

## MSCI: Data Analytics in Practice

### Overview & Rationale

Olin Business School proposes a program designed to help drive modern critical thinking and analysis to managing metals related businesses, and to enable effective utilization of MSCI's current (and future) data by MSCI's member base.

The program spans 2 days and will cover the following areas:

- Developing an information/data analytics strategy
- Thinking in probabilities: Improving your ability to forecast & predict
- Data transparency and changing behavior
- Operational excellence
  - Measuring the revenue-value of a cost-dollar
  - Techniques for benchmarking and business improvement

### Audience

Any members of MSCI are encouraged to consider applying. While senior executive attendance is encouraged for informational and supervisory purposes, we recommend the application and attendance of those employees who will actually work with the data.

A central goal of this program is to assist MSCI members in achieving improvements and gains through the development of an information/data strategy and approach to improving their fundamental operations and business performance. Thus, we suggest at least two individual per company apply.

### Program method

This program is designed to build understanding through hands-on learning. We will use examples and work through data primarily in Microsoft Excel to build understanding.

While Excel is an excellent learning tool, it will fall short as data set sizes increase, and methods become more advanced. We will suggest other software tools that participants can deploy as they fully implement their approaches to the businesses they work with.

### Program Outcomes

- Learn a set of forecasting tools to apply to your business operations
- Learn a set of benchmarking tools to help redefine & achieve operational excellence

- A strategic plan for improving data collection and analysis for the MSCI member base (producers, distributors, etc.)
  - Strategy & execution plan
  - Resource allocation decisions

**Program Overview**

While the program can be modified easily at this point in time, the following table outlines the content as we currently see it:

MSCI: Data Analytics in Practice – Tentative Outline	
Day 1 – Introduction, Data Analytics Concepts & Forecasting, Operational Excellence	Day 2 – Operational Excellence, Benchmarking and Developing a Data Analytics Strategy
<p><b>Morning Session – S. Chun: Thinking Probabilistically – Modern Data Analytics and Forecasting Techniques</b></p> <ul style="list-style-type: none"> <li>- Overview of modern data approaches</li> <li>- Crash course: Key ideas in probability &amp; statistics</li> <li>- Modern forecasting &amp; prediction</li> </ul> <p>Content: MSCI case study &amp; data application 1</p>	<p><b>Morning Session – M. Gupta: Benchmarking and Frontier Analytics – Measuring and improving performance</b></p> <ul style="list-style-type: none"> <li>- Benchmarking: Outside vs. Inside Comparisons</li> <li>- Frontier Analytics – How to push the envelope with the data you have</li> <li>- Data transparency: Getting business units &amp; individuals to self-monitor and improve</li> </ul> <p>Content: MSCI data application 3</p>
Lunch	Lunch
<p><b>Afternoon Session – M. Gupta: Rethinking Operational Excellence – Cost and Revenue Correlation</b></p> <ul style="list-style-type: none"> <li>- Using data to understand costs as business choices</li> <li>- Understanding the correlation between cost and revenue</li> <li>- Re-thinking &amp; re-defining operational excellence</li> </ul> <p>Content: Outside case study or example, MSCI data application 2</p>	<p><b>Afternoon Session – S. Chun: Review and Development of a Data Strategy to Improve Business Performance</b></p> <ul style="list-style-type: none"> <li>- Some takeaways from behavioral psychology &amp; economics on learning &amp; change</li> <li>- What it means to have a “data &amp; analytics strategy”</li> <li>- Work Session: Developing a Data &amp; Analytics Strategy</li> <li>- Review and conclusions</li> </ul> <p>Activities: Develop individual company strategies and action plans to use data</p>
Dinner Reception	Depart
Evening Workshop – TBD: e.g., <b>What Amazon does and how to do it yourself</b>	