Leveraging AI: How ZS and Databricks are powering innovation in healthcare and life sciences

Explore our case studies

Where data science meets life sciences

Healthcare and life sciences require unified data teams to leverage their analytics to drive results. Whether you're focused on complete AI life cycles, exploring large datasets or iterating across data science and data engineering workloads, a scalable, enterprisewide solution coupled with domain expertise is key.

That's where the partnership of ZS and Databricks comes into play. ZS helps organizations amplify their data management, derive data-driven insights and leverage AI to power innovation by delivering Databricks scalable business-ready technology.

Databricks' Data Lake, Data Marketplace and Data Intelligence Engine are just a few of the Databricks technologies used to scale data and analytics platforms for our clients.

Together, we help healthcare and life sciences organizations manage their data and unlock real-time insights, while reducing data processing times and infrastructure costs.

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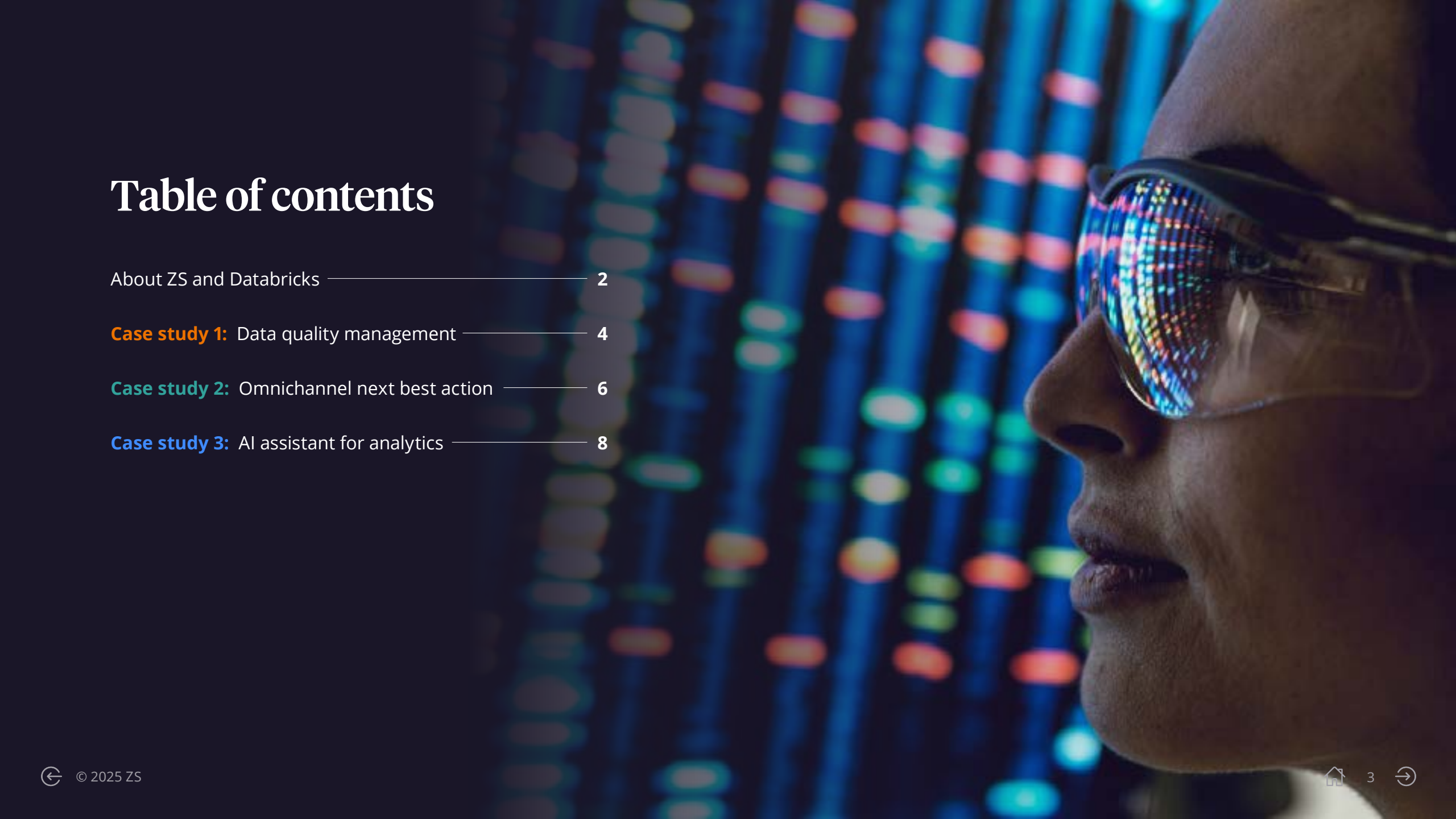

CASE STUDY 1

Data quality management

1 Data quality management with lakehouse architecture reduces cost and risk

THE CLIENT

A large U.S. healthcare company focused on pharmaceutical distribution, medical supplies and health information technology sought to ensure data quality across a vast and diverse corporate lakehouse.

CHALLENGES

The client wanted to:

- Transform data quality management (DQM) approaches to meet advanced data requirements.
- Find a cost-effective, scalable solution to reduce custom development and the use of specialized tools.

CASE STUDY 1

Data quality management

ZS created a comprehensive DQM solution to meet advanced data requirements.

APPROACH

ZS created a comprehensive DQM solution with:

- **Rule design and definition,** including custom rules tailored to specific datasets.
- **Metric generation and analysis** from profile tables that assess datasets across six standard dimensions: completeness, accuracy, consistency, timeliness, validity and uniqueness.
- **Data catalog publishing** for data quality metrics, ensuring transparency and accessibility for all stakeholders.

IMPACT

- Reduced cost of DQM
- Reduced compliance risk
- Improved transparency
- Eliminated reliance specialized tools
- Enabled a scalable DQM framework for advanced data requirements

CASE STUDY 2

Omnichannel next best action

2 AI-powered next best action (NBA) drives personalized messaging

THE CLIENT

A global pharmaceutical company sought a data-driven approach to improve healthcare provider (HCP) engagement across 80 countries.

CHALLENGES

The client wanted to:

- Improve HCP engagement with healthcare providers with personalized, focused, cross-channel messaging.
- Access real-time analytics on customer behavior and engagement patterns.
- Gather and organize data from multiple sources.
- Track performance and refine their NBA models based on real-time feedback.

CASE STUDY 2

Omnichannel next best action

The client's next best action solution drives measurable engagement and remains flexible to evolving customer preferences.

APPROACH

ZS built a next best action solution with capabilities that included:

- Data integration across customer profiles, sales activity and engagement history.
- AI and machine learning models that recommend optimal timing, channel and content.
- Real-time decisioning to adjust outreach based on evolving customer behavior.
- Omnichannel orchestration for consistent experiences across field and marketing channels.
- Ongoing monitoring and feedback loops for transparency and optimization.

IMPACT

Results compiled by several organizations include:

- 4%-10% sales increase through improved messaging effectiveness
- 30%-40% engagement improvements by aligning content with customer preferences

CASE STUDY 3

AI assistant for analytics

3 An AI assistant democratizes brand analytics

THE CLIENT

A global, research-based biopharmaceutical company wanted an AI-assistant to democratize brand analytics.

CHALLENGES

The client wanted to:

- Aggregate and extract insights from diverse, complex datasets.
- Enable plain-English queries for non-technical users.
- Deliver on-demand analysis to support agile, real-time decisions.
- Scale seamlessly with the organization's evolving data needs.

CASE STUDY 3

AI assistant for analytics

ZS delivered a scalable AI analytics solution that empowers enterprisewide decision-making.

APPROACH

ZS built a solution with:

- Secure user query intake via web apps, chatbots and dashboards.
- Smart routing using LangGraph to match queries with data agents.
- Data processing and generation using AI-driven SQL on Delta Lake Unity Catalog in Databricks.
- Compliance checks with natural language summaries for clear governance.
- An LLMOps layer to monitor accuracy, relevance and latency in real time via Databricks.

IMPACT

- Accelerated decision-making with natural language processing for plain-English queries
- Democratization of data through self-service analytics
- Scalable, future-proof AI analytics for enterprisewide adoption

About ZS

ZS is a management consulting and technology firm that partners with companies to improve life and how we live it. We transform ideas into impact by bringing together data, science, technology and human ingenuity to deliver better outcomes for all. Founded in 1983, ZS has more than 13,000 employees in over 35 offices worldwide. To learn more, visit https://www.zs.com. or follow us on LinkedIn.

Learn more

About our Databricks partnership

As a Premier Databricks Partner, ZS helps organizations leverage the power of Databricks to drive results. Databricks helps organizations accelerate innovation by unifying data teams with an open, scalable platform for all their data-driven use cases. Databricks provides a modern lakehouse architecture that combines data engineering, data science, machine learning and analytics within a single collaborative platform.