CELENT

INSURER STAND-ALONE RATING ENGINES

2023 Solutionscape: Powered by VendorMatch

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EXECUTIVE SUMMARY

Stand-alone rating engines are used for a variety of reasons—but primarily to externalize the rates, rules, and logic associated with rating from the policy administration system (PAS) to create speed-to-market. This report provides an overview of the stand-alone rating engines available in North America for life and property and casualty insurance carriers.

The report profiles 16 stand-alone rating engines, providing an overview of their functionality, customer base, lines of business supported, technology, implementation, pricing, and support.

We asked firms that provide stand-alone rating engines to enter information about their company and products into Celent's free digital catalog, VendorMatch (https://www.celent.com/vendormatch). This report presents certain extracts of that information. Additional details about each product are available in VendorMatch, subject to the VendorMatch terms of use.

The following vendors and solutions are included in this report:

CGI Group, Inc. – Ratabase; Cogitate Technology Solutions, Inc.- Cogitate Rater; Decision Research Corporation - RS X Rating; Duck Creek Technologies - Duck Creek Rating; Earnix - Earnix Enterprise Rating Engine; Jarus Technologies - JARUS RATING ENGINE; Majesco - Global IQX - Stand Alone Rating Engine for Group and Voluntary Benefits; Oracle Corporation - Oracle Insurance Insbridge Enterprise Rating; RDT – Equator; Solartis - Solartis Rating Microservice; Tritech Insurance Systems, Inc. - Stand Alone Rating Engine; Valuemomentum - BizDynamics Rating; Verisk - Sequel Rulebook - Pricing, Underwriting & Digital Distribution; Vertafore, Inc. – NetRate; WTW – Radar; Zywave Digital Distribution Suite - ClarionDoor

This report should help insurers define their core rating engine system requirements and can be used as the first step toward creating a short list of vendors for evaluation. Expanded rating functionality and improved technology mean that insurers have a broad spectrum of systems and vendors to consider when looking for a solution to their needs. Insurers can leverage their access to the author through analyst access calls to learn more about the vendors.

INTRODUCTION/CONTEXT

Significant innovation is occurring in product management in the insurance industry. Carriers are looking to grow, differentiate themselves, and navigate the regulatory environment—and to do all these things efficiently.

The most innovative carriers include unique offerings such as behavior-based products or products with embedded services in their product management efforts. Multivariate rating algorithms are increasingly being used, and product managers are using predictive analytics as a key tool in providing pricing guidance for books of business. Smaller carriers are focusing on managing their rates more efficiently and looking for speed-to-market with easy and fast updates of rates and algorithms.

All carriers are expanding channels and providing online rating capabilities to agents, and many are extending this to policyholders. And the mergers and acquisitions market continues to be very active, as many organizations seek acquisitions.

Managing the regulatory environment continues to be an area of focus, as one of the top ten market conduct actions for property casualty insurers is using unapproved/unfiled rates and rules or misapplying rating factors.[1]

Each trend creates a potential reason to use an external rating engine.

Stand-alone rating engines are primarily used to externalize the rates, rules, and logic associated with a product away from the policy administration system to create speed-to-market. Older policy admin systems often are unable to support unique, innovative products. Rating logic is often embedded in code in older systems, making it extremely complex and time-consuming to make product changes. This makes it difficult to integrate with other systems such as comparative raters, third party data vendors, rules engines, web quoting, predictive modeling tools, and internal databases. It also means that carriers depend on the IT department to make product and rate changes, which requires a high-level skill set and can take additional time.

Carriers running multiple policy admin systems can experience inaccuracies, entry duplication, and data redundancy as they make rating changes across multiple systems. Carriers providing web-based quoting can experience large volumes of quotes, which can affect the performance of a policy admin system if the website pings it directly.

External rating engines allow a carrier to build the rating algorithms once and distribute it to any application—web quoting, comparative rater, or policy admin system—which can improve productivity, create speed-to-market, and provide

[1] Wolters Kluwer Press Release, November 2022

carriers with greater flexibility. Intuitive configuration environments often found in modern rating engines allow business analysts to perform many updates. Product architectures that include inheritance allow rapid extension of products across jurisdictions. Built-in modeling and testing tools allow for faster, better analysis of proposed rate changes.

At their core, rating packages are calculators receiving required data about risk and computing a rate that is associated with a wide combination of inputs. Calculating a premium for a specific account usually involves a variety of factors:

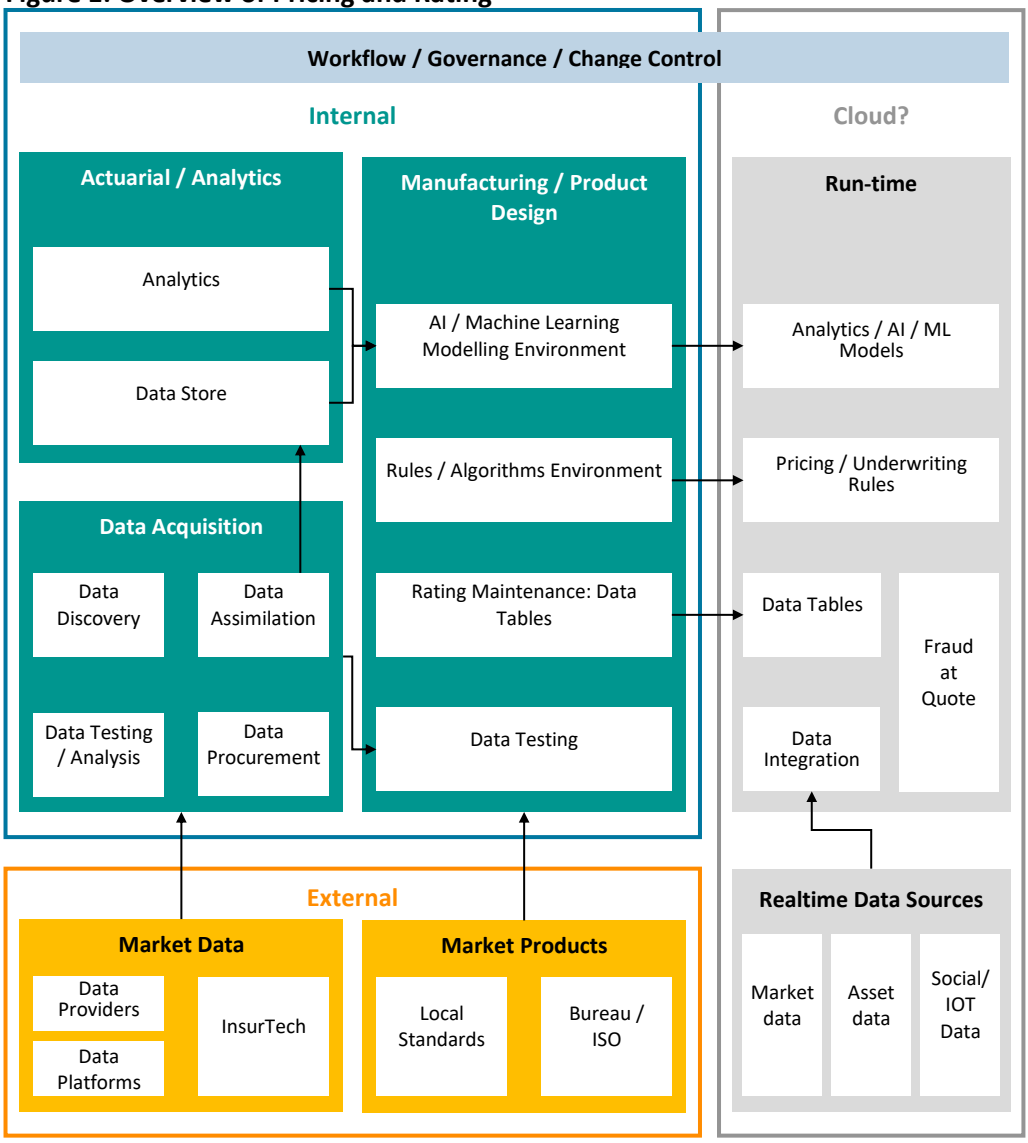
- *Rating rules:* Rating rules contain the business logic necessary to apply rating algorithms, such as how drivers are assigned to vehicles. They may also contain other premium rules, such as minimum premiums or rounding rules.
- *Underwriting rules:* These typically contain the logic that applies appetite and risk selection characteristics. Usually applied before a rate is calculated, they may be used to determine which rating tier a risk belongs in, or which rating company should be used for a specific policy.
- *Rate tables:* Contain the numerical inputs needed to calculate a premium. They include base rates and fees and rating factors that reflect the basic risk being covered, such as territorial modifiers, construction types, or alarm credits. Rate tables may also include factors that reflect product terms, such as the deductible chosen, limits selected, or additional endorsements requested.
- *Rating algorithm:* Outlines how to combine the rates and rules to calculate the premium. They are very explicit and provide guidance on which variables should be included, what mathematical functions should be applied, how rounding takes place, and in what order the algorithms should be calculated. Subroutines are common within rating algorithms, especially when a product contains multiple types of coverage. While there is some standardization of algorithms across carriers, most carriers have some level of deviation to accommodate their specific products and risk appetite.

RATING ENGINES: DEFINITION AND FUNCTIONALITY

At their core, rating packages are calculators that receive required data about a risk and compute a rate that is associated with a wide combination of factors. Rating automation can be delivered from within a policy administration product or by a stand-alone engine. Both perform the calculations required to return a rate for standard insurance products. Stand-alone rating engines have traditionally included more mathematical expressions, supported more complex algorithms, and performed more complicated operations, such as driver assignments, in a more robust fashion than those packaged within administration applications. However, rating engines within administration solutions continue to improve in complexity and performance. As a result, several suite solution providers are now offering their rating functions in a stand-alone manner.

A broader set of features occasionally found in stand-alone rating solutions involve product creation and management. Given the importance of rating to product performance, it is natural to include functionality that builds on rate derivation and allows users to build and maintain other product attributes, such as rules and forms.

Figure 1: Overview of Pricing and Rating



Source: Celent

New data sources are enabling more robust rating capability and even new products—both real time data and data used at product design time. Figure 1 captures the interplay of data, AI, workflow, and external parties in insurers' increasingly complex product design and rating environments.

Primary Functionality

A variety of features are available to handle the day-to-day activities of a rating engine. Insurers will want to ensure that the features available in the solution they choose will support their business goals now and in the future.

Product Design Tools: Product architecture is a key component of a rating engine. Look for a base set of insurance products that can be leveraged to build new lines or products. Some solutions allow easy cloning of product/rating rules and structures. Many solutions have a product architecture depicted as a tree, allowing inheritance across jurisdictions for common features. Some include

color coding that helps a carrier easily identify where a product does not conform to the nationwide version. Some keep the product architecture in a spreadsheet format, which can be easy for the business to maintain but can sometimes result in additional complexity for carriers with many lines of business across many states. Some solutions include wizards that make it easy for a business user to make basic parameter-driven product updates. Some include a self-documenting product dictionary that sources complete, reusable insurance product definitions including rates, underwriting rules, calculations, specifications, integration definitions, and data for managing forms. Each reusable component can be rapidly adapted to form new products or enhancements. Some product dictionaries are very business user-friendly with natural language definitions.

Rules and Algorithms: Managing the rules and algorithms is the core process of a rating engine. The more precise an algorithm, the more precisely a risk can be priced. As carriers extend their use of predictive models, they need algorithms that can accommodate these models. Solutions that started as rating engines for single policy admin systems often have only basic mathematical functions. Those starting as stand-alone rating engines typically have very robust mathematical expressions, such as square roots or logarithmic functions. Look for the tools necessary to create the algorithm—some solutions have graphical Visio-like tools. Also, consider the ability to easily create subroutines, built-in functions to handle minimum premiums, rate capping, or prorating, and the ease of ordering the expression. Interpreting rates are sometimes needed, for instance, when a specific rate is not provided in a rate table. Some tools include interpolation capabilities out of the box. It's also important to ensure the ability to round with the right level of granularity at any place in the expression.

Table Maintenance: Rate tables should be kept separate from the algorithms. Most solutions allow the import or export of rating tables to or from spreadsheets. Look at how the tool handles multidimensional tables.

Testing, Modeling, and Analytical Tools: Some solutions include robust tools for handling the rate analysis function. Testing, modeling, and product analysis tools allow a carrier to conduct an impact analysis to calculate the overall impact of a rate change, or a displacement analysis to identify the number of policyholders affected. Some include tools that make it easy to compare current rates against proposed rates. Some vendors have business intelligence tools included and can set up reports that provide some level of analysis. Some have included very robust analytic tools that go beyond basic impact analysis. They can provide insights into what might happen to retention or conversion ratios should a rate change—or can allow the carrier to look at the impact in very granular slices, such as the impact on top agents or on high-quality accounts. However, not all vendors have these types of tools built in. Some solutions do not include any functionality for handling rate analysis or testing.

Price Optimization, Machine Learning, and Artificial Intelligence: Systems may include price-optimization tools (in jurisdictions where this is legal). Some include artificial intelligence capabilities. The integration sometimes allows models and other data sources to inform the rating, underwriting rules, and pricing. Actuaries and pricing specialists increasingly lean toward using advanced analytics, machine learning, and AI to inform rating and pricing decisions. Some solutions include this capability. Most will require building a data science pipeline into the

rating and pricing capability to create, update, and realize the utility of these models at run-time, as shown in Figure 1.

Fraud at Quote: Fraud analytics at the point of sale is another new area we are starting to see, particularly in markets with significant fraud issues. Many can integrate with a third party solution. Some are beginning to work on creating this capability themselves.

Bureau Support: Almost all commercial lines carriers rely on ISO or NCCI for rates, rules, and forms. The most significant new option is the ISO Electronic Rating Content (ERC). With ERC, ISO offers its rating content in an electronic format. This service has many features, all of which are intended to streamline the process for carriers and allow them to make revisions faster. ISO provides all circulars in an electronic format. It provides loss costs, rules, and forms attachment logic in both XML and Excel formats. ISO also includes a reporting utility that helps carriers identify and understand the differences between the circular revisions and the carrier's current rating structure, including their program deviations. Carriers can subscribe to ISO ERC, but to get its full value their policy administration or rating system needs to be able to absorb the XML stream or Excel files.

Vendors provide ISO rating support to their clients in several ways.

> **Vendor Interpretation:** Some vendors have their own teams of people that support ISO content. Employees read the ISO circulars, interpret them, and send the information to the carrier to determine if they wish to adopt the change. If they do, the vendor then loads the changes into the policy administration system. The cost for this service is typically added on top of the vendor's annual maintenance fee for its solution. Some vendors provide service-level guarantees to ensure they do not miss a filing date.
>
> **ISO ERC Support:** The vendor invests in technical capabilities that allow its policy administration or rating solution to receive the ISO ERC changes from ISO. The vendor creates a utility that receives the changes and transforms the data into the solution's data model. Typically, the solution provides additional tools to allow the carrier to identify what changes were included and modeling tools to understand the impact of those changes. Look for how many major and minor lines have been enabled and how many are actually in production.

Technical Functionality

While assessing features and functionality is a critical step in selecting a rating engine system, there are a number of technical considerations as well.

Versioning: Versioning and update management are critical for a rating engine. Rating plans may be used on one date for new business and on a different date for renewals. Effective dates may differ by state or product. Look for the ability to manage multiple dates, such as new, renewal, effective, available, expiration, etc. The easiest solutions have fields to enter the type of date and the actual date by product or state. Some tools require the developer to enter the date in XML. These are more difficult to audit. Tools are available in some solutions that allow for auditability of versioning, and version comparison reports come out of the box for others.

Change Control: This function tracks and documents changes made, who made the change, and the reasons for making the change. Some automatic document

rating activities and changes allow for easy traceability. Some include seeing which fields, formulas, and tables are being used.

Workflow: Generally, a rating solution does not handle underwriting workflow. However, some solutions include workflow capabilities to handle the tickets within the rating system. Some feature full ticket management, including the ability to assign to a developer. Some have wizard-like workflow tools that allow a business user to make certain changes easily.

Scalability: While we typically think of scalability regarding the number of policy transactions or users, an additional area to examine is how the system handles multiple units (locations, vehicles, or other schedules) on a policy. Performance as the system scales is another important consideration.

Integration: Rating systems integrate with many third party systems and external data sources and require real time integration. Most solutions have been designed with a service-oriented architecture and offer a variety of ways to handle integration, including web services, ACORD Standard XML, other XML, RESTful HTTP-style services, JSON format, MQSeries, JMS, or similar queue technology, flat files, custom APIs, and more. Most systems have some accelerator or experience that integrates with the most common third party data sources and policy admin systems.

Configuration Tools: A general trend in insurance software is to create tools that allow carriers to make more system modifications through configuration tools rather than code. The most robust tools allow carriers to easily add data elements, create algorithms and underwriting rules, and even map interfaces, all using configuration tools. Some tools are extremely intuitive, with drag-and-drop and point-and-click capabilities. Others require knowledge of a scripting language to make changes. Some vendors are moving toward a dual-development environment with simplified tools and wizards that allow business analysts to make general changes and a more robust environment meant for technical staff.

Security: Security is becoming increasingly important to insurers, especially as web quoting applications frequently access rating solutions. Ask about the security standards the vendor complies with and which certification and assurance methods they use. Look at how the system handles security for managing APIs for application-level integration. Look at which authentication capabilities the system leverages for internal and external users. There is a broad range of capabilities, from one-time passwords, security tokens/PINs, multifactor authentication, and federated identity support to biometric security support. Regarding cybersecurity, consider whether the software has penetration security and how the system has been tested.

Implementation: Vendors use a wide variety of implementation methodologies. Some prefer to handle the implementations themselves. Others prefer to work with third party system integrators. More and more vendors are moving to an agile or hybrid methodology. Look to see what methodology the vendor uses and consider how it aligns with your own preferred methodology. Some vendors are very good at helping carriers transition to an agile approach. Look for the artifacts they have available for gathering requirements and capturing the business rules. Vendors that claim very fast implementation timeframes may indeed have better artifacts and more configurable solutions, or they may be

touting very simple single-product implementations with little or no configuration. Be sure to do customer reference checks to understand how well the vendor has handled project management, knowledge transfer, and scope creep with carriers of a similar size and complexity to your company.

Cloud: Few technologies are as talked about as cloud computing. Cloud-enabled solutions are on the rise, with most responding vendors reporting that they have cloud-enabled core systems. There are many different variants of “cloud” solutions available. Many vendors offer a hosted version of their software. The software is licensed by the carrier and hosted by the vendor in its own or private data center. Increasingly, the software is being hosted in public data centers owned by companies like Amazon or Microsoft. Look at the level of managed services available if you want this option. Additionally, check if the solution includes cloud-native features such as dynamic scaling, artificial intelligence (AI) or machine learning (ML) modules. Amazon, Microsoft, and other cloud vendors often include additional support to help insurers use cloud capabilities reliably and efficiently while finding smart ways to manage costs.

REPORT METHODOLOGY

Approach

To analyze the capabilities of rating engines active in the insurance marketplace, Celent invited a broad set of stand-alone rating engine vendors to participate in this year's report. Not all vendors chose to participate. There was no cost for vendors to be included.

Each participating vendor completed an online request for information (RFI) in Celent's VendorMatch/RFX platform. The RFI sought information about the features provided by the solution, its technology and architecture, the current client base, pricing models, and the vendor itself. RFIs were completed for 16 products in North America.

Celent used that data to draft profiles but did not independently confirm the information provided by the vendors. Vendors had an opportunity to review their profiles for factual accuracy. Some of the vendors profiled in this report are Celent clients, and some are not. No preference was given to Celent clients for inclusion in either the report or the subsequent profile.

About the Profiles

Each profile is structured the same way. Profiles present information about the vendor and its rating offerings, geographic presence, and client base. Charts provide more detailed information about specific features such as functionality, technology, pricing, and partnerships.

The profiles are presented in alphabetical order.

Limitations

Celent believes that this study provides valuable insights into current offerings in distribution management systems. However, readers are encouraged to consider these results in the following context. The vendors self-reported. Participants in the study were asked to indicate which capabilities they offer in addition to providing general information about their client base. While this information was supplemented with publicly available information where possible, Celent did not confirm the details provided by the participants.

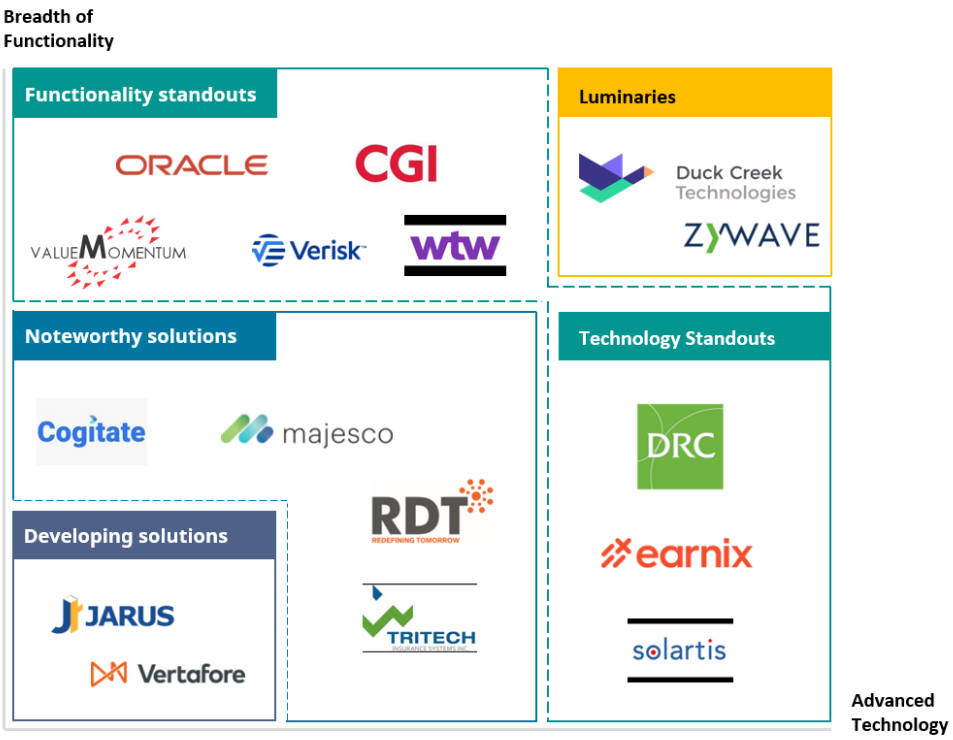
CELENT TECHNICAL CAPABILITY MATRIX

New to Celent's solution reports this year is the Technical Capability Matrix. We've placed each solution into one of five categories based on the sophistication and breadth of its technology and functionality (i.e., plotting the A and B dimensions). Solutions are not ranked within the assigned category; they are listed alphabetically.

The five categories are:

- **Luminary**: Excels on both Advanced Technology and Breadth of Functionality.
- **Technology Standout**: Excels in Advanced Technology but doesn't yet have as many features as leading competitors (low on Breadth of Functionality). Often newer, these solutions typically have chosen a focused set of functionalities to begin their journey.
- **Functionality Standout**: Excels in Breadth of Functionality but the technology isn't as advanced as leading competitors. Often more established, these solutions have built out a robust set of features with technology that may not be cutting-edge.
- **Noteworthy Solution**: Relatively lower on both dimensions, yet still worthy of consideration by some financial institutions.
- **Developing Solution**: Low on both Advanced Technology and Breadth of Functionality. Often a new solution. Has the potential to mature into a more robust offering over time.

Figure 2: Celent Technical Capability Matrix



Source: Celent

PROFILES

ZYWAVE: DIGITAL DISTRIBUTION SUITE - CLARIONDOOR

Company and Product Snapshot

Table 1: Company Snapshot

Year Founded	1995
Headquarters	Milwaukee, Wisconsin
Number of Employees	1,000
Revenues (USD)	Confidential
Financial Structure	Private with outside investors
VendorMatch Link	https://www.celent.com/vendormatch/discovery/solutions/132753603

Source: Vendor RFI

Table 2: Product Snapshot

Name	Digital Distribution Suite - ClarionDoor
Year Originally Released	2012
Current Release and Date of Release	Not specified
Revenue Derived from the Product	10% of annual revenues
R&D Expense	R&D expense over the past two years has been 10% of total revenue attributed to this solution
FTEs Providing Professional Services for Product	40
Notable Clients (Life Insurance)	Confidential
Notable Clients (P&C Insurance)	Confidential

Source: Vendor RFI

Functionality

Table 3: Functionality

Category	Function	In Production	Supported But Not in Production	Not Supported
Product Design Tools	Base insurance product (templates) that can be leveraged for building new lines/insurance products	●		
	Cloning of product / rating rules and structures	●		
	Re-usable product definitions	●		
	Uses a hierarchical rating model structure (e.g., LOB, Product, Version, Element, Revision, etc.)	●		
Rate Calculations	Supports rate tiering	●		
	Supports rate capping	●		
	Rate plans can differ by the status of the case, e.g., new business vs. (in-force) and the years in force	●		
	Is able to handle multiple caps	●		
	System can use third party data gathered in real time as an input to the rate calculation	●		
	If legal in your territory, the system provides price optimization features.	●		
Rating Maintenance	Rating algorithm definition and management maintained separately from rate tables	●		
	Business rule definition and management (e.g., automatic driver assignment) maintained separate from rating algorithm	●		
	Business rules repository that is searchable, version-controlled	●		
	Supports multi-dimensional tables	●		
	Prebuilt library of product and rating rules components			
	Reusable rating components, e.g., set up a sub-routine that can be reused across multiple products	●		
Release Management	Includes functionality for an IT organization to manage the release process.	●		
	Allows the packaging of a group of changes or filings together that you can manage as a release	●		
	Supports assigning and tracking work packets	●		
Testing, modeling, & analysis tools	Includes testing, modeling, and product analysis tools	●		
	Ability to model different rating scenarios to understand impact of potential changes	●		
	End user-performed modeling (what-if analysis) that identifies effect of changes to rates on books of business	●		

Category	Function	In Production	Supported But Not in Production	Not Supported
	Displacement testing – ability to run existing book of business through proposed rate / product changes to determine impact on individual accounts	●		
	Deviation analysis – comparison of current rates against proposed rates	●		
	Includes debugging tools and reports	●		
User Interface	Has a user interface included for manual data entry	●		
Versioning and Change Control	Versioning and update management	●		
	Multiple date management capabilities, e.g., new, renewal, effective, available, etc.	●		
	Expiry mechanism for products to ensure that quotes are up to date	●		
	Auditability of versioning	●		
	Version comparison reports	●		
	Change control functions (track and document changes that are made, by who, reasons making change)	●		
	Referenceability – can easily see where fields, formulas, tables are being used	●		
Workflow	Includes workflow automation capabilities	●		
	Supports tracking the tasks associated with state filings			●
	Workflow management graphic design environment, with automated code generation			●
	Workflow rules repository that is searchable and version-controlled	●		
	Automated workflow alerts, e.g., bottlenecks, past due tasks			●
	Manager-level workflow reports/audit/inquiry capability			●
Fraud	The rating solution is integrated to solutions to identify fraud at point of quote	●		
	The rating solution can identify fraud at point of quote			●

● = Available out of the box
● = Configurable using simple tools for business user
● = Configurable using simple tools for IT user
● = Configurable through a scripting language/coding
● = Available with integration to a third party solution
● = Available with integration to a separate module provided by this vendor
● = Under development/on roadmap
● = Could develop, would be considered customization
● = Not available/not applicable

Source: Vendor RFI

Lines of Business Supported

Table 4: Lines of Business Supported (P&C)

Line of Business	NA	EMEA	APAC	LATAM
Personal Auto	✔	☐	✔	☐
Homeowners / Home	✔	☐	✔	☐
Renters / Contents	✔	☐	☐	☐
Umbrella	✔	☐	☐	☐
Commercial Auto	✔	☐	✔	☐
Commercial Property	✔	✔	✔	☐
Commercial Liability	✔	☐	✔	☐
Workers Compensation	✕	✕	✕	✕
Medical Professional Liability	✔	☐	☐	☐
Other Professional Liability	✔	☐	☐	☐
Business Owners Policy (BOP)	✔	☐	☐	☐
Surety & Fidelity	☐	☐	☐	☐
Excess Policies	✔	☐	☐	☐
Directors and Officers Liability	✔	☐	☐	☐
Boat / Motorcycle / ATV / etc	☐	☐	☐	☐
Flood	☐	☐	☐	☐
Jewelry	☐	☐	☐	☐
Cyber Insurance	✔	☐	☐	☐

Legend: ✔ = In production; ☐ = Supported but not in production; ✕ = Not supported

Source: Vendor RFI

Table 5: Lines of Business Supported (Life)

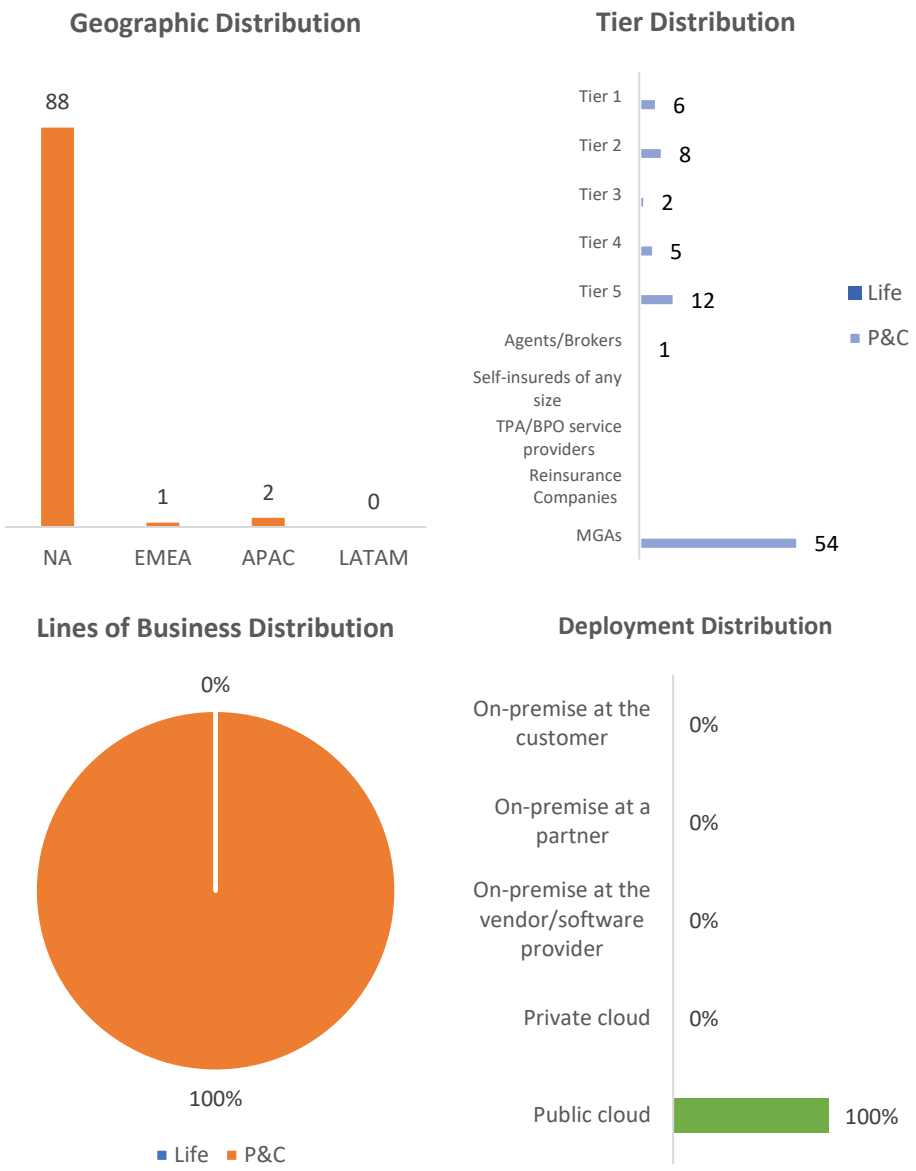
Line of Business	NA	EMEA	APAC	LATAM
Term Life	✕	✕	✕	✕
Whole Life	✕	✕	✕	✕
Variable Life	✕	✕	✕	✕
Universal Life	✕	✕	✕	✕
Variable Universal Life	✕	✕	✕	✕
Indexed Universal Life	✕	✕	✕	✕
Unit Linked	✕	✕	✕	✕
Senior or Pre-need / Final Expense	✕	✕	✕	✕
Fixed Annuity	✕	✕	✕	✕
Variable Annuity	✕	✕	✕	✕
Indexed Annuities	✕	✕	✕	✕
Enhanced/Impaired Annuities	✕	✕	✕	✕
Short-Term Care	✕	✕	✕	✕
Accidental Death or Dismemberment	✕	✕	✕	✕
Critical Illness	✕	✕	✕	✕
Long-Term Disability (LTD)	✕	✕	✕	✕
Short-Term Disability (STD)	✕	✕	✕	✕
Long-Term Care (LTC)	✕	✕	✕	✕
Income Protection	✕	✕	✕	✕
Dental	✕	✕	✕	✕
Vision	✕	✕	✕	✕
Supplemental Health/Hospital Indemnity/Major Medical	✕	✕	✕	✕
Credit	✕	✕	✕	✕
Pension (Defined Contribution)	✕	✕	✕	✕
Pension (Defined Benefit)	✕	✕	✕	✕
Wrap	✕	✕	✕	✕
Savings (Bonds, Mutual Funds, etc.)	✕	✕	✕	✕

Legend: ✔ = In production; ☐ = Supported but not in production; ✕ = Not supported

Source: Vendor RFI

Customer Base

Figure 3: Client Base by Geography, Tier Size, Line of Business, and Deployment Option



Source: Vendor RFI

Table 6: Implementations by Country

Region	Countries
North America	United States
Europe	United Kingdom
Middle East	-
Africa	-
Asia-Pacific	Australia, New Zealand
Central America	-
South America	-
Caribbean	-

Source: Vendor RFI

Technology

Table 7: Technology Options

Technology Options	Responses	
Code Base	PhP: 50%; Other: 50%	
Integration Methods	Web services; XML, not through web services; HTML; HTTP; RESTful HTTP-style services; JSON format; MQSeries, JMS, or similar queue technology; Custom APIs; Flat files	
Scalability	Vendor's largest deployment (total number of transactions processed daily): 0 users and millions	
API Details	✓	The API is documented
	✓	External systems can trigger an event in the system which can be responded to by a workflow or business rules system
	✓	API management supports local or global standards such as ACORD application creation and rendering
	✓	API sample codes are available to clients
	✓	API developer portal is available for support and descriptions
	✓	API testing portal and the ability to use scripts on website is available
	✓	The system allows API publishing in SOAP, REST, JSON, and XML style services as APIs
	✓	API version management is available
	✓	Access to the APIs is managed and use of APIs tracked by developers
	✓	Training in extending the system is offered

Legend: ✔ = Available; ☐ = Not available

Source: Vendor RFI

Table 8: SaaS Capabilities

Elements	Availability
Support a multi-tenant architecture	✔
Type of effort required to update the solution	Evergreen – all clients are on the same latest version
Cadence of upgrades for multi-tenant deployments	More frequent than every 3 months
Deployment approach support elasticity	Yes, automatically
Current APIs-related strategy	Enabled by consumable APIs
Ability of the deployment model to leverage a serverless approach	✘
Ability to enable independent services (microservices)	✔
Proportion of the system architected as microservices	Under 25%
Support automation of development and deployment processes (DevOps)	✔
Ability to run and deploy under containers to improve the application deployment	✔
Need for containerization to run in a cloud	✘
Ability of the system's functions and capabilities to be distributed among a private cloud and a public cloud	✘

Legend: ✔ = Yes ✘ = No

Source: Vendor RFI

Table 9: Change Tooling and Upgrades

Types of Changes	Availability
Business Rule Definition	✔
Data Definition	✔
Table Maintenance, List of Values, etc.	✔
Interface Definition	✔
Product Definition	✔
Role-Based Security, Access Control, and Authorizations	✔
Screen Definition	✔
Workflow Definition	✔

Legend: ✔ = Configurable via tools for business users; □ = Configurable via tools for IT users; ■ = Configurable via the vendor; ⊖ = Configurable via scripting; ● = Coding required; ✘ = Not available

Source: Vendor RFI

Table 10: Public Cloud Options

Providers	NA	EMEA	APAC	LATAM
Microsoft Azure	✘	✘	✘	✘
Amazon AWS	✔	✔	✔	□

Providers	NA	EMEA	APAC	LATAM
Google Cloud Platform (GCP)	✕	✕	✕	✕
Alibaba Cloud	✕	✕	✕	✕
IBM Cloud / Bluemix	✕	✕	✕	✕
Oracle Cloud	✕	✕	✕	✕
Salesforce Cloud, Force.com, AppExchange	✕	✕	✕	✕
Other	✕	✕	✕	✕

Legend: ✔ = In production; ☐ = Supported but not in production; ✕ = Not supported

Source: Vendor RFI

Partnership

Table 11: Implementation and Support

Type of Partnership	Partner Vendor
System Integrators	None
Fintech Partners	None

Source: Vendor RFI

Implementation, Support, and Pricing

Table 12: Implementation, Support, and Pricing

Typical Implementation Team Size	1 to 5
Resource Breakdown	Vendor: 50%; Insurer: 50%; Third party: 0%
Location of Employees	Zywave has 20 employees in North America, 6 employees in APAC, 6 employees in Latin America
Use of Third Parties	Vendor occasionally works with third party system integrators
Average Time to Implementation	Initial Implementation: 1 to 3 months 2nd and subsequent line of business: 1 to 3 months 2nd and subsequent states/jurisdictions: 1 to 3 months
Pricing Models	Subscription-based license, Enterprise license

Source: Vendor RFI

CONCLUSION

Choice has increased for insurers in the rating engine marketplace. While traditional rating engines have improved their capabilities, some new entrants with highly modern architectures are seen as attractive by some insurers. Ease of integration, an enhanced ability to use data, and microservices architecture are increasingly seen as high-value features of stand-alone rating engines.

For Insurers

There is no single best rating engine for all insurers. There are several good choices for an insurer with almost any set of requirements. An insurer seeking a new rating engine should begin the process by looking inward. Every insurer has its own unique mix of lines of business, geography, staff capabilities, architecture demands, business objectives, and financial resources. These factors, as well as the organization's risk appetite, will influence the list of vendors for consideration.

Some vendors are a better fit for an insurance company with a large IT group that is deeply proficient with the most modern platforms and tools. Other vendors are a better fit for an insurance company that has a small IT group and wants the vendor to take a leading role in maintaining and supporting its applications.

We recommend that insurers looking for a rating engine narrow their choices by focusing on four areas:

- *Art of the possible.* What can be done with advanced tools? Look at whether functionalities the business needs are available out of the box for the lines of business and states desired. Check to see what is actually in production.
- *Technology— the overall architecture, configuration tools, and environment.* Perform proof-of-concept exercises with short-listed vendors. This is a chance for providers to show what they can do.
- *Vendor's stability, knowledge, and investment in the solution.* Consider the partnership dimension carefully. Key functional gaps are quickly closed by leading vendors.
- *Implementation and support capabilities and experience.* The relationship between an insurer and its rating engine vendor will likely last ten years or longer.

For Vendors

As a group, vendors continue to make significant investments in stand-alone rating solutions. The solutions are delivering advanced analytics functionality

with improved configuration tools. They're also more connected, with APIs and RESTful web services becoming the de facto standard. Although these trends are all excellent news for insurers, they make the competitive challenges facing vendors that much more daunting.

Celent recommends vendors differentiate themselves by:

- Continuing to expand functionality—especially in the use of AI and analytics capabilities.
- Focusing on improving usability for both new and experienced users and managers.
- Continuing to build out configuration environments to put change controls in the hands of the insurers. Configuration tools that business analysts can use get high scores from insurers assessing these solutions.
- Making implementation faster and less expensive.

LEVERAGING CELENT'S EXPERTISE

If you found this report valuable, you might consider engaging with Celent for custom analysis and research. Our collective experience and the knowledge we gained while working on this report can help you streamline the creation, refinement, or execution of your strategies.

Support for Financial Institutions

Typical projects we support include:

Vendor short listing and selection. We perform discovery specific to you and your business to better understand your unique needs. We then create and administer a custom RFI to selected vendors to assist you in making rapid and accurate vendor choices.

Business practice evaluations. We spend time evaluating your business processes and requirements. Based on our knowledge of the market, we identify potential process or technology constraints and provide clear insights that will help you implement industry best practices.

IT and business strategy creation. We collect perspectives from your executive team, your front-line business and IT staff, and your customers. We then analyze your current position, institutional capabilities, and technology against your goals. If necessary, we help you reformulate your technology and business plans to address short-term and long-term needs.

Support for Vendors

We provide services that help you refine your product and service offerings. Examples include:

Product and service strategy evaluation. We help you assess your market position in terms of functionality, technology, and services. Our strategy workshops will help you target the right customers and map your offerings to their needs.

Market messaging and collateral review. Based on our extensive experience with your potential clients, we assess your marketing and sales materials—including your website and any collateral.

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