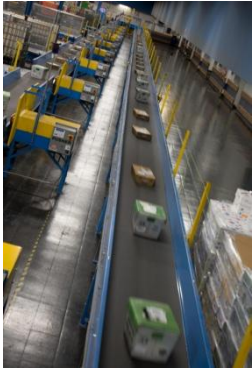


## Case Study: Providing a Sorting Solution

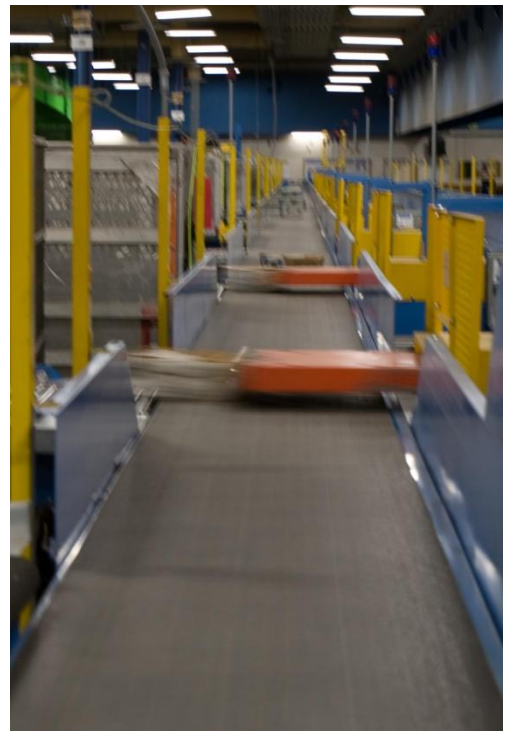


The United States Postal Service (USPS) Material Handling Deployment Department presented North American Conveyor (NACI) with the opportunity to address their need for an inexpensive way to process parcels, sacks of mail, sleeved trays and totes in their medium to small Processing and Distribution Centers (PDC). These medium and small processing facilities are vital components of the USPS mail processing network of approximately three hundred and fifty facilities. These PDCs must be equipped to efficiently receive mail from local Post Offices and other processing facilities and then, process this incoming mail and forward outgoing mail to other facilities and Post Offices for delivery. The medium and small PDCs have all of the duties and responsibilities of the larger processing facilities; however, these facilities handle less volume of mail. Therefore, they typically have lower capital budgets for automation equipment.

The question quickly became what system could North American Conveyor develop or recommend for these medium and small PDCs that would process their product mix, require minimum amounts of floor space and be inexpensive enough to meet their budget requirements.

NACI already had an extensive amount of experience with USPS operations, including sorting and processing first class mail and bulk mail. A number of the smaller PDCs processed first class and bulk mail in their facilities. The first class mail was being handled as loose individual pieces before being organized in uniform sized trays and/or totes for further processing. The bulk mail consisted of loose parcels and sacks made from cotton or a synthetic fiber. NACI was given the challenge of utilizing its previous experience handling both types of mail products independently and develop a sortation system that could process both simultaneously.

The USPS required that the system handle products with a minimum size of  $\frac{1}{4}$ " x 3" x 6" and minimum weight of 6 oz. while also being able to handle larger products up to 70 pounds in weight. Additionally, they required that the sorter process the required range of products at a rate of 30 to 50 pieces per minute depending on the size of the objects.



NACI worked closely with various USPS personnel to design and determine the specifications for a belt sorter with electric pusher diverters that could handle the range of products the smaller PDCs needed to process. The system was designed to read and assign bar codes for each parcel, sack and tray; dynamically weigh each parcel, sack or tray; and automatically sort the products to specific receiving conveyors. The receiving conveyors were powered accumulation conveyor run-outs that could easily handle soft goods, boxes and totes of various sizes.

NACI fabricated and installed the initial sorter for the Albuquerque, NM PDC and incorporated



common, readily accessible mechanical parts and power transmission components, which enabled the system to be deployed and tested within a four week timeframe. After the system in Albuquerque was deployed successfully and the facility realized significant productivity gains resulting in a return on investment of over 30%, the USPS Material Handling Deployment Department determined that this sortation solution should be implemented throughout their network of

processing facilities.

The system that was implemented in Albuquerque ultimately became the “Universal Sorter” product because of its ability to handle a wide variety of products and product sizes. The Universal Sorter has also been a key component of one the most successful material handling programs at the Postal Service. Since 2003, Universal Sorters have been installed at 55 USPS facilities, large and small, throughout the country. We were extremely pleased that we were able to work so closely with one of our most valued customers to help them identify and deploy a cost effective solution that addressed a broad need.