

# Challenges and Opportunities in Enterprise Data for P&C Insurers

A Novarica Research Partners Program™ Report  
*Underwritten by Informatica*



# Executive Summary

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Enterprise data has increased in importance over the past few years, driven by an increased focus on analytics in all areas of the insurance business. Accessible and reliable enterprise data is the fuel that powers the analytics revolution. But most large P&C insurer IT leaders face significant challenges in providing this critical resource.

In addition to inhibiting analytics, poor data infrastructures add an average additional cost of 25% or more to most IT projects, costing the industry more than a billion dollars a year.

Challenges include disparate legacy systems and complex data infrastructures, as well as a lack of maturity in master data management. On average, insurers rate their own MDM capabilities as only a 2 out of 5.

Insurers are addressing these challenges through a wide range of programs, from enterprise data warehouses and operational data stores, to big data technologies, to organizational changes and improved data governance.

Data-related projects are high on the agenda for 2015. On average, P&C insurers will spend about 13% of their new project budgets on data-related projects, equivalent to nearly a billion dollars overall.

While few insurers have developed quantitative business cases for enterprise data quality and accessibility, the need and the benefits are widely acknowledged. It can be challenging to quantify the value since the benefits are diffuse and mostly related either to cost avoidance (rather than reduction), or to improved decision-making, which would require establishing a cost of current poor decision making and attributing that to data issues.

Insurers expect the need for enterprise data and the challenges of providing it to continue to increase rapidly in the years ahead.

*This report presents and discusses the findings of a survey of 10 large P&C insurers (annual premiums over \$1B).*

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# Enterprise Data is More Important than Ever

- ▶ Accessible and reliable enterprise data is the fuel that powers the analytics revolution.
- ▶ Across the industry, CIOs are responding to business demands for improved capabilities.
- ▶ Insurers need accessible and reliable enterprise data to support:
  - ▶ Predictive analytics programs in underwriting and claims
  - ▶ Straight-through processing initiatives that demand strong models
  - ▶ Cross-sell and upsell strategies
  - ▶ Account-aware underwriting and service
  - ▶ Enterprise risk management
  - ▶ Customer profitability analysis

## **CIOs say...**

*Good models require years of enterprise and external data that we can act on.*

*Data used to be just data. Now there's a recognition of data as having business value.*

*We now have board-level attention to data issues.*

*Access to data has gone from a "nice to have" to a necessity.*

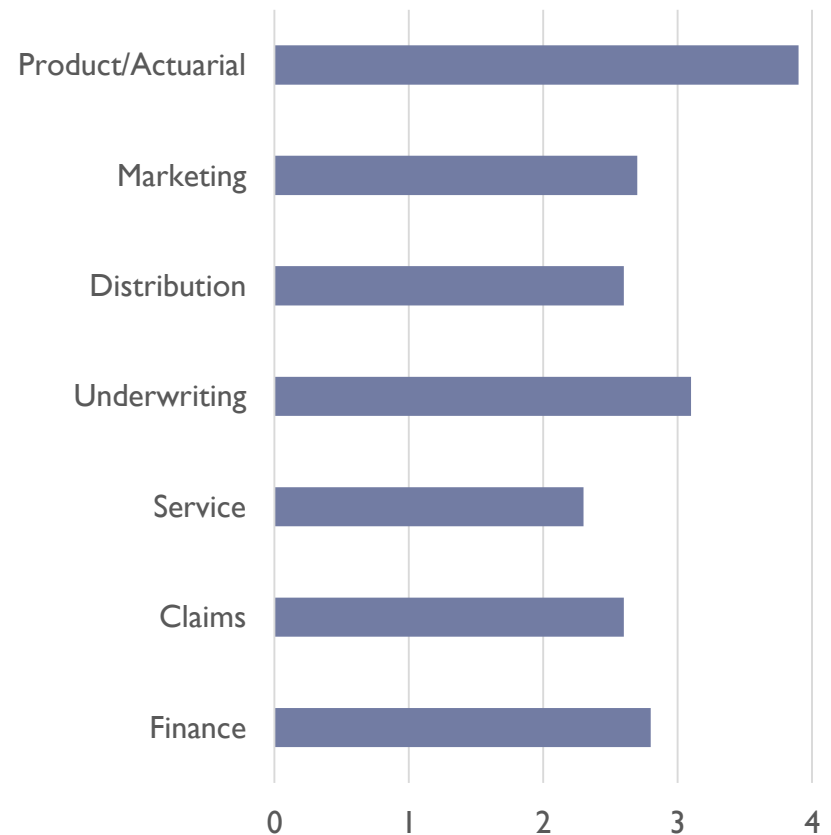
*We're actually developing predictive models that run online at point of decision.*

*Data is now a core workstream, not an afterthought.*

# Accessible and Reliable Enterprise Data is Important to All Functional Areas

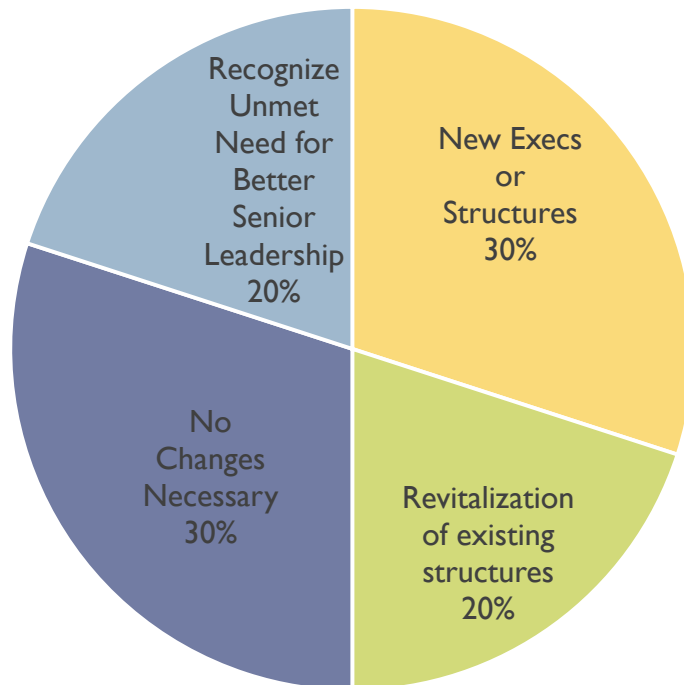
- ▶ While product design/actuarial and underwriting are the most obvious consumers of accessible and reliable enterprise data, demands are increasing from other areas as well.
  - ▶ More than half of the CIOs in the study group specifically cited the growth of predictive analytics in underwriting as driving the need for enterprise data.
- ▶ Distribution and marketing are becoming important consumers of enterprise data, but still rank lower on average.
- ▶ There is wide diversity of maturity levels:
  - ▶ One insurer mentioned a CEO mandate for distribution to consider portfolio-level impacts
  - ▶ Others describe their marketing and distribution organizations as still driven by “gut feel.”

Average Relative Importance of Accurate and Reliable Enterprise Data  
*0 = Not Important, 4 = Most Important Need*



# Data Organizations Are Changing, But Remain a Challenge for Some Insurers

## Data Governance Changes Among P&C Insurer CIOs



- ▶ Half of the insurers in the study had either recently introduced a new senior level executive position responsible for enterprise data, or had revitalized existing data governance structures.
- ▶ The others were either confident in existing structures, or recognized a need for senior leadership which was likely to remain unmet. One insurer commented:

*“The biggest challenge is organization structure and funding, because funding is all business-unit driven, it’s hard to get funding for joint value projects. If there was a Chief Data Officer that was truly empowered with a budget and team, you could do a lot of good.”*

# Challenges

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- ▶ **Legacy systems and data silos.** Most P&C insurers have a wide diversity of core systems of different ages, technologies, and data structures.
  - ▶ “With so many source systems, governance is a huge challenge. Naming and ensuring consistent data is very difficult.”
  - ▶ “We had to use Watson just to link up premiums and losses.”
- ▶ **Culture v. Capture.** In addition to disparate data structures, legacy applications with poor user interfaces and workflows actually encourage line workers to enter bad data in the first place.
  - ▶ “Getting the people who enter the data to get over their preference for speed rather than data capture.”
  - ▶ “I have 40 FTEs that do nothing but fix data downstream because we have to clean up the ‘garbage in.’ Our systems provide a perverse incentive to enter bad data.”
- ▶ **Organizational silos.** Even more than the technical challenges, investing in accessible and reliable enterprise data in large P&C companies is inhibited by organizational silos and a “tragedy of the commons” mentality.
  - ▶ “No one wants to pay for the consolidated enhanced data on an enterprise basis.”
  - ▶ “Our distributed, entrepreneurial focus makes it hard to provide one common view and definition.”
  - ▶ “The hardest thing is to get business to clarify what they need and what the justification is.”
  - ▶ “It’s hard to establish an enterprise data standard that everyone likes.”

# Insurers Estimate Data Environment Challenges Increase Cost of IT Projects by More than 25%

Equivalent to more than \$1 billion dollars across the P&C Industry

- ▶ Insurer CIOs recognize the additional costs to new IT projects that poor data infrastructure, quality, and capabilities create.
- ▶ On average, CIOs state that more than half of IT projects are affected by challenges in the data environment.
- ▶ While the average estimated increased cost is approximately 25%, some insurers estimate this increase at as much as 4x or even 10x.
- ▶ Additional costs result from:
  - ▶ Increased need for manual workarounds in integration
  - ▶ Understanding and cleaning data during implementations
  - ▶ Increased user acceptance testing, unit testing, and systems testing

## CIOs say...

*Everything is affected by data issues*

*Everything requires workarounds.*

*For every 5 hours of work, 2 are spent understanding and cleaning data.*

*We still live with the legacies of the sins of the past.*

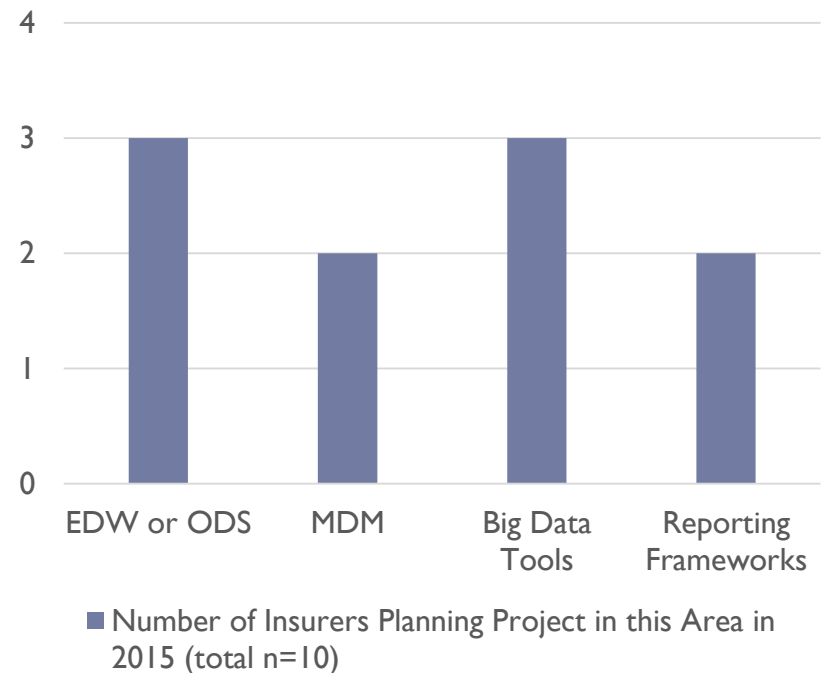
# Addressing the Challenges

An average of 13% of 2015 insurer IT new project budgets at large P&C insurers is related to data projects, a total investment of nearly \$1 billion

## Sample Data-Related Projects Planned by Large P&C Insurers in 2015 Include:

- ▶ Analytics in support of data modeling
- ▶ Hadoop, Exadata, and other Big Data tools
- ▶ Standardized enterprise reporting frameworks
- ▶ Data consolidation in support of enterprise reporting
- ▶ Improving or implementing Master Data Management (MDM)
- ▶ Switching analytics tools and replacing Operational Data Store
- ▶ Improving data quality for predictive modeling
- ▶ Improving integration and quality in claims data warehouse

## Most Common 2015 Data Project Types





# Quantifying the Value

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- ▶ While the value of enterprise data is widely understood, and investments are widespread, few insurers are able to quantify the value of reliable and accessible enterprise data in formal business cases.
- ▶ Several insurers indicate that they are taking steps to attempt to quantify the value, but none have already done so.
- ▶ Since most business cases rely on performance improvement rather than cost avoidance, attributing benefits specifically to enterprise data reliability and accessibility can be challenging.
- ▶ Despite the lack of formal business cases and quantified value, aggressive investments are being made by many companies.
- ▶ Where the needs are not well-understood, it is up to CIOs to educate their business leader colleagues on the hidden costs and inhibitors of poor data capabilities.

## CIOs say...

*It's hard to take a predictive analytics project and attribute loss ratio improvement to it directly.*

*We have done some soft analysis, but generally folks get it and haven't asked for hard numbers. They feel the pain and recognize there are data problems.*

# Looking to the Future

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## “More Usage, More Data, More Everything”

– *Insurer CIO on likely evolution of enterprise data over next few years.*

- ▶ All insurers in our sample group indicated that enterprise data was only going to get more critically important in the coming years.
- ▶ Most see a growing reliance on analytics across their businesses, as well as growing data volumes across the economy in general.
- ▶ The challenge of providing accessible and reliable enterprise data will continue to be a core challenge for insurer CIOs, and for insurers generally. As one CIO put it:

*“We’re still at the beginning of maturity. Over time, we’ll become more integrated with the business rather than being viewed as a separate issue.”*

- ▶ Challenges that Insurer CIOs see on the horizon
  - ▶ Increased regulatory pressure
  - ▶ Handling true Big Data, especially with current infrastructures
  - ▶ Managing access and security of Big Data
  - ▶ Unstructured text analytics
  - ▶ Training line staff to be analytics-savvy
  - ▶ Expanding just-in-time decisioning
  - ▶ Data quality pressures increasing

# Concluding Thoughts

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- ▶ Enterprise data is the fuel that powers the analytics revolution in insurance.
- ▶ Poor enterprise data infrastructures create a drag on IT, increasing the costs of IT projects by more than 25% on average.
- ▶ Large P&C insurers are poised to spend hundreds of millions of dollars on data-related projects in 2015, even though formal business cases are few and far between.
- ▶ Insurers are deploying a wide range of tools, solutions, and approaches to improve their enterprise data, including big data tools.
- ▶ Master Data Management maturity levels are low, but insurers are actively building in this area.
- ▶ Insurers expect the challenges, and the importance of meeting them, to increase in the coming years.

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