Analance™

BIG DATA AND ANALYTICS FOR PHARMACEUTICAL AND LIFE SCIENCES INDUSTRY

ANALANCE™ CAPABILITIES

DESCRIPTIVE ANALYSIS
What has happened?

DIAGNOSTIC ANALYSIS
Why did it happen?

PRESCRIPTIVE ANALYSIS
What should we do?

PREDICTIVE ANALYSIS
What will happen?

Power to derive insights for every decision that needs to be made

MARKETING AND SALES
• Sales Rep Performance Analytics
• Sales & Marketing Effectiveness

FINANCE
• Financial Performance
• Clinical Trials Budgeting
• Risk Analysis

SUPPLY CHAIN & OPERATIONS
• Procurement Analytics
• Manufacturing Analytics
• Resource Performance Analytics

CLINICAL TRIALS
• Clinical Trials Analysis
• Cross Study Analysis
• Adverse Event Analysis
• Statistical Analytics
• Project Management

With data growing exponentially and it getting more and more heterogeneous, Pharma and Life Science organization face significant challenges with data integration, data transformation and data cleansing. In fact, 70% of pharma data projects involves managing data before the analysis can even begin. Lack of investment in the right resources, processes and technologies impact the industry from unlocking the benefits of BI and Advanced Analytics.

With the emergence of IoT, data is only ones and zeros. Once they're managed, advanced analytical tools can help drive insightful decisions for all functions of the organization from product planning, design, manufacturing to clinical trials to enhance collaboration in the ecosystem, information sharing, process efficiency, cost optimization and drive competitive advantage. Application of pharma and life sciences analytics ranges from basic reporting and dashboarding to running complex predictive, prescriptive, and cognitive analytics. The key applications of analytics in pharma and life sciences include regulatory compliance reporting, marketing/sales support, and product/service enablement.

Analance™

How can Analytics transform Pharma operations?

RESEARCH & DISCOVERY

HINDSIGHT
- Strategic Planning
- Portfolio Management
- New Drug Discovery

FORESIGHT
- √ Prioritize, Support Assets
- √ Portfolio Optimization
- √ Protect Market Exclusivity
- √ Life Cycle Management

CLINICAL DEVELOPMENT

INTUITIVE
- Cost Pressures
- Regulations & Safety challenges
- Outcome Uncertainty
- Trial Planning & Operations

DATA DRIVEN
- √ Trial Monitoring
- √ Patient Safety & Compliance
- √ Data Management

MANUFACTURING & SUPPLY CHAIN

UNCERTAINTY
- Emerging Markets
- Regulatory Changes
- High Cost of Capital
- Forecasting Inaccuracies
- Inflexible & Fragmented Supply Chain

OPPORTUNITY
- √ Cost containment
- √ Agile Inventory
- √ End-to-end visibility
- √ Accurate Forecasting
- √ Outsourced Manufacturing

MARKETING & SALES

TRADITIONAL
- Field Sales
- Forecasting inaccuracies
- Limited ROI visibility

SOCIAL & DIGITAL
- √ Social & Digital Engagement
- √ Patient & Physician Outreach
- √ Behavioral Marketing
- √ Mobile Apps Integration

RISK MANAGEMENT

REACTIVE
- Government Reporting
- Internal Reporting
- Adverse Events
- Clinical Trial Vigilance

PROACTIVE
- √ Enterprise risk monitoring
- √ Real Time Assessment
- √ Encompassing IT systems
- √ BYOD / Social

SOLUTION AREAS

- Strategy & Portfolio Analysis
- Market & Disease Landscape
- Pipeline & Patent Analysis
- Targeted Therapies Analysis
- M&A VS. New Develop ment
- Portals & Electronic Data Exchange

- Data Integration, MDM & Mining
- Trail Planning & Efficiency Analysis
- Site Selection & Performance Oversight
- Resource Planning & Allocation
- Trial Design & Cohort Segmentation
- Forecasting & Scenario Planning
- Safety Monitoring
- Regulatory Compliance & Filing

- Demand Planning & Forecasting
- Inventory Visibility Analysis
- Mfg. Asset Performance Analysis
- Freight Analysis
- Regulatory Compliance Monitoring

- Marketing Spend & ROI Tracking
- Customer Analytics: Acquisition, Retention & Reputation Management
- Segmentation & Demand Forecasting
- Managed Markets Analysis
- Field Performance Analysis
- Adverse Events Monitoring
- Sales Channel & Pricing Optimization

- Real Time Enterprise Risk Analysis
- Adverse Events Reporting
- Pharmacovigilance MDM
- Sunshine Act Reporting
- Forecasting regulatory requirements
- Monitoring Digital & Social Channels

Pharma & Life Sciences Challenges and Solutions

MANUFACTURING & SUPPLY CHAIN OPERATIONS

Anomaly Detection in Plant / Equipment Performance

CHALLENGES :

Experiencing unexpected manufacturing disruptions due to the lack of visibility into the performance of different plant and equipment systems.

SOLUTION :

To resolve this challenge, supervised machine learning can be employed. By mining from equipment maintenance systems, a reduction in equipment downtime can be achieved which help improve bottom line and speed to market. With access to historical data from various instruments, performance profiles for individual machines and their critical components from previously unseen patterns can also be established. These profiles could then be used to monitor streaming sensor data in real time to proactively detect anomalies and timely respond.

CLINICAL DEVELOPMENT & ADVERSE EVENTS

Identifying Healthy Sites for Clinical Trials

CHALLENGES :

Identify and evaluate potential sites for clinical trial beforehand to avoid clinical trial failures.

SOLUTION :

Hypotheses related to poor site health indicators for clinical trial are : serious adverse events, protocol deviations, staff levels and turnover, and untimely patient visit data entry.

Predictive model for the number of protocol deviations in a monitoring window based on site characteristics are :
- number of treated patients
- the country in which it was located
- the complexity of the protocol

The model produced the expected number of protocol deviations that were then compared to the actual number; the difference between the actual and predicted counts was an indicator of site health: sites with too many protocol deviations were found to have poor site health.

SALES & MARKETING

Prescriber Behavior Pattern Analytics

CHALLENGES :

Physician behavior and their prescription habits are very difficult to predict because it depends on several variables.

SOLUTION :

Pharma companies can use Cluster Analysis to :
- Identify clusters of doctors who exhibit similar prescribing habits and who have patients with similar demographics.
- Identify opportunities for sales representatives to work with physicians whose prescribing habits exhibit outlier behavior.
- Conduct cluster analysis based on prescription volume, geography and demographic characteristics.

CLINICAL DEVELOPMENT & MARKETING

Drug Demand / Success in the Market

CHALLENGES :

Identify the drug demand / adoption in market

SOLUTION :

With different analytical techniques, we can track the demand of drugs
- Classification
  - √ Predicting the likelihood of success in a drug adoption process
  - √ Prediction of what type of drugs most likely to be retained, most likely to be left, most likely to transform the composition
- Clustering
  - √ Predicting the demand for items that have not been sold

A LITTLE ABOUT US

DUCEN™
Intelligence to Decision Making

Ducen is a one-stop technology consulting company specializing in business intelligence, advanced analytics, data management and big data, software development and integration, performance optimization, and enterprise architecture services.

PEOPLE ARE OUR STRENGTH
For over 10 years, our team has garnered a reputation for unparalleled service and delivery, helping clients deploy quality solutions that are delivered on time and within budget.

THRIVE ON CHALLENGES
As an end-to-end IT solutions provider, we think disruptively to help our clients succeed. The ideas and passion of our team members and the ambitions of our customers drive our corporate philosophy and purpose.

ALWAYS INNOVATING
We continue to push the limits of our software solutions to ensure dynamic data integration, insight and decision optimization techniques for our customers. We accomplish this by following proven, structured processes that provide immediate business value and ongoing results.

WORK AS A TEAM
We are a transparent organization that values honesty and promotes diversity. We believe in building long term relationships and work with our clients as an extension of their teams.

EXPERIENCE ACROSS INDUSTRIES
Our clients are diverse organizations across North America and Asia and a mix of innovative, emerging, and leading global corporations across the industry spectrum from Media and Telecom to Healthcare, Life Sciences, Manufacturing, Hospitality, Education and Financial Services.

EXPERT SOLUTION DELIVERY
We work with business and technology leaders in sales, marketing, production, supply chain, customer service, operations and IT. We help our clients in executing strategic initiatives as well as achieving operational excellence while optimizing their business processes.

WORK WITH REPUTED PARTNERS
Ducen has alliances of with several industry giants including Oracle, IBM, and Microsoft. We are a Microsoft Certified Partner with competencies in the areas of Application Development, Application Integration, Data Platform, Data Analytics and Collaboration and Content.

HIGH STANDARDS AND CONTROLS
We are a CMMI 3 level company, registered with Carnegie Mellon Software Engineering Institute (SEI). Along with being certified for ISO 9001:2015, Ducen has been certified for the internationally recognized ISO 27001:2013 standards that endorse the company's commitment to high standards and security controls.

FOR MORE INFORMATION

+1-844-DUCEN IT

sales@ducenIT.com

www.ducenit.com

ISO 9001:2015 CERTIFIED COMPANY   **ISO** 27001:2013   **CMMI** LEVEL 3   CERTIFIED

MAKE THE MOVE TO EVOLVE YOUR BUSINESS TO THE NEXT LEVEL.

DUCEN™
Intelligence to Decision Making