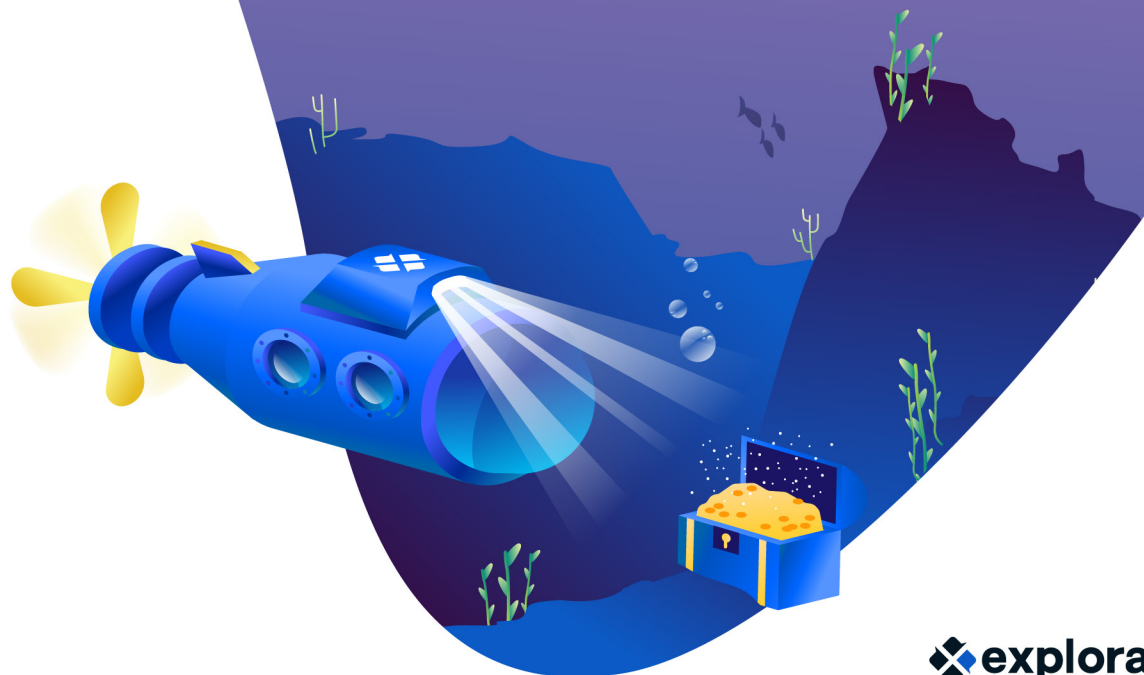





# How to Dive Deeper into Your Employee Comments and Gain Richer Insights

An Executive Briefing for HR Leaders



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# Introduction

Every company is surrounded by an ocean of feedback from employees. Some of this feedback, like answers to survey questions, is straightforward to interpret. The rest, like freeform text or social media comments, is more challenging to analyze at scale.

This executive briefing gives HR leaders quick answers to three questions:

- 1** Why do my employee text comments matter?
- 2** How can I analyze text comments?
- 3** How can I pick the best tool for my team?

This briefing provides a quick, clear guide to five different technologies available for processing text comments from employees.

By picking the best technology, you can enable your HR team to dive deeper and find the treasure hidden in the vast ocean of employee comments.

# Why Are Text Comments From Employees Precious?

Some feedback from employees is easy to process.

For example, dealing with A-B-or-C answers to survey questions is simple. You just assign numbers so that A=1, B=2, and C=3; then you can slice and dice the numbers with software.

So if 87% of your employees say they “agree” or “strongly agree” with your new work-from-home policy, you know you’ve got their support. That sentiment is right on the surface, easy to see.

But what about another type of feedback that’s harder to analyze?

Today, employee comments bubble up through more channels than ever:

- Scheduled or pulse surveys
- Chat groups and online comments
- Websites like Glassdoor,<sup>1</sup> Indeed, and many others <sup>2</sup>
- Social media like Facebook and Yelp

As you will see, much of this feedback is spontaneous and unstructured. These comments reflect the authentic concerns of employees. And they can reveal surprising issues and helpful suggestions.

“Employees are the most valuable source of information a company has,” says acclaimed HR consultant Josh Bersin. “Leaders should treat their suggestions, concerns, and feedback as gold.” <sup>3</sup>

Unfortunately, not every HR team is well-equipped to find the gold in the text comments they gather both from internal surveys and from external sources. To listen well to employees, HR teams must be able to analyze feedback from both internal and external sources at scale.

“Millions of dollars are lost every day in organizations simply because of poor listening,” declares executive coach Dan Bobinski. Those costs include misunderstandings, ineffective decisions, and costly mistakes. <sup>4</sup>

Gaining better insights from employee comments can help your team avoid these problems and make better decisions that generate positive results. That’s why the text comments from your employees are so precious.

# Structured vs. Unstructured Feedback

Every answer to a multiple-choice question is planned in advance and reported as a number.

Since this feedback is predictable, it's called **structured**. And since it's given as numbers, it's **quantitative**.

Traditional software does a great job with **structured** data.

For instance, we can give Excel any set of numbers and quickly find the mean, median, mode, range, and any other values that interest us.

On the other hand, open-ended comments are more spontaneous, free-flowing text. Many are not complete sentences.

That's why these comments are called **unstructured** or **qualitative**.

**Unstructured** feedback takes advanced software to decipher. This software often uses some form of AI, such as natural language processing or machine learning.

The graphic below shows the difference visually.

## STRUCTURED DATA

Composed of numbers that are simple to add up or arrange in order.

5 3 2 1 4 5 3

## UNSTRUCTURED DATA

Comes in all different shapes that are harder to analyze.



# How Do Companies Analyze Text Comments?

Given that unstructured comments are so valuable, what methods are available to analyze them? And how do the different methods compare?

To answer these questions, think of employee comments as an ocean that surrounds your company. The goal for your HR team is to dive deep to find the hidden treasures and bring them back to the surface.

Just like when exploring the ocean, different approaches can reach different depths. To gain a better understanding, it's helpful to compare and contrast several different potential methodologies.



**A** Human readers, who are like swimmers skimming the surface.



**D** HCM suites with machine learning modules, which are like deep-sea divers tethered to the surface who can't go beyond a certain depth.



**B** Text analytics using fixed dictionaries, which is like using a metal detector to fish for treasure.



**E** Employee experience management-based machine learning platform, which is like using a powerful underwater drone that can roam freely and pinpoint the treasure.



**C** General-purpose machine learning services from Big Tech vendors, which are like renting a scuba suit: you may glimpse some nice fish, but you can't reach very deep.

**Two factors are critical when comparing systems for analyzing text comments: context and agility.**

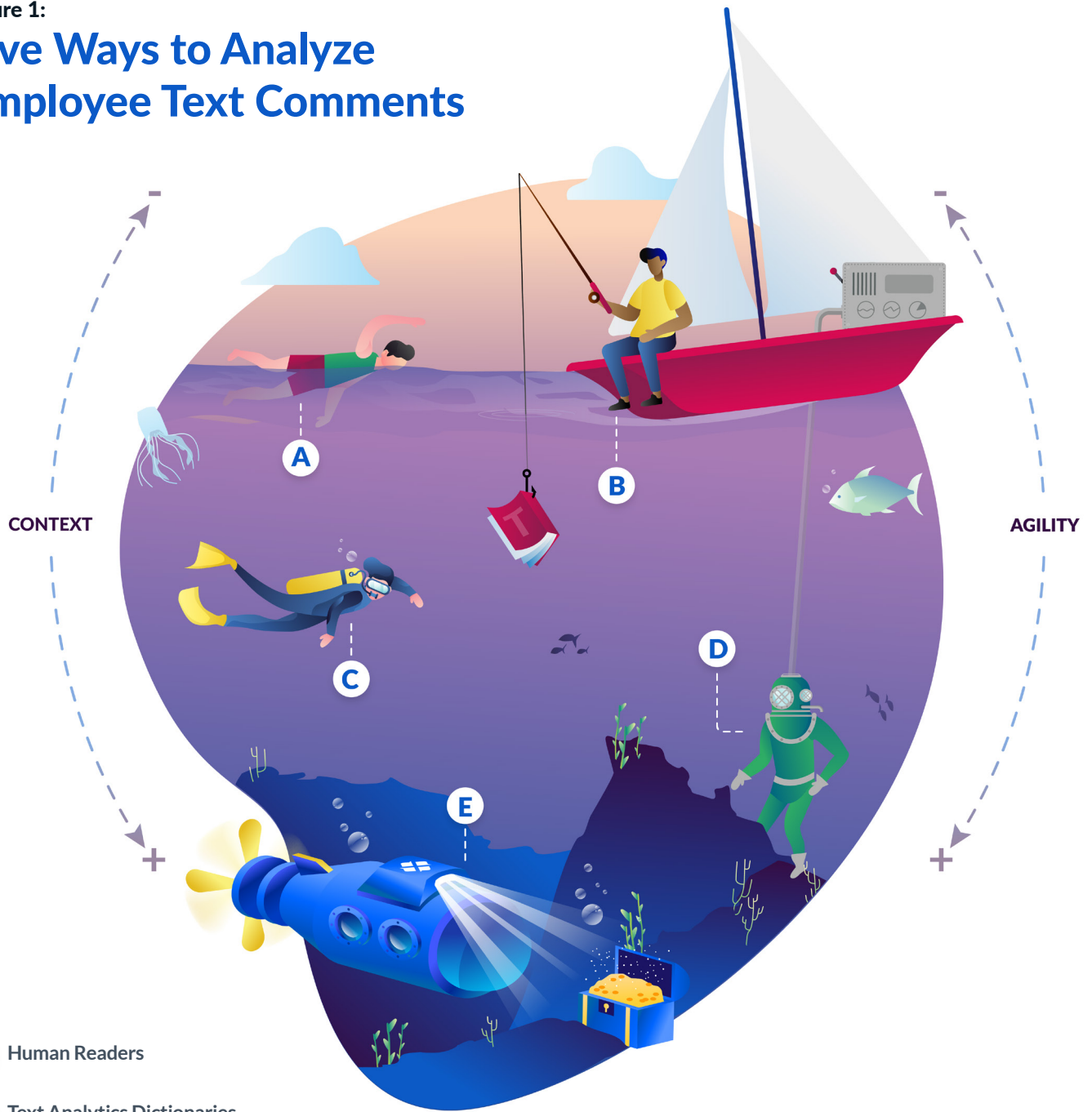
## Context

Context is the setting for a comment that shapes its meaning, the inter-related words and concepts that help us express meaning. Any system that can't detect the context of unstructured comments will miss many sentiments and deliver shallow insights.

## Agility

Agility is the ability to react quickly to changing conditions, to understand and act on new information. Any system without agility will take a long time to update, miss new terms, and ignore fresh sentiments bubbling up from employees. The rapid workplace change precipitated by the COVID-19 pandemic has underlined the need for responsiveness in text analysis systems.

Figure 1:  
**Five Ways to Analyze  
 Employee Text Comments**



- A** Human Readers
- B** Text Analytics Dictionaries
- C** General-purpose Machine Learning Services
- D** Human Capital Management (HCM) suites with Machine Learning
- E** Employee Experience Management (EXM)-based Machine Learning

As you can see, the more context and agility any approach provides, the deeper it dives into the ocean and the more treasure it finds.

Let's consider each of the five technologies that are depicted in more detail.

## A: Human Readers

### How it works:

People read through comments and report their impressions. But working manually, people soon get out of their depth. Like a swimmer caught in an undertow, human readers can easily drown in the vast ocean of comments.

### Context:

The same comment can mean different things to different readers. So like any manual process, this method suffers from significant bias and errors.

### Agility:

Human readers are slow and expensive, and this approach can't scale up to handle comments from hundreds or thousands of employees. Human readers will struggle to quickly react to disruptive, fast-moving events like a pandemic.

### The bottom line:

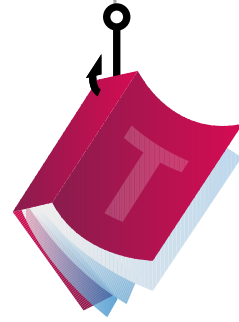
This old-fashioned approach is slow, costly, and subject to human bias, errors, and omissions. That means this approach is not suitable for medium and large enterprises.



## B: Text Analytics

### How it works:

Software sifts through comments looking for any terms it recognizes. The software doesn't really 'understand' comments; it simply prepares statistics on the words that match its dictionary.



Using text analytics is like searching for treasure by dragging a metal detector through shallow waters. The detector is only effective within a short range, which means there are many things it may not catch.

The metal detector is the fixed dictionary that drives the system. Any word that matches the current dictionary and its rules will be detected; anything else will be missed.

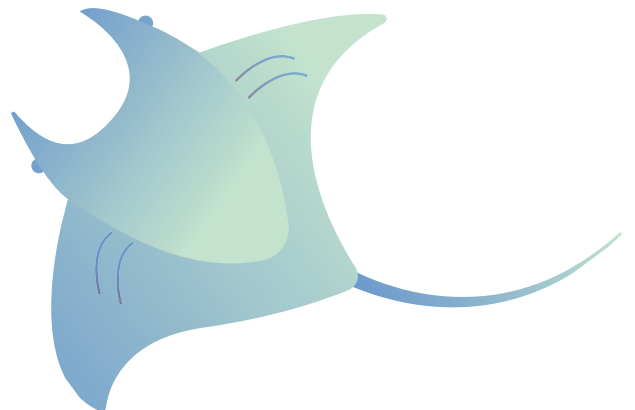
### Context:

This black-and-white approach often misses the link between words and concepts, fails to pick up on idioms, and misinterprets nuances of expression. The dictionary can often detect the high-level topic being discussed but not the specifics of what the employee really meant.

For example, suppose an employee made this comment on a training session: "The trainer was knowledgeable, but the lab assistant was unprofessional."

A typical text analytics system might detect four terms: "trainer, knowledgeable, lab assistant, unprofessional." So it would recognize two roles and two attributes. But it might not be able to identify which person goes with which attribute. Thus it would miss the main point of what the employee said.

As you can see, text analytics can only provide a shallow context for sentiments.



### Agility:

Text analytics has been criticized as a “bag-of-words approach”<sup>5</sup> that relies on “hand-crafted rules” with a lot of “brittleness.”<sup>6</sup>

The only way to improve the results is to update and re-issue the whole dictionary. That means feeding it millions of new comments or hardcoding connections between different synonyms or phrases.

Since updating a dictionary takes so much effort, it’s only done occasionally. Meanwhile, the system will miss any new terms.

Imagine trying to understand how your employees were feeling through 2020-21 without knowing terms like “pandemic” or “Covid-19” or “remote work.”

Text analytics lacks the agility to keep up with changes in the workplace.

### The bottom line:

Text analytics is preferable to relying on a human reader. But this approach remains mechanical, inflexible, and labor-intensive. Lacking context and agility, these systems can’t find many deep insights in employee comments.

All the remaining methods use some form of “machine learning.”

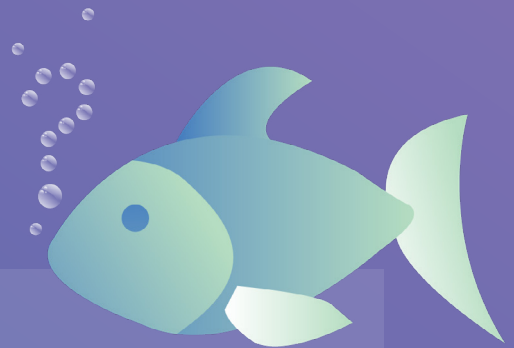


# What is “Machine Learning”?

Machine learning is a new, improved way to analyze employee text comments. This method catches more of what your employees are really saying than any earlier method.

Although the terms “machine learning” and “artificial intelligence (AI)” are often used interchangeably, they mean different things.

- ▶ **AI** refers to any task performed by a machine that was previously considered to require human intelligence. <sup>7</sup>
- ▶ **Machine learning** is a branch of AI that refers to software that can learn how to get better at doing certain tasks over time.<sup>8</sup> In effect, this software learns how to learn.



Systems driven by machine learning are all around us, from the digital assistants in our phones to the self-driving cars on our highways.

To get started, a machine learning system must be “trained” by scanning massive amounts of data.

For example, a system designed to analyze employee text comments must be trained by scanning millions of these comments. Of course, that happens at the lightning speed of the computer. And here’s the exciting part: If a machine learning system is properly trained with enough text comments, it can gradually learn to “understand” more and more of what that text means.

Instead of being limited by a fixed set of terms and synonyms—a dictionary—a machine learning system on its own begins to associate certain words with their synonyms, and to link those synonyms with certain concepts.

Eventually, it builds up a rich set of categories, themes, and topics. The more the machine learning system is used, the “smarter” it gets. And it does that automatically, without needing any people to code text or update a dictionary.

This is a key reason why people get excited about machine learning: The system’s performance continues to improve, all by itself.



## C: General-Purpose Cloud-Based Machine Learning Services



### How it works:

A branch of AI that uses software trained to recognize deep patterns in unstructured data and continuously improve over time.

This level covers the machine learning systems from Big Tech vendors like Amazon, IBM, and Microsoft.

As we've seen, these general-purpose systems are like renting a scuba suit at a beach. You may go for a nice swim and even glimpse a few colorful fish. But you will never get very deep or stay underwater for long – making it hard to discover any treasure.

Another issue concerns the privacy of your employee comments. Many tech companies are eager to get their hands on your data and use it for their own purposes.

### Context:

These generic systems tend to deliver generalized analysis without action. To their credit, these general-purpose systems can sort the unstructured text into different buckets. But they're still far from perfect – and cannot provide recommendations or prompt clear courses of action.

[Have you ever had Alexa, Google, or Siri completely misunderstand what you're talking about?](#)

These systems are general-purpose, not specialized. They were never trained with real-world employee feedback, so they're not strong at recognizing the themes or context that is important to HR.

### Agility:

These general-purpose systems are quick and easy to access. They're available 24/7 in the cloud so a customer can upload their comments and get back results fairly quickly. That makes these systems far more agile than text analytics driven by a dictionary.

### The bottom line:

General-purpose machine learning services are not HR-trained or designed to deal with employee comments. While more agile than text analytics, these systems tend to dredge up generic or superficial insights and do not facilitate time-sensitive decision support and insight to HR teams.

## D: HCM Suites With Machine Learning Modules

### How it works:

Established HCM vendors are issuing new modules that claim to use machine learning to analyze employee comments. But when these vendors say they use machine learning, they may not mean what you expect.

As we've seen, using a new HCM module is rather like sending down a deep-sea diver in a few select spots hoping to find some treasure.

But that diver can't see very far. They can only stay underwater for a short while, and they remain tethered to the surface for life support.

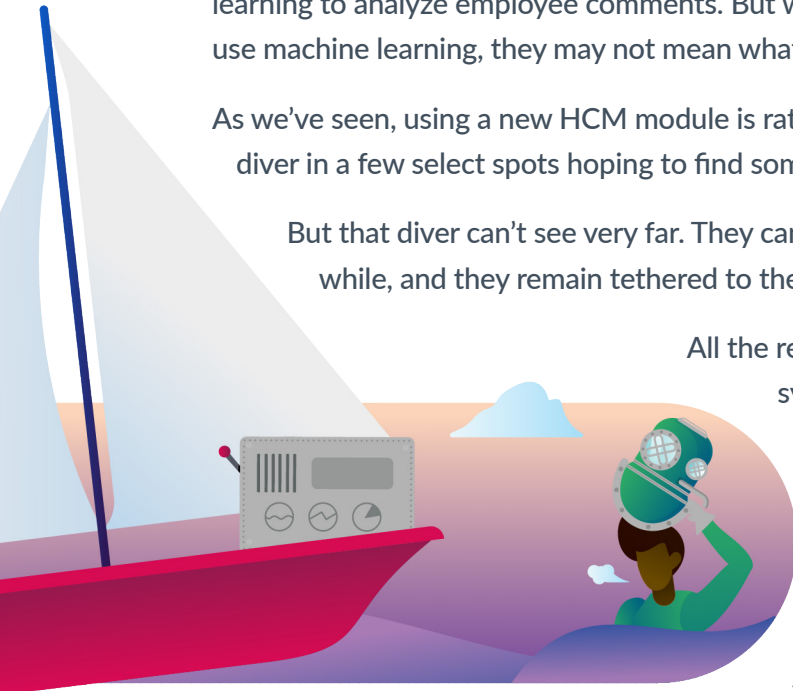
All the real work goes on at the surface, where the system is busy analyzing the employee data the HCM system already collected.

This is understandable. Any HCM suite has accumulated lots of proprietary data about your employees: their position, salary, raises, promotions, work address, home address, and so on.

So HCM vendors are investing most of their budgets in using machine learning to sift through all this demographic data and predict what an employee may do in the future.

This is an interesting approach called Predictive Analytics.

But these systems are preoccupied mainly with internal employee data. They tend to overlook the valuable insights found in employee text comments, especially any unstructured data gathered from external sources.



### **Context:**

Any HCM suite can provide more HR context than a general-purpose system. After all, that software was designed by a vendor steeped in the HR domain to serve the HR function.

But this only covers the background context. Grasping the specific context of employee comments takes more.

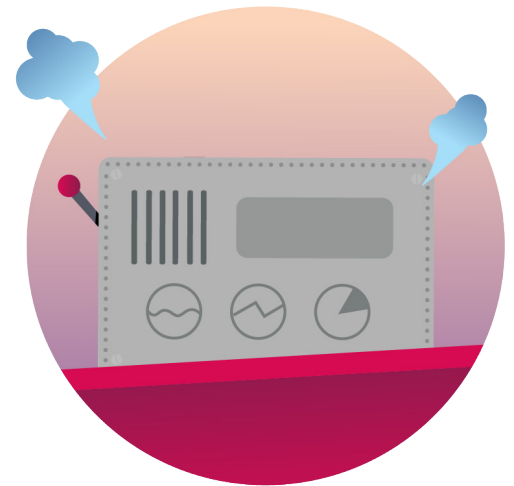
The system must be built specifically for employee comments and carefully trained by scanning millions of examples. Without all this, any HCM system provides a limited context and less useful insights.

### **Agility:**

Good machine learning software is smart enough to learn new words and detect new sentiments without waiting for a new dictionary. So this type of system is more agile than text analytics.

Installing new modules can take a lot of effort for everything from configuring the system to training users. That lag time can be months.

For these reasons, any new machine learning module for an HCM suite gets mixed reviews for agility.



### **The bottom line:**

Most HCM systems that claim to do machine learning focus more on mining the demographic data they've already collected on your employees. Then the system guesstimates what may happen next.

That's an interesting approach. But it doesn't dive deep enough into what your employees are really telling you, so any insights you gain will not be as rich and helpful as they should be.

# E: Employee Experience Management-based Machine Learning

## How it works:

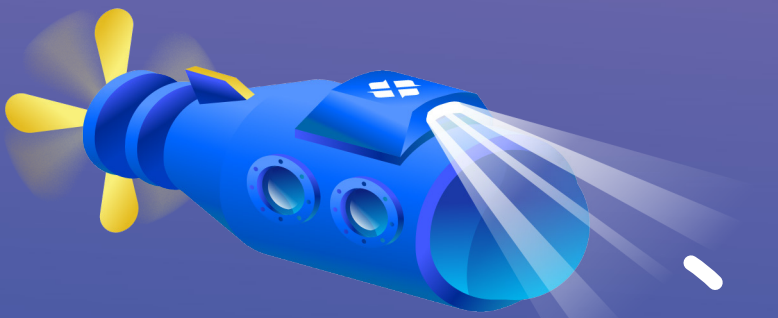
Extensive knowledge of Employee Experience Management (EXM) is applied to machine learning in order to analyze actual employee comments within an HR context.

This approach combines a high level of expertise in EXM with advanced machine learning trained on millions of real-world employee comments. That training enables the system to continuously recognize, reformulate, and reorganize the patterns it detects in the comments it studies. Open architecture design enables data from multiple sources to be analyzed.

Ultimately the system rolls up all the categories, themes, and sentiments that it finds into the insights that it delivers. And the more it's used, the more it continues to learn and improve

As we've previously seen, this method is like using an autonomous underwater drone that constantly patrols up, down, and all around the 360-degree ocean space, able to access siloed information and traverse the data barriers that limit other methods.

This vehicle uses a cluster of sensitive instruments to map the ocean floor at high resolution to search for sunken treasure. Because this vehicle is so agile and flexible, it can go deeper, explore further, and bring up richer treasure than any other method. By choosing this system, you will benefit from the best-in-class method available today. And it will continue to evolve quickly by using advances in research to deliver ongoing practical results. For example, this system is poised to reach an even deeper goal called "prescriptive analytics." This will not only predict future outcomes but also suggest options that can maximize the benefit or minimize the risk of the most likely outcomes.





**Context:**

This method combines long-term familiarity with Employee Experience Management with a direct focus on actual employee comments. That overcomes the limitations of earlier systems and provides the deepest context available, delivering a truly unified analysis and dependable decision support to HR teams.

**Agility:**

This machine learning algorithm rigorously trained with actual employee comments continues to improve over time. With no waiting for a new dictionary and no lag time to get a new module integrated with your HCM suite, this approach gets top marks for agility.

**The bottom line:**

This approach offers the best understanding of context plus the most agile technology. This kind of system can achieve a deeper dive into employee comments than any other method, which means better and more useful insights for your HR team.

So far, only one product on the market uses this approach to achieve such a deep dive into employee comments: BlueML from Explorance.





# Privacy concerns around employee data



When you submit a big file of employee comments to a machine learning vendor, how will they handle it? Where will they store it? For how long?

What will they do with it, besides processing it for you? And will they even claim to own your data from then on?

When you look for a machine learning vendor, ask these questions. You may be surprised by the answers you get.

No matter what the salesperson says, you'll want to carefully review the fine print in any vendor proposal, contract, or privacy policy.

And if you don't like what you see, insist on a separate agreement to cover the ownership and use of your employee data.

Make sure that working with a machine learning vendor doesn't mean losing control of your HR data.



# Getting the Best Tool for Your Team

As we've seen, the older approaches of human readers and text analytics can't match the results from machine learning. This new, improved approach uses more advanced software to dive deeper and bring up richer categories, themes, and insights—just what your team needs to support better decisions.

To get the best results, your team needs the best tools. And although many vendors claim to have the range of features needed to dig into your employee text comments, what lies beneath is not always gold.

The following questions can help you to evaluate a text analysis solution provider.

## Approach

How does it make sense of employee experience data?

## Evolution

Does it allow categorization to improve, evolve and adapt to changing HR themes?

## Scalability

Is it modeled on real employee comments, so you get something that is scalable over time?

## Automation

Can it capture, categorize, analyze, and predict from open text comments in real-time?

## Precision

Can comments be broken down into multiple categories and subcategories, leading to more accurate insights?

## Coverage

Does it have the ability to categorize and drive insights from as many comments as possible?

## Context

What level of depth and context does it provide in the analysis (themes, attributes, sentiments, and employee metadata)?

## Advanced Analytics

Can it evolve to support predictive and prescriptive analytics?

Below, we sum up the pros and cons of each approach - to help you achieve the best results.

Table 1:

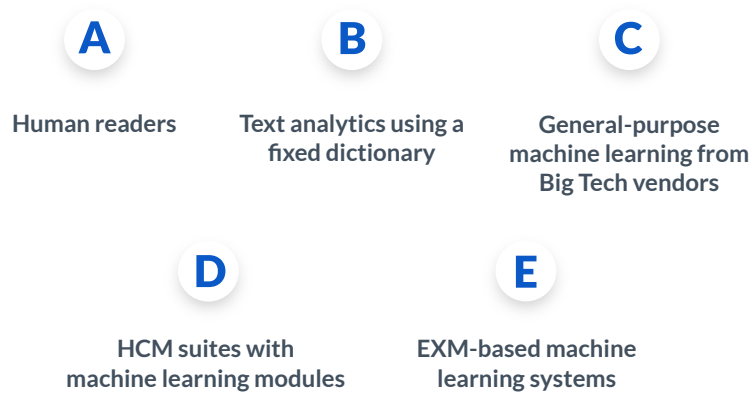
## Five Ways to Process Employee Text Comments

	<b>A</b> Human readers	<b>B</b> Text analytics dictionaries	<b>C</b> General-purpose machine learning services	<b>D</b> HCM suites with machine learning modules	<b>E</b> EXM-based machine learning systems
<b>Approach</b>	Introduces human bias	Supports predetermined semantic structures	Built to mine generic topics	Built to mine HR-centric data	Built specifically to mine employee experience data in HR and L&D context
<b>Evolution</b>	None	Requires full rebuild efforts yearly	Learns & adapts based on ongoing input	Self-learning - adaptive	Self-learning - adaptive
<b>Scalability</b>	Supports small volumes (0 to 100)	Supports medium volumes (100 to tens of thousands)	Supports all volumes (1 to millions)	Supports all volumes (1 to millions)	Supports all volumes (1 to millions)
<b>Open Architecture</b>	No	Yes	Yes	No	Yes
<b>Precision</b>	Medium	Medium	Medium	Medium	High
<b>Coverage</b>	High	Medium	Medium	Medium	High
<b>Context</b>	High	Low; cannot scale to support cross category analysis	Low; does not provide rich coverage of HR themes	Medium; lacks a strong focus on employee feedback patterns	High; can correlate deep HR topics with employee feedback concepts and other metadata
<b>Advanced analytics</b>	None	None	Basic sentiment-based predictive analytics	Predictive analytics based on HR data	Predictive and prescriptive analytics based on HR data, other metadata, and employee feedback patterns, also provides decision support

# Summary

Larger companies are surrounded by an ocean of unstructured comments from employees that cover a rich treasure of insights. But not all HR teams are well-equipped to analyze these comments.

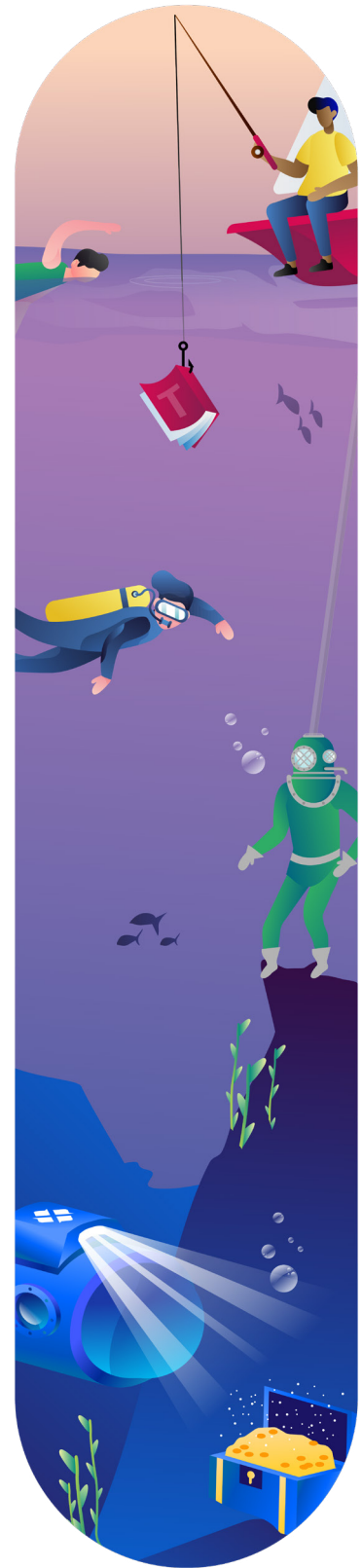
Today there are five ways to analyze text comments from employees:



Each method goes deeper than the one before. But only the final method uses machine learning specifically designed and trained to analyze employee text comments. A system at this level can reach deeper and return richer, more helpful insights than any other.

So far, there is only one product on the market that achieves this deep dive, called **BlueML** from **Explorance**.

To hear more about how BlueML can help your HR team find the hidden treasure in employee comments, request a [personalized demo](#).



# Glossary

**Analytics:**

Studying data to find meaningful patterns or insights

**Artificial Intelligence (AI):**

Any task performed by a machine that was previously considered to require human intelligence

**Cloud-based:**

Any system using servers located remotely, not on your company premises; for example, Google Search and Gmail are cloud-based

**Machine Learning:**

Software that can learn how to get better at doing certain tasks over time; a branch of AI<sup>9</sup>

**Natural Language Processing:**

Software that can process human language, either to study text produced by humans as input or to generate natural-sounding text as output; a branch of AI

**Predictive Analytics:**

Analyzing data to predict events likely to happen; in HR, using structured data from the employee journey such as demographics and employment history to predict future behavior such as the likelihood to leave the company

**Prescriptive Analytics:**

Analyzing data to provide options to maximize the benefit or minimize the risk of events likely to happen; considered the ultimate form of analytics, not yet achieved by anyone for HR

**Qualitative Data:**

Same as Unstructured data

**Quantitative Data:**

Same as Structured data

**Structured Data:**

Data given as numbers, which are easier for traditional software to process

**Text Analytics:**

Software that analyzes text by counting the occurrences of terms pre-defined in a dictionary

**Unstructured data:**

Data as free-form text, which is harder for traditional software to process



# About Explorance

BlueML is part of a suite of Employee Experience Management (EXM) solutions provided by Explorance.

At Explorance, we believe that each experience matters. From students in higher education to employees at the workplace, feedback is vital for the lifelong learner's journey. That's why Explorance's mission is to help organizations create a personalized journey of impact and fulfillment for their people through innovative Experience Management (XM) solutions.

With Blue, the Experience Management Platform, and Metrics That Matter, organizations can gather richer insights to make the best decisions for developing their key stakeholders' skills, knowledge, and competencies while meeting their needs and expectations. As the world's largest provider of XM solutions for the lifelong learner, Explorance supports more than 750 organizations in 45 countries, including 35% of the Fortune 100 and over 25% of the QS top 100 higher education institutions.

We believe in the human touch at Explorance and are known for our pioneering culture of mutual trust built on free will, flexibility and reciprocity. To our employees, this means the freedom to bring achievement into their own lives. For our customers, it means caring for their needs and helping them succeed. For our communities, it means doing our part to help our neighbors simply because it's the right thing to do. **Explorance is ranked the #1 best workplace in Canada by the Great Places to Work® Institute** and is headquartered in Montreal with business units in Chicago, Chennai, London, Amman, and Melbourne.



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