

PROBLEMS

- Increasing network management complexity
 - Integration of new technologies
 - Redundant information
 - Different vendors, heterogeneous devices
 - Interdependent network elements (NEs)
- Network operation, administration and maintenance (OAM)
 - Frequent reconfigurations, little automation
 - Human interaction error-prone and cost-intensive
 - Different network management domains and applications

OBJECTIVES

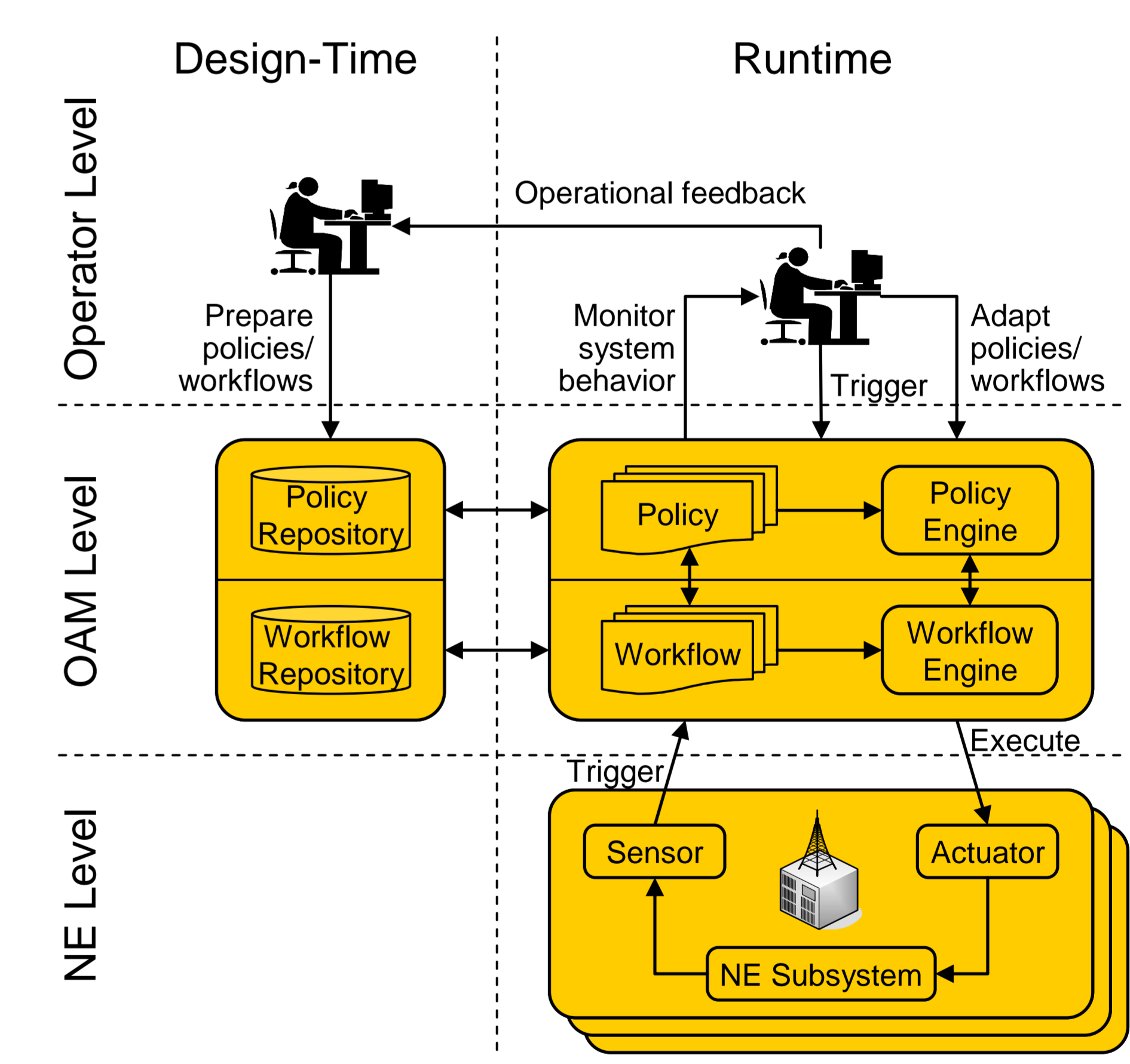
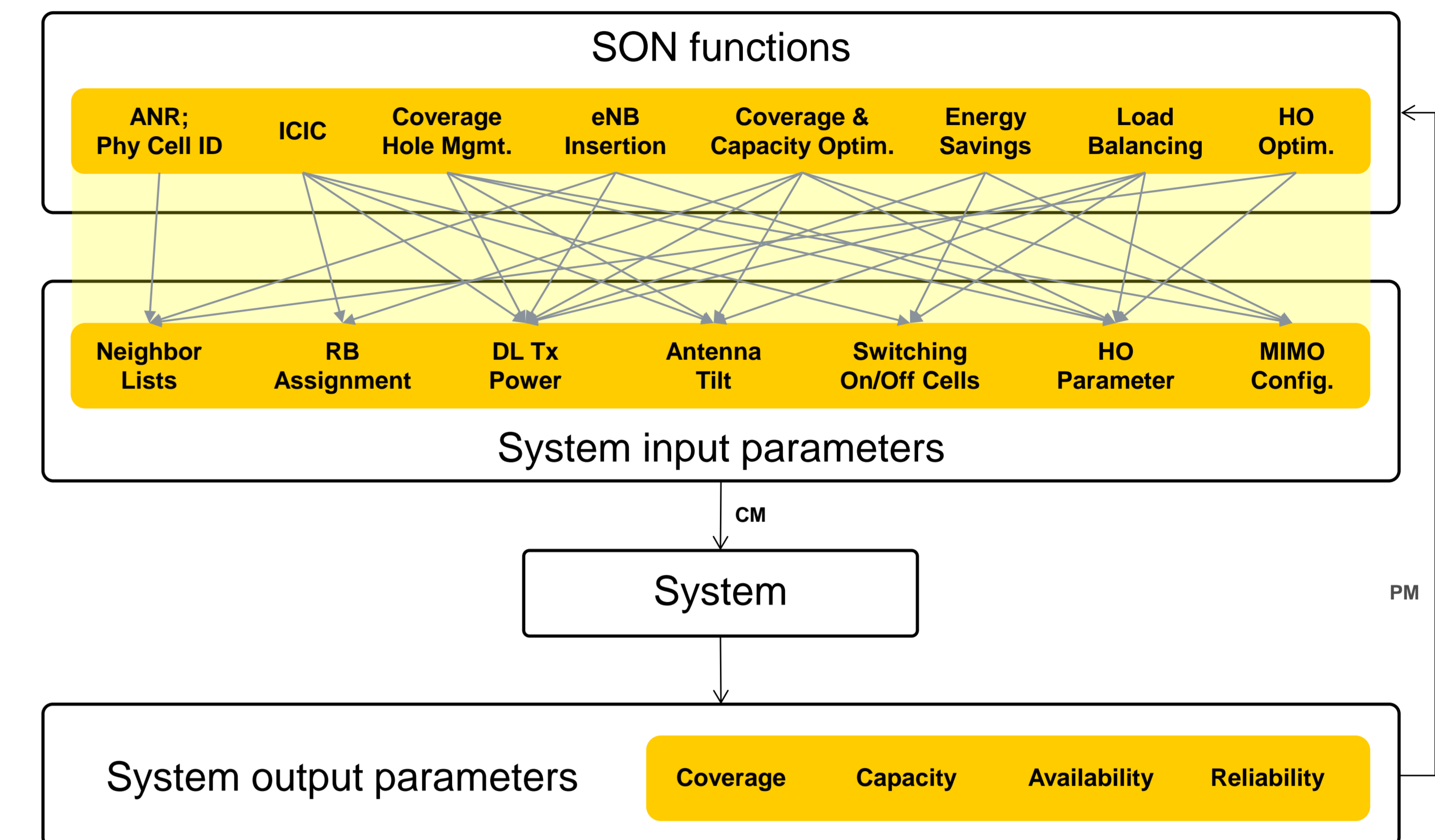
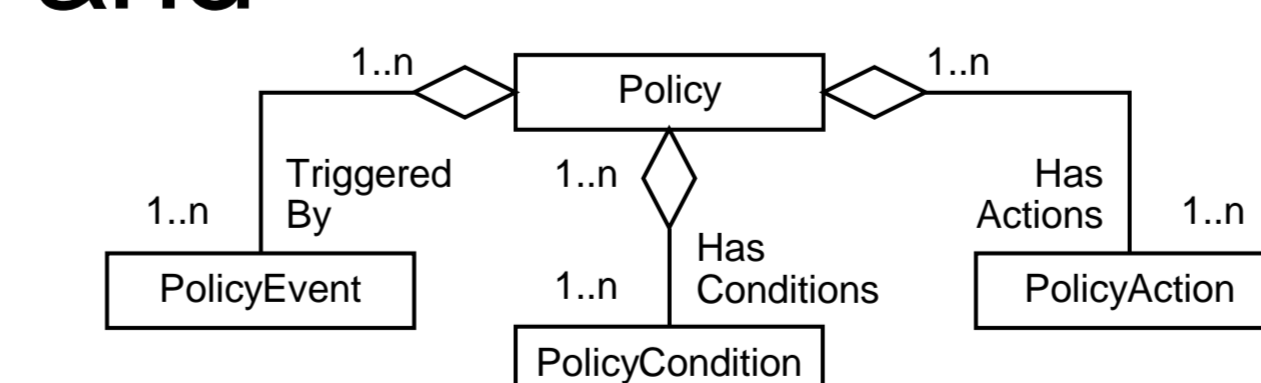
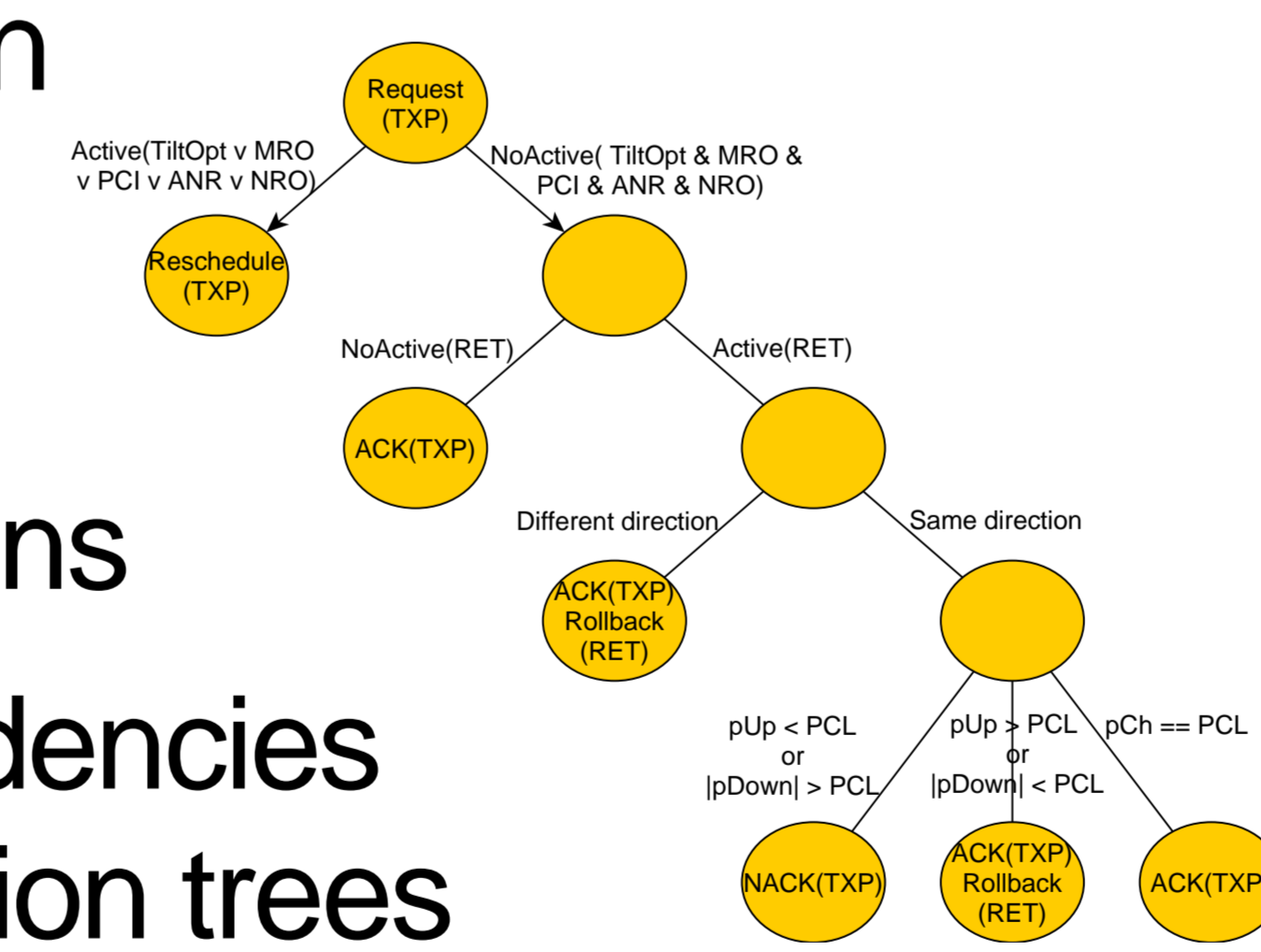
- Reduction of network management complexity
 - Simplification of management tasks
 - Management at a higher abstraction level
- Increase in network management automation
 - Task execution without human intervention
 - Conflict resolution for concurrent tasks
- Reduction of operational expenditures (OPEX)

APPROACH

- Decoupling of management applications from NEs
- Autonomous self-organizing network (SON) functions
- Analysis of SON function dependencies
- Coordination mechanisms for SON function execution
- Demonstration and evaluation

SOLUTION

- Management middleware layer with an event-based communication mechanism
- Workflow system for realizing SON functions
- SON function dependencies expressed with decision trees
- Policy-based detection and resolution of SON function interactions
- Experimental system for SON operation of real world use cases



DETAILS

- Project partner:
- Start: 2007

