The Total Economic Impact™ Of HighBond By Galvanize

Cost Savings And Business Benefits Enabled By HighBond For A Government Administration Department

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ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. Ranging in scope from a short strategy session to custom projects, Forrester's Consulting services connect you directly with research analysts who apply expert insight to your specific business challenges. For more information, visit forrester.com/consulting.

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Executive Summary

Return on Investment (ROI): 702%

Net Present Value (NPV): $3.9 million

115% improvement in vendor on-time reporting (from 166 to 365 vendors), helping save $362,000 in labor savings managing vendor reports

Galvanize provides governance, risk management, and compliance (GRC) software with advanced data analytic capabilities for assessing strategic risk, executing risk mitigation and assurance activities, achieving control objectives, continuously monitoring data and operational processes, automating the review and feedback of workflows, and creating reports on net risk and performance for better business visibility and real-time decision insights.

Galvanize commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) that enterprises may realize by deploying HighBond and Analytics Exchange. The purpose of this study is to provide readers with a framework to evaluate the benefits of the HighBond Platform.
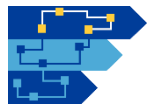
Forrester interviewed a current HighBond customer, a US state government administration agency (the "organization") that sets policies and processes for state-wide functions (i.e., purchasing, human resources, and fleet management) across various state entities – agencies, universities, colleges, and authorities. In order to maintain cost control and use taxpayer dollars effectively, the organization needed to streamline its human resource and procurement compliance processes to meet state requirements, monitor appropriate usage of purchase cards ("P-cards"), review third-party activities (vendor billings and reporting), verify large volumes of transactions, and accurately apportion revenue while providing assurance of risk coverage across the state.

Without a standard framework and technology platform, the central procurement department had to spend time aggregating various vendor documents, do manual re-calculations, and conduct numerous follow-ups for correcting invoice prices and payments. The organization's human resources (HR) team also faced challenges in time and resources when conducting self-assessment reviews across state agencies to collect information on key compliance metrics. It would take several months to collect these assessments, analyze data in spreadsheets, and recommend necessary changes.

Using HighBond, the organization was able to proactively manage its enterprise risks with the ability to flag overcharging vendors, employee errors, P-card fraud, and HR non-compliance and, most importantly, provide management oversight of state-wide activities. For example, with analytics to continuously monitor some data and more easily collect and report on other data sources, the organization can quickly identify exceptions and escalate issues as they arise. With HighBond, these exceptions can be centrally captured and actioned by engaging appropriate personnel for remediation while fostering greater collaboration between teams through an improved workflow.

Since HighBond implementation in 2015, Forrester estimates the organization has realized an ROI of 702%, comprised of recoveries of $2.9 million in vendor overpayments, prevention of nearly $250,000 in P-card fraud, savings of $362,000 in labor costs from improved vendor reporting, and $933,000 in a shortened HR assessment cycle.

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Key Benefits

100,000 reviewed P-card transactions each month (up from 20,000)

90 audits done each year (up from 30)
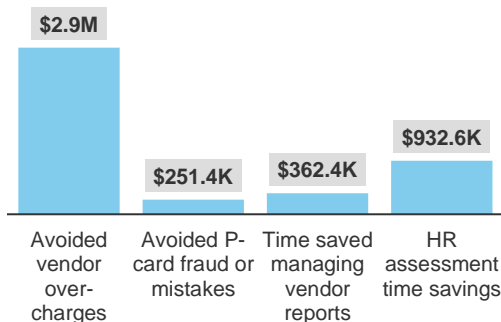
$2.9 million in avoided vendor overcharges
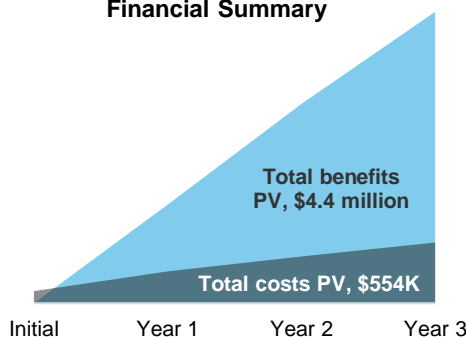
$250,000 in reduced fraud losses

3,900 hours saved managing vendor reports each year

Benefits (Three-Year Present Value, Risk-Adjusted)

$2.9M	$251.4K	$362.4K	$932.6K
Avoided vendor over-charges	Avoided P-card fraud or mistakes	Time saved managing vendor reports	HR assessment time savings

Three Year Risk-Adjusted Financial Summary

Total benefits PV, $4.4 million

Total costs PV, $554K

Initial   Year 1   Year 2   Year 3

Key Findings (risk-adjusted)

Financial (quantified) benefits, representative of those experienced by the interviewed organization:

› **Recovered procurement costs from incorrect vendor pricing of nearly $2.9 million.** With HighBond, the organization can more easily identify vendor purchases that did not match contracted pricing.

› **Avoided more than $250,000 in purchasing card fraud losses.** The organization was only able to review about 20,000 (or 20%) of all purchasing ("P-") card transactions each month. With continuous monitoring in HighBond, it can review all 100,000 transactions, limit risk and opportunities for P-card fraud, and identify issues much sooner.

› **Saved more than $362,000 from improved vendor compliance and standardization of processes.** The organization implemented a Common Data Model for all vendor-related reporting. This meant that data from vendors' various ERP systems was consolidated into a common template. The organization now spends less time on report collection and analysis. Vendors have improved on-time reporting by 115% with these templates, eliminating unnecessary follow-up by staff.

› **Saved nearly $933,000 from improved HR compliance management.** The administration agency also includes HR, which sets employment policies to ensure that state and federal rules are followed. With analytics, HR can continuously monitor employee compliance while also speeding up assessment reviews with an improved team workflow in HighBond.

Non-financial benefits.

› **Strategic advisor role recognition.** With HighBond, the organization has transitioned from a "traffic cop" to being viewed as a strategic advisor that helps state entity stakeholders identify ways to create incentives and improve their own processes. This leads to better compliance and transparency, reduces costs, and delivers more taxpayer value.

› **Reduced reputational risk.** Improvements in the purchasing process reduces the state's risk exposure to things like vendor fraud which, if left unchecked, can turn into a major public relations issue, costing the state significant dollars in remediation, fines, fees, investigations, lost revenue, and additional marketing efforts to regain trust.

› **Audit scope and quality improvement.** Before HighBond, the organization had a three-year procurement audit cycle, only managing to audit about 30 out of 90 state entities. HighBond allows for easier data collection and more efficient analysis, meaning that the organization can now review all state entities, leading to more thorough audits and increased coverage.

Costs.

› Upfront planning, deployment, and training resource costs of $185,325.

› Annual costs of about $125,000 to $170,000 per year, including $70,000 annually for HighBond licensing.

Forrester's financial analysis and interview with the HighBond customer concludes the organization experienced a risk-adjusted, three-year present value (PV) of benefits of more than $4.4 million versus a PV of costs of about $554,000, adding up to a net present value (NPV) of nearly $3.9 million and an ROI of 702%.

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TEI Framework And Methodology

From the information provided in the interview, Forrester has constructed a Total Economic Impact (TEI) framework for those organizations considering implementing HighBond.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that HighBond can have on an organization. Specifically:

DUE DILIGENCE
Interviewed Galvanize stakeholders and Forrester analysts to gather data relative to HighBond.

CUSTOMER INTERVIEWS
Interviewed an organization using HighBond to obtain data with respect to costs, benefits, and risks.

FINANCIAL FRAMEWORK MODELING
Constructed a financial model representative of the interview using the TEI methodology, and risk-adjusted the financial model based on issues and concerns of the interviewed organization.

CASE STUDY WRITING
Employed four fundamental elements of TEI in modeling HighBond's impact: benefits, costs, flexibility, and risks. Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester's TEI methodology serves to provide a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

> The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Galvanize and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in HighBond by Galvanize.

Galvanize reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

Galvanize provided the customer name for the interview but did not participate in the interview.

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The HighBond Customer Journey

BEFORE AND AFTER THE HIGHBOND INVESTMENT

Interviewed Organization

For this study, Forrester conducted an interview with a current HighBond customer, a US state government administration agency that manages the processes, compliance, and auditing for purchasing, human resources, and other state-wide services for all state entities (which cover agencies, colleges, universities, and authorities). For example, it reviews state purchase transactions and conducts purchasing audits across 90 state entities to ensure compliance with regulations.

Key Challenges

› **The organization spent a considerable amount of time on each audit.** The sheer volume and scope of data to be reviewed meant that audits could not be conducted as often, which frequently resulted in the auditable entity relaxing its attention to compliance matters until the next audit, which could be two to three years away.

› **The organization was not able to monitor and manage statewide contract vendor sales reports efficiently.** Every vendor had its own templates, making it difficult for the organization to spot often missing or incorrect data.

› **The organization had a difficult time finding and handling vendor overcharges.** The spreadsheet system was difficult to use with so many transactions to check. Consequently, if a state entity made a purchase and was charged more than the contracted price, it might go unnoticed.

› **The above inaccuracy in purchase prices caused difficulty in the invoicing process and vendor reporting.** Because the organization gains revenue based on a percentage of total purchase dollars made by all state entities, the tracking of cross-entity purchase volumes and related fees is critical. Because some vendors reported just a total cost (with zero items) and others reported per-item costs, this often resulted in inaccuracies in reporting, which ultimately led to the organization being underpaid.

› **Purchase and P-card fraud was a significant risk.** While most issues were a matter of human error or process inefficiencies, vendors or employees who wanted to abuse the system knew they had a good chance of getting away with it. Given the large volume of data and a manual approach, audits were conducted only once every three years, and only 20% of the vendor and P-card transactions were sampled for review. This left the state exposed to potential fraud. "If you just got audited, you didn't expect us to come back for at least three years," said the deputy CIO.

Solution Requirements

The interviewed organization searched for a platform that could:

› Support teams that needed an end-to-end, data-driven GRC platform.

› Improve and standardize all vendor invoice and payment data collection and reporting.

› Improve purchasing and P-card processes to save time and properly track vendor pricing agreements.

> "We do analysis of spending across the state; [HighBond] gives us an opportunity, for statewide contract purposes, to see down to a very detailed level to make better supplier decisions."
>
> *— Deputy CIO, administration department*

Key issues before HighBond

- Only 30 of 90 state entities audited each year
- Only 20% (20,000 of 100,000) of P-card transactions reviewed each month
- Difficult and time consuming to verify if a vendor charge matched contracted pricing

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- › Reduce purchasing and P-card fraud.

- › Meet legal requirements for transparency and compliance as a state organization.

- › Help the organization become a trusted advisor for other state entities.

- › Conduct continuous monitoring on some purchases, as well as use analytics to review and analyze data much faster than with spreadsheets.

- › Speed up audit, risk management, and compliance processes.

After a detailed review of platforms and discussions with many leaders within various state entities, the organization deployed HighBond with Analytics Exchange to address its key challenges.

The organization also implemented new policies and requirements to be able to more holistically address its risks as well as manage and resolve any issues in HighBond.

For example, with HighBond, the organization developed a "Common Data Model" that serves as a baseline for all invoicing and reporting standards, including for vendors. This meant that any incoming purchasing data (e.g., invoices from various ERP systems and quarterly vendor purchase reports) could be collected in a common format, whether from state systems or provided by vendors, so that transactions could be monitored continually, and potential overcharges and other discrepancies could be readily identified and resolved. "[With HighBond], we moved from agency-focused audits to continuous monitoring for P-card transactions," said the deputy CIO for the organization, and are now in the process of doing the same for purchase orders and payment data.

In another example, the human resources division that manages HR compliance policies for the state's civil servants needed to streamline its compliance reporting and data gathering process from various state agencies. After surveying state entities, responses were consolidated in HighBond, allowing for faster analysis and reporting.

In addition, the team made use of HighBond to conduct and document compliance review and procurement audit procedures, identify issues, track remediation status, and prepare reports to create insight and drive action.

Key Results

After interviewing the organization, Forrester organized and articulated the benefits, costs, and business value of implementing HighBond as the organization's primary analytics and GRC platform to monitor processes, collect data, and identify and manage exceptions. Benefit and cost metrics and financial results follow Forrester Consulting's TEI framework as well as Forrester Research's recent "Build The Business Case For GRC" report (see Appendix B for more information). Benefits of HighBond experienced by the organization include:

- › **Standardization of vendors' documents, pricing, and reporting.** The organization can flag vendor agreements and procurement transactions that do not match contracted pricing.

- › **Improvements in the procurement process.** The organization can review more transactions, complete audits quicker, and conduct continuous procurement integrity monitoring across all 90 state entities every year. "Twenty thousand P-card transactions were manually

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>
> — *Deputy CIO, administration department*

> "Twenty thousand transactions were manually reviewed each month. Now [with HighBond], all 100,000 are monitored continuously."
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> — *Deputy CIO, administration department*

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reviewed each month. Now [with HighBond], all 100,000 are monitored continuously," said the deputy CIO for the organization.

> **Improved vendor compliance.** Vendors and state entities can complete reports more efficiently. The deputy CIO for the organization said: "We worked with Galvanize. They helped us with a project to develop our Common Data Model. We standardized the templates." This ensured data from multiple reports could be easily loaded into HighBond and Analytics Exchange for detailed analysis and identified exceptions that required remediation managed in HighBond.

> **Better HR compliance management.** HR, which is part of the administration department, can now more efficiently manage the high volume of state entity self-assessments (of which there are 125 state entities covered by the HR team) and compliance metrics to quickly identify areas that need the most attention. This enables a quicker response time to address potentially problematic employment processes. "It's about being timely in providing information and working with agencies. . . . [Our team] could get back to working on improvements rather than chugging through data," said the deputy CIO for the organization.

> **Improved audit quality and efficiency.** Procurement and HR audits are completed more efficiently while also delivering greater transparency (which helps meet state transparency and information requirements) without an increase in headcount for either team.

> **Reduced risk in vendor and employee fraud.** The state can reduce its risk exposure to things like vendor fraud or employee P-card abuse. Continuous monitoring and faster data collection and analysis means potential issues can be flagged immediately — even before the purchase is made.

> **Acting as a trusted, strategic advisor.** The organization's new processes coupled with HighBond capabilities has led to better compliance and transparency (as some data is required to be publicly accessible), reduced costs, and the delivery of better value. "The team now spends their time on where the areas of strength and weakness are, to help each agency improve," said the deputy CIO.

"It's about being timely in providing information and working with agencies. . . . [Our team] could get back to working on improvements rather than chugging through data."

— *Deputy CIO, administration department*

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Financial Analysis

QUANTIFIED BENEFIT AND COST DATA

Total Benefits

REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Atr	Avoided vendor overcharges	$1,162,800	$1,162,800	$1,162,800	$3,488,400	$2,891,711
Btr	Reduced P-card fraud, waste, and abuse	$101,080	$101,080	$101,080	$303,240	$251,371
Ctr	Reduced effort to manage vendor compliance	$145,725	$145,725	$145,725	$437,175	$362,397
Dtr	Accelerated HR self-assessment cycle	$375,000	$375,000	$375,000	$1,125,000	$932,569
	Total benefits (risk-adjusted)	**$1,784,605**	**$1,784,605**	**$1,784,605**	**$5,353,815**	**$4,438,048**

Avoided Vendor Overcharges

The organization provides policies, contracts, and tools for 90 state entities for procurement and payment processing. This means that the vendor catalog with contracted government discount pricing is managed centrally, and every state entity must reference it to issue the necessary purchase orders for goods and services. To ensure contract compliance, purchase and payment records have to be collected and reconciled between the organization, the purchasing division, and the vendor. But before HighBond, tracking and monitoring this process was a challenge because:

> Monitoring was difficult and very delayed. By the time an invoice, a purchase order, and a sales report were all reconciled, several weeks or months would have passed.

> Vendors often "forgot to apply" agreed-upon discount pricing. There was no convenient access to the contract information, making verification practically labor-intensive, or being missed altogether.

> If an issue was identified, a refund request was necessary, which could take a lot of employee time to investigate and manage.

> Not all overpayments were identified because reviewers (using Excel) would often be bogged down with the volume of transactions. The agency could only sample a portion of all transactions. With analytics, the full population could be analyzed, resulting in identification of more overpayments.

HighBond is used to check vendor prices and payments for statewide contract items coming from various ERP systems, so that those that do not meet contracted pricing limits are flagged for review. These exceptions are published in HighBond for more detailed analysis and remediation. "We are using HighBond to audit purchase orders to make sure there's a contract attached to it, that the dollar amount is within state limits, or that it was put out for bid if over a certain dollar amount. You just can't go and pick a vendor," said the deputy CIO.

With better monitoring, most discrepancies are identified soon after product or service is purchased (and sometimes at the time purchase is attempted).

The table above shows the total of all benefits across the four areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the organization expects risk-adjusted total benefits to be a PV of more than $4.4 million.

Vendor improvements:
- Avoid $1.2 million each year in overpayments (for a $2.9M PV)
- Identify pricing issues before they happen

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Avoided Vendor Overcharges					
REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3
A1	Estimated annual amount spent on purchases via vendors (non-P-card; estimated to be 60% of total)		$1.6 billion	$1.6 billion	$1.6 billion
A2	Percentage of spending amount that was found to have been overcharged		0.20%	0.20%	0.20%
A3	Amount overspent from inaccurate vendor pricing (or ability to check)	A1*A2	$3,200,000	$3,200,000	$3,200,000
A4	Overspending that was not noticed before HighBond		45%	45%	45%
A5	Overspending now reduced and attributable to HighBond		95%	95%	95%
At	Avoided vendor overcharges	A3*A4*A5	$1,368,000	$1,368,000	$1,368,000
	Risk adjustment	↓15%			
Atr	**Avoided vendor overcharges (risk-adjusted)**		**$1,162,800**	**$1,162,800**	**$1,162,800**

Key metrics, drivers, and assumptions leading to this benefit include:

› An annual spend of $1.6 billion in purchases through vendors (i.e., via purchase orders).

› Analysis of all transactions, not just a sample.

› Identification of nearly all overspending issues, not just some.

The organization estimates a total of $3.2 million each year in overpayments; about 45% of this amount would not have been checked and recovered without HighBond. HighBond can now help identify nearly all overpayments — either before they happen or quickly enough to streamline the reimbursement process.

Incorrect pricing is not always due to vendor or state representatives not checking the contract, and the dollar amount associated with each specific purchase agreement can vary greatly. To account for these risks and variances, Forrester adjusted this benefit downward by 15%.

This results in an annual risk-adjusted benefit of nearly $1.2 million, or a three-year present value of avoided vendor overcharging (versus contracted pricing) of nearly $2.9 million.

Reduced P-Card Fraud, Waste, And Abuse

Vendor purchases come with a purchase order, an invoice, and a payment, all of which need to be reconciled.

P-card transactions are purchases made by the organization using a credit card instead of opening a purchase order (though sometimes one purchase may include both). But it can be difficult to collect receipts and confirm that each purchase was both approved and met a business need, so P-cards are also targets for abuse or outright fraud.

Before HighBond, the organization reviewed only about 20% of P-card transactions, so not all unintended behaviors were identified. Some employees saw this as an opportunity to try and save time using the P-card to make quick purchases that might be better suited (and possibly cheaper) with a larger purchase order agreement. Others took

Impact risk is the risk that the business or technology needs of the organization may not be met by the investment in HighBond, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for benefit estimates.

P-card improvements
- 20% of P-card transactions were reviewed before HighBond.
- Continuous monitoring covers 100% of transactions today.

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advantage of the simplicity and lax oversight of the P-card system to make fraudulent purchases for their own gain.

With analytics, the organization has been able to more closely monitor P-card purchases. "Now, people know that these are being watched. In the past, if you were auditing perhaps up to 20% of those P-cards, there's a big chance it was going to be missed. We really think the story is two-fold here. . . . [That is], we're going to review, but also people know we are going to review," said the deputy CIO. While it's harder to identify issues before they occur, analytics can monitor 100% of transactions and identify exceptions to be further investigated in HighBond. The organization has seen:

› P-card purchases of $200 million per year.

› Annual estimated costs of $140,000 from incorrect pricing, unapproved purchases, and fraudulent charges.

A significant portion of this was going undetected until HighBond.

Refer to Appendix A for more details. Note the exact amount of detected fraud is difficult to measure, as some fraud may go unreported. Any fraud reduction may be due in part to increased attention or other influences.

To account for these risks, Forrester adjusted this benefit downward by 5% for an annual benefit of more than $100,000. Over the three-year analysis period, the risk-adjusted present value of this benefit is more than $250,000.

> "[Before HighBond], if you wanted to even see what they were reporting and aggregate it together, it was impossible."
>
> — *Deputy CIO, administration department*

> "We really think the story is two-fold here. . . . [That is], we're going to review, but also people know we are going to review."
>
> — *Deputy CIO, administration department*

Reduced P-Card Fraud, Waste, And Abuse					
REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3
B1	Estimated annual amount spent on purchases via P-card (instead of vendor PO)		$200 million	$200 million	$200 million
B2	Percentage of P-card spending attributable to waste, error, or fraud		0.07%	0.07%	0.07%
B3	Amount of P-card spending attributable to waste, error, or fraud	B1*B2	$140,000	$140,000	$140,000
B4	Percentage of P-card waste, error, or fraud that was not caught before HighBond		80%	80%	80%
B5	Amount of P-card waste, error, or fraud that was not caught before HighBond	B3*B4	$112,000	$112,000	$112,000
B6	Percentage of fraud caught with HighBond		95%	95%	95%
Bt	Reduced P-card fraud, waste, and abuse	B5*B6	$106,400	$106,400	$106,400
	Risk adjustment	↓5%			
Btr	**Reduced P-card fraud, waste, and abuse (risk-adjusted)**		**$101,080**	**$101,080**	**$101,080**

Reduced Effort To Manage Vendor Compliance

Along with better vendor monitoring and tracking with analytics and HighBond, the organization instituted a number of new policies and practices — with the most impactful being the standardization of statewide-managed vendors' invoicing and quarterly reporting templates.

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"[Even though the state provided templates], many suppliers were making all kinds of changes to the templates that were given to them," said the deputy CIO.

For example, there are about 375 vendors that are managed at a state level. The one category of furniture suppliers consists of nearly 100 vendors on its own, each with its own invoice and report templates, which made it very difficult to conduct analysis for even the simplest metrics such as total dollars paid for desk furniture or chairs. "So, if you wanted to see what they were reporting and aggregate it together, it was impossible. It made it very difficult to calculate the actual total of what was purchased," continued the deputy CIO. One key issue was how units and prices were entered for each item. Some vendors did this correctly, but some might only provide a total amount instead of a unit price, with the number of items blank or even zero, so even simple calculations were often incorrect.

These variances meant that each invoice and report had to be individually reviewed and checked to make sure quantities and total cost were correct. This was time consuming to manage, and the organization estimates it would take 2 to 4 hours to check and fix each report.

With the help of Galvanize's consulting services, the organization used analytics to apply a Common Data Model designed to structure relevant information such as unit cost and quantity. This greatly helped the problem of the variations in vendor invoices and sales reports, and HighBond was able to manage the process of handling any reports or vendors that required individual attention. "The accuracy of the vendor sales reporting went up — we had about $700,000 over what they originally reported that were found because we were using HighBond to audit that process."

With improved monitoring, templates, and other best practices, the organization has seen a 115% improvement in vendors delivering on-time reporting (that is, more than twice as many deliver reports on time, from about 166 vendors before HighBond, to about 356 today). "We do analysis of the spend across the state, and it gives us an opportunity, for statewide contract purposes, to see down to the very detailed level what they're buying," said the deputy CIO.

As an additional process improvement, the organization uses analytics to monitor transactions and flag any issues, such as purchases that do not match the contract price (as mentioned above), or purchases that break rules set by the state. Analytics with appropriate transaction rules can be set or modified accordingly. For example, "You can't purchase alcohol with a P-card at the state. But we have technical colleges under our purview [that] buy alcohol for their cooking school," explains the deputy CIO. "We can [leave] those exceptions in there and make sure we don't flag them." The organization is able to leverage analytics and to create more efficient transaction rules that can be tailored to reflect the business and individual agencies' activities. Exceptions can then be published in HighBond and assigned to process owners for review. Using a structured workflow, participants are also able to log observation notes or issues and communicate with the business or provide commentary on remediation efforts.

The organization is able to continuously monitor transactions as they occur. Standardized reports make aggregating and reviewing vendor activities much faster. Additionally, the 115% improvement in vendors that deliver reports on time also helps the organization avoid significant efforts such as tracking late vendors, sending reminders, making calls,

"We are creating audit rules using HighBond that are more focused on individual agencies rather than across the board. For example, you can't purchase alcohol with a P-card at the state. But we have technical colleges under our purview; they buy alcohol for their cooking school. With HighBond, we can put those exceptions in there and make sure we don't flag them."

— *Deputy CIO, administration department*

Vendor report review time
- Before: 1 to 2 hours
- With HighBond: 30 minutes

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and repeating manual tasks. The organization estimates that reviewing and aggregating each report takes about a half an hour, with much fewer vendors requiring extra time to manage late or missing submissions, adding up to an annual benefit of more than $145,000.

Over the three-year analysis period, the risk-adjusted, present value of this benefit is nearly $363,000.

REF.	METRIC	CALCULATION	YEAR 1	YEAR 2	YEAR 3
	Reduced Effort To Manage Vendor Compliance				
C1	Number of vendors managed by the administration department		375	375	375
C2	Number of vendors before HighBond that delivered timely reports		166	166	166
C3	Number of vendors before HighBond that delivered late reports	C1-C2	209	209	209
C4	Minutes required to review and collate each on-time report before HighBond		120	120	120
C5	Minutes required to manage, review, and collate each late report before HighBond		240	240	240
C6	Total annual hours to manage vendor reports before HighBond	(C2*C4+C3*C5)/60	4,674	4,674	4,674
C7	Improvement in on-time report delivery since HighBond		115%	19	19
C8	Number of vendors that deliver timely reports since HighBond	C2*(1+C7)	356	356	356
C9	Number of vendors that still deliver late reports since HighBond	C1-C8	19	19	19
C10	Minutes required to review and collate each on-time report since HighBond		30	30	30
C11	Minutes required to manage, review, and collate each late report since HighBond		60	60	60
C12	Total annual hours to manage vendor reports since HighBond	(C8*C10+C9*C11)/60	788	788	788
C13	Annual hours saved managing vendor reports	C6-C12	3,886	3,886	3,886
C14	Hourly rate for procurement auditor		$50	$50	$50
C15	Percent of improvement directly attributed to HighBond		50%	50%	50%
Ct	Reduced effort to manage vendor compliance	(C6-C12)*C14*C15	$145,725	$145,725	$145,725
	Risk adjustment	↓0%			
Ctr	**Reduced effort to manage vendor compliance (risk-adjusted)**		**$145,725**	**$145,725**	**$145,725**

Accelerated HR Self-Assessment Cycle

The organization's HR team — which provides policies, tools and processes for all state agency employees— would conduct self-

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assessment reviews across state entities to collect information about key compliance metrics such as the number of employment issues, the time it takes to update policies and processes to comply with federal and state rules, and the time it takes to clean up accounts and records for an employee who has left. With 125 different state entities, it would take several months for state entity employees to complete assessments and handle follow-up tasks, and for the organization to collect these assessments, analyze the information in spreadsheets, and then recommend the necessary changes.

HR data such as employee records and compliance status reporting can more easily be monitored and checked regularly with analytics, so the HR team can focus on improvement initiatives rather than crunching data, and can use the HighBond remediation workflow to efficiently deal with any problems or issues as they arise. "The team now spends their time on where the areas of strength and weakness are, to help each agency improve," said the deputy CIO for the organization. This benefit adds up to $375,000 per year for the state.

Over the three-year analysis period, the risk-adjusted, three-year present value of this benefit is nearly $933,000.

> "The team now spends their time on where the areas of weakness are, what should we work with that agency on to improve, versus spending all the time just going through the numbers."
>
> — *Deputy CIO, administration department*

	Accelerated HR Self-Assessment Cycle				
REF.	**METRIC**	**CALCULATION**	**YEAR 1**	**YEAR 2**	**YEAR 3**
D1	State entities managed by HR		125		
D2	Workdays required to audit and assess state entities before HighBond (over several months)		15		
D3	Workdays required to audit and assess state entities since HighBond (over three or four weeks)		10		
D4	FTEs required for each HR audit and self-assessment (including employees in the organization and the state entities)		1.5		
D5	Hourly rate for organization auditor		$50		
Dt	Accelerated HR self-assessment cycle	D1*(D2-D3)* D4*D5*8	$375,000	$375,000	$375,000
	Risk adjustment	↓0%			
Dtr	**Accelerated HR self-assessment cycle (risk-adjusted)**		**$375,000**	**$375,000**	**$375,000**

Unquantified Benefits

In addition to the financial benefits estimated above, the organization has identified several other benefit areas that are difficult to measure, or at least measure financially.

Improved Quality And Value Of The Procurement Process

As mentioned above, improved monitoring of the procurement process helps save time and money.

By identifying more questionable transactions that need review, the organization can deliver better quality and value, using analytics. Even more importantly, by triggering a workflow for those exceptions using HighBond, the organization can take appropriate corrective or

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preventative action, manage the process of working with the individual state entities to resolve any issues, and make process improvements to avoid similar issues in the future.

This way, reviewers can focus on resolving issues and providing more value-added services. "We run the data every night. They arrive in the morning, get their exception reports and work on those," said the deputy CIO. The organization can support others to deliver more services with the time it has saved. Correct purchase requests are a major issue lifted from the purchaser's shoulders and allow department, college, and authority representatives to keep friendly and professional relationships with vendors — instead of having adversarial conflicts such as arguing over prices.

For P-card purchases, "We moved from agency-focused audits to continuous monitoring, where we look at every P-card transaction each week," said the deputy CIO. "Because it's being done day to day, we're able to find questionable P-card transactions when it's happening versus six months after it happened."

No Increase In Procurement Audit Team Headcount

Like HR, the purchasing team conducts audits with each state entity (though for procurement there are 90 state entities, and some colleges are grouped together). The state uses analytics to continuously monitor P-card transactions, and is in the process of implementing it for purchase order and other transactions, which means data collection is easier and audits in HighBond can be completed more quickly and more frequently, while being supported by objective, quantifiable data. "Our audit team is fairly small; it's less than 10 people, [so] we were having trouble getting to everyone every year." With HighBond, the organization is able to handle the increase from 30 to 90 audits each year without any increase in headcount.

Improved Transaction Quality and Compliance

Before, infrequent audits (e.g., one every two or three years) required a lot of effort, but also left too much time between audits, leading to opportunities for employees to ignore compliance requirements — or even enable bad behavior. When a state entity knows the audit team won't be back for three years, and there was very little monitoring of purchases in the interim, employees would, at best, fall back into old habits and not worry too much about accurate records and compliance. But at worst, knowing no one was around to check, some employees would abuse the situation for personal gain.

With HighBond, the organization can keep tabs on any issues as they occur, and pull reports when it's time for the in-depth review. "The focus of the new program is to conduct more continuous audits," and regularly scheduled audits, said the deputy CIO. Analytics are used to monitor purchase transactions continuously, along with HighBond, which manages the workflow for exceptions and documents audit procedures and evidence. Transaction issues can be identified and managed quickly — sometimes even before the order entry is completed — so that employees can discuss and resolve the issue quickly and efficiently, instead of returning much later to request a correction due to an audit finding.

Improved Vendor And Purchase Reporting

The organization is compensated based on a percentage of what is bought through procurement and P-card processes. Aggregating vendor

> "We're able to find questionable P-card transactions when it's happening versus six months after it happened."
>
> — *Deputy CIO, administration department*

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reports is much quicker, as described above. With improved vendor reporting, it is much easier for the organization to calculate accurate spending for each state entity and statewide vendor, and also calculate the fees that all the other departments in the organization owe for its services. It no longer needs to spend extra time checking all reports for errors.

With analytics and the Common Data Model, these exceptions are avoided or quickly managed. The organization identified $700,000 in additional purchases, meaning the organization received $10,000 more in revenue in transfers from other state entities to be able to deliver its services.

Flexibility

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. There are multiple scenarios in which a customer might choose to implement HighBond and later realize additional uses and business opportunities. For the organization, this includes expanding its HighBond implementation to monitor other processes in the organization. For example:

> The organization includes divisions that oversee fleet management, risk, and surplus. While the HR and procurement improvements already instituted have an impact on these other areas, there are specific processes that the organization has planned or may in the future plan for HighBond, such as managing and monitoring flexible benefit spending and compliance, monitoring the use and maintenance of fleet vehicles, tracking, and monitoring non-purchasing-related financials, and tracking and reporting on the proper disposal of any surplus state equipment, goods, or property.

> There are opportunities for other state entities to consider using HighBond for their monitoring and risk management needs. For example, those that manage areas such as labor, housing, accounting, revenues, and wildlife all have a part in GRC activities. Benefits and cost savings enabled by HighBond for each of these state entities are expected to include productivity and process cost savings, as well as savings and revenue opportunities specific to each entity.

Flexibility would be quantified when evaluated as part of a specific project (described in more detail in Appendix A).

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a future additional investment. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so.

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Total Costs

REF.	COST	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PV
Etr	Deployment and implementation costs	$185,325	$0	$0	$0	$185,325	$185,325
Ftr	Ongoing costs	$0	$170,000	$145,000	$125,000	$440,000	$368,295
	Total costs (risk-adjusted)	**$185,325**	**$170,000**	**$145,000**	**$125,000**	**$625,325**	**$553,620**

Deployment And Implementation Costs

The organization was able to plan for and implement HighBond and analytics in just a few months. That time was primarily spent on:

> Department resources working on data cleansing and process or system revisions needed for integration with HighBond.

> One to two days of training for 10 to 15 team members.

> HighBond consulting services brought in to assist with implementation prior to the platform being launched across all departments.

Forrester risk-adjusted implementation costs by 5% to allow for time requirements that may be underestimated; refer to Appendix A for more information about Forrester's approach to risk adjustment. The organization estimated a risk-adjusted initial cost of about $185,000.

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the organization expects risk-adjusted total costs to be a PV of about $554,000.

Deployment And Implementation Costs

REF.	METRIC	CALCULATION	INITIAL	YEAR 1	YEAR 2	YEAR 3
E1	Implementation resource costs		$100,000			
E2	Training/change management costs		$50,000			
E3	HighBond services and support		$26,500			
Et	Deployment and implementation costs	E1+E2+E3	$176,500			
	Risk adjustment	↑5%				
Etr	**Deployment and implementation costs (risk-adjusted)**		**$185,325**			

HighBond Licensing And Ongoing Resource Costs

HighBond operates a software-as-a-service (SaaS) model, so ongoing subscription costs for HighBond are applied, along with a few new tasks associated with creating and managing reports, monitoring new data sources, and managing the HighBond platform.

HighBond licensing for this organization, is estimated to be about $70,000 per year.

The management and administration of HighBond requires some internal resources in initial years. This includes about one IT full-time equivalent (FTE) and one database administrator. In subsequent years, this is expected to gradually reduce.

The organization estimates ongoing costs are about $125,000 to $170,000 per year, adding up to a risk-adjusted, three-year present value of less than $369,000.

Implementation risk is the risk that a proposed investment in HighBond may deviate from the original or expected requirements, resulting in higher costs than anticipated. The greater the uncertainty, the wider the potential range of outcomes for cost estimates.
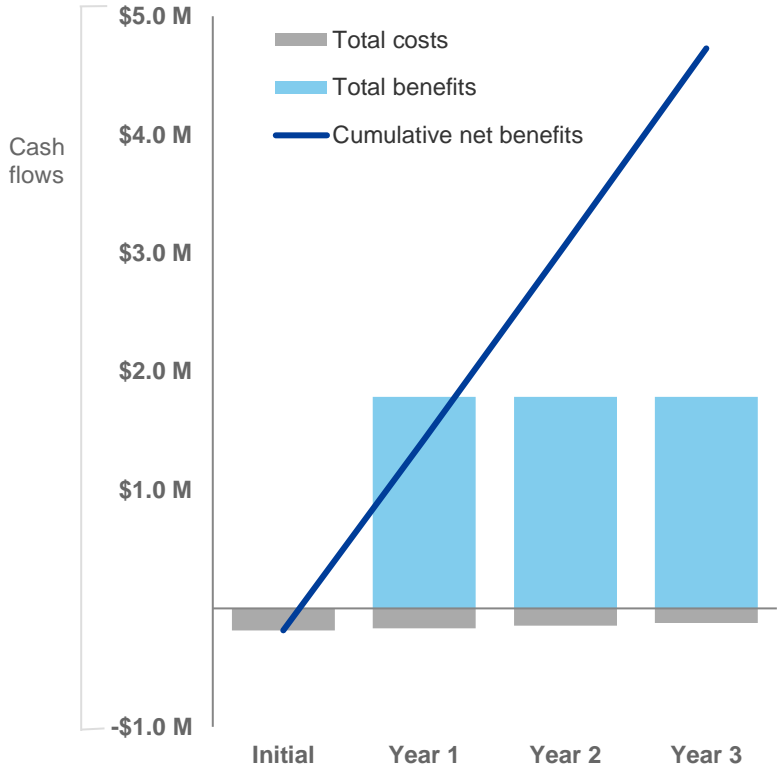
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REF.	METRIC	CALCULATION	INITIAL	YEAR 1	YEAR 2	YEAR 3
HighBond Licensing And Ongoing Resource Costs						
F1	HighBond subscription costs			$70,000	$70,000	$70,000
F2	Additional organization resource costs for HighBond			$100,000	$75,000	$55,000
Ft	Ongoing costs	F1+F2		$170,000	$145,000	$125,000
	Risk adjustment	↑0%				
Ftr	**HighBond licensing and ongoing resource costs (risk-adjusted)**		**$0**	**$170,000**	**$145,000**	**$125,000**

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Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)

The financial results calculated in the Benefits and Costs sections can be used to determine the ROI and NPV for the organization's investment in HighBond. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI and NPV values are determined by applying risk-adjustment factors to the unadjusted results in each benefit and cost section.

Cash Flow Table (Risk-Adjusted)

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	($185,325)	($170,000)	($145,000)	($125,000)	($625,325)	($553,620)
Total benefits	$0	$1,784,605	$1,784,605	$1,784,605	$5,353,815	$4,438,048
Net benefits	**($185,325)**	**$1,614,605**	**$1,639,605**	**$1,659,605**	**$4,728,490**	**$3,884,429**
ROI						**702%**

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HighBond: Overview

Galvanize provided this information. Forrester has not validated any claims and does not endorse Galvanize or its offerings.

Galvanize builds award-winning, cloud-based security, risk management, compliance, and audit software to drive change in some of the world's largest organizations. Galvanize is on a mission to unite and strengthen individuals and entire organizations through the integrated HighBond software platform.

Within the HighBond platform, you'll find the following products:

› **RiskBond:** Integrated risk management software that identifies, assesses, responds to, and monitors your enterprise risks.

› **ComplianceBond:** Software to simplify and centralize regulatory compliance management, minimize risk exposure, and share one-click, real-time reporting.

› **ControlsBond:** Automate your manual and repetitive internal controls work with this software to reduce costs and increase assurance.

› **AuditBond:** Audit management software for audit workflows — from planning, risk assessments, and fieldwork to analytics, issue management, and reporting.

› **FraudBond:** Software that uses data automation to detect, prevent, and remediate fraud and corruption.

› **ITGRCBond:** Workflow-based IT risk and compliance management software that streamlines IT assessment activity.

› **CyberBond:** Consolidate and simplify your remediation management in one single software platform.

› **PolicyBond:** Automate the entire policy management life cycle, from drafting to eventual revision and retirement with this software.

› **ContinuityBond:** Software to help maintain effective business continuity planning, reduce risk exposure, and increase the ability to plan and respond.

› **ThirdPartyBond:** End-to-end, automated, and continuous vendor risk management and reporting software.

› **IncidentBond:** Automated security incident management software to centrally process and route security information and event management (SIEM) and security tool data for triage and resolution based on event rules.

› **ACL Robotics:** Software that transforms data into real-time insight and action through automation.

With more than 7,000 customer organizations in 140 countries, Galvanize is connecting teams in 60% of the Fortune 1,000, 72% of the S&P 500, and hundreds of government organizations, banks, manufacturers, and healthcare organizations. Whether these professionals are managing threats, assessing risk, measuring controls, monitoring compliance, or expanding assurance coverage, HighBond automates manual tasks, blends organizationwide data, and broadcasts it in easy-to-share dashboards and reports. But Galvanize doesn't just make technology — it provides tools that inspire individuals to achieve great things and do heroic work in the process.

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Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

Total Economic Impact Approach

Benefits represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

Costs consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.

Flexibility represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

Risks measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows in years 1 through 3 are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.

PRESENT VALUE (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.

NET PRESENT VALUE (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.

RETURN ON INVESTMENT (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.

DISCOUNT RATE

The interest rate used in cash flow analysis to take into account the time value of money. Forrester assumes a yearly discount rate of 10% for this analysis. Organizations typically use discount rates between 8% and 16%.

PAYBACK PERIOD

The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

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Appendix B: Supplemental Material

Related Forrester Research

"Build The Business Case For GRC," Forrester Research, Inc., February 14, 2017

"Designate Clear Lines Of Risk And Compliance Accountability With Forrester's RASCI Tool," Forrester Research, Inc., December 5, 2016

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