Course : Data Factory, data products and decision-making systems

Big data, data lake, data mesh: integrate them

Seminar - 3d - 21h00 - Ref. SID
Price : 2990 CHF E.T.

★★★★⯪ 4,3 / 5

BEST   Nouvelle édition

At a time when data is strategic, mastering its transformation is crucial. This course takes you to the heart of business intelligence systems, moving from traditional analysis to modern data science. It details models for optimizing the use of this precious data and supporting business decisions. Learn how to convert your data into real performance drivers. From big data to data lakes and data meshes, discover how to build an innovative "Data Factory". Transform your vision of data. Your strategy starts here!returnchariot

🎯 Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Understand the added value, challenges and principles of decision-making systems
- ✓ Mix different BI models to optimize data use
- ✓ Implement an approach for designing an enterprise data repository
- ✓ Integrating big data and artificial intelligence (AI) into the CIS to build the Data Factory
- ✓ Step-by-step guide to managing your CIS project
- ✓ Choosing the right architecture, tools and Data Platform

Intended audience

IT managers, design managers, IS architects, business intelligence consultants and project managers, other functional and technical project managers.

Prerequisites

No special knowledge required.

PARTICIPANTS

IT managers, design managers, IS architects, business intelligence consultants and project managers, other functional and technical project managers.

PREREQUISITES

No special knowledge required.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

Practical details

Example

A complete example of the implementation of a decision-support information system will be presented.

Course schedule

1   Purpose and principles of CIS

- Governance organization: teams - processes - data.
- Developments in Business Intelligence. How should data be managed? Pure or hybrid data mesh model, or data lake and/or data warehouse, depending on strategic choices.
- New challenges: information enhancement, rapid correlation.
- Strategic architecture choices: which platform for which need?
- A new balance between pre-modeling and real-time dynamic analysis.

2   SID design process, impact of discovery mode

- The universal typology of requests on an SID around management and predictive analysis.
- Master the design process for data marts and data labs.
- How to optimize BI discovery and data science services.
- Model consistency. In-memory analysis versus star model. Data lab model.
- NoSQL denormalization versus classical decision denormalization.
- The difference between multidimensional and predictive analysis.
- Avoid the proliferation of aggregates and indicators by reusing developments or data products
- Designing a high-performance BI-discovery-data science architecture

Case study

Propose a design approach based on analysis needs.

3   Building reference systems

- Building the company's reference framework. Analytical dimensions and shareable indicators.
- Build an architecture covering all stages, from piloting to behavior analysis.
- Build dictionaries for the SID, use metadata to manage consistency.

Case study

Deployment of the proposed methods on examples.

4   Optimize data access

- Data organization: concepts common to all types of modeling.
- Recommendations for understanding data mesh modeling.
- Data mesh: mapping domains to internal organization or use cases.
- Multidimensional, ROLAP, MOLAP, hybrid, in-memory: criteria for choice.
- Organizing your data lake. Building data labs at different data product levels.
- Apply decisional normalization to your star models.

5 Measuring the SID value

- Make your CIS a lever for corporate strategy.
- Gathering use cases into decision-making processes.
- SID urbanization: avoid over-processing and overloaded semantic layers.
- Identify areas eligible for cloud computing.
- Mapping its SID to link purpose of use and data used for RGPD.
- Define the criteria for an effective CIS.
- Manage the value of data. Organize data governance.

6 Big data in industrial mode

- Main types of use cases.
- The problem of industrializing big data projects.
- Checklist of recommendations.
- Analytics - real-time predictive and streaming (CEP: complex event processing).

7 State-of-the-art decision-making tools

- Link or merge your data lake and data warehouse to create the Data Factory.
- Overview of business intelligence suites: SAS, Microsoft, SAP BusinessObjects...
- Degree of integration of discovery mode, analytics and data visualization.
- ETL- ELT. Multidimensional tools. Web deployment.
- Big data integrated with SID. NoSQL databases. NewSQL databases. Cohabitation between different databases.
- In-memory analysis. Cloud, appliance or commodity hardware.
- Advantages and disadvantages of different data platform architectures.
- Switching the SID to a NoSQL or NewSQL database or integrating the approaches?
- Combine an agile data discovery solution with business intelligence (BI) industrialization capabilities.

Case study
Determine your evolution path towards an integrated architecture.

8 Opportunity and value creation for the company

- Evaluate the added value for the company and the usefulness of change management.
- Manage and prioritize your project portfolio. Subdivision criteria.
- Specificities of a BI project and a Big Data project.
- Business intelligence needs analysis techniques: pitfalls to avoid.
- How do you assess the complexity and maturity of your needs?
- Leading the transition from existing business intelligence systems to a data mesh organization.

9   Governance organization: teams - processes - data

- Different players and respective roles. New relationship between business and IT.
- Special case of data mesh, recommendations for successful organization.
- Position business intelligence within the company. Organize governance, consistency and overall data quality.
- Create a coherent, multidisciplinary organization.
- Preserve user autonomy. Manage responsiveness.
- Integrating business units into value management: data and use cases.
- Organize the Data Factory. Administer SID components.
- Guarantee data quality and veracity management.
- Define minimum quality controls. Define control phasing.
- Impact of RGPD regulations on data access security.
- Impact of AI-ACT on the administration of AI models.

Dates and locations

REMOTE CLASS
2026 : 26 May, 8 Sep., 17 Nov.