A service is an entity that offers an intended value to its consumer; in today’s society, people are dependent on service paradigms. A service consumer may need to pay an exchange value to consume a service but does not have to be concerned with how the service is developed or delivered. The service model design, development, and delivery are the concern of, and are handled by, the service providers: e.g., the Postal Service. Web Service (WS) is the technology that makes services available as consumable entities accessed and consumed through computers, via the Web: e.g., the Email Service. WS technology, backed by Service Oriented Computing and Service Oriented Architecture (SOA) has gained a lot of focus and popularity in the commercial computing sector as an enabling technology for the most enduring service planning, development, delivery and management methodology. In this research, we propose a conceptual model for context aware Semantic Web Service (SWS) discovery, which can utilize real-time legacy data from external systems and support user context-based service discovery and selection through the use of service metadata ontologies and domain ontologies. This model offers advantages over current SWS technology which cannot be easily applied to different domains or be integrated with legacy systems. Using this conceptualization we also propose an intelligent decision support system, which offers Service Enabled Workflow.