Infosys
topaz

UNLOCKING THE POWER OF GOOD DATA: ENABLING DATA GOVERNANCE FOR THE AI-FIRST ERA

Infosys®
Navigate your next

Insights

- Data underpins every digital transformation effort. Enterprises focusing on data quality consistently outperform competitors and are better positioned to succeed with enhanced decision-making and growth.

- The unpredictable nature of data systems, compounded by the 3 V's—volume, variety, and velocity—poses significant challenges for enterprises. While data grows exponentially, unlocking its full potential requires non-linear, innovative approaches that transcend conventional methods.

- AI-powered tools improve data quality by automating anomaly detection, cleansing processes, and predictive insights.

The world is becoming increasingly digital, making business transformation the only way ahead. For the enterprises undergoing this shift, technology and data are at the core, empowering them to shape strategies, understand customers, and drive innovation. According to latest research, 70% of executives view data as essential for survival and driving top-line growth, while 72% recognize its critical role in enhancing decision-making and 69% believe it significantly reduces costs.

However, this vision will remain unattainable without a strong foundation of data hygiene, which ensures organizational well-being, similar to how we view hygiene in the human context, in managing individual health.

To achieve data hygiene, enterprises must focus on six key pillars: robust monitoring or governance, establishing a utility-based baseline, addressing necessities, adopting non-negotiable data protocols, committing to incremental improvements, and fostering long-term loyalty. Having said that, a popular report did reveal that only 17% of some 1000 surveyed companies had a dedicated data governance committee, highlighting a significant gap in organizational readiness to make the most out of their data.

But the impact of data is even more profound in an AI-driven world. Acting as a nerve center to power continuous innovation–similar to every neuron, every data point contributes to the overall function.

A single faulty neuron, or a piece of data, can disrupt the entire system, leading to real-world consequences. From fake news in social media influencing elections to errors in manufacturing master data resulting in tragic outcomes, the repercussions of poor data are evident across industries.

Therefore, it is clear that data quality is the DNA that drives decision-making in all verticals, and its absence comes at a high cost—whether it's healthcare systems relying on outdated imaging machines, financial institutions grappling with inaccurate credit scores, or telecom companies suffering from flawed location data, the message is clear: bad data, bad business.

Laying the foundation for reliable data hygiene

Moving from raw data to actionable insights is not an easy process. Organizations must connect the dots between disparate datasets, contextualize the information, and draw insights that enable better decisions, all while maintaining trust.

Let's take a look at how we can establish a culture of data hygiene with a few principles :

Identify the relevant data: When it comes to ensuring data quality, the journey begins with identifying the most relevant data and recognizing its role in driving actionable insights. Businesses that can extract overarching themes from disparate data sources often find themselves at the forefront of their industries.

Build connected ecosystems: Data hygiene thrives when systems are connected with emerging technologies. By integrating AI, cloud, and advanced analytics, organizations can eliminate silos and enhance collaboration. For instance, leveraging enterprise AI data and fostering connected ecosystems allowed one of our clients to generate $30 million in incremental sales year-on-year.

Scale up with the right resources: Where data quality alone isn't enough, scalability is another crucial aspect to look at. To implement solutions at scale and bring down production cycles from months to weeks, organizations must ensure adoption, user buy-in, and the involvement of the right subject matter experts with intuitive tools. An example of this is the launch of a B2B insights platform. Through a collaborative design thinking session involving 26 experts across seven verticals, we co-created an award-winning platform. It now drives efficiencies at scale, generating $8 million annually. We transformed what could have been a "buy vs. build" dilemma into a collaborative effort that resulted in a joint intellectual property.

Turning data complexities into an advantage

The unpredictability of modern data systems means challenges often compound in unexpected ways. The 3 V's of data—volume, variety, and velocity—further add to the trouble. Enterprises are drowning in a sea of data, yet unlocking its full potential is anything but a breeze.

The challenge is inherently non-linear, requiring innovative solutions that go beyond conventional methods. And addressing these challenges is a business imperative.

So the question is, can AI help scale solutions while maintaining data hygiene? Yes, and more:

1. Identifies patterns and recognizes anomalies or inconsistencies in large datasets.

2. Automates compliance checks to ensure adherence to privacy laws and regulations.

3. Scales solutions and enables them to move from isolated use cases to enterprise-wide applications.

But it's due to note that, for many practitioners, AI can be both a promise and a paradox. On one hand, it offers unmatched scale, adaptability, and strategic insights, with the potential to boost productivity by 10X to 50X compared to human efforts. Depending on how AI is deployed across strategic, operational, and tactical levels, AI can add anywhere from 1% to 300% to the top line. On the other, it can veer off course, delivering limited or counterproductive outcomes.

Its evolution, from a support tool in the back office to a core driver of business strategy, underscores its potential to ensure data quality and unlock significant value for enterprises. Leading organizations are already harnessing AI to drive transformation. FAANG companies, for example, use AI at the strategic level to shape products, services, and customer experiences. Similarly, for CPG firms, AI enhances brand trust through optimized processes like demand forecasting, supply chain planning, and personalized marketing.

Lead the game with intelligent tools

Enterprises with superior data quality management are not just surviving—they're thriving. Our extensive experience across industries has consistently demonstrated a vital truth: businesses that adhere to a gold standard of data quality—defined by the 3Rs: easy to retrieve, reliable, and relatable—consistently outpace their competitors.

The key to achieving this gold standard lies in harnessing intelligent tools that ensure that data is actionable, reliable, and accurate. Furthermore, AI is increasingly being integrated into data quality tools, enabling advanced capabilities such as automated data cleansing, anomaly detection, and predictive analytics, improving data accuracy by 20-40%. These capabilities enable enterprises to leverage data quality to achieve tangible results.

How to make data hygiene a reality?

Achieving data hygiene requires a seamless blend of AI, design thinking, domain expertise, cutting-edge technology, cloud capabilities, and deep customer insights. Infosys SMART DQ, an AI-led, digital-first data quality tool, is a front-runner in the range of all the AI-powered tools. It empowers enterprises to create trust at scale while reducing manual effort by more than 75%.

Over the past decade, SMART DQ has emerged as a trusted partner in addressing the most complex data challenges. By seamlessly integrating cutting-edge AI capabilities into data ecosystems, this tool enables organizations to:

- **Ensure data accuracy**: Implement processes that validate, cleanse, and enhance data quality in real time.

- **Streamline data access**: Build ecosystems where data is readily available, ensuring timely and informed decision-making.

- **Enhance relatability**: Contextualize data to make it actionable for diverse business functions.

SMART DQ goes beyond merely solving data hygiene issues—it catalyzes AI-first business transformations. However, we need to follow the best practices to make the most out of the solution.

A clear roadmap to implement SMART DQ

Integrating a solution like SMART DQ into existing systems might seem complex, but a structured framework makes the process simple and manageable. Here are the steps we follow to achieve it.

- **Data assessment**: Conduct a data quality audit to identify pain points and prioritize issues.

- **AI model selection**: Select the appropriate AI techniques based on the problem domain—supervised learning for labeled data, unsupervised learning for unlabeled data, or NLP for text-based data processing.

- **Implementation**: Integrate the solution with existing platforms such as Databricks or Snowflake and cloud ecosystems like AWS, Azure, and GCP. Additionally, provides adequate training to staff, enabling them to use the tool effectively.

- **Validation**: Define KPIs to measure the success of the implemented solution. Ensure compliance with data protection regulations and security requirements.

- **Feedback mechanism**: Implement feedback loops for model retraining and continuous improvement. Gradually scale up AI efforts with innovative technologies.

Real-world impact delivered across verticals

Over the years, SMART DQ has been successfully implemented across CPG, manufacturing, BFSI, and energy sectors. Here are a few examples:

Accelerated growth

- Identified $45 M worth of missed sales or leakage opportunities for one of the biggest CPG firms, helping them address immediate revenue gaps.

- Resolved data quality issues in enterprise master data for one of the leading car manufacturers, uncovering opportunities worth $8 M.

Connected ecosystems

- Enabled an organization with 700 disparate data sources to share information and harmonize point of sale (POS) data, processing transactions valued at over $110 B.

- Integrated data from multiple source systems and analyzed it to unlock better forecast accuracy and on-shelf availability for a CPG firm, saving up to $100 M in potential revenue, cost savings, and energy efficiency.

Unlocked efficiencies at scale

- Helped a global CPG organization unlock $110M in topline growth with an $8M investment in AI-powered solutions, reducing program timelines and delivering results within just a few months.+

- Assisted an organization in achieving higher granularity of data using AI-driven data quality solutions, optimizing decision-making, and reducing delivery lead time to just 1 day.

Good data, good business: Toward a digital-first future

As the world transitions to digital ecosystems, prioritizing data hygiene is more than just the need of the hour for enterprises. AI's role in this journey is undeniable—bridging the gap between data complexity and actionable insights.

At the heart of these transformations lies the commitment to superior data governance and hygiene. *SMART DQ* has proven to be a game-changer, enabling enterprises to turn data challenges into opportunities.

Simply put, winners will use AI to create a moat fortified by data governance and responsible AI-powered solutions. With Infosys Topaz, businesses are no longer limited by hurdles—they are equipped to lead the digital era with confidence and agility.

Authors

Aditya Vardhan Shroff, Infosys

Ankur Vishnoi, Infosys

Srujan Darsi, Infosys Limited

Infosys Topaz is an AI-first set of services, solutions and platforms using generative AI technologies. It amplifies the potential of humans, enterprises and communities to create value. With 12,000+ AI use cases, 150+ pre-trained AI models, 10+ AI platforms steered by AI-first specialists and data strategists, and a 'responsible by design' approach, Infosys Topaz helps enterprises accelerate growth, unlock efficiencies at scale and build connected ecosystems.

Infosys®
Navigate your next

For more information, contact askus@infosys.com

Infosys.com | NYSE: INFY

Stay Connected X in ▶