INTRODUCTIONS

Hany Choueiri
Chief Data Officer
Aldermore Bank

- Board Member – Global LEI Foundation
- Former CDO – Bank of England
- Former Head of Data Governance & Strategy EMEA – State Street
- Former CDO & Head of Data Quality – HSBC Europe

Colin Gibson
Regional Advocate – EMEA
EDM Council

- Former Head of Data Architecture – HSBC GBM
- Former Head of Enterprise Architecture – Willis Towers Watson
- Former Head of Data Architecture – RBS GBM

Michael Meriton
COO, Co-Founder
EDM Council

- Joined EDM Council full-time 2015 to lead Industry Engagement
- Former CEO GoldenSource (2002-2014) - an original IBM Global MDM Company
- Former President of CheckFree CFACS (Compliance & Reconciliation Solutions)
- Former Executive for D&B Software and Oracle
- FinTech Innovation Lab – Executive Mentor (2011 – Present)
2020 Global Data Management Benchmark Report
  • Key Insights and Highlights

Increasing Focus on Data Analytics
  • Insights from a CDO – Driving the Analytics Agenda

DCAM and Data Analytics
  • DCAM Model Structure
  • Introducing Component 8 – Analytics Best Practices For the Data Professional
    o Analytics Makeup and Structure
    o DCAM Analytics Work Group

Get Involved – Stay Informed
2020 Global Data Management Benchmark Report

- 3rd EDMC Survey (2015; 2017; 2020)
- Over 300 respondents
  - 69% from Finance Industry
  - 31% cross industries
- 35 Countries Contributed
  - 38% - Americas
  - 27% - EMEA
  - 35% - APAC

Insights and Highlights
- Data program – Scope and Maturity
- Tenure and Role of the Chief Data Executive
- Adoption of the Data Analytics Program
- Best Practice Model

https://edmcouncil.org/page/2020BenchmarkReport
THE DATA MANAGEMENT PROGRAM
66% of Data Management Programs operate on a Global or Enterprise-wide basis

Existing Data Management Programs continue to mature, while new programs are being launched

- 43% of programs have been in place in 3 years or more, vs. 19% in 2017
- Nearly 57% new - having been started in the past 3 years
THE TENURE AND ROLE OF THE CHIEF DATA EXECUTIVE
2020 GLOBAL DATA MANAGEMENT BENCHMARK REPORT

THE TENURE AND ROLE OF THE CHIEF DATA EXECUTIVE

60% surveyed have a Chief Data Executive

Chief Data Executive Tenure

Finance Industry

Other Industry

Chief Data Executive Responsibility

The Finance Industry has supported this role for a longer period
- Nearly 40% in the role for more than 3 years
- 88% one year and longer

Other Industry organizations, the Chief Data Executive is relatively new
- 35% 1-year or less
- 92% less than 3 years

While traditional data management (Data Governance; Data Quality) ranked the highest (96%), new responsibilities have fallen to the Chief Data Executive.
- 52% of respondents include “Data Analytics” as part of their role
- 42% are responsible for “Data Ethics”

Neither of these functional responsibilities appears in previous surveys (2017 or 2015).
THE DATA ANALYTICS PROGRAM
The Data Analytics Program – How Mature?; Who has Oversight Responsibility?

Formal Analytics Programs
The growth and focus of analytics as part of a firm’s overall data management strategy is increasing.
- 41% of respondents stated that they either have a defined and planned program or are fully operational
- 45% are in the ‘aspirational’ or ‘in process’ stage.

Data Management Oversight for Analytics
More and more, the responsibility of a firm’s data analytics and big data programs are falling to the Data Management Function within organizations. 56% of respondents said their data management functions have either partial or full oversight over their analytic programs.
Does your Data Management Program utilize a Data Management Maturity Model?
Do you utilize a Data Maturity Model?

50%

50% of respondents state that they are using a data maturity model for their programs.

Which model are you using?

Many of the respondents claim to use a hybrid of models. The following graph represents the percentage of the models used:

- DCAM: 63%
- Model 1: 27%
- Model 2: 18%
- Other: 16%
SUMMARY:

- The Role of Analytics continues to grow as firms seek to “Learn” from their data
- More and more firms are turning to their Data Management Professions to lead the Analytics Effort

CONCLUSION:

- Expand the DCAM Model to assist the Data Management Professional in supporting their Data Analytics Programs
INSIGHTS FROM A CDO

DRIVING THE ANALYTICS AGENDA
Data Strategy
How DCAM supports our Data Strategy

Hany Choueiri
Chief Data Officer

Mar 2020
Data Strategy

This document is a brief summary of the Aldermore Data Strategy. It describes the data journey, present state and future aspirations and outlines how we will achieve a higher level of data maturity. This will be benchmarked to industry standards (aka Data Maturity Models) where possible to enable the bank’s executive to also compare Aldermore’s data capabilities versus those of the industry to facilitate investment decisions.

The regulatory landscape has evolved since the last strategy (2017) with a new focus on regulatory reporting (“Dear CEO Letter”) while privacy regulators are increasingly issuing fines and guidance which is further informing our approach to continued compliance with GDPR. We are seeing increased market pressures with highly digitised offerings, and it is therefore important that innovation is at the heart of the Data Strategy.

Finally, Data Science and insights is becoming a true competitive differentiator and a key component of our strategy. We must continue to strengthen this capability alongside data innovation and cloud enablement.
Chief Data Office - Evolution

Significant effort continues on regulation and risk reduction

**Establishment**
- Chief Data Office established
- Data Strategy approved

**Reg Focused**
- Data Governance
- Regulatory Focus
- GDPR Day 1
- PCI

**Reg Focused & early innovation**
- GDPR Day 2
- Data Visualisation
- Quality (Client Data)

**Reg Focused & continued innovation**
- GDPR Day 2
- Data Stewardship Model
- DGWG Established

**Reg Focused & continued innovation**
- GDPR Day 2
- Data Lab
- Cloud Strategy
- Tableau Rollouts

**Phase #1**
- Team members recruited (8 inc head of Data Science)
- Data Strategy (v 2017)
- CDO take on Marketing & Servicing Responsibility
- Data Visualisation licensing approved
- GDPR Programme – compliance roadmap

**Phase #2**
- Head of Data Governance onboarded
- Focus on EUC identification
- GDPR policies signed-off

**Phase #3**
- GDPR Maturity (Day 2) project initiated. Progress on DSAR, DPIA and LIA processes, FPNs, and Data Privacy TOM
- PCI-DSS Round 1 sweep
- Base DQ reporting (Client data)

**Phase #4**
- Mortgages and Savings Data Stewards onboarded
- Data Governance Working Group Established
- LoBs start developing Tableau dashboards
- Data Science models development
- Cloud governance established

**Phase #5**
- GDPR Day 2
- Data Lab
- Cloud Strategy
- Tableau Rollouts

Significant effort continues on regulation and risk reduction.
CDO - Current Team Structure & Reach

Hany Choueiri, Chief Data Officer

Head of Data Governance and Management

Head of Data Science & Web Analytics

Chief Data Office Business Management & Supplier Oversight

Lead Architect Enterprise Data Architect

Head of Digital Marketing
Our new data strategy **will align to three key pillars** to better articulate and communicate what we do. These pillars together **cover best practice in terms of data management** across the industry.

Poor data practices ("**Protection**") represents a real threat to an organisation, while the lack of "**Innovation**" results in poor business outcomes and a lack of competitiveness.

Finally, poor data "**Quality**" represents both an operational risk while also increasing the burden and manual validation that users have to undertake before using the data. This hampers efficiency and reduces our ability to straight through process that is essential for remaining efficient.
Chief Data Office - Pillars have strong dependencies

Protect – Insights - Quality

Insights help identify areas where more Protection is required.

Protect support analytics, cloud enablement and data science to use data securely for driving data value.

Quality Assurance detects areas where further protection is needed.

Protect identify areas of data quality improvement.
Chief Data Office - Pillars have strong dependencies

Protect – Insights - Quality

- Protect
- Insights
- Quality

Quality drives better insights and straight through decision making

Insights surface areas of poor quality and data enrichment
Chief Data Office – Pillar Alignment to Business Strategy

**PROTECT**
1. Data Driven Compliance
2. Data Usage & Loss Prevention
3. Data by Design

**INSIGHTS**
1. Data Discovery & Innovation
2. Information Provisioning
3. Campaign Execution

**QUALITY**
1. Knowledge Base
2. Measurement, Monitoring & Reporting
3. Governance

- Be Deeply Invested
- Always do the Right thing
- Nimble, Lean and Strong
- Stay Curious
- Be Deeply Invested
- Have Courage
- Compelling Customer Exp.
- Build Trust Not Territory
- Have Courage
- Nimble, Lean and Strong
- Compelling Customer Exp.
Vision
Supporting our businesses and functions to better serve our customers and our continued growth

Mission
Provisioning of quality data, self service analytics, advanced data science techniques and first class campaign management to power insights and protect our customers
Problem Statement

Where are we in terms of maturity, and where do we want to get to?
Target Maturity Across the Pillars – Sample Data

Target maturity (avg. X) across the pillars, requires a disciplined BAU plan and successful execution of the Data Transformation Programme.

Protect: 3.5* (3.1**)  
- Data Driven Compliance  
- Data Usage & Loss Prevention  
- Data by Design

Insights: 3 (?)  
- Data Discovery & Innovation  
- Information Provisioning  
- Campaign Execution

Quality: 3.5* (2.2**)  
- Knowledge Base  
- Measurement, Monitoring & Reporting  
- Governance

* Target on Scale 1-5
Solution

Leverage DCAM, but work to extend with Analytics Component
UPDATE – DCAM AND ANALYTICS

DCAM V2.1 – HIGH-LEVEL STRUCTURE
7 Components of the Data Management Capability Assessment Model
Components (7)

Capability (31)

Sub-Capability (106)

DATA GOVERNANCE

- Data Governance Function is Established
- Policy and Standards are Written and Approved
- The Data Management Program is Governed
- Data Access and Use is Governed
- Data Structures are Governed
- The Ethical use and outcome of data are governed

Objectives (358)

1. Get the funding model operational.
2. Identify and empower the parties accountable for the budget of the Data Management.
3. Policy and standards are in alignment with Data Management Strategy.

Sample Artifacts:
- Funding model; Formal approvals from stakeholders and budget owners;
- Records of spending on DM expenses.

Business process optimization for data management is enforced

Program and project reviews and approvals are established

Program funding governance is established and operational

Issue Management process is defined and operational

Sample Artifacts:
- Documented policy and standards (cross-border, privacy, data acquisition, entitlement, access, data retention, quality control process, training, data content, data format)

Formally establish review and approval processes to build, access, use and send data
Integrate ethical data review and approval processes into the organizations development and SDLC processes
Align review and approval processes with cross-control functions
Communicate established processes (policy and guidelines) to stakeholders
4.2.3. Data domain taxonomies are actively implemented, maintained and enforced

**Taxonomies define how things relate. Data taxonomies define relationship of elements within a data domain.** Taxonomies are critical to establishing common definitions and language of data across an enterprise and are required to ensure data's proper use.

**Sub-Capability Objectives**
- Authorized data domains are verified by business subject matter experts.
- Authorized data domain taxonomies are being published and are being used by upstream/downstream systems (existing and new).
- Internal taxonomies are aligned with (and cross referenced to) global standards.

**Advice**
- Taxonomies define hierarchical relationships. Ontologies define how financial instruments and processes work in the real world. Once designated, they need to be managed (via policy) to ensure that they are implemented, maintained and used. Adjustment to data domain taxonomies and conceptual/logical models should be formally aligned with the firm's change management policies (including change approvals, impact analysis, controlled implementation/rollout).

**Questions**
- Have data domain taxonomies (and conceptual/logical models) been verified by business subject experts?
- Have data taxonomies and models being published and are being used in existing and new systems?
- Have policies and standards for managing taxonomies/models been defined, verified, sanctioned and published?
- Has governance over taxonomies been aligned with existing change management policies?

**Artifacts**
- Policy and standards on use and maintenance
- Mapping and transformation to ensure implementation by upstream and downstream systems
- Bi-directional communication (verification, approvals, agreements)

<table>
<thead>
<tr>
<th>Not Initiated</th>
<th>Conceptual</th>
<th>Developmental</th>
<th>Defined</th>
<th>Capability Achieved</th>
<th>Capability Enhanced</th>
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</thead>
<tbody>
<tr>
<td>Data domain taxonomy governance does not exist</td>
<td>Data taxonomy governance is being debated by relevant stakeholders</td>
<td>Policies to ensure the maintenance and use of established data taxonomies and being developed in collaboration with business and IT subject matter experts</td>
<td>Policies related to the use and maintenance of authorized data taxonomies have been defined, and have been reviewed and approved by relevant stakeholders</td>
<td>Taxonomies are being used by upstream and downstream systems. Data is shared across business processes. Data harmonization is achieved.</td>
<td>Operational taxonomies are aligned with (and cross-referenced to) industry standards</td>
</tr>
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</table>

**DCAM Description and Objectives**

**Scoring Guidance**

**Advice from an Audit Perspective**

**Essential Questions**

**Required Artifacts as Evidence of Adherence**
DCAM V2.2 – ADDITION OF AN ANALYTICS COMPONENT
V2.2 FRAMEWORK

8.0 Analytics Management

- Additional Component
- Consistent Structure
- Consistent Glossary and Style
- Use if Relevant
8.0 Analytics Management

8.1 The Analytics Function is Established
- Analytics function is formalized and funded

8.2 Aligned with Business and Data Strategy
- Driven by Business Strategy and supported by Data Strategy

8.3 Aligned with Data Architecture
- Data Architecture is Respected

8.4 Aligned with Data Quality
- Data Quality Understood and Improved

8.5 Platform Designed and Operational
- Operational Platform Established

8.6 Model Operationalization Established
- Models can run in Production

8.7 Culture and Education Needs Managed
- Active Management of Culture and Skills
8.1 The Analytics Function is Established

8.1.1 A classification scheme for levels of Analytics is defined and adopted

8.1.2 The operating model is defined and the organization structure is implemented

8.1.3 The funding model for analytics has been established, approved and adopted

8.1.4 Analytics governance structures are in place

8.1.5 An Analytics methodology has been adopted
8.2 Aligned with Business and Data Strategy

8.2.1 The Analytics requirements of the Business Architecture are understood and addressed

8.2.2 The prioritization of Analytics activities is driven by business strategy

8.2.3 Analytics support business needs and are actionable where required

8.2.4 Analytics usage is measured and understood to be driving business value
8.3 Aligned with Data Architecture

8.3.1 Analytics data lineage is understood and authoritative data assets are used
8.3.2 Analytics references approved business definitions
8.3.3 Analytics respects the organization’s identification and classification standards
8.3.4 Data preparation standards exist and are applied consistently
8.4 Aligned with Data Quality

8.4.1 The quality of data used by Analytics is understood and aligned to the needs of the business case

8.4.2 Issues identified during data preparation are managed via the Data Quality framework
8.5 Platform Designed and Operational

8.5.1 A version control regime is defined and in place

8.5.2 Data obfuscation strategies are defined and supported

8.5.3 Environment scalability requirements are understood and supported

8.5.4 The platform addresses the separate needs for sandbox / innovation and production

8.5.5 The platform design meets the needs of the analytics operating model
**8.6 Model Operationalization Established**

8.6.1 Model testing, approval, release and regular review processes are in place and effective

8.6.2 Model approval and release is aligned with Data Ethics governance

8.6.3 Model approval and release is aligned with Confidentiality Compliance governance

8.6.4 Model bias is understood and managed

8.6.5 Requirements for model explainability are understood and incorporated
8.7 Culture and Education Needs Managed

8.7.1 The behaviors needed for an analytics culture are understood and measured
8.7.2 Education initiatives to address culture gaps are in place
8.7.3 The learning experience needs of analytics practitioners are defined
8.7.4 Education initiatives to address skills gaps are in place
UPDATE – DCAM AND ANALYTICS

DCAM ANALYTICS COMPONENT WORK GROUP
WORK GROUP PARTICIPANTS

• Aldermore Bank
• AstraZeneca
• Emerge
• Federal Reserve Bank of New York
• Freddie Mac
• HSBC
• KPMG
• Lloyds Banking Group
• London Stock Exchange Group
• Mudano
• PwC
• Wellington Consulting
<table>
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<tr>
<th>Month</th>
<th>Task Description</th>
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<tbody>
<tr>
<td>March</td>
<td>Agree Capability / Sub-capability Structure &amp; Scoring Guidance</td>
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<tr>
<td>April – May</td>
<td>Draft Sub-capability content (esp. Description, Sub-Objectives &amp; Advice)</td>
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<tr>
<td>June</td>
<td>Agree Sub-capability content &amp; draft Component introductory “Upper Matter”</td>
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<tr>
<td>July</td>
<td>Finalise content</td>
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**WORK GROUP TIMELINE**
STAYING INFORMED – GET INVOLVED
DCAM USER GROUP OVERVIEW

EDMConnect

WHY JOIN THE EDMCONNECT DCAM USER GROUP?

• Access to all things DCAM
• Join, collaborate, contribute and stay connected with the DCAM community
• Contribute to new knowledge and provide feedback to continuously improve the published knowledge
Analytics Forum in DCAM User Group

- Review and comment on Work Group output
- Contribute Best Practice
- Contribute to discussions

DCAM Goes Digital

DCAM Knowledge Portal

• DCAM Framework – a digital presentation of the seven DCAM Framework components

• DCAM Knowledge Base – a collection of best practice organized by the DCAM Framework components

• DM Business Glossary – a standard set of Data Management terms and definitions (~150 terms)

Go Live: Week commencing 6th April
Q & A

UPDATE – DCAM AND ANALYTICS

8.0 Analytics Management
EDM Council Upcoming Webinars
Introduction to DCAM and the NEW DCAM Knowledge Portal

16th April 2020

11am EST / 4pm BST / 5pm CET
### EDM Council Webinars

1. Open FIBO / Knowledge Graph Update  
   - March 31 at 11 AM EDT
2. Intro to DCAM & the Knowledge Portal  
   - April 16 at 11 AM EDT

- Register on home page
- Can watch live or receive recording by registering

### Partner Webinars

1. Data Coalition: Realizing the Benefits of the Financial Transparency Act  
   - April 8 at 2 PM EDT
2. Tamr: EDMWebinar  
   - April 21 at 11 AM EDT
3. Data Republic: EDMWebinar  
   - April 30 at 11 AM EDT
EDM COUNCIL UPDATES

EDM COUNCIL LIVE VIRTUAL TRAINING CLASSES

DCAM v2 & KNOWLEDGE GRAPH
UPCOMING VIRTUAL TRAINING (OPEN LIVE CLASSES)

DCAM v2 Framework

2-day virtual live class
9am-2pm

1. April 28 – 29
2. May 20 – 21

• Stay tuned for registration details
• APAC timings available

Knowledge Graph/FIBO Class

2-day virtual live class
9am-2pm

1. April 28 – 29
2. May 20 – 21

• Stay tuned for registration details
• APAC timings available
EDM COUNCIL UPDATES

EDM COUNCIL eLEARNING TRAINING & CERTIFICATION

Data Management Online Academy
eLearning Training & Certification Program Updates
**eLEARNING - TRAINING & CERTIFICATION PROGRAMS**

**eLEARNING CURVE ONLINE DATA ACADEMY – CIMP / CDS INTERNATIONAL CERTIFICATION**

- 8 Information Management tracks with 2 Professional Certification Programs
- Encompasses: 45+ online courses (+6 NEW in 2019), 200+ hours of education materials

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<th>Information Management Track Curricula</th>
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<tr>
<td>IM Foundations</td>
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<td>Data Quality</td>
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<tr>
<td>Data Governance</td>
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<td>Data Stewardship</td>
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<table>
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<th>Certification Programs</th>
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<td>Certified Information Management Professional (CIMP)</td>
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<td>Certified Data Steward (CDS)</td>
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Courses are 3 to 6 hours long and cover Fundamentals to Advanced Topics
Each course is accompanied by a Certification Exam

- Analytics Fundamentals
- Analytics-based Enterprise Performance Management
- Best Practices in Data Resource Management
- Big Data Fundamentals
- Conceptual Data Modeling
- Crafting the Business Case for Data Quality
- Curating and Cataloging Data
- Data Governance for Business Leaders
- Data Governance for Data Stewards
- Data Governance Fundamentals
- Data Integration Fundamentals & Best Practices
- Data Integration Techniques for Designing an ODS
- Data Mining Concepts and Techniques
- Data Mining in R
- Data Parsing, Matching and De-Duplication
- Data Profiling
- Data Quality Assessment

- Data Quality For Data Stewards
- Data Quality Fundamentals
- Data Quality Scorecard
- Data Stewardship Core
- Data Stewardship Fundamentals
- Data Understanding and Preparation for Data Science
- Data Virtualization
- Data Warehousing Fundamentals
- Diagnostic Analytics Using Statistical Process Control
- DW and BI Data Modeling
- Ensuring Data Quality in Data Integration
- Framing and Planning Data Science Projects
- Fundamentals of Business Intelligence
- Fundamentals of Data Modeling & Metadata
- Fundamentals of Predictive Analytics
- Hadoop Fundamentals
- How to Deploy Data Governance Part 1

- How to Deploy Data Governance Part 2
- Information Management Fundamentals
- Introduction to NoSQL
- Location Intelligence and GIS
- Logical Data Modeling
- MDM for Data Stewards
- MDM Fundamentals: Architecture & Implementation
- Metadata Management for Data Stewards
- Modernizing Data Governance
- Organizing for Data Quality
- Prescriptive Analytics Using Simulation Models
- Putting the Science in Data Science
- Root Cause Analysis
- The Data Model Scorecard
- Web Analytics
ILLUSTRATION

DATA GOVERNANCE FUNDAMENTALS COURSE

You will learn:
- What data should be governed
- Why data governance is important
- Basic concepts, principles, and practices of a data governance program
- Where and how to start a data governance program
- People and tools that enable a data governance program
- Techniques to measure success of a data governance program
- Governance of big data and cloud applications
- Tips and techniques to modernize established data governance programs

This course is geared towards:
- Individuals who implement a data governance program
- Individuals who participate in a data governance program
- Business data stewards
- Information professionals who want to learn about this emerging area

DG-01 Data Governance Fundamentals

Module 0. About the Course (7 min)

Module 1. Introduction to Data Governance (33 min)
- Data Governance 101
- Why Govern Data?
- What Data Should Be Governed?
- Business Drivers for Data Governance

Module 2. Implementation Fundamentals (78 min)
- Selecting Data and Setting Goals
- Standards, Policies, Processes, People, and Technology
- Managing and Measuring Data Governance

Module 3. Case Study (63 min)

Module 4. Data Governance of Emerging Solutions (65 min)
- Big Data
- Cloud Applications

Module 5. Modernizing Data Governance (53 min)
- Overview
- The Data Quake: From Stable to Volatile
- New Data Governance Challenges
- Curating and Cataloging Data
- Rethinking Data Governance Practices
- Technologies and Modern Data Governance
- Module Summary
ELearning Curriculum Updates 2020 Plans

- Data Science Track and Certification (April 2020)

- DCAM / Knowledge Graph / Data Ethics (Q2/Q3 2020)

- Key Industry Updates in 2020
  - Key updates to Certified Data Steward & Data Governance Tracks
  - Major update to Metadata Management Track

- Big Data Track and Certification (Q3 2020)

  - Visit EDM Council Home Page for More Info
    - Individual and Corporate eLearning packages

Many New Courses Including
- DCAM / Knowledge Graph / Data Ethics
- Data Science Fundamentals
- Fundamentals of Artificial Intelligence
- Data Science Modeling Best Practices
- Data Strategy for the Age of Big Data
- Supervised & Unsupervised Machine Learning
- Data Lake Architecture
- Managing Big Data
- Data Engineering Fundamentals
KEY TAKE-AWAYS

- Join DCAM User Group on EDMConnect
- Follow the Analytics discussion Forum
- Register for the DCAM Overview and Knowledge Portal Webinar

Thank You!