

Vendor Landscape: Legacy Software Modernization

An increasingly vital and challenging effort of epic proportions.

Introduction

Early efforts to modernize legacy systems had disappointing results. Today's vendors leverage technology that rivals the human brain!

This Research Is Designed For:

- ✓ Enterprises running legacy applications that recognize the need to modernize due to numerous causes including:
 - Cost – The legacy system is extremely expensive and difficult to maintain.
 - Limitations – The legacy system meets the core needs of the business and clients, but lacks the capability to enhance and update.
 - Staff – The resources responsible for maintaining the legacy system are dying off. It is a declining skill base where no new developers are being trained.

- ✓ Enterprises that recognize an increasing gap between IT and the business that is filled with inadequate functionality unable to fulfill current business needs.

This Research Will Help You:

- ✓ Understand what's changed in the field of modernization and how legacy systems can now be modernized relatively affordably, and in surprisingly short time frames.

- ✓ Evaluate legacy modernization vendors and products for your enterprise needs.

- ✓ Determine which vendors are most appropriate for particular use cases and scenarios.

Executive Summary

- Executives around the world, in all sectors of our economy, are facing the realization that their legacy systems can no longer be ignored. As the developers responsible for maintaining these technological dinosaurs retire from the workforce, businesses need to start acting proactively to modernize their aging systems.
- Early attempts to modernize legacy systems were fraught with disastrous outcomes due to the lack of technological capability to assist with the process of transformation. This created a situation where many executives would rather accept the ever spiralling cost of continuing to run their legacy systems rather than risk career ending failure.
- Standards have been formed from the Object Management Group (OMG) along with tools conforming to the standards, methods, and technologies that greatly increase the success rate of today's transformations.
- Automated techniques and tools using an architecture-driven approach have been created and are seeing huge successes causing many legacy owners to take notice and engage one of the included vendors to transform their applications, data, and platforms.
- Platform, Application, and Database modernization was evaluated as well as the capabilities to offer additional functionality during the transformation process, optimization of the code, beyond that achieved through updated code languages, and extensive planning, design of the project, and execution.

Market Overview

How it got here

- Prior to the turn of the century (2000) most modernization efforts were manual in their attempt to convert old systems to new.
- Manual efforts proved to be problematic, error prone, and extremely time consuming and in many cases enormous failures costing businesses millions of dollars in the attempt and in potential lost revenue.
- Many business leaders chose to continue spending on the ancient systems electing to spend rather than risk a career-ending failure attempt.
- Systems continue to work and represent business-critical functionality; *if it ain't broke don't fix it*, created the exasperated situation many businesses have today.

Where it's going

- Resources capable of maintaining legacy systems, specifically those in COBOL, Pascal, Fortran, RPG, etc. are retiring from the work force with no newly trained developers entering the field. For systems to continue, business are forced to act now before it's too late.
- Artificial Intelligence techniques are being employed to build automated translation tools in order to partially, or in some cases fully, translate old legacy code, and databases to newer technologies.
- Businesses need to stay current with technological trends to stay competitive and that means mobile solutions, Web solutions, and client server solutions.
- Vendors continue to push the envelope to gain more efficiency with their translation tools in producing highly optimized code, better than that of custom generated code.

Legacy Software Modernization Services Evaluation Criteria & Weighting Factors

Product Evaluation

Features	The solution provides basic and advanced feature/functionality.
Affordability	The five year TCO of the solution is economical.
Usability	The solution's dashboard and reporting tools are intuitive and easy to use.
Architecture	The delivery method of the solution aligns with what is expected within the space.

Vendor Evaluation

Viability	Vendor is profitable, knowledgeable, and will be around for the long-term.
Strategy	Vendor is committed to the space and has a future product and portfolio roadmap.
Reach	Vendor offers global coverage and is able to sell and provide post-sales support.
Channel	Vendor channel strategy is appropriate and the channels themselves are strong.

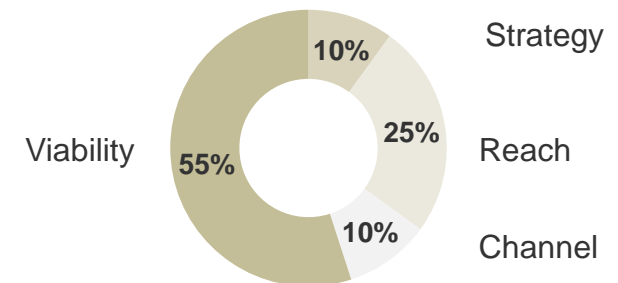
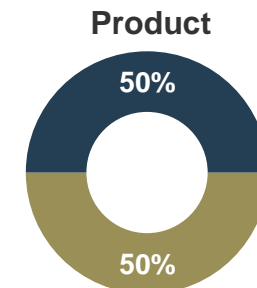
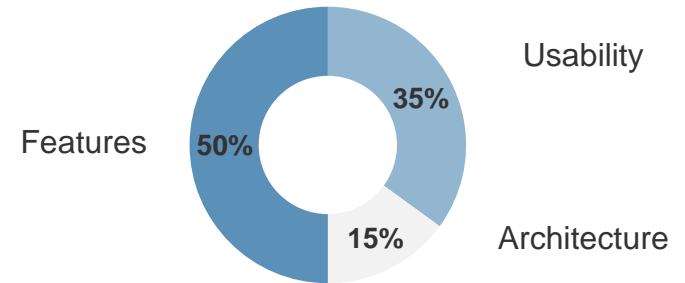


Table Stakes represent the minimum standard; without these, a product doesn't even get reviewed

The Table Stakes

Feature	Description
Basic Application Modernization	Conversion of legacy applications to one of a .NET or Java codebase.
Basic Database Modernization	Conversion of legacy databases to, at minimum, a Microsoft SQL database.
Passive Legacy Code Optimization	Reduction of number of lines of code through automatic processes.
Use of Automated Tools	Use of a kit of automated tools to parse, modernize, and optimize legacy code.
Project Planning and Execution Services	Comprehensive project planning and management services accompanied by detailed documentation.

What Does This Mean?

The products assessed in this Vendor Landscape™ meet, at the very least, the requirements outlined as Table Stakes.

Many of the vendors go above and beyond the outlined Table Stakes, some even do so in multiple categories. This section aims to highlight the product capabilities **in excess** of the criteria listed here.

Info-Tech Insight

If Table Stakes are all you need from your Legacy Application Modernization, the only true differentiator for the organization is price. Otherwise, dig deeper to find the best price to value for your needs. With legacy modernization being so unique, pricing is generally fixed, with a fixed timeline, based 100% on your situation. *(As a general rule calculate about 20-50 cents per line of code to be transformed)*

Advanced Features are the market differentiators that make or break a product

Scoring Methodology

Info-Tech scored each vendor's features offering as a summation of their individual scores across the listed advanced features. Vendors were given 1 point for each feature the product inherently provided. Some categories were scored on a more granular scale with vendors receiving half points (see Partial functionality criteria).

***Partial functionality was given across several categories if vendors were capable. For example, some vendors offered additional outsourced development options to address any new features or functionality that was warranted during the modernization timeline.*

Advanced Features

Feature	What We Looked For
Enhanced Application Modernization	Conversion of legacy applications to either a .NET or Java codebase.
Enhanced Database Modernization	Conversion of legacy databases to Oracle or MS SQL or other commonly used database.
Platform Modernization	Specification of appropriate platform for the modernized application /database.
Additive Functionality Development	Ability to develop and include code for additive functionality within existing app.
Net New Application Development	Ability to develop net new software, components or features.
Active Legacy Code Optimization	Additional reduction of lines of code through granular manual review and editing.
Code Testing	Thorough testing of all modernized code in a parallel environment.
Training, Education, & Support	Services to ensure legacy staff are able to operate modernized applications.

ATERAS differentiates itself with proven successes, ability to limit code freeze, and automated rules-based conversions

Champion

Employees: 50
Headquarters: Dallas, TX
Website: ateras.com
Founded: 1983
Presence: Privately held
Sectors include: Insurance,
Financial Services,
Healthcare, Government,
Universities



Due to project variability, standardized pricing cannot be determined. ATERAS can provide a ROM based on project size, and a fixed bid and timeline after assessment.

Overview

- Since 2000 ATERAS has been performing automated analysis and conversions.
- Solutions include legacy assessment, code understanding, architectural, data and code transformation.

Strengths

- Received *Best Migration Award* in 2006 and *Microsoft Product Innovation* award for their legacy migration conversion in 2009.
- Extensive experience having carried out manual migrations for 10 years prior to automating their process.
- Have assessed over 450 million lines of code, and over 120 language types, and converted over 65 Million lines of code.

Challenges

- Keeping abreast of latest trends in technology and making sure that conversion and migration teams and tools are capable of providing leading edge solutions for their clients. (i.e. modernizing to RIA Web solutions)

Info-Tech Recommends:

With their suite of tools including eavRPM and DBShuttle, ATERAS can achieve 100% conversion automation, functional equivalency, and improved performance of your systems.