The World Wide Web has been changing rapidly in the past few years due to the emergence and fast adoption of large variety of new internet-enabled devices: starting with web-enabled phones through converged appliances, combining a PDA and a cell phone, to specialized internet tablets and business productivity tools. This change is bringing many challenges into the process of designing and developing both the thin-client (web-based) and thick-client (device-hosted) applications and related services. The application and service providers are facing a trade-off between the number of platforms and devices they are able to support, representing the size of the potential market, and mounting costs tied to developing and supporting multiple variants of their applications. There are several ongoing efforts taking place at various standardization organizations and industry associations to address these issues. Some of the essential standards for specifying and transporting device capabilities have been available for several years now, but so far they have had only a limited impact on the way the actual applications and services are being designed and developed. This work is trying to identify and explain the shortcomings of the existing approaches and as a reaction proposes an application-centric framework designed specifically to better manage the trade-off between the coverage and the cost. The main idea is describing device capabilities (requirements) and application artifacts (provisions) using semantically rich properties – mostly hierarchical classifications – and employing that semantic information for implementing a best-effort (approximate) matching algorithm.