

Technology Update

Performance Measurement Committee: NCREIF Summer 2019



Technology Summary from NCREIF Winter 2018

Identifying the Current State

- Sent Survey to NCREIF Performance Measurement Committee
 - Wanted to assess how firms were calculating performance returns
 - Respondents ranged from 35-46
- More than half of respondents are/were still using Excel to calculate performance
- 54% said they are/were addressing the performance issues with internal/external software implementations
- 73% said they had interest in hearing from a consultant on real estate performance software
- RealFoundations did a presentation on the issues facing real estate managers
 - Fragmented data, inconsistent data, data not recognized as a real asset, etc...
 - Identified solutions/vendors and provided a case study

Technology Summary from NCREIF Spring 2019

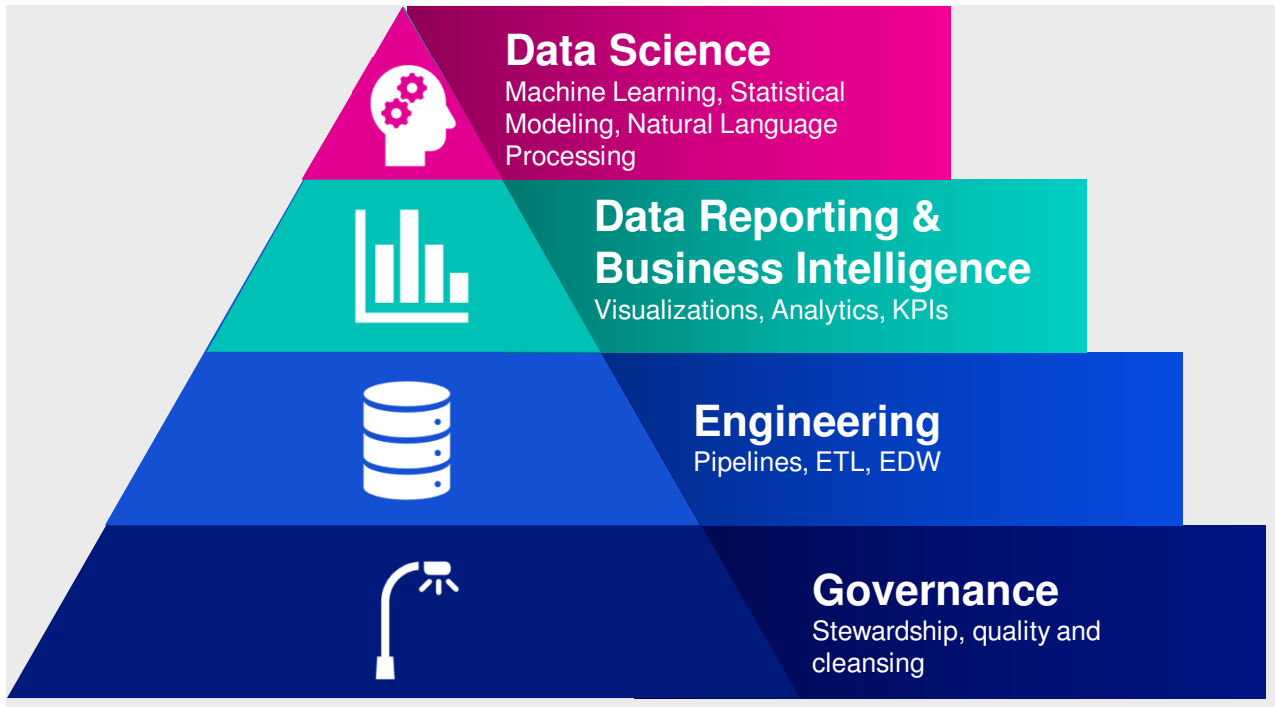
Performance Team Structure, Responsibilities & IT/Automation

- Sent 2nd Survey to NCREIF Performance Measurement Committee
 - Respondents ranged from 35-40
 - Based on questions organized across four categories
- Team Structure: Performance teams are small, mostly reside in Accounting, and time spent on analytics exceeded 60%
- Team Focus: Fund/Property performance, internal analysis, Pitch books, RFPs, policies and procedures, GIPS reporting
 - Analytics: Excess returns, contribution to returns, relative attribution, correlations
- Connectivity: quarterly meetings with Portfolio, Regional and Research teams
- Automation/IT: Initiatives focused on automating performance calculations, producing dashboards and doing attribution
 - Many respondents have a current IT initiative to automate performance calculations

Technology Update for NCREIF Summer 2019 NAREIM Data Conference

- NAREIM hosted a conference on Data Strategy May 14-15th in Chicago
 - Many Institutional shops were present with good representation from NCREIF members
- Major topics included:
 - A **current state** on data strategies from the attendees
 - Many shops are developing data strategies focused on harnessing the power of internal data
 - While the end solution is similar the path to get there has some variations
 - There is an increasing number of firms that are hiring data teams, data strategists, or data scientists
 - **Developing Data Governance** and identifying best practices
 - Implementation of a **Data Warehouse**
 - A key theme from this discussion was the importance of accountability and user adoption
 - **Outsourcing data strategy** is a possibility for shops that do not have the expertise, resources, or technology capabilities to develop an in-house solution
 - Many times this starts with a Consultant who advises on the best path forward for an organization
 - **Talent and skills** necessary to develop a data strategy could drastically disrupt the normal business model in next five years
 - Data teams could push the classic model for research to more of a focus on data science and learning to leverage internal data
 - **Emerging Technologies** include Yardi Performance Module, Informatica (Data Governance) are shaping the industry

Developing Data Strategy Components



Foundations

- Governance establishes the baseline to insure coordination and quality.
- Engineering builds contextual structure that is required for data to become information.
- Reporting and BI represents the beginning of insight.
- Data Science is the culmination.

Source: Invesco Real Estate

Technology Update for NCREIF Summer 2019

Summary and Thoughts

- The Industry is Evolving Fast and Focused on Data
 - Data is being seen more as a real asset
 - More emphasis on leveraging internal data to gain more insight on performance & operations
 - Data teams are starting to appear at major firms
 - Focus ranges from data governance to data collection to data science
 - Investment Performance is becoming more automated by emerging technologies
 - The evolution is towards doing more analysis and understanding drivers of performance
 - Analytics is evolving as well and data strategies will focus on Big Data (internal and external) to drive investment decisions
 - The roadmap forward is focused on the following areas:
 - Data Governance (Defining and processing data)
 - Data Engineering (Technology and structure)
 - Data Reporting (Automated data reports to the business and develop Business Intelligence)
 - Data Science (Machine Learning, statistical modeling, etc.)

Technology Update for NCREIF Summer 2019

What's Going on at NCREIF

- **Information Management Committee**
 - Data Governance Task Force
 - Working on standards for defining data fields
 - Data Management Task Force
 - Working on data validation, data maintenance, etc...
- **Solutions Expo**
 - Bringing in vendors focused on technology
 - Who does the PMC want to bring in?
 - CRM (investors/tenants)
 - Visualization (interactive/read-only)
 - PropTech (asset level tools)
 - Modeling and investment accounting
- **NCREIF Technology update**
 - Dan Dierking providing/provided update