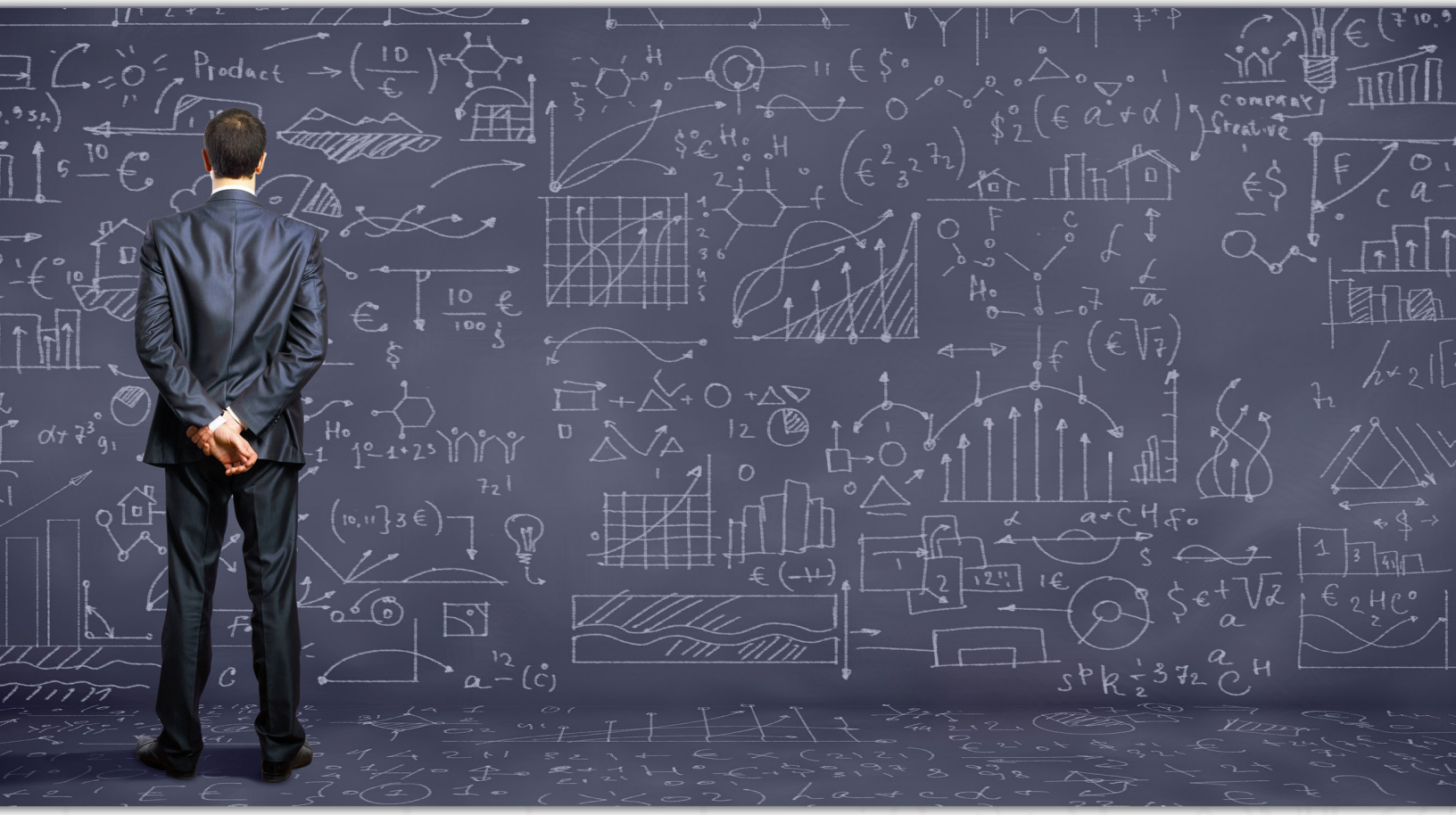

THE TRUE VALUE OF DATA SCIENCE

MISSION POSSIBLE

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IT IS CRUCIAL FOR DATA SCIENTISTS TO POSSESS NOT ONLY TECHNICAL DATA PROCESSING SKILLS, BUT ALSO THE ABILITY TO EFFECTIVELY PRESENT THE INFORMATION TO BUSINESS LEADERS.

THE TRUE VALUE OF DATA SCIENCE

MORE THAN HALF OF LARGE BUSINESSES CITE THEIR TOP CHALLENGE AS TURNING ANALYTICAL INSIGHTS INTO BUSINESS ACTIONS.

International Integrated Solutions, Inc. (IIS) can help architect a solution that will launch your business into the next phase of development. Read more to learn about this opportunity.

This whitepaper will define what it means to employ data science in strategic business planning and what to expect from an in-house data scientist. Big data is often underutilized as an effective business metric, but the field of data science is rapidly expanding. As more large companies begin to realize the benefits of employing one or more scientists, only then will companies be able to interpret data and extract relevant points that are useful in shaping business behaviors.

UNDERSTANDING THE NEED FOR BIG DATA

The volume of data being transmitted each second on the internet is vastly increasing, which creates a challenge for businesses to collect, store, and analyze information in an effort to glean meaningful business lessons. Often times, the quantity of data becomes so large, it is unmanageable to identify a pattern. This is where a data professional's assistance and expertise is critical.

The phrase "big data" has several meanings, but in general it means that data sizes are so large, that most basic database systems have difficulty retrieving it or processing it quickly enough to be helpful. The speed of the incoming data, or its variation from one input to another, may also stress the limitations of older database systems. The MIT Sloan Management Review reports the top three data analytics challenges today are:

- Managing ever-increasing amounts of data from multiple sources,
- Lack of appropriate analytical skills, and
- Turning analytical insights into business actions.

More than 50% of businesses surveyed report this as a top challenge (Footnote: Ransbotham).

A data scientist has the necessary skills to process big data and to identify significant patterns or trends, which may lead to optimization

in processes, reduction of risks, or other opportunities for improvement. Businesses that are continually trying to improve their operations and products in order to compete effectively and efficiently need a data scientist for this purpose. ***It is crucial for data scientists to possess not only technical data processing skills, but also the ability to effectively present the information to business leaders.*** The combination of business acumen and analytical skills makes a data scientist a valuable asset to any large corporation.

The high level solution for managing and interpreting big data is to hire a team of data scientists. This section of the paper will outline the issues a business might consider when embarking into the world of data science professionals.

THERE ARE NOW MORE THAN 70 MASTER'S DEGREE PROGRAMS IN ANALYTICS AND DATA SCIENCE IN THE UNITED STATES ALONE.

1. COMPENSATION

The field of data science, while relatively new, is rapidly expanding. There are now more than 70 master's degree programs in analytics and data science in the United States alone (Footnote: Ransbotham). Increased demand for analytics professionals has driven salaries skyward. According to the Burtch Works Study, which polled 371 data scientists in the United States, junior level data scientists earn a median salary of $91,000 per year, while those who manage a team of professionals can expect to earn in excess of $250,000 annually (Footnote: Burtch). Competition for qualified candidates is further reflected in the 16% average increase in base salary that data scientists can expect when changing jobs (Footnote: Burtch).

COMPETITION FOR QUALIFIED CANDIDATES IS FURTHER REFLECTED IN THE 16% AVERAGE INCREASE IN BASE SALARY THAT DATA SCIENTISTS CAN EXPECT WHEN CHANGING JOBS.

2. CORE COMPETENCIES

This increased competition for qualified data scientists is not limited to salary, as many young professionals seek on-the-job training to supplement their education. The MIT Sloan Management Review conducted its fifth annual survey of business executives and analytical professionals in 2014, which included a sample of 2,719 respondents. This study showed that organizations that received the largest benefit from analytics were also more likely to have a plan to develop their talent.

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COMPANIES CAN EARN A BETTER RETURN ON INVESTMENT IN SOFTWARE PURCHASES IF THEY ALSO EMPLOY A KNOWLEDGEABLE ANALYTICS PROFESSIONAL WITH THE ABILITY TO LAYER THE PLATFORMS AND EXTRACT THE NECESSARY INFORMATION.

Such a plan typically includes preference for candidates with analytical skills when hiring/promoting, developing analytical skills through formal training, and integrating new talent with other data-skilled employees (Footnote: Ransbotham).

Data scientists are interpreters of a twofold nature. Not only do they apply scientific and analytical principles to the data, they must also translate their findings into real-world concepts that can be incorporated into business practices to achieve a desired result. ***Executives require broad-spectrum concepts that can be applied to strategic planning and development, less so the technical jargon about terabytes of data gathered and stored.*** Data scientists with a background relevant to the substance of the business in addition to the formal analytical skills are often the most successful at helping the business gain a competitive edge.

3. USE CASES

While considering the addition of a data scientist to any corporate team, leadership should closely consider the issues for which data analysis may be beneficial. These "use cases" may underscore the need for data science professionals in a variety of areas within the business such as the need to optimize market approach, prices, or to simply explore greenfield opportunities. Data scientists can examine company metrics closely to determine where adjustments can be made to make the company more efficient. Data can be used to change behaviors and practices to impact the company's bottom line.

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NEWS

ENHANCE SOFTWARE INVESTMENTS WITH A DATA SCIENTIST

In addition to the human resource component, various technological platforms also may be required for useful big data management. These platforms can require a substantial investment, and may be underutilized without the assistance of a skilled data scientist. ***Companies can earn a better return on investment in software purchases if they also employ a knowledgeable analytics professional with the ability to layer the platforms and extract the necessary information.*** A data scientist is often the right tool for the job of gaining a competitive industry advantage.

DATA SCIENCE ANALYTICS TO DRIVE YOUR BUSINESS

International Integrated Solutions, Inc. (IIS) thrives on using technology to achieve the business objectives of its customers. Our team of experts will develop a unique platform for collecting and analyzing your data and translating its findings into tangible results to give your business a competitive edge. For more information about IIS' Big Data practice area, visit *www.iisl.com/what_we_do/big-data.*