Active data warehousing is rapidly changing the landscape for deployment of decision support solutions. The trend toward actionable business intelligence demands that capabilities for tactical and event-driven decision-making be supported in addition to traditional uses of the data warehouse for strategic decision-making. The resulting challenges to deliver extreme service levels in the areas of performance, availability, and data freshness require new methods for data warehouse construction.

In this talk, the architectural requirements for an active data warehouse are described in detail. The evolutionary steps from first generation data warehouse implementations to active data warehouse deployment are provided as a means for incrementally delivering business value in the path toward advanced decision support capability. The service level requirements and technical building blocks for an active data warehouse deployment will be described using specific examples. We will explore the design tradeoffs and implementation techniques for active data warehouse deployment. Particular attention is paid to architectural topologies for successful implementation and the role of frameworks for Enterprise Application Integration (EAI). Implementation of scalable solutions with capability for near real-time data acquisition and mixed workload management with aggressive service levels will be discussed with real customer scenarios as mini case study examples.