Application Modernization for AWS

advanced

People. Partnership. Solutions.

Legacy technology can hold your business back, slow down productivity, and increase your costs.

Modernization is necessary. As [Stefan van der Zijden, Research Director at Gartner](#) explains, "Application modernization is not one 'thing'. If you're faced with a legacy challenge, the best approach depends on the problem you're trying to solve. Replacement isn't the only option."

Client >
GE Capital

Sector >
Financial Services

"I thought I knew what my application did, but I was wrong. Advanced showed me how much more there was than I assumed...this assessment was one of the best things we did."

Mark Rubel > Director of Application Development > GE Capital

The broad scope of our Application Modernization practice means that it touches organizations resolving different kinds of issues across industries and around the world.

While technology continues to grow in prevalence across everything we do, organizations have two options. They can review their current estate and proactively look to move forward, or they can assume that relying on their current tech will suffice. Making this assumption is risky. In the digital age, it is becoming more and more necessary to align resources to the future.

Relying on your current IT often means agreeing to legacy technology as part of your future. In doing this, you are:

> Accepting a reduction in productivity

> Limiting your ability to adapt to, and deliver on, customers' expectations quickly

> Ignoring that your specialists are retiring and the new workforce cannot support your technology

> Increasing your costs

> Enabling susceptibility to security breaches and risk

As the difficulties around integrating legacy applications with modern technology show, trying to force old to mix with new is an arduous process. Though it may be necessary during your transition, it isn't a place you can stay in.

In our [2020 Mainframe Modernization Business Barometer Report](#), the consequences of not modernising were shown to be huge. 61 per cent of IT respondents said difficulty in integrating legacy systems and modern technology is an ancillary consequence of not modernizing, followed by difficulty to recruit the right talent (41 per cent) and reduced levels of customer service (36 per cent). This lack of integration and talent means making changes in applications is extremely difficult and time consuming because they are often complex and require a specific, diminishing skillset.

Application Modernization by Advanced

Our Application Modernization products and services have capabilities cultivated by specialists that can meet you where you are, and strategically move your organization forwards digitally. We are here to deeply understand, comprehensively document, manage, migrate and modernize your legacy applications, databases and the environments that currently support them.

Our Application Analyzer tool helps businesses understand the structure of their application code, the business logic contained within it, and the dependencies throughout the application. This enables organizations to optimize their application development to reduce time and effort for changes and to drive development efficiencies. The understanding generated by Application Analyzer is vital to the formation of an Application Modernization strategy that can be executed successfully. However, this AWS or on-premises tool can also be used as a stand-alone solution.

Our Modernization Platform-as-a-Service (ModPaaS) platform analyzes mainframe applications (eg. COBOL, PL/I, Assembler, JCL etc.), producing detail that then supports decisions to fuel an effective modernization disposition strategy.

Whether the goal destination for your application is to remain on-premises with improved functionality and interoperability, to be Cloud-Ready, Cloud-Optimized, Cloud-Native,

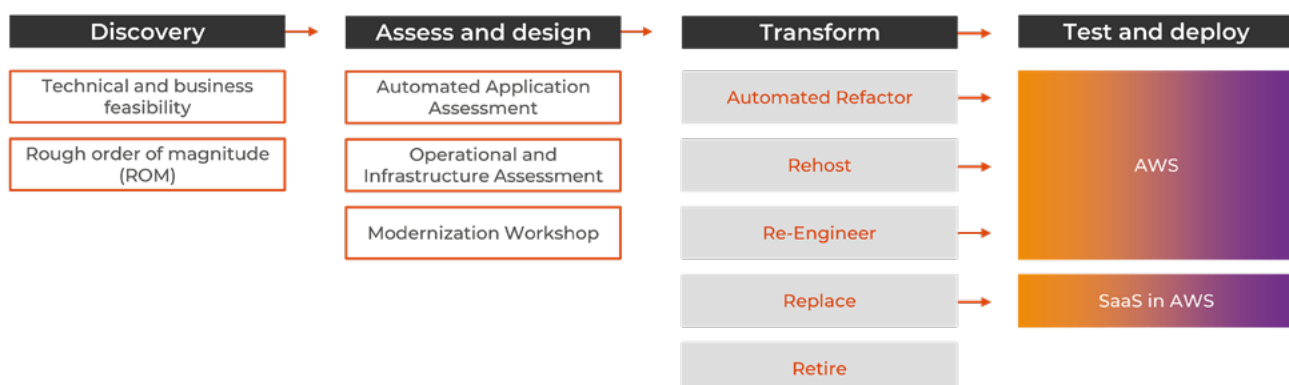or to use Software-as-a-Service (SaaS) or to be retired, our specialists can take you there.

In terms of a starting place, we work with applications and databases on IBM, OpenVMS, and VME mainframes and platforms. We can manage applications off the mainframe, as well as on. In addition, we can transform over 100 languages and technologies, with the ability to create parsers to understand more. Our teams are committed to working with you to ensure your technology supports your business goals.

As a guide, so far, most of our projects have worked with:

> Mainframe

> COBOL

> Assembler

> CA Gen

> CA Telon

> Natural

> PL/I

> Adabas

> IDMS Database

> IMS Database

> OpenVMS

> VME

Discovery	Assess and design	Transform	Test and deploy
Technical and business feasibility	Automated Application Assessment	Automated Refactor	AWS
Rough order of magnitude (ROM)	Operational and Infrastructure Assessment	Rehost	
	Modernization Workshop	Re-Engineer	
		Replace	SaaS in AWS
		Retire	

Our technical experience:

Languages		**Databases**	**SOA Architects**
ASP/ASP.NET	Natural	Adabas	ACMS
Assembler	NDM Scripts	Alpha	SOAP
Awk Script	Netron Cap	DB2	UDDI
Basic	Oracle Forms	DDL	WSDL
C	Oracle Reports	DTS Packages (SQL	XMI
C#	Pascal	Server)	XML
C++	Perl	Image/SQL (HP)	XPath
CICS including BMS	PL/I	IMS DB - PSB, DBD	XQuery
Maps	Powerbuilder	Informix	XSLT
CL (AS/400)	Pro*C	MS Access	
CLIST	QMF	ORACLE	**Infrastructure-**
COBOL	REXX	PL/SQL (Oracle)	**Schedulers**
CSS	RPG/RPG LE (AS/400)	Postgres	AutoSys
DCL	SAS	RDB	CA-Jobtrac
DCR	Shell Script	SQL Server	CA-7
DDS (AS/400)	SQLMOD	Supra	Control-M
DOS Scripts	Struts	Sybase	cron
Easytrieve	TACL (HP Tandem)	T-SQL (Sybase)	ECS
Focus	TAL (HP Tandem)	UDB	ESP
Fortran	Tiles UBL		Maestro
FTP Scripts	UBL	ETL Tools	NetBatch (HP
GDF	Umbrella		Tandem)
Hibernate	VBScript	CA Advantage Data	Robot (AS/400)
HTML	Visual Basic/VB.Net	Transformer	Zeke
IMS DC including MFS		CA InfoRefiner	
Java		Cognos Data Manager	
JavaScript		DataStage	
JCL		Informatica	
JSP			
Makefile			
Mark IV			
MQ Series			

In support of our work, we recognize key industry providers and form tight partnerships with them, or, in the case of Transoft, Information Balance, and Modern Systems, we acquire them. These partnerships and acquisitions have created a cohesive portfolio of services, delivering complete end-to-end solutions that readies our customers for tomorrow, while bettering what they do today.

Our ecosystem of partnerships includes a strong partnership with AWS. As mainframes become a growing hindrance to modern, continuously evolving, agile business, companies are rapidly moving to DevOps and the Cloud while consolidating their technology stacks to maximize IT performance. To facilitate this, they are adopting Cloud-compatible languages and harnessing best-of-breed solutions from AWS. The Advanced/AWS partnership ensures a smooth transition into the target environment.

Experience with our customers:

Our 35+ years of experience evidences that every Application Modernization project is different, and must be based on the individual business drivers of our customers. This table shows a, by no means exhaustive, list of challenges that we discover when speaking to our customers.

Challenge	Risks	Solution	Benefits
Business critical application(s) running on aging legacy operating system/platform	Legacy platforms such as the IBM Mainframe, OpenVMS and VME are costly to maintain	Refactor or rehost to AWS	Reduce technical debt, overcome the challenge of a skills gap and reduce maintenance - while easing the handling of such tech
Maintaining or enhancing core application(s) where source code is owned but there is a lack of documentation and insight	Changes to application(s) become time-consuming and can be detrimental if you don't understand your application	ModPaaS in AWS understands and documents source code, and can help with business rules extraction for comprehensive understanding	Reduce development time, work smarter, support developers, reduce on-boarding time for new resources
Happy with existing application functionality but need to move to a modern environment	Legacy applications, written in languages such as COBOL, are costly to maintain, with a skills gap due to diminishing resources	Leverage Automated Refactoring to move your applications to functionally equivalent target languages such as Java and C# in AWS	Maintain the functionality of your existing application while working with a more manageable, future-proof platform
Legacy platform becoming end-of-life	Business-critical systems are no longer supported	Refactor or rehost to AWS	Modernizing enables you to move to an environment that is easily supported
Need to integrate modern application with legacy	Building custom APIs can take weeks/months and as organizations digitally transform, more and more APIs are needed	Migration to AWS, which enables simple API integration and connectivity through its architecture and solutions.	Building APIs with modern tools is five times faster and a fifth of the cost of building custom APIs

500+

So far, we have processed more than 2.5 billion lines of code and have successfully completed over 500 projects worldwide.

We use a proven methodology that includes leveraging automated tooling to ensure the most beneficial outcome is achieved. A range of methods are available from our teams to reach the ideal destination, we can rehost, refactor, reengineer, replace or retire applications and databases.

We operate in accordance with global ITIL and PRINCE 2 standards, and in compliance with ISO 9001, ISO 14001 and ISO 27001.

Some of our highlights include:

COBOL to AWS - New York Times

The New York Times had a critical business workload running on a mainframe as the core IT system supporting daily home delivery of its newspaper. Our teams collaborated to successfully transform the New York Times' COBOL-based application into a Java-based application running on AWS.

Data Migration - Desjardins General Insurance Company

Desjardins General Insurance Group (DGIG) is a leading Property and Casualty insurer with a portfolio of over 4 million active policies, $5 billion in revenues and over 13 billion in assets. This project completely migrated DGIG's systems from an MVS/IDMS platform to a new Windows/ Oracle platform. According to DGIG, currently stands as the largest successful modernization project done in both North America and in the history of the insurance industry.

VME - Department of Work & Pensions

As part of its ongoing migration away from the legacy VME platform, the Department of Work & Pensions chose to invest in runtime software to allow the department to manage the workload and performance of existing systems.

OpenVMS - Cashco

Cashco was running its entire operation on a highly customized, long-standing OpenVMS system. They wanted to reduce their dependency on this aging platform, mitigate the risk of skills shortages and use the latest database tools – while at the same time retaining their valuable business logic.

35

In the past 35 years, our broad range of services have been showcased across different industries, organizations, and capabilities.

About Advanced

Advanced is a leading international provider of application modernization services with unique expertise in the legacy modernization market.

With more than 500 modernization projects completed worldwide, and 2.5 billion lines of code processed through our solutions we have been driving IT efficiency, agility, and competitive advantage for customers through core application and database transformations for the past 35 years. Over that time, we have helped organizations across all sectors including the UK Department for Work and Pensions, FedEx and the New York Times.

Advanced is one of the three largest providers of business software and services in the UK, with a strong track record in helping our customers' journey to the Cloud with tailored solutions across all industries.

With a turnover of US$339m, 20,000+ customers and 2,500+ employees we help organizations create the right digital foundations that drive productivity, insight and innovation – all while remaining safe, secure and compliant.

We work with organizations in all sectors, from Healthcare to Legal, and of all sizes – whether they want to move to the Cloud, invest in ERP, manage core business functions through one unified system or modernize their legacy applications.

More information

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