NAI Partners & Data Science

The history of human civilization is demarcated by major transformations arising from the agricultural revolution, the industrial revolution, and more recently the information age. Society is currently at the breaking point of a 'data' revolution. Nearly all public and private sectors --- business, economic, medical, political, and government alike --- are undergoing shifts in their operations based on new information attained from data analyses. The future success of businesses belongs to those companies and people that can turn data into products and sound decision making.

At NAI Partners, we are embracing this data revolution by building a forward-thinking team on the data analytics of commercial real estate. We are working with brokers and clients to develop the key questions at the heart of issues, testing those questions with data using statistics, and importantly, interpreting the results to guide data-driven decisions for commercial real estate. Data analytics at NAI Partners span market research and reporting, quarterly market presentations, corporate projects, broker-initiated projects, and client-initiated consulting projects. Analytical research projects at NAI Partners result in important products and deliverables, including written reports, oral presentations to stakeholders, data visualizations, and guidance on data-driven decision making (Table 2).

Data analytics at NAI Partners benefits its stakeholders, including brokers, clients, tenants, landlords and others, by having statistically meaningful and accurate knowledge at their finger tips, as opposed to inadequate impressions. Such information can result in increased profits and reduced costs through better investment decisions, prospecting, market analyses, lease negotiations, and otherwise.
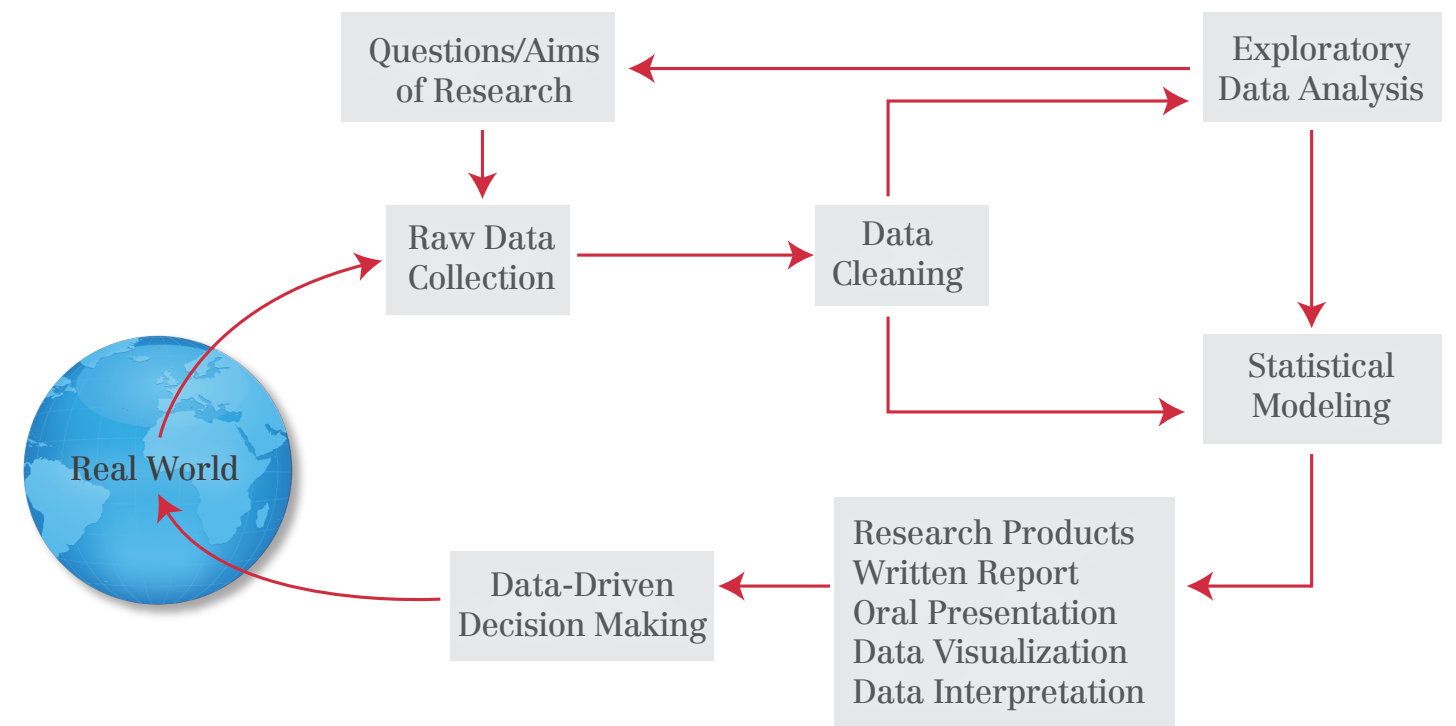
Figure 1. The research and data science process.

Table 1. Key steps in using research and data science to guide business decisions.

Step	Research and Data Science	Business Analytics
1	Develop the key questions at the core of a problem.	What does the broker, client, or business hope to achieve from data.
2	Design research to test question-driven hypotheses.	How to collect data to extract the most meaningful information.
3	Analyze data using statistical and mathematical techniques.	How to extract information from data.
4	Interpret data analyses and draw conclusions.	How does the data guide business decision making.
5	Communicate findings in written, visual and oral forms.	How to tell a story with data to advise stakeholders.

Table 2. Products and deliverables of analytical research projects.

Research Product	Description
Written Report	Summary report of research objectives, data collection, statistical analyses, results, data visualization, data interpretation, and conclusions.
Oral Presentation	Personal one-on-one presentation of entire research project with clients and stakeholders.
Data Visualization	Presentation of data and results in visual formats such as tables, figures, and graphics.
Data Interpretation/ Decision Making	Strategy and guidance on the implementation of data-driven decisions arising from the analytical research.

Dr. J. Nathaniel Holland - Chief Research and Data Scientist

Dr. J. Nathaniel Holland is a research scientist with 20 years of experience in using the scientific method to extract information from complex multi-dimensional data. He joined NAI Partners in 2014 as Chief Research and Data Scientist. At NAI Partners, Nat leverages his sharp intellectual curiosity with his skills in statistical modeling to guide data-driven business decisions in commercial real estate. Like many data scientists in the private sector, Nat joined NAI Partners following a career in academia. Prior to taking up data analytics at NAI Partners, he held professorial and research positions at Rice University, University of Houston, and the University of Arizona between the years of 2001 and 2014. Nat is the author of more than 50 scientific publications, and he has been an invited expert speaker for more than 60 presentations. Trained as a quantitative ecologist, he holds a Ph.D. from the University of Miami, a M.S. from the University of Georgia, and a B.S. from Ferrum College.