

Dotsquares

CREATIVE
DIGITAL DESIGN
& DEVELOPMENT

UK • USA • UAE • AUSTRALIA • EUROPE • INDIA

About the company

- 19 years of Industry experience since 2002.
- Team of 700+ Skilled full time Analysts, Developers with industry certifications
- Certified Team of Scrum Agile Project Managers.
- Project Management offices in the UK, USA, Australia and India.
- 3 fully equipped development centres in India with ISO 9001 Certification.
- Gartner Recommended Vendor 2018.
- Assisted Fujitsu to obtain Guinness World Record.
- Member of the International Association of Outsourcing Professionals.
- Direct developer interaction using Skype, Phone, Emails, WebEx and Project Management Tools.
- Works on Time and Material, Agile Methodology.
- One stop solution for Design, Development, Hosting and Digital Marketing (and many other services).
- Approved supplier of Microsoft, Google, Salesforce, Magento amongst many others.



700+
Employees



10,000+
Clients



Global
Offices



18,000
Projects



CMMI DEV / 3SM
Exp. 2022-03-15 / Appraisal #2782



What our CMMI Maturity level rating means for you:

Improved Quality

- Smart supplier management ensures quality results.
- Strategic people management empowers team members to develop skills that will help the organization succeed.

Decreased Costs and Enhanced Productivity

- Streamlined processes allow teams to integrate and collaborate more efficiently.
- Standardized project management practices reduce redundancy and waste.
- Identifying skill gaps helps break down workflow bottlenecks.

Higher Customer Satisfaction

- Service delivery strategies strengthen weak customer touch points.
- Effective product development instills customer confidence.
- Project management practices help teams meet and manage customer expectations.

Improved On-Time Delivery

- Field-tested project management standards keep work on schedule.
- Transparent development processes reduce scope creep and deadline extensions.
- Careful vendor management mitigates supplier delays.

AFFILIATIONS & ACHIEVEMENTS

Gatwick Diamond
BUSINESS AWARDS
FINALIST 2015

NASSCOM
MEMBER

Microsoft
Partner
Microsoft
Gold Application Development

 **IWDRO™**
BUSINESS
MEMBERSHIP

 registered consulting
partner



 **Google**
Partner

Agile Alliance®

Microsoft®
REGISTERED
Partner



Data Engineering Practices



Introduction

Our Data Engineering services enable organizations to conceptualize and implement a well-thought-out data program across multiple domains and focus areas. We help our clients account for scale and platform readiness while developing Data Engineering capabilities to drive vision and value. Our data solutions enable organizations to:

- Find the right approach to collecting and connecting with data
- Connect the dots across data silos for generating actionable insights
- Develop and implement data solutions across all business verticals
- Identify and resolve data security risks ahead of time
- Migrating traditional data platforms to cloud native
- Maintain and manage data services with ease

Data Engineering Competencies

Enterprise Data Warehousing

Equip your Enterprise Data Warehouse to tackle the growing demands of big data. Build a central data repository that unifies heterogeneous sources, maintains data quality, and gives you access to the information you need – when you need it. We help you with:

- Data Archiving
- ELT Offload Architecture
- Datastore, Governance & Security Management
- Self Service BI / Discovery

Data Lakes

Define, design, and develop the capabilities of dealing with data of any size, shape, and speed. Empower your developers, data scientists and analysts with the right tools to leverage quintillions of bytes of data.

We help you with:

- Strategy & Roadmap
- Prototyping & Tool Evaluation
- Data Integration, access & services
- Construction & Go-Live Enablement

Real Time Analytics

Redefine real-time processing and analytics.

- Real-time Ingestion
- Scalable Data Processing & Storage
- Analytics, Dash-boarding & Alerting

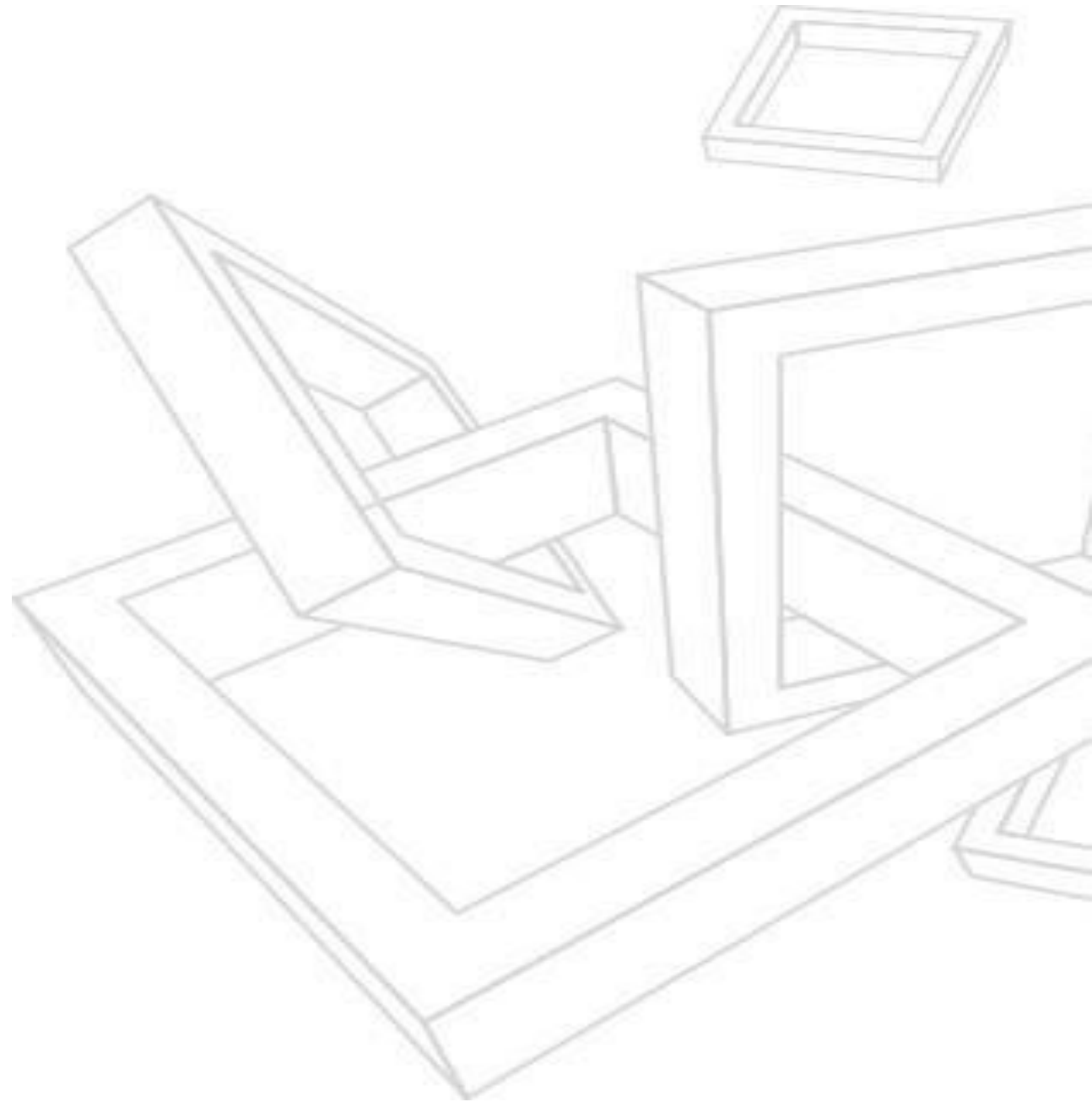
Migrations

Increasingly, organizations are migrating some or all of their data to cloud in order to increase their speed to market, improve scalability, and reduce the need for technical resources.

We help you with migrating

- Datawarehouse/Data Lakes
- ETL workloads
- Business reporting

Case Studies



Hortonworks Platform to Azure Databricks Migration

Business Scenario

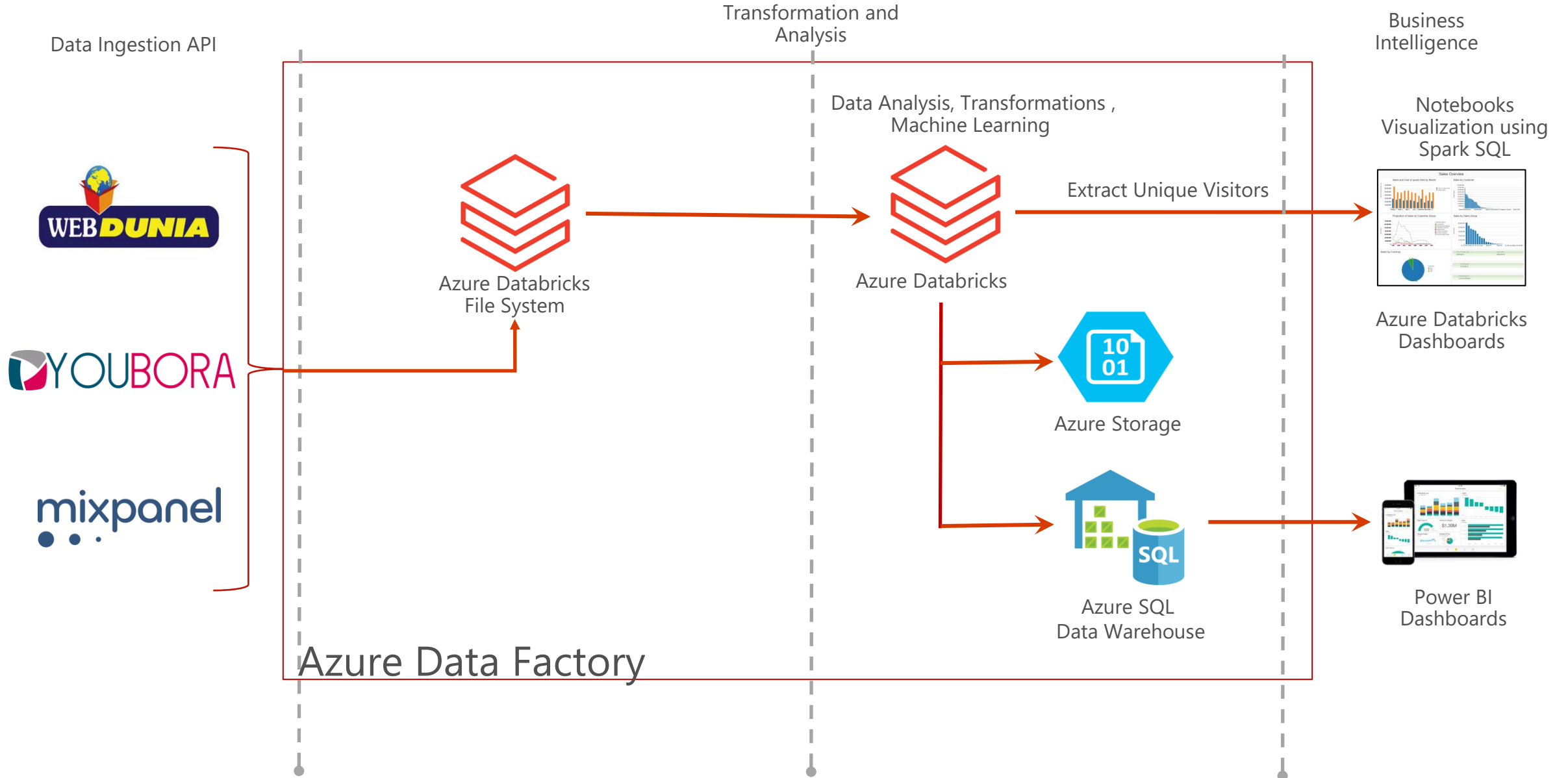
Daily processing and number crunching of dataset of size 2-3Tb per day was the prime requirement, for performing analytics on Advertising Video-on-demand service user data to generate reports and dashboards for marketing team on a daily basis.

Viacom18 was not able to automate the ETL process of their web and mobile platform viewers data using HD Insights and also managing HD Insights was an operational overhead. Besides this, they were also interested in performance and cost optimization for their ETL jobs.

Conclusion

- Migrating the ETL workload from HD Insights to Databricks reduced cost by 26%
- Azure Databricks being a fully managed service eliminated the operational overhead of managing the platform, therefore the productivity got increase. After migrating to Azure Databricks, ten more use-cases has been implemented and productionized.
- Databricks seamless integration with the Azure Ecosystem helped in automating the ETL processes using Azure Data Factory

Technical Architecture



Data Processing Framework

Business Scenario

The first requirement for this project was to improve the data processing architecture. The previous architecture had some loops holes and it required immense production support due to lot of data load failures. These loops holes included lack of planning of data processing, lack of triggers and a planned Architecture. Dotsquares team helped by understanding the requirements by doing brain storming sessions with key stakeholders, further working on architecture to improve the data processing framework, finally changed the framework for data processing

Outcomes

- Improved data Framework – Integration, cleaning, transformations, modelling, reconciliation, archival, governance
- Cost optimization by 40%
- Reduced Data failures
- Monitoring of daily load pipelines was automated which improved efficiency of data reconciliation and issue investigation by 30%
- Data Integrations from more than 25+ sources like Google connectors, Social connectors (fb , Twitter, Insta etc)
- Due to the improved data framework and UI, client based increased by 40%
- Far fetched data model was created with anticipated 10x load

Technical Architecture

Data Sources



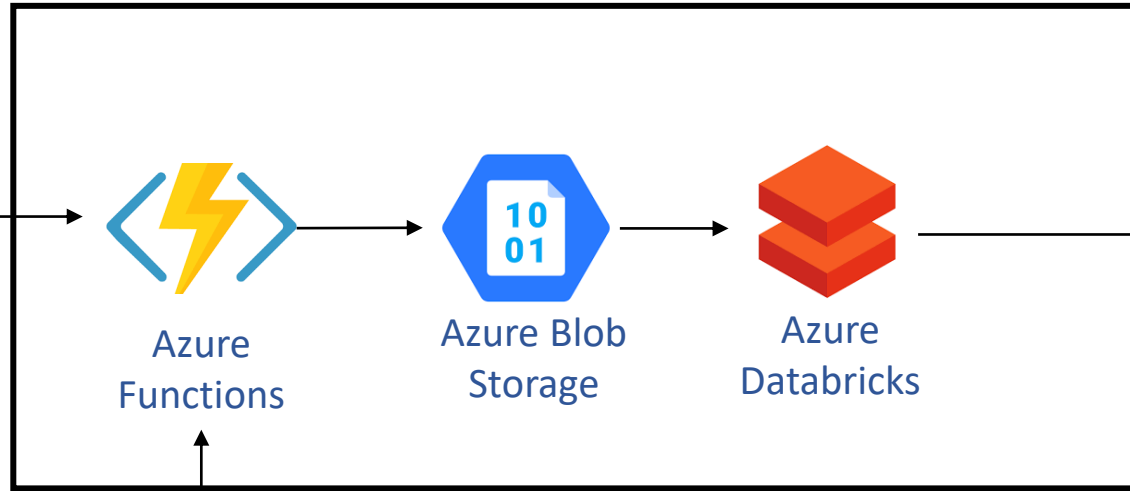
Adobe Analytics



Google Analytics



Others



Azure SQL Database Elastic Pool



SQL Database



Azure Data Factory

Log Analytics Alerts



OMS

Drift Detection and Predictive Analytics – AO SMITH

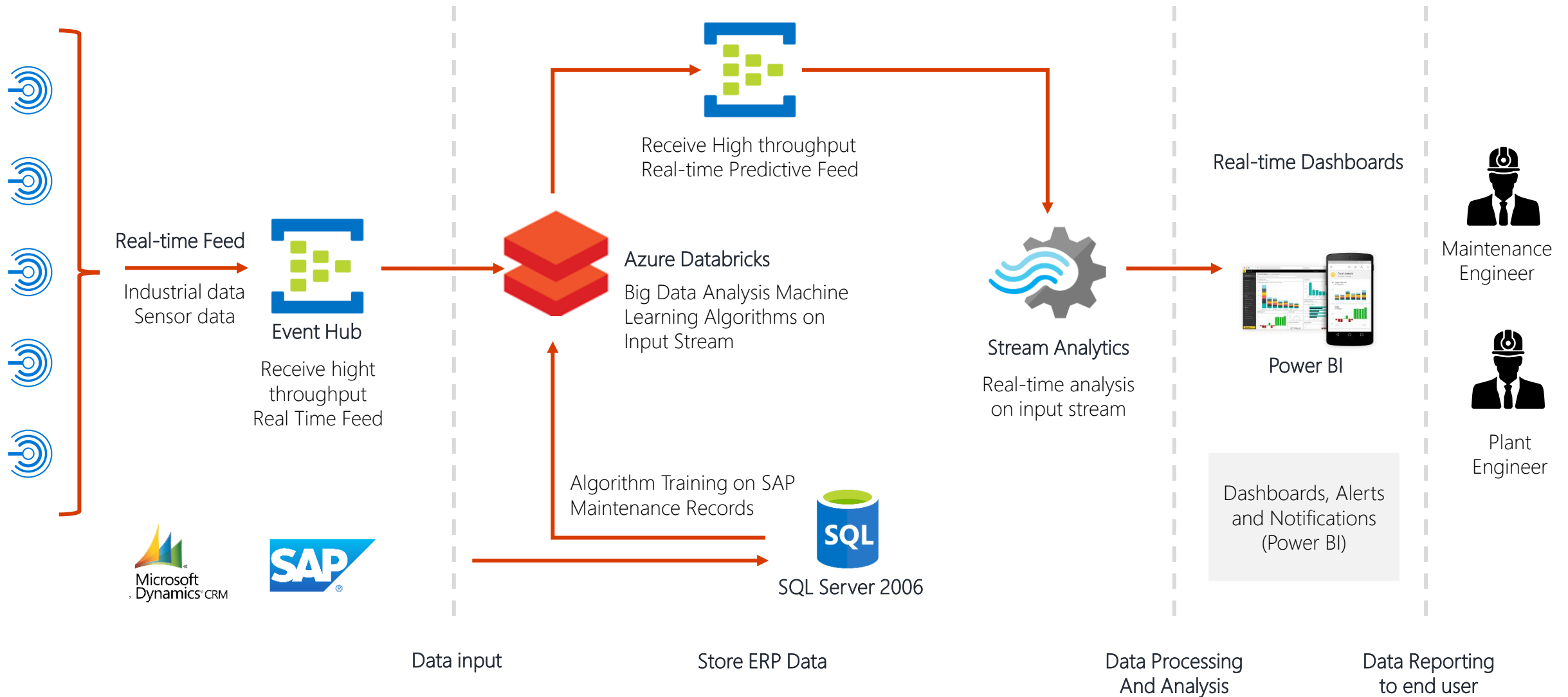
Business Scenario

- The scenario is focused on analysing real time data inputs from sensor-based collection mechanism.
- Earlier, the service of the equipment was carried out after the occurrence of fault.
- There was a need to analyse real time equipment data in order to predict its safety score and probability of parts failure.

Solution

- The service history data is imported into IOT Predictive system using SQL Server 2016 which is then used to Train a Machine Learning model in Azure Databricks
- Using Azure Stream Analytics Services and EventHub- Real-time equipment (heater) data is streamed into this Model to analyze and predict safety score (Probability of Equipment Failure)
- Power BI is used to visualize this real time streaming data for heater and scoring information
- Also, the maintenance Alerts are enabled and sent to relevant stakeholders via E-Mail through Power BI API, which helps to directly predict failures and take corrective action.

Drift Detectives and Predictive Maintenance



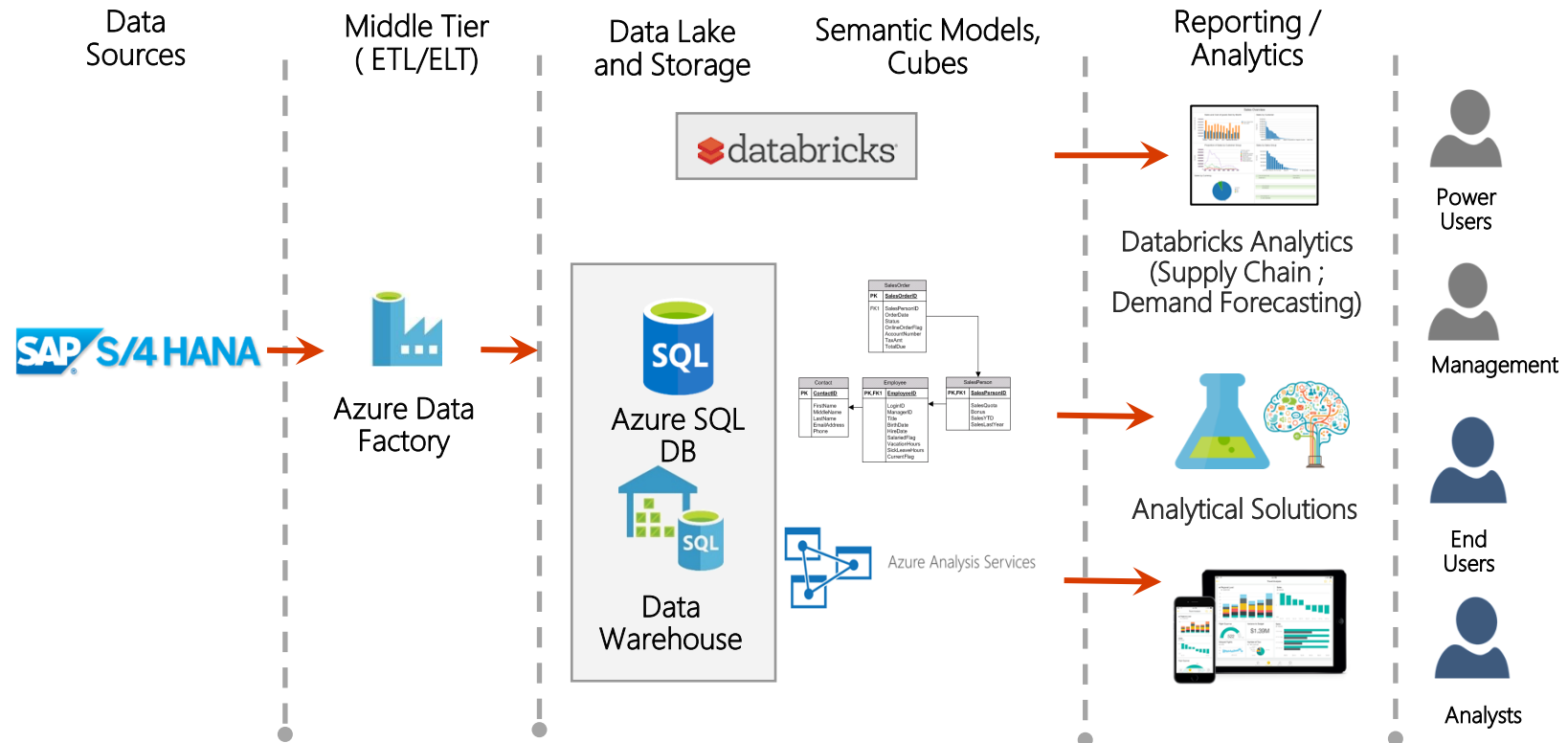
Price Optimization

Business Scenario

Customer wants a one-stop-shop by connecting all the SAP Finance Data at one place via Azure Analytics and enable Enterprise Data Democratization with Auto Scalable and unified access. The solution aimed at collating master and transactional data from SAP S/4 HANA, OneDrive and FTP Locations delivering a data model to enable connections to Power BI, Excel for ad-hoc Analysis as well as creating Reports / Dashboards.

Solution

- Self-serve BI – driving a data culture by putting BI in the hands of everyone
- Improved forecast accuracy, managing inventories, and manufacturing the right products to sell
- Automated exceptional reporting subscription - timely & faster decision making, better focus on actions.
- Minimal data preparation activities.
- Greater collaboration, visibility , and communication on analytics.



Predictive Analytics

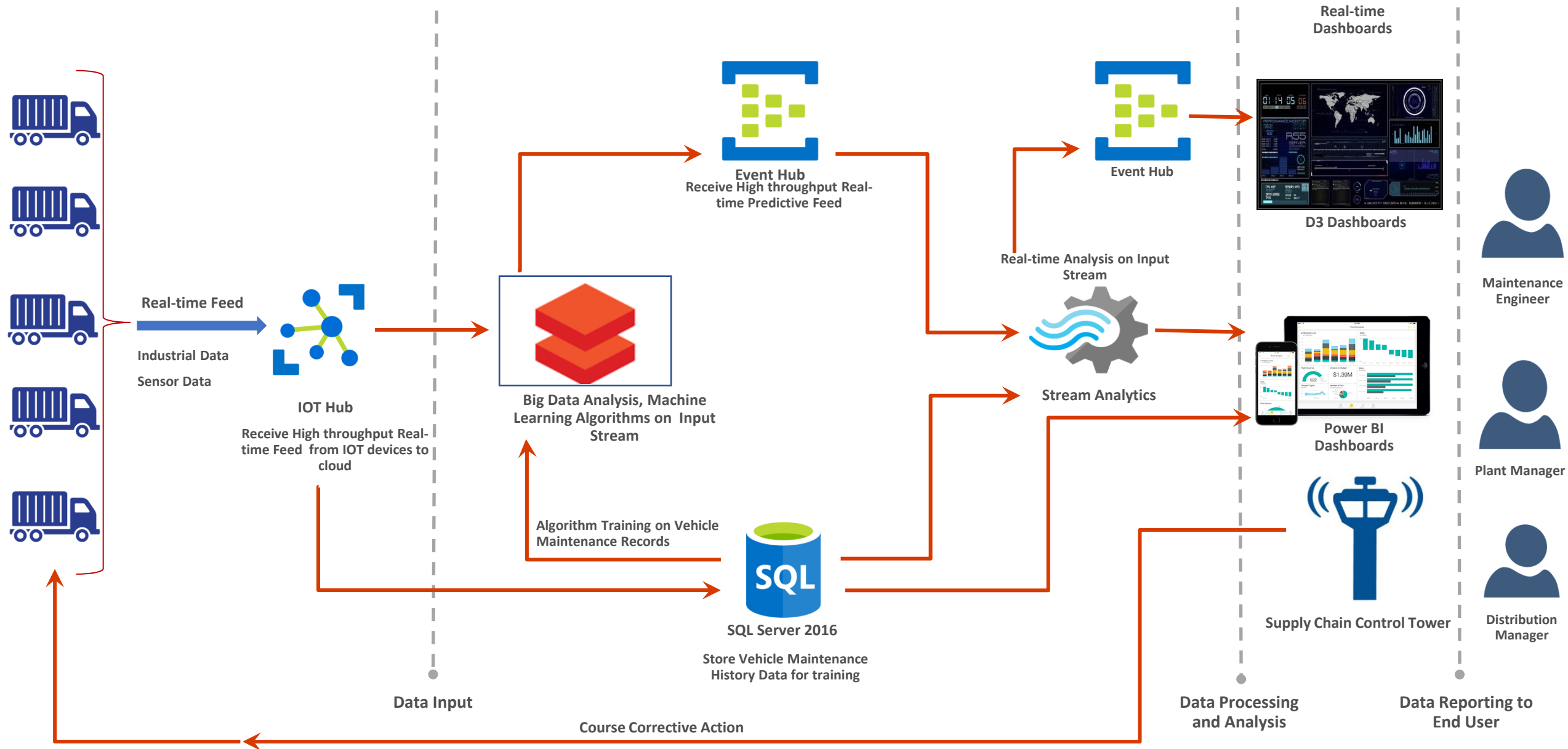
Business Scenario

- The scenario is focused on analysing real time data inputs from sensor-based collection mechanism.
- The vehicle maintenance and tracking history data is imported into IOT Predictive system using SQL Server 2016 which is then used to Train a Machine Learning model in Azure Data Bricks / Azure ML
- Using Azure Stream Analytics Services and IOT Hub- Real-time equipment (vehicle sensor) data is streamed into this Model to analyse and predict potential breakdown of vehicle (Probability of Equipment Failure)
- Power BI / D3 dashboards are used to visualize this real time streaming data for vehicle and scoring information
- Also, the maintenance Alerts are enabled and sent to relevant vehicles through Power BI API, which helps to directly predict failures and take corrective action from the traffic control tower.

Solution

- The real time data like tyre pressure, current latitude and longitude , traffic congestion etc. is procured to the cloud at real time and then alerts are sent to the trucks to take corrective measures in order to prevent delays
- This is handled using a Supply Chain Traffic Control Tower which not only handles alerts and sends out corrective measures to the trucks but also monitors real time analysis on the stream data and the predictive machine learning model in order to make very intuitive dashboards so that the T1 shipments can be monitored and managed from just one point

Technical Architecture





Head Office :

Unit 2, Hobbs Court
2 Jacob Street
London
SE1 2BG

0208 0901819

www.dotsquares.com

Unit 2, Albourne Court
Henfield Road
Albourne
West Sussex
BN6 9FF
01273 575190

6701 Democracy Blvd.
Suite 300 Bethesda,
US (Maryland)
MD 20817
01273575199

Please call or email with any requirements and we would be delighted to provide our analysis for you.

Email: office@dotsquares.com



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Dotsquares LLC
6701 Democracy Blvd
Suite 300
Bethesda
MD 20817

Dotsquares Australia
Pvt. Ltd
Suite 20
981 North Road
Murrumbeena
Victoria 3163

Dotsquares Technologies
India Pvt. Ltd
J-3
Jhalana Institutional Area
Jaipur
Rajasthan 302004



A background image showing a group of business professionals in a meeting. In the center, two people are shaking hands over a document labeled 'CONTRACT'. Other people are visible around the table, some with their hands on the documents. The image has a semi-transparent dark overlay.

THANK YOU REQUEST FOR QUOTE

www.dotsquares.com