



**The**  
**NuminaGroup**

## **Cold Chain Food Logistics Deploys Numina Group's RDS™ Warehouse Automation Solution to Double Productivity for Rapid E-commerce Growth**

# Background

Green Rabbit was originally founded by cousins Greg Balestrieri and Joe Melville in 2009 as Candy.com with the goal of becoming “the candy store of the world.” The founders’ e-commerce instincts paid off, and business grew quickly, noted Balestrieri. As the company was fulfilling next-day orders from its e-commerce store, one particular aspect of shipping candy caught their attention. “Chocolate melts, especially in the summer months,” said Balestrieri. “It requires specialized expertise to successfully fulfill perishable goods.”

Realizing this requirement extended into other industries, the founders set about creating a world-class cold chain fulfillment service for companies with temperature-sensitive products. Business continued to explode as the founders expanded sales efforts to new industries, and they rebranded as Green Rabbit to become the first e-commerce order fulfillment supply chain for temperature sensitive and perishable goods. Today, Green Rabbit processes millions of e-commerce orders on behalf of its diverse group of partners.



# Challenge

Green Rabbit was experiencing dramatic growth and was awarded logistics contracts from six of the ten largest e-commerce retailers, and five of the top ten CPG companies in the US. Order volume soon eclipsed its existing fulfillment systems and processes.

“We’d initially developed our own order fulfillment processes, which were built to handle hundreds of orders a day, and we really had no problems,” said Greg Balestrieri, CEO of Green Rabbit. “But as we grew from hundreds of orders a day to tens of thousands of orders a day, and expanded into multiple warehouses, those systems were struggling.”

At the time, Green Rabbit was using a paper-based system, and relied on employees on the warehouse floor to make key decisions related to how to best pick, pack, and ship orders. These methods worked well with 20 to 30 employees, but did not scale as they grew to over 200 employees. The management team knew they needed to investigate means to improve efficiencies and invest in warehouse automation to improve productivity and keep up with their strategic business growth goals.



## Defining the Solution

After conducting an extensive, yearlong RFP process and reviewing several solution providers, Green Rabbit selected The Numina Group to conduct an engineering study to design their new flagship Indianapolis area Distribution Center, scope out and implement a warehouse execution and control solution (WES/WCS) tailored to their specific requirements, while determining which warehouse automation solutions and technologies would meet their aggressive growth plans, and yield a strong ROI.

During the engineering design study Numina Group and the Green Rabbit team focused on a business-first approach to align labor, technology, and distribution practices with business growth projections. Numerous automation technologies were evaluated for the new DC, with special attention being paid to how the technology could also be retrofitted into the existing operation, as well as a planned DC on the West Coast.

Order data and business analysis requirements pointed to a couple of viable technologies. One option was a two level conveyor pick module using a combination of carton flow and pallet flow storage. The second option was voice directed batch pick carts combined with a bulk pick and pack process for the large quantity of single SKU orders. Voice directed picking processes compared favorably to the pick module design, but offered more flexibility and scalability for a lower capital investment. Green Rabbit made the decision to deploy the voice directed batch picking solution in all three DC's.

## Software Overview

Numina Group's WES-WCS, Real-time Distribution Software, RDS™ includes a highly flexible Voice Suite, with a full family of pre-developed application modules that manages the order release, cartonization logic, creates optimized batches of orders, and directs the batch of order pick and pack in the shortest travel path directly to the order shipping carton or totes.

RDS™ Voice is speaker independent which means zero operator voice training time so new operators are productive in 5-10 minutes. RDS™ Voice is highly intuitive and remarkably easy to use. Voice commands are combined with hands-free product and lot sell by date capture, so pick, pack, and validation becomes a single touch process operating at near 100% accuracy rates.

# Software Overview

RDS™ Voice includes labor management software that tracks individual work task productivity, and when combined with a labor standards strategy such as a pay for performance program, rewards employees for meeting labor and accuracy goals, and significantly boosts productivity while ensuring quality workers stay long-term.



## Batch Cart Voice Picking

Green Rabbit selected RDS™ voice picking integrated with pack and ship conveyor automation. At pick completion, batch pick carts are unloaded on to the pack and ship conveyor system. Each carton is automatically weight checked, and a digital camera captures order contents. If the order fails weight audit, it is routed to the inspection station.

## In-line Ice Pack and Void Workstation

Orders that pass the weight audit are conveyed to the in-line Ice Pack and Void fill station. Workstations display specific order pack rules based on the order temperature control delivery algorithms, which consider 15 variables to determine required packaging and ice, based on weather, distance, and shipping methods. An RDS™ Touch Screen directs the operator to add the ice packs and on-demand printed customer specific packing sheets.



## In-line Scan-Weigh-Dim

Orders exit the pack area and convey to the in-line taper for carton sealing. Following taper sealing, cartons transport to the in-line scan-weigh-dim and print and apply labeling zone. The final weight check verifies that the right amount of ice is included for each specific order.



## Print and Apply Labeling System

The automated print and apply labeling system automatically prints and applies the carrier shipping label, and when required, a label from some of the world's largest retailers, or other E-tailer compliance labels. Successfully labeled and verified shipments travel to the shipping sorter and cartons are sorted to the required carrier pallet build lanes.



# Technology Snapshot

As a result of the warehouse automation investment, the company has transitioned to a paperless order fulfillment operation managed by the RDS™ WES-WCS software suite.



Automated Order Release with Priority based release logic



Cartonization and optimized cart build that selects the right packing and walk path based on order size, order profile, prioritization, and shipment rules



Voice directed pick and pack validation to carton, with singles speed picked to totes, to optimize polybag packing



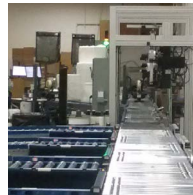
Automated conveyor with in-line weight and vision audit



Packing Automation directs operators to perform the required ice-pack insert, void fill, and automates document print and carton sealing with tapers



Inline weight and dimension capture resulting in high speed inline shipping manifesting



Print and apply labeling auto applies the required carrier shipping label and customer compliance labels



Ship Sorter sorts cartons to the carrier pallet build lanes

## Rapid Rollout

Green Rabbit chose its new Indianapolis facility as the first site to go live on an aggressive project schedule with a go-live date only 12 weeks away, just ahead of summer, Green Rabbit's busiest time of year.

“We had just won a couple of really big contracts for the Indianapolis facility, which required us to be live by a certain date,” said Balestrieri. “We literally went live the week before. The Numina Group did a great job of getting us up and running within the required time window.”

# Benefits

Green Rabbit deployed RDS™ Voice directed pick, pack, and ship automation at three of the companies' facilities, obtaining a 1-2 day delivery window across the U.S. Green Rabbit implemented more efficient warehouse fulfillment operations, allowing for room to increase capacity.

Numina's solution delivered:



**Doubled order throughput.** “We’ve at least doubled output in the original Massachusetts facility with the same headcount and have nearly tripled output in other facilities as business has grown,” said Rob Cedrone, Director of Operations.



**99.9% order accuracy.** Eliminated operator decision making and built in lot and sell by date capture validation across the operation.



**Proven Scalability.** “Now processing several million transactions per year, and tens of thousands of shipments per day, at multiple facilities and the system has proven its reliability with no delays,” said Greg Balestrieri, Green Rabbit CEO.



**Trusted Partner.** Green Rabbit's goal is to build the world's first comprehensive perishable supply chain. They knew that the right automation solution was critical, but it was just as important to choose the right technology partner.



*It's critical to find the right system integration partner, that provides both process improvement design skills and an honest assessment of what automation investments make sense, and then have the skills to implement and support the solution that meets or exceeds the defined performance specifications. We're a fulfillment and distribution company, so having a partner that delivers the software and right blend of automation is crucial to our organization's success. We're really happy overall with the partnership with Numina, we're going to continue to expand our distribution network and have some really big growth plans in the near future.*

— Greg Balestrieri, CEO of Green Rabbit

