eCube Systems
Empowering Enterprise Evolution

NXTware:
Extending ROI via Enterprise Evolution
An Executive Overview

Summary:

- **Valuable applications built on older technology present a challenge and an opportunity**
  - **Shifting technology landscape adds complexity**
  - **As vendors discontinue support, aging technology jeopardizes continued ROI**
  - **Older enterprise infrastructures are expensive to maintain and often redundant**
- **NXTware can simplify the evolution of enterprise systems and extend ROI by reducing**
  - **Legacy dependencies**
  - **Operational cost of older enterprise infrastructures**
  - **Risk associated with the lost of institutional knowledge and the rising cost of specialized workers**
- **NXTware extends the value of existing business investments by**
  - **Enabling the continued use of business logic built on older enterprise infrastructures**
  - **Removing the need to re-engineer existing applications using the latest technology platform**
  - **Managing the risk and ROI lifecycle of existing enterprise technology**

Business reality dictates that software vendors lessen and discontinue support for older products and architectures as they adopt newer ones. Often, vendors sell older products to opportunistic companies that generate profit from maintenance fees and minimal re-investment. More often, technologies are abandoned, neglected and left to die a slow death.

Inevitably, companies that invested in prior generation technologies are faced with gaps in their ability to sustain and leverage these systems. Without continued maintenance, functional improvements and support for contemporary development languages and service-oriented architectures, the technology managers responsible for applications built on these systems are faced with increased operational cost, additional risk and an inability to clearly extend return on investment. (ROI)

In these situations, there are a limited number of available responses:

- Prematurely retire working profitable applications and invest in replacing them with new applications re-engineered from scratch;
- Buy expensive, off the shelf-applications and attempt to customize them to duplicate the functionality of the existing system;
- Do nothing, role the dice, and ride out the company's initial investment for as long as possible, allowing the value of the investment to diminish

Each of these options is problematic. Undoubtedly, it is the aim of responsible technology managers that new expenditures minimize risk and enhance productivity. The goal is to increase productivity and extend ROI. Major investments that replace existing systems do not meet those criteria. At the same time, technology management professionals understand that doing nothing is never a long-term option.

NXTware, the enterprise evolution platform, from eCube Systems addresses these issues; particularly for companies with existing investments in enterprise applications built on DCE, RPC, CORBA and RPG/COBOL technology. eCube Systems makes it possible to leverage and maintain these existing applications, while adding support for Java, SOAP, .NET, J2EE and other technologies that enable the use of enterprise services.

Despite the preference of some analysts and software vendors, enterprise technology is not disposable. It is evident that companies need to have the ability to evolve their existing technology investments. eCube is committed to extending ROI and reducing risk via enterprise evolution – the natural evolution of an organization's technical equity from one platform to another.

As the first enterprise evolution platform, NXTware provides older, "Generation Last" (Gen L) applications with:

- **Integration:** NXTware enables existing DCE, RPC, CORBA and RPG/COBOL applications to serve as both consumers and providers of .NET, J2EE and XML data and logic.
- **Emulation and Replacement**: NXTware emulates existing distributed infrastructures such as DCE, EZ-RPC, Entera and CORBA, allowing companies to continue to use existing application logic, while they transition to more contemporary service platforms at their own speed.
- **Federation:** NXTware serves as a service interface wrapper to existing RPC, DCE, CORBA and RPG applications, allowing new federated applications to be constructed from functions and procedures in these older applications.
- **Mitigation:** NXTware slows the standard ROI bell curve by lowering the cost of ownership, maintenance and development for "Gen L" applications, while concurrently reducing operational risk.

Integration

NXTware SOA bridges the gap between existing applications and the new services based architecture. Now distributed applications can respond to .NET requests, read SOAP messages and consume or generate XML data. This provides a simple cost- effective integration solution that extends the productivity of existing applications, thus removing the need to rebuild previously "stove-piped" applications.

Emulation

Moving to a new platform is always challenging, but being forced to move is even worse. eCube simplifies these transitions by enabling enterprise applications to evolve. NXTware's emulation capability provides connectivity to contemporary platforms while allowing existing applications to continue to function as they always have, without re-writing or disruption.

NXTware can emulate DCE and RPC calls, so existing clients and servers can continue to function normally, even as support for Java or XML is added. This type of emulation simplifies the transformation process, and allows users to move from one paradigm to another at their own pace.

Replacement

When companies determine that a valuable application's underlying technology has become too expensive or too risky to maintain, NXTware can serve as a replacement platform. It enables existing business logic to continue to provide value without the added cost of reengineering.

NXTware reduces the expensive operational costs of legacy systems by:

- Replicating services such as DCE's Cell Directory Service (CDS) with LDAP
- Supporting common development languages such as Java, J# and C#
- Removing the need for developers with specialized skills (C/C++, COBOL)

NXTware eliminates redundancies and reduces risk by providing
a lightweight infrastructure that employs contemporary standards-based interfaces and protocols, such as SOAP, and .NET.

Managers Technical Note:

Enterprise users of DCE (the Distributed Computing Environment) often site the Cell Directory Service (CDS) as expensive and thorny to operate. In addition to requiring specialized knowledge to manage, in many cases, the CDS replicates data or functionality that is already present in existing corporate LDAP implementations. In those cases where LDAP and CDS are being used concurrently, an expensive operational effort is being needlessly duplicated.

NXTware's lightweight directory service is built on top of an LDAP interface, allowing customers to replace the function of the CDS with existing LDAP repositories.

NXTware's emulation capabilities make it possible to replace DCE services with cost- effective, standards-based solutions without disrupting application users or developers.

Federation

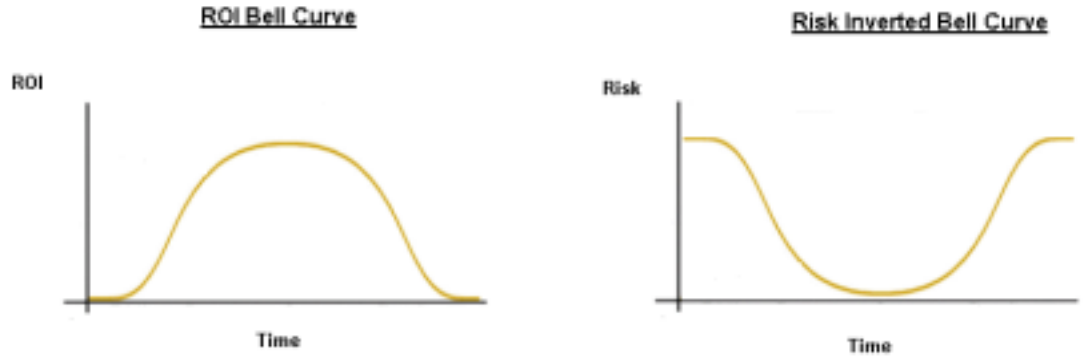
Today, technology managers are beginning to see the business value in associating independent applications via federated services. Federation makes it possible for functions and services from independent applications to be used in conjunction with each other to deliver new business value.

In this way, a new application comprised of federated services can start a business process that moves from sales application to an inventory system, to a distributor's sourcing portal, and back to a reporting system - all without having to change the original applications. The NXTware platform enables the federation of disparate business processes in enterprise service oriented architectures.

Mitigation

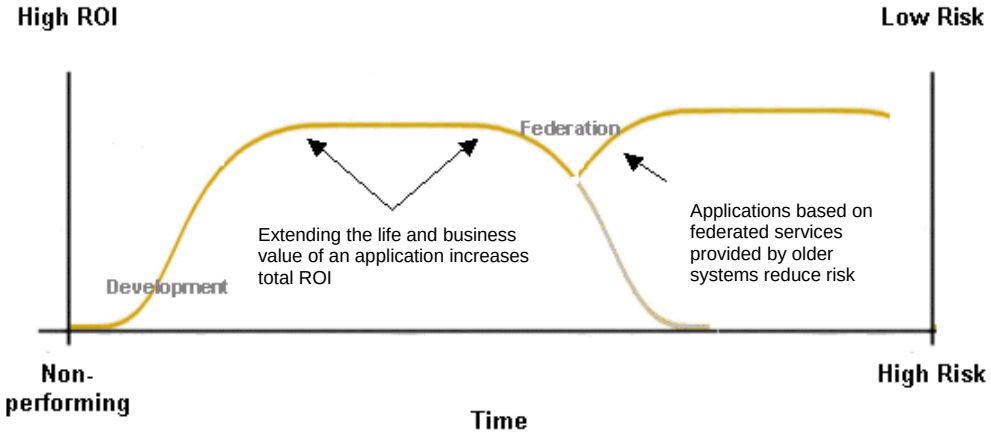
The lifecycle of custom applications and the underlying technology required to support them can be easily forecast in terms of ROI and Risk. Certain phases of a given application's lifecycle may be elongated, but ROI generally follows a traditional bell curve, with the best return on investment delivered in the middle of the curve. The least profitable phases are during development and toward end-of-life. Risk follows a similar pattern, with higher risk associated with development and end-of-life.

Custom Application ROI and Risk Cycle



NXTware provides customers with a means to extend the "sweet spot" of both the ROI and Risk curves. By enabling custom applications to continue to operate and meet new business needs, NXTware can extend the plateau of the ROI curve. At the same time, NXTware limits the risk associated with changes in the market place – shifting standards and talent pools – and unexpected anomalies.

Mitigated ROI and Risk Bell Curve



The risk associated with development can also be minimized using NXTware's evolutionary approach. By supporting federation, NXTware minimizes the need to rewrite applications and bypasses the challenges of trying to reuse business objects independent of their original application environment. In this way, enterprise evolution enhances technology returns while managing transition, complexity and risk.

Conclusion

Technology managers are faced with increasing complexity and risk. At the same time they are experiencing business pressure to increase productivity. Consequently, they need to identify how they can get more out of their older investments. This means that applications will have to have longer lifecycles and to perform at a high level, well into the future. Managers will not only have to maintain older systems longer, but also find new ways to leverage them to achieve higher levels of productivity. eCube's enterprise evolution platform, NXTware, provides a productive way to cost effectively address these issues.

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NXTware, Enterprise Evolution Platform
Technical Overview

The NXTware platform finally provides an easy, transparent way to extend the ROI and productivity of last generation business logic. NXTware can:

- Transparently expose DCE, RPC, RPG/COBOL services as SOAP objects using NXTware's protocol switch
- Expose existing application functions as Java beans that can be automatically exported as Java servlets or CORBA objects.
- Supports automatic generation of XML data output from existing application services
- Transparently integrate existing legacy security models with contemporary security management systems.
- Work with LDAP and various LDAP servers
- Incorporate Jetty, the award-winning scalable J2EE servlet engine
- Work with leading J2EE application servers such as BEA Weblogic and IBM WebSphere
- Enables one to extend message processing in a Web-Services based manner using Java's JAX-RPC standard
- Supports a variety of consumer/provider (client/server) bindings, including:
    - C#,
    - VB.NET
    - ASP.NET
    - JCA
    - J#
    - C++
    - J2EE, early 2004
    - SOAP, early 2004
- Using JCA Connection technology supports integration with ERP's and MOM-type systems:
    - Oracle Financial
    - Siebel
    - SAP
    - PeopleSoft
    - WebSphere/MQ Series
- Extend message processing in a Web-Services based manner using Java's JAX-RPC standard

