

Case Study: Rapid Protein Split Assessment Using AI

Why Companies Are Adopting Protein Targets

More companies are introducing protein-diversification policies to support their sustainability and emissions reduction goals.

One of the most practical approaches is a protein split target.

This approach measures the ratio of animal-based and plant-based proteins across a company's food offering or supply chain, and sets a target split for the future.

It is a flexible framework with multiple possible actions that align with operations, customer preferences, and business goals.

Examples of Companies with Protein Diversification Policies and Targets



A Faster and Simpler Approach

Many companies assume protein split calculations require complex data collection and significant internal resources.

We developed and tested a **simple AI-supported approach that uses existing operational data** to establish a company's protein split baseline.

With minimal capacity allocation, **an initial assessment can now be completed within days** rather than months.



Case Study Overview

We partnered with Capsule Hotel, a hospitality company in Switzerland and Denmark, to support its sustainability goals through protein diversification.

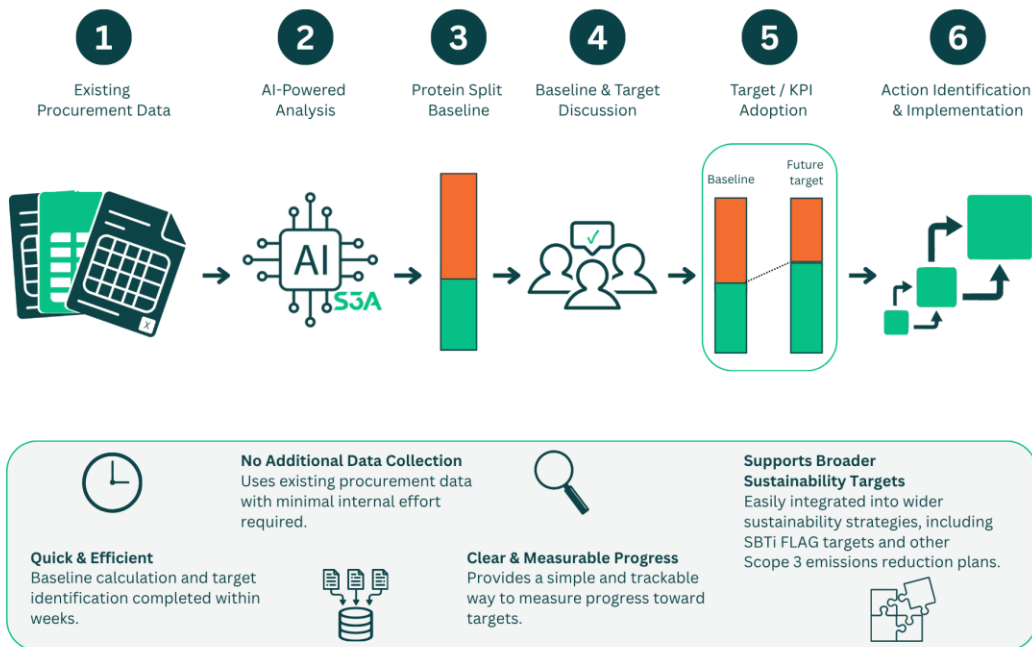
We began by establishing Capsule Hotel's current protein split ratio as a baseline for future target setting.

The analysis used existing procurement data already available within the company, requiring no additional data collection.

Using an AI-supported workflow, we calculated the baseline, identified a suitable target, and completed the process within two weeks.

Following the review, Capsule Hotel adopted a new KPI and integrated this methodology into its broader sustainability strategy.

Fast AI-Supported Workflow for Protein Diversification



Data Used for the Analysis

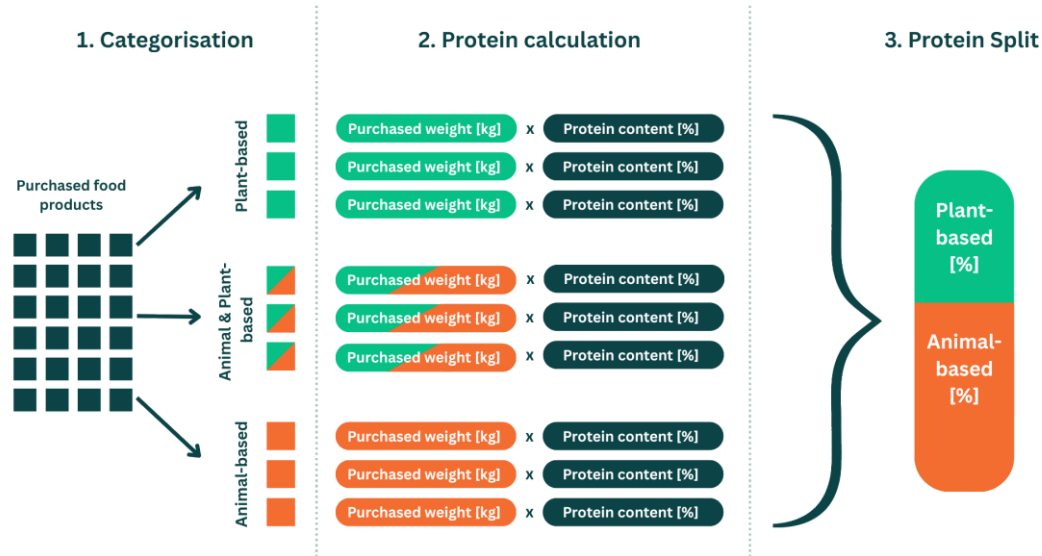
We worked with the company's existing procurement data and data format. Inputs included purchased items, unit measures (e.g. packages, cartons), and quantities purchased (e.g. 80 packages).

The AI-supported system automatically identified and excluded non-food items and beverages from the analysis.

Protein split calculations were fully automated for each individual location. The only manual step involved combining location-level results into a final group-wide protein split ratio.

Preserving this one manual step was deliberately chosen to improve reliability and maintain granular location-level insights that support future implementation planning.

Protein Split Calculation



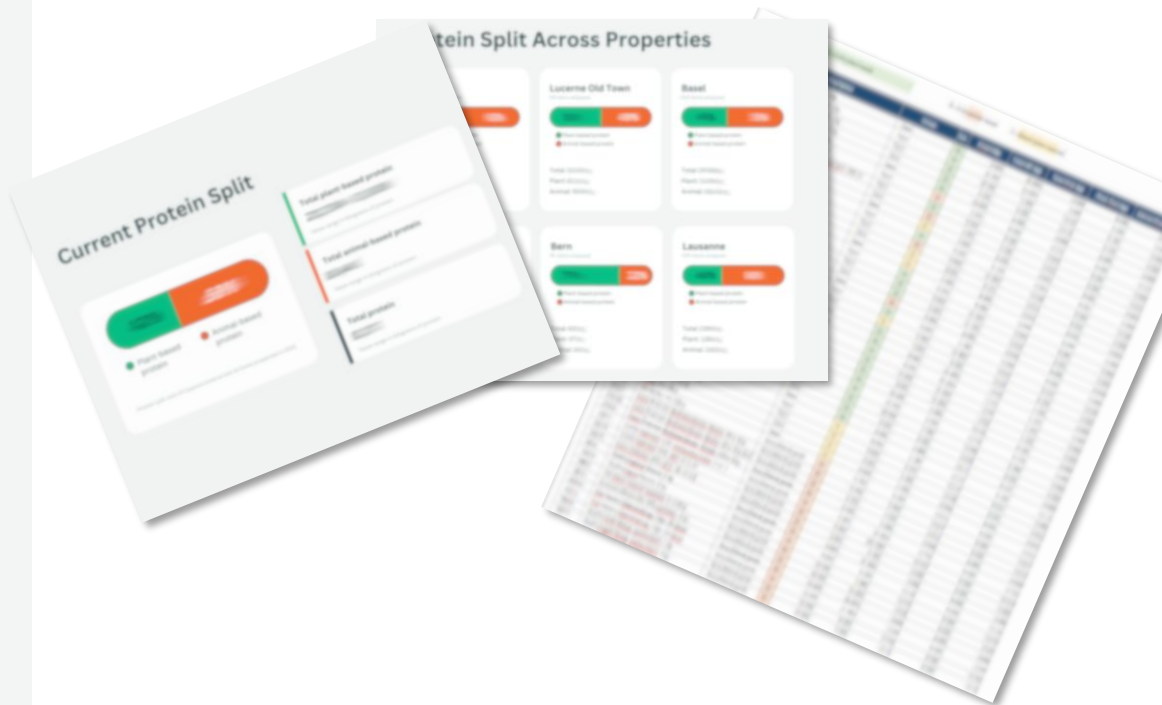
Reliability Check and Results Delivered

To validate the reliability of the results, we compared outputs from three different LLMs using slightly different methodologies.

The deviation between results ranged from 2.5% to 4.5%, showing a high level of consistency and reliability. Even manual calculations naturally vary depending on the protein datasets and classification methods used.

The final tool provided:

- Overall protein split ratio across the hotel group
- Protein split ratio for each location
- Detailed classification of purchased food items
- Data and insights for identifying key opportunities for future action



From Baseline to Target Adoption

Capsule Hotel reviewed their baseline protein split ratio, key opportunities for improvement, and potential next steps.

Based on their starting position and broader industry direction, **they decided that a protein split target would greatly complement their current sustainability approach.**

Following further discussions, Capsule Hotel chose to adopt a new company target to reach a 65% plant-based : 35% animal-based protein split by 2030 as part of its broader food sustainability strategy.

“By 2030, we will achieve a 65:35 split in the weight of plant-based and animal-based protein we purchase across our hotel properties.”

CAPSULE
HOTEL

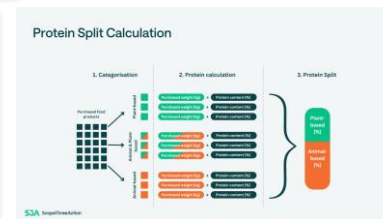
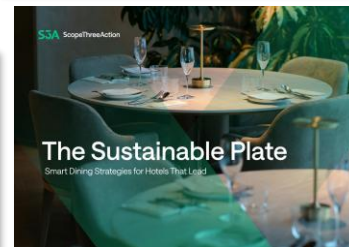
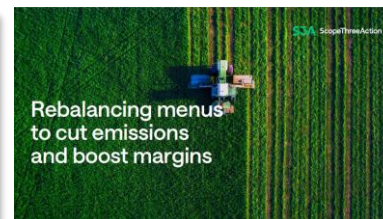
From Target to Action with Practical Support

We provided practical materials and support to help Capsule Hotel move toward its protein split target and reduce food-related emissions.

Our resources allow companies to build on proven approaches already tested by peer companies, helping them move quickly from ambition to action with minimal internal effort.

Scope Three Action is a non-profit organisation supporting hospitality businesses and food service providers in reducing Scope 3 food emissions while strengthening resilience and future-proofing their operations.

All support is provided free of charge.



Marian Milec

Program Manager

marian@scopethreeaction.org

scopethreeaction.org