

Openlab Workshop on Data Analytics



16th November 2012



- 40% of major decisions are based on “**gut instinct**” and not on facts.

-Accenture

“The unexamined life is not worth living”

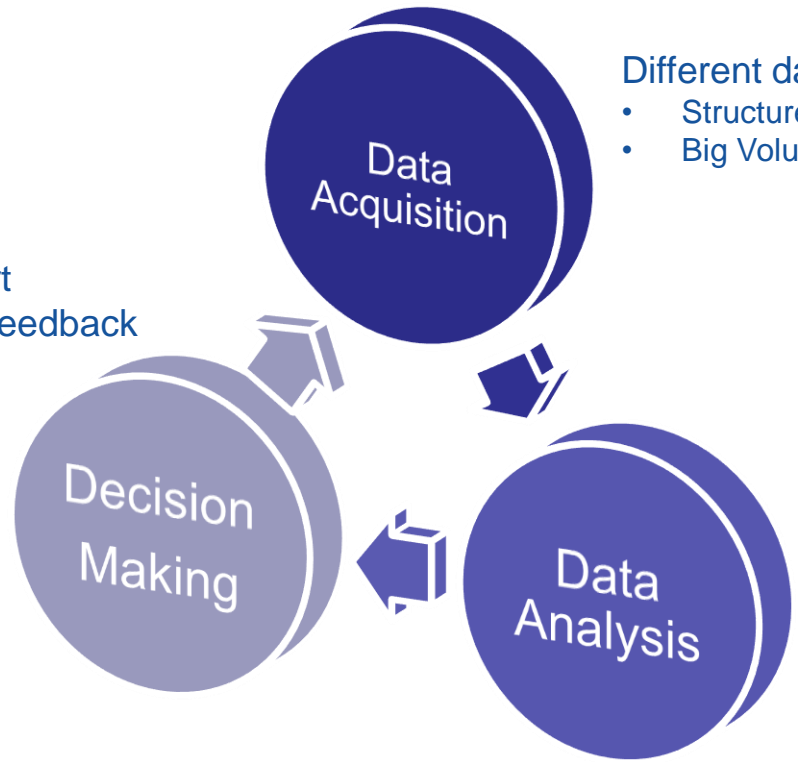
-Socrates

- **Analytics Use cases**
 - Engineering
 - Information Technology
 - Beams
- **Main challenges on Data Analytics**
- **Analytics techniques, approaches and technologies**

- **Engineering**
 - LHC post-mortem
 - Control system health
 - Predictive maintenance for control devices
 - Vibration analysis
 - Power cut analysis
 - Electrical consumption
- **Beams**
 - Control logs analysis
- **Information Technology**
 - Suspicious event detection
 - IT Monitoring

Objectives: Analytics Challenges

Decision Making Support
Decision Performance Feedback



Different data sources and nature:

- Structured, Semi-structured, Unstructured
- Big Volume, Diversity and Velocity

Different Analytics use cases

- Different Analytics Technologies
- Different data representations

Objectives: Analytics Technologies

- Advance Analytics
- Information Discovery
- In-Database Analytics
- Logs Analysis
- Advance Visualization
- Reporting and Dashboards
- etc.

Welcome, Agenda & Participants Presentation	<i>Tony CASS</i>
<i>IT Auditorium, CERN</i>	08:30 - 08:40
Introduction to the Data Analytics Workshop	<i>Manuel MARTIN MARQUEZ</i>
<i>IT Auditorium, CERN</i>	08:40 - 08:45
CERN – IT Monitoring and Data Analytics	<i>Mr. Pedro Manuel RODRIGUES DE SOUSA ANDRADE</i>
<i>IT Auditorium, CERN</i>	08:45 - 09:05
LHC Control Logs Analysis	<i>Steen JENSEN</i>
<i>IT Auditorium, CERN</i>	09:05 - 09:25
Industrial Controls Data Analytics Use Cases	<i>Mr. Axel VOITIER</i>
<i>IT Auditorium, CERN</i>	09:25 - 09:50
Analytics Framework and Best Practices	<i>Giuseppe CALABRESE</i>
<i>IT Auditorium, CERN</i>	09:50 - 10:05





Coffee Break	
<i>IT Auditorium, CERN</i>	10:05 - 10:25
Large DWH architectures : key challenges and best practices	
<i>Reiner ZIMMERMAN</i>	
<i>IT Auditorium, CERN</i>	10:25 - 10:55
ETL/ELT, Real-time acquisition: Oracle Data Integrator and Oracle GoldenGate	
<i>Marco RAGOGNA</i>	
<i>IT Auditorium, CERN</i>	10:55 - 11:35
Big Data Analytics	
<i>Jean-Philippe BREYSSE</i>	
<i>IT Auditorium, CERN</i>	11:35 - 12:05
Lunch Break	
<i>CERN</i>	12:05 - 13:00
In-memory BI: Oracle Business Intelligence Foundation and Exalytics	
<i>Pierre MERLE</i>	
<i>IT Auditorium, CERN</i>	13:00 - 13:45



Intro to Splunk	<i>Alex IRIBARREN</i>
<i>IT Auditorium, CERN</i>	13:45 - 14:15
Alerting & Recommendations: Real-Time Decisions	<i>Dave CRESSY</i>
<i>IT Auditorium, CERN</i>	14:15 - 15:00
Data Exploration: Endeca Information Discovery	<i>David DE SANTIAGO</i>
<i>IT Auditorium, CERN</i>	15:00 - 15:45
Coffee Break	
<i>IT Auditorium, CERN</i>	15:45 - 16:05
Identification of Dynamical Systems, Forecasting and Control with neural networks	<i>Hans-Georg ZIMMERMANN</i>
<i>IT Auditorium, CERN</i>	16:05 - 16:50
Machine Learning in Networked Data	<i>Tresp VOLKER</i>
<i>IT Auditorium, CERN</i>	16:50 - 17:35
Advanced In-database Analytics: Oracle R Enterprise and Data Mining	<i>Jean-Philippe BREYSSSE</i>
<i>IT Auditorium, CERN</i>	17:35 - 18:00
Conclusion, Closing Remarks and Plenum	
<i>IT Auditorium, CERN</i>	18:00 - 18:10