

E-commerce in Air Freight Reaches Its Limits: Coordination at Destination is Essential

The rise of e-commerce has profoundly transformed the logistics supply chain at Schiphol Airport, though not in a sustainable manner. Despite the logistical challenges, e-commerce now accounts for 20% of global air freight volumes; it is therefore an economically essential flow that an airport wants and needs to be able to handle successfully. What began as a steady stream has grown into an avalanche of parcels, pushing first-line handling to its physical limits. The current model puts severe pressure on personnel, disrupts regular air freight, and demands structural interventions.

Physical Overload on the Shop Floor

Anyone entering a cargo handling facility at Schiphol today will observe two distinct worlds. While traditional export cargo is stacked systematically, neatly, and with care, e-commerce on the import side too often resembles a chaotic pile of loose boxes in every shape, size, and color. Historically, the air freight process revolved around reasonably structured B2B shipments alongside a clearly identifiable flow of standard airmail. Today, e-commerce rapidly generates thousands to tens of thousands of B2C-style orders, dispatched partly as air freight and partly as airmail. These shipments frequently arrive in the familiar grey poly mailers, packed into bulging cartons and stacked onto pallets where the bottom boxes have collapsed under the weight of the load above

This causes immense operational problems. While handlers have invested heavily in recent years to reduce the physical strain on employees, e-commerce introduces new challenges in this area. Boxes frequently lack weight indicators, and because they (if not simply bags) cannot be stacked properly, counting the number of items on a pallet is exceedingly difficult. Furthermore, these small, variable parcels are incompatible with existing automated systems, which are specifically designed for large, consolidated freight. Handwritten or unclear labels make it difficult to distinguish shipments and regularly cause administrative chaos. Employees genuinely dread the physical handling of e-commerce flows due to the high workload and lack of structure. Everything improved in logistics over the past years regarding process optimization seems to have been thrown overboard with e-commerce.

Regular Processes Compromised

Apart from the issues it creates for itself, this dynamic also compromises regular—often high-value—air freight: the massive import flow of e-commerce creates bottlenecks when counting, processing, and loading goods into the trucks that arrive for collection. These bottlenecks are further exacerbated because small shipments frequently lead to additional customs inspections, causing further delays. Errors in the process lead to significant rework and delays, putting traditional 'neat' air freight under intense pressure. Both the physical and administrative sides of the handling process are bursting at the seams.



Coordination at Origin, Less Fragmentation

The tide must be turned before the supply chain grinds to a halt. The key to the solution lies in reducing complexity at the source and minimizing the so-called human interface at the airport. To achieve this, targeted measures are necessary. Regulation must occur at the point of origin. The parties that import the vast majority of e-commerce into the Netherlands—a select group of roughly ten to fifteen companies—should take a more guiding role at the beginning of the chain and impose stricter requirements on shipping methods. This includes better packaging, clearer labeling, and improved stacking. Additionally, efforts at the origin must ensure that shipments can be sent as a single consolidated unit to the receiver as much as possible. Too often, shipments destined for the same receiver are spread across different pallets or divided into multiple Unit Load Devices (ULDs), which subsequently have to be opened and repalletized at Schiphol.

Targeted Incentives and Transparency

Airlines and the airport authority Schiphol could assume a guiding role by imposing additional conditions on parties that fail to deliver goods as complete units. Furthermore, a blind spot has emerged because customs and airlines often do not know exactly what they are transporting, as postal shipments are not always processed using a standardized Airway Bill (AWB). A specific IATA handling code for e-commerce is necessary so that the industry at least has an overarching understanding of the actual volume of e-commerce being transported. By bundling e-commerce flows more intelligently, exchanging data more effectively, and minimizing physical handling on the shop floor, we protect not only the operational continuity and reliability of the airport, but above all the health and motivation of the people performing the manual labor.

