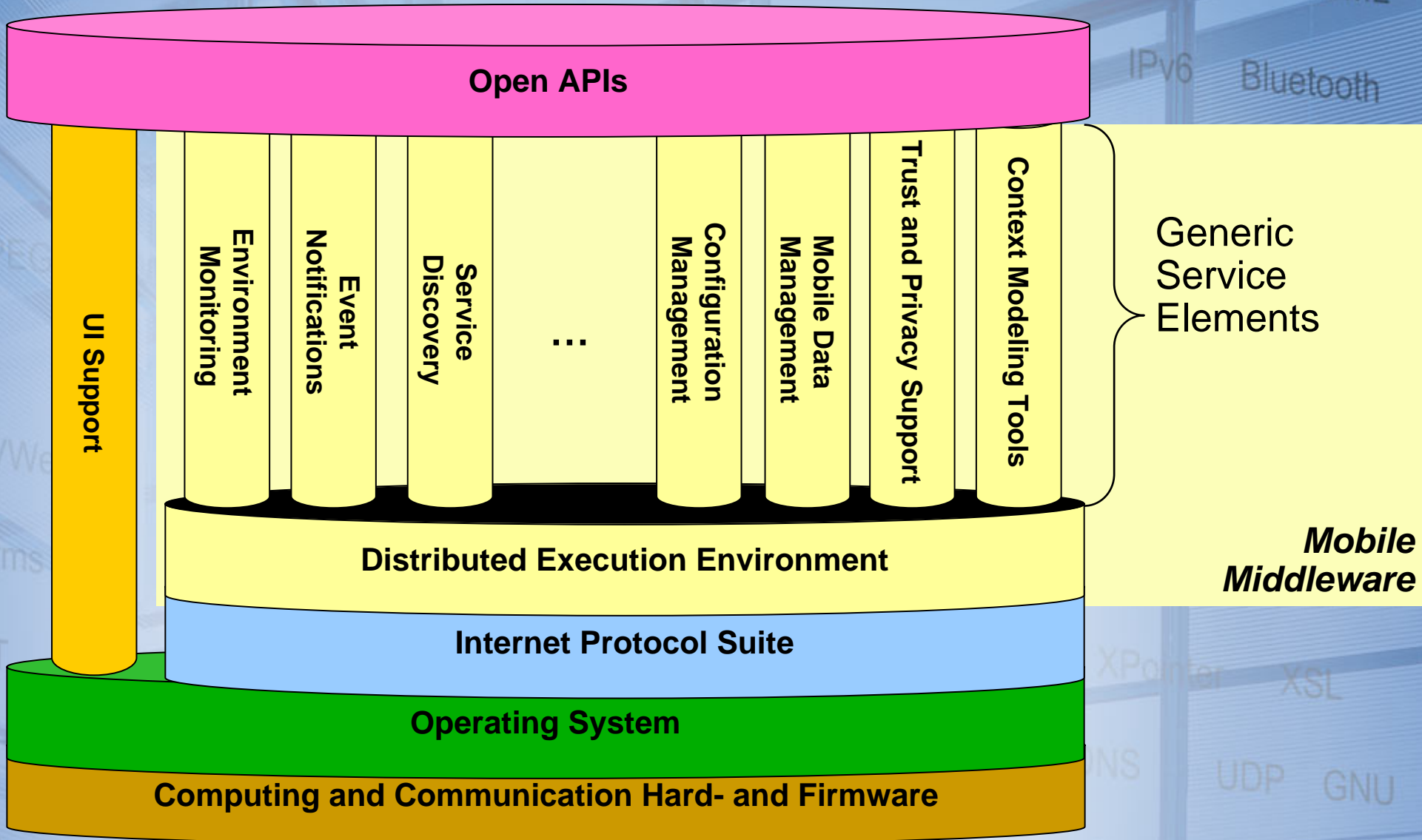
- Simplify Reference Model
 - Overall picture
 - Mobile middleware in details

High-level Reference Model

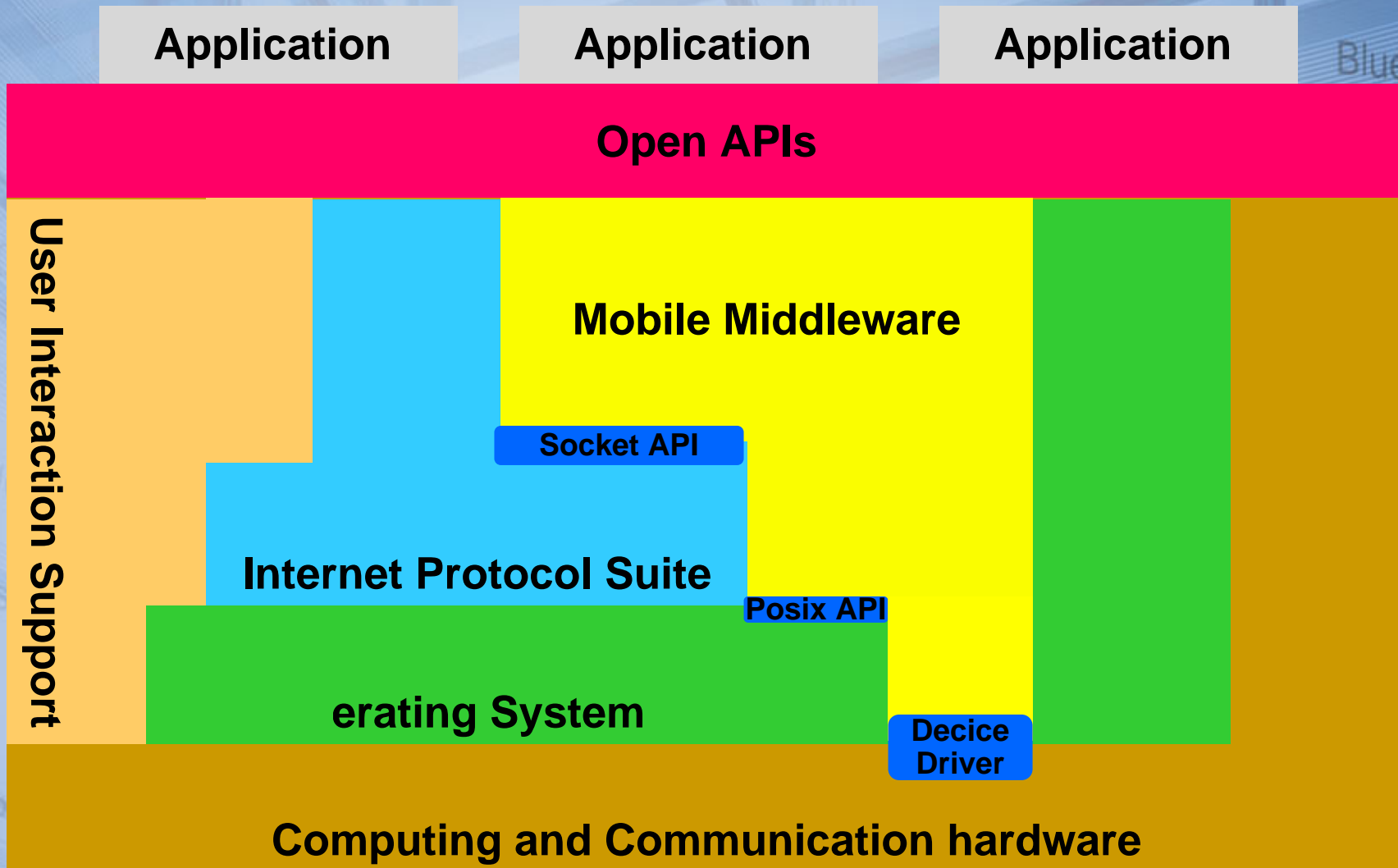
Values



Mobile Middleware



Implementation View



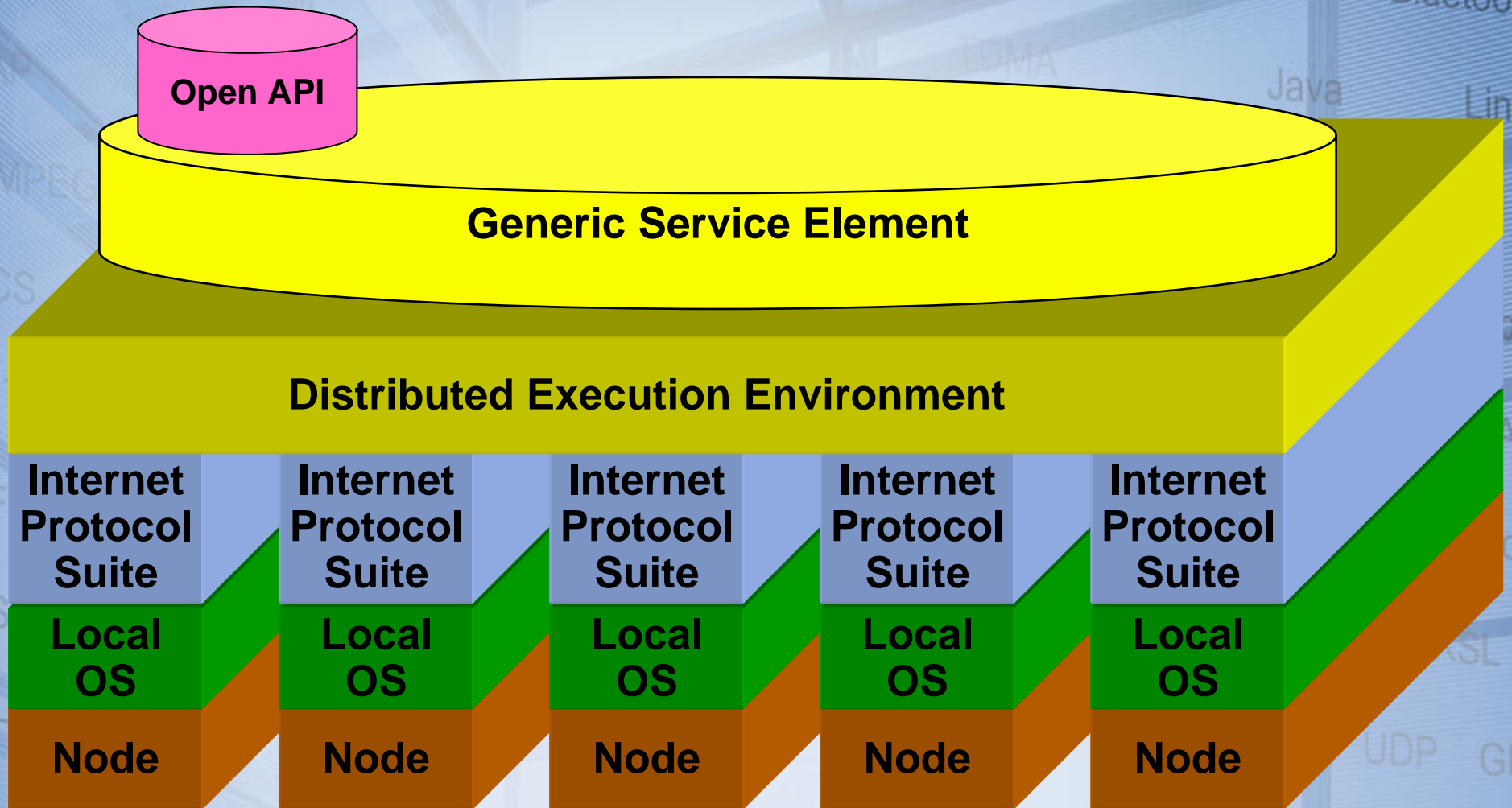
Actions to be taken

- Simplify Architectural Framework
 - Overall picture
 - Mobile middleware in details
- Model for Generic Service Element

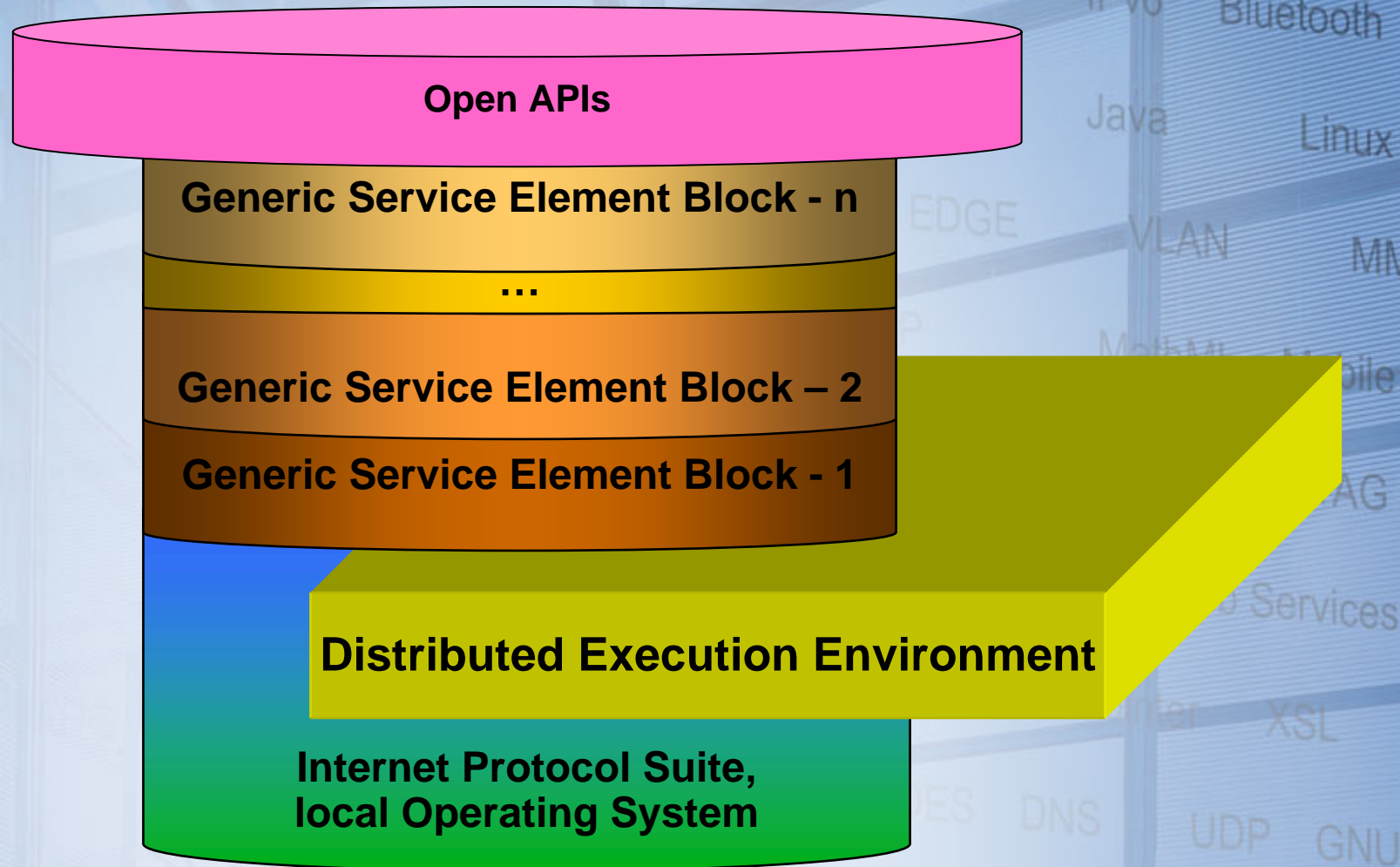
Generic Service Element

- Infrastructure service for application
- Application gets the service thru an Open API
- Implementation styles:
 - local
 - client – server
 - peer – to – peer
- Implementation style invisible to application
- An application can affect the service behavior thru QoS requirements (performance, reliability, etc.)

Distributed Execution Environment



Decomposition of Generic Service Element



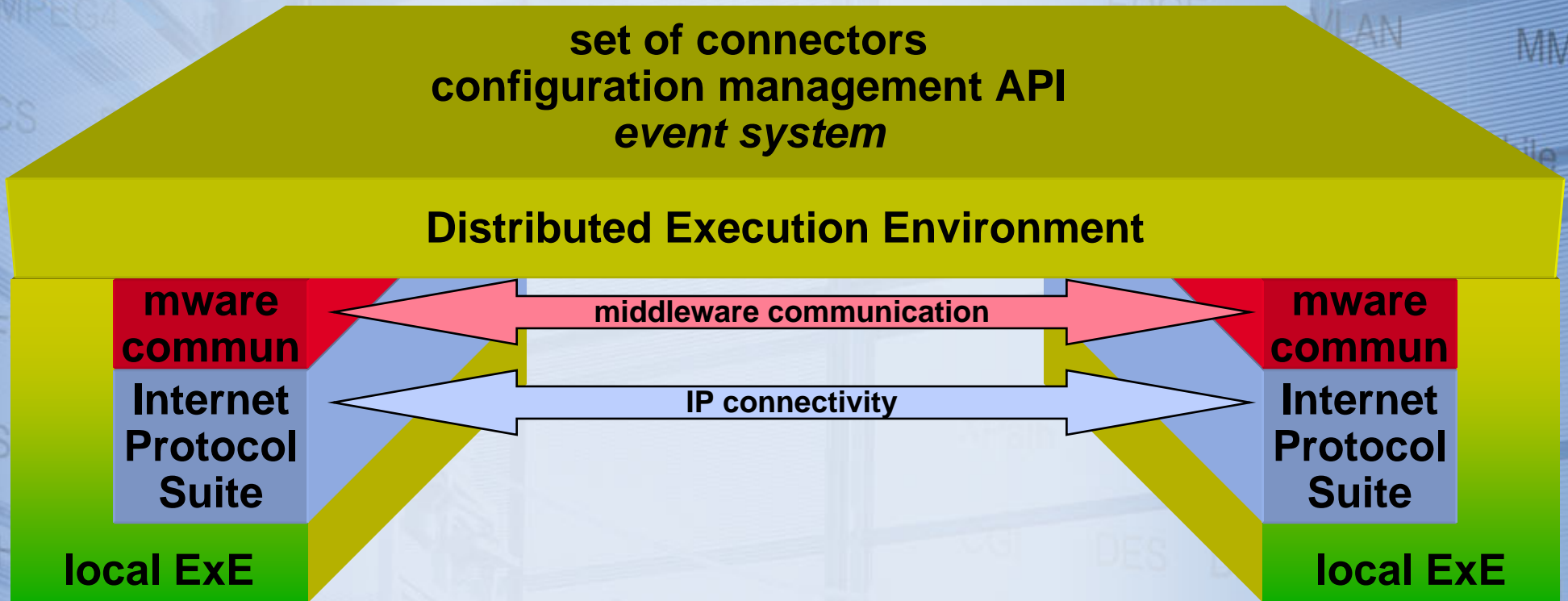
Generic Service Element Block

- Unit of distribution
- Unit of replacement
- Well defined interfaces (connectors) between GSEBs
- Well defined (configuration) management functions in distributed execution environment

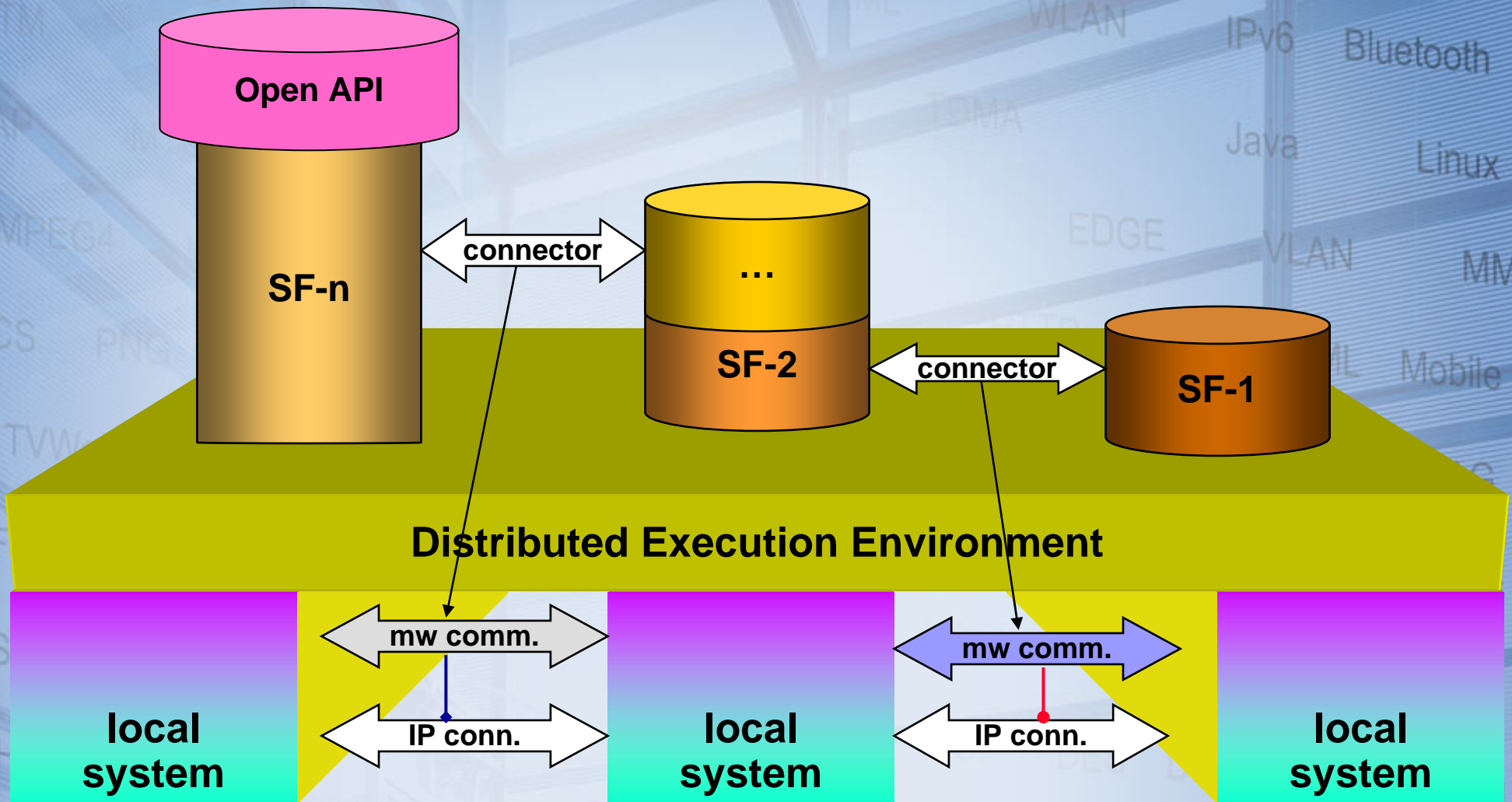
Actions to be taken

- Simplify Architectural Framework
 - Overall picture
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- Model for Generic Service Element
- Identification of functionality in the Distributed Execution Environment

Distributed Execution Environment



Reconfigurable Service



Connectors

- used to model
 - interactions among components and
 - rules that govern those interactions
- features:
 - interfaces,
 - types,
 - semantics,
 - constraints,
 - evolution, and
 - nonfunctional properties
- For details, see e.g. Nenad Medvidovic and Richard N. Taylor, “A Classification and Comparison Framework for Software Architecture Description Languages,” IEEE Transactions on Software Engineering, Vol. 26, No. 1, January 2000, pp. 70—93.

Actions to be taken

- Simplify Architectural Framework
 - Overall picture
 - Mobile middleware in details
- Model for Generic Service Element
- Identification of functionality in the Distributed Execution Environment
- Agreement of Architectural Description
 - content: e.g. IEEE Standard 1471-2000
 - language