AI for Data
Data Capital Management @ Scale with AI

Executive Summary
Data has become a crucial component for helping companies grow and reinvent their businesses. Organizations now find themselves in a new position where they must use data and AI to responsibly fuel their innovation, business models, and partnerships.

As many foundational data capabilities are typically human-led and expensive to scale, AI can be applied to tasks to increase automation and precision. We are helping our clients to be more data-driven and data-native by aligning their data and business strategies.
Background: Data as a new form of Capital

Data as an asset is not a new idea, but more and more organizations are recognizing how critical data is to their present and future success. Many are starting to embrace the idea that data should be treated as another form of capital, just like human capital, financial capital, or intellectual capital.

Optimizing data capital is essential for businesses to survive and thrive in the digital age and reinvent their businesses to be more data-driven enterprises. It forces CEOs to be more strategic about acquiring, growing, refining, safeguarding, and deploying their data as they would be for other forms of enterprise capital.

Data must be high-quality, trusted, easy-to-use, and secure to maximize it’s use as an asset and minimize it’s potential liability. Data capital management requires strength in the following areas:

Data Supply Chain
Ensuring you have the right data repositories and data pipelines to meet business needs. Raw and curated data is available for data scientists, while shaped data is available for business consumers and operational systems.

Data Management
Sustaining high-quality, trusted data at scale. Requires excellence in data quality management, master data management, and data lineage tracking.

Data Governance
Requires competency in managing business metadata (e.g. data definitions) and the design of cross-functional models of collaboration around data.
The need to scale Data Capital Management

The way companies have traditionally operated their data organizations data is human-led and not easily scalable. This is where artificial intelligence (AI) comes into play. AI increases scale in data capital management—lowering costs while improving quality overall investments in data and AI.

These foundational data capabilities are traditionally human-led and expensive to scale

**Analysts & SMEs**
- Define business terms
- Determine business relationships between terms (data models)
- Define business rules for data transformation
- Define Data Quality rules & thresholds

**Data Engineers**
- Configure tools to support movement of data
- Write code to implement business rules (e.g., transformation, quality)
- Configure purpose-built data repositories

**Quality Experts**
- Monitor & respond to data processing issues with Data Engineers
- Monitor & respond to data quality issues with Business SMEs & Data Stewards

**Data Stewards**
- Catalog data & definitions
- Identify & maintain data lineage
- Participate in data remediation efforts
- Assist in creation & maintenance of data assets
Scaling Data Capital Management with AI

AI is being used throughout all three pillars of Data Capital Management:

**Data Supply Chain**

**Unstructured Data Interpretation**

Improve the business value and accuracy of data science models by analyzing text, images, voice, and other unstructured data types.

**Automatic Data Linking**

**Data Architecture**

Linking of data elements and assets automatically, accelerating Data Vault 2.0 and other leading data architectural patterns.

**Data Management**

**Self-Healing Data**

*Data Quality Management*

Sense data quality issues and recommend changes based on pattern recognition, reduce cost of data operations and improve data quality.

**Autonomous Database**

*Database Management*

Next-gen database technology leveraging AI to automate manual, administrative tasks, and reduce time and cost.

**Data Governance**

**Auto-labeling Data Fingerprinting**

*Metadata Management*

Automatically tag data sets and data elements with relevant business metadata to provide a richer context.

**Responsible Data & AI**

*Data Ethics & Compliance*

Identifies bias in the data underlying machine learning models to prevent unbalanced representation. Increase responsibility in AI and data, mitigate reputational issues.
**Guiding your AI for Data journey**

AI increases scale in data capital management—lowering costs while improving quality.

- Reducing time of data build
- Reducing cost of data build and operations
- Increasing quality of data

AI can transform your data capital management. We tend to see organizations follow a journey of AI for Data similar to what is illustrated below.

**The AI for Data journey**

- Initial use case, often driven by business urgency for a time consuming capability.
- Scale up government and management with automation and precision.
- Operationalize and mature automated data quality and mapping capability.
- Create learning systems that optimize data workloads and quality.
The Challenge:
A global entertainment company sought to reduce duplicate customer records due to impact on campaign costs and precision.

The Solution:
We helped the client build ML & NLP models to check data for consistency and flag duplicates/issues for remediation.

The Outcome:
The client garnered improved customer data—lowering its marketing costs and enhancing overall experience.
How pre-built AI for Data solutions can accelerate your journey

Companies don’t need to build these capabilities themselves. Accenture has its own AI for Data Suite for supporting and accelerating data engineering quality, master data management, metadata tagging, and governance across the stack. And, leading third-party vendors are incorporating AI into their commercial products—including Informatica, Tamr, Alation, and Collibra.

AI for Data Products and Accelerators
How Accenture can help

Accenture guides our clients to realize their full potential by integrating data capital management, AI, and automation on cloud through transformative technologies, adaptive business models, innovative culture, and living processes to become data-driven companies.

Data is a new form of strategic capital. The time is now to introduce intelligent machine technology—using AI to accelerate the speed, decrease the cost, and create systems that optimize data workloads and quality.

Authors

Shail Jain
Global Data & AI Lead, Technology

Prateek Peres da Silva
Global Growth & Strategy, Data & AI
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