



# LUMINOSO

## *The Impact of AI Text Analytics: Listening to the Voice of the Employee*



### Business Benefits Enabled by Luminoso Technologies

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Luminoso Technologies is a leading artificial intelligence (AI) and natural language understanding (NLU) company that enables companies to rapidly discover value in their unstructured data. Luminoso's award-winning software accurately analyzes text-based data for any industry without lengthy setup time or training natively in 13 languages, including Chinese, Korean, Japanese, and Arabic. The company is privately held and headquartered in Cambridge, MA.

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## The Impact of AI Text Analytics: Listening to the Voice of the Employee

### Quantifying the Benefits of Better Employee Engagement

Employee turnover is a huge pain-point for global corporations today. Rehiring remains expensive, costing US businesses between \$160 and \$550 billion annually, and turnover continues to link with other negative outcomes like poor morale, declines in productivity, and customer churn.

Yet, as the pace of innovation increases, market preferences are moving towards a gig economy, and public sentiment no longer favors traditional loyalty to firms. After all, Fortune 500 companies average 52,800 employees and 21.7% annual turnover. Due to this shift, global corporations are feeling more pressure than ever to attract and retain their internal talent, or be disrupted from within.

Understanding the root causes of employee turnover is difficult in such large organizations. Voice of the Employee initiatives are a key component of employee engagement programs, but traditional methods of analyzing that employee feedback simply aren't reliable enough, often because they only capture limited sample sets.

A full-time HR researcher reading and analyzing 30 responses an hour would take over 2 months to process 10,000 surveys and interviews. That's not fast enough to catch and fix problems that lead to high turnover, nor is it an efficient use of an employee's time.

This paper quantifies the benefits of an AI text analytics platform that enables enterprises to listen to and understand the voice of their employees. It assumes a composite company comprised of an average of the Fortune 500, working with at least 100,000 data points.

New AI text analytics technologies can make better sense of these surveys and deliver actionable insights on employee turnover. The best use common sense natural-language understanding to adapt automatically to domain-specific datasets, so they can uncover meaningful trends in minutes, not months.

These solutions also make researching the Voice of the Employee affordable and efficient, empowering global companies to discover and curb actions that result in turnover. They can then decrease turnover costs by rescuing dissatisfied employees and enabling a leaner group of recruiters.

By fixing problems that lead to turnover, they also improve employee satisfaction, which is strongly correlated with improved customer satisfaction and incremental increases in revenue.

The model uses a composite company comprised of an average of the Fortune 500. Then, projected the benefits that a company with \$55.4B in annual revenue, 52,810 employees, and \$100,000 salaries would earn from utilizing text analytics software to identify and correct turnover issues.

Specifically, it examined three main benefits:

- Increased Efficiency from Automating Research of Exit Interviews;
- Decreased Cost from Reduction in Turnover; and
- Increased Net Profit from Increased eNPS, or employee satisfaction.

By how much? Luminoso Technologies quantified the benefits of an AI text analytics platform in helping enterprises listen to and understand the Voice of their Employees, which can be seen throughout this paper.

### Decreased Cost from Reduction in Turnover

Luminoso enables companies like yours to process huge volumes of previously untapped Voice of the Employee or satisfaction surveys, and even exit interview data. Meaning, you can easily unearth trending topics, top complaints, and any friction points that could be driving employees away, giving you more time to focus on fixing them.

This kind of data is rarely disseminated throughout the organization, and extracting actionable insights is difficult without visibility to the bigger picture (what all your employees are saying). Luminoso simplifies this process by quickly allowing companies to listen to employee feedback and start focusing on improving their experience.

Within minutes, you can analyze tens of thousands of employee text communications to better understand what really matters to both your current and future workforce. This will help your organization to better understand the relationship between employee engagement, customer loyalty, and profitable growth. And because Luminoso quantitatively measures all your data, instead of manufacturing narratives from a small data set, your workforce data becomes clear, accurate, and actionable.



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Tables 1 & 2 below demonstrate this value over a 3-year period, using Fortune 500 averages and moderate assumptions around the growth and time value of such a solution.

Table 1 – Recruiter Reduction Cost Savings

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Employees	F 500 Avg	52,810	53,866	54,944
A2	Incremental Hires for Growth	Assumption		2%	2%
A3	Turnover Rate	F 500 Avg	25%	23.40%	21.70%
A4	Number of Annual Exit Interviews	A1*A3	13203	12588	11944
A5	Recruiters per Hire	Assumption	0.02	0.02	0.02
A6	Recruiter Salary (fully loaded)	Assumption	51368	\$52,395.36	\$53,443.27
A7	Recruiters Saved	A4*A5	11	23	36
A <sub>t</sub>	<b>Recruiter Reduction Cost Savings:</b>	<b>A6*A7</b>	<b>\$569,726.97</b>	<b>\$1,227,103.89</b>	<b>\$1,915,018.33</b>

Table 2 – Hiring Cost Reductions

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	Employees	F 500 Avg	52,810	53,866	54,944
B2	Incremental Hires for Growth	Assumption		2%	2%
B3	Turnover Rate	F 500 Avg	25%	23.40%	21.70%
B4	Number of Annual Exit Interviews	B1*B3	13203	12588	11944
B5	Average Employee Salary	Assumption	\$100,000	\$102,000	\$104,040
B6	% of Salary Cost to Re-Hire	Assumption	20%	20%	20%
B7	Cost to Train	Assumption	10000	10200	10404
B8	Cost to Rehire	B5*B6	\$20,000	\$20,400	\$20,808
B9	Incremental % Reduction in Turnover	Assumption	1.10%	2.20%	3.30%
B10	Employees Rescued	B1*B9	574	1171	1792
B11	Months Until Employee Productivity	Assumption	2	2	2
B12	Opportunity Cost Savings	(B11/12)*B5*B10	\$9,567,028.99	\$19,907,073.91	\$31,066,979.55
B13	Hiring Cost Savings	B10*(B7+B8)	\$17,220,652.17	\$35,832,733.04	\$55,920,563.19
B <sub>t</sub>	<b>Total Hiring Cost Reductions</b>	<b>B12+B13</b>	<b>\$26,787,681.16</b>	<b>\$55,739,806.96</b>	<b>\$86,987,542.74</b>



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### Increased Net Profit from Improved eNPS

For a company to prioritize the initiatives that would be most beneficial, the first step is to identify the connections between employee engagement and customer satisfaction. The problem is that traditional statistical models for doing so are often not as effective or rapid at analyzing unstructured text.

These traditional approaches also rely extensively on keyword lists and ontologies created by human analysts, which might inadvertently skew the results by cherry-picking keywords or falling prey to confirmation bias.

Luminoso, on the other hand, uses cutting-edge machine learning technologies to map out links between customers and employees. This way, you can identify the most important topics and visualize them in clusters based on how related they are to one another. Table 4 (below) provides more detail on the potential increases in net profit that stem from improving your overall eNPS.

Table 3 – Aggregate Benefits from AI Text Analytics to VoE

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
C1	Annual Revenue	F 500 Avg	\$55,400,000,000	\$56,508,000,000	\$57,638,160,000
C2	Annual Revenue Growth Rate	Assumption		2%	2%
C3	Net Margin	Assumption	25%	25%	25%
C5	1 eNPS Increase in NPS	Assumption	0.4	0.4	0.4
C6	1 NPS Increase in % Incremental Increase of Revenue	Assumption	0.14%	0.14%	0.14%
C7	Increased eNPS	Assumption	0.5	1	1.5
C8	Increased NPS	C5*C7	0.2	0.4	0.6
C9	Incremental Increase in Revenue	C1*C8*C8	\$15,828,571.43	\$32,290,285.71	\$49,404,137.14
Ct	Total Incremental Increased Net Profit	C3*C9	\$3,957,142.86	\$8,072,571.43	\$12,351,034.29

### Financial Summary

The models shown in this report demonstrate the power of an AI text analytics program that reduces turnover by an incremental 3.3 percent and increases employee Net Promoter Scores (eNPS) by just three points over a three-year program has a present value of \$158M to the composite company. Even if the program were to increase employee satisfaction by 1 eNPS and reduce turnover only by an incremental 0.33 percent, the net benefits to the company would amount to a present value of \$19.9M.



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More specifically by benefit, the analysis revealed that:

- AI text analytics saves and reallocates valuable man hours away from analyzing and toward action planning. Assuming that an individual can read quickly through 30 surveys an hour, AI text analytics technology can save over 400 man hours, or approximately 3 months, and over \$11,000 annually. While we do not calculate the time value of driving turnover 400 hours earlier than other methods, it is implicit that the quicker a problem is discovered, the sooner it can be addressed.

The largest benefits are in cost savings from reducing turnover. Were the actionable insights learned from

- the AI text analytics program to lead to a reduction in turnover of 3.3% for a composite Fortune 500 company, it would rescue 1,792 employees annually. This benefit could also reduce the need for up to 33 new recruiters, along with cost savings of up to \$87 million across hiring, recruiting, and opportunity costs.

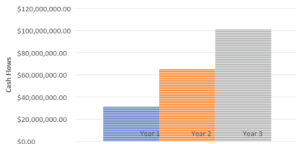
Insights can lead to increased employee satisfaction that incrementally improves a company's net margin.

- In the model, employee satisfaction rises by 15 points as a result of ongoing actions taken from learnings gleaned from the AI software. The rise in employee satisfaction drives \$12.3m in increased net profit by the end of the program's third year.

Table 4 – Financial Summary

Ref.	Benefits	Year 1	Year 2	Year 3	Total	Present Value
D1	Recruiter Reduction Cost Savings	\$589,726	\$1,227,103	\$1,915,018	\$3,731,849	\$2,989,032
D2	Cost Savings from Reductions in Turnover	\$26,787,681	\$55,739,806	\$86,987,542	\$169,515,030	\$135,773,421
D3	Increased Net Profit from Increased eNPS	\$3,957,142	\$8,072,571	\$12,351,034	\$24,380,748	\$19,548,464
Et	<b>Total</b>	<b>\$31,334,549</b>	<b>\$65,039,480</b>	<b>\$101,253,594</b>	<b>\$197,627,627</b>	<b>\$158,310,9172</b>

### Financial Analysis





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### About Luminoso

The employee experience is today's battleground for organizations competing to win and retain loyal employees. HR, executives, and management know that to improve the employee experience, they must scrutinize their feedback. But many organizations and their HR teams can only skim or sample employee data when digging for insights.

Luminoso's solution are the fastest way to listen to your employees so you can improve their experience. Within minutes, it digests tens of thousands of employee text communications, like open-ended survey responses or reviews, so you can learn from the constantly arriving feedback that might otherwise go unread.

Luminoso's solution understands and quantifies employee feedback at scale, so you can improve the employee experience. Unlike other analytics technologies, which require months of expensive tuning and massive data collection efforts, it works in minutes.

To learn more, schedule a demo or contact us today!

