IM Department Capabilities
Big Data at COMPANY

Company Information Management

December 2014

COMPANY

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Objective and Background

Our objective is to share information and provide examples of current analytic capabilities and work to partner with you forward

- Competing on Analytics has been the focus of IM since we became a company

- COMPANY is uniquely positioned to compete on analytics in the financial services industry (We manufacture, serve, and sell financial products)

- In 2013, IM will deliver 1600+ projects that use at least some level of analytics. We estimate about $70MM of direct impact from these efforts in 2014.

- IM's infrastructure is refreshed monthly with 350+ data sources and has ten years of client, advisor and product data. About 300TB of data resides at ACME, our strategic partner

- IM stores data on about 300MM US residents and can very precisely identify who they are and whether they are a client. We also maintain alliance files for their customers

- IM maintains at least 65 different segmentation schemes, over 150 active predictive models, and 4000 audience propensity identifiers

- IM supports both reactive and predictive analytics

- IM is a team of 75 professionals, 30% in Phoenix, 30% in Minneapolis and 40% in Gurgaon

IM's Charter is Targeting COMPANY Success

The Information Management vision is to deliver a sustainable competitive advantage to COMPANY by visibly driving information-based decisions and solutions. This vision includes making sure that our company is using data for systematic reasoning to make decisions. It includes targeting the right people with the right products and services at the right time. IM also plays a major role in developing an understanding the products, clients and advisors in our current business models.

IM's 4 Cornerstone Capabilities: IM is a knowledge expert with an extremely broad base of information – and we know how to use it. By integrating people, tools and processes, IM provides the following solutions to COMPANY:

- **Predictive Modeling**
- **Campaign Services**
- **Consultative Services**
- **Measurement Solutions**

Key Linkages to Technologies:

- **Data Management Solutions**
- **Business Intelligence**
- **Reporting and key metrics**
- **Strategic Measurement**
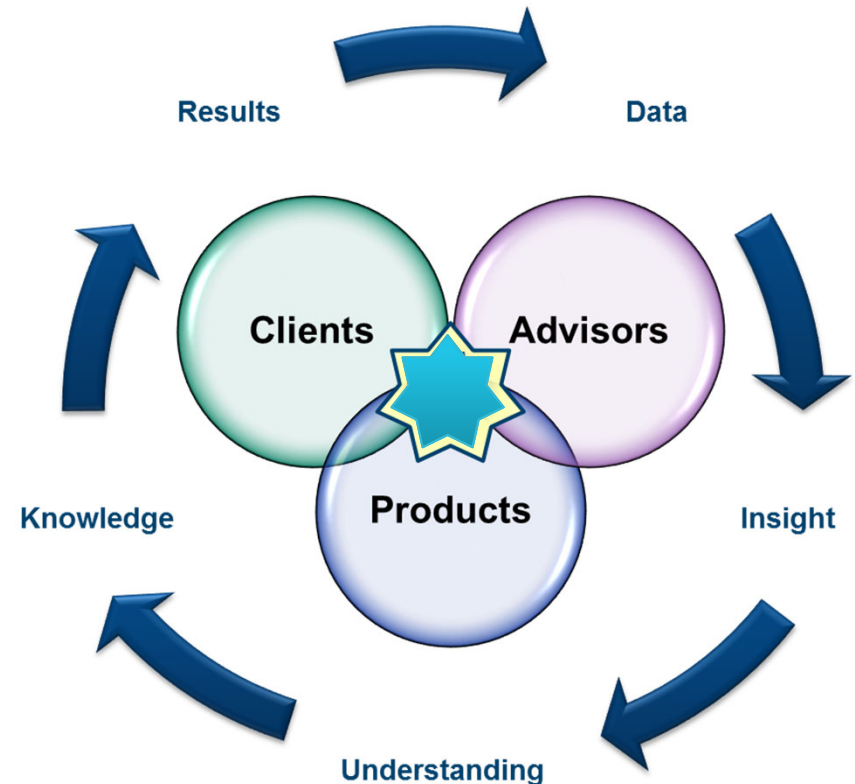
Integrated Financial Services Model: Information from Client, Advisor, Prospect, Product and Channel are brought together to drive information-based decisions and strategies
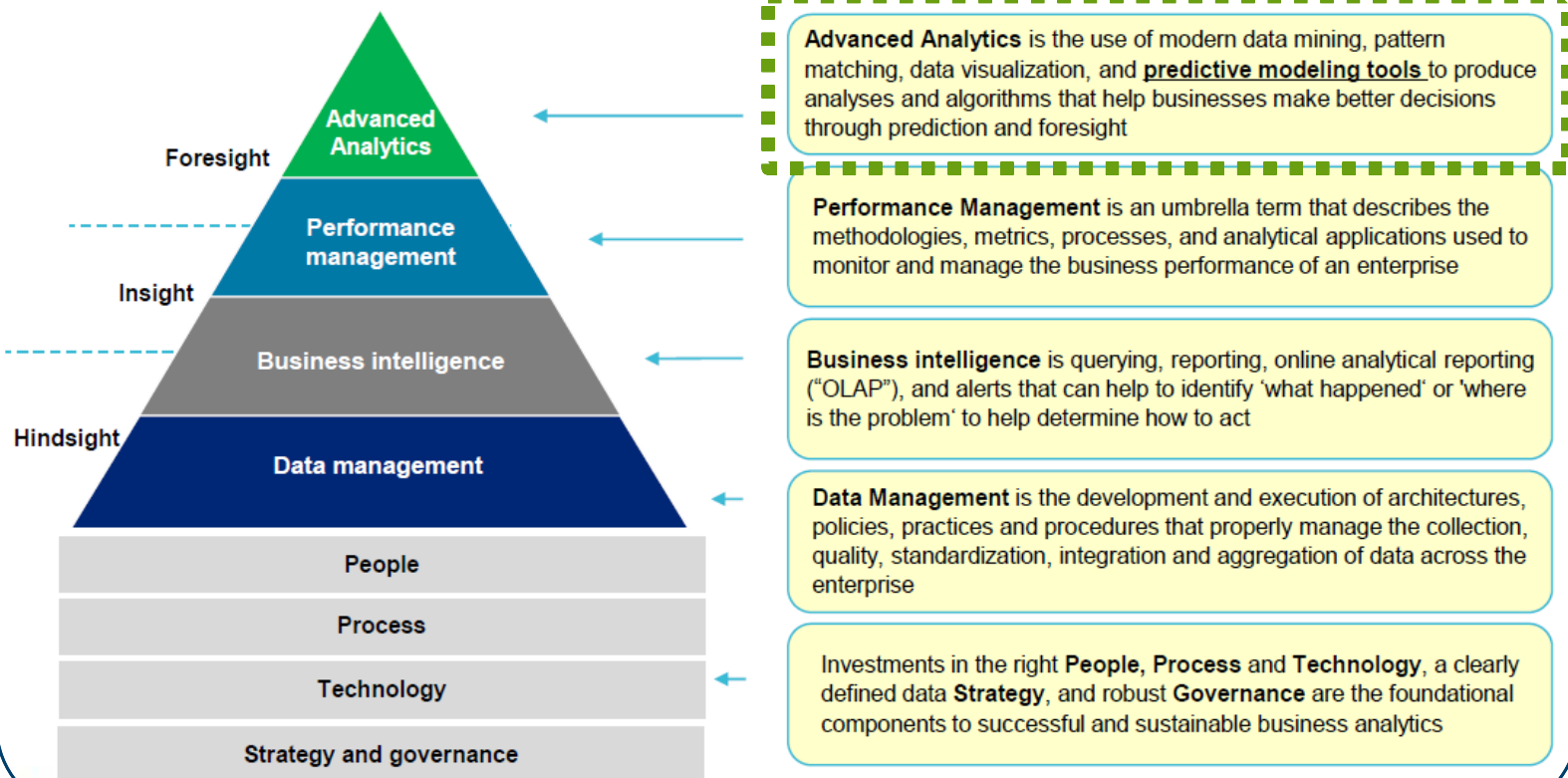
Example of Predictive Analytics in Action: CRM for the ABC

The COMPANY ABC Center is leveraging predictive analytics to drive insight for their CRM tools and customer strategies.
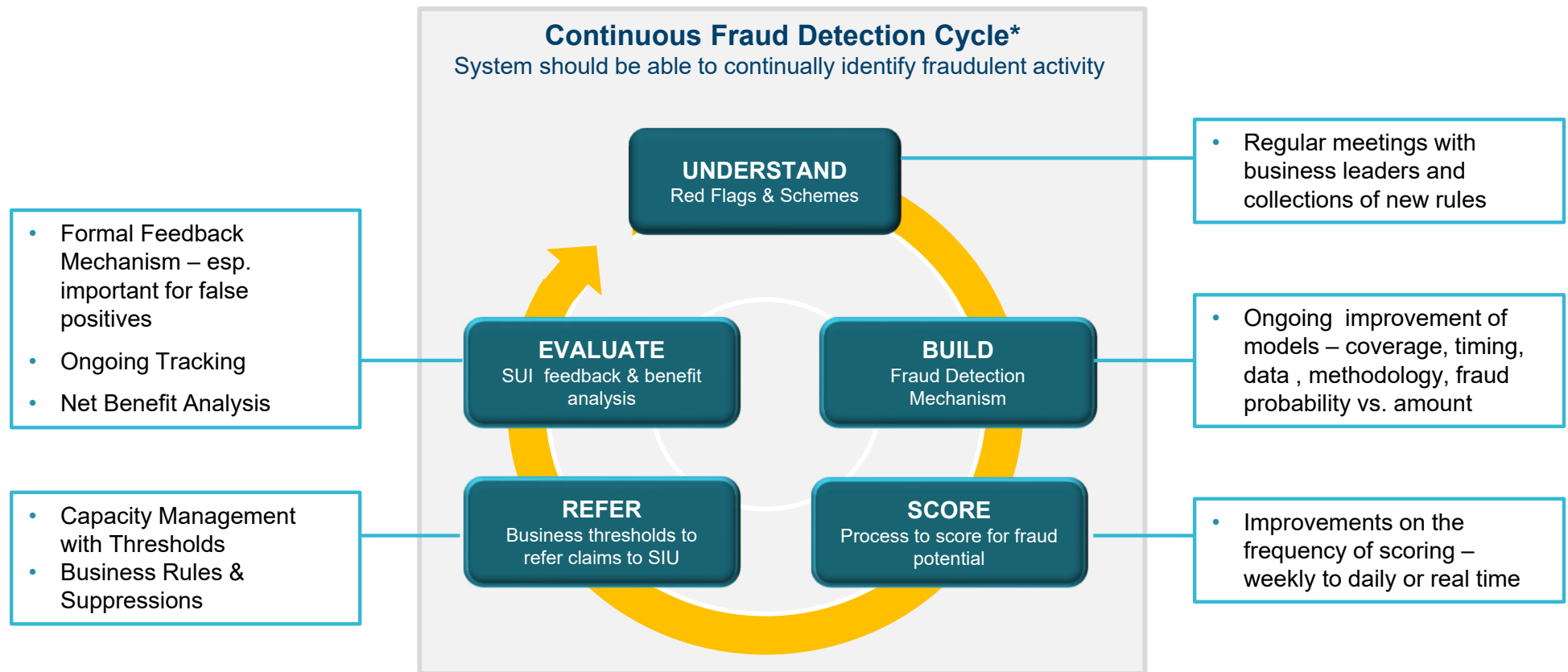
Shift from Hindsight to Foresight: Driving Insight to the Moments of Truth Through CRM

Wealth Management firms are utilizing traditionally retail techniques to better drive insight & foresight to better understand their advisors, their clients and improve experience.

Advanced Analytics is the use of modern data mining, pattern matching, data visualization, and **predictive modeling tools** to produce analyses and algorithms that help businesses make better decisions through prediction and foresight

Performance Management is an umbrella term that describes the methodologies, metrics, processes, and analytical applications used to monitor and manage the business performance of an enterprise

Business intelligence is querying, reporting, online analytical reporting ("OLAP"), and alerts that can help to identify 'what happened' or 'where is the problem' to help determine how to act

Data Management is the development and execution of architectures, policies, practices and procedures that properly manage the collection, quality, standardization, integration and aggregation of data across the enterprise

Investments in the right **People, Process** and **Technology**, a clearly defined data **Strategy**, and robust **Governance** are the foundational components to successful and sustainable business analytics

Foresight — Advanced Analytics

Insight — Performance management

— Business intelligence

Hindsight — Data management

People

Process

Technology

Strategy and governance

# Example of Predictive Analytics in Action: Claims Fraud

IM is working closely with the COMPANY Claims area to identify high risk claims that are not getting reviewed in the current process. Due to the ever-changing nature of fraud, the process to detect it must be continuously updated and improved. This requires a strong ongoing partnership between business and analytics. Below shows the continuous fraud detection cycle:

Continuous Fraud Detection Cycle*
System should be able to continually identify fraudulent activity

UNDERSTAND
Red Flags & Schemes

EVALUATE
SUI feedback & benefit analysis

BUILD
Fraud Detection Mechanism

REFER
Business thresholds to refer claims to SIU

SCORE
Process to score for fraud potential

- Formal Feedback Mechanism – esp. important for false positives
- Ongoing Tracking
- Net Benefit Analysis

- Capacity Management with Thresholds
- Business Rules & Suppressions

- Regular meetings with business leaders and collections of new rules

- Ongoing improvement of models – coverage, timing, data , methodology, fraud probability vs. amount

- Improvements on the frequency of scoring – weekly to daily or real time

*From the article "Innovations in Claim Fraud Detection"
by Karthik Balakrishnan, Thomas Mulvey*

IM Data Asset – Data vs. Information and Knowledge

IM adds business value by utilizing and advancing raw data assets through statistical analysis
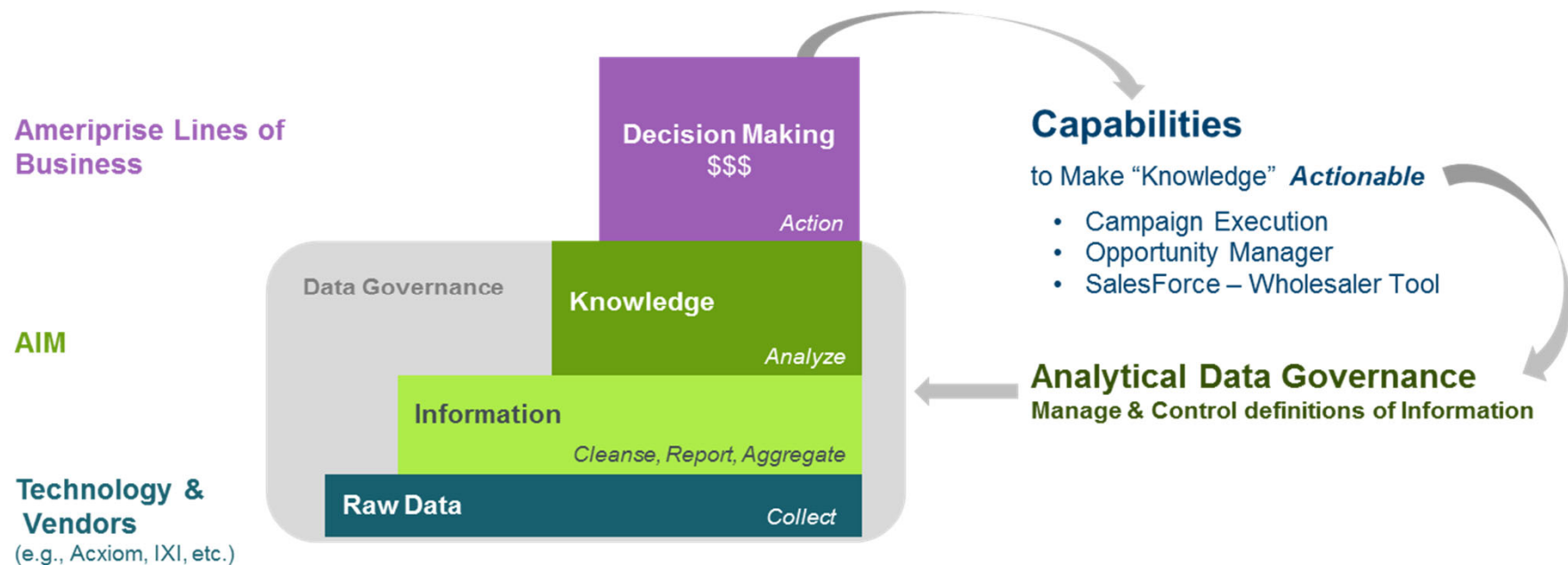
IM built an Analytical Datamart that includes the following forms of data:

- Raw Data – Regular feeds from Technologies
- Data with Insights:
  - Information - collection of organized data with content and perspective
  - Knowledge - the information that provides guidance or initiates action

Strategic Areas of Focus for IM

Long before there were slogans like "Big Data" or "A Smarter Planet" or "High powered Analytics," IM was working to lay the foundations for our company to compete on analytics. At COMPANY, we see several clear analytic trends:

1. Consistent increases in volume of requests

2. Greater sophistication in the questions being asked

3. A cultural shift towards using analytics across our organization

IM's analytic foundation includes hundreds of data sources, the most complete customer picture in the industry, a robust prospect warehouse and almost ten years of data and metrics to use in decision making. We are proud of what we have accomplished and the results are consistently good:

• IM always delivers on time and operates above a six sigma level of quality

• We partner well and have established relationships with 500 different COMPANY Leaders, from ELT to Managers

• Our teams are global, virtual and operating effectively

• Our processes are auditable and our costs well controlled

• IM people are some of the most satisfied and engaged in the company and the industry

Fast Forward – Analytics at COMPANY in 2018

When we defined our first IM Roadmap in 2008, the world of analytics was vastly different. Facebook was still in its infancy and the iPhone had just come on the market. Since then, computing power has grown exponentially and the analytics industry has changed to the point where many industries live and die by the information they get from analytics.

Over the next five years, the pace will quicken and the companies that use analytics well will reap the rewards. Those who don't will follow. While there is some need for continued investment to stay current with our platforms, we see the need to invest more in understanding and exploring what's possible.

- **Big Data**
  - Emerging technologies will continue to expand data and re-define what's possible
  - Data from mobile and social media solutions will be born that require real time analytics
  - COMPANY data solutions will be more dynamic and integrated

  Key Change: IM will have a bridge to Technologies and real time scoring in key business processes

- **Evolving Technology**
  - The technology will be faster, cheaper and easier to use

  Key Change: Extend value of data asset past IM, Banking and Cash Solutions and Compliance
  - Analytic software solutions like R will be more visual and evolve to change current standards
  - The way data is managed changes to handle volumes, integrate views and maintain security (e.g., Hadoop)

- **Vendors and Partners**
  - There are many evolving players – Accenture, McKinsey, etc. are all accelerating their presence in this space
  - ACME is going big with analytics as their value proposition
  - IBM is knocking on our door to showcase their view of the future
  - Service Level expectations evolve and DR solutions are becoming more important

Conclusions – Moving Forward

IM has made significant progress against our last roadmap and expanded our impact into many parts of the company. We now want to focus on delivering an even greater strategic impact and to anticipate the company's needs for tomorrow. IM High – we are in it to win it.

- IM has established capabilities in predictive analytics in many key parts of COMPANY, but analytics is a journey not a destination

- IM should focus on the biggest and highest value opportunities

- For each opportunity, start with questions not data

- Keep existing capabilities while adding new ones

- Use an information agenda to plan for the future

What We Need From Technologies:

1. Support in influencing the culture –

2. Keep thinking long term – COMPANY needs a business intelligence strategy

3. Data will drive tomorrow's opportunity (it wisely)

analytics is a journey, not a destination

Appendix

▶ **End-to-End Across COMPANY: An Integrated Model**

▶ **Current Services from ACME**

End-to-End Across COMPANY: An Integrated Model

The power alley for COMPANY is the fact that we are fully integrated financial services team. IM's power alley is the ability to understand the crossroads of products, customers, advisors, investors and prospects. Many of our deliverables are focused at the department or segment level. We believe an approach that brings together the end to end view for (with measurement) is a key step forward.

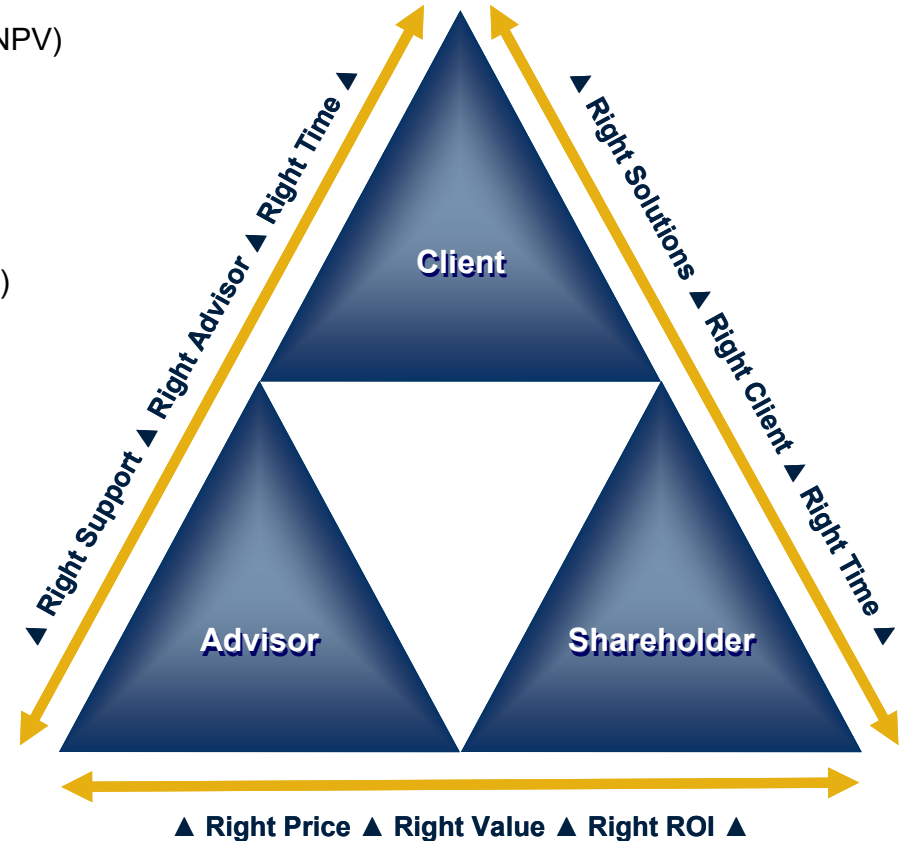- **Full Enterprise View (A Measured COMPANY)**
  - A granular view for each advisor
  - A flexible view across programs and across segments
  - Measures all key metrics and provides a financial measure (e.g., NPV)

- **IM Vision Across the Company**
  - Full view of customer or investor (some missing pieces)
  - Full view of Advisor (internal and external)
  - Full view of Field and Sales Leaders (field leader data unavailable)
  - Full view of integrated firm (an enterprise view)

- **Metrics Solution**
  - Access to data asset for broader group than IM, Compliance and the Bank
  - Key metrics reactive and proactive at the fingertips of leaders
  - Simple, organized and secure
  - *Insight at fingertips of those who need it*

Right Time ► Right Advisor ► Right Support

▼ Right Solutions ▼ Right Client ▼ Right Time

Client

Advisor

Shareholder

▲ Right Price ▲ Right Value ▲ Right ROI ▲

Current Services from ACME

IM's largest expense is the AbiliTec services at $1.2 million, which internally we call "pinning." This service is essential for identifying lead conversion.

Data

Becky Smith, IL?
Rebecca Wilson, AZ?
Becky Wilson? GA?
120 Main Ave, GA?

AbiliTec ®

Becky Smith
45 Oak St
Chicago, IL
DOB: 7/4/60

Married & Move →

Becky Wilson
123 1st Ave
Phoenix AZ
DOB: 7/4/60

Name Change

Rebecca Wilson
123 1st Ave
Phoenix AZ

Re-married & Move →

Rebecca Jones
12 Main St
Atlanta GA

Link = ABC123 →

Verified Data

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