monitora
a marlabs company

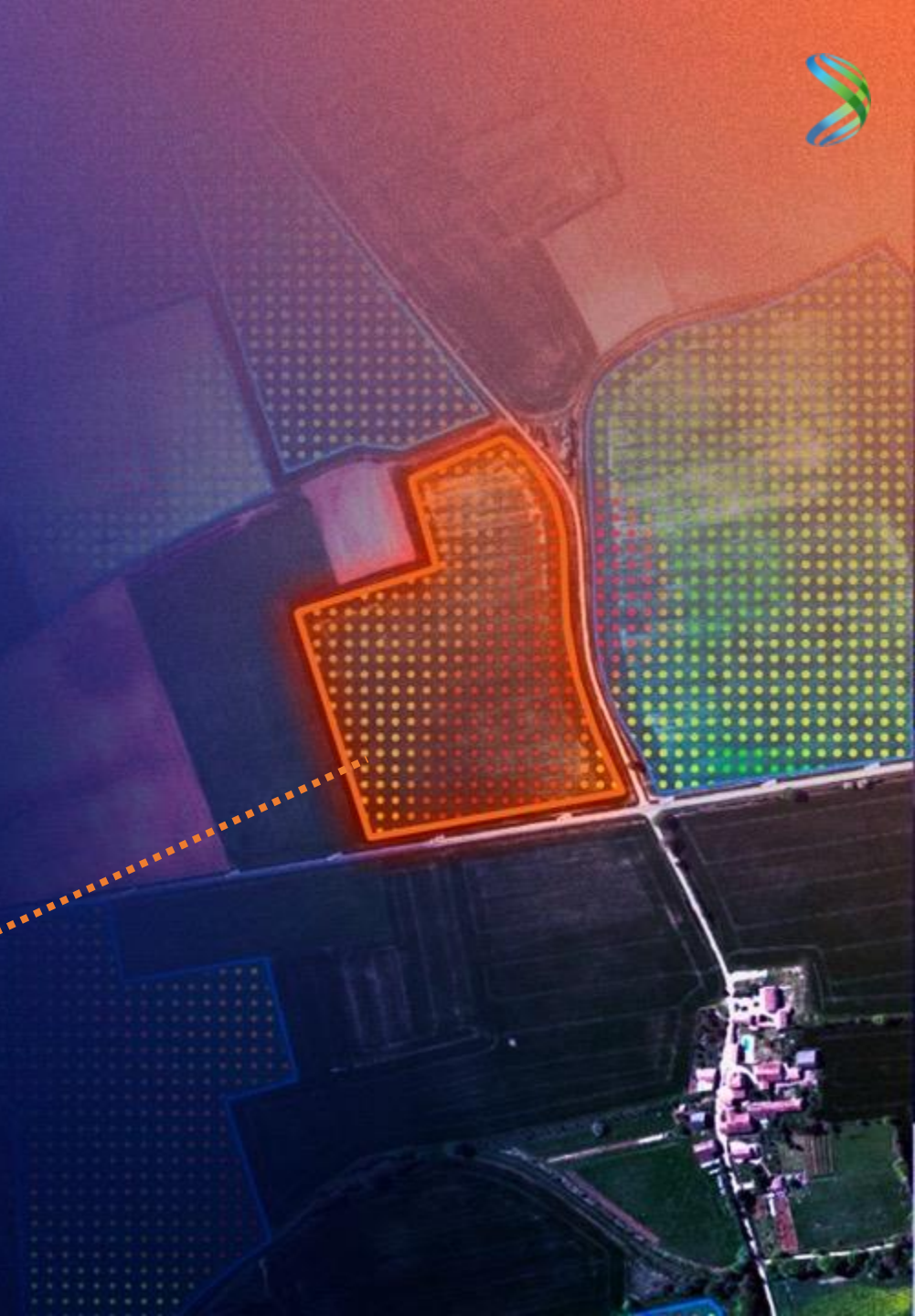
CASE

CITRICULTURE

The decision on planting orange orchards is a very important choice for the strategic planning of companies focused on citrus. The orchard tends to operate for up to 20 years. Several types of orange can be planted and at various times.

CHALLENGE

Define what, how much, where and how to plant, in each year of planning



Scenario

The decision on planting orange orchards is a very important choice for the strategic planning of companies focused on citrus.

The orchard tends to operate for up to 20 years. Several types of orange can be planted and at various times.

Challenge

Find which variety of orange should be planted to have division between varieties of orange, age equity (it is bad to have all areas with the same age of orchard, the ideal is the balance) and especially the maximization of the number of boxes harvested.

Variables

- Plots
- Orange variety
- Irrigation
- Rootstock
- Density
- Productivity curve
- Eradication curve
- Horizon: 30 years
- Minimum production
- Annual planting limit

Case

MATHEMATICAL MODELS - Citriculture

ACTION

A mathematical model was built that considers all the variables of the problem focusing on maximizing production, meeting age equity and division between types of orange to be harvested.

Results

- Production planning for the next 30 years ensuring:
- Production maximization:
  - Age equity
  - Desired variety
  - Revenue