BARRY
DEVLIN

Data Mesh, Data Fabric

Unravelling Digital Information Systems

ONLINE LIVE STREAMING

DECEMBER 1-2, 2021

ABOUT THIS SEMINAR

The Data Warehouse is over thirty years old. Business intelligence around twenty. The Data Lake just turned ten. So, is it time for something new? In fact, two new frameworks have recently emerged: Data Fabric and Data Mesh.

But what are they? Are they truly novel or simply marketing hype? Are they the same thing? How do they relate to the Data Warehouse, Lake, Hub, or even Lakehouse? What are their benefits and drawbacks? Should you be planning a Mesh or a Fabric? If so, where would you start?

All these new and old terms, with overlapping scopes and different promoters, are types of Digital Information Systems, designed to manage and deliver data/information to all digital business processes in today's complex distributed and network-centric environments.

Dr. Barry Devlin explains and positions Data Fabric and Mesh, as well as other concepts, old and new, using as a foundation the Digital Information Systems Architecture (DISA) first defined in "Business unintelligence." Existing and emerging technologies for Data Storage, Preparation, and Virtualization; Data Catalogs; and other tools, both on-premises and Cloud, are described. Also explored are a variety of organisational issues, methodologies, and implementation approaches.

WHAT YOU WILL LEARN

- History, meaning, and detailed functionality of Data Fabric
- History, meaning, and detailed functionality of Data Mesh
- An introduction to the Digital Information Systems Architecture (DISA) and its business and technical uses
- Technical rationale, structure and components of the DISA conceptual and logical architectures
- An in-depth comparison of Data Fabric and Mesh with Data Warehouse, Lake, Hub, and Lakehouse using DISA as a basis
- Possibilities and challenges of new database and data management technologies in Cloud, on-premises, and hybrid environments
- The central role of context-setting information and metadata
- Adaptive Processes as the basis for data preparation, information creation, and insight discovery
- Using data virtualization and preparation as tools for integration of all types of content and data in Cloud, on-premises, and hybrid environments
- Practical planning and implementation steps from Data Warehouse/Lake to Data Fabric or Mesh

WHO SHOULD ATTEND

- Enterprise, systems, solutions and Data Warehouse architects
- Systems, strategy and Business Intelligence managers
- Data Warehouse, Data Lake and IT systems designers and developers
- Data and database administrators
- Tech-savvy business analysts

OUTLINE

1. The Path to the Present

- A brief history of decision-making suppor t
- Information-use modes: active, descriptive, diagno-stic, predictive, prescriptive
- Data Warehouse (hub & spoke and star schema) and marts: business, technology drivers, and challenges
- Operational BI: business, technology drivers, and challenges
- The emergence and impact of Big Data, the Internet of Things and Artificial Intelligence
- Data Lake: business, technology drivers, and challenges
- Logical Data Warehouse: business, technology drivers, and challenges

2. Architectural View I: Information as Foundation

- Modern, future-proof hypotheses for a new architecture
- Overview of conceptual and logical architecture structures
- Thinking Spaces: Information, Process, and People
- Key information considerations - timeliness/consistency, structure/context, and reliance/usage
- From silos and layers to pillars - supporting multiple storage and processing technologies
- Information types: process-mediated data, human-sourced information, machine-generated data, and context-setting information

3. Emerging Concepts: High Level View

- Data Lakehouse: origins, meaning, promoters, and detractors
- Data Fabric: origins, meaning, promoters, and detractors
- Data Mesh: origins, meaning, promoters, and detractors
- Models for decision making and action taking: the adaptive decision loop and others
- How your decision-making model influences deciding between these concepts

4. Context is Everything: Modernising Metadata

- From DIKW to the manifest meaning model
- Information, knowledge, meaning, decision, action
- Metadata as context-setting information - sources and stores, tools and techniques, including data glossary, data dictionary, and data catalog
- Modelling, ontologies, and knowledge graphs

5. Deep Dive: Data Lakehouse

- Conceptual and architectural views
- Products, tools, and techniques
- Technology considerations, including NoSQL data stores, Hadoop-based databases, XML, JSON-based, graph and other data stores
- Pros and cons

6. Deep Dive: Data Fabric

- Conceptual and architectural views
- Products, tools, and techniques
- Technology considerations, including relational database evolution: structures, software and hard ware
- Pros and cons

7. Architectural View II: Process as Intermediary

- Merging of business and IT processes
- Defining adaptive, closed-loop processes across business and IT
- The new role of users in "application development" - opportunities and dangers

8. Evolution of Information Preparation

- Data Preparation, ETL, Replication, Data Ware house Automation, Wrangling, and Data Virtualisa tion
- Data pipelines and data ops
- Batch, real-time and Lambda architectures
- Streaming, messaging, immutable logs and Kappa architecture

9. Deep Dive: Data Mesh

- Conceptual and architectural views
- Decision-making and action-taking in a closed-loop, real-time environment
- Products, tools, and techniques
- Technology considerations, including Service Oriented Architecture and Microservices
- Pros and cons

10. Migration and Implementation

- Evolution - not revolution - a methodology for digital transformation success
- The Corporate Information Atlas (CIA) and Staged Implementation Roadmap (SIR)
- Organisational considerations; changes in IT culture and responsibilities
- Hybrid cloud/on-premises implementation considerations
- Selected possible first migration steps
- Lessons from technology implementations during the COVID-19 pandemic

11. Ethical and Economic Considerations

- The emergence and importance of Artificial Intelligence (AI)
- Augmenting and/or Automating decision making and action taking
- Technical, legal, and ethical issues with data collection, anonymisation and surveillance
- Bias, privacy erosion, and other dangers
- Facial recognition and affective computing
- Surveillance capitalism and other economic uses of Big Data and AI

12. Conclusions and Wrap-up

- Comparing Data Lakehouse, Fabric, and Mesh with one another
- Comparing all three with current best practice
- Outlook for further developments
- Conclusions

Speaker

Barry Devlin is Founder and Principal, 9sight Consulting. Dr. Barry Devlin is among the foremost authorities on Business Insight and one of the founders of Data Warehousing, having published the first architectural paper in 1988.

With almost 40 years of IT experience, including 20 years with IBM as a Distinguished Engineer, he is a widely respected industry analyst, consultant, speaker and author of the seminal book, "**Data Warehouse-from Architecture to Implementation**" and numerous White Papers. His 2013 book, "**Business unIntelligence-Insight and Innovation beyond Analytics and Big Data**" is available in both hardcopy and e-book formats.

As founder and principal of 9sight Consulting, Dr. Devlin provides strategic consulting and thought-leadership to buyers and vendors of BI solutions. He is continuously developing new architectural models for all aspects of decision-making and action-taking support.

Now returned to Europe since 2018, Barry's knowledge and expertise are in demand internationally.

INFORMATION

PARTICIPATION FEE

€ 1100

The fee includes all seminar documentation.

SEMINAR TIMETABLE

9.30 am - 1.00 pm
2.00 pm - 5.00 pm

HOW TO REGISTER

You must send the registration form with the receipt of the payment to: info@technologytransfer.it

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GENERAL CONDITIONS

DISCOUNT

The participants who will register 30 days before the seminar are entitled to a 5% discount.

If a company registers 5 participants to the same seminar, it will pay only for 4.

Those who benefit of this discount are not entitled to other discounts for the same seminar.

CANCELLATION POLICY

A full refund is given for any cancellation received more than 15 days before the seminar starts. Cancellations less than 15 days prior the event are liable for 50% of the fee. Cancellations less than one week prior to the event date will be liable for the full fee.

CANCELLATION LIABILITY

In the case of cancellation of an event for any reason, Technology Transfer's liability is limited to the return of the registration fee only.

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December 1-2, 2021

Registration fee:
€ 1100

If registered participants are unable to attend, or in case of cancellation of the seminar, the general conditions mentioned before are applicable.

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