IATA works closely with its member airlines and representatives from key entities in the air cargo supply chain, including freight forwarders and ground service providers to develop and implement common standards that support the safe, secure and efficient transport of air cargo globally.

The IATA Dangerous Goods Board (DGB), which comprises representatives from 12 IATA member airlines elected by the IATA Cargo Services Conference is responsible for developing and maintaining the content of the IATA Dangerous Goods Regulations (DGR).

In developing the revisions to the DGR, the DGB works closely with regulatory authorities and the ICAO Dangerous Goods Panel to ensure that regulatory changes address emerging safety issues and that the changes adopted are effective at addressing the safety risks and can be implemented effectively and efficiently.

Top air transport dangerous goods trends for 2023

Every year more than 1.25 million dangerous goods shipments are transported by air. With the volume of air cargo forecast continued to grow, the number of dangerous goods shipments will also increase, particularly those containing lithium batteries. Consumer demand for electronic devices such as tablets and small personal mobility devices such as e-bikes is a key factor in driving this increase. As a result, there are new entrants in the market, which creates a need for training, process improvement and adoption of new technologies.

# 1 Continued increase in transport of lithium batteries

As with many products shipped by air, effective standards, globally implemented, are needed to ensure safety in air transport. This is a particular challenge with the ongoing increase in global demand for lithium batteries (the market is growing 30% annually) bringing many new shippers into air cargo supply chains. A critical risk that is evolving, for example, concerns incidents of undeclared or mis-declared shipments. Consequently, governments must step-up enforcement of safety regulation for the transport of lithium batteries. This should include stiffer penalties for rogue shippers and the criminalization of egregious or willful offenses. Specific measures being developed by IATA include:

- **Development of safety-related screening standards and processes for lithium batteries**
  Development of specific standards and processes by governments to support the safe transport of lithium batteries, like those that exist for air cargo security, will help provide an efficient process for compliant shippers of lithium batteries. It is critical that these standards and processes be outcome based and globally harmonized.

- **Development and implementation of a fire-testing standard that addresses lithium battery fire containment**
  With the increase in the quantity of lithium batteries being transported by air, there is a need to develop a testing standard for fire involving lithium batteries that can be used to evaluate fire protection measures, such as fire-resistant containers and fire containment covers that can be used to supplement the existing aircraft cargo compartment fire suppression system.

- **Enhance safety data collection and sharing information between governments**
  Safety data is critical to understanding and managing lithium battery risks effectively. Without sufficient relevant data there is little ability to understand the effectiveness of any measures. Better information sharing and coordination on lithium battery incidents among governments and with the industry is essential to help managing lithium battery risks effectively.

WANT TO LEARN MORE? Read this article to learn about:
Basic rules relating to lithium battery shipments
- How to package lithium batteries for shipping by air
- Marking, labelling and documentation requirements
- And much more…
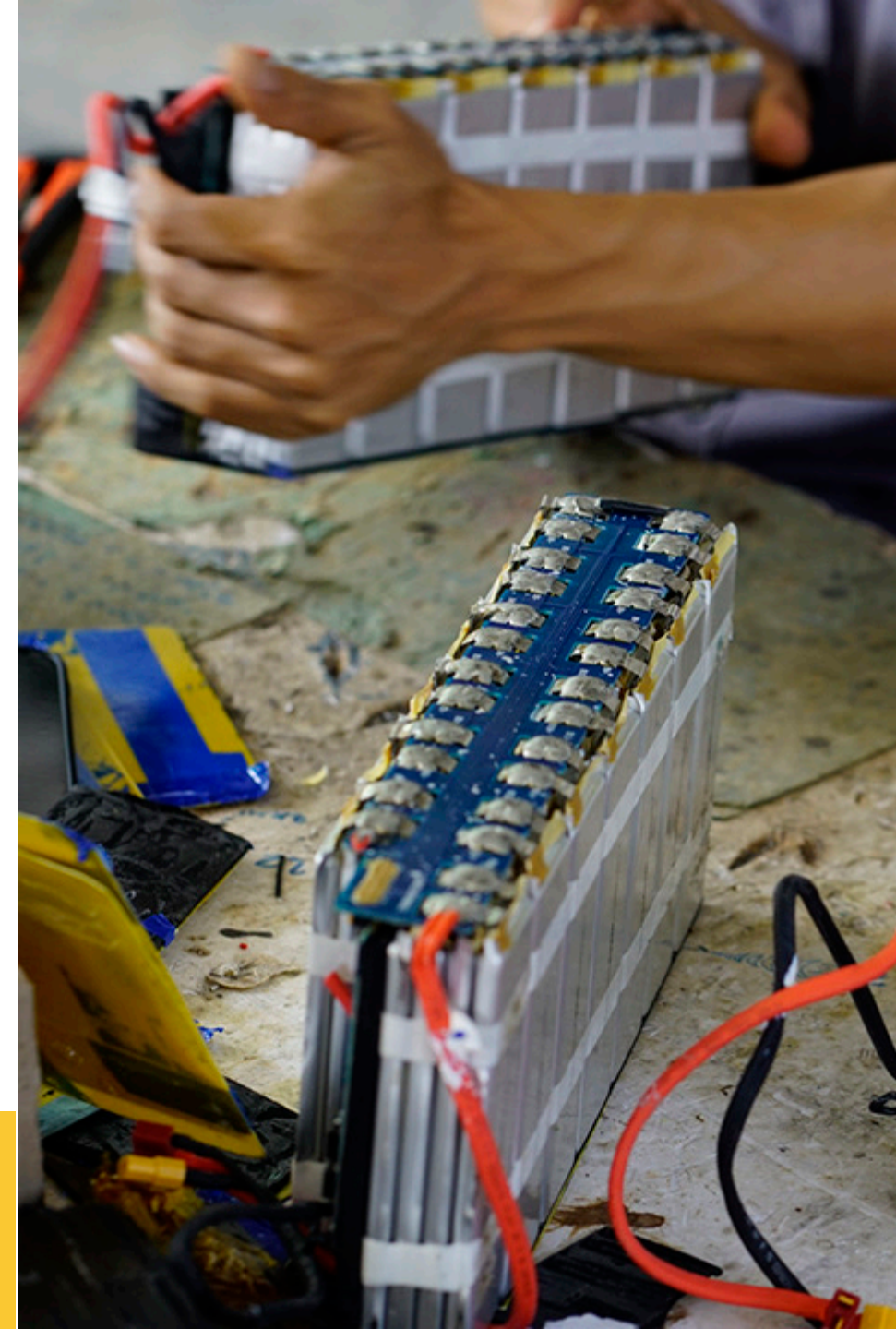
2 The world continues to shift online

By 2025 e-commerce retail sales are expected to grow by [50% to $7.4 trillion]($5.1 trillion without services). The consumers' behavioural change towards online retail is now established and the air cargo industry must transform to stay relevant in this digital shift.

However, at the same time, this digital shift has brought many new merchants online. It is essential that they understand and are educated on the regulatory requirements that apply to the transport of dangerous goods so that their shipments are correctly packed, marked, labelled and documented.

Every dangerous goods shipment carries the risk of being rejected due to compliance gaps—errors in labeling, packaging and/or documentation. As the shipper, a new online merchant, is responsible for getting these details right. An erroneous shipment can be delayed, returned or even confiscated, which is why such shipment issues due to a lack of knowledge and/or compliance can have a significant impact on a merchant's bottom line.

Retail E-Commerce Sales Worldwide (2018-2025)

WANT TO LEARN MORE? Read this article to learn about:
- What are dangerous goods
- Who is involved in the transport of dangerous goods and what are their responsibilities
- How to prepare dangerous goods for shipment by air
- And much more…

3 Transformation of dangerous goods training requirements

The staff involved in the air transport of dangerous goods must follow mandatory training and to be re-qualified every two years. These provisions on dangerous goods training have been in place for many years, and the most up-to-date information can be found in the IATA Dangerous Goods Regulations (DGR).

In September 2019, the ICAO Dangerous Goods Panel (DGP) undertook the development of new proposed provisions and guidance material under a competency-based approach for dangerous goods training. The objective of competency-based training and assessment (CBTA) is to use the necessary tools to clearly establish the training needs for a specific job function and then ensure that employees acquire the level of knowledge and demonstrate the right skills to perform that function.

The adopted revised provisions for dangerous goods training to incorporate a competency-based training and assessment (CBTA) approach will become mandatory for dangerous goods training as of January 1, 2023. The revisions emphasize more on the importance of a person to be trained and assessed and be competent to perform the function for which they are responsible.

We can expect two major positive impacts from the implementation of CBTA:

- closer involvement of the employer in determining the needs and measuring performance in a more precise way;

- an increase in employee's engagement as a result of a closer correlation between the training content and job performance assessment.

WANT TO LEARN MORE? **Read this article** to learn about:
- What is CBTA for the air transport of dangerous goods?
- What are the benefits of CBTA for the safe transport of dangerous goods by air?
- How to get started with CBTA to dangerous goods training and assessment?
- And much more…

4 Digitalization of dangerous goods processes

The digitalization of the dangerous goods processes starts with the digitalization of the [Shipper's Declaration for Dangerous Goods (DGD)](). The DGD is the document created by the shipper that contains detailed information about the dangerous goods being shipped, including the aircraft type, UN numbers, proper shipping names, class or division, number of packages, type of packagings and net quantity.

To support this digitalization IATA defined a data sharing standard to enable the use of [electronic DGD (e-DGD)]() based on the legacy Cargo XML standard (XSDG) or the use of the [ONE Record standard](). These standards have been developed in compliance to all applicable provisions in the [IATA Dangerous Goods Regulations (DGR)]() to ensure that safety is not compromised.

The use of data allows for a close collaboration between all stakeholders, including shippers, forwarders, carriers, ground handling agents and third-party providers, and comes with all the below benefits:

- Increased data quality
- More transparency and traceability
- Reduced number of errors and delays
- Leaner and faster DG processes
- Improved customer experience

Particularly, the use of the DG data combined with intelligent solutions such as the [IATA DG AutoCheck]() can automate the DG acceptance process, speeding up the entire process and reducing the risk of human errors by simplifying steps and eliminating the tedious aspects of the acceptance process. Given the amount of data to be verified, accepting the DGD manually leaves room for human error. Especially when you consider the sheer volume of consignments the airlines have to process every day. Something as an incorrectly indicated class could prove detrimental in the shipping and handling of dangerous goods.

The digitalization of the DG process creates a safer environment for the handling of dangerous goods by air where data is easily accessible by all the relevant parties and can be used for decision making support for both reactive actions but also proactive actions through pre-arrival assessment for instance.

Connecting the complete supply via a data-sharing platform allows for better communication, collaboration, efficiencies and overall safety.

WANT TO LEARN MORE? **Read this article** to learn about:
- What issues can arise due to manually checking the Shipper's Declaration for Dangerous Goods?
- What aspects of dangerous goods handling can digital processes improve?
- Impact of COVID-19 on digitalization
- And much more…

5 Compliance continues to become increasingly challenging

Compliance will continue to be a challenge as supply chains evolve and regulations are developed and refined. To keep pace, it is critical for organizations to assess their DG operations to identify opportunities within their compliance infrastructure and processes.

Improving and streamlining your DG operations can be implemented in phases and through a blended approach. Here are a few ideas that can be considered:

- **Technology:** Automate DG operations and establish repeatable and reliable processes across the supply chain utilizing DG software and integrating it with your ERP or other systems.

- **Training:** Utilize gamification or 3D training experiences to better train and recertify employees, and do so quickly and remotely.

- **Packaging:** Refine your packaging strategies to further improve efficiency, safety and compliance throughout the supply chain.

- **Regulations:** Keep your employees and supply chain partners up-to-date on the latest regulations using digital regulatory materials.

WANT TO LEARN MORE? **Read this article** to learn about:
- How are air cargo and ground handling operations regulations updated?
- Why are IATA regulation manuals updated annually?
- What has changed in the Dangerous Goods Regulations this year?
- And much more…

About IATA

The International Air Transport Association (IATA) is the trade association for the world's airlines, representing some 290 airlines or 83% of total air traffic. We support many areas of aviation activity and help formulate industry policy on critical aviation issues.

For nearly 80 years, we have developed global commercial standards upon which the air transport industry is built. Our aim is to assist airlines by simplifying cargo processes and operations while reducing costs and improving efficiency. We help airlines to operate safely, securely, efficiently, and economically under clearly defined rules. Professional support is provided to all industry stakeholders with a wide range of products and expert services.

The **IATA Dangerous Goods Regulations (DGR) manual** is the global reference for shipping dangerous goods by air and the only standard recognized by airlines.

Discover the IATA Dangerous Goods products and services

IATA Manuals

Airlines, freight forwarders, ground handlers and shippers like you rely on the IATA Dangerous Goods Regulations, Lithium Battery Shipping Regulations and Infectious Substances Shipping Regulations every day to make sure dangerous goods are prepared, handled and transported safely and efficiently. **Learn more**

IATA Training

IATA Dangerous Goods Regulations courses and diplomas help you stay up-to-date with the latest industry regulations and procedures and ensure that your dangerous goods shipments comply with industry standards. Learn how to use our industry-recognized Dangerous Goods Regulations manual and gain your certificate to handle dangerous goods shipments. **Learn more**

IATA CBTA Center

The global accreditation authority on recognizing organizations for compliance with the training provisions for dangerous goods under a competency-based training and assessment approach. **Learn more**

IATA DG AutoCheck

DG AutoCheck is a digital solution that enables airlines, ground handlers and freight forwarders to automatically check the compliance of the Shipper's Declaration for Dangerous Goods against all relevant provisions of the IATA Dangerous Goods Regulations. It also facilitates the verification of the packages' marks and labels on dangerous goods consignments. **Learn more**

CEIV Lithium Batteries

CEIV certification is proof that your organization follows best practice in all relevant fields. Customers will want to do business with you, trusting in the commitment and transparency you provide throughout the supply chain. Your organization, in turn, is best placed to take advantage of numerous opportunities in critical and lucrative sectors. **Learn more**