

FORRESTER®

The Total Economic Impact™ Of BigID

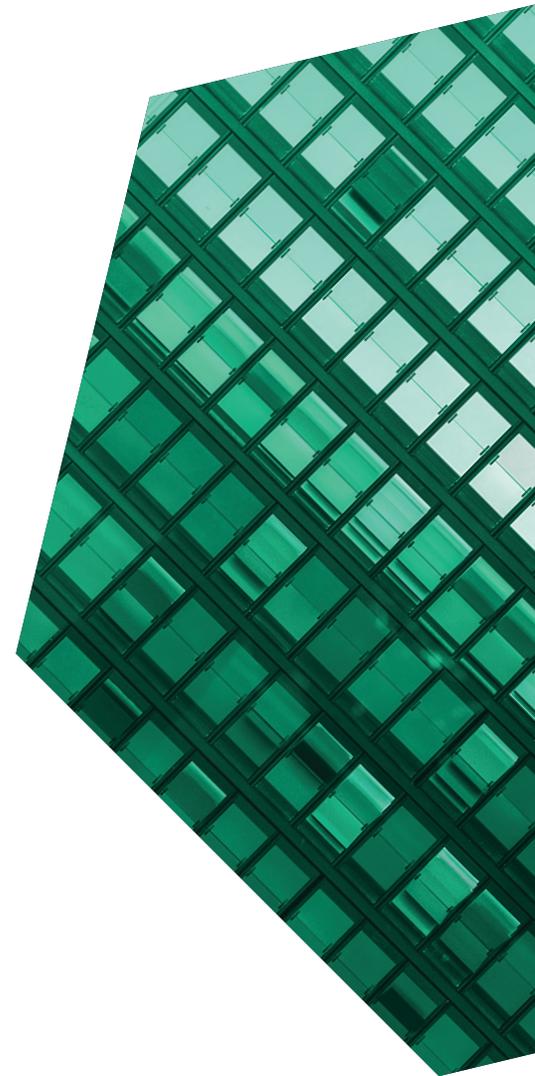
Cost Savings And Business Benefits
Enabled By BigID's Data Intelligence Platform

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Executive Summary

BigID's data intelligence platform enables companies to understand, manage, use, and protect their data. BigID scans both structured and unstructured data at scale without altering it — regardless of where it resides. At its core, the platform is a foundational data discovery engine that combines ML-discovery and foundation-based cataloging, classification, cluster analysis, and correlation into one solution. This gives companies the ability to better manage their data for privacy, security, and governance.

BigID's actionable data intelligence platform

combines foundational data discovery-in-depth and an extensible application framework. The technology scans data that is at rest or in motion and on-premises or in the cloud, and it performs machine learning (ML)-based cataloging, data classification, cluster analysis, and correlation. The platform enables organizations to design and enact privacy actions, increase security and protection, achieve compliance, improve data trust, and gain perspective around data.

BigID commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying its data intelligence platform. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of BigID on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed decision-makers at an organization with several years of experience using BigID's data intelligence platform. Forrester used this experience to project a three-year financial analysis.

Prior to using BigID, the organization used siloed solutions and incurred hundreds of FTE hours annually by manually inspecting data repositories. These inefficiencies led to long data scans, poor discovery results, and underutilization of business intelligence due to data security and regulatory concerns. This led to high data storage costs, not knowing where sensitive and personally identifiable information (PII) data resided in the organization,

KEY STATISTICS



Return on Investment (ROI)

377%



Net present value (NPV)

\$3.58 million

and exposure to data privacy and security risks.

After investing in BigID, the organization gained complete visibility into how much critical, sensitive, and PII data exists, how it is collected, where it is stored, and how it is managed and used within the organization. Key results from the investment include faster discovery scans, a reduction in legacy tools used for data privacy and security functions, lower data storage costs, greater insight into data, and a reduction in data breach risks.

KEY FINDINGS

Quantified benefits. Risk-adjusted present value (PV) quantified benefits include:

- **Increased speed of discovery scans, saving \$2.5 million.** The deployment of BigID helped the organization reduce the number of FTEs needed to catalog, scan, classify, and analyze data. Faster and more efficient data discovery led to reallocating nine FTEs to other valuable tasks, which saved \$2.5 million over three years.
- **Reduced legacy tools needed for discovery and analyses, saving \$1.3 million.** Prior to using BigID, the organization used multiple siloed tools for different data sources. BigID scanned data that was structured and unstructured, static and in-motion, and on-premises and in the cloud, which led it to retire numerous legacy tools. This saved the organization \$1.3 million over three years.
- **Reduction of data stored, saving \$652,000.** BigID provided more efficient and more effective discovery scans that identified replicated, redundant, or stale data. This led to a 30% reduction in stored data and saved the organization \$652,000 over three years.
- **Avoidance of compliance audits, saving \$111,000.** BigID's discovery scans were more effective and helped the organization properly identify and manage sensitive and critical data. This reduced the risk of more intrusive audits by external compliance bodies, saving \$111,000.

Unquantified benefits. Benefits that are not quantified for this study include:

- **Data breach cost avoidance.** The protection and privacy applications within BigID helped the organization identify high-risk and vulnerable data. Armed with this information, the organization took actions to fulfill data rights requests, manage access, and protect this data, which reduced the risk of data breaches and the cost of remediation. Although the organization

could not quantify this impact, it should be considered with any BigID deployment.

- **Data insights.** Thorough discovery scans helped the organization understand the source of its data and where it resides. BigID's extensible apps helped it decipher useful data, enabling it to take actions on the right data at the right time and for the right reasons.
- **Querying efficiencies.** The organization improved its ability to query data more efficiently. After applying BigID's discovery-in-depth lenses of cataloging, classification, cluster analysis, and correlation, decision-makers now understand what type of data the organization has and where it resides. Redundant or stale data was eliminated, which increased data hygiene. Business units could query data more quickly and more inexpensively.

Costs. Risk-adjusted PV costs include:

- **BigID software costs and service fees of \$682,000.** The organization paid costs included the discovery foundation and relevant applications to support 200 logical data sources over three years. The costs also included a one-time, up-front fee of \$60,000 for BigID services.
- **Internal planning, training, and implementation cost of \$267,000.** The organization initially incurred internal costs for new hardware, internal planning, and employee training, along with other implementation costs.

The interview and financial analysis found that this customer experiences benefits of \$4.53 million over three years versus costs of \$949,000, adding up to a net present value (NPV) of \$3.58 million and an ROI of 377%.



377%
ROI



\$4.53M
Revenue PV

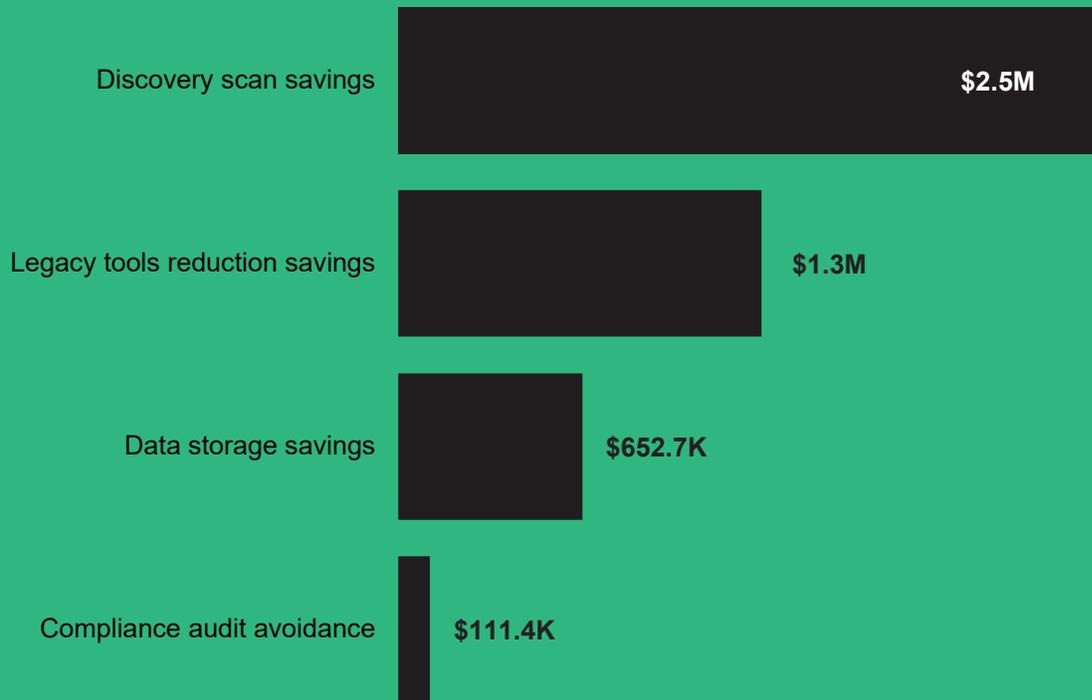


\$3.58M
NPV



<6 months
NPV

Benefits (Three-Year)



TEI Framework And Methodology

From the information provided in the interviews, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in BigID’s data intelligence platform.

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 BigID can have on an organization.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by BigID 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 study to determine the appropriateness of an investment in BigID’s data intelligence platform.

BigID 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.

BigID provided the customer’s name for the interview but did not participate in the interview.



DUE DILIGENCE

Interviewed BigID stakeholders and Forrester analysts to gather data relative to BigID’s data intelligence platform.



CUSTOMER INTERVIEWS

Interviewed decision-makers at an organization using BigID’s data intelligence platform to obtain data with respect to costs, benefits, and risks.



FINANCIAL MODEL FRAMEWORK

Constructed a financial model representative of the interviews using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewed organizations.



CASE STUDY

Employed four fundamental elements of TEI in modeling the investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester’s TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

The BigID Customer Journey

■ Drivers leading to the BigID investment

INTERVIEWED ORGANIZATION

Forrester interviewed decision-makers from an organization using BigID.

The organization has the following characteristics:

- International travel and hospitality company
- 100,000 employees
- \$10 billion in annual revenue
- Uses BigID on 200 data repositories with 2 PB of stored data.
- Main use cases for BigID are foundational discovery and addressing privacy

“Our CPO wanted to find out: ‘Can a technology tell us the providence of information? Where did it come in? Where was it collected from? When was it brought in? What information systems did it get stored in? How do we share it? Who has access to it?’”

— Senior privacy manager, travel and hospitality

KEY CHALLENGES

The organization collects data during daily business activities. It keeps critical and sensitive data for employees, customers, and business activities. Before using BigID, the organization was unable to determine every system that held critical or sensitive data. Different business units collected and used data with no intentional collaboration.

The organization struggled with common challenges, including:

- **Critical, sensitive, regulated, and personal information (PI)/PII data scattered on many siloed systems.** Data collection was siloed between business units. There was no clear definition of what kind of data each unit collected and how or where it was stored. Data governance was not well-defined or well-managed, which made it difficult to know exactly where critical or sensitive data resided.
- **Dark data that was not harnessed for business insights, risk reduction, or productive decision-making.** Due to limited data governance processes and practices, the organization had a lot of dark data. The organization did not use this data to make productive business decisions. Instead, it exposed the organization to risks because critical and sensitive data was not always protected.
- **High cost of data storage and querying.** Decision-makers did not understand the breadth or depth of all the organization’s data. This led to storing redundant data. Having multiple iterations of data was both costly to store and inefficient to query for good business decision-making.

SOLUTION REQUIREMENTS/ INVESTMENT OBJECTIVES

The organization searched for a solution that could:

- Locate all the organization's PI/PII data.
- Identify critical and sensitive data within structured and unstructured data sources.
- Help the organization comply with data privacy and protection regulations.
- Perform data discovery quickly and at scale so the organization could promptly satisfy individual rights requests.

After a request for proposal (RFP) and business case process evaluating multiple vendors, decision-makers chose to use BigID's data intelligence platform and began deployment.

The organization dedicated three FTEs from IT to work on the POC and implementation for the first nine months of the project. It trained core employees on how to use the software and assigned another team to open firewalls and work on network routing. It performed full scans on 200 data sources in three months and determined the type of data within those systems.

“Data retention is one of the hardest things to operationalize across the company. This is why we're really looking at BigID's data retention module.”

— *Senior privacy manager, travel and hospitality*

USE CASE DESCRIPTION

The organization originally engaged BigID to help determine where critical and sensitive data resided on its systems. The robust discovery-in-depth functionality of BigID helped it accomplish this and then it extended to other benefits. As employees learned and began using the privacy, protection, and perspective applications within the platform, the organization realized even more quantified and unquantified benefits.

For this use case, Forrester has modeled benefits and costs over three years.

Analysis Of Benefits

Quantified benefit data

Total Benefits						
Ref	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Atr	Discovery scan savings	\$972,000	\$996,300	\$1,021,208	\$2,989,508	\$2,474,273
Btr	Legacy tools reduction savings	\$518,400	\$518,400	\$518,400	\$1,555,200	\$1,289,184
Ctr	Data storage savings	\$306,000	\$257,040	\$215,750	\$778,790	\$652,708
Dtr	Compliance audit avoidance	\$44,080	\$44,840	\$45,600	\$134,520	\$111,391
	Total benefits (risk-adjusted)	\$1,840,480	\$1,816,580	\$1,800,958	\$5,458,018	\$4,527,556

DISCOVERY SCAN SAVINGS

Evidence and data. Prior to using BigID, the organization used a combination of cybersecurity tools, IT security tools, and FTE hours to comb through systems to satisfy data subject access requests (DSARs). This often took a long time, and it sometimes took longer than the number of days specified by regulations like the General Data Protection Regulation (GDPR).

- An interviewed senior privacy manager said: “It’s incredibly important to pull that data quickly because we are not going to just turn it over right away. We have attorneys review the data to determine if there is any information that we would consider privileged so we can pull it out and not give it back to the individual. If it takes a long time to pull, it gives less time to analyze the data. Typically, it takes a week or two for attorneys to sort or comb through that data.”
- The same interviewee said: “It was impossible to search through the data manually and be fairly confident that what you were providing was accurate. Having BigID hooked up to these systems and having already done scans, we understand what type of data is where. When

“Discovery takes three FTEs with BigID. With all the different groups and tools, you need about 12 FTEs without BigID.”

— Senior privacy manager, travel and hospitality

we get these requests, one can feel reasonably comfortable that what we are providing is accurate.”

Modeling and assumptions. Forrester assumes the following about the organization:

- With BigID, the organization needs three FTEs to perform the duties that previously required 12 FTEs using legacy tools.
- The average annual salary of an FTE is \$120,000, and this increases 2.5% each year.

Risks. The following may affect the impact of this benefit:

- The complexity of the data source.
- The size of the data repositories.
- The skill sets of FTEs who operate the software.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$2.5 million.

Discovery Scan Savings					
Ref	Metric	Calculation	Year 1	Year 2	Year 3
A1	Baseline FTEs needed without BigID	Interviews	12	12	12
A2	FTEs used with BigID	Interviews	3	3	3
A3	FTE saved	Interviews	9	9	9
A4	Average FTE salary	Year 1: Interviews Years 2 and 3: $A4_{PY} * 2.5\%$	\$120,000	\$123,000	\$126,075
At	Discovery scan savings	$A3 * A4$	\$1,080,000	\$1,107,000	\$1,134,675
	Risk adjustment	↓10%			
Atr	Discovery scan savings (risk-adjusted)		\$972,000	\$996,300	\$1,021,208
Three-year total : \$2,989,508			Three-year present value: \$2,474,273		

LEGACY TOOLS REDUCTION SAVINGS

Evidence and data. The organization previously used multiple legacy tools to perform data privacy tasks. It employed tools that were designed for other functions like access management, cybersecurity, or information security to generate reports. It then used hundreds of FTE hours to filter through these results. This method was not always accurate and left a lot of dark data unaccounted for.

- The senior privacy manager said: “As we started to build this privacy organization, the first thing we wanted to figure out was where all of the personal information was in the company. Having worked in information security and IT for over 15 years, there were various lists of tools, assets, applications, and databases. But a lot

of times, those were not kept up to date or they weren’t nearly as good as you would want them to be.”

- The same interviewee said: “One big saving of BigID is that it can look at multiple types of data. That was another reason why BigID made more sense [than other options]. We had multiple tools within the company to just look at certain types of data, and that was very costly. You had different vendors and different licensing agreements just to look at small pockets of the company. These were very good tools for that type of data, but BigID can look at all of that data and pull information from various repositories.”

Modeling and assumptions. Forrester assumes the following about the organization:

Using BigID allowed the organization to eliminate four legacy tools.

The average annual cost of a license for an eliminated legacy tool is \$36,000.

Risks. The following may affect the impact of this benefit:

- The number of legacy tools used within the organization.
- The variety of data types, formats, or structures of data in the organization.
- The skill sets of the employees who use these tools.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of \$1.3 million.

Legacy Tools Reduction Savings					
Ref	Metric	Calculation	Year 1	Year 2	Year 3
B1	Tools used for structured and unstructured data before using Big ID	Interviews	5	5	5
B2	Tools used for structured and unstructured data with BigID	Interviews	1	1	1
B3	Legacy tools eliminated	C2-C3	4	4	4
B4	Average annual licenses cost	B3*\$36,000	\$144,000	\$144,000	\$144,000
Bt	Legacy tools reduction savings	B3*B4	\$576,000	\$576,000	\$576,000
	Risk adjustment	↓10%			
Btr	Legacy tools reduction savings (risk-adjusted)		\$518,400	\$518,400	\$518,400
Three-year total: \$1,555,200			Three-year present value: \$1,289,184		

DATA STORAGE SAVINGS

Evidence and data. Organizations collect and store data, sometimes with limited understanding of its relevance to business objectives. BigID helped the interviewed organization explore that data to determine its importance. Understanding data sources, the relevance of data to business objectives, and how to manage data helped streamline data retention actions. This led to reduced storage costs.

- The senior privacy manager said: “Our organization has developed a data retention policy, and we have periods for types of data. We apply that to the data within a system and make sure that the IT folks understand what that data is. BigID helps us to get alerts based on data type and the age of the data. We then communicate with the business unit and make sure that we’re erasing data when we need to.”

- The same interviewee explained how data retention policies affected their organization’s data storage costs. They said: “It’s really hard to identify exact amounts, but we have been able to get rid of at least 30% of our data. For example, we had a huge project removing data from the mainframe to the cloud. In that particular process, we eliminated 70% to 80% of the data that was stored on the mainframe, and we only kept about 30% of it.”

Modeling and assumptions. Forrester assumes the organization sees a 20% decline in data storage costs each year.

Risks. The following may affect the impact of this benefit:

- The amount of data within the organization.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of \$652,700.

Data Storage Savings					
Ref	Metric	Calculation	Year 1	Year 2	Year 3
C1	Baseline data storage volume (TB)	Year 1: Interviews Years 2 and 3: C1 _{PY} *5%	2,000	2,100	2,205
C2	Data storage after discovery (TB)	Interviews	1,400	1,470	1,544
C3	Reduction in data stored (TB)	Interviews	600	630	661
C4	Annual storage cost	Year 1: Interviews Years 2 and 3: C4 _{PY} *80%	\$600	\$480	\$384
Ct	Data storage savings	C3*C4	\$360,000	\$302,400	\$253,824
	Risk adjustment	↓15%			
Ctr	Data storage savings (risk-adjusted)		\$306,000	\$257,040	\$215,750
Three-year total: \$778,790			Three-year present value: \$652,708		

COMPLIANCE AUDIT AVOIDANCE

Evidence and data. BigID’s data intelligence platform has applications that helped the organization design and implement protective actions that comply with various data privacy and protection regulations. This helped it reduce intrusive and expensive audits for noncompliance.

- The senior privacy manager said: “When our organization has a privacy audit, it would consist of any and all global privacy laws that affect our industry. GDPR is one of more than 50 or so that we have to comply with.”

- The same interviewee explained how BigID helps with compliance. They said: “When we have these privacy audits, it’s usually a question around discovery. The question is: ‘How do you discover personal information?’ BigID is definitely an answer for that.”
- The same interviewee said: “The fundamental piece of any compliance or privacy audit is understanding where your data is. I must be able to say that I have this type of data in these systems, and I can prove that because we have these tools or these processes in place. We run

scans on a recurrent table because, with BigID, it's not just one scan and you're done. We are constantly doing scans. We have policies and rules that can be set up to alert us about certain types of data and if it gets put into a particular repository. Because we have this process in place, it would be a huge finding for auditors. At a minimum, our audit would be marked yellow."

Modeling and assumptions. Forrester assumes the following about the organization:

- Passing a regular audit avoids an additional and more intrusive audit each year.
- A noncompliance audit will cost at least as much as a regular audit.
- The average annual cost of an FTE who supports audits increases by 2.5% each year.

Risks. The following may affect the impact of this benefit:

- How often regular privacy audits are conducted in the organization's industry.
- How intrusive privacy audits are within the organization's industry.
- How soon or how often follow-up audits are conducted after a noncompliance result.

Results. To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year, risk-adjusted total PV of nearly \$111,400.

Compliance Audit Avoidance					
Ref	Metric	Calculation	Year 1	Year 2	Year 3
D1	FTEs needed to support a compliance audit	Interview	20	20	20
D2	FTE hours needed to support a compliance audit	Interview	40	40	40
D3	Audits avoided	Interview	1	1	1
D4	Average hourly rate of FTE (rounded)	Year 1: Interview Years 2 and 3: $D4_{PY} + 2.5\%$	\$58	\$59	\$60
Dt	Compliance audit avoidance	$D1 * D2 * D3 * D4$	\$46,400	\$47,200	\$48,000
	Risk adjustment	↓5%			
Dtr	Compliance audit avoidance (risk-adjusted)		\$44,080	\$44,840	\$45,600
Three-year total: \$134,520			Three-year present value: \$111,391		

UNQUANTIFIED BENEFITS

Additional benefits that the organization experienced but was not able to quantify include:

- **Data breach avoidance.** BigID helped the organization comprehend the data it had, where it was coming from, where it was stored, and who had access to it.
 - The senior privacy manager said: “I suspect that over the course of the next year to 18 months, BigID is going to be a security tool and/or an IT tool versus just being a privacy office tool.”
 - The same interviewee said their organization used BigID to identify specific information within systems, which controlled access and the risk of breaches.
- **Data insights.** Using the perspective apps of BigID, the organization could derive more insights from its data. BigID helped it acquire deeper insights with data catalog, data quality, unified inventory, and data labeling applications.
 - The senior privacy manager said: “If our organization needs to use BigID to look for something that had nothing to do with personal information but that was very specific to what the CISO was looking for — like a particular crown jewel or something to be compliant with — we can use the tool to do that.”
 - The same interviewee said: “We used the tool when employees in a business unit that had a 2 TB database swore there was no credit card information in that database. We scanned the database with BigID, and it took a day-and-a-half to scan the information. We found millions of potential credit card records within that system. That business unit’s employees were amazed since they didn’t realize that information existed or sat in the system.”

- **Querying efficiencies.** BigID helped the organization sanitize its data. The cluster analysis application automatically found similar, redundant, and duplicate data. Armed with this information, the organization eliminated nonessential data, which made it easier to query more quickly.
 - The senior privacy manager said: “After cleaning up the data saved space, running queries against that data became much faster, and that has been a huge benefit of connecting BigID and running scans across the company. Most of the business units or IT folks who manage these systems are only doing what the business is telling them to do. A lot of times, business leaders don’t realize or don’t tell them exactly what they need to keep. So, IT just thinks, ‘Well, to cover myself, I will just keep everything.’”
 - The same interviewee said: “Now, I can use BigID to run a query and pull data into a fairly decent report that I can hand back to an individual. Most impressive is that I can turn that around in 24 hours.”

FLEXIBILITY

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement BigID’s data intelligence platform and later realize additional uses and business opportunities, including:

- **Discovery and classification of both structured and unstructured data.** The robust discovery-in-depth of BigID lays the groundwork for extensible applications already built into the platform. The interviewed organization continues to expand the use of the platform into more functions within the company.

- **Privacy management.** Applications involving a privacy portal, consent governance, data mapping, data processes, and sharing help companies build and maintain end-to-end privacy programs.
- **Protection and perspective at scale.** Applications involving data remediation, automated labeling, and data breach investigation can help companies better protect their data. Other applications involving data retention, stewardship, and data quality can help with perspective. All of this can be done at scale and on a single platform because BigID can look at structured and unstructured data across an entire enterprise.
- **Data governance.** BigID provides a comprehensive suite to help companies design and implement healthy data management programs with apps to take action. The platform enables organizations to look across the entire lifecycle of its data.

- **Collaboration between business units.** In organizations with siloed business units, BigID can help with collaboration and better decision-making. It can explore, correlate, and report on data without altering it. This can bridge disparities between data collectors, owners, users, managers, and protectors across silos.

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

Analysis Of Costs

■ Quantified cost data

Total Costs							
Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Etr	Software cost and services fees	\$60,000	\$250,000	\$250,000	\$250,000	\$810,000	\$681,713
Ftr	Internal planning, training, and implementation	\$99,484	\$66,352	\$67,496	\$68,640	\$301,972	\$267,156
	Total costs (risk-adjusted)	\$159,484	\$316,352	\$317,496	\$318,640	\$1,111,972	\$948,869

SOFTWARE COST AND SERVICE FEES

Evidence and data. The interviewed senior privacy manager said the following about the cost of BigID and service fees:

- The organization incurred an initial service fee of \$60,000.
- BigID charged a software cost based on the number of data sources scanned.
- The organization used BigID on 200 logical data sources.

Modeling and assumptions. Forrester modeled the costs in this category based on those of the interviewed organization and corroborated them with BigID.

Risks. The following may affect the software cost and service fees that an organization pays to BigID:

- The number of logical data sources the organization has and wants to scan.
- Whether or not the organization crosses a predetermined threshold will change the price of the software.

Results. The risks around these costs are limited and can be addressed before engaging with BigID. Forrester did not adjust for this risk, yielding a three-year, risk-adjusted total PV (discounted at 10%) of nearly \$682,000.

Software Cost and Services Fees						
Ref	Metric	Source	Initial	Year 1	Year 2	Year 3
E1	Discovery foundation cost for 101 to 200 logical data sources	Provided by BigID	\$0	\$250,000	\$250,000	\$250,000
E2	BigID services fees	Provided by Big ID	\$60,000	\$0	\$0	\$0
Et	Software cost and services fees	E1+E2	\$60,000	\$250,000	\$250,000	\$250,000
	Risk adjustment	0%				
Etr	Software cost and services fees (risk-adjusted)		\$60,000	\$250,000	\$250,000	\$250,000
Three-year total: \$810,000			Three-year present value: \$681,713			

INTERNAL PLANNING, TRAINING AND IMPLEMENTATION

Evidence and data. The interviewed senior privacy manager said the following about the cost of internal planning, training, and implementation:

- The organization spent \$80,000 on new hardware to launch the BigID platform.
- The organization used internal resources to execute POC activities and to address firewall restrictions and other network configuration activities.
- The organization supports continuous training for 20 employees weekly.
- **Modeling and assumptions.** Forrester assumes the annual rate of a FTE increases by 2.5% each year.

Risks. The following may affect the costs of internal planning, training, and implementation:

- The cost of hardware, which will vary depending on the brand.
- The number of FTE hours used for preparation and launch, which will vary depending on the skill sets of the FTEs.
- The complexity of the organization’s current network and logical data sources.
- The rate of FTEs, which will vary between organizations.

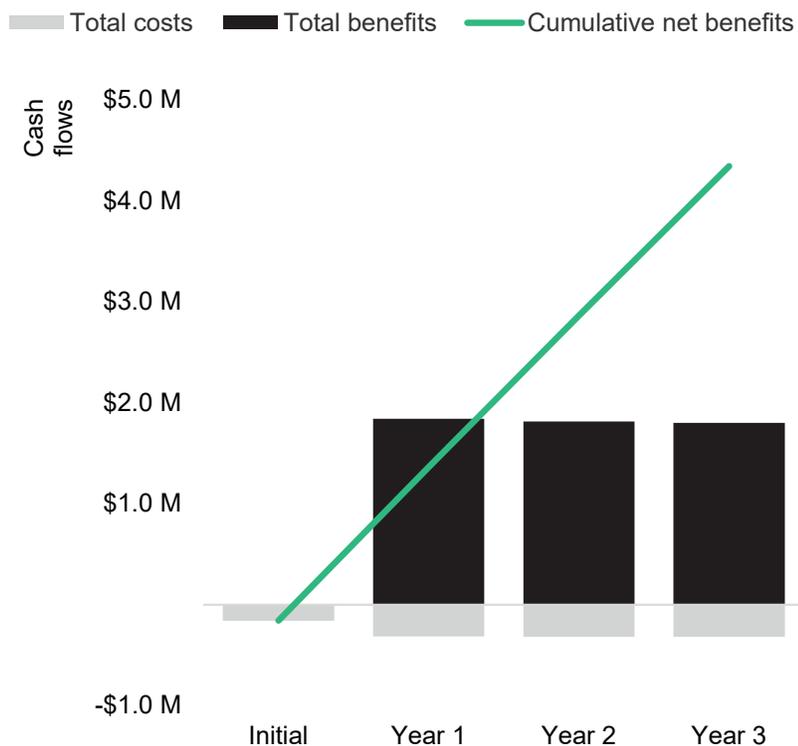
Results. To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV of \$267,000.

Internal Planning, Training, and Implementation						
Ref	Metric	Source	Initial	Year 1	Year 2	Year 3
F1	Initial hardware purchase cost	Interview	\$80,000	\$0	\$0	\$0
F2	Primary employees used	Interview	3	20	20	20
F3	FTE time used (hours)	Interview	60	52	52	52
F4	Average hourly rate of FTE	Interview	\$58	\$58	\$59	\$60
F5	Planning, training, and implementation	$F2 \times F3 \times F4$	\$10,440	\$60,320	\$61,360	\$62,400
Ft	Internal planning, training, and implementation	$F1 + F5$	\$90,440	\$60,320	\$61,360	\$62,400
	Risk adjustment	↑10%				
Ftr	Internal planning, training, and implementation (risk-adjusted)		\$99,484	\$66,352	\$67,496	\$68,640
Three-year total: \$301,972			Three-year present value: \$267,156			

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, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section

Cash Flow Analysis (Risk-Adjusted Estimates)						
	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$159,484)	(\$316,352)	(\$317,496)	(\$318,640)	(\$1,111,972)	(\$948,869)
Total benefits	\$0	\$1,840,480	\$1,816,580	\$1,800,958	\$5,458,018	\$4,527,556
Net benefits	(\$159,484)	\$1,524,128	\$1,499,084	\$1,482,318	\$4,346,046	\$3,578,687
ROI						377%
Payback period (months)						<6

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 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. 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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