Realizing the value of cloud modernization in financial services

A conversation with

Peter Ku
Chief Strategist
Informatica

Sandeep Mangaraj
Industry Executive
Microsoft

John Bottega
President
EDM Council

Informatica
Microsoft
EDM Council
Today’s Agenda

• Industry Trends: Cloud adoption in Financial Services
• Cloud impact on data management and data governance
• EDMC’s Cloud Data Management Capabilities Workgroup
• Expert panel & audience Q&A (Submit your questions through Zoom)
Today’s Speakers

**Peter Ku**  
VP & Chief Industry Strategist – Financial Services  
Informatica

**Sandeep Mangaraj**  
Industry Executive, Digital Transformation  
Microsoft

**John Bottega**  
President  
EDM Council
Forces at work driving change

Changing customer expectations
Non-traditional, cloud-native players (FinTech)
Changing business models
Data culture relying on 24/7, 360-degree AI-interpreted signals

Sophistication of fraud and cybercrime
Cost optimization and legacy systems
Complex regulatory environment
New technical standards—e.g., ISO 20022

54% of banks think removing friction from the customer journey is the most important trend in retail banking
37% of Generation Y customers use non-traditional banks; retailers looking to be customer interface
37% of bank executives plan to upgrade their IT infrastructure to cut cost and improve efficiency
$72B projected risk technology spending
25% of banks think cyber risk is the top threat in the Financial Services industry
The COVID-19 pandemic was a catalyst for change and shifting business priorities

Here’s what we’ve heard from the industry:

Customer engagement
Organizational productivity
Value creation
Risk management
Security and compliance
Microsoft Cloud for Financial Services

Trusted cloud to accelerate innovation for sustainable growth

Deliver differentiated customer experience
Accelerate customer growth, profitability, and loyalty through more relevant and personalized interactions along with deeper customer insights

Empower employees through teamwork
Improve employee productivity virtually, enhance workflow efficiencies to improve cost savings, accelerate workplace modernization, and strengthen customer connections

Modernize core systems
Modernize core systems to gain cost savings and accelerate new product development. Support open banking models and unlock access to new market infrastructure to create new business models

Manage risk across the enterprise
Deepen insights, improve risk management to address business risk, and facilitate requirements for compliance

Trust, security and compliance
At Microsoft we are focused on trust, and we are always empowering and never competing with our customers. And most importantly we’re not monetizing your data. We adhere to the strictest security and privacy standards in the industry to place you in control over security and encryption as well as help you to create your own governance
Critical considerations for managing financial data today

What data do I have?

Is it trustworthy?

Can people access the data needed to make the right decisions?

How can I enable faster business insights?

What’s my compliance exposure?
State of Cloud Adoption

- **92%** of enterprises have a multi-cloud strategy
- **80%** have a hybrid cloud strategy
- **42%** of all participating organizations use multi-cloud management tools
- **60%** of PII data will be in the cloud

N = 750 respondents
As the industry adopts more cloud, it will be harder to answer critical questions about your data.

- Can we explain where all the data is and comes from?
- Can we trust it?
- Is the data where we need it to be?
- Are we using right data to support our business needs?
- Do we know what data is sensitive and needs protection?
Cloud Adoption Brings New Data Management Challenges

- Data Rationalization & Transparency
- Data Access, Transformation, and Integration
- Data Quality Errors
- Data Literacy & Governance
- Data Security & Protection
Data Rationalization & Transparency

- Locating existing data sources to migrate to the cloud
- Understanding the lineage of existing data
- Complying with existing data policies and standards
- Avoiding any business disruptions by migrating unintended data
Data Access, Transformation, & Integration

• Accessing data from source systems
• Ensuring proper data conversation and transformation
• Satisfying data latency requirements (e.g. batch vs. real-time)
• Dealing with existing custom coded data integration processes (e.g. Hand coding)
Data Quality Errors

- Understanding and dealing with source data errors and corruption
- Fixing errors with business user inputs
- Enforcing and executing data quality rules and controls
- Keeping business users informed about the quality of their data
Data Literacy & Governance

- Developing and managing data policies, processes, and standards to support new cloud investments
- Controlling the cost of governing data
- Making it easy for business users to get answers to their data questions
- Standardizing on common technology solutions across the enterprise
Data Privacy & Protection

• Identifying, locating, and tracking PII data across on-premise and cloud

• Accurately classifying and tagging sensitive data to comply with existing privacy regulations

• Knowing what data is protected vs. not while in motion and at rest
Informatica Intelligent Data Management Cloud
End-to-End Platform To Manage your Data and Apps in Today’s Cloud Era

Intelligent Data Management Cloud

DATA INTEGRATION
API & APP INTEGRATION
DATA QUALITY
MASTER DATA MANAGEMENT
CUSTOMER & BUSINESS 360
DATA CATALOG
GOVERNANCE & PRIVACY

AI-Powered Metadata Intelligence & Automation

DATA SOURCES
Enterprise Data Catalog

Scan & Catalog enterprise metadata

Easily search and discovery

Provide end to end data lineage for audits & impact analysis

AI-assisted data discovery, classification and business context

Collaboration & social curation to tap into shared data knowledge
Enterprise Data Integration

Access, Transform, Format Across Any System, Anywhere

- Supports **simple to complex** data and API integration requirements for Cloud/Hybrid needs
- Pre-built data integration transformations and mappings.
- Supports **all** data latencies, structures, formats, volume requirements.
Enterprise Data Quality

Profile, Cleanse, Monitor, Trust Your Data

- Business user friendly Data Profiling and Discovery.
- AI-assisted Data Quality Rules Management
- Hundreds of pre-built DQ Rules
- Configurable workflow management for data remediation and stewardship
- Customizable and sharable Data Quality dashboards and scorecards
Data Governance

Making it easier for self service data governance for all

• For Data Governance Leaders & Stewards:
  - Define and manage business terms and definitions
  - Classify data, manage data policies and standards
  - Collaborate with fellow data stewards and business users

• For Business users:
  - Browse and search for relevant data assets, find data recommended by peers
  - Easily search, navigate and subscribe to relevant data topics
  - Request and access data without IT intervention
Data Privacy Management

- Discover data and map to subjects to automate insights into data access and use
- Assess risks using AI to determine exposure and prioritize critical remediation
- Orchestrate protection and transparency, including DSAR reporting, masking, archiving
Informatica is a PROUD member of the EDM Council’s Cloud Data Management Capabilities Work Group!
Today’s Speakers

Peter Ku
VP & Chief Industry Strategist – Financial Services
Informatica

Sandeep Mangaraj
Industry Executive, Digital Transformation
Microsoft

John Bottega
President
EDM Council
Power of the Platform!

Data in the Cloud

Advantages of cloud computing...

- Cost Savings
- Security
- Flexibility
- Mobility
- Insight
- Increased Collaboration
- Quality Control
- Disaster Recovery
- Loss Prevention
- Automatic Software Updates
- Competitive Edge
- Sustainability

Problem Statement:
There is a lack of consistent industry best practices for applying data management capabilities while migrating data, applications and operations to cloud environments.

Challenges of Cloud:
Cloud implementations face a variety of challenges (data, technology and resources, etc.), but they are repeatedly revisited on nearly every implementation.

Goal:
Launch an Industry Workgroup to establish industry Best Practice Guidelines in implementing data management in the era of cloud computing.

Objectives:
Propose best practice guidelines to cover the core capabilities for cloud data management. Topics including:

- Cataloguing & Classification
- Data Accountability & Governance
- Data Access & Usage Tracking
- Lifecycle Management
- Data Security & Privacy
- Commercial Best Practices
CDMC: Industry Engagement

100+ Leading firms and 300 participants actively participating since May 2020

CDMC Working Group
- LSEG Morgan Stanley
- CAPCO
- J.P. Morgan
- Standard Chartered
- KPMG
- UBS
- HSBC
- Citi
- Goldman Sachs
- PayPal
- Freddie Mac
- Wells Fargo
- TP ICAP
- Northern Trust
- Barclays
- Deutsche Bank
- Tradeweb
- BNP Paribas
- Credit Suisse
- Nasdaq
- Société Générale

Cloud & Technology Provider Certification
- Amazon Web Services (AWS)
- Microsoft Azure
- Google Cloud
- IBM Cloud
- Snowflake
- Collibra
- Informatica
- BigID
- Data.world
- Privitar

Regulatory Engagement
- US: Federal Reserve, OCC, FDIC, NCUA, NAIC
- Canada: OSFI, BoC, CDIC
- UK: BoE, FCA, IOC
- EU: EBA, ECB, DORA Act
- Germany: BaFin
- Swiss: FinMA
- Japan: FSA
- Australia: APRA
- Singapore: MAS
- India: RBI, SEBI
- Africa/Middle East regulators
- Others

Go-to-market Support
- Training Courses
- Cloud Service Certification
- Open Source Tools
- CDMC Authorized Partner Program

2H 2021 – 1H 2022

Other Industries
- Life Sciences
- Telecommunications
- Manufacturing
- Retail / Services
- Consumer Tech
- Government / Defense
- Others
<table>
<thead>
<tr>
<th>Component</th>
<th>Capability</th>
<th>Sub-Capability</th>
<th>CDMC Controls &amp; Automations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Governance &amp; Accountability</td>
<td>1.1 The Cloud Data Management business case is defined and measurable</td>
<td>1.1.1 Cloud data management business cases are defined</td>
<td>Data Control Compliance Metric – calculated from extent of implementation of controls</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.1.2 Cloud data management business cases are governed and syndicated</td>
<td>Ownership Field – populated or reported to a defined workflow</td>
</tr>
<tr>
<td></td>
<td>1.2 Data ownership established for both migrated &amp; cloud-generated data</td>
<td>1.2.1 Data Owner roles and responsibilities are defined and agreed</td>
<td>Authoritative Sources &amp; Authorized Distributors – register populated or reported to a defined workflow</td>
</tr>
<tr>
<td></td>
<td>1.3 Data sourcing and consumption are governed and supported by automation</td>
<td>1.3.1 Data sourcing is managed and authorized</td>
<td>Data Sovereignty &amp; Cross-Border Data Movement – recorded, auditable and controlled</td>
</tr>
<tr>
<td></td>
<td>1.4 Data Sovereignty and Cross-Border Data Movement are actively managed</td>
<td>1.4.1 Sovereignty of data is tracked</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.1 Data catalogues are implemented, used and interoperable</td>
<td>2.1.1 Data cataloguing is defined, scoped and actively used</td>
<td>Cataloguing – automated at point of creation / ingestion</td>
</tr>
<tr>
<td></td>
<td>2.2 Data classifications are defined and used</td>
<td>2.1.2 Metadata is discoverable, enriched, managed and exposed in Data Catalogues</td>
<td>Classification – automated at point of creation / ingestion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.1.3 Data catalogues are interoperable across multi and hybrid cloud environments</td>
<td></td>
</tr>
<tr>
<td>3. Accessibility &amp; Usage</td>
<td>3.1 Data entitlements are managed, enforced and tracked</td>
<td>3.1.1 Data entitlement rights and obligations are captured as metadata</td>
<td>Entitlements and Access – defaulted to owner and creator and tracked</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.1.2 Data entitlement rights are enforced</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.2 Ethical access, use, and outcomes of data are managed</td>
<td>3.1.3 Automated access and entitlement tracking is established</td>
<td>Data Consumption Purpose – provided for all Data Sharing Agreements</td>
</tr>
<tr>
<td>4. Protection &amp; Privacy</td>
<td>4.1 Data is secured, and controls are evidenced</td>
<td>4.1.1 Encryption policies are defined and enforced for data at rest, in motion, and in use</td>
<td>Security Controls – enabled and evidenced</td>
</tr>
<tr>
<td></td>
<td>4.2 A data privacy framework is defined and operational</td>
<td>4.1.2 Implementation of data security controls is evidenced</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.1.3 A data obfuscation techniques are defined, scoped and applied</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.1.4 A Data loss Prevention program is in place</td>
<td></td>
</tr>
<tr>
<td>5. Data Lifecycle</td>
<td>5.1 The data lifecycle is planned and managed</td>
<td>5.1.1 A data lifecycle management framework is defined and adopted</td>
<td>Data Retention, Archiving &amp; Purging – managed to a defined schedule</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.1.2 The data lifecycle is implemented and managed</td>
<td>Data Quality Measurement – enabled and metrics distributed</td>
</tr>
<tr>
<td></td>
<td>5.2 Data quality is managed</td>
<td>5.2.1 Data Quality rules management is established</td>
<td>Cost Metrics – available in the catalogue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.2.2 Data Quality measurement is established and operational</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.2.3 Data Quality metrics reporting is established and operational</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.2.4 Data Quality issue management is established and operational</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.1 Technical design principles are established and applied</td>
<td>6.1.1 Optimization of cloud use and cost efficiency is facilitated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.2 Data provenance and lineage are understood</td>
<td>6.1.2 Principles for data availability and resilience are established and applied</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.1.3 Backups and point-in-time recovery are supported</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.1.4 Portability and exit planning are supported</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.2.1 Multi-environment lineage discovery is automated</td>
<td>Data Lineage – information available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.2.2 Data lineage changes are tracked and managed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.2.3 Data lineage reporting and visualization are implemented</td>
<td></td>
</tr>
</tbody>
</table>
Sub-Capability Description

Objectives of the Best Practice

Auditable “Artifacts of Evidence”

Scoring Guidance to measure compliance

Questions that need to be answered

Advice for the Data Professional

Advice for the CSPs and technology providers
Release Schedule

July 2021: 14 CDMC Key Controls & Automations
- First CDMC Industry Deliverable published 7 July 2021
- Auditable, evidence-based Key CDMC Controls & Automations for managing and protecting sensitive data
- 20-page document
- Summarizes and elaborates on key controls in Framework

DOWNLOAD 14 CMDC KEY CONTROLS:
https://edmcouncil.org/page/cdmc-14-key-controls-and-automation

Sept 28, 2021: CDMC Framework Release
- Comprehensive 150+ page document
  - 6 Components
  - 14 capabilities
  - 37 sub-capabilities
- Complete 14 Key Controls & Automations integration
Expert Panel + Audience Q&A

Peter Ku
VP & Chief Industry Strategist – Financial Services
Informatica

Sandeep Mangaraj
Industry Executive, Digital Transformation
Microsoft

John Bottega
President
EDM Council
Questions?

Peter Ku, VP & Chief Industry Strategist – Financial Services
pku@informatica.com
Ph. 1-925-984-3735
Follow me @peterku
Let's connect on LinkedIn!
Panel Questions

• What should companies be doing to ensure they can adequately manage and govern data in today’s cloud/hybrid world?
• How are local data privacy and retentions laws impacting cloud adoption across the globe?
  • How are companies like Microsoft and Informatica dealing with these realities?
• How is the EDM Council helping the FS industry with these requirements? E.g. CDMC!
• How does one become a member and access the CDMC content?
• What is Informatica and Microsoft doing to support CDMC?
• How are the regulators adapting to the rise in Cloud computing across FSI?