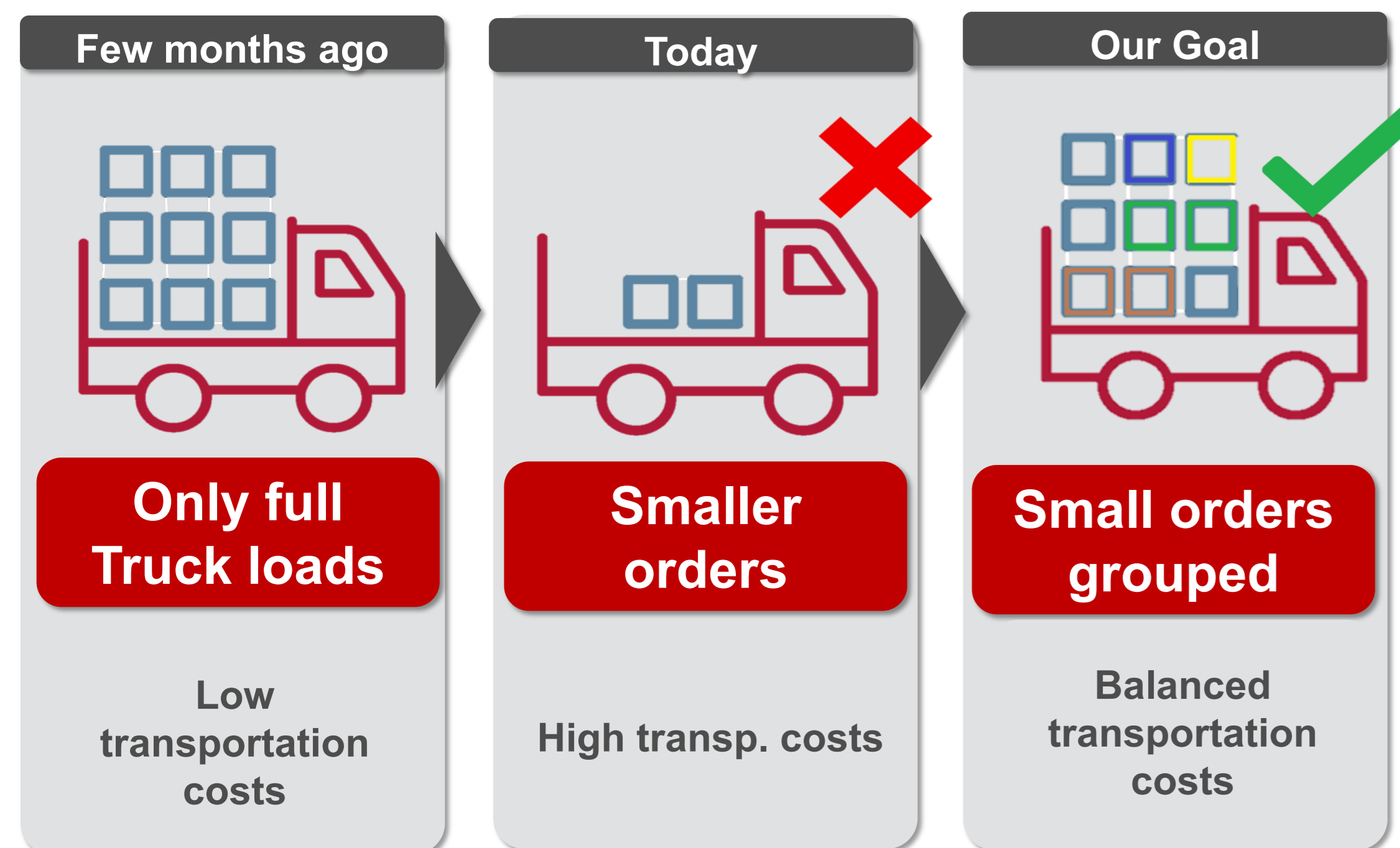


Increasing delivery efficiency and flexibility

Motivation / Background

- Votorantim Cimentos, aiming to expand its customer reach, is allowing clients to **place orders smaller than full truck loads**.
- With less products in each truck the **cost** per ton has **increased** constantly.



Key Questions / Hypothesis

- Which is the most appropriate delivery policy to balance the sales expansion and cost efficiency?
- What is the impact of restricting deliveries in only certain weekdays according to its geography?
- How much can a delivery policy decrease the transportation cost?

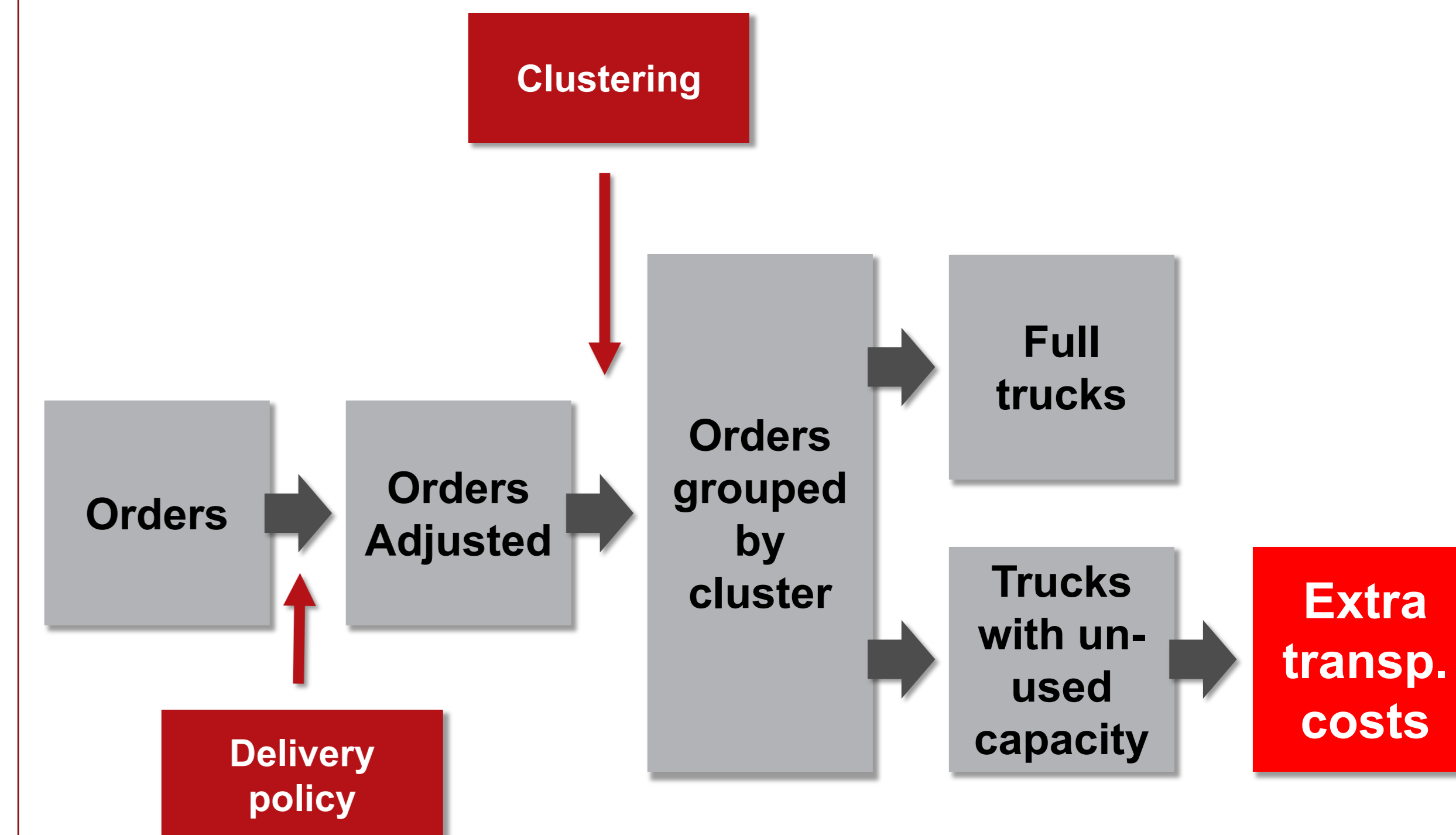


Methodology

We propose to address the topic by **evaluating different policies**; allowing to test the impact on service level and transportation cost. Methodology proposed:

- 1) Restrict the delivery dates for different regions.
- 2) Adjust the real demand to fit restriction tested.
- 3) Cluster the orders at region level.
- 4) Calculate transportation costs and the service level
- 5) Evaluate different policies

Initial Results



Expected Contribution

- Define a delivery policy for Votorantim Cimentos.
- Define an analytical process replicable in other industries in the need of increasing delivery efficiency and flexibility.
- Define a list of KPIs that can be easily reapplied in different environments.