EDM Council Overview

**Mission:** *Elevate the practice of data and analytics management and support the role of data and analytics professionals*

**Principles:**

*We believe* in a responsible data-driven organization and establishing *data literacy for all.*

*We advocate* **industry collaboration** to provide data management and analytics research, best practices, standards, training and education.

*We are* the **neutral, non-profit** industry forum for companies and their data & analytics professionals.

**Established**
- 2005

**Worldwide**
- Americas, Europe, Africa, Asia, Australia

**250+ Member Firms**
- Cross-industry, including Regulators

**10,000+ Professionals**
EDM Council’s Areas of Advocacy

Best Practices
- DCAM & Cloud CDMC
- ESG Data
- Data ROI

Driving Standards
- Knowledge Graph
- Industry Ontologies
- Shared Lab

Training & Certification
- Virtual & eLearning Courses
- EDMWebinars & Events

Research & Benchmarking
- Global Industry Study
- Life Sciences
- Data Sharing

Regulatory Engagement
- Regulators participate in the agenda
- Many regulators are members

Networking
- EDMConnect Community
- DataVision, CDO Summit
- Workgroups & Forums
Data Management Capability Assessment Model

WHO?
• Developed via member collaboration
• 62% of Council members using frameworks use DCAM

WHAT’S IN DCAM?
• 8 components, 38 Capabilities, 136 Sub-capabilities
• Members flexibly apply to their organization
• Includes: Data Supply Chain, Advanced Analytics, Data Ethics and Responsible AI/ML

USED FOR:
• Program Initiation & Funding
• Team Training & Common Language
• Assessments & Benchmarking
Cloud Data Management Capability (CDMC)

CDMC Working Group

Cloud Challenges

- **Inefficiency**: data, technology, regulatory and planning challenges on nearly every cloud implementation
- **93% of firms** use 2 or more cloud providers*

CDMC Group Objectives

1. Define consistent best practices for a hybrid-cloud world
2. Align key cloud data controls to meet regulatory obligations for Sensitive Data
3. Accelerate Cloud Adoption with comprehensive framework

* Source: Flexera, 2020 *State of the Cloud*
CDMC: Industry Engagement

70+ Leading firms and 226 participants actively participating since May 2020

CDMC Working Group

LSEG Morgan Stanley
J.P. Morgan
CAPCO

Cloud & Technology Provider Certification

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

CDMC Working Group Publication on track for Q3 2021
### CDMC Capabilities: Requirements & Automated Controls

<table>
<thead>
<tr>
<th>Component</th>
<th>Capability</th>
<th>Sub-Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Data Accountability &amp; Governance</strong></td>
<td>1.1 The Cloud Data Management business case is defined and measurable</td>
<td>1.1.1 TBA</td>
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<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, 1.2.2 Data ownership is established for newly cloud generated data</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 governed for accuracy, data duplication control and data protection, 1.3.2 Data consumption is governed for accuracy, trustworthiness and usage, 1.3.3 Data sources are authorized and certified, 1.3.4 Data provisioning and consumption are standardised and automated</td>
</tr>
<tr>
<td></td>
<td>1.4 Data Sovereignty, Residency and Localisation are actively managed</td>
<td>1.4.1 TBA</td>
</tr>
</tbody>
</table>

| **2. Data Cataloguing & Classification** | 2.1 Data catalogues are implemented, used and interoperable | 2.1.1 Data cataloguing is defined, scoped and actively used, 2.1.2 Metadata is discoverable, enriched, managed and exposed in Data Catalogues, 2.1.3 Data catalogues are interoperable across multi and hybrid cloud environments |
| | 2.2 Data classifications are defined and used | 2.2.1 Data classifications are defined, applied and actively used |

| **3. Data Accessibility & Usage** | 3.1 Data entitlements are managed, enforced and tracked | 3.1.1 Data entitlement rights and obligations are captured as metadata, 3.1.2 Data entitlement rights are enforced, 3.1.3 Enforcement of data entitlement rights is evidenced |
| | 3.2 Ethical use and purpose of data use are tracked | 3.2.1 TBA |

| **4. Securing Data & Privacy** | 4.1 Data is secured and controls are evidenced | 4.1.1 Data is encrypted at rest, in motion and while in use, 4.1.2 Implementation of data security controls is evidenced, 4.1.3 Data obfuscation techniques are defined, scoped and applied based on risk and utility, 4.1.4 A Data Loss Prevention regime is in place |
| | 4.2 A data privacy framework is defined and operational | 4.2.1 A data privacy framework is defined and agreed, 4.2.2 The data privacy framework is operational |

| **5. Data Lifecycle Management** | 5.1 Data quality is managed | 5.1.1 Data Quality Rules Management, 5.1.2 Data Quality Profiling and Validation, 5.1.3 Data Quality outputs publication, 5.1.4 Data Quality issue management, 5.2.1 Archiving and purging of data are managed |
| | 5.2 The data lifecycle is planned and managed | 5.2.1 TBA |

| **6. Data & Technical Architecture** | 6.1 Data provenance and lineage are understood | 6.1.1 TBA |
| | 6.2 Technical design principles are established and applied | 6.2.1 Data back-up, resilience & recovery (Rewording TBA), 6.2.2 Portability & exit plan (Rewording TBA), 6.2.3 Usage & cost transparency (Rewording TBA) |

### CDMC Automation Checklist (DRAFT)

- **Ownership field required for specified classifications (eg PII, MNPI, ISC=HR|C)**
- **Authorisation field required on catalogued data assets for specified classifications (eg PII, MNPI, ISC=HR|C)**
- **Auto Cataloguing Supported**
- **Auto Classification Supported**
- **Personal Information auto-discovery**
- **ISC auto-discovery (HR|C|IUO)**
- **MNPI auto-discovery**
- **Client Information auto-discovery**
- **Additional classifications**
- **Entitlements automatically restricted to creator & owner for sensitive data (ISC=HR|C|IUO)**
- **Access tracked for all sensitive data (ISC=HR|C|IUO)**
- **Purpose required for all DSAs, for all PII & sensitive data (ISC=HR|C|IUO)**
- **Security controls and DLP are automatically enabled for all sensitive data (ISC=HR|C|IUO)**
- **Security control evidence is sent to Catalog for all sensitive data**
- **Recommended data privacy framework workflows (eg jurisdictionally aware PIAs) are automatically triggered for all personal data**
- **Data Quality metrics information required for specified classifications (eg PII, MNPI, ISC=HR|C)**
- **Data meeting specific retention schedule classifications is automatically retained, archived and purged**
- **Provenance information required for specified classifications (eg PII, MNPI, ISC=HR|C)**
- **Well architected framework evaluated metrics**
- **Costs directly associated with managing data assets are available to view by Data Owners in the catalog**

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- **6.2.3 Usage & cost transparency (Rewording TBA)**
Cloud Data Management Capabilities (CDMC) Key Controls

- **The Ownership field in a data catalog must be populated for all sensitive data.**
- **The Authorization field in a data catalog must be populated for all data assets containing sensitive data.**
- **Security Controls and Data Loss Prevention (DLP) must be enabled for sensitive data and evidence must be recorded.**
- **Data Privacy Impact Assessments (PIAs) must be automatically triggered for personal data according to its jurisdiction.**
- **Data Quality Metrics are required for all sensitive data.**
- **Data Retention, Archiving and Purging must be managed according to the schedule that applies to its classification.**
- **Data Lineage information is required for all sensitive data.**
- **Cost Metrics directly associated with the use, storage and movement of data must be available in the catalog.**
- **Entitlements and Access for Sensitive Data must be defaulted to creator and owner and all access must be tracked.**
- **Auto-cataloguing must be supported for all data.**
- **Auto-classification must be supported for all data.**
- **Data Consumption Purpose is required for all Data Sharing Agreements involving sensitive data.**

**Sensitive Data** includes classifications such as:
- Personal Information (PI) / Sensitive Personal Data
- Personally Identifiable Information (PII)
- Material Non-Public Information (MNPI)
- Specific Information Sensitivity Classifications (such as ‘Highly Restricted’ and ‘Confidential’)
- Critical Data Elements used for Regulatory Reporting
CDMC Draft Document Structure

CDMC Document Structure

Cloud Data Management Capability

Draft Version 0.1.0
04-January-2021

Abstract

Introduction to the CDMC Framework (source language)

Approach

Technical Content

EADG

Document

Framework

Support Services

TRUSTS

Assessment

CSP Monitoring

CDMC Draft Document Structure

CDMC Document Structure

Editing Process

• New content added as approved by EAB
• Technical Editing
• Business Editing
• Document completed
• Final Editing
• Published Q3 2021
CDMC Regulatory Engagement Update

- **Objective**
  - Engage Global Regulators for CDMC awareness, engagement and feedback

- **Key Regulatory Updates**
  - Formed CDMC Regulatory Engagement Committee
  - Significant Momentum in Engaging Regulators

- **Completed 3 Initial CDMC Regulatory Briefings**
  - US Federal Reserve Board
  - Bank of England
  - APRA (Australia)
  - OSFI (Canada)
  - ICO (Information Commissions Office UK)

- **Upcoming Initial CDMC Regulatory Briefings**
  - African Regulators (20) Cloud Symposium (July)
  - 2nd annual meeting hosted by Standard Bank

- **Scheduling CDMC Deeper Dive Sessions**
  - Bank of England
  - Federal Reserve Board (potential OCC addition)
  - APRA

- **Additional Regulatory Outreach support from EDMC CDMC Partners**
  - IBM/Promontory, PwC, UBS, Standard Bank, others…
CDMC: Accelerating Cloud Adoption

**CDMC Industry Objective:**
*Build Trust, Confidence, and Dependability for Cloud Adoption*

<table>
<thead>
<tr>
<th><strong>Companies</strong></th>
<th><strong>Cloud Service Providers (CSP)</strong></th>
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<tbody>
<tr>
<td>CDMC structured framework of auditable Cloud processes and controls – especially for sensitive data</td>
<td>CDMC requirements and controls can be automated into CSP platforms which accelerates adoption and provides market confidence</td>
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</tbody>
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<table>
<thead>
<tr>
<th><strong>Application, Technology &amp; Data Providers</strong></th>
<th><strong>Consultants &amp; Systems Integrators (SI)</strong></th>
<th><strong>Regulators</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporates certified CDMC capabilities and controls into services and solutions to ensure high degree of reliability and operational effectiveness</td>
<td>CDMC enables training &amp; assessments, gap analysis, strategy development, and execution services for end clients adopting cloud</td>
<td>CDMC provides industry guidance for auditing and validating key cloud controls, especially for sensitive data</td>
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</tbody>
</table>
CDMC AUTHORIZED PARTNER PROGRAM (CAP) – KEY ELEMENTS

• CDMC Authorized Partner (CAP) Program to be Modeled after DCAM Authorized Partner Program (DAP)
  – DCAM Authorized Partner (DAP) Program launched 2015 and today comprises 30 DAP Partner companies globally
    • DAP Program has 600+ trained & accredited consultants and 20+ certified master trainers globally

• Implement CAP Authorized Partner Program to conduct:
  – CDMC Assessments – specifically for Institutions conducted by CAP Partner with CDMC trained and certified resources
  – CDMC Training – for any industry participants through trained and certified CAP Partner Trainers

• Establishing Optional CDMC Program to provide CDMC mark for Accredited / Certified Cloud Offerings
  – CDMC Framework to include Key Automations
    • CDMC Framework to call out Key automation call outs that are opportunities to automate key CDMC requirements
    • Optional opportunity for Cloud Offerings & Solutions to designate Accredited and Certified solutions based on CDMC Requirements
  
  • CDMC Accredited Solutions
    – Cloud Solution Providers (CSP, Application and Service providers) can license CDMC mark for accrediting their cloud offerings through their own CDMC trained resources
  
  • CDMC Certified Cloud Offerings
    – Cloud Solution Providers to potentially engage CAP Partner to independently certify Cloud offerings as compliant to CDMC capability requirements
CDMC Go-To-Market Support - Roadmap & Timeline

Q1 2021 – Organize, Plan & Establish CDMC Support Program
• Organize and develop plan
• Establish CAP Program Agreement (for Assessments & Training) with Early Development Partner Program Commercial Benefits
• Form Training Development Committee with and commence development with early CAP Partners cross segment
• Plan for Certification Programs for both Institution and Application/Data/Platform Providers

Q2 2021 – Finalize Development of CDMC Framework, Training Materials & Authorized Partner Program
• Validate Training Template leveraging completed Data Classification & Cataloging component (post editorial review)
• Utilize Training Template and sequence development of other CDMC components as they come available
• Continue to develop Certification Programs for both Institution and Application/Data/Platform Providers
• Launch CDMC Authorized Partner Program (CAP) – first to market CDMC Partners

• Publishing CDMC Assessor’s Guide (the Framework) free download available to include scoring guide & glossary of terms
• Virtual CDMC Training class Available – develop training materials for eLearning production and certification exam development
• Core Training, assessment approach operational to meet industry support objective

Q4 2021 – CDMC Broader Industry Roll-out
• Continue CDMC rollout to other industry verticals
• Certification Exam Operational on eLearning platform
• Additional CAP Partners trained & certified and offering training, assessment and certification services