Feature interaction in service provisioning

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Policy-enabled mechanisms for feature interactions: Reality, expectations, challenges

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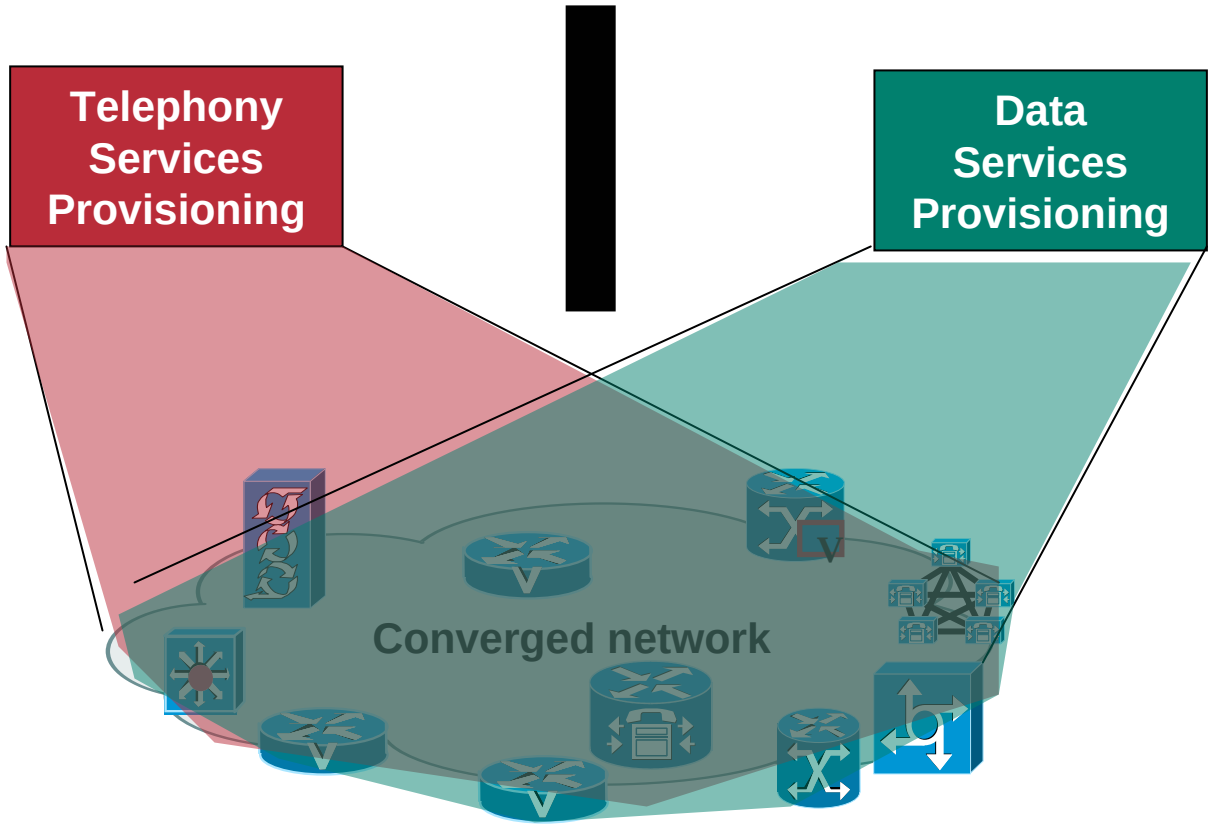
Feature interaction in service provisioning - Reality-

- **Dedicated service provisioning vs. converged networks**



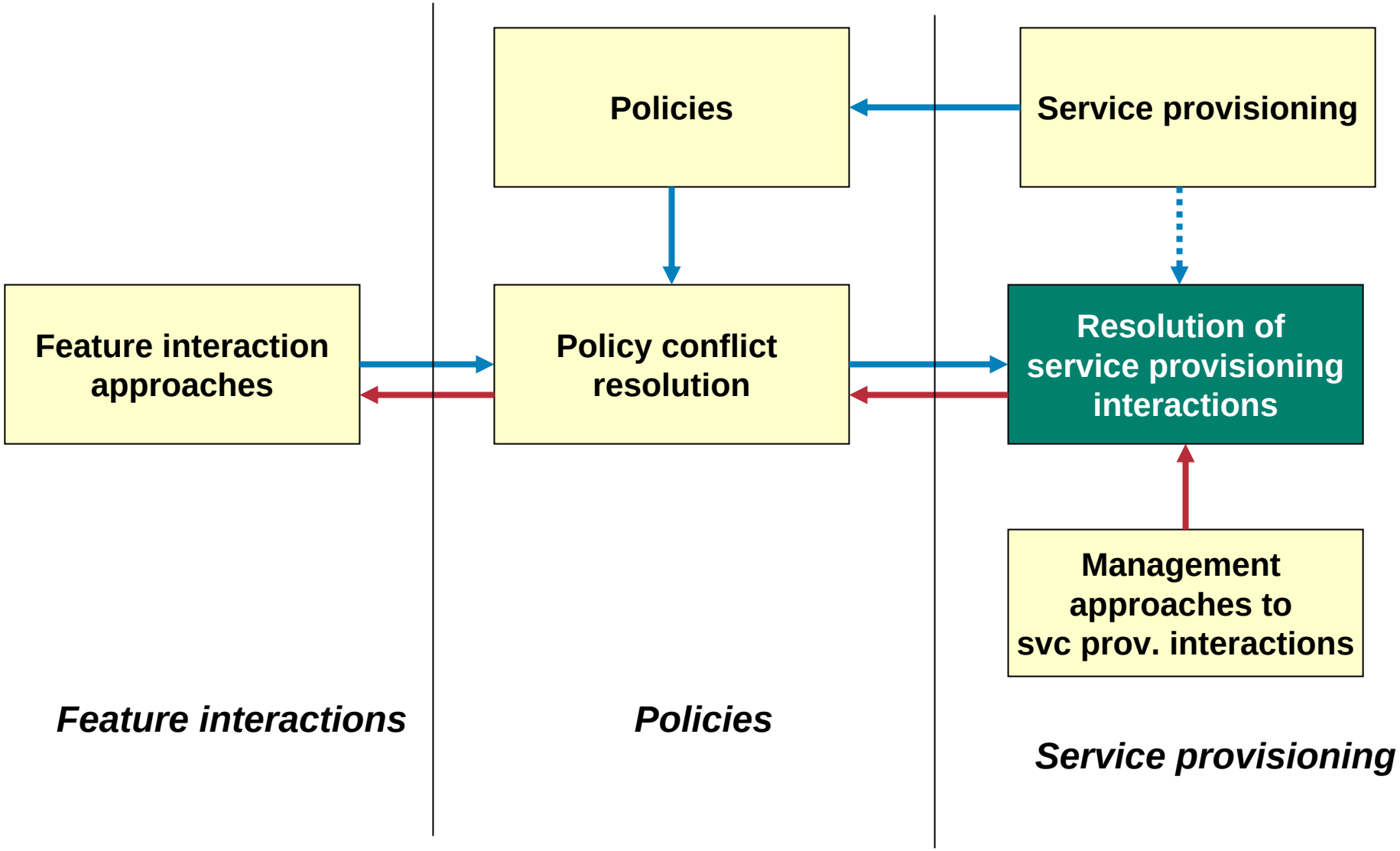
Feature interaction in service provisioning - Reality (2) -

- **Function impacting**
  - Examples: reassignment of physical or logical resources
  - Operational death spirals
- **Performance impacting**
  - Examples: CAC, DSP utilization impact QoS
  - Critical only when SLAs get compromised
  - Hard to grasp
- **Business impacting**
  - Lost revenue
  - Increased cost
  - Decreased profitability

Feature interaction in service provisioning - Expectation-

- **Isolation (I as in ACID)**
  - **Provisioned service keeps functioning**
  - **Provisioned service remains in SLA bounds**
- **Prevent provisioning operations that may impact an existing service**
- **Warn if integrity of a service could have been compromised**

Feature interaction in service provisioning
Expectation (here): “cross-pollination”



Feature interaction in service provisioning
- Challenges -

- **Services as policies**
  - Make policies a technique for service provisioning
- **Policies for resolution of service provisioning conflicts**
  - Make policies a technique for feature interaction resolution
  - "Meta-policies"
  - Proactive policies: prevention of negative interaction
    - Isolation properties expressed as policies
  - Reactive policies: resolution of negative interaction as it occurs
    - Policies on "what to do if"

Feature interaction in service provisioning - Challenges (2) -

- **Common challenges**
  - **How to express service provisioning policies**
    - **How to define policy goals, ex.**
      - **Delivery of service**
      - **Maintaining of SLAs**
    - **How to define policy targets – what are items of contention**
  - **How to make service provisioning policies executable**
    - **Address both function and performance interactions**
  - **How to apply policy architecture, ex. “where is the PDP”**
    - **Centralized: NE, broker instance**
    - **Distributed: Provisioning applications**

Thank you!