TDWI is your source for in-depth education and research on all things data.

San Diego 2015
September 20–25

Gain the knowledge you need to deliver business value and competitive advantage with data

In-Depth Education **Hands-on Training** **Case Studies** **Networking**

Monday Keynote Presentation
Elevating Your Data Platform:
Philosophy, Pragmatism, and Practices
Kurt Brown
Director, Data Platform
Netflix

Co-located Event for IT and Business Leaders
TDWI EXECUTIVE SUMMIT
Building Business Advantage with Customer Data and Analytics
September 21–23
tdwi.org/SD2015/summit

tdwi.org/SD2015

Join us at TDWI San Diego for end-to-end coverage of the most important and complex topics, skills, and disciplines that are essential to succeed in today's data-driven world of business. Unlike any other conference experience, TDWI San Diego gives you the depth and breadth of knowledge and hands-on experience needed to deliver a cohesive data strategy that covers the continuum—from traditional structured data to big data, and from reporting to advanced analytics.

Together we're advancing all things data. See you there!

What You'll Find at TDWI San Diego

This event features the in-depth, vendor-neutral training that has set TDWI apart for 20 years, with expanded real-world case studies, hands-on training, and peer networking opportunities you've been looking for.

IN-DEPTH EDUCATION	HANDS-ON TRAINING	CASE STUDIES	PEER NETWORKING
More than 60 full-, half-, and quarter-day courses, from business intelligence basics to big data analytics, data visualization, the evolving data ecosystem, and much more.	Learn how to use all the latest tools and technologies from data warehouse automation and data virtualization to data visualization.	Gain in-depth, actionable insights on how leading organizations are transforming data into business value, including full-day deep dives on BI and analytics in healthcare and financial services.	Enjoy the San Diego sun and many opportunities to network with your peers.

Core Learning Tracks

In addition to our featured courses, TDWI offers training in seven core tracks:

// **Leading in a Data-Driven Organization**

// **Data Analytics**

// **Big Data**

// **Data Visualization**

// **Data Modeling & Management**

// **Data Warehousing & BI**

// **Tools and Technology**

"
The TDWI conference was of tremendous value to our organization. We were able to get a deeper understanding of the changes in the analytics landscape and how using big data can differentiate our company in this extremely competitive landscape. We plan to attend multiple TDWI events throughout the year.

—B. Docili
Technicolor

"
It was both validating and forward looking. The classes validated the value of our early BI analytics efforts. Peer interactions, an integral aspect of the classes, provided possible paths for future BI development within our own company.

—G. Erickson
RDO Equipment Co.

Keynote Presentations

Monday, September 21, 8:00–8:45 a.m.

Elevating Your Data Platform: Philosophy, Pragmatism, and Practices

Kurt Brown
Director, Data Platform
Netflix

Are you getting the most out of your data platform? The technologies you choose are important, but not as important as how you put them into practice. Part philosophy and part pragmatic reality, I'll dive into our thinking at Netflix on using the cloud, open source software, building vs. buying, challenging everything (constructively), providing building blocks and paved paths, technology selection, and more. I'll also talk through our tech stack, which includes many big data technologies (e.g., Hadoop, Spark, and Presto), traditional BI tools (e.g., Teradata, MicroStrategy, and Tableau), and custom tools and services (e.g., our big data portal and API). My hope (and expectation) is that you'll leave with an arsenal of new ideas on the best way to get things done.

Thursday, September 24, 8:00–8:45 a.m.

Implementing Predictive Analytics Programs: What's Possible?

Mike Lampa
Managing Partner
Archipelago IS, LLC

Making business decisions via rearview mirror reflections and gut-feel hunches no longer suffices in today's competitive world. Enterprises embracing data-driven decisions outperform the competition by 5-6 percent. They leverage data to analyze performance, reveal behavior patterns, identify anomalies, prove causal relationships, and generate actionable, game-changing insights. Whether it's higher revenues, improved profits, or reduced security and audit risks you're after, advanced (predictive and prescriptive) analytics is a key enabler.

During this presentation you will learn how enterprises are succeeding in instituting a data-driven decision culture, adopting predictive analytics program disciplines, and augmenting their systems architectures and methodologies to embrace the dynamic requirements of predictive analytics.

Who Should Attend

// **Business and IT leaders working to build a data-driven organization**

// **Business and data analysts who turn data into knowledge and insight**

// **Everyone who is interested in big data from those seeking business opportunities to those faced with the technical challenges**

// **BI, data warehousing, and analytics architects, designers, and developers**

// **Data architects, modelers, designers, and developers working across the data continuum from structured data to non-traditional data sources**

// **Data stewards, custodians, and stakeholders who are challenged by the expanding scope of data and the growing complexity of regulations governing data privacy, security, and use**

// **Anyone who wants to get hands-on with state-of-the-art technologies for data mining, big data, and data visualization**

REGISTER EARLY & SAVE

SUPER EARLY—SAVE 20%
SAVE UP TO $855
WHEN YOU REGISTER BY JULY 31

EARLY—SAVE 10%
SAVE UP TO $345
WHEN YOU REGISTER BY AUGUST 21

USE PRIORITY CODE SD3

Why TDWI?

TDWI knows you have a choice when it comes to training. For more than 20 years, TDWI's community of practitioners, analysts, educators, and solution providers has helped data professionals get smarter, so the companies they work for can manage and monetize data more effectively. What sets TDWI's training apart?

// **All things data.** TDWI offers the most comprehensive coverage of data-related topics, including business intelligence, data warehousing, big data, visualization and advanced analytics, and more.

// **In-depth, vendor-neutral education.** Classes of different lengths, taught by seasoned professionals, trusted vendor representatives, and industry thought leaders for new and experienced practitioners.

// **Trusted in the space.** For more than 20 years, our full-time, on-staff research analysts and education directors have tracked technologies and trends to bring you the most comprehensive, timely education available.

// **Immediate impact.** The things you learn in the classroom today can be applied at work tomorrow. The focus is on practical education that you can use.

// **Networking opportunities** at evening receptions and luncheons.

// **Exhibit hall.** See the latest solutions from leading providers of hardware, software, and services for analytics, business intelligence, and related technologies.

TDWI EDUCATION and PHILOSOPHY

TDWI provides individuals and teams with a comprehensive portfolio of business and technical education and research to acquire the knowledge and skills they need, when and where they need them. The in-depth, best-practices-based information TDWI offers can be quickly applied to develop world-class talent across your organization's business and IT functions to enhance analytical, data-driven decision making and performance.

TDWI advances the art and science of realizing business value from data by providing an objective forum where industry experts, solution providers, and practitioners can explore and enhance data competencies, practices, and technologies.

TDWI never endorses any specific products, services, or tools and goes to great lengths to keep course offerings free of bias. To sustain the high standard of quality and product neutrality, we kindly ask your assistance by responding thoughtfully to the objectivity category when completing training evaluation forms.
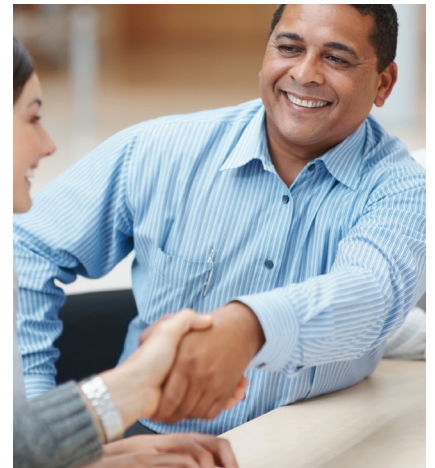
Meet Our Faculty

TDWI faculty are thoroughly vetted for depth of expertise as well as presentation style to deliver curriculum-based, full-day training. Many are authors and well-known authorities in the space.

Chris Adamson, CBIP
Founder and BI Specialist
Oakton Software LLC
COURSES T3, W3, F2

Mark Albala
Lead, Thought Leadership, Architecture and Technology, Digital Insights
Cognizant
COURSE F5A

Stephen Brobst
Managing Partner
Sampo Technologies & Systems
COURSES S4, M4

Kurt Brown
Director, Data Platform
Netflix
MONDAY KEYNOTE

Andrew Cardno
Data Visualization Expert
AmericanKiwi LLC
COURSE M4

Maureen Clarry
President
Clarry Consulting Inc.
COURSE M7

Ted Cuzzillo
Data Intelligence Journalist
Datadoodle
COURSES F3A, F3P

Aaron Fuller, CBIP
Principal
Superior Data Strategies, LLC
COURSES T1, W3

Jonathan Geiger, CBIP
Executive Vice President
Intelligent Solutions, Inc.
COURSES T5, TH2

Richard Hines
Vice President Business Analytics, Global
Hitachi Solutions Ltd
COURSES S1, M1

Claudia Imhoff, Ph.D.
President and Founder
Intelligent Solutions, Inc.
COURSE T5

Krish Krishnan
CEO
Sixth Sense Advisors, Inc.
COURSES W5, TH6

Mike Lampa
Managing Partner
Archipelago IS, LLC
COURSES W1, F4A, F4P, THURSDAY KEYNOTE

Deanne Larson, DM, CBIP
President
Larson & Associates
COURSES S3, M5

Evan Levy, CBIP
Vice President of Business Consulting
SAS
COURSES S5, M6

Mark Madsen
President
Third Nature, Inc.
COURSE TH3

Eileen McDaniel, Ph.D.
Director of Analytics User Experience
Freakalytics, LLC
COURSE W2

Stephen McDaniel
Chief Data Scientist
Freakalytics, LLC
COURSE W2

William McKnight
President
McKnight Consulting Group
COURSES T7A, T7P

John Myers
Managing Research Director
Enterprise Management Associates
COURSES M2, T4, W6A, W6P

John O'Brien, CBIP
President
Radiant Advisors
COURSES S6A, S6P

Ben Olsen
Partner
Fizzy, Inc.
COURSE TH4

Mark Peco, CBIP
Partner
InQvis
COURSES S2, M8A, M8P

Shawn Rogers
President
Analytic Response, LLC
COURSES W5A, W5P

Dave Wells, CBIP
BI Consultant, Mentor, and Teacher
COURSES M3, T2, TH5, F3A, F3P

Nancy Williams, CBIP
Vice President and Principal Consultant
DecisionPath Consulting
COURSES TH1, F1

Vendor Exhibition

EXHIBIT HALL HOURS

	Tuesday		Wednesday
	Exhibit Hall Open and Lunch 11:15 a.m.–2:15 p.m.	**Exhibit Hall Open and Reception** 5:00–7:00 p.m.	**Exhibit Hall Open and Lunch** 12:00 p.m.–2:00 p.m.

The TDWI Exhibit Hall features leading providers of hardware, software, and services for analytics, business intelligence, and related technologies demonstrating their latest solutions. Time is set aside for visiting with these solution providers without missing any courses.

Visit tdwi.org/SD2015 for more information about exhibitors at TDWI San Diego.

View all past exhibitors at tdwi.org/SD2015/exhibitors.

RECENT TDWI EXHIBITORS:

Actian Corporation
Actuate
Adaptive Planning
Alteryx
Altosoft, A Kofax Company
Analytix Data Services LLC
Attivio
Birst
Blue Star Infotech
CA Technologies
CBIG Consulting
CirrusPoint
Cisco
Cloudera
Collibra
Compact Solutions
Composite Software, Inc.
Damaka
Datasource Consulting

Datawatch
Dell Software
Denodo Technologies
Domo Technologies
Esri
EXASOL
GoodData
Halo BI
Hortonworks
HP
HP Vertica
IBM
iceDQ
Impetus Technologies
Infogix, Inc.
Information Builders
Intel
iOLAP, Inc.
Jaspersoft

Kalido by Magnitude Software
L&T Infotech
Liaison
Logi Analytics
Looker
MapR
MarkLogic
MemSQL
Microsoft
MicroStrategy
Neudesic
Neutrino Concepts Ltd.
Oracle
ParAccel, Inc.
Pentaho
RedPoint Global
Rocket Software
SAP
SAS Institute Inc.

Sisense
SnapLogic, Inc.
Solace Systems
Splunk
Tableau Software
Talend
Tamr
Teradata Corporation
TIBCO Spotfire
TimeXtender
Treasure Data
Trillium Software
ValueMomentum
VelociData, Inc.
WebAction
WhereScape
YarcData
Yellowfin

TDWI PARTNERS

For 2015, the following companies have joined the TDWI Partner program. These solution providers share the TDWI commitment to quality education, research, and knowledge transfer for business intelligence, analytics, and data warehousing.

PLATINUM PARTNERS

PARTNERS

Agenda

SUNDAY
September 20

SCHEDULE

COURSES

Full Day	9:00 a.m.–5:00 p.m.
Half Day A (a.m.)	9:00 a.m.–12:15 p.m.
Half Day P (p.m.)	1:45–5:00 p.m.

EVENTS

Breakfast	8:00–9:00 a.m.
Lunch Break	12:15–1:45 p.m.

COURSE OFFERINGS

S1 · cbip · BI · p. 12
TDWI Business Intelligence Principles and Practices: Charting the Course to BI Success
R. Hines

S2 · cbip · DA · p. 12
TDWI Business Analytics: Exploration, Experimentation, and Discovery
M. Peco

S3 · cbip · DM · p. 12
TDWI Dimensional Data Modeling Primer: From Requirements to Business Analysis
D. Larson

S4 NEW! · DA · p. 13
Social Network Analysis: Practical Uses and Implementation
S. Brobst

S5 · LD DM · p. 13
Designing Your Company's Data Strategy
E. Levy

S6A NEW! · LD · p. 13
Mission Impossible: Developing Analytic Capabilities, Culture, and Teams
J. O'Brien

S6P NEW! · DA · p. 14
Defining Architectures That Support Advanced Analytics Variety
J. O'Brien

MONDAY
September 21

SCHEDULE

COURSES

Full Day	9:15 a.m.–5:15 p.m.
Half Day A (a.m.)	9:15 a.m.–12:30 p.m.
Half Day P (p.m.)	2:00–5:15 p.m.

EVENTS

Breakfast	7:30–8:00 a.m.
Keynote Presentation (see p. 3)	8:00–8:45 a.m.
Best Practices Awards	8:45–9:00 a.m.
Lunch Break	12:30–2:00 p.m.
CBIP Exam Lab	5:45–7:15 p.m.
Welcome Reception	6:30–8:00 p.m.

COURSE OFFERINGS

M1 · cbip · BI · p. 14
TDWI Business Intelligence Architecture: Principles of BI Design
R. Hines

M2 · BI · p. 14
TDWI Data Warehouse Automation: Better, Faster, Cheaper … You Can Have It All
J. Myers

M3 · cbip · DM · p. 15
TDWI Data Modeling: Data Analysis and Design for BI and Data Warehousing Systems
D. Wells

M4 · DV · p. 15
Overcoming Information Overload with Best Practices in Data Visualization
S. Brobst, A. Cardno

M5 · Hands-on TT DA · p. 15
Hands-on: Data Mining with R
D. Larson

M6 · BD · p. 16
Tactics from the Data Trenches: Tackling the Diverse Challenges of New Data
E. Levy

M7 · LD · p. 16
Power, Politics, and Partnership: Building an Analytics Culture
M. Clarry

M8A · cbip · BI · p. 16
CBIP Preparation for the Information Systems Core Exam
M. Peco

M8P · cbip · BI · p. 17
CBIP Preparation for the Data Warehousing Exam
M. Peco

TUESDAY
September 22

SCHEDULE

COURSES

Full Day	8:00 a.m.–5:30 p.m.
Half Day A (a.m.)	8:00–11:15 a.m.
Half Day P (p.m.)	2:15–5:30 p.m.

EVENTS

Breakfast	7:30–8:00 a.m.
Exhibit Hall Open and Lunch	11:15 a.m.–2:15 p.m.
Premium Membership Briefing	1:40–2:00 p.m.
Exhibit Hall Open and Reception	5:00–7:00 p.m.

COURSE OFFERINGS

T1 · cbip · BD · p. 17
TDWI Big Data Fundamentals: Creating Value from Non-Traditional Data Sets
A. Fuller

T2 · DV · p. 17
TDWI Data Visualization Fundamentals
D. Wells

T3 · cbip · DM · p. 18
Dimensional Modeling: Intermediate and Advanced Techniques
C. Adamson

T4 · cbip · BI · p. 18
TDWI Data Virtualization: Solving Complex Data Integration Challenges
J. Myers

T5 · DA · p. 18
Solving Common Analytics Problems
J. Geiger, C. Imhoff

T6 · Hands-on TT · p. 19
Hands-On Lab: Big Data Analytics: Swimming in the Data Lake

T7A · TT BD DM · p. 19
Introduction to NoSQL for Those Used to SQL: Storing and Managing Operational Big Data
W. McKnight

T7P NEW! · TT · p. 19
Introduction to Graph Databases
W. McKnight

COURSE TOPICS KEY

- **BI** Data Warehousing and BI
- **BD** Big Data
- **DM** Data Modeling and Management
- **DV** Data Visualization
- **DA** Data Analytics
- **LD** Leading in a Data-Driven Organization
- **TT** Tools and Technology
- **Hands-on Training**

cbip Recommended courses to help with CBIP certification exam prep.

Some classes cover more than one topic. Primary focus is listed first.

WEDNESDAY · September 23

SCHEDULE

COURSES
Full Day	9:00 a.m.–5:00 p.m.
Half Day A (a.m.)	9:00 a.m.–12:00 p.m.
Half Day P (p.m.)	2:00–5:00 p.m.

EVENTS
Breakfast	8:00–9:00 a.m.
Exhibit Hall Open and Lunch	12:00–2:00 p.m.
CBIP Exam Lab	5:30–7:00 p.m.

COURSE OFFERINGS

○ **W1** ✓cbip DA   p. 20
TDWI Predictive Analytics Fundamentals
M. Lampa

○ **W2** ✋ DV   p. 20
Hands-on Visualization with Point-and-Click Open Source Tools
S. McDaniel, E. McDaniel

○ **W3** BD DM   p. 20
Data Modeling in the Age of Big Data
C. Adamson, A. Fuller

○ **W4** TT   p. 21
Understanding Hadoop
K. Krishnan

W5A DA   p. 21
Social Analytics in the Enterprise
S. Rogers

W5P BD LD   p. 21
Strategies for Big Data Success: Privacy, Compliance, and Best Practices
S. Rogers

○ **W6A** TT   p. 21
Selecting the Right Analytics Tools for Your Organization
J. Myers

○ **W6P** TT   p. 22
Selecting Tools for Your Hybrid Data Ecosystem
J. Myers

○ **W7A** ✋ TT   p. 22
Hands-on Lab : Data Warehouse Automation: Build a Fully Functional, Documented Data Warehouse in Two Hours!

○ **W7P** ✋ TT   p. 22
Hands-on Lab : Self-Service Data Preparation

THURSDAY · September 24

SCHEDULE

COURSES
Full Day	9:00 a.m.–5:00 p.m.
Half Day A (a.m.)	9:00 a.m.–12:15 p.m.
Half Day P (p.m.)	1:45–5:00 p.m.

EVENTS
Breakfast	7:30–8:00 a.m.
Keynote Presentation (see p. 3)	8:00–8:45 a.m.
Lunch Break	12:15–1:45 p.m.
CBIP Exam Lab	5:30–7:00 p.m.

COURSE OFFERINGS

○ **TH1** ✓cbip DM   p. 22
TDWI Data Quality Management: Techniques for Data Profiling, Assessment, and Improvement
N. Williams

○ **TH2** ✓cbip DM   p. 23
TDWI Advanced Data Modeling Techniques
J. Geiger

○ **TH3** BD DA   p. 23
Demystifying Big Data: Designing an Architecture for Data and Analytics
M. Madsen

○ **TH4** UPDATED! DV   p. 23
Advanced Topics in Data Visualization
B. Olsen

○ **TH5** DA   p. 24
Business Analytics for Insight and Foresight
D. Wells

○ **TH6** ✋ TT   p. 24
Hands-on Hadoop
K. Krishnan

○ **TH7**   p. 24
Case Study Presentations: Healthcare

○ **TH8**   p. 25
Case Study Presentations: Financial Services

FRIDAY · September 25

SCHEDULE

COURSES
Full Day	8:00 a.m.–3:30 p.m.
Half Day A (a.m.)	8:00–11:15 a.m.
Half Day P (p.m.)	12:15–3:30 p.m.

EVENTS
Breakfast	7:30–8:00 a.m.
Lunch Break	11:15 a.m.–12:15 p.m.
CBIP Exam Lab	8:00 a.m.–2:00 p.m.

TDWI has arranged the Friday schedule to finish earlier than the other days of the week yet still provide a full day of instruction.

COURSE OFFERINGS

○ **F1** ✓cbip DM LD   p. 25
TDWI Data Governance Innovations: Adapting for Agile, Big Data, and Cloud
N. Williams

○ **F2** ✓cbip BI   p. 25
TDWI Data Integration Principles and Practices: Creating Information Unity from Data Disparity
C. Adamson

○ **F3A** DV   p. 25
Data Storytelling: The New Horizon in Business Analytics
D. Wells, T. Cuzzillo

○ **F3P** DV   p. 26
Data Storytelling Workshop
D. Wells, T. Cuzzillo

○ **F4A** TT   p. 26
Emerging Technology for Advanced Analytics
M. Lampa

○ **F4P** DA   p. 26
Innovative Techniques for Advanced Analytics
M. Lampa

○ **F5A** DA   p. 27
The How and Why of Location-Based Analytics: Gaining Insight from Geospatial and Proximity Data
M. Albala

SEE PAGES 9–11 FOR COURSE OFFERINGS BY TOPIC.

Featured Training & Core Topics

Six action-packed days filled with classes, case studies, hands-on training, and networking offer an accelerated learning experience for business and technical leaders and implementers.

LD LEADING IN A DATA-DRIVEN ORGANIZATION

Leadership in data-driven organizations becomes increasingly important and complex as the range of data sources and variety of data uses expand. In the age of advanced analytics and big data, leadership encompasses many topics, including strategies, people, cultures, capabilities, governance, data protection, regulatory compliance, and much more. These courses are designed to cover the "must have" knowledge for those in leadership roles.

CASE STUDIES

Gain in-depth, actionable insights on how leading organizations are transforming data into business value, including a one-day deep dive on two verticals.

HANDS-ON LABS

Learn how to use all the latest tools and technologies from data warehouse automation and data virtualization to data visualization. These half-day sessions are offered on Tuesday and Wednesday.

San Diego 2015
September 20–25

BI & Analytics in Financial Services: Agenda 9/24

Time	Case Study	Presenter
9:00 - 10:30a	**Case Study:** Data Analytics Federation vs. Centralization: When and where it makes sense	Ryan Fenner *Vice President, Enterprise Data Solutions Architect, Union Bank*
10:45a - 12:15p	**Case Study:** Naval Federal Credit Union: A Case Study in Enhancing Analytic Capabilities	Oliver Smith & Carol Hayes *Enterprise Data Strategy & Services, Information Services Deptartment Navy Federal Credit Union*
1:45 - 3:15p	**Case Study:** Case Study: The Analytics Roadmap and Lessons Learned	Juan Gorricho *VP, Chief Data & Analytics Officer Partners Federal Credit Union*

BI & Analytics in Healthcare Agenda 9/24

Time	Case Study	Presenter
9:00 - 10:30a	**Case Study:** Using Governance and Analytics to Treat the "Healthcare Data Complexity Disease"	Evon Holloday *VP Enterprise Intelligence - Analytcs & Data Operations, Catholic Health Initiatives*
10:45a - 12:15p	**Case Study:** How Swedish Medical Group Booster Cancer Screening Rates with Data Transparency	Ann Goldman *Director, Finance & Decision Support, Swedish Medical Center, Providence Health & Services*
1:45 - 3:15p	**Case Study:** Healthy Analytics at Hoag Hospital: Improving Care & Affordability	Waleed Bassyoni *Data Warehouse / Business Intelligence & Reporting	IT, Hoag Memorial Hospital Presbyterian*

DM DATA MODELING AND MANAGEMENT

Data is the fuel that powers BI and analytics. Well-managed data provides the foundation for delivery of BI applications. Data that is meaningful and easily understood—supported with models and metadata—is essential to analytics success. Critical skills in this area include modeling for relational, dimensional, and big data stores as well as capabilities for data governance and managed quality.

BI DATA WAREHOUSING AND BUSINESS INTELLIGENCE

Business intelligence and analytics are closely related fields, both focused on quantifying business activities, behaviors, and results. Courses covering BI, performance management, and predictive analytics help to lay a strong foundation upon which you can build increasingly advanced analytics capabilities.

DA DATA ANALYTICS

Data analytics courses cover topics such as streaming, clickstream, geospatial, and social analytics as well as data science and technology perspectives.

BD BIG DATA

Big data brings new opportunities for analytics—but it also brings new challenges: fitting new and non-traditional data sources into your data strategy and data architecture, choosing the right use cases for big data, embracing big data technologies, executing big data projects, and much more. From big data basics to lessons learned "in the trenches," you'll learn concepts and techniques to make the most of your big data analytics endeavors.

○ **M6**   p. 16
Tactics from the Data Trenches: Tackling the Diverse Challenges of New Data

○ **T1**   p. 17
TDWI Big Data Fundamentals: Creating Value from Non-Traditional Data Sets

○ **T7A**   p. 19
Introduction to NoSQL for Those Used to SQL: Storing and Managing Operational Big Data

○ **W5P**   p. 21
Strategies for Big Data Success: Privacy, Compliance, and Best Practices

○ **W3**   p. 20
Data Modeling in the Age of Big Data

○ **TH3**   p. 23
Demystifying Big Data: Designing an Architecture for Data and Analytics

DV DATA VISUALIZATION

Modern information delivery practices and effective analytics present data in concise, understandable, and engaging visual forms. Data visualization is a language (of images) that communicates in much the same way as the languages of words and numbers. High-impact information delivery often adds narrative to visuals, combining images and words to let the data tell a story. Comprising chart and graph design, concise presentation of massive data volumes, and the art of data storytelling, these courses build the skills to communicate most effectively with data and analytics.

○ **M4**   p. 15
Overcoming Information Overload with Best Practices in Data Visualization

○ **T2**   p. 17
TDWI Data Visualization Fundamentals

○ **W2**   p. 20
Hands-on Visualization with Point-and-Click Open Source Tools

○ **TH4**   p. 23
Advanced Topics in Data Visualization

○ **F3A**   p. 25
Data Storytelling: The New Horizon in Business Analytics

○ **F3P**   p. 26
Data Storytelling Workshop

TT TOOLS AND TECHNOLOGY

The new world of big data analytics brings an onslaught of new technologies that are continuously changing. Hadoop, NoSQL, data visualization, data mining, and other analytics capabilities are technology dependent, with open source driving much of the technology evolution. This track helps you understand the variety of tools and technologies, learn what to expect as the technologies evolve, make informed technology decisions, and gain hands-on experience with big data and analytics technologies.

○ **M5**   p. 15
Hands-on: Data Mining with R

○ **T6**   p. 19
Hands-On Lab: Big Data Analytics: Swimming in the Data Lake

○ **T7P**   p. 19
Introduction to Graph Databases

○ **W4**   p. 21
Understanding Hadoop

○ **W6A**   p. 21
Selecting the Right Analytics Tools for Your Organization

○ **W6P**   p. 22
Selecting Tools for Your Hybrid Data Ecosystem

○ **W7A**   p. 22
Data Warehouse Automation: Build a Fully Functional, Documented Data Warehouse in Two Hours!

○ **W7P**   p. 22
Hands-On Lab: Self-Service Data Preparation

○ **TH6**   p. 24
Hands-on Hadoop

○ **F4A**   p. 26
Emerging Technology for Advanced Analytics

Course Descriptions

Sunday, September 20, 9:00 a.m.–5:00 p.m.
                                                                  Data Warehousing and BI

TDWI Business Intelligence Principles and Practices: Charting the Course to BI Success

Richard Hines

The BI life cycle spans a continuum that begins with large amounts of disparate data and stretches to encompass people, technology, information, analysis, and decision making. The benefits of BI are substantial: new business capabilities for insight, forecasting, planning, agility, and strategy execution.

Realizing benefits is challenging. With many moving parts—infrastructure, technology, data, integration, analytics, applications, metrics, reports, dashboards, scorecards—putting the pieces together in the most effective way is difficult. Learn the basics of BI from end to end, with special attention on two of the most important factors for BI success: planning and collaboration. You are most able to chart a course for BI success when teams and stakeholders share common concepts, use consistent terminology, and contribute collectively to the BI vision.

YOU WILL LEARN
- Meaningful and actionable definitions of BI
- Effective ways to deliver BI: Web, mobile, desktop, etc.
- Common kinds of BI reporting: ad hoc, published, enterprise, operational
- Performance management principles: dashboards, scorecards, KPIs
- Business analyst principles: OLAP, analytic modeling, data visualization
- Advanced analytics concepts for data mining, predictive analytics, and text analytics
- Data management practices: profiling, cleansing, quality management
- Data integration practices: consolidation, virtualization, data warehousing

GEARED TO
Anyone with a role in BI/DW programs who needs to understand the concepts and the full life cycle of BI; BI/DW managers and leaders seeking to increase the value and business impact of a BI program; business and technical people who need to work together to implement BI; teams that need to develop a common base of concepts and terminology for BI

Sunday, September 20, 9:00 a.m.–5:00 p.m.
                                                                          Data Analytics

TDWI Business Analytics: Exploration, Experimentation, and Discovery

Mark Peco

Analytics is at the forefront of business intelligence. The promise of BI is found in data analysis that provides insight and drives innovation. Data-driven investigation, exploration, and experimentation lead to the kinds of discoveries that uncover opportunities and help to answer future-looking questions. Analytics is a hot topic in business management, and quantitative analysis has rapidly become the in-demand skill for data management. What was once a specialty field exclusive to statisticians and mathematicians has become mainstream. Today's business analysts combine understanding of business, data, statistics, math, visualization, and problem solving to meet business-critical needs for information, understanding, and insight.

YOU WILL LEARN
- How models are used to define and frame analytic needs

- Model development techniques including influence diagramming, spreadsheet engineering, and parameterization
- Model refinement techniques including sensitivity analysis, strategy analysis, and iteration
- Discovery-oriented techniques including heuristic analysis, subjective probability, and hypotheses and experimentation
- Statistical foundations of data analysis including histograms, standard deviation, and regression
- The data side of analytics—data preparation, data cleansing, data visualization
- The human side of analytics—communication, conversation, collaboration
- A bit about analytics tools from free and open source to advanced analytics technology

GEARED TO
Practicing business analysts and those who aspire to become business analysts; business functional managers responsible to analyze performance and risk; BI program managers, architects, and project managers; BI and IT professionals seeking to know more about business analytics

Sunday, September 20, 9:00 a.m.–5:00 p.m.
                                                               Data Modeling and Management

TDWI Dimensional Data Modeling Primer: From Requirements to Business Analysis

Deanne Larson

Dimensional data is a core component of modern business intelligence and data warehouse implementations. Dimensionally organized data offers a more effective and adaptable solution to business analytics needs than can be achieved with relational data structures. Virtually anyone involved in business intelligence and data warehousing projects needs to have fundamental knowledge of the pathway from business questions to business analytics. This course traces that pathway.

The course begins with a comparison of relational and dimensional data organization and provides an example of business questions not readily answered using the more traditional data structures of relational modeling. It then illustrates the steps to design analytic solutions, starting from business questions and concluding by demonstrating an OLAP solution. These steps encompass techniques to capture business questions, represent them as a business solution, translate them into a technology solution, and deliver them to those who need information.

YOU WILL LEARN
- Concepts of dimensional data modeling
- The relationship between business metrics and dimensional data
- Similarities and differences between relational and dimensional data models
- Requirements-gathering techniques for business metrics and dimensional data
- How to build a logical dimensional model
- How to translate a logical dimensional model to a star schema design
- How dimensional data is used to deliver business analytics and OLAP capabilities

GEARED TO
Data architects; data mart developers; business analysts; business intelligence and data warehouse program and project managers

S4 NEW!   Sunday, September 20, 9:00 a.m.–5:00 p.m.
Data Analytics

Social Network Analysis: Practical Uses and Implementation

Stephen Brobst

Social networking via Web 2.0 applications such as LinkedIn and Facebook has created huge interest in understanding the connections between individuals to predict patterns of churn, influencers related to early adoption of new products and services, successful pricing strategies for certain kinds of services, and customer segmentation. We will explain how to use these advanced analytic techniques with mini case studies across a wide range of industries including telecommunications, financial services, healthcare, retailing, and government agencies. Identification of strong, medium, and weak ties in a social network has many applications—but can be computationally intense to calculate for large populations. This workshop will illustrate techniques for successful deployment of social network analysis using practical algorithms and parallel database technologies to overcome scale problems inherent in performing implementation at large scale (millions of customers/prospects). Practical case studies for extracting value from social network analysis in the areas of fraud detection, churn reduction, and viral marketing will be discussed. Social networking analysis using transactional data as well as social media analytics for sentiment analysis will be covered. In addition to traditional social network analysis, we will discuss using bi-partite graphs for advanced product recommendations and fraud analytics.

YOU WILL LEARN
- About different techniques for social network analysis: relational, transactional, and new media.
- The critical success factors for implementing social network analysis.
- How to apply social networking analysis for purposes of customer retention, fraud detection, and more.

GEARED TO
Data scientists and aspiring data scientists; BI analysts; solution architects; and anyone wishing to understand value creation from social network and social media data.

S5   Sunday, September 20, 9:00 a.m.–5:00 p.m.
Leading in a Data-Driven Organization
Data Modeling and Management

Designing Your Company's Data Strategy

Evan Levy

Companies are dealing with exploding amounts of data; and a common belief is that volumes are doubling every two years. While most people agree that data is a corporate asset, there's little discussion about how companies can ensure that data is being managed and used effectively. With the continued growth of IT budgets, it has become commonplace to challenge the value (and ongoing cost) of retaining data assets. Although most IT organizations are prepared to discuss their strategy with technology platforms, tools, and methodologies, few are equipped to discuss their goals and strategy for corporate data.

A successful data strategy isn't just about data management, naming standards, or governance methods. It must support the goals and the execution details for ensuring the effective adoption and use of data assets. In this class,

Evan Levy discusses the details and reviews the activities that go into building a comprehensive data strategy.

YOU WILL LEARN
- The key components of an enterprise data strategy
- Aligning the strategy with your company's goals and priorities
- The key tactical enablers that can elevate the visibility of a data strategy initiative
- Understanding the alternatives and determining the best fit for your company
- The analysis and construction activities involved in building your company's data strategy
- Identifying the stakeholders and determining their roles in supporting the strategy
- Suggested approaches and techniques for conducting stakeholder interviews, along with sample questions
- Building sample strategy artifacts based on real-world scenarios

GEARED TO
CIOs and chief data officers, IT program managers, business sponsors and end users, BI program management, and data management staff

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S6A NEW!   Sunday, September 20, 9:00 a.m.–12:15 p.m.
Leading in a Data-Driven Organization

Mission Impossible: Developing Analytic Capabilities, Culture, and Teams

John O'Brien

As companies embrace advanced analytics, business leaders are recognizing that people and culture are critical to realizing a sustainable business analytics program. Beyond skills and technology, a clear understanding of the organizational strategy for analytics can be counterintuitive to existing BI/DW competency centers. Analytics processes are also very different from their complementary BI development processes. Today, data-driven companies are taking innovative approaches to developing, deploying, and maintaining analytic assets, and working to build analytical cultures and communities within their organizations.

In this session we will discuss effective organizational strategies for implementing advanced analytics and how to develop new analytic processes and operational effectiveness. Then we'll share tips on how analytic-minded organizations can learn from companies already building a thriving analytical culture.

YOU WILL LEARN
- Organizational strategies for adopting advanced analytics
- Analytic development processes and operational effectiveness
- The importance of properly applying advanced analytics
- Tips from companies for building a thriving analytical culture

GEARED TO
Business and technical leaders; program managers; BI teams

Course Descriptions

Sunday, September 20, 1:45–5:00 p.m.
Data Analytics

Defining Architectures That Support Advanced Analytics Variety

John O'Brien

Companies wanting to become data-centric and integrate advanced analytics, discovery, and big data into their existing BI/DW strategies need to think beyond analytic sandboxes or specialized tools. Based on data management principles and polyglot persistence, the modern data platform framework provides a holistic and evolutionary approach for data warehouse transformations. Advanced analytics is no longer limited to SQL and MDX, as the world of NoSQL data stores enables valuable analytic capabilities alongside advanced analytic languages and visualization libraries.

This session will discuss how modern data platforms will enable advanced analytics and discovery, and the role of the data lake in next-generation data architectures. With this solid framework in place, we will also discuss how emerging technologies and open source variations will need to balance innovation with risk in the architecture itself.

YOU WILL LEARN
- Modern data platforms for enabling advanced analytics and discovery
- The role of data lakes in next-generation data architectures
- Balancing established technologies with emerging technologies and analytics (data wrangling)
- The role of open source technologies in your analytics framework

GEARED TO
Business innovators; enterprise architects; technology managers; application developers; data modelers

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M1 cbip

Monday, September 21, 9:15 a.m.–5:15 p.m.
Data Warehousing and BI

TDWI Business Intelligence Architecture: Principles of BI Design

Richard Hines

Business intelligence architecture is a set of frameworks to organize the data, management, and technical components used to build BI systems. Architecture plays an important role in BI programs and projects, ensuring that the development efforts of multiple projects fit neatly together as a cohesive whole. Comprehensive architecture addresses data, technology, integration, business rules, processes, projects, and more. Multifaceted, multidimensional, and complex—BI architecture is clearly a team job that involves data architects, integration architects, technology architects, and more. With the right knowledge and skills, your BI architects become an effective team able to handle the many complexities of BI systems.

YOU WILL LEARN
- The full scope of architectural objectives—structural integrity, standardization, reusability, environmental fit, aesthetics, and sustainability
- A framework to ensure architectural completeness—business, organization, data, integration, and process views
- A framework to organize BI components—access, analysis, presentation, storage, integration, and data source tiers
- A framework to organize the information management stack—data, integration, rules, tools, teams, reports, analysis, and application

- A framework to organize architectural requirements—functional, data, operations, environment, and structural requirements
- A framework to organize technology requirements—data access, data manipulation, data analysis, reporting, visualization, security, portability, and accessibility
- Technology trends and BI architecture—cloud, SaaS, open source, appliances, advanced visualization
- Organizational options for best fit of BI into your culture—conglomerate, cooperative, and centralized
- Data integration options in BI architecture—bus, hub and spoke, hybrid, federation, and virtualization

GEARED TO
Anyone who has a role in defining, documenting, or applying architecture in BI and data warehousing programs, including business architects, data architects, integration architects, and technology architects

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M2

Monday, September 21, 9:15 a.m.–5:15 p.m.
Data Warehousing and BI

TDWI Data Warehouse Automation: Better, Faster, Cheaper … You Can Have It All

John Myers

Building a data warehouse is among the most labor-intensive and time-consuming activities of BI development. There are many moving parts—requirements, source data analysis, source-target mapping, data acquisition, data transformation logic, ETL design, database loading, scheduling, error handling—and getting it right the first time isn't easy. When you finally do get it right, something changes. One of the most pervasive problems in BI today is the fact that data warehouses take too long to build and they are hard to change!

Data warehouse automation (DWA) is a relatively new class of technology that accelerates warehouse development and change cycles while simultaneously assuring quality and consistency. More than simply generating ETL scripts, DWA automates the entire life cycle from source system analysis to testing and documentation. Productivity gains, cost savings, and quality improvement are all possible with DWA.

YOU WILL LEARN
- Concepts, principles, and practices of data warehouse automation (DWA)
- The current state of DWA technology
- Automation opportunities and benefits when building or managing a data warehouse
- How to get started with DWA
- Best practices and mistakes to avoid with DWA

GEARED TO
BI and data warehousing program and project managers; data integration architects, designers, and developers; data warehouse operations, maintenance, and support personnel; data and technology architects

M3 cbip

Monday, September 21, 9:15 a.m.–5:15 p.m.
Data Modeling and Management

TDWI Data Modeling: Data Analysis and Design for BI and Data Warehousing Systems

This course assumes knowledge of data warehousing concepts and business intelligence fundamentals.

Dave Wells

Business intelligence and data warehousing systems challenge the proven data modeling techniques of the past. From requirements to implementation, new roles, uses, and kinds of data demand updated modeling skills. The data modeler's toolbox must address relational data, dimensional data, unstructured data, and master data. For those with data modeling experience, this course extends their skills to meet today's modeling challenges. Those new to data modeling are introduced to the broad range of modeling skills needed for BI/DW systems. Those who need to understand data models, but not necessarily develop them, will learn about the various forms of models and what they are intended to communicate.

YOU WILL LEARN
- Differences in modeling techniques for business transactions, business events, and business metrics
- Different types of data and their implications
- Application of business context to modeling activities
- The role of business requirements in BI data modeling
- The role of source data analysis in data modeling
- Use of normalized modeling techniques for data warehouse analysis and design
- Use of dimensional modeling techniques for data warehouse analysis and design
- The roles of generalization and abstraction in data warehouse design
- The roles of identity and hierarchy management in data warehouse design
- How time-variant data is represented in data models
- Implementation and optimization considerations for warehousing data stores

GEARED TO
Data architects; data modelers; BI program and project managers; BI/DW system developers

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M4

Monday, September 21, 9:15 a.m.–5:15 p.m.
Data Visualization

Overcoming Information Overload with Best Practices in Data Visualization

Stephen Brobst, Andrew Cardno

It is well known that human understanding is more effective with pictures than with rows and columns of numbers. However, much of the output from business intelligence environments remains trapped in traditional reporting formats.

In this workshop, we explore best practices for deriving insight from vast amounts of data using visualization techniques. We will examine visualization for reporting with drill-downs and real-time business activity monitoring, and leverage data visualization in connection to data mining algorithms.

A key theme is exposing actionable decisions through the use of visualization techniques. Examples from a variety of industries will be employed. This workshop will describe advanced visualization algorithms, including the use of organic shapes to convey high-density information, how animation of data increases data density, and an experiment demonstrating the data absorption rate of the human mind. The workshop will also cover the relationship between data warehousing and data visualization, showing how metadata can be used to leverage the power of highly detailed data to create insightful data visualizations.

YOU WILL LEARN
- How visualization can be used to overcome information overload
- Best practices in the use of visualization for BI
- Common pitfalls in the use of visualization for BI
- Next-generation visualization techniques using mashups, geospatial data, and animation
- The differences in using visualization for strategic BI versus operational BI
- Critical success factors for implementation of scalable solutions

GEARED TO
Business and IT leaders; managers; analysts; end users; BI application developers

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M5

Monday, September 21, 9:15 a.m.–5:15 p.m.
Tools and Technology
Data Analytics

Hands-on: Data Mining with R

Attendees should have some coding experience and basic statistics, and will need to bring a laptop computer with RStudio installed prior to the session. After you register for the class you will receive detailed instructions for download and installation of RStudio.

Deanne Larson

With the advent of big data, there is an increased focus on data mining and the value that can be derived from large data sets. Data mining is the process of selecting, exploring, and modeling large amounts of data to uncover previously unknown information for business benefit.

R is an open source software environment for statistical computing and graphics and is very popular with data scientists. R is being used for data analysis, extracting and transforming data, fitting models, drawing inferences, making predictions, plotting, and reporting results. Learn how to use R basics, working with data frames, data reshaping, basic statistics, graphing, linear models, non-linear models, clustering, and model diagnostics.

YOU WILL LEARN
- How to configure the RStudio environment and load R packages
- How to use R basics such as basic math, data types, vectors, and calling functions
- How to use advanced data structures such as data frames, lists, and matrices
- How to use R base graphics
- How to use R basic statistics, correlation, and covariance
- How to use linear models such as simple linear regression, logistic regression
- How to use non-linear models such as decision trees and Random Forests
- How to apply clustering using K-means
- How to complete model diagnostics

Course Descriptions

Anyone interested in learning to use data mining techniques to find insights in data and who has at least some statistical and programming experience.

Course is limited to 35 attendees.

M6 Monday, September 21, 9:15 a.m.–5:15 p.m.
Big Data

Tactics from the Data Trenches: Tackling the Diverse Challenges of New Data

Evan Levy

The idea that data is the critical ingredient to running our companies by the numbers is nothing new. We've developed methods to move data between our application systems and data warehouses in a fast and scalable manner. We've delivered business intelligence (BI) solutions to enable users to become knowledge workers. And it's still not enough. It's not enough because the sources of data and the needs of users continue to grow.

Many corporate data ecosystems are based on a vision that is 20 years out of date. Our methods and tactics for managing and processing data must expand to support data outside the company's four walls. Business decisions require access to data outside the traditional IT infrastructure: cloud application platforms, social media feeds, third-party data providers, and business partner systems. We need to be able to support adding and managing new data sources and content more quickly and efficiently. If data is truly a corporate asset, it needs to be accessible and usable by anyone in the company.

In this session, Evan Levy will discuss the challenges within our corporate data ecosystems and the issues associated with supporting the enormous growth of new and diverse data content and sources. He will review various approaches and methods to tackling these challenges and how leading companies are succeeding in addressing their companies' data objectives.

YOU WILL LEARN
- The business data ecosystem and the changes in data usage and sharing inside today's companies
- The most common data challenges in the era of big data and cloud computing
- The methods and infrastructure changes required to support the enormous growth in new data sources and alternative data content
- Tactics for managing data movement within (and outside) of your company; for reviewing tooling to simplify and automate data access and usage; for positioning users as stakeholders in data improvement processes (quality, correction, monitoring, etc.); for delivering (or deferring) data self-sufficiency; and for managing data content at the enterprise, organization, and user levels
- Aligning your company's data needs with their tactical business priorities

GEARED TO
CIOs and chief data officers; IT program managers; business sponsors and end users; BI program management; data management staff

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M7 Monday, September 21, 9:15 a.m.–5:15 p.m.
Leading in a Data-Driven Organization

Power, Politics, and Partnership: Building an Analytics Culture

Maureen Clarry

Data management organizations are at the center of successful, business-value-driven projects. However, cultural issues such as poor communication, power struggles, and organizational silos are frequently cited as factors in project failure. Everyone wants change—but real change rarely happens because we are stuck in old patterns of interaction, and cultural change is difficult. Paying lip-service to "improved communication," "partnership," and "teamwork" won't work. We need new ways for dealing with the complex reality of our organizational difficulties if we want to build a successful analytics culture.

This course will help you see your organization from a whole new perspective! It provides insight and strategies on how to create cross-functional collaboration between the executive sponsor, steering committee, business stakeholders, management, project team, and technical staff. If your organization is struggling with poor communication, misunderstandings between IT and the business, organizational silos, finger-pointing, apathy, or dissatisfied customers, you will see new possibilities and solutions in this class.

YOU WILL LEARN
- Key components of successful analytics cultures
- Predictable patterns of communication and how they impede our effectiveness
- Systemic patterns that contribute to failed projects and strategies for overcoming them
- How to better navigate the complexities of data management politics
- A new model for understanding organizational dynamics and building better partnerships
- Strategies for empowering yourself and others to achieve maximum results

GEARED TO
Business sponsors; business analytics stakeholders; project or program managers; technical staff struggling to make sense of organizational dynamics

Enrollment is limited to 60 attendees.

M8A cbip Monday, September 21, 9:15 a.m.–12:30 p.m.
Data Warehousing and BI

CBIP Preparation for the Information Systems Core Exam

This course assumes a working knowledge of information systems.

Mark Peco

This course is designed for those who already have knowledge and experience in the field of information systems but would benefit from an interactive and informative review prior to testing. You'll get ready to test through discussion, review of concepts and terminology, and sample exam questions. A CBIP-certified instructor who has experienced the examination process and can share tips and techniques to improve your performance on the exam will lead this class.

YOU WILL LEARN
- Concepts and terms used in the exam: technology and business, application system, data management, and systems development
- What constitutes the complete body of knowledge for the exam
- How to assess your knowledge and skill related to the body of knowledge
- What to expect during the examination process
- Techniques to improve your performance when taking the exam

GEARED TO
Everyone seeking CBIP certification (the information systems core exam is required for all CBIP specialties)

Enrollment is limited to 60 attendees.

M8P cbip   Monday, September 21, 2:00–5:15 p.m.
                                                    Data Warehousing and BI

CBIP Preparation for the Data Warehousing Exam

This course assumes a working knowledge of data warehousing.

Mark Peco

This course is designed for those who already have data warehousing knowledge and experience but would benefit from an interactive and informative review prior to testing. You'll get ready to test through discussion, review of concepts and terminology, and sample exam questions. A CBIP-certified instructor who has experienced the examination process and can share tips and techniques to improve your performance on the exam will lead this class.

YOU WILL LEARN
- Concepts and terms used in the exam: organization and methodology, architecture and technology, data modeling concepts, data integration, and implementation and operation
- What constitutes the complete body of knowledge for the exam
- How to assess your knowledge and skill related to the body of knowledge
- What to expect during the examination process
- Techniques to improve your performance when taking the exam

GEARED TO
Everyone seeking CBIP certification (the data warehousing exam is required for all CBIP specialties)

Enrollment is limited to 60 attendees.

T1 cbip   Tuesday, September 22, 8:00 a.m.–5:30 p.m.
                                                    Big Data

TDWI Big Data Fundamentals: Creating Value from Non-Traditional Data Sets

Aaron Fuller

Big data is a hot topic in BI and analytics. Yet it is a complex topic that is still in the early stages of evolution. Successful big data projects that deliver real business value are challenged by multiple definitions and rapidly shifting technologies. Achieving good return on your big data investment requires strategy that focuses on purpose, people, and process before exploring data and technologies. Strategy drives planning and architecture to ensure that big data complements and does not disrupt the existing BI and analytics

environment. To prepare for success with big data, start by understanding all of the pieces and how they fit together.

YOU WILL LEARN
- Common definitions of big data and the implications of each
- Key characteristics of big data and why size is not among the top five
- The structures that can be found in "unstructured" data
- Types of big data sources—streaming data, social data, sensor data, etc.
- Value opportunities and common applications for big data
- Considerations when adapting architectures, organizations, and cultures to incorporate big data
- The scope of big data processes, tools, and technologies

GEARED TO
Business and data analysts; BI and analytics program and project managers; BI and data warehouse architects, designers, and developers; data governance and data quality professionals getting started with big data; anyone seeking to cut through the hype to understand the opportunities, challenges, and realities of the big data phenomenon

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T2   Tuesday, September 22, 8:00 a.m.–5:30 p.m.
                                                    Data Visualization

TDWI Data Visualization Fundamentals

Dave Wells

Data visualization has rapidly become a critical part of business analytics and business communications. Without visualization, the numbers and statistics of analytics are difficult to interpret and incomprehensible to many who need to turn data into knowledge. The advent of big data, with increasing volume and velocity of data, emphasizes visualization as a technique to compress large volumes of data into digestible presentations and observe streaming data in motion.

Elegant and well-designed data visuals often appear to be easy because skilled visual developers are able to hide the complexities and hard work behind the scenes. Business intelligence and business analytics professionals need to communicate as effectively in visual forms as they do with their verbal and written communications skills. Get started by learning the fundamentals of data visualization.

YOU WILL LEARN
- Visualization as a communication medium
- Preparing data for visualization
- Components of visualization
- Choosing and using charts and graphs
- Visual exploration and analysis
- Visual design techniques
- Extending visualization with infographics
- Visual storytelling
- Data visualization tools

GEARED TO
Business analysts and data analysts; data scientists and analytics modelers; business analytics leaders and managers; BI leaders and managers; anyone who develops charts and graphs to communicate about data

Course Descriptions

Tuesday, September 22, 8:00 a.m.–5:30 p.m.
Data Modeling and Management

Dimensional Modeling: Intermediate and Advanced Techniques

This course assumes a basic understanding of star schema concepts.

Chris Adamson

Real-world designs rarely resemble the simple star schemas found in product demos or introductory courses --a single fact table, fully additive facts, and several standard dimension tables.

This course takes you beyond fundamental principles of dimensional design, providing an extended set of techniques to address real-world complexity.

The course begins with a brief review of the core concepts of dimensional modeling. These fundamentals are then built upon in four areas: multi-star designs, alternative fact table designs, dimensional intricacy, and scaling.

This comprehensive treatment provides the breadth and depth you will need to meet your information design challenges --whether you are building a dimensional data warehouse, a Corporate Information Factory, standalone data marts, or virtual solutions.

YOU WILL LEARN
- Why most subject areas require multiple fact tables, and how to identify them
- When to use alternatives to the basic transaction fact table, including periodic snapshots, accumulating snapshots, and type-specific stars
- How to cope with dimensional intricacy, using techniques such as bridge tables, mini-dimensions, time-stamped dimensions, hybrid slow changes, and other slow change options
- Techniques to ensure your data warehouse will scale as new subject areas are added

GEARED TO
BI program managers; business analysts; business intelligence developers; report developers; project managers; ETL developers; data architects; database administrators; power users

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Tuesday, September 22, 8:00 a.m.–5:30 p.m.
Data Warehousing and BI

TDWI Data Virtualization: Solving Complex Data Integration Challenges

John Myers

The data integration landscape has changed radically the past few years. What was once a relatively manageable problem of blending and unifying data from enterprise transaction systems has grown to encompass external data, Web data, clickstream data, end-user data, big data, cloud data, and more. New expectations for information-driven business agility further compound the complexities of modern data integration. The ETL-based data warehouse is no longer enough. Data virtualization is a core component of next-generation data integration architectures, techniques, and technology.

Get ready to expand your data integration capabilities, deliver business-speed information, and make the most of recent advances in data integration technology. Through a combination of lecture, exercises, and case study review,

you will learn how data virtualization works and how to position it in your data integration architecture and processes.

YOU WILL LEARN
- Data virtualization definitions and terminology
- Business case and technical rationale for data virtualization
- Key concepts and foundational principles of virtualization—views, services, etc.
- Data virtualization life cycle, capabilities, and processes
- How to extend the data warehouse with virtualization
- How virtualization enables federation and enterprise data integration
- How virtualization is applied to big data and cloud data challenges
- How companies use virtualization to solve business problems and drive business agility

GEARED TO
BI, MDM, and data warehousing program and project managers; data integration architects, designers, and developers; data and technology architects

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Tuesday, September 22, 8:00–11:15 a.m.
Data Analytics

Solving Common Analytics Problems

Jonathan Geiger, Claudia Imhoff

It seems like everyone in the business world is talking about analytics, but what does that really mean? More important, how do you use analytics to create business value? This course provides several common examples of how companies in multiple industries are using analytics to understand business drivers, establish meaningful goals, and execute successfully against those goals.

Following a brief introduction of business analytics concepts, the session describes use cases with practical applications of business analytics. The use case descriptions include the business scenario, anticipated business value, type of analytics involved, information needs, technology needs, skill needs, and results. Frequently encountered challenges are also explored, along with ways to overcome them. Looking across all use cases, we'll summarize common characteristics of successful analytic organizations, identify key roles, and describe areas that should be assessed to develop a road map to introduce or expand the use of analytics.

Use cases that are addressed:

Customer relationship management (personalization, churn analysis and reduction)
Financial risk reduction (fraud detection, expense analysis, regulatory compliance)
Sales and marketing (leveraging loyalty programs, converting browser to buyer, cross-selling)
Operational analysis (productivity analysis and improvement, quality improvement)
Supply chain optimization (inventory optimization, logistics)

YOU WILL LEARN
- Real-world examples of business analytics at work
- Common characteristics of successful business analytics applications
- Common challenges in deploying business analytics and how to address them
- Steps to help an organization prepare for effective business analytics use

GEARED TO

Business managers seeking analytics opportunities; technical managers and developers who need deeper understanding of the business value of analytics; everyone who needs to understand the importance of analytics in a competitive business environment

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T6
Tuesday, September 22, 8:00 a.m. -5:30 p.m.
Tools and Technology

Hands-On Lab: Big Data Analytics: Swimming in the Data Lake

IIn this ever-evolving world of business intelligence, everyone is talking, wondering, throwing things together, and trying to make sense of big data and how to put it to work to enable the analytical insights organizations require.

This informative, lab-based session will give you the snorkel and scuba gear to find the wonders that are waiting in your data lake to help you set up a data visualization lab. No more confusion. No more complexity. No more weeks of hardware and software installations. Just focusing on what you do best, interacting with your data and producing some data goodness by leveraging easy-to-use, intuitive big data management and data visualization tools.

Each attendee will receive an individual "Big Data in the Cloud" environment (provided by Google Cloud Platform) and a data visualization tool (provided by Tableau) as part of their lake diving equipment.

YOU WILL LEARN
- Big data 101 and why it's relevant.
- State of the big data ecosystem: industry adoption and technology stack.
- Introduction to the Google Cloud Platform, including provisioning a big data environment.
- Introduction to data visualization and the road to analytics.
- Hands-on use case: How to fill the data (ingesting data)
- Hands-on lab: How to snorkel in the data lake to find cool, new specimens (big data discovery)
- How to wow your business leaders with views of beautiful treasures (big data analytics)
- Panel discussion

GEARED TO

Business managers and analysts, Big Data architects, Solutions architects, Data integration architects, and Data scientists.

T7A
Tuesday, September 22, 8:00–11:15 a.m.
Tools and Technology
Big Data
Data Modeling and Management

Introduction to NoSQL for Those Used to SQL: Storing and Managing Operational Big Data

William McKnight

In this informative session, learn about the emerging class of NoSQL technologies that can be used to manage operational big data. Understand the ideal workloads for NoSQL in managing enterprise data, and where NoSQL adds value to an enterprise information strategy.

Find out how to get projects started, and how to drop the "not in production" label to position NoSQL as part of your production toolbox for data management.

This "code-lite" session addresses the NoSQL community as well as the key user community, providing guidance on how NoSQL technologies work and how to position them in the enterprise. This practical session will help you add a significant class of technologies into consideration to ensure information remains an unparalleled corporate asset.

YOU WILL LEARN
- Big data basics
- Enablers for NoSQL
- NoSQL data models: key-value, document, graph
- NoSQL usage patterns
- NoSQL database architectures

GEARED TO

Anyone with a SQL background who is interested, curious, or even skeptical about the role and value of NoSQL technologies.

T7P NEW!
Tuesday, September 22, 2:15–5:30 p.m.
Tools and Technology

Introduction to Graph Databases

William McKnight

Graph databases may be the unsung heroes of NoSQL. They are poised to expand dramatically in the next few years as relationships and networks become a central focus of analytics. We live and work today in a highly connected world where individuals and their relationships, brand perceptions, and consumer behaviors have become critical business success factors. Where patterns are involved in relationships, it is imperative to understand them. Graph databases are the technology that is best-suited to determining and understanding data relationships and the real-world relationships that they represent.

This code-light class is an introduction to graph databases and the relationship data stored in them. It will help the student determine why, how, and where to apply graphs and how to get started.

YOU WILL LEARN
- The current state of graph databases
- Realizing value from relationship data
- Graph database modeling basics
- Graph databases in the enterprise: data loading and architecture basics

GEARED TO

Data architects; business analysts; data developers; data administrators; data strategists; chief data officers

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W1 cbip
Wednesday, September 23, 9:00 a.m.–5:00 p.m.
Data Analytics

TDWI Predictive Analytics Fundamentals

Mike Lampa

Predictive analytics is a set of techniques used to gain new knowledge from large amounts of raw data by combining data mining, statistics, and modeling. Predictive analytics goes beyond insight (knowing why things happen) to foresight (knowing what is likely to happen in the future). Predictive

Course Descriptions

models use patterns in historical data to identify and quantify probabilities of future opportunities and risks. Virtually every industry—insurance, telecommunications, financial services, retail, healthcare, pharmaceuticals, and many more—uses predictive analytics for applications such as marketing, customer relationship management, fraud detection, collections, cross-sell and up-sell, and risk management.

This course introduces predictive analytics skills, which encompass a variety of statistical modeling techniques, including linear and logistic regression, time-series analysis, classification and decision trees, and machine-learning techniques. Beyond statistics skills, predictive analytics requires knowledge of problem framing, data profiling, data preparation, and model evaluation.

YOU WILL LEARN
- Definitions, concepts, and terminology of predictive analytics
- Common applications of predictive analytics
- How and where predictive analytics fits into a BI program and the relationships with business metrics, performance management, and data mining
- To distinguish among various predictive model types and understand the purpose and statistical foundations of each
- Organizational considerations for predictive analytics, including roles, responsibilities, and the need for business, technical, and management skills

GEARED TO
BI program managers, architects, and project managers; business analysts who want to extend from gaining insight to providing foresight; business managers who need new tools to help them shape the future of the business; anyone interested in the basics of predictive analytics

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W2 Wednesday, September 23, 9:00 a.m.–5:00 p.m.
Data Visualization

Hands-on Visualization with Point-and-Click Open Source Tools

Course assumes an interest in data visualization using open source point-and-click tools. You will need to bring a laptop computer with specific software installed. You will receive detailed instructions for software download and installation after you register.

Stephen McDaniel, Eileen McDaniel

Data visualization has created a lot of buzz in both the popular media and the minds of business decision makers. Although there are many tools for charting, new open source tools that are purposely designed for building high-quality data visualizations are opening up new possibilities for developing and sharing highly stylized data visualization content. The underpinnings of these tools are advanced Web technologies powering many of the most compelling data visualizations for top newspapers and on leading websites. The tools in this session will enable you to create high-quality content that can be embedded in websites or shared in presentations.

This class offers a hands-on learning experience in data visualization with point-and-click interfaces in both Lyra (which is based on the now famous D3 JavaScript library) and R. In a series of case studies, you will experience the power of these tools firsthand for solving real-world data presentation problems.

YOU WILL LEARN
- Lyra, a point-and-click interface for detailed data visualization
- R packages that enable data visualization methods that complement Lyra
- How to share your results in dynamic Web content and business presentations
- Data visualization best practices to keep in mind as you create content for decision makers

GEARED TO
Anyone with an interest in finding better ways to communicate key data insights with new technology capable of creating high-end data graphics to impress and inform.

W4 Wednesday, September 23, 9:00 a.m.–5:00 p.m.
Tools and Technology

Understanding Hadoop

Krish Krishnan

The advent of big data has changed the world of analytics forever. Big data challenges scalability and big data platforms reshape BI and analytics infrastructure. Hadoop has taken center stage in the big data revolution, and we'll all need to understand the platform, its ecosystem, and how to work with it. The enterprise adoption of Hadoop is met with mixed responses. Join us to learn Hadoop basics, understand the realities, sort out the conflicts, and find out where and how Hadoop fits into your BI and analytics future. We will discuss the ecosystem and its intricacies, look at where it will help, and discuss how companies have embraced its usage.

YOU WILL LEARN
- The what and why of Hadoop
- Hadoop components
- Technical architecture
- Core components (MapReduce, HDFS, YARN)
- Hadoop tools (Hbase, Hive, Pig, Mahout, Impala)
- Hadoop setup and configuration
- Hadoop administration and management
- Using Hadoop: applications and examples

GEARED TO
Architects, developers, anyone interested in Hadoop

W5A Wednesday, September 23, 9:00 a.m.–12:00 p.m.
Data Analytics

Social Analytics in the Enterprise

Shawn Rogers

Big data comes in all shapes and sizes. Social data is at the forefront of big data innovation for companies who need to power deeper and richer analytics. Social data analytics enables better understanding of customer sentiment, brand awareness, purchasing habits, and more. Integrating, sharing, and leveraging this data across your analytic environment opens the door to a new world of business insight. This class explores the various social data sources, data structures, integration strategies, and benefits of social analytics in your enterprise.

YOU WILL LEARN
- Why you can't afford to ignore this growing trend and innovative data source
- How leading companies achieve a competitive edge using social analytics
- To understand the five social media data types and how to leverage them
- Mistakes to avoid in your social analytics strategy
- Essential tools for social analytics
- How to integrate and utilize social data within your enterprise

GEARED TO

Those with experience on prior BI projects; those who are tasked with adding value to existing BI implementations with new data sources; anyone getting started with big data and/or social media strategy; anyone who is curious about social analytics opportunities and value

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W5P	Wednesday, September 23, 2:00–5:00 p.m.
	Big Data
	Leading in a Data-Driven Organization

Strategies for Big Data Success: Privacy, Compliance, and Best Practices

Shawn Rogers

The world of big data creates new opportunities for companies in search of innovation, but it also brings new challenges. Big data applications drive new revenue models, providing deeper and richer views of business processes and customers. These new technologies take data-driven insights far beyond traditional data management paradigms and cause companies to reevaluate privacy policies, regulatory and compliance best practices, security, and how best to manage issues surrounding sensitive data collected in big data applications. This class explores ways to identify issues in a proactive manner and helps you understand how to manage a new arena of data-driven insights and actions.

YOU WILL LEARN
- Best practices and policies to manage big data insights
- About interesting and innovative big data use cases involving privacy and regulatory compliance
- How to identify exposure and minimize risk in big data projects
- Mistakes to avoid when managing personally identifiable information and regulated data such as HIPAA information
- How leading companies achieve competitive advantage leveraging new data sources such as social media and simultaneously mitigate the challenges they represent

GEARED TO

Data professionals tasked with implementing big data projects and business executives responsible for customer privacy, data security, or compliance

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W6A	Wednesday, September 23, 9:00 a.m.–12:00 p.m.
	Tools and Technology

Selecting the Right Analytics Tools for Your Organization

John Myers

If you don't know the trick, there is little difference between magic and science. Modern organizations push the envelope of business analytics to the point where analytical insights must be both magical and scientific—not just as a technological concept, but also as a business requirement. Organizations must develop competitive advantage via new (aka, magical) insights, and they must get results into the field with precision and speed (aka, science).

The ability to meet expectations depends on having the right platform. But how do you choose the correct platform? Business analytics spans a wide range of capabilities, from multi-dimensional analysis to advanced analytics techniques with platform capabilities progressing from data visualization and exploration platforms to advanced analytical modeling and processing engines.

This course describes product evaluation criteria and processes to help you select the tools that best match your organization's business analytics strategy. You'll be better able to deliver on both the magic and the science of business analytics with tools that meet today's requirements and readily adapt to tomorrow's changes.

YOU WILL LEARN
- The composition of the EMA Business Analytics Pyramid
- The impact of on-premises, cloud (private, hybrid, public), and managed services choices
- An overview of the marketplace and vendor product positioning
- Vendor and product evaluation criteria to best match your business analytics strategy
- The common challenges of implementing business analytics tools and technologies

GEARED TO

Business managers and end users; BI directors; business analysts; BI application owners; data management staff; program and project managers; all non-IT business audiences

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W6P	Wednesday, September 23, 2:00–5:00 p.m.
	Tools and Technology

Selecting Tools for Your Hybrid Data Ecosystem

John Myers

Big data presents exciting opportunities to gain customer insights, supercharge analytics, and drive innovation throughout your organization. To take advantage of these opportunities you must understand the available technology options. This session describes the hybrid data ecosystem (HDE), discusses current technical solutions, and shares in-depth market research on how solutions enable the adoption of big data use cases, such as the Internet of things. Failure to manage your HDE vendor and product portfolio will waste time, capital, and staff resources; discourage project sponsors and data consumers; and keep you from finding the full potential of your big data environment.

Understanding the strategic and functional differences between the components of the HDE and the impact of various implementation avenues (on-premises, cloud, managed service) is critical to developing an HDE strategy. Instead of knee-jerk investing in a platform or homegrown solution that will require eventual replacement, organizations should invest in platforms and vendors with the flexibility and adaptability to meet future business requirements. This course includes a discussion of standard approaches and how to evaluate various platforms within the EMA HDE.

There is a wide range of solution costs, and the differences between "low-end" and "high-end" products are often hidden in the features or in how the product works. The course presents effective product evaluation processes that empower your organization to recognize the critical details of your HDE environment and what you need to achieve.

Course Descriptions

YOU WILL LEARN
- The composition of the hybrid data ecosystem and its platforms
- The impact of on-premises, cloud (private, hybrid, public), and managed services implementation avenues as well as an overview of the marketplace and vendors' product positioning
- Top technological vendor evaluation selection criteria to improve the probability of succeeding with an HDE
- Common challenges to the implementation of HDE platforms

GEARED TO
Business managers and end users; BI directors; business analysts; BI application owners; data management staff; program and project managers; all non-IT business audiences

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W7A   Wednesday, September 23, 9:00 a.m.–12:00 p.m.
Tools and Technology

Hands-On Lab: Data Warehouse Automation: Build a Fully Functional, Documented Data Warehouse in 2 Hours!

One of the most pervasive problems in BI today is that data warehouses take too long to build and are too hard to change. According to TDWI, building a data warehouse is among the most labor-intensive and time-consuming activities of BI development. There are so many moving parts—requirements, source data analysis, source-target mapping, data acquisition, data transformation logic, ETL design, database loading, scheduling, error handling—and getting it right the first time isn't easy. And when you finally do get it right, something changes.

Join data warehouse automation pioneer WhereScape for this fast-paced, hands-on lab to learn how to greatly accelerate warehouse development and change cycles while simultaneously assuring quality and consistency.

Whether your development team is building its first enterprise data warehouse, business-targeted data marts, a tier of reporting services, or the renovation or migration of an existing warehouse or mart, you will experience how automation provides an alternative to complex and expensive do-it-yourself development environments.

YOU WILL LEARN
- How data warehouse automation enables development productivity increases of up to 10x
- Key automation opportunities and benefits when building or managing a data warehouse
- How to deliver accurate data to the business faster than you ever dreamed possible

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W7P   Wednesday, September 23, 2:00–5:00 p.m.
Tools and Technology

Hands-On Lab: Self-Service Data Preparation: Get varied data sets ready for BI faster with code-free, hassle-free data preparation

As data scientists, business analysts, or data developers, the challenge we face is not in analyzing or making decisions with data. It's how to get our data—regardless of source, size, or shape—cleaned, merged, and organized without spending hours in the data preparation stage.

Join us for this half-day, interactive training session where you will take four data sets of varied sizes, formats, and shapes and turn them into a complete, contextual, clean AnswerSet to be consumed by any BI tool. This will all be done without creating a single line of code, script, or VLOOKUP, etc.

Prior to the course, we'll collect the toughest data preparation projects from attendees (you and your peers). In the first part of the session, attendee-supplied projects will be used as the instructor walks through a series of hands-on exercises, teaching you the basic elements of the Paxata Adaptive Data Preparation platform. In the second part of the session, you will apply those lessons to similar data sets and issues.

YOU WILL LEARN
- Execute a complete data preparation project from start to finish using the Paxata Adaptive Data Preparation platform
- Use IntelliFusion algorithms to identify join opportunities across four varied data sets
- Combine those data sets into one project, ready for data preparation
- Quickly clean, deduplicate, pivot/unpivot, enrich, and shape that project
- Publish it into an AnswerSet
- Move the AnswerSet into Tableau to begin analytics and visualization
- Replay a project, reorder steps within a project, or reuse an entire set of data prep functions against a new data set using the step editor
- Review the full lineage of the project in the library

TH1 cbip   Thursday, September 24, 9:00 a.m.–5:00 p.m.
Data Modeling and Management

TDWI Data Quality Management: Techniques for Data Profiling, Assessment, and Improvement

Nancy Williams

Data quality is one of the most difficult challenges for nearly every business, IT organization, and BI program. The most common approach to data quality problems is reactive—a process of fixing problems when they are discovered and reported. But reactive data quality methods are not quality management; they are simply quality maintenance—a never-ending cycle of continuously fixing defects but rarely removing the causes. The only proven path to sustainable data quality is through a comprehensive quality management program that includes data profiling, data quality assessment, root cause analysis, data cleansing, and process improvement.

YOU WILL LEARN
- Techniques for column, table, and cross-table data profiling
- How to analyze data profiles and find the stories within them
- Subjective and objective methods to assess and measure data quality
- How to apply OLAP and performance scorecards for data quality management
- How to get beyond symptoms and understand the real causes of data quality defects
- Data cleansing techniques to effectively remediate existing data quality deficiencies
- Process improvement methods to eliminate root causes and prevent future defects

GEARED TO
BI, MDM, and data governance program and project managers and practitioners; data stewards; data warehouse designers and developers; data quality professionals

TH2 Mcbip   Thursday, September 24, 9:00 a.m.–5:00 p.m.
                                              Data Modeling and Management

TDWI Advanced Data Modeling Techniques

This course assumes completion of the course TDWI Data Modeling: Data Analysis and Design for BI and Data Warehousing Systems or equivalent understanding of entity-relationship modeling, dimensional modeling, and DW terms and concepts.

Jonathan Geiger

Whether you are a business data modeler who represents data requirements as entities and relationships, or a physical data modeler more concerned with tables, columns, and indexes, you know that the hard stuff lies beneath the surface. Every data design, whether logical or technical, is challenged by one or more complex considerations—scalability, adaptability, performance, legacy and package databases, etc. Every data model raises questions. Advanced modeling techniques provide many of the answers. This course explores different situations facing data modeling practitioners and provides information and techniques to help them develop the appropriate data models.

YOU WILL LEARN
• Enterprise architecture approaches and how to apply them
• How big data and analytics impact traditional approaches
• Different data models and how they relate to each other
• The role of modeling in analytics
• Higher normalization forms
• How to effectively apply generalization and specialization
• The role of metadata management in data governance
• State and time dependencies and how to handle them
• How to validate the data model
• How to transform the business data model into physical models based on the application
• The implications of alternative storage approaches
• The roles and structures of complementary models
• How to deal with multiple time zones and currencies

GEARED TO
Data modelers with some practical experience; data architects; database developers

TH3   Thursday, September 24, 9:00 a.m.–5:00 p.m.
                                                                    Big Data
                                                               Data Analytics

Demystifying Big Data: Designing an Architecture for Data and Analytics

Mark Madsen

The problem we designers need to solve isn't "big data" or "small data"—it's all data. The data warehouse is sufficient for a portion of the data we manage, but not for all of it.

The requirements we have today are to accept any data, not just rigidly structured data in rows and columns; to accept that data at any speed, not just what the database can keep up with; to deliver via any means, not just SQL-based BI tools; and to support any process—not just queries but also algorithms and transformations.

The technology that we use is problematic because it constrains and sometimes prevents necessary activities. We don't need more technology and

bigger machines. We need different technology that does different things. More product features from the same vendors won't solve the problem.

The big data market has set itself up as an alternative to the data warehouse, not realizing the new technologies solve different problems and aren't appropriate for some of the original problems. This is really confusion of technology with architecture.

Architecture is more than just software. Architecture starts from use, and includes the data, methods of building and maintaining, organization of people, as well as the software. We are also in an emerging technology space when it comes to data. This requires exploratory design practices, something we've largely discarded over the last 10 years as data warehousing and BI matured.

YOU WILL LEARN
• Data architecture alternatives to those of the past that are able to adapt to today's data realities
• New technologies that can be applied to address new problems inherent to the scope and scale of data today
• Methods and techniques to migrate from old data architecture of the past to new data architectures that resolve today's problems and prepare for the future

GEARED TO
BI and analytics leaders and managers; data architects, modelers, and designers; big data architects, designers, and implementers; anyone with data management responsibilities who is challenged by recent and upcoming changes in the data landscape

TH4 **UPDATED!**   Thursday, September 24, 9:00 a.m.–5:00 p.m.
                                                           Data Visualization

Advanced Topics in Data Visualization

Ben Olsen

The bar is being raised throughout the world when it comes to data visualization. We are all adopting tools that make visualization easier and more cost-effective, and more people are becoming familiar with the work of luminaries such as Edward Tufte and Stephen Few.

However, for those of us who know the fundamentals and want to accelerate our visualization techniques, it is not always easy to find the path forward.

This course will bring your practical visual methods and your operating paradigms to the next level. We will be leveraging a combination of advanced analytical patterns, the newest tools, and proven approaches to enhance your analytical toolkit.

YOU WILL LEARN
• Advanced visual artifacts: icebergs, horizons, butterflies
• Leveraging open source for rapid insight
• The "chart" chart: a guide for uncharted charting
• Data science meets visual science
• Visual economies of pattern

GEARED TO
Analysts; data scientists; analytics professionals, leaders, and managers; BI professionals, leaders, and managers

Course Descriptions

Data Analytics

Business Analytics for Insight and Foresight

Dave Wells

Business analytics goes far beyond reports, dashboards, and scorecards. Analytic impact occurs after the numbers are delivered, and analytic value is driven by the kinds of questions that are answered. Ordinary analytics tells you what has already happened. Good analytics provides insight into why things happen, and great analytics provides foresight to see what lies ahead. Today's business climate demands extraordinary analytics. Business managers need to know more than what. The hard questions today are why, what if, and what next.

But answering these questions is especially difficult. They bring challenges that can't be met without holistic thinking and a systemic view of the business. It takes different analysis skills to deliver great analytics—to see the whole system, measure the right things, and find the right answers to critical business questions.

YOU WILL LEARN
- How and why cause and effect is the heart of business analytics
- How to create a holistic systems view of the business
- How to apply the systems view to find the right measures and metrics and create purposeful and actionable analytics
- How to apply the systems view for analytic insight
- How simulation is used to make the leap from insight to foresight

GEARED TO
Business analysts and business managers; analytics designers and developers; BI program and project managers; problem solvers

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TH6   Thursday, September 24, 9:00 a.m.–5:00 p.m.
Tools and Technology

Hands-on Hadoop

Course assumes completion of Understanding Hadoop course or equivalent knowledge. You will need a laptop with specific software installed prior to the session. After you register for the class, you will receive detailed instructions for software download and installation.

Krish Krishnan

Hadoop has created a lot of buzz. From data warehousing to advanced analytics, our enterprise data and processing infrastructure is being reshaped by Hadoop technology. The question is no longer if you'll have Hadoop, but how best to approach it for both business and technical value.

This class offers a hands-on learning experience working with the Hadoop ecosystem. Using a series of examples and exercises for each topic, you'll experience the Hadoop tools firsthand and strengthen your learning with discussion about how to implement them.

YOU WILL LEARN
- Hadoop components and architecture
- Configuration of Hadoop
- Configuration of core components (MapReduce, HDFS, Yarn)
- Usage of Hadoop tools (HBase, Hive, Pig, Mahout, Impala)
- ZooKeeper setup and configuration
- Hadoop administration and management

GEARED TO
Anyone with an interest in Hadoop, ranging from "Hadoop curious" to those who are actively involved in implementation

Attendance is limited to 40.

TH7   Thursday, September 24, 9:00 a.m.–5:00 p.m.

Case Study Presentations: Healthcare

BI and analytics are particularly important in healthcare. This unusually complex industry has become highly data dependent. Data analysis is the key to navigating current and future challenges of healthcare. Whether you're a payer, provider, vendor, or technologist, you are well aware of the challenges. Join us to participate in a full day of insights on getting from challenges to solutions. You'll experience three interesting and compelling case studies and success stories from your peers. And you'll be able to raise questions and share your perspectives in the closing panel discussion. With abundant opportunity for discussion and networking, you'll find common ground with others challenged to balance cost and quality of care, and to respond to unprecedented pressures and the radical changes of healthcare reforms.

TH8   Thursday, September 24, 9:00 a.m.–5:00 p.m.

Case Study Presentations: Financial Services

Financial services is a broad, complex, and competitive industry. Every company in the space—investment banks, brokerages, international and national banks, regional banks, credit unions, large financial services companies, asset managers and investors, insurers, and re-insurers—experiences competitive, regulatory, security, and fraud pressures. And everyone needs data, intelligence, and analytics to manage in this high-pressure environment. BI and analytics will become increasingly important as future-looking companies respond to expanding legislation and regulation across the globe, extend services to mobile devices, and aggressively combat growing security threats in today's digital economy. Join us to take part in a full day of insights into financial services challenges and solutions. You'll experience three interesting and compelling case studies and success stories from your peers. And you'll be able to raise questions and share your perspectives in the closing panel discussion. With abundant opportunity for discussion and networking, you'll find common ground working to meet the unique challenges of financial services.

F1 ▼cbip   Friday, September 25, 8:00 a.m.–3:30 p.m.
Data Modeling and Management
Leading in a Data-Driven Organization

TDWI Data Governance Innovations: Adapting for Agile, Big Data, and Cloud

Nancy Williams

Rapid increases in data variety and data management practices challenge the old model of policy- and enforcement-based data governance. Cloud services bring new issues that go well beyond the obvious concerns of security and privacy. Big data implementation brings substantial changes to the scope and complexity of governance. Many ask if governance and agile can coexist.

The answer must be "yes," but making them work together is especially challenging.

Cloud services, big data, and agile BI are here to stay. Data governance programs must modernize and adapt to these realities. A fundamental culture change from control-oriented governance to collaboration is at the core of modern data governance—shifting from enforcement to prevention and intervention as the means to assure data security, privacy, compliance, quality, and value. Beyond cultural change, every data governance participant needs to understand the new issues and the new opportunities that arise from current trends in data management.

YOU WILL LEARN
- The data governance challenges and opportunities that arise from cloud services
- Risks, challenges, and opportunities of big data governance
- How to overcome apparent conflicts between data governance and agile
- Roles, relationships, and complexities of metadata management for data governance
- Data governance challenges that arise from mobile devices and social media
- The importance of ethics as a data governance imperative
- New models, practices, and processes for modern data governance

GEARED TO
Data quality and data governance professionals; CIOs, business leaders, and IT executives facing the realities of agile, big data, or cloud services; managers, architects, designers, and developers of BI, MDM, and data warehousing systems; data stewards, data architects, and data administrators; anyone with a role in data governance or data quality management; anyone needing to modernize a data governance program for agile BI, big data, or cloud services

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F2 cbip   Friday, September 25, 8:00 a.m.–3:30 p.m.
Data Warehousing and BI

TDWI Data Integration Principles and Practices: Creating Information Unity from Data Disparity

Chris Adamson

Today's business managers depend heavily on data analysis and decision-speed information, raising the stakes for data integration. At the same time, the work of integrating data has become increasingly complex. The simple processes of extract, transform, and load (ETL) integration for structured enterprise data no longer meet the need. Unstructured data, big data, departmental data, end-user data, and external data all challenge the old models for data integration. Meeting modern data integration challenges calls for data integration strategy and architecture.

Get ready to build reliable and adaptable data integration systems and make the most of recent advances in data integration technologies by following the path of strategy first, architecture next, and then integration systems and technology.

YOU WILL LEARN
- The role, purpose, and issues of data integration strategy
- Frameworks and patterns for data integration architecture
- How to fit unstructured data into integration strategy, architecture, and systems
- How to use integration architecture and patterns to handle large-volume data challenges

- How to apply architecture and patterns for enterprise, departmental, and local data
- How to select, mix and match, and apply several data integration methods, including ETL, federated, service oriented, and virtualized
- Techniques to collect and manage data integration requirements
- Tips and techniques for success throughout the data integration life cycle—strategy, architecture, systems development, and operations

GEARED TO
BI, MDM, and data warehousing program and project managers; data integration architects, designers, and developers; data and technology architects

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F3A   Friday, September 25, 8:00–11:15 a.m.
Data Visualization

Data Storytelling: The New Horizon in Business Analytics

Dave Wells, Ted Cuzzillo

Stories are powerful. We've used them throughout history to capture attention, convey ideas, fire the imagination, and stir the soul. Data can be persuasive, but stories are much more. A well-told story is inspirational.

On the surface, storytelling appears to be the opposite of analytics: anecdotal instead of quantitative. But quantities aren't the only way, or even necessarily the ideal way to convey information. We know that not everyone is a quant who thinks natively in numbers. Some think in pictures, thus the popularity of data visualization: "Show me the shape of things, not the quantities. ..." Visualization is powerful, but even more powerful is the ability to connect visuals to tell a story with data.

Storytellers are the next generation of business and data analysts. They don't dismiss the value of the quants—quantification is the foundation. Neither do they devalue the importance of visualization; in fact, they amplify it by scripting a story through visuals to communicate the what, when, where, who, and why of business circumstances and business behaviors.

YOU WILL LEARN
- Four reasons to pursue the art of storytelling
- The differences between explanatory and exploratory stories
- How to find the stories in data
- How to choose visualizations for storytelling
- How to compose captivating and compelling stories

GEARED TO
BI and analytics designers and developers; anyone interested in learning new and highly effective ways to communicate and share information

Course Descriptions

Friday, September 25, 12:15–3:30 p.m.
Data Visualization

Data Storytelling Workshop

To get the most from this workshop, we recommend that you also attend the morning session, Data Storytelling: The New Horizon in Business Analytics.

Dave Wells, Ted Cuzzillo

Data storytelling is a recent and important contribution to analytics, going beyond data visualization to complement visuals with narrative. A well-told story that is interesting and convincing may appear quite easy on the surface, but crafting a good data story is challenging. In this interactive workshop setting you'll work with a team and gain experience blending the science of statistics, the art of data visualization, and the talent of verbal narrative to develop and deliver compelling data stories.

A laptop computer is recommended, but not required, for this course. You'll be provided with collections of data visualizations for story crafting. The visualizations are provided both in print and digital form. Those who work with the digital versions will get greatest value from the workshop.

YOU WILL LEARN
- To find the story line in a collection of data
- To craft a story that combines data visuals with verbal narrative
- To choose the best visuals for your story and filter those that just add noise
- To understand and connect with the audience when telling a data story

GEARED TO
BI and analytics designers and developers; anyone interested in learning to effectively communicate information using data storytelling techniques

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F4A Friday, September 25, 8:00–11:15 a.m.
Tools and Technology

Emerging Technology for Advanced Analytics

Mike Lampa

Moore's Law—the processing power of computers doubles every two years—continues to hold true. For analytics, this means increasing capabilities to crunch more data, more quickly, at reduced costs. Software capabilities are exploding with options to leverage increased processing power and capitalize on the big data buzz.

From little known start-ups to the mega-stacks, many new capabilities exist to acquire, integrate, manage, consume, analyze, and visualize data. These technologies enable increasingly complex data mining, pattern detection, machine learning, predictive modeling, and workflow collaboration. They create new opportunities to expand beyond traditional BI solutions into hyper-integrated advanced analytics that will ultimately blur the line between business operations and business analytics.

YOU WILL LEARN
- How hardware layers are evolving at all levels from chipsets to supercomputers supporting advanced analytics workloads
- How software providers are removing barriers to entry for advanced analytics
- How emerging technologies in hardware and software combine to address complex and demanding advanced analytics workloads

- Where big data finds its niche in the world of analytics-enabling technologies

GEARED TO
Chief information officers; chief analytics officers; chief technology officers; BI and analytics architects; enterprise architects; data scientists

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F4P Friday, September 25, 12:15–3:30 p.m.
Data Analytics

Innovative Techniques for Advanced Analytics

Mike Lampa

The world of advanced analytics is about developing solutions that closely simulate the way humans think. The key is capability to assimilate massive volumes of diverse information, observe countless permutations of data points, and discover meaningful patterns and trends. Discovery is a typical goal, with specific questions to be answered frequently unknown. Original hypotheses may morph many times along the path to real business insight. Traditional BI practices struggle to realize the possibilities that are the promise of advanced analytics. In this session, we'll look at proven innovative processes to enable the fast-paced, dynamic, and sometimes chaotic nature of advanced analytics projects. We'll explore creative ways to weave advanced analytics into the fabric of enterprise decision making, both strategic and tactical.

YOU WILL LEARN
- How project management evolves to support advanced analytics
- How to augment systems methodologies to embrace advanced analytics without compromising systems audit points
- How to leverage new technologies, reference architectures, and design patterns to bring advanced analytics to the masses
- How to develop the talent needed to become an advanced analytics enterprise
- How to drive adoption of advanced analytics throughout the enterprise

GEARED TO
Chief analytics officers, data scientists, business strategists, business analysts, functional line-of-business owners (chief marketing officers, sales executives, supply chain executives, chief operations officers, etc.)

F5A Friday, September 25, 8:00–11:15 a.m.
Data Analytics

The How and Why of Location-Based Analytics: Gaining Insight from Geospatial and Proximity Data

Mark Albala

Location-based analytics through GPS and cell towers has gained prominence for a number of reasons. To gain advantage from location-based information, you need to understand how it is sourced and commonly used, and the prominent role open data plays in location-based analytics. We'll discuss use cases for location data and explore ways to synthesize intelligence by integrating location intelligence with your digital ecosystem.

Proximity beacons have drawn new attention as very inexpensive devices that track the movement of cellular devices; they have become one of the leading marketing intents of 2015. Integrating the information from this important thread of location-based data with digitally sourced information (websites,

social media, etc.) offers your organization increased insight into customer behavior.

YOU WILL LEARN
- Why location-based analytics is a major trend for marketing in 2015
- Why the cohesive view of customers from both their online presence and their visits to physical establishments is gaining prominence
- How to measure the value of efforts to extend the reach and breadth of your location-based analytics

GEARED TO
Anyone interested in geospatial analytics and location intelligence; marketing professionals and marketing analytics specialists who want to understand and apply proximity marketing techniques; customer analytics and predictive analytics professionals seeking greater insight into customer behaviors

More TDWI Conference Benefits

PEER NETWORKING

The network you build with instructors and thought leaders is one of the most valuable aspects of involvement with TDWI. You can develop invaluable industry connections in a specific vertical at our educational events, or network online anonymously or openly through a variety of social network communities.

GURU SESSIONS

Need some free consulting? Many TDWI instructors make themselves available for 30-minute, one-on-one consultative sessions during the conference. This is a great way to get answers to problems you are struggling with, or simply validate your approach and direction.

CBIP

The Certified Business Intelligence Professional (CBIP) program is the industry's most meaningful and credible certification. Choose from a wealth of great courses to help you prepare for your exams.

About TDWI

TDWI provides individuals and teams with a comprehensive portfolio of business and technical education and research to acquire the knowledge and skills they need, when and where they need them. The in-depth, best-practices-based information TDWI offers can be quickly applied to develop world-class talent across your organization's business and IT functions to enhance analytical, data-driven decision making and performance.

TDWI advances the art and science of realizing business value from data by providing an objective forum where industry experts, solution providers, and practitioners can explore and enhance data competencies, practices, and technologies.

TDWI delivers education and research insights in various formats and settings (conferences, summits, on site, and online) with:

// **In-depth, vendor-neutral education:** Classes of different lengths, taught by seasoned professionals, trusted vendor representatives, and industry thought leaders for new and experienced practitioners.

// **Executive-level education:** Focused programs geared toward business and IT executives, featuring award-winning case studies, expert strategy sessions, and opportunities for peer-level learning.

// **Research and publications:** Best practices reports, quick-study checklists, maturity assessment tools, and thought-leading perspectives to accelerate business-critical data projects.

TDWI PREMIUM MEMBERSHIP
tdwi.org/premium-membership

A community of learning where business and technical professionals come together to gain knowledge and skills, network with peers, and advance their careers.

TEAM MEMBERSHIP
TDWI offers a very efficient and cost-effective way to keep your entire team current on the latest trends and technologies. Team Membership provides significant discounts to organizations that register individuals as TDWI Team Members. It is easy to manage and renew!

TDWI CHAPTERS
tdwi.org/chapters

TDWI sponsors chapters throughout the world to foster continued education and networking at the local level. Chapter meetings are open to any BI/DW professional.

TDWI EDUCATION DEPARTMENT
For help with course selection and other conference information, contact the TDWI Education department today.

Phone: 425.277.9181
E-mail: education@tdwi.org

TDWI CONTACT INFORMATION
Phone: 425.277.9126
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Advancing all things data.

TDWI is your source for in-depth education and research on all things data.

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Your Team, Your Location, Our Instructors

TDWI Onsite delivers the highest quality business intelligence (BI) and data warehousing (DW) education directly to your office so each member of your team learns the same best practices, methodology, and strategy directly from the industry gurus. **Maximize your training budgets today. Schedule a free consultation.**

Core Tracks:

- Data Asset Management
- Core Business Intelligence Skills
- Data Analysis and Design
- Big Data

- Agile BI and DW Development
- Leadership and Management
- CBIP Certification

Contact:

Yvonne M. Baho
Director, Onsite Education
978.582.7105
ybaho@tdwi.org

Download the Onsite brochure today

tdwi.org/onsite

TDWI CERTIFICATION

Get Certified at TDWI San Diego

Professionals holding a TDWI CBIP certification command an average salary of $125,905—$20,000 higher than the average for non-certified professionals.

Source: 2015 TDWI Salary, Roles, and Responsibilities Report

cbip
Certified Business
Intelligence Professional

The TDWI Certified Business Intelligence Professional (CBIP) program is the business intelligence and data warehousing industry's most meaningful and credible certification available. While you attend TDWI San Diego, take the opportunity to prepare for and complete the CBIP exams. TDWI offers exam preparatory sessions as well as other courses to complement your knowledge for taking the CBIP specialty exams. In addition, the many exam lab opportunities throughout the week make it convenient for you to complete your certification requirements all at one conference.

Why Become Certified?

DISTINGUISH YOURSELF PROFESSIONALLY
Your achievement of the CBIP credential tells the world—including current and prospective employers—that you are serious about business intelligence. Let your résumé show that your in-depth knowledge has been certified by TDWI, the industry's premier provider of education on all things data. You'll gain a competitive advantage and open up opportunities down the road.

**GET AN EDGE OVER THE COMPETITION**
Achieve CBIP status and gain:

// **SALARY.** Surveys consistently suggest certified professionals enjoy higher salaries.

// **RECOGNITION.** Have your BI expertise confirmed by a recognized industry organization.

// **SPECIALIZATION.** CBIP recognizes your experience in distinct skill areas, which helps employers confidently match your skills to their job requirements.

Is CBIP Right for You?

The CBIP program is designed for senior-level information systems and technology professionals in the business intelligence, data warehousing, and business analytics industry. A combination of experience, knowledge, and education provide the foundation for certification.

For More Information

Visit **tdwi.org/cbip** for step-by-step information on how to get certified, or contact us at 425.277.9126 or cbip@tdwi.org.
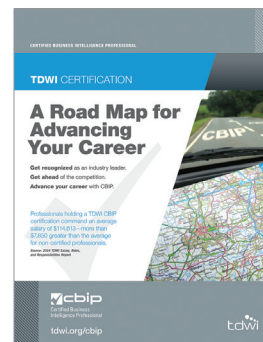
Download the CBIP brochure to advance your career today

tdwi.org/cbip

Advance Your Career with CBIP

You'll find the following CBIP prep courses, CBIP friendly courses, and exams at TDWI San Diego:

IS CORE EXAM

S1   p. 12
TDWI Business Intelligence Principles and Practices: Charting the course to BI Success

M8A   p. 16
CBIP Preparation for the Information Systems Core Exam

DATA WAREHOUSING EXAM

S1   p. 12
TDWI Business Intelligence Principles and Practices: Charting the course to BI Success

M1   p. 14
TDWI Business Intelligence Architecture: Principles of BI Design

M8P   p. 17
CBIP Preparation for Data Warehousing Exam

BUSINESS ANALYTICS EXAM

S2   p. 12
TDWI Business Analytics: Exploration, Experimentation, and Discovery

T1   p. 17
TDWI Big Data Fundamentals: Creating Value from Non-Traditional Data Sets

W1   p. 20
TDWI Predictive Analytics Fundamentals

DATA ANALYSIS AND DESIGN EXAM

S3   p. 12
TDWI Dimensional Data Modeling Primer: From requirements to Business Analytics

M3   p. 15
TDWI Data Modeling: Data Analysis and Design for BI and Data Warehousing Systems

T3   p. 18
Dimensional Modeling Intermediate and Advanced Techniques

TH2   p. 23
TDWI Advanced Data Modeling Techniques

DATA INTEGRATION EXAM

T4   p. 18
TDWI Data Virtualization: Solving Complex Data Integration Challenges

F2   p. 25
TDWI Data Integration Principles and Practices: Creating Information Unity from Data Disparity

LEADERSHIP AND MANAGEMENT EXAM

TH1   p. 22
TDWI Data Quality Management: Techniques for Data Profiling, Assessment, and Improvement

F1   p. 25
TDWI Data Governance Innovations: Adapting for Agile, Big Data, and Cloud

CBIP EXAM LABS

Sign up for exams at the conference registration desk. You will need a laptop that is Windows compatible and does not encrypt data on a USB drive. If your laptop does not meet these requirements, you can reserve one for loan.

Monday	5:45–7:15 p.m.
Wednesday	5:30–7:00 p.m.
Thursday	5:30–7:00 p.m.
Friday	8:00 a.m.–2:00 p.m.

Fee per Exam:
$325 TDWI Premium Members
$350 non-members

Exam Duration:
Maximum 90 minutes each

For more information, visit tdwi.org/cbip.

Hotel and Travel

Many courses sell out and hotel accommodations fill quickly at
TDWI San Diego. Register for the conference and reserve your hotel
room early to ensure availability, as space is limited.

MANCHESTER GRAND HYATT
The Manchester Grand Hyatt San Diego, with a prime waterfront location, will serve as
the official headqarters hotel for TDWI San Diego.

MANCHESTER GRAND HYATT SAN DIEGO
One Market Place
San Diego, CA 92101
Phone: 619-232-1234

website: **www.manchestergrand.hyatt.com**

Reservations:
https://resweb.passkey.com/Resweb.do?mode=welcome_ei_new&eventID=12098528

TDWI has reserved a block of rooms at reduced rates for conference attendees (single
or double occupancy).

Use the above URL or contact the hotel directly for reservations. Be sure to reference
"TDWI" to get the conference rate. Rooms are limited, so reserve early. If you need
special facilities or services, notify the hotel when you make your reservation.

For added convenience, you can book your hotel room and your conference registration
with one easy payment. See details on the following page, or visit
tdwi.org/SD2015/hotel.

CAR RENTAL DISCOUNTS
Avis is offering discounts on car rental fees
for TDWI conference attendees.
Information: tdwi.org/SD2015/hotel

TDWI Event Registration and Hotel Package

For added convenience, TDWI now offers the following hotel packages to add to your conference registration:

3 nights	$807
4 nights	$1,076
5 nights	$1,345
6 nights	$1,614
7 nights	$1,883

For more information, visit **tdwi.org/SD2015/register**

ABOUT SAN DIEGO

Known for its great hotels and accommodations, beautiful weather, pristine beaches, friendly people, and a wide selection of entertainment, San Diego is a favorite travel destination for visitors across the globe. This great city has a huge variety of attractions.

Find more at **www.sandiego.org**

SAN DIEGO AREA ATTRACTIONS:

- San Diego Zoo, zoo.sandiegozoo.com
- USS Midway Museum, www.midway.org
- Seaworld San Diego, http://seaworldparks.com/en/seaworld-sandiego/
- San Diego Lego Land, http://california.legoland.com/
- Seaport Village, www.seaportvillage.com
- Balboa Park, www.balboapark.org
- San Diego Museum of Art, www.sdmart.org

How to Register

STEP 1. SELECT YOUR CLASSES

Check one full-day class or one morning (A) class and one afternoon (P) class for each day that you will attend.
Classes without an A or P designation are full-day classes.

SUNDAY, SEPTEMBER 20

○ **S1**	TDWI Business Intelligence Principles and Practices: Charting the Course to BI Success
○ **S2**	TDWI Business Analytics: Exploration, Experimentation, and Discovery
○ **S3**	TDWI Dimensional Data Modeling Primer: From Requirements to Business Analysis
○ **S4**	Social Network Analysis: Practical Uses and Implementation
○ **S5**	Designing Your Company's Data Strategy
○ **S6A**	Mission Impossible: Developing Analytic Capabilities, Culture, and Teams
○ **S6P**	Defining Architectures That Support Advanced Analytics Variety

MONDAY, SEPTEMBER 21

○ **M1**	TDWI Business Intelligence Architecture: Principles of BI Design
○ **M2**	TDWI Data Warehouse Automation: Better, Faster, Cheaper … You Can Have It All
○ **M3**	TDWI Data Modeling: Data Analysis and Design for BI and Data Warehousing Systems
○ **M4**	Overcoming Information Overload with Best Practices in Data Visualization
○ **M5**	Hands-on: Data Mining with R
○ **M6**	Tactics from the Data Trenches: Tackling the Diverse Challenges of New Data
○ **M7**	Power, Politics, and Partnership: Building an Analytics Culture
○ **M8A**	CBIP Preparation for the Information Systems Core Exam
○ **M8P**	CBIP Preparation for the Data Warehousing Exam

TUESDAY, SEPTEMBER 22

○ **T1**	TDWI Big Data Fundamentals: Creating Value from Non-Traditional Data Sets
○ **T2**	TDWI Data Visualization Fundamentals
○ **T3**	Dimensional Modeling: Intermediate and Advanced Techniques
○ **T4**	TDWI Data Virtualization: Solving Complex Data Integration Challenges
○ **T5**	Solving Common Analytics Problems
○ **T6**	Hands-On Lab: Big Data Analytics: Swimming in the Data Lake
○ **T7A**	Introduction to NoSQL for Those Used to SQL: Storing and Managing Operational Big Data
○ **T7P**	Introduction to Graph Databases

WEDNESDAY, SEPTEMBER 23

○ **W1**	TDWI Predictive Analytics Fundamentals
○ **W2**	Hands-on Visualization with Point-and-Click Open Source Tools
○ **W3**	Data Modeling in the Age of Big Data
○ **W4**	Understanding Hadoop
○ **W5A**	Social Analytics in the Enterprise
○ **W5P**	Strategies for Big Data Success: Privacy, Compliance, and Best Practices
○ **W6A**	Selecting the Right Analytics Tools for Your Organization
○ **W6P**	Selecting Tools for Your Hybrid Data Ecosystem
○ **W7A**	Data Warehouse Automation: Build a Fully Functional, Documented Data Warehouse in Two Hours!
○ **W7P**	Hands-On Lab: Self-Service Data Preparation

THURSDAY, SEPTEMBER 24

○ **TH1**	TDWI Data Quality Management: Techniques for Data Profiling, Assessment, and Improvement
○ **TH2**	TDWI Advanced Data Modeling Techniques
○ **TH3**	Demystifying Big Data: Designing an Architecture for Data and Analytics
○ **TH4**	Advanced Topics in Data Visualization
○ **TH5**	Business Analytics for Insight and Foresight
○ **TH6**	Hands-on Hadoop
○ **TH7**	Case Study Presentations: Healthcare
○ **TH8**	Case Study Presentations: Financial Services

FRIDAY, SEPTEMBER 25

○ **F1**	TDWI Data Governance Innovations: Adapting for Agile, Big Data, and Cloud
○ **F2**	TDWI Data Integration Principles and Practices: Creating Information Unity from Data Disparity
○ **F3A**	Data Storytelling: The New Horizon in Business Analytics
○ **F3P**	Data Storytelling Workshop
○ **F4A**	Emerging Technology for Advanced Analytics
○ **F4P**	Innovative Techniques for Advanced Analytics
○ **F5A**	The How and Why of Location-Based Analytics: Gaining Insight from Geospatial and Proximity Data

REGISTRATION QUESTIONS?

Phone: 425.277.9201 (M–F, 9:00 a.m.–5:00 p.m. PT)

Fax: 425.687.2842

E-mail: registration@tdwi.org

STEP 2. CALCULATE YOUR PAYMENT

Conference price includes complimentary TDWI Premium Membership. Current TDWI Premium Members get a $275 discount off the conference price (in lieu of complimentary Premium Membership). Multiple-day packages do not require consecutive days.

FEES—SUPER EARLY REGISTRATION (July 31, 2015)

USE PRIORITY CODE SD3

○ Standard Package (3 days)	$2,040
○ Mega Package (4 days)	$2,560
○ Giga Package (5 days)	$3,015
○ Tera Package (6 days)	$3,400

FEES—EARLY REGISTRATION (August 1–21, 2015)

USE PRIORITY CODE SD3

○ Standard Package (3 days)	$2,350
○ Mega Package (4 days)	$2,945
○ Giga Package (5 days)	$3,470
○ Tera Package (6 days)	$3,910

FEES—REGULAR REGISTRATION (August 22–September 18, 2015)

○ Standard Package (3 days)	$2,550
○ Mega Package (4 days)	$3,205
○ Giga Package (5 days)	$3,770
○ Tera Package (6 days)	$4,255

FEE FROM TABLE ABOVE $ _____

CURRENT MEMBER DISCOUNT (Deduct $275 from above)   – $ _____
Premium Membership status will be validated when your registration is processed

TEAM DISCOUNT (Deduct 10% from above)   – $ _____
For 3 or more people from the same company registering at the same time

LATE FEE (After September 18, 2015—add $50)   + $ _____

❯ **TOTAL FEE**   = $ _____

CONFERENCE QUESTIONS?

Phone: 425.277.9181
E-mail: education@tdwi.org

REGISTER EARLY & SAVE

SUPER EARLY—SAVE 20%
SAVE UP TO $855
WHEN YOU REGISTER BY JULY 31

EARLY—SAVE 10%
SAVE UP TO $345
WHEN YOU REGISTER BY AUGUST 21

USE PRIORITY CODE SD3

STEP 3. REGISTER

Online: tdwi.org/SD2015/register

Phone: 425.277.9201 (M–F, 9:00 a.m.–5:00 p.m. PT)

Rest easy—online registrations are secure. Our secured server environment keeps your information private.

TDWI's Federal Tax ID Number is 20-4583700.
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REGISTRATION DEADLINES

Super Early Registration Deadline (priority code: SD3) . . . July 31, 2015
Early Registration Deadline (priority code: SD3) . . . . . August 21, 2015
Regular Registration Deadline . . . . September 18, 2015
After September 18, please register on site. Registration will be limited to space available. You will incur a $50 late registration fee after September 18.

TEAM DISCOUNT

When three or more people from a single company or government agency register at the same time, the entire team receives a 10 percent discount. **All registration forms must be submitted together in order to qualify for the team discount.**

TDWI PREMIUM MEMBERSHIP INCLUDED

All registrations for three or more days include a one-year TDWI Premium Membership. If you are already a current TDWI Premium Member, you will instead be eligible for a $275 discount off the conference price (in lieu of complimentary Premium Membership). See page 28 or visit tdwi.org/premium-membership for more information on TDWI Premium Member benefits. Premium Membership is activated on your conference registration date, so you can begin to enjoy benefits right away.

REFUND AND CANCELLATION POLICY

You may substitute another person in your place by calling 425.277.9201 (M–F, 8:00 a.m.–5:00 p.m. PT) before September 4, 2015.
If you must cancel, your refund request must be e-mailed to registration@tdwi.org no later than September 4. Your fee will be returned, less a 20 percent cancellation fee. No refunds or credits will be issued after September 4.

Please be aware that still photography, video, and audio recording may occur at this event. By attending this event, you consent to have your image, photograph, likeness, picture, rendering, or audio recording utilized for TDWI educational, marketing, and sales purposes. You hereby grant TDWI the right to unrestricted use, reproduction, display, dissemination, publication, and distribution in any medium, provided that TDWI will take measures on behalf of attendees against infringement and/or inappropriate use of your image, photograph, likeness, picture, rendering, and audio recording.