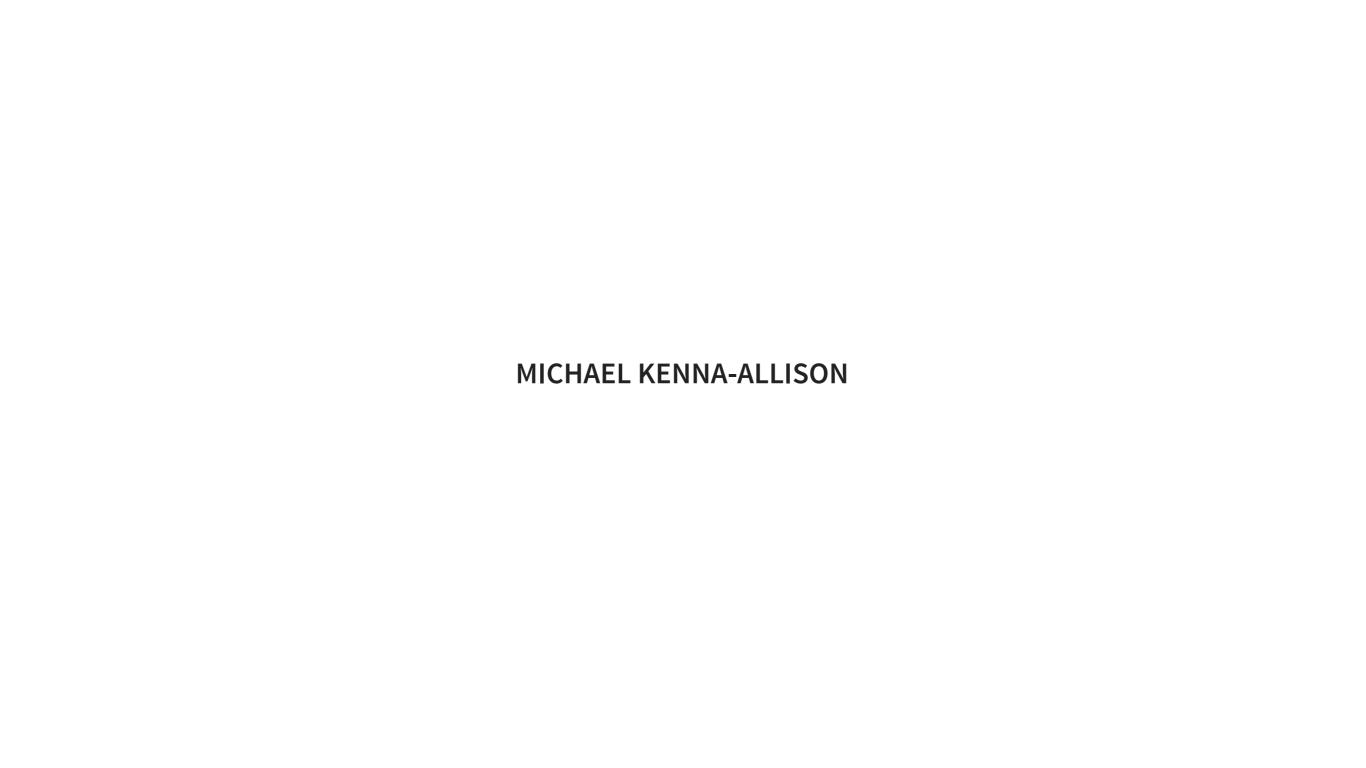
Markdown Slides Ian Hawke

MARKDOWN SLIDES

Ian Hawke

INTRODUCTION TO OR

IAN HAWKE



A MEET UP

A hard year.



Describe, predict, prescribe?

Descriptive

Analytics that helps you understand how things are going.

Analytics that help you forecast future performance and results.

Prescriptive

Analytics that suggest a prescribed next step or action.

Analytics

Describe, predict, prescribe?

Operational Research (OR) belongs to analytics:

- What is happening? (Describe)
- What will happen? (*Predict*)
- What should we do? (*Prescribe*)

OR tools are prescriptive.



Algorithms

- A description
- of a *finite* set of operations
- that solve a given problem
- for all of its instances.

Algorithms

- A description
- of a *finite* set of operations
- that solve a given problem
- for all of its instances.
- *Problem*: solve $ax^2 + bx + c = 0$ for $x \in \mathbb{C}$.
- Instance: a = 2, b = 8, c = 5.
- Algorithm:
 - 1. Compute $b^2 4ac$ and 2a;
 - 2. Compute $\sqrt{b^2-4ac}$
 - 3. Compute $(-b\pm\sqrt{b^2-4ac})/(2a)$.

SUMMARY