From Manufacturing to Mining:
Asset Management Data Strategies Reach for ‘Knowledge Alpha’

Industry Research Findings

Executive Summary

Q1 2020

Alpha Financial Markets Consulting

Research Objectives and Universe

To understand the maturity of data operating models across the business our research addressed a broad range of topics through all aspects of investment management across Investments, Distribution, Operations and Compliance

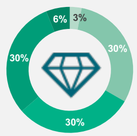
33 participating firms representing ~£6.9 trillion AUM

DEMOGRAPHICS OF PARTICIPANTS

AUM size

AUM BY BANDINGS:

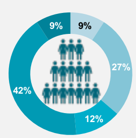
- £0-10bn
- £10-50bn
- £50-250bn
- £250-750bn
- £1trn+



Total staff size

TOTAL HEADCOUNT

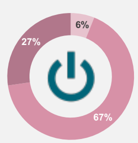
- 0 - 100
- 100 - 500
- 500 - 1000
- 1000 - 5000
- 5000+



Active vs passive

ACTIVE VS PASSIVE MIX

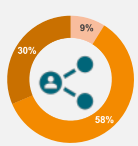
- Predominantly Passive
- Predominantly Active
- Combination of the two



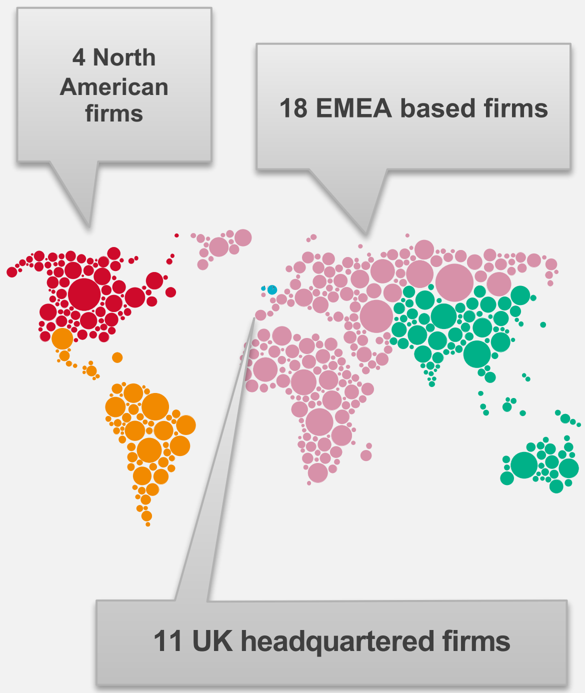
Distribution mix

DISTRIBUTION MIX

- Direct to Customer (%)
- Institutional (%)
- Wholesale (%)



GLOBAL RESEARCH UNIVERSE



KEY QUESTIONS TO ANSWER

- What are firms doing to improve data governance?
- What progress is the industry making in mastering key data sets and the technology to support this?
- Where are firms investing in initiatives such as cloud, APIs, data architecture?
- What are the key opportunities and threats of new data models?
- Is data innovation really impacting core processes or is it simply hype?

Financial Services Is Lagging Other Sectors in Its Data Capabilities

Research across sectors highlights how banks and asset managers have been slow to recognise data as a source of business growth and sustainability. To catch up, the sector now needs to address this 'data debt' with investment and data technology expertise

Other sectors have gone through data transformation

While the finance sector has long been successful, the burden of legacy infrastructure challenges many firms as they seek innovation and struggle to fully adopt new technologies.

Industries that have advanced over recent years include manufacturing, which has seen rapid evolution to tackle change, for example with robotics in assembly lines and globalised supply chains. Telecom providers have effectively navigated digital and invested to meet increasing demand from customers on their networks.

Finance ranks low in the use of data (visualisation), data skills and data infrastructure (cloud)

- Only **mining and metals is further behind on cloud computing**, a foundation of the data operating model
- Of 10 industry categories in data science, **finance is ranked last for data visualisation** and is 6th in machine learning, four places ahead of healthcare.
- In another cross-industry study**, finance is in second to last place for data skills** and 5th place for technology expertise.

Why is this important?

Market uncertainty, fee compression and flows into lower margin products are driving forces behind asset managers need to boost their competitiveness and simplify the operating platform. Our survey will look in detail at asset managers' specific progress in establishing an effective, advanced data operating model.

FINANCE RANK PER TENCHNOLOGY

TECHNOLOGY ADOPTION — 12 INDUSTRY CATEGORIES

- 1 Distributed ledger (blockchain)
- 2 Digital trade
- 3 App- and web-enabled markets
- 5 User and entity big data analytics
- 8 Machine learning
- 8 Augmented and virtual reality
- 11 Cloud computing

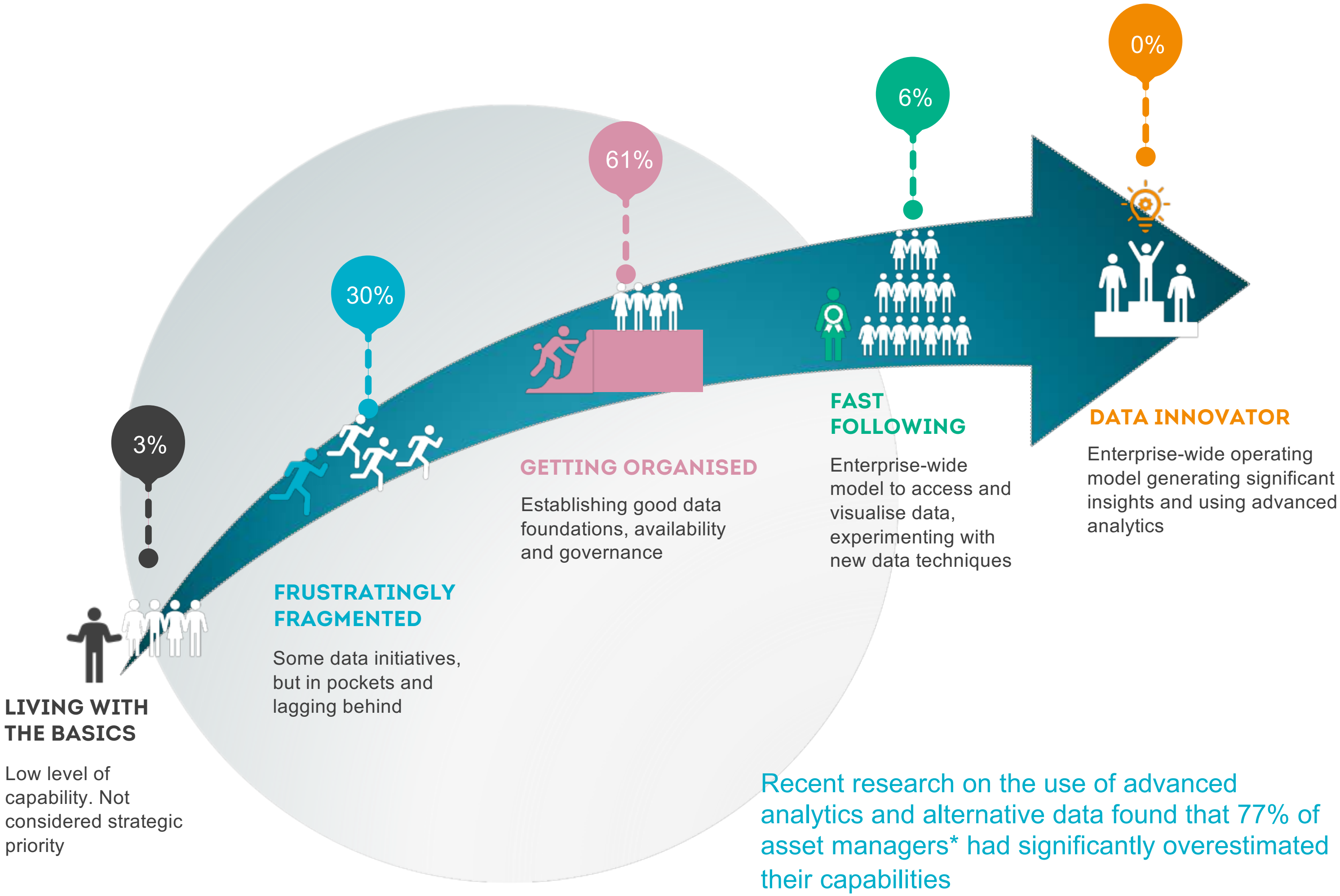
DATA SCIENCE — 10 INDUSTRY CATEGORIES

- 4 Data Management
- 6 Machine Learning
- 10 Data Visualization

Source:
1 - World Economic Forum, Future of Jobs
2 - World Economic Forum, Data Science in the New Economy
3 – Company & Industry ranking of skills, Harvard Business Review 2019

On Data Maturity, Most Firms Describe Themselves as ‘Getting Organised’

Whilst the industry has increased levels of investment and focus, we have yet to observe any firm describing itself as a ‘data innovator’



Recent research on the use of advanced analytics and alternative data found that 77% of asset managers* had significantly overestimated their capabilities

* UBS Analytics Power Report, 2019

Four Components of Data Transformation

Our high level findings indicate that many asset managers are 'stuck' at level two: having the right resource and governance in place

1 DATA INFRASTRUCTURE

- **80% of firms are using cloud** based infrastructure and 89% have a data warehouse
- The top cloud driver is rated as **flexibility**
- Internal data stores are mostly used for regulatory, investment risk, client reporting and performance datasets
- IBOR, ABOR and CBOR are mostly held on firm's servers in vendor systems, moving to the cloud
- Only half (53%) of firms have a defined approach to Data Visualisation and BI

2 DATA GOVERNANCE

- **69% of firms** do not have – and **do not plan to hire a CDO**
- **Responsibility for data** sits with **business functions** for almost half of firms
- 52% of firms have **defined an enterprise data model** at least to the conceptual level
- Total people with data skills average **20 FTE**
- Top 2 data issues are **Mastering** and **Integrating**

3 DATA INTEGRATION

- **40% of large firms** have an explicit goal to become an **analytics-focussed** organisation
- Top 3 benefits sought from data transformation:
  1. Improved client engagement
  2. Reduced errors/risk
  3. Generate economies of scale
- Under half of firms have a **robust use of ESG data** in investments

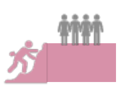
4 DATA ANALYTICS/AI

- **25%** of firms have **dynamic dashboards** in Investments and Distribution
- **55% of large firms** are formally applying **predictive/advanced analytics** in Distribution
- AI/ML is predicted to bring greatest advantage in Investments and Distribution
- One third of firms are considering Blockchain

Alpha's Data Strategy Index:
Characterising the Level of Ambition in Data and Analytics

To better understand and contextualise the approach taken by the firms in our study, we scored how each firm's current activity and aspiration signifies their commitment to turning data into advanced intelligence

High scoring



Medium scoring

Lower scoring

	Topic	Example response
High scoring	**Data intelligence skills & culture**	# Data Scientist FTEs (current and increasing)
		"It is our explicit goal for the whole organisation to operate with an analytics-focused mindset"
	Data ambition	Advanced technologies are on the roadmap e.g. VR/AR, and/or data shared with clients via mobile apps
		High self-assessment of maturity e.g. "Fast Follower"
	Client & Investments focused Analytics and AI capabilities	Use of dynamic/interactive dashboards in Distribution and Investments
		Experimentation with, and formal application of predictive/advanced analytics in Distribution and Investments
		Most promising use of AI identified in alpha generation, trading and client engagement/sentiment
Medium scoring	**Alternative Data and Advanced Analytics**	Use of APIs, FTP to share data with clients
		Use of dynamic/interactive dashboards in Risk, Compliance, Performance & Operations
		Experimentation with advanced / predictive analytics and alternative data
	Data skills	# Data engineers (current and increasing)
		Defined approach to data visualisation and BI, defined enterprise data model
	Data Transformation Roadmap	At least some of: Big Data, Blockchain, Advanced Analytics methods, Mobile Apps
Lower scoring	**Data Leadership & Governance**	Benefits sought from data transformation: MI/Decision making insights, Increased revenue/AUM, Improved retention and reduced outflows, Competing against new entrants
		Senior Management concern about data governance and focused on integration
	Foundational Data infrastructure	At least some use of public Cloud platforms such as AWS, Azure, also private cloud and established SaaS products (e.g. Salesforce)
	Data integration and tooling	Use of data tooling such as Hadoop, MongoDB, Matlab, R, Python, Alteryx

Large Asset Managers Are ‘on the Offensive’ with Data, and Without Significant Investment Mid-sized Firms Risk Being Left Behind

Against a backdrop of market uncertainty, the industry is bracing itself with defensive investment strategies*. Our research indicates a significant shift is taking place as firms recognize that an offensive data strategy is needed to capture growth in competitive times

ALPHA’S DATA STRATEGY INDEX

Proprietary measure of data ambition

OFFENSIVE

Data drives core business objectives

- Growing revenue
- Identifying inefficiencies
- Improving client satisfaction
- Supports strategic decision making through aggregation of different sources of client and market data

DEFENSIVE

Data operations focused on minimising risk to the business

- Compliance monitoring
- Risk and fraud detection
- Data management and governance

* 64% of asset managers are adopting a more defensive investment strategy, State Street Growth Readiness Survey 2018

The key items on firms' Data Transformation Roadmap

Asset management industry is still struggling to get the basic architecture in place required to support more advanced data processing and analysis

GETTING THE BASICS READY

1 **Data Warehouse**
Central data storage is key for consistent reporting across organisation. 68% of the asset managers already have a live data warehouse and for 21% this initiative is underway

2 **Data Visualisation**
To generate insights from data, you need to represent it. Data visualisation allows to do this near real-time. 39% of asset managers already have this capability, 25% are currently developing it, while another 25% still have it in their plans

3 **Data Lake**
Similar to a Data Warehouse, a Data Lake provides central repository for data, yet is more flexible as the data does not need to be structured. 14% of firms have a live data like and 29% are building it

4 **Enterprise Data Model**
Good architecture and data governance around it are essential for timely and high-quality data delivery to the required entities within organisation. Only 14% of respondents have an enterprise data model defined, while 36% have started defining it

5 **Cloud**
Cloud solutions provide flexible scalability, data security and a lower operational commitment. Only 11% of firms have moved apps and data to the cloud, yet another 50% are already busy with this initiative

5-YEAR INNOVATION ROADMAP

1 **Big Data / Alternative Data**
Social sentiment, app usage, satellite images, web data scraping are becoming to play a role in investment decisions. 54% of asset managers utilise it or are planning to start using it in the next 5 years

2 **RPA/Automation**
RPA and more sophisticated automation techniques reduce operational risk through minimising human error and streamlining processes. 54% of firms plan to implement these techniques within the next 5 years

3 **Simple analytics (regression)**
Simple analytics are essential in analysing simple data relationships and estimating risks. 39% of the respondents plan to have simple analytics implemented within the next 5 years

4 **Advanced analytics (bayes, neural networks etc.)**
Advanced analytics methods enable use of statistics and machine intelligence to determine the likelihoods of outcomes, given historical data inputs and pattern recognition. 39% of the respondents plan to implement these methods in the next 5 years

5 **Mobile apps**
Mobile apps allow firms to be better aligned with changing client needs providing more interactivity, transparency and faster data delivery. 36% of firms plan to implement this technology within the next 5 years

Firms need to lay the foundations to unlock the value of their data

7 out of 10 participants identified "generating insights from data" as part of their data wish list…

… However, of those who stated an interest in data insights…

50% also state that they have no clear approach to analytics across the organisation

Only **17%** have the explicit goal for the organization to operate with an analytics-focused mindset

33% aim to apply analytic methods to specific problems and initiatives

Asset managers want to leverage data to improve their processes but they lack commitment to define a consistent approach to analytics

- **Large firms** seem to have more clearer vision of what they want to do with analytics as most of them have an explicit goal to operate with an analytics-focused mindset
- **Medium size firms** seem to struggle the most, which can be driven by their relatively big size, which impairs their agility to change. On the other hand they do not have the right budget to be spend on innovative solutions
- **Small firms** are also lagging behind with 60% of them not having a consistent approach towards analytics
- With firms deploying an ever growing range of unconnected BI & Analytics point solutions across their technology estate, smaller and mid-sized managers often struggle with **user adoption**, **training** and **exploitation of analytics** insights as a result of inconsistent approaches

Where firms have established data visualisation & BI strategies, these often fail to establish effective operating models to support emerging requirements

e.g. row-level access management and security, maintenance and release control and query support from business users

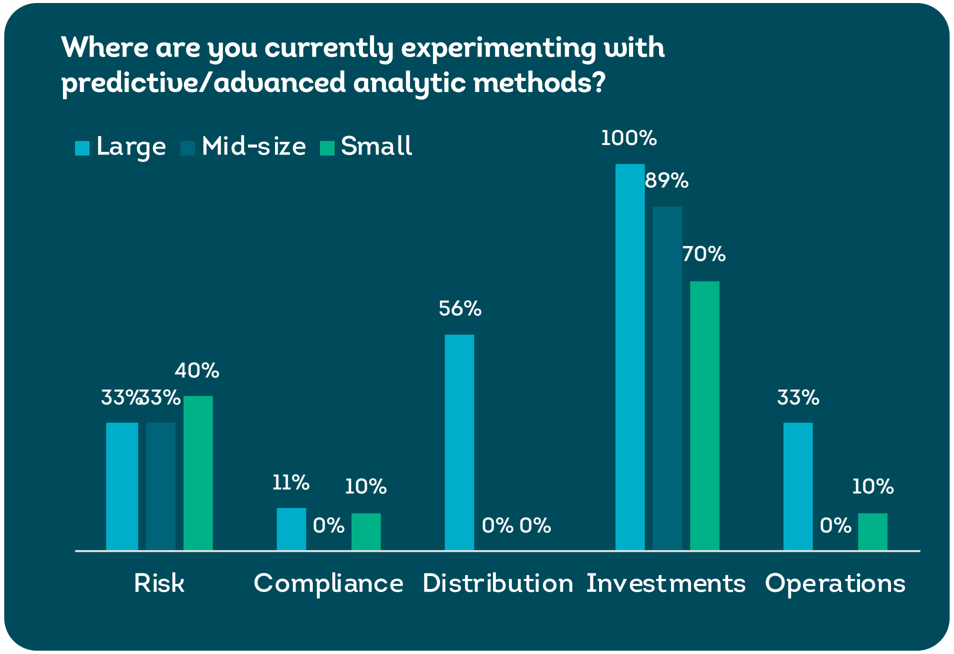
Some responses point to participants struggling to build the necessary momentum in the analytics space

45% of firms have no defined approach to data visualization and business intelligence

40% of small firms and 78% of mid-size firms do not use any dynamic dashboards

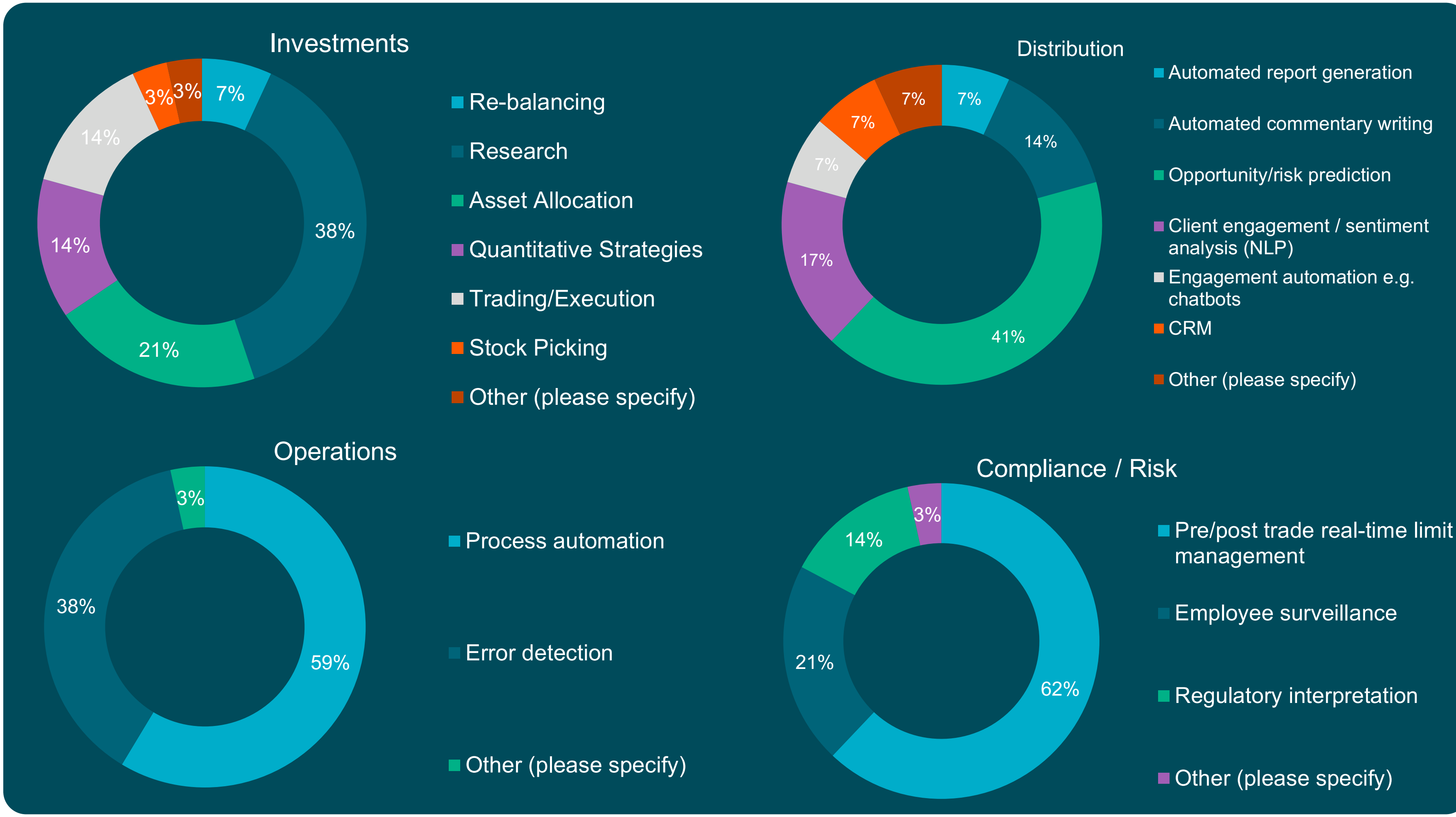
For advanced analytic methods, there is an innovation gap across the whole spectrum of participants, but especially for mid-size firms

56% of large players have advanced analytic methods on their 5 year project roadmap as opposed to 30% and 20% of small and medium players respectively.



Having access to the real time data across the value chain is becoming a “do or die” trend in the industry

On benefits of AI, most respondents believe it can help improve their investment returns as well as helping them differentiate against competition by enhancing customer experience and ensuring customer retention. Cost reduction was another benefit recognised



Introducing Alpha

Headquartered in London, we have 400+ consultants deployed from twelve offices and provide clients with complementary propositions covering consulting, technology services and contracting

Should you have any further questions on the information contained within this pack, please contact:

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3x
winner of Funds Europe European Consultant of the Year

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350
clients globally

We have worked with
80%
of the 20 Global Asset Managers by AUM

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13
covering the whole asset management value chain

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- Data Operating Models
- Data Architecture
- Insights & Analytics

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