Uniface is a model-driven application development platform, with a long-running history and a loyal installed base. The technology traces its roots back to 1984 when it was introduced to provide an abstracted and portable application development and runtime environment during an era of proliferating hardware and operating system platforms. We note the following:

- The Uniface offering provides an end-to-end application development solution including a productive integrated development environment (IDE) for building applications and multiplatform runtimes for various client and server operating systems for running the applications.
- Uniface became a popular environment in the 1980s and 1990s for building custom mission-critical applications, with many of the applications built with Uniface continuing to be maintained by Uniface's developers.
- A significant number of commercial ISVs use Uniface for their business software solutions to achieve portability and productivity in their application development efforts, and to date, about 60% of Uniface business is derived from partners that use it for commercial applications.
- The Uniface team has a long history of proactive product evolution and has continued to invest in design and development to keep Uniface updated and in line with modern client and server platforms and developer needs.
- Born to support business applications, Uniface was from inception focused on enterprise interoperability needs, making it attractive in complex settings with multiple databases and legacy systems integrations.
- Uniface enjoys intense loyalty with its customers and partners. The company has won its customer-partner loyalty through its intimate engagement model and strong support with its big customers and partners. The company has developed a reputation for releasing regular, well-thought-through product upgrades that feature a positive upgrade experience.
- While Uniface has evolved over the years to support changing winds in underlying operating systems, database platforms, and software architectures, the company has to evolve its offering aggressively to adapt it to modern cloud and mobile platforms and to handle the intensifying need for application development agility and productivity that are now propelling the model-driven application development space.
- As of early 2014, Uniface was sold to Marlin Equity Partners, a global private equity firm with assets totaling over $2.6 billion. Marlin's modus operandi appears to be to create long-term value by utilizing in-house and domain expertise. IDC does not expect this to affect Uniface negatively, and this may in fact lead to increased investment in the technology to harness evolving market opportunities.
IN THIS VENDOR PROFILE

This IDC Vendor Profile analyzes Uniface, a company competing in the model-driven application development software market. This Vendor Profile also analyzes Uniface’s business model, technology, road map, strengths, and challenges and provides guidance for Uniface’s customers and prospects.

SITUATION OVERVIEW

Company Overview

The Uniface development and deployment platform is used for creating applications and custom solutions ranging from mainframe applications and infrastructure integration tools to mobile apps and cloud-based services. As a model-driven application platform, Uniface provides an abstraction layer that enables faster, higher-level coding for rapid application development. Taking a lower-level approach could open the door for faster performance, but the development speed and efficiency of Uniface is valued by users who say they can create applications more quickly, and writing less code, than they could with other development platforms.

Uniface reports a maintenance renewal rate of over 95%. Research the company does on its customers shows that 70% of Uniface customers are using the technology in client/server mode, while 25% have added the Web mode of usage. Interestingly, about 5% continue to use character mode, highlighting the general pace of evolution of systematic IT applications. The company has around 300 maintenance-paying customers in North America, out of a total of 1,600 worldwide.

Uniface has a rich partner ecosystem responsible for its longevity over the years. The company can claim over 700 solutions developed by over 250 independent software vendors and solution providers. In total, this community is responsible for 60% of Uniface’s business and accounts for the stability that the company has enjoyed over the years.

A Brief History of 4GLs

To understand the value proposition behind technology like Uniface, it is important to take a quick historical detour of business programming development languages, historically known as 4GLs or fourth-generation languages. The idea behind 4GLs is very much in line with what the industry calls today model-driven application development, which is an approach to constructing business applications that relies on higher-level abstracted application through visual models or through scripting languages operating at the data and business process domain, rather than machine entities such as bits and bytes. Model-driven application development approaches, which can leverage well-trained business analysts for application building, have largely superseded traditional machine-model-compiled languages (e.g., C/C++), also known as 3GLs (third-generation languages) for building business applications. In the mid-1990s, a challenge to 4GLs emerged in the form of virtual machine languages (or bytecode-compiled languages) such as Java and later Microsoft’s .NET, which provided useful and effective abstraction from the machine model. The virtual machine programming language revolution has continued to play out and has indeed achieved considerable success, absorbing
considerable business application development activity from both compiled-to-machine languages and 4GLs, but has proven to require significant programming skill and is largely used today in commercial software development or to build and maintain large-scale systematic enterprise applications. Meantime, model-driven approaches are seeing a renaissance in the form of a considerable increase in adoption in recent years as the need for rapid innovation and business differentiation has accelerated. With model-driven approaches on the market today, including technologies from the likes of salesforce.com, Mendex, and OutSystems, enterprises strive to be more productive and agile in their application development and more engaging of the business power user or analyst in the application development life cycle. In many ways, we are entering the new age of the 4GL, in the guise of the modern model-driven application platform.

**Company History**

Uniface traces its roots to the early 1980s when research activity around 4GL computing languages and environments began to commercialize. Leveraging the wave of business interest in building applications, Inside Automation — a Dutch start-up — launched a product by the name of UNIS in 1984. The product became especially popular after some packaging and partnering arrangements were made with then high-flying relational database vendor Sybase (now part of SAP). The late 1980s and early 1990s were the golden years for 4GLs, and Uniface saw aggressive and rapid expansion. Uniface’s ability to address different operating systems and different database back ends, including the various dialects of SQL sported by then up-and-coming relational power houses like Oracle, Sybase, and Informix, allowed enterprises to stay above the raging technological fray.

Uniface is based in the Netherlands and has 150 worldwide employees, with several international offices including significant operations in the United States. For 20 years, from 1994, around when Uniface 6.0 shipped supporting a graphical user interface for the first time, until 2014, the company was owned by Compuware, the database tools and application performance software maker. Compuware generally gave Uniface freedom to evolve its technology, but since 2009, Compuware allowed Uniface to operate more formally as an independent division, giving it more room to evolve its product and maintain its customers and partners through a strong customer support program. Durable growth through cross-selling largely eluded the Compuware-Uniface combination, but existing customers stuck around, continuing to find great value in the portability of the technology and its agility and productivity of development.

As of early 2014, Uniface was sold to Marlin Equity Partners, a global private equity firm with over $2.6 billion in assets and a long-term focus. IDC believes this is a generally positive development with minimal impact on Uniface customers. We expect Uniface to continue to operate independently and to enjoy a potentially increased level of investment to meet evolving market conditions.

**Product Evolution**

Uniface shows a history of continuous evolution (see Table 1). Uniface 3, the first production release, was released in 1986 and included support for multiple databases and data models, laying a foundational commitment to facilitating interoperability on a cross-platform basis. Uniface 4 introduced MS-DOS support, and Uniface 5 snapped the product to the client-server revolution in 1990, highlighting Uniface’s approach to transcend software architecture changes in the industry.
# TABLE 1

Key Uniface Milestones: A History of Evolution and Adaptation

<table>
<thead>
<tr>
<th>Release</th>
<th>Year</th>
<th>Key Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIS</td>
<td>1984</td>
<td>Multi-DB 4GL for VAX/VMS launched by Inside Automation of the Netherlands</td>
</tr>
<tr>
<td>Uniface 3</td>
<td>1986</td>
<td>First public release; advanced 4GL IDE and runtime with multi-DB support</td>
</tr>
<tr>
<td>Uniface 4</td>
<td>1988</td>
<td>PC support (MS-DOS); improvements in IDE and engine</td>
</tr>
<tr>
<td>Uniface 5</td>
<td>1990</td>
<td>Client/server deployment with remote DB access, Unix support, GUI support with Universal Presentation Interface (UPI), and 13+ data stores supported</td>
</tr>
<tr>
<td>Compuware</td>
<td>1994</td>
<td>Uniface acquired by Compuware Corp.</td>
</tr>
<tr>
<td>Uniface 6</td>
<td>1994</td>
<td>GUI form painter and application model editor, Macintosh support, Microsoft platform enhancements (OLE), reporting tools, and integrated version control</td>
</tr>
<tr>
<td>Uniface 7</td>
<td>1997</td>
<td>Components and integration, request broker architecture, Web app server, and partitioning</td>
</tr>
<tr>
<td>Uniface 8</td>
<td>2001</td>
<td>Scalability, load balancing, and performance; automatic garbage collection; and XML Web services</td>
</tr>
<tr>
<td>Uniface 8.3</td>
<td>2003</td>
<td>WS-I Web services support; SOAP, COM, CORBA, and MQSeries connectors</td>
</tr>
<tr>
<td>Uniface 9</td>
<td>2006</td>
<td>Thin-client support, early mobile support (Windows mobile), and Unicode</td>
</tr>
<tr>
<td>Uniface 9.2</td>
<td>2008</td>
<td>Multichannel deployment; suite capabilities such as Uniface View portlets and Uniface Flow</td>
</tr>
<tr>
<td>Division Status</td>
<td>2009</td>
<td>Uniface becoming a separate business unit of Compuware</td>
</tr>
<tr>
<td>Uniface 9.4</td>
<td>2010</td>
<td>First Web support: RIA and &quot;Web 2.0&quot; functionality including AJAX and JavaScript</td>
</tr>
<tr>
<td>Uniface 9.5</td>
<td>2011</td>
<td>Better client-side processing with JavaScript API, session management, and REST support</td>
</tr>
<tr>
<td>Uniface 9.6</td>
<td>2012</td>
<td>New client/server GUI features, HTML5 control and JavaScript APIs, updated PC support (e.g., 64 bits), and agile release cycle</td>
</tr>
<tr>
<td>Spin-off</td>
<td>2014</td>
<td>Global investment firm Marlin Equity Partners acquiring Uniface</td>
</tr>
<tr>
<td>Uniface 9.7 (future)</td>
<td>2015 (estimate)</td>
<td>Mobile and extended Web and client-server functionality</td>
</tr>
<tr>
<td>Uniface 10 (future)</td>
<td>2015 (estimate)</td>
<td>New IDE, cloud and mobile improvements, and multitenancy application support</td>
</tr>
</tbody>
</table>

Source: IDC, 2014
Since 2010, Uniface has released updates on an annual basis as it has sought to incrementalize its evolution through a new agile approach to product development. Today, the company’s R&D is focused on adapting the technology to agile application development for Web, mobile, and cloud, with the aim of delivering much of this functionality in the Uniface 10 release time frame of 2015. Version 9.6 heralded a switch by the Uniface team to a more agile development approach that has resulted in incremental improvements coming out roughly every four months. This change is a positive one, although the transition likely took a toll on the long-planned road map for version 10, now destined for some time in 2015.

The Uniface development and deployment platform is used for creating applications and custom solutions ranging from mainframe applications and infrastructure integration tools to mobile apps and cloud-based services. As a fourth-generation language, Uniface provides an abstraction layer that enables faster, higher-level coding for rapid application development. Taking a lower-level approach could open the door for faster performance, but the development speed and efficiency of Uniface is valued by users who say they can create applications more quickly, and writing less code, than they could with other development platforms.

**Company Leadership**

IDC believes that Uniface has a strong leadership team ready to take it forward. The key principles in charge of operating, marketing, and engineering are:

- **Jim Byrnes, CEO.** Byrnes has taken the helm after the divestiture from Compuware. He has significant enterprise software experience at IBM and most recently at Infor.

- **Aad van Schetsen, President and General Manager.** van Schetsen is responsible for running Uniface on a day-to-day basis and has been at the company since 1992 where he joined after working at Cognos in many positions.

- **Adrian Gosbell, Vice President of Product Management and Marketing.** Gosbell has been at Uniface since 1994, having joined the company after stints at end-user organizations as a software developer often using the Uniface technology.

- **Maarten van Leer, Vice President of Uniface Technology.** van Leer is Uniface's top software developer running the engineering team behind the product and has been at the company since 1993.

- **Deniz Yugnuk, Vice President of Sales.** Yugnuk has been with Uniface since 2000 in sales and project management roles after stints at Baan and other companies.

**Company Strategy**

From its inception, Uniface has been focused on making available a portable approach for building business applications. Compuware's acquisition of Uniface two decades ago was motivated by synergies between Compuware's focus on application development tools and application management. With Compuware's extensive enterprise sales organization, Compuware promoted
Uniface to its customers, but changes in application development away from mainframe technology meant that most of Compuware’s enterprise connections in IT operations were increasingly not the best targets for marketing portable application development tools. In addition, as Java was being adopted in the enterprise in the late 1990s and as enterprises focused their front-end application development on Microsoft PCs at the exclusion of any other platform, the grounds shifted, and portability requirements became less intense in the application development tools space. Thus while Uniface was able to continuously evolve its offering to remain relevant and valuable to its international base of customers, the expansion to a much larger base of customers through cross-selling was illusive.

As platforms changed and architectures evolved, the Uniface team’s diligence in supporting emerging technologies helped the company retain the loyalty and support of its customers. In recent years, new disruption in front-end devices brought about by smartphone technologies is creating new portability needs, but now in the guise of agile and productive development. Uniface provides the kind of platform-agnostic, model-driven development and deployment platform that developers can use to create new applications and to solve complex integration challenges with fewer lines of code and a faster time to completion than is typically possible with virtual machine-based technologies such as Java.

*Products and Services*

Uniface continues to be focused on its original mission. The Uniface development and deployment platform is used for creating applications and custom solutions ranging from mainframe applications and infrastructure integration tools to mobile apps and cloud-based services. As a fourth-generation language, Uniface provides an abstraction layer that enables faster, higher-level coding for rapid application development. Taking a lower-level approach could open the door for faster performance, but the development speed and efficiency of Uniface is valued by users who say they can create applications more quickly, and writing less code, than they could with other development platforms.

Uniface’s support for the Dojo Toolkit and HTML5 helps the company’s customers create hybrid and Web-based applications, as part of a strategy to enable customers to deploy solutions on the platform of their choice, including the cloud. This strategy extends Uniface relevance to developers focused on cloud-based solutions, software as a service, and mobile apps.

*Customers and Partners*

Uniface appears to have a strong partner strategy, with partners making up 60% of its customer base. Partners provide a steady royalty revenue stream, as well as strategic longevity and viability for Uniface. Partners can be strategic door openers because when an enterprise takes on a vendor to create a custom application or to resolve an infrastructure integration challenge, the vendor usually is given a strong say in the tools the vendor wants to use in solving the problem.

*Enterprise ready* has become a cliché, but Uniface enjoys a reputation for reliability. Its customers have used Uniface to develop and deploy an array of mission-critical line-of-business and back-end applications. The company’s long-term commitment to supporting multiple databases, operating systems, and industry standards has given the company relevance, with companies undertaking large modernization projects.
Uniface has developed a reputation for taking care of the customer, which translates into a long-time value for Uniface. Uniface has remained relevant for decades because of its history of responding to developer needs through evolving the product. It has also developed a reputation for thoroughly testing updates prior to release and providing easy transitions. This strategy results in customers looking forward to new product releases, which isn’t always the case in the computer industry.

**Market**

Uniface falls in a class of technologies known as model-driven application platforms that combine rapid application development capability through visual or abstract models with client-side and server-side runtimes, which execute the developed code. Such tools typically provide a significantly higher level of abstraction than a 3GL. Uniface is generally known as a data-centric application platform where the application development process is often guided by and centered around the application's data model. Process-centric model-driven application platforms are guided by and centered around an application's process model, essentially requiring a process-centric view of the application requirements. The focus of model-driven application platforms is often portability, development productivity, and agility and involves a trade-off between support for industry-standard and proprietary approaches to achieve these results. The overall model-driven application platform market is currently being sized as IDC has reconfigured its software taxonomy to aggregate all such tools, but it is estimated to be in excess of $3 billion annually. IDC estimates that Uniface has license revenue in excess of $40 million.

**Competition**

Competition in the model-driven application platform space has heated up significantly. The market has a number of innovators leveraging the need for agile and productive development and using cloud and mobile technology to open new doors. In particular, players like Salesforce, Progress Software, Mendex, OutSystems, Caspio, Zoho, and Intuit are most likely to be evaluated when enterprises or ISVs look for model-driven development solutions. Vendors in this space also compete with business process management (BPM) players, which also layer highly visual compositional approaches on top of an orchestration engine.

**FUTURE OUTLOOK**

We see a stable future for Uniface as long as it remains focused on the strategies that have brought it this far – without losing its sight on where the world of development is headed. This means continuing to evolve Uniface. The company’s future to an extent will be determined by the success of its partner program – and the extent to which partners can showcase their project work as a case for extending the use of Uniface within the enterprise.

While the company hasn’t yet announced a detailed feature list for its forthcoming Uniface 10, its history to this point suggests that when it arrives (currently set for mid-2015), the code should be clean and well tested and provide well-planned feature capabilities and enhancements that encourage upgrades. The question for Uniface as a business is whether it will be able to attract new customers and ISV partners.
Challenges and Opportunities

The key challenges and opportunities facing Uniface are as follows:

- **Strategic safety.** Like many model-driven application platforms, Uniface requires a strategic commitment to the development platform that some enterprises and ISVs are not willing to make. IDC finds that enterprises select such tools if they deem the return-on-investment (ROI) or time-to-market benefits outweigh these strategic risks. In addition, Uniface's longevity and customer loyalty stands as a strong testament that this is a vendor focused on customer satisfaction and continued adoption.

- **Cloud and mobile deployment.** Uniface can be deployed today in cloud environments, but it does not provide specific support for the leverage of the cloud self-service model and does not enable ISVs or larger enterprises to deploy its servers in a multitenant model. Similarly, the product offers strong support for multiple platforms but only Web support for modern smartphone and tablet platforms. To broaden its customer base, Uniface must invest heavily in modern deployment approaches for its server and client technology by embracing cloud and mobile application models.

- **Complexity.** Uniface was designed in an era where portability was the key value derived from abstraction. The product's early competitors were traditional compiled languages like C/C++, and later Uniface evolved in a world of Java competition, which while raising the abstraction layer somewhat with a virtual machine model retains considerable complexity to support a broad range of consumer and enterprise applications. Uniface thus has retained considerable complexity in its development model relative to modern model-driven environments that are more focused on agility and productivity for business applications. This is an area that the Uniface team needs to be mindful of as it evolves the product.

Uniface appears focused on continuing the evolution of its offering in order to adapt to modern challenges. The company's Uniface 10 release, which has been talked about for several years, promises to make progress along many of the dimensions listed previously.

ESSENTIAL GUIDANCE

There is a long trail of development tools that have enjoyed their time in the sun only to be later abandoned as more efficient solutions were released, or even because less efficient (but more popular) alternatives came on the scene. In fact, many Uniface customers believe that today's market-leading development tools provide an example of the later — more popular, but less efficient. We fully realize that adherents of any development platform could be just as passionate, but Uniface has indeed earned a customer base that feels as though it has found a better way to get things done.
Advice for Technology Buyers

The selection of application development tools can be a complex and confusing exercise. Enterprises need to assess their strengths and weaknesses realistically and identify goals and needs to make the right selection decisions. Some of the questions buyers need to answer are:

- Are applications intended to extend existing systems or are they for greenfields settings? If existing applications are to be extended, what is the extensibility of the existing platform and toolset? Do the existing systems support modern application development processes? Do they enable the adaptation of existing code to modern Web services?

- What are the application scale requirements in terms of front-end workflow complexity or back-end business integration or algorithmic complexity? How many users are likely to use the system concurrently? What are the platform's limitations? How stable is the architecture?

- Is cloud enablement a strategic imperative? What is the preferred cloud deployment model – public, private, or hybrid? Does the application platform under consideration support these cloud models of deployment?

- What are the mobile requirements for developing new applications or mobile extensions? What are the integration requirements or architectures to comply with in the enterprise? Does the existing toolset support the data synchronization patterns required? Is HTML5 adequate even in hybrid form for the requirements? Are multiplatform tools needed?

- Is the vendor viable on a long-term basis and capable of supporting its offering, and is the vendor offering a stable architecture and product set? Is the vendor staffed to provide the required level of enterprise or partner support?

Advice for Uniface

Mode-driven application platform vendors like Uniface need to understand the specific requirements of technology buyers and address them clearly and directly, including case studies and ROI calculators where possible. Buyers should expect vendors to be conversant with buyer concerns around support for specific workloads and their scaling and around offering services to help transition to public, private, and hybrid cloud environments.

IDC's guidance for Uniface is to continue to advance its development and deployment platform to meet the evolving needs of its partners and other customers, ranging from Windows to cloud and from mobile to modernization. This will require staying tightly attuned to its partner-customer ecosystem as well as proving nimble at accommodating new methodologies or standards as they emerge.
Related Research

- Worldwide Software Construction Components 2013 Vendor Shares (IDC #250545, August 2014)
- TrackVia: Model-Driven Application Platform and PaaS for the Citizen Developer (IDC #250496, August 2014)
- Negotiating the Mobile Disruption: Approaches for Multiplatform Application Development (IDC #249202, June 2014)
- Worldwide Development Languages, Environments, and Tools 2013 Vendor Shares (IDC #248995, June 2014)
- The Evolving State of HTML5 (IDC #247499, March 2014)
- 2014 Worldwide Software Developer and ICT-Skilled Worker Estimates (IDC #244709, December 2013)
- The Evolving State of PaaS – Strategic Guidance on Cloud Application Platforms (IDC #244391, November 2013)
- Progress Software Goes All-in on PaaS: Converged Pacific Platform Opens New Horizons (IDC #244384, November 2013)
- BuyerPulse Snapshot: SixSq on Platform as a Service (IDC #lcUS24364313, October 2013)
- BuyerPulse Snapshot: Caspio on Platform as a Service (IDC #lcUS24327113, September 2013)
- The Pressures That Are Reshaping Platform as a Service (IDC #240993, May 2013)
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