

The Forrester Wave™: AI-Based Text Analytics Platforms (People Focused), Q2 2020

The Eight Providers That Matter Most And How They Stack Up

by Boris Evelson

June 17, 2020

Why Read This Report

In our 27-criterion evaluation of people-focused AI-based text analytics platforms, we identified the eight most significant ones — Clarabridge, EPAM, Expert System, Google, IBM, Micro Focus, OpenText, and SAS — and researched, analyzed, and scored them. This report shows how each provider measures up and helps AD&D professionals and their customer insights (CI) and customer experience (CX) colleagues select the right one for their needs.

Additionally, Forrester recommends that AD&D pros consider the text analytics platforms evaluated in “The Forrester Wave™: AI-Based Text Analytics Platforms (Document Focused), Q2 2020,” which uses similar evaluation criteria for more document-oriented use cases.

Key Takeaways

IBM, Micro Focus, SAS, And Clarabridge Lead The Pack

Forrester's research uncovered a market in which IBM, Micro Focus, SAS, and Clarabridge are Leaders; Google, OpenText, and Expert System are Strong Performers; and EPAM is a Contender.

Knowledge-Based AI Is A Key Differentiator

As machine learning (ML) technology becomes more widespread, knowledge-based AI will dictate which providers lead the pack. Vendors that can provide a combination of knowledge- and ML-based text analytics capabilities will position themselves to successfully deliver people-focused text analytics applications to their customers.

People-Focused Text Analytics Platforms Require Additional Capabilities

Rich linguistic rules, multilingual capabilities, and speech analytics are key differentiators for people-focused enterprise text analytics platforms, which focus on analyzing relatively short texts generated by customers or employees in survey platforms, social media, or call center recordings.

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Table Of Contents

- 2 ML-Based And Knowledge-Based AI Are Key To Precise Text Analytics
- 3 Evaluation Summary
- 6 Vendor Offerings
- 6 Vendor Profiles
 - Leaders
 - Strong Performers
 - Contenders
- 10 Evaluation Overview
 - Vendor Inclusion Criteria
- 12 Supplemental Material

Related Research Documents

- [The Forrester Wave™: AI-Based Text Analytics Platforms \(Document Focused\), Q2 2020](#)
- [The Forrester Wave™: Cognitive Search, Q2 2019](#)
- [Now Tech: AI-Based Text Analytics Platforms, Q1 2020](#)
- [Research Overview: Text Analytics Technology](#)



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ML-Based And Knowledge-Based AI Are Key To Precise Text Analytics

Many enterprises are well on their way to effectively leveraging data, processes, and applications to derive insights from unstructured data — text-based data, specifically. But their efforts are still very siloed. Enterprises often use separate platforms for [customer feedback management](#) (CFM), [social listening](#), [employee experience](#) (EX), and other people-focused applications, even though under the covers these platforms are all largely based on similar text mining and text analytics technologies. The good news is that text analytics technology, specifically AI-based text analytics, has matured to a point where enterprises can use it for multiple use cases.

Note, however, that AI can be knowledge based (based on domain ontologies and language-specific linguistic rules) or ML based. While each approach has its limitations, a hybrid ML- and knowledge-based approach produces the most accurate and timely results.¹ Due to this market evolution, broad definition of AI, and specific requirements for people-focused text analytics apps, AD&D pros looking to select people-focused AI-based text analytics platforms should look for providers that:

- › **Package domain ontologies with the platform.** During the initial phases of deployment, a key indicator of the accuracy of your text analytics application is the richness and quality of domain-specific (industry vertical or business process) ontologies (i.e., lexicons and taxonomies) that come out of the box (OOTB) with the platform. ML-based platforms will catch up eventually after multiple cycles of continuous learning and improving, but knowledge-based platforms are typically more accurate from the start.
- › **Offer advanced natural language understanding (NLU) capabilities.** Extracting keywords, topics, and entities (such as people, places, times, and events) is largely a commoditized capability of most text analytics platforms. Extracting more subtle concepts such as sentiment, emotion, effort, and intent is more challenging, but these concepts are key to effective CX, EX, and social listening applications. Platforms differ in three ways: whether they can derive all of these concepts from text; whether they calculate them at a document, phrase, sentence, subsentence, or entity level; and how they score them (e.g., simply as positive/neutral/negative or on a scale from 1 to 100).
- › **Holistically derive insights from text and speech/voice analytics.** Once a call center recording has been transcribed to text, many insights are lost. Digital text loses vital information such as pauses, voice intonation, whether someone was speaking fast or slow and quietly or loudly, and whether callers were interrupting and speaking over each other. Last but not least, poor transcriptions may not accurately capture who was saying what — a customer or an agent. If you plan to use a text analytics platform for CX, EX, or contact center applications, the platform must have [speech analytics capabilities](#) to capture these key insights — and holistically integrate them with the insights derived from text mining after the call was transcribed.
- › **Provide advanced support for multiple languages.** Don't be misled by vendors that claim to offer text analytics functionality in over 100 languages. Forrester advises clients to dig deeper than "how many languages does the platform support," especially for the languages that matter for your

The Forrester Wave™: AI-Based Text Analytics Platforms (People Focused), Q2 2020

The Eight Providers That Matter Most And How They Stack Up

geographic presence. For instance, ask questions about the number of languages the platform supports with full natural language processing (NLP), including word disambiguation, domain-specific ontologies, and spelling and grammar correction. Usually, these fall into three tiers. Tier 1 languages support all of the above. Tier 2 language support is mostly based on text tokenization and can only analyze words based on sequences and proximity — a less accurate technique than Tier 1 language support.² Tier 3 language support is based on machine translation and is the least accurate option.

Evaluation Summary

The Forrester Wave evaluation highlights Leaders, Strong Performers, Contenders, and Challengers. It's an assessment of the top vendors in the market and does not represent the entire vendor landscape. You'll find more information about this market in our reports "[The Forrester Tech Tide™: Artificial Intelligence For Business Insights, Q3 2018](#)," "[Now Tech: AI-Based Text Analytics Platforms, Q1 2020](#)," and "[Research Overview: Text Analytics Technology](#)."

We intend this evaluation to be a starting point only and encourage clients to view product evaluations and adapt criteria weightings using the Excel-based vendor comparison tool (see Figure 1 and see Figure 2). Click the link at the beginning of this report on Forrester.com to download the tool.

The Forrester Wave™: AI-Based Text Analytics Platforms (People Focused), Q2 2020

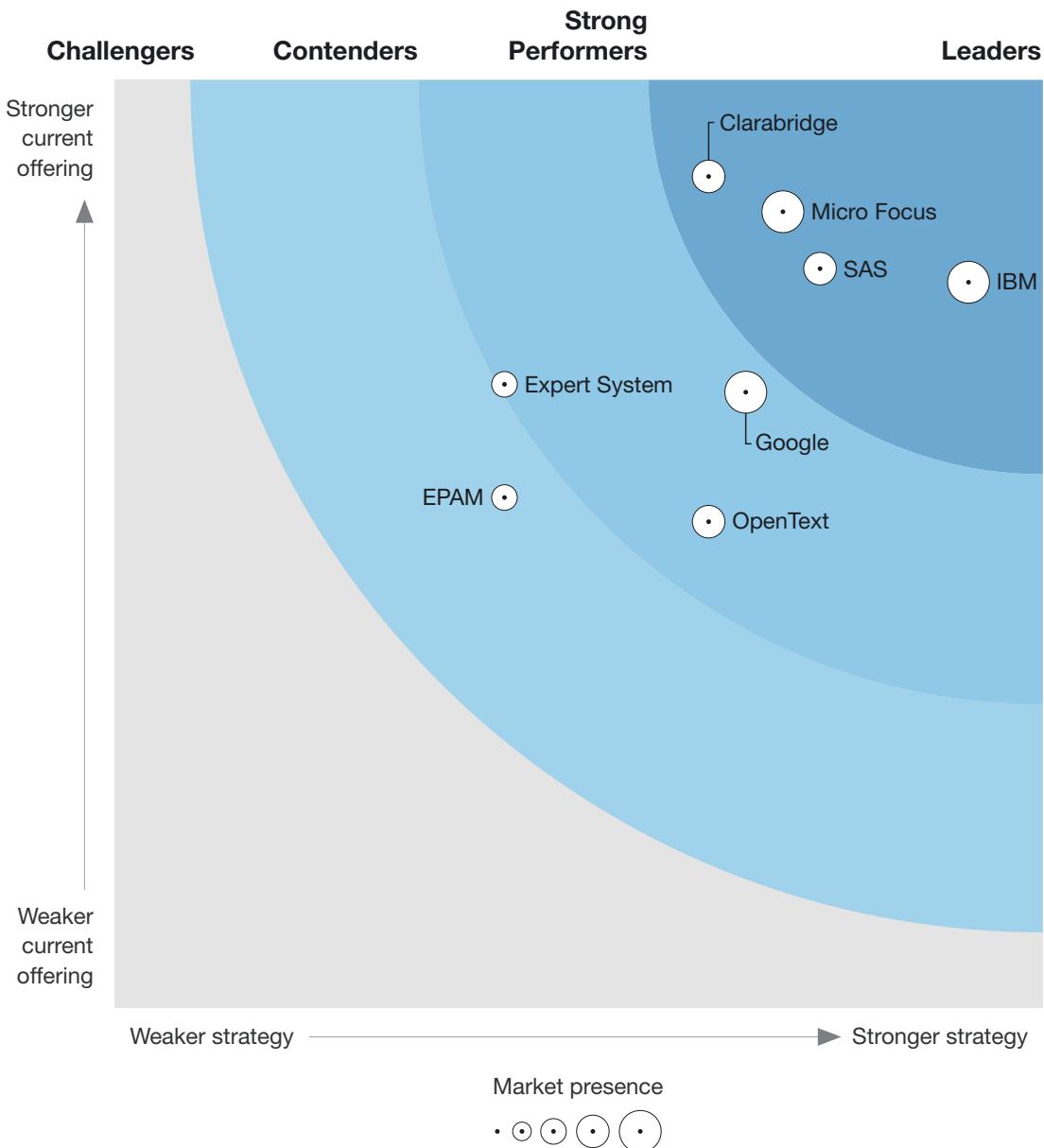
The Eight Providers That Matter Most And How They Stack Up

FIGURE 1 Forrester Wave™: AI-Based Text Analytics Platforms (People Focused), Q2 2020

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AI-Based Text Analytics Platforms (People Focused)

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The Forrester Wave™: AI-Based Text Analytics Platforms (People Focused), Q2 2020

The Eight Providers That Matter Most And How They Stack Up

FIGURE 2 Forrester Wave™: AI-Based Text Analytics Platforms (People Focused) Scorecard, Q2 2020

	Forrester's weighting	Clarabridge	EPAM	Expert System	Google	IBM	Micro Focus	OpenText	SAS
Current offering	50%	4.48	2.75	3.36	3.32	3.91	4.29	2.62	3.98
Data preparation	15%	4.60	3.00	1.00	5.00	3.60	5.00	2.20	2.20
Data enrichment	15%	5.00	3.00	4.80	3.00	3.00	5.00	3.20	3.00
Subdocument analysis	15%	5.00	1.40	5.00	1.40	4.60	5.00	1.40	5.00
Machine learning capabilities	10%	3.40	3.00	1.00	5.00	4.20	5.00	4.20	5.00
Linguistic rules	15%	5.00	2.60	4.60	3.40	3.40	4.60	4.20	5.00
Applications	5%	3.00	4.00	2.00	1.00	3.00	4.00	2.00	1.00
GUI and collaboration	10%	5.00	3.00	5.00	3.00	5.00	1.00	1.00	5.00
Architecture	5%	3.00	1.00	3.00	3.00	5.00	3.00	3.00	5.00
Security	5%	5.00	3.00	1.00	5.00	5.00	5.00	3.00	5.00
Administration and usability	5%	3.00	5.00	3.00	3.00	3.00	3.00	1.00	3.00
Strategy	50%	3.20	2.10	2.10	3.40	4.60	3.60	3.20	3.80
Product vision	20%	3.00	3.00	3.00	3.00	5.00	5.00	3.00	5.00
Execution	15%	5.00	3.00	3.00	3.00	5.00	3.00	3.00	3.00
Performance	20%	5.00	1.00	1.00	3.00	5.00	3.00	1.00	1.00
Market approach	15%	3.00	3.00	3.00	3.00	5.00	1.00	3.00	5.00
Partnerships	20%	1.00	1.00	1.00	5.00	3.00	5.00	5.00	5.00
Supporting products and services	5%	1.00	3.00	1.00	5.00	5.00	5.00	5.00	5.00
Delivery model	5%	3.00	1.00	3.00	1.00	5.00	3.00	5.00	3.00
Market presence	0%	3.40	3.00	3.00	5.00	5.00	5.00	3.40	3.40
Revenue and customers	80%	3.00	3.00	3.00	5.00	5.00	5.00	3.00	3.00
Global presence	20%	5.00	3.00	3.00	5.00	5.00	5.00	5.00	5.00

All scores are based on a scale of 0 (weak) to 5 (strong).

Vendor Offerings

Forrester included eight vendors in this assessment: Clarabridge, EPAM, Expert System, Google, IBM, Micro Focus, OpenText, and SAS (see Figure 3).

FIGURE 3 Evaluated Vendors And Product Information

Vendor	Product evaluated	Product version evaluated
Clarabridge	Clarabridge	Winter 2020 release
EPAM	InfoNgen	Version 8
Expert System	Cogito	14.5
Google	Google Cloud AI	
IBM	IBM Watson Discovery	
Micro Focus	Micro Focus IDOL	12.5
OpenText	OpenText Magellan	16.7
SAS	SAS Visual Text Analytics (VTA)	3.5

Vendor Profiles

Our analysis uncovered the following strengths and weaknesses of individual vendors.

Leaders

- › **IBM Watson Discovery streamlines multiple products into a holistic platform.** Since our last evaluation, IBM consolidated and rationalized its text analytics platform.³ IBM Watson Discovery wraps IBM's NLU APIs (for extracting entities, categories, concepts, sentiment, and emotion) and comes packaged with Watson Knowledge Studio for custom model development. Clients will like a Watson Discovery feature to provide a sentiment score not just at a sentence level but also at an entity level (e.g., person or product), as well as the capability to identify cause and effect in sentences. Clients can use IBM Watson Speech To Text transcription recognition (a separately sold product) for speech analytics — a capability that reference clients called out as a differentiator. IBM also positions Watson Discovery as a cognitive search platform; however, IBM chooses to work with partners on other people-focused solutions (such as VOC and VOE).⁴

The Forrester Wave™: AI-Based Text Analytics Platforms (People Focused), Q2 2020

The Eight Providers That Matter Most And How They Stack Up

All text analytics applications require ample training to become highly accurate, and IBM clients can benefit from engaging with IBM Expert Labs or IBM GBS for professional services to train, customize, deploy, and scale IBM Watson Discovery-based applications. The Watson Discovery product team has introduced new capabilities, including innovations from IBM Research.

However, the sheer size of IBM — and the number of acquisitions, supported legacy products, and products it needs to integrate — diverts resources, sometimes at the expense of innovation; a few reference clients called out a lack of innovations in Watson Discovery. Clients often tell us it's challenging to navigate the IBM landscape — IBM needs to do a better job communicating its complex product catalog.

- › **Micro Focus IDOL remains a spaceship of unstructured data analytics.** In most organizations, unstructured analytics is still federated — teams use different tools for people- and document-focused applications, as well as different tools for text, speech, and computer vision analytics. Organizations ready for one platform to address all of the unstructured data analytics should shortlist Micro Focus IDOL. IDOL comes OOTB with more data connectors (based on Apache NiFi and comprehensive data ingestion, transformation, and routing capabilities), more language support, and more domain-specific ontologies than most of its competitors. The product also supports building conversational applications (virtual assistants) using its Conversation Server and Answer Server APIs. Companies can instantly leverage IDOL as an enterprise cognitive search platform, and it also comes bundled with the Media Management and Analytics Platform (MMAP). However, most of the other people-focused solutions are available only through indirect channels (partners or OEMs).

Users conscious of data privacy will like IDOL's capabilities that treat personally identifiable information (PII) data beyond masking text — it has APIs to blur faces in images and redact PII from speech. The product's breadth and depth are also its weakness — it's not easy to use for a non-IT professional. Users must maneuver an overwhelming number of screens as they develop data ingestion processes, build models, and analyze the results, and the UX is less than seamless. Client references confirmed the platform's complexity and gave IDOL lower marks for ease of use and time-to-value compared to competitors. Micro Focus has yet to invest in NLU beyond sentiments such as effort, emotion, and intent.

- › **SAS Visual Text Analytics bolsters SAS's family of formidable analytics products.** SAS Visual Text Analytics is one of several applications built on the SAS Viya platform, where all applications share data and model management, a business intelligence (BI) and analytics GUI, and other microservices, resulting in consistent UX. Additionally, SAS Visual Text Analytics customers will benefit from augmented BI capabilities — including an NLG-based feature that explains results and what-ifs — available in SAS Visual Analytics (VA) (the vendor's [enterprise BI platform](#)), which is the visualization/analytics component of Visual Text Analytics. Core speech and image/cursive writing analytics features are natively available in Visual Text Analytics, but for customized models, clients will have to purchase separate products: SAS Visual Data Mining and Machine Learning (VDMML) for data scientists looking to build and customize native SAS code.⁵ While domain-specific ontologies come packaged with most competitive products, SAS sells "industry packs" separately.

The Forrester Wave™: AI-Based Text Analytics Platforms (People Focused), Q2 2020

The Eight Providers That Matter Most And How They Stack Up

SAS Visual Text Analytics' speech analytics is mostly limited to voice-to-text transcription, which limits the ability to analyze pauses and multispeaker conversations — an increasingly popular feature in call center analytics. Other than "sentiment packs" (included with the product), the platform's NLU capabilities (identifying sentiment, emotion, effort, and intent) are also very basic, mostly requiring users to build custom rules and models.⁶ SAS also sells "sentiment packs" as a separate product. While the pure Visual Text Analytics UX is seamless, the UX becomes less harmonious when diving deep into building and customizing models in SAS VDMML and SAS Studio.

- › **Clarabridge is primarily a CFM platform on text analytics steroids.** First and foremost, Clarabridge is a CFM platform that, in addition to text analytics, provides clients with the ability to collect and aggregate feedback across multiple channels, case management, and other key VOC capabilities. While the vendor goes to market with three VOC applications (Customer Experience, Contact Center, and Digital Customer Service), under the covers these capabilities rest on Clarabridge's comprehensive, general-purpose text analytics platform. The platform comes with a multitude of connectors to most popular cloud and on-premises VOC data sources; numerous ontologies; and OOTB sentiment, emotion, effort, and intention identification rules and models (capabilities that would require model training with other platforms). The platform can also identify phrases as real conversations about a product rather than marketing or sales pitches. As a bonus, Clarabridge has embedded speech and conversation analytics capabilities, making it especially attractive for analyzing call center client communications (such as calls, chats, or emails).

The Clarabridge platform is only available as a cloud software-as-a-service (SaaS) option, which could be a concern for clients that aren't ready to move sensitive data outside of their firewalls. While the platform is a great fit for CX pros, it may not suit data scientists with its few capabilities to build custom ML models or bring in external ones. Reference customers call out Clarabridge for its inflexible pricing, citing that its pricing tiers are too broad.

Strong Performers

- › **Google Cloud AI turns an assortment of NLP services into a platform-like offering.** Google's text analytics platform is a collection of multiple Google Cloud AI services and other services. It includes NLP APIs for entity and sentiment extraction, contact center APIs, and speech-to-text APIs (which can differentiate between conversations happening inside a building and on noisy streets and apply different analysis to each). Other services include Data Fusion for data ingestion and preparation and Dialogflow for building conversational apps. Google also offers AutoML, which enables developers and users with limited ML expertise to build custom models for document classification, entity extraction, and sentiment analysis. These services integrate natively with Google data lake (Google Cloud Storage) and BigQuery and Looker for analysis. A huge benefit of using Google text analytics services is its crowdsourced knowledge graph, which competitors will struggle to keep up with. Data scientists and other power users will like that Google lets you pick your favorite NLP engine (such as the popular open source BERT). Last but not least, Google offers its text analytics on a pay-per-use basis, which is still a differentiator.

The Forrester Wave™: AI-Based Text Analytics Platforms (People Focused), Q2 2020

The Eight Providers That Matter Most And How They Stack Up

Although Google has done a decent job of pulling together all of the relevant services into a platform-like look and feel, navigating its UX may be a daunting task for non-IT, nondata pros. It also doesn't offer many people-focused solutions (Contact Center AI and Dialogflow are the exceptions) — its approach to solutions is mostly partner dependent. Lastly, all Google services are mostly available as cloud SaaS, which could be a concern for clients that require an on-premises deployment (a limitation confirmed by customer references).⁷

- › **OpenText Magellan aspires to be your one-stop shop for analytics.** Text analytics is one of the three core capabilities of OpenText Magellan, the other two being an enterprise BI platform and a predictive analytics and machine learning platform — all based on a big data Spark architecture. While some competitors prefer to work with BI vendor partners for comprehensive data visualization, analysis and slice-and-dice functionality, and ML-based predictive analytics, OpenText Magellan Text Analytics can simply function as a data ingestion and transformation step for its BI component. A user can switch between building text mining processes, analyzing results, and building predictive models without switching platforms. OpenText currently offers speech analytics only via partner product integration.

A bonus for OpenText customers is they will find Magellan embedded and integrated into OpenText Qfinity — an application to categorize, analyze, and summarize contact center customer conversations. Document-focused (versus people-focused) text analytics is OpenText's core strength — and as a result, customers will find Magellan's sentiment analysis capabilities less comprehensive than competitive offerings. OpenText mostly grows by acquisitions, and product integration is its specialty. However, based on the sheer number of products it acquires and the frequency of its acquisitions, integration does take time. As a result, a different UX sometimes bursts through the seams during the end-to-end text mining and analysis process.

- › **Expert System Cogito bets on out-of-the-box accuracy with its knowledge graph.** While AI will undoubtedly outpace humans in building a base of knowledge someday, that time has not come yet. For now, Expert System's knowledge graph, built over 20 years, beats purely ML-based text analytics applications during the initial few months of client deployments, often achieving faster time-to-value, more predictable results, and lower overall cost of ownership (all confirmed by customer references, which gave Cogito high scores for its multilingual capabilities, ontologies, and time-to-value). Especially impressive is Cogito knowledge graph's availability in 12 languages, supporting full linguistic NLP functionality (including term disambiguation). In addition to its main knowledge-graph-based components (Discover for text mining and Intelligence for analytics and visualization), Cogito also packages Studio for building custom ML-based text analytics models. Expert System also sells Cogito Answers — a product for automating customer interactions.

Machine learning, for now, is Cogito's Achilles' heel. While Expert System is increasing its investments in supervised and unsupervised ML models, in the near term it will lag behind competitors that invested in ML technologies earlier. Cogito offers speech analytics — an

The Forrester Wave™: AI-Based Text Analytics Platforms (People Focused), Q2 2020

The Eight Providers That Matter Most And How They Stack Up

increasingly important capability in contact/call center applications — only through partners. The vendor also needs to invest more in packaged people-focused applications, such as VOC, VOE, and social listening.

Contenders

- › **EPAM InfoNgen remains a solid choice if you look for software/services combination.** No matter what any vendor claims, no text analytics application is as accurate on day one as it will be after a few weeks or months of diligent system training and customization. And this is precisely where EPAM's sweet spot lies — it is a large, global systems integrator. InfoNgen is one of several products EPAM productized over a decade ago, and it is a respectable competitor to software pure-plays. The product comes with all of the capabilities an enterprise text analytics platform may require: numerous data connectors, ontologies, support for multiple languages via linguistic rules, and ML algorithms. While InfoNgen can be used for virtually any text analytics application, EPAM goes to market with domain-focused applications, namely Brand & Competitive Intelligence, Online Consumer Engagement, and Customer Feedback & Inquiry Intelligence, as well as related applications like Enterprise Search. We found InfoNgen's "newsletter" application, which distributes insights derived from text mining, useful and unique. End users will also find a feature allowing them to validate platform tags (or not) and submit the results for review quite handy.

Reference clients gave EPAM's text analytics professional services top scores; this is definitely a key strength. The InfoNgen platform is only available as cloud SaaS, which is often an issue for clients that are not ready to move sensitive data to public clouds. EPAM will also have to invest in updating its speech and voice analytics capabilities, which are currently limited mostly to voice-to-text transcription.

Evaluation Overview

We evaluated vendors against 27 criteria, which we grouped into three high-level categories:

- › **Current offering.** Each vendor's position on the vertical axis of the Forrester Wave graphic indicates the strength of its current offering. Key criteria for these solutions include variety of data ingestion options (not limited to text files but also including speech analytics, image capture, and cursive writing capture); data enrichment using domain-specific ontologies; subdocument, document, and cross-document NLP capabilities; knowledge- and ML-based AI functionality; ease of use for end users and administrators; and modern architecture (micro services, containers, serverless, and security).
- › **Strategy.** Placement on the horizontal axis indicates the strength of the vendors' strategies. We evaluated vendor and product vision, execution, performance, market approach, partnership ecosystem, supporting products, and services and delivery model.

The Forrester Wave™: AI-Based Text Analytics Platforms (People Focused), Q2 2020

The Eight Providers That Matter Most And How They Stack Up

- › **Market presence.** Represented by the size of the markers on the graphic, our market presence scores reflect each vendor's product revenue and geographical presence.

Vendor Inclusion Criteria

Forrester included eight vendors in the assessment: Clarabridge, EPAM, Expert System, Google, IBM, Micro Focus, OpenText, and SAS. Each of these vendors has:

- › **A standalone, general-purpose text analytics platform.** We excluded vendors that embed text analytics functionality into solution-specific platforms like CX, EX, social listening, and others.⁸
- › **People-focused specific text analytics capabilities.** Although all vendors in this evaluation can support the majority of text analytics use cases, this evaluation focuses on vendors' people-focused solutions capabilities. These capabilities include integrated speech and text analytics, knowledge-based AI (linguistic rules and ontologies), and spelling and grammar correction.
- › **Significant market presence.** Included vendors demonstrated significant market presence via revenues, customers, global presence, and interest from Forrester clients.

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Supplemental Material

Online Resource

We publish all our Forrester Wave scores and weightings in an Excel file that provides detailed product evaluations and customizable rankings; download this tool by clicking the link at the beginning of this report on Forrester.com. We intend these scores and default weightings to serve only as a starting point and encourage readers to adapt the weightings to fit their individual needs.

The Forrester Wave Methodology

A Forrester Wave is a guide for buyers considering their purchasing options in a technology marketplace. To offer an equitable process for all participants, Forrester follows [The Forrester Wave™ Methodology Guide](#) to evaluate participating vendors.

The Forrester Wave™: AI-Based Text Analytics Platforms (People Focused), Q2 2020

The Eight Providers That Matter Most And How They Stack Up

In our review, we conduct primary research to develop a list of vendors to consider for the evaluation. From that initial pool of vendors, we narrow our final list based on the inclusion criteria. We then gather details of product and strategy through a detailed questionnaire, demos/briefings, and customer reference surveys/interviews. We use those inputs, along with the analyst's experience and expertise in the marketplace, to score vendors, using a relative rating system that compares each vendor against the others in the evaluation.

We include the Forrester Wave publishing date (quarter and year) clearly in the title of each Forrester Wave report. We evaluated the vendors participating in this Forrester Wave using materials they provided to us by April 8, 2020, and did not allow additional information after that point. We encourage readers to evaluate how the market and vendor offerings change over time.

In accordance with [The Forrester Wave™ Vendor Review Policy](#), Forrester asks vendors to review our findings prior to publishing to check for accuracy. Vendors marked as nonparticipating vendors in the Forrester Wave graphic met our defined inclusion criteria but declined to participate in or contributed only partially to the evaluation. We score these vendors in accordance with [The Forrester Wave™ And The Forrester New Wave™ Nonparticipating And Incomplete Participation Vendor Policy](#) and publish their positioning along with those of the participating vendors.

Integrity Policy

We conduct all our research, including Forrester Wave evaluations, in accordance with the [Integrity Policy](#) posted on our website.

Endnotes

¹ Figure 4 in the following report provides more detail. See the Forrester report "[Look To Four Use Case Categories To Push RPA And AI Convergence](#)."

² In text analytics, tokenization means finding sentences and words based on periods, spaces, and other delimiters.

³ At the time of 2018 Forrester Wave evaluation of multimodal predictive analytics and machine learning solutions, IBM had five different text analytics products and API libraries. It has consolidated most under Watson Discovery. IBM SPSS, evaluated separately, is still sold as a separate product and has text mining capabilities. See the Forrester report "[The Forrester Wave™: Multimodal Predictive Analytics And Machine Learning Solutions, Q3 2018](#)."

⁴ VOC: voice of the customer; VOE: voice of the employee.

⁵ SAS Studio — an interface to build and customize models — comes with all SAS Viya applications.

⁶ SAS plans to address this gap with a release of SAS Conversation Designer later in 2020.

⁷ Clients can deploy their own version of all required Google services on-premises in containers — Google Anthos — but the approach carries multiple implications, such as the need to keep all relevant services in sync with Google cloud updates.

⁸ There are vendors in this evaluation that met this criterion by demonstrating a capability to analyze text in long documents, specifically call center transcripts.

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