

27 NOV 2018 By Cartus



By Greg Bonnette, Vice President, Strategy & Innovation – Ironside

Predictive analytics may seem like a recent innovation, but the basic concept has been used in various ways for hundreds of years.

For example, the 16th century Italian polymath Gerolamo Cardano (1501-1576) is considered one of the founding

fathers of probability. In addition to his interests in mathematics, physics, biology, chemistry, astrology, astronomy, philosophy, and mechanics, he was also an accomplished (some might say incurable) gambler. Not only was gambling an

important source of income to Cardano, it also served as the impetus for his *Liber de Iudo aleae* ("Book on Games of Chance") in which he used dice to demonstrate the basic concepts of mathematical probability.

One key difference between Cardano's mathematical probabilities and predictive analytics today are the number of variables in question. Whether calculating probable outcomes from multiple throws of several six-sided dice or estimating the likelihood of drawing certain cards in a 52-card deck, Cardano only had to contend with a limited data set. Five hundred years later, the sheer quantity of data available and the technology required to process it is changing the way numerous industries—including, now, relocation—conduct business.

Big Data is Small Potatoes for a French Fry Machine

Over the past 30 years alone, Cartus Corporation—Ironside's partner in pioneering predictive analytics in the relocation industry—has managed more than 2.3 million relocations for employees and their families. Each one of those moves was associated with dozens of interconnected data points related to costs, timings, locations, and more, resulting in a nearly infinite combination of attributes and thus potential causal relationships (i.e., which variable was most responsible for which result).

"

"Over the past 30 years, Cartus has managed more than 2.3 million relocations for employees and their families."

Contrast that to someone calculating gambling outcomes based on a fixed set of variables, or even an early life insurance company like Scottish Widows

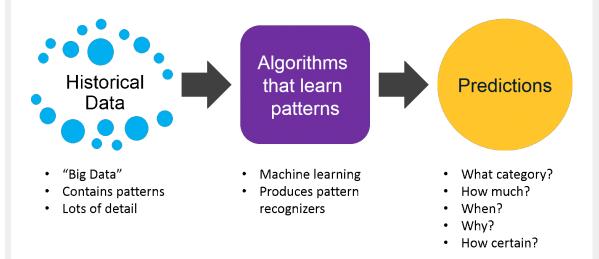
(established 1815) using local church data to create the first actuarial tables of human mortality, and it's easy to see why the amount of data powering the predictive formulas of old would be considered trivial by today's computational practitioners.

Hence the *Rise of the Machines* (terminators hopefully not included).

By filtering today's data deluge through self-improving software dedicated to seeking out recurring patterns and relationships, no matter how obscure or deeply buried, analysts are left with a more digestible subset of data, which can then be targeted and fed through different algorithms to determine their predictive viability.

This is exactly what Cartus and Ironside are partnering together to achieve for the first time in the relocation industry.

How does predictive analytics work?



Relo Goes Real Low (into the Data) to Reach New Heights

In early 2018, Ironside—a leader in the North American analytics community—partnered with Cartus to launch their Leading Edge Analytics Practice (LEAP) to

explore how predictive analytics can be applied to improve outcomes across the relocation realm. Shortly thereafter, Cartus released their first employee-facing product, MovePro TimelineSM—powered by LEAP.

MovePro Timeline predicts employees' personal relocation journeys based on Cartus' vast historical experience. Using data acquired over millions of moves, MovePro Timeline dynamically updates as each employee's moves progress, shifting key activities and tasks while reforecasting future milestones. This lets employees see at a glance what they've accomplished and what's still ahead.

Cartus is now preparing to launch their first client-facing product designed to anticipate events and identify unique opportunities during the corporate relocation process: MovePro Vision^{5M}—powered by LEAP.



New Predictive Analytics Paradigm Will Enhance Decision-Making for Mobility Strategists

Available in 2019, MovePro Vision is a predictive analytics application dedicated to uncovering valuable knowledge which would otherwise be lost in an overwhelming amount of data. The machine learning behind MovePro Vision sifts through and analyzes data from past relocations to provide mobility stakeholders

with real-time decision support for expenditures, exceptions, authorization volumes, and more, resulting in better planning and cost management.

The ability to toggle instantly between aggregated global views and employeelevel detail provides mobility leaders with further clarity into their past relocations, which will assist with in-progress moves and all future relocations.

Using Predictive Analytics to Turn Insights into Action. Literally.

Beyond the insights generated by MovePro Vision—which will only be available to Cartus clients through their newly redesigned client platform—Cartus and Ironside continue to explore ways to embed artificial intelligence (AI) within every mobility process, providing intelligent and transparent advice to guide decision making and deliver the best possible outcome for clients and their employees.

Ultimately, Cartus is dedicated to using their wealth of data and predictive analytics to enable a smarter digital experience across all their products and services. What that looks like could take many forms:

- A new hire beginning his professional career by moving to an unfamiliar place receives relocation advice based on what has led to positive outcomes for previous moves similar to his ...
- A rising executive embarking on her first long-term expat assignment
 with her young family learns up front how long things will take, what to
 expect, and which services and benefits are most critical to settling in
 quickly ...
- A global mobility director designing a new policy receives service and benefit recommendations to minimize exceptions, optimize cost control, and reduce employee churn during a strategic group move ...

That's the vision, anyway—one that Ironside and Cartus are working hard every day to turn into a reality.

In case you missed it: I recently had the pleasure of co-presenting a Worldwide

ERC® webinar, The Power of Predictive Analytics and Its Value to Your Mobility Program, with Neil Bussell, Director, Business Intelligence & Data Management at Cartus. In the webinar, we explored the important aspects of advanced analytics, its potential for predicting the components and outcome of your relocating employees' experiences, and how it can help shape your relocation policies in the future.

If you didn't get a chance to attend, please take the opportunity to listen to a playback of the webinar and view the presentation for some real-life examples of use cases that demonstrate how predictive analytics can help organizations develop competitive relocation programs.

Connect with Ironside: Blog | LinkedIn | Twitter | YouTube

Connect with Cartus: Blog | LinkedIn | Facebook | Twitter | YouTube

