

## Approaches to Deal with the Problem (or Parts of it)

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If there are legacy systems to deal with the organization has three main avenues to chose from: To some extent, most organizations will travel on all three of them at the same time.

1. **Migration/Replacement**, i.e., phasing out the old systems and structures, building new systems (porting the old databases into the new environment, rewriting the applications) on basis of renovated or reengineered business processes,
2. **Encapsulation**, i.e., shielding NLS against the environment, maybe even to the extent of freezing them in terms of further developments. This approach involves building front-ends that serve as gateways between WAppS, WDBs and their NLS equivalents
3. **Expansion**, i.e. adding Web/Internet capable components to NLS in a fashion, that NLS can directly be accessed from WAppS, and maybe even the other way around, that NLS can access both WAppS and WDBs.

As mentioned, the most common approach will be a hybrid that is any combination of the three with a clear preference for (1) and (2) in the mix, not only for cost reasons.

IBM has recently estimated that in the private sector 70 percent of all relevant corporate data and applications still reside on NLS of which only one half has some sort of TCP/IP connectivity<sup>(3)</sup>. CISCO confirms this estimate, however, says that only 30 percent of NLS have any TCP/IP connectivity<sup>3</sup>. These figures also serve as a benchmark for the public sector where the percentage of relevant data and applications sitting on NLS might be even higher and that of TCP/IP connectivity even lower (if research institutes, universities, and the military are not taken into account).

With the tsunami of *ecommerce* surging through the private sector, these proportions will undoubtedly change soon; in other words there is high demand for service and supply regarding the three avenues mentioned above. It must be noted here, that "ecommerce" is only the tip of the iceberg or a special form of true Web-based transaction processing in general. In analogy, Web-based EIS will soon arrive in larger quantities, likewise creating high demand for some sort of integration with NLS. The example of ecommerce in the private sector will soon lead to a broadened understanding of the opportunities, and hence a strong demand for Web-based transactions and EIS in the governmental sector.

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(3) See InternetWeek, *ibid*.