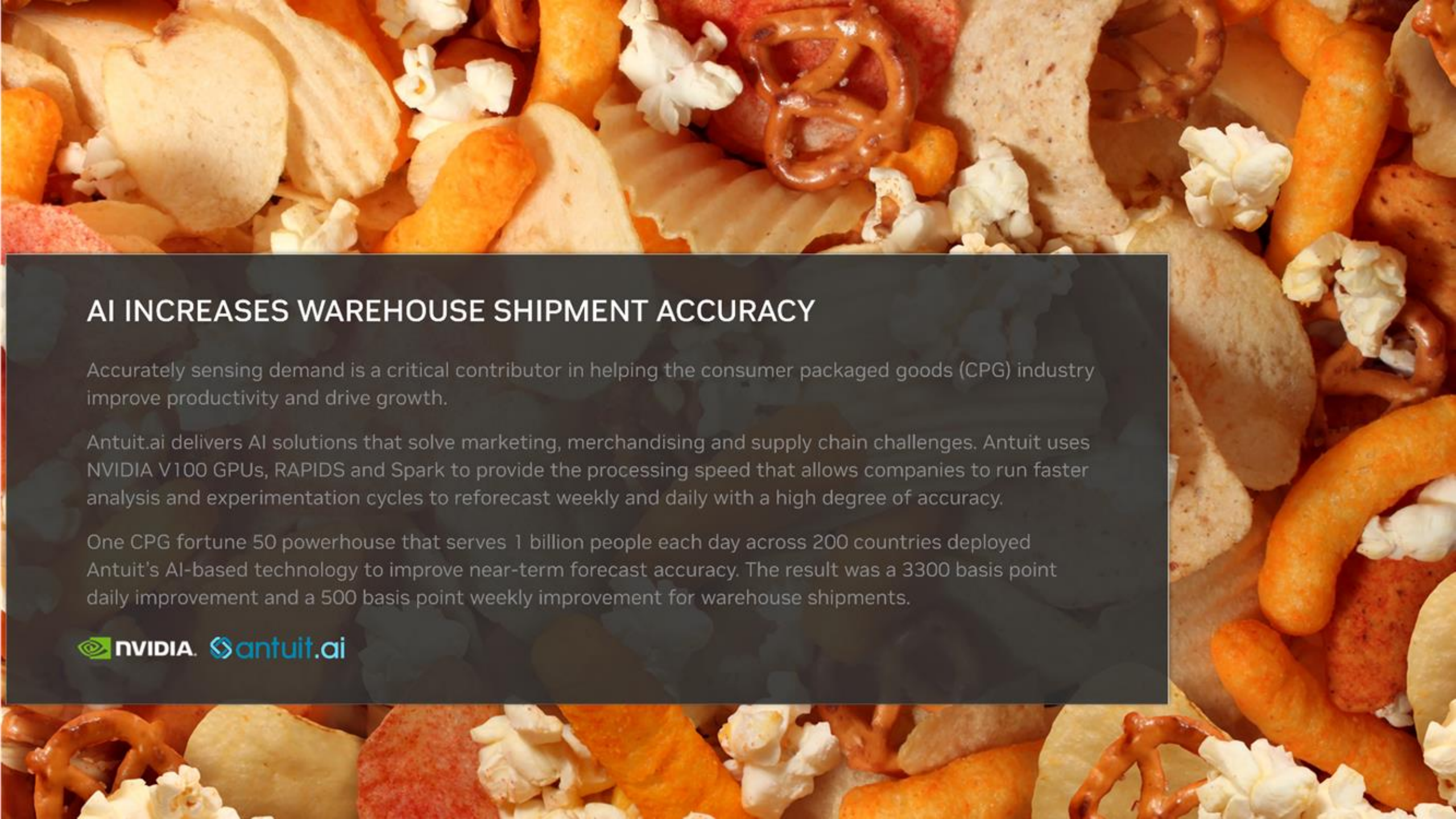# Case Studies

# AI INCREASES WAREHOUSE SHIPMENT ACCURACY

Accurately sensing demand is a critical contributor in helping the consumer packaged goods (CPG) industry improve productivity and drive growth.

Antuit.ai delivers AI solutions that solve marketing, merchandising and supply chain challenges. Antuit uses NVIDIA V100 GPUs, RAPIDS and Spark to provide the processing speed that allows companies to run faster analysis and experimentation cycles to reforecast weekly and daily with a high degree of accuracy.

One CPG fortune 50 powerhouse that serves 1 billion people each day across 200 countries deployed Antuit's AI-based technology to improve near-term forecast accuracy. The result was a 3300 basis point daily improvement and a 500 basis point weekly improvement for warehouse shipments.

**NVIDIA.**  **antuit.ai**

# IMPROVING DEMAND FORECASTS

With >100,000 different products in its 4,700 U.S. stores, the Walmart Labs data science team predicts demand for 500 million item-by-store combinations every week.

By performing forecasting with the open-source RAPIDS data processing and machine learning libraries built on CUDA-X AI on NVIDIA GPUs, Walmart speeds up feature engineering 100x and trains machine learning algorithms 20x faster, resulting in faster delivery of products, real-time reaction to shopper trends, and inventory cost savings at scale.

## IMPROVED INVENTORY FORECASTING

Fully stocked retail shelves are critical to retaining loyal customers, but accurate inventory forecasting is a challenging science requiring complex algorithms and massive amounts of data and compute cycles.

A mid-market retailer's legacy infrastructure was an I/O bottleneck. It took 10 minutes to pull in ~1M rows of data for 10 stores, or 1 store/minute on CPUs.

Using RAPIDS with cuDF, the retailer now pulls in millions of rows of data for 6,000 stores in under 3 minutes, or 2,000 stores/minute — a 2,000X speedup.

NVIDIA.

# AI & DATA SCIENCE FOR NETWORK OPERATIONS

A wireless network operator had access to terabytes of data daily but needed an efficient way to gain insights from it.

A deep learning solution powered by NVIDIA DGX POD, RAPIDS, and software from Datalogue and OmniSci, changed the way they collect, process, visualize and understand data.

Data prep improved from 8 days to 4 minutes and the company's new AI models predict high-surge Wi-Fi usage and detect anomalies with 99% accuracy.

NVIDIA