



## Advanced Logic Analytics

“Big Data Analytics – Enhanced Insight for Regulatory Compliance”

# Big Data Analytics Financial Services (Gartner)



- Gartner research 300 entities in Financial Services, 70% of respondents planned to invest in Big Data projects in the next 12 months, 38% of Banks already have projects in hand.
- Increasing spend & resources required for Big Data & Analytics but the industry is behind the curve using social, location context and other **unstructured sources of data**.
- Finance Industry **must** find ways to use Big Data in a “Non Silo” fashion to compete with new disruptive digitalised industry competitors.
- The industry is competent at capturing in-house data, but not so good at analysing to best potential, especially when generating customer revenue or customer experience.
- BI and analytics represent top technology priorities for the industry, **but there is a disconnect between data availability and the ability to derive business outcome insights from analysis**.
- The industry needs to shift investment focus more to advanced analytic tools that help business to connect with big data and enable optimized decisions.



# ALA - One Logic Solutions:



In the Financial Sector Big data analytics is changing from technology that enabled analysis of structured data towards capabilities that enable in-depth analysis of the ever-growing unstructured data. With this ability for new analytic capability there are untapped end user business opportunities, for which ALA has the One Logic platform covering:

- Sentiment, Behavioural, Emotional content analysis.
- Unstructured data use.
- Risk & Governance.
- Counterparty Risk.
- Data Security.
- Basel 3.
- Detection & Prevention of Fraud.
- Customer 360's & CRM.
- Marketing
- Telephony data recording
- MIFID II
- Mobile Workforce productivity
- Ethical and Sustainable investment
- Real time data feeds
- Social media
- Office moves and Data relocation

# ALA - One Logic Solutions:



**Unstructured data use** – Organisations have been able to analyse structured data for some time, but the industry shift is the explosion of unstructured data which exists in sources outside the domain of the main database. This process for combining unstructured and structured data together is a new dynamic, and is what HP software is designed to help organisations achieve.

**Risk & Governance** - The staggering increase in volume, variety and velocity of business information has changed how leading companies manage their compliance challenges and investigate risk and governance behaviour. The biggest challenges faced by businesses are getting the right tools or expertise for analysis process quality improvement and increasing challenges with combining multiple data sources.

**Counterparty Risk** - The issue of gaining a view of counterparty risk is prevalent in the capital markets industry, and regulations require great amounts of information that requires Big Data methodology and systems to extract, and analyse.

# ALA - One Logic Solutions:



**Data Security** – backup and recovery and access to data whilst providing security from hacking and misuse is a key requirement of datacenter design.

**Basel 3** - means Big Data demands are placed on financial firms to track the source of data, how it has changed over time, and who has changed it. The ability to pull data in near real-time from a wide variety of sources to calculate exposure reports and feed risk algorithms is especially important.

Regulatory changes are forcing firms to source and report increasingly large amounts of trade data, as well as to adopt higher-quality and usually data hungry risk and pricing models, and comply with reporting and regulatory requirements, all part of a growing trend of increasing volumes of data that are enveloping capital markets. Improving data management processes is very important, especially where disparate systems across the front-to-back office can make it difficult to calculate exposure.

# ALA - One Logic Solutions:



**Detection & Prevention of Fraud** - By using a combination of the right data, smarter analytics and visualisation technology such as a combination of Vertica and Tableau software, businesses can implement Big Data analysis techniques to reduce fraud.

Finance organisations are often good at capturing structured data and performing analytics, but sometimes the data is in one department or database, limiting the analysis that is performed, or linked to small subsets of information which leads to decisions with incomplete information.

Using a more holistic Big Data approach we analyse not just from existing data but from additional unstructured data such as social media, blogs, news, emails, and chat messages.

# ALA - One Logic Solutions:



**Telephony data recording** – FCA regulations stipulate the storing of vast amounts of voice data which can also be used in Big Data analytics as source of information. The access to data and ability to refresh and audit means that database solutions need to be current and resilient to be compliant.

**MIFID II** - was published in the Official Journal of the European Union in June 2014 and sets out new obligations and revised requirements for both retail and wholesale financial markets. Many of these new rules address risks in the wholesale market, such as controls on algorithmic trading, position limits in commodity derivatives markets and the regulation of data reporting services.

All of these require database storage solutions which need increased capability to retrieve and analyse.

# ALA - Risk and Governance Datalake



## Information & Knowledge

- Find
- Manage
- Govern



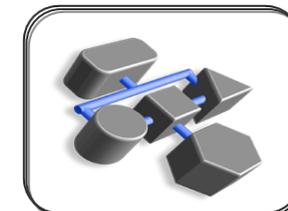
## Collaboration :-

- Internal
- External

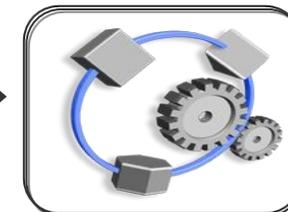
Central Index of all  
Corporate Intelligence  
"Voice, Video, Text, Data"



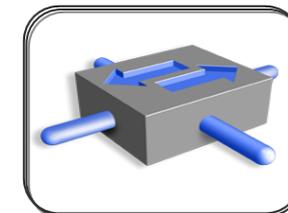
## Automated Processes



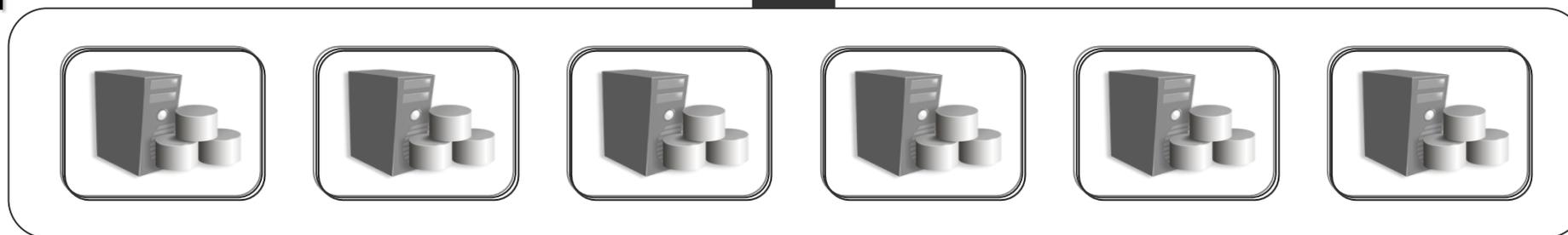
Document  
& Content  
Classification



Consolidated/  
Intelligent  
Archive



Legal Hold  
and investigation



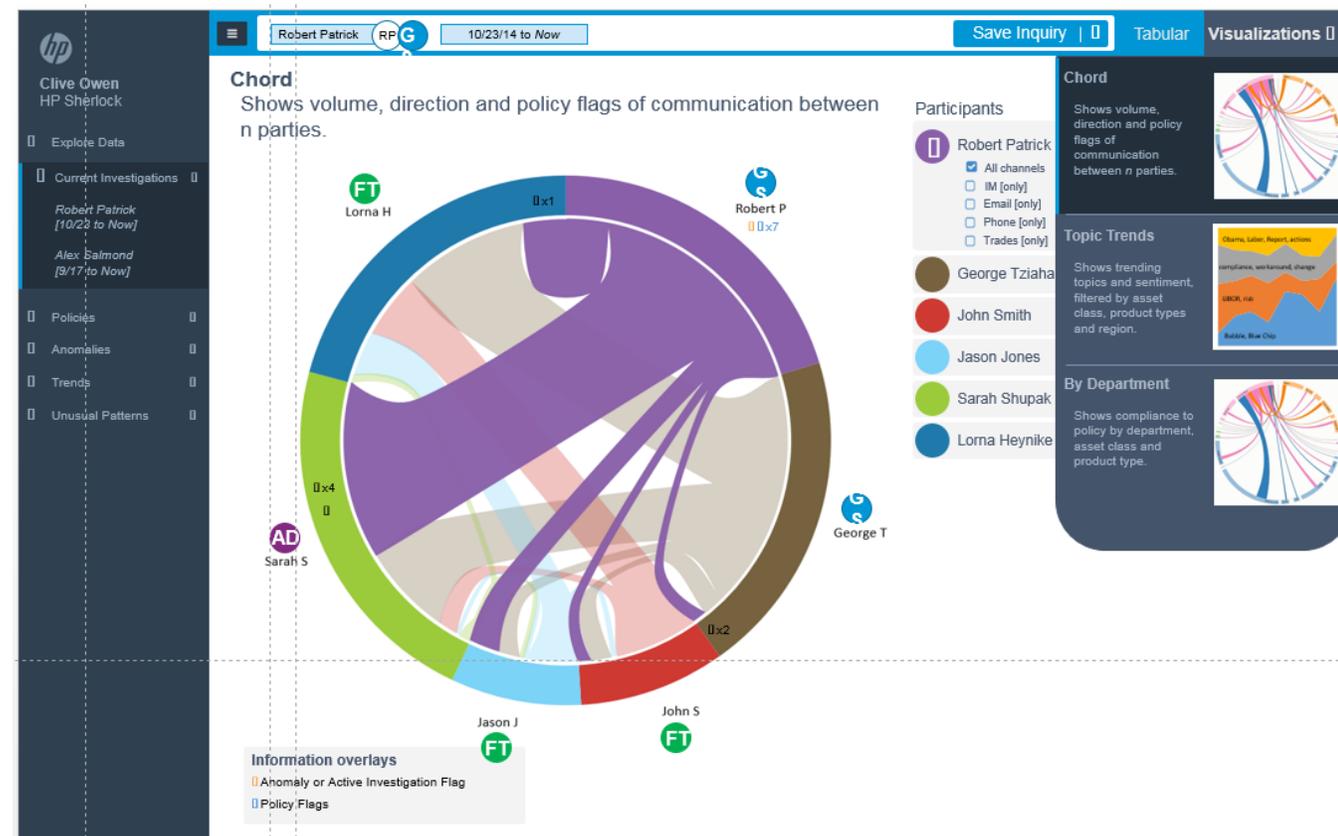
Distributed Repositories

# ALA - Misconduct/Fraud Detection



In the month when Tom Hayes was sentenced for LIBOR rigging we recommend an Information Surveillance & Digital Forensics Solution

- Analyse Multiple data sources:
  - **HP Digital Safe data**
  - **Transactional trading data**
  - **Financial news feeds**
  - **Social media**
  - **Email, voicemail recordings, instant messaging**
- Highlighting suspect trades where no communication can be found between related Bank A and Bank B contacts
- Integrate Vertica for trend and anomaly detection
- IDOL education sends real-time interesting data to Vertica for statistical analysis and slice/dice
- Combine Vertica's pattern-matching and graph-analysis at scale with IDOL's ability to model concepts and enrich data within Advanced Logic Analytics Hadoop lake



# ALA - One Logic Summary



## Hadoop Datalake

- Consolidates structured and unstructured data (including text/audio/video in multiple languages). Links data silos into coherent whole.

## Vertica and Idol Databases

- Real-time analytics on all data sets.

## Company, Index and Market Analytics

- Application and tuning of ALA algorithms and tools to provide full ALA solution.
- Dashboards and visualisations to analyse stocks in user-friendly way.
- Real-time alerts and predictive analytics.

# ALA - One Logic Full Solution Architecture

