

Understanding Dual-use Products and Ensuring Compliance

Introduction, definition and use cases

Pinnacle Technologies is a multinational company specializing in advanced manufacturing technologies. They develop and manufacture lithium-ion batteries with various applications in the aerospace, automotive, and healthcare industries. To expand its market share, the company entered into a business agreement with a foreign entity and started shipping its batteries to this new customer soon after. However, some of the partners at this company have been known to be involved in the production of military-grade components.

Despite being aware of the potential dual-use nature of their batteries, Pinnacle exported goods without any export control scrutiny to its customer offices in Dubai, Bangladesh, and Syria. Pinnacle was fined \$15M for engaging in illicit activities that compromise international security, undermine the objectives of export control regimes, and violate dual-use regulations. Now the company faces restrictions on future exports, and its reputation is severely damaged.

While the example above is for a hypothetical company and provided for illustrative purposes, the actual cases of companies violating dual-use regulations across industries, regions, products, and specific circumstances, are unfortunately plentiful and too frequent. In today's interconnected world, advancements in technology and innovation have led to the emergence of dual-use products. These items, designed for civilian purposes, have the potential for peaceful as well as military applications. However, due to the potential risks associated with their misuse, governments worldwide have implemented stringent export control regulations to ensure responsible trade and prevent unauthorized transfers into the wrong hands.

In this guide, we'll explore the concept of dual-use products, provide some examples of dual-use products across different industries, navigate the landscape of regulations across the globe, and share insights on staying compliant in this ever-evolving landscape.



Dual-use products encompass a broad range of items that have both civilian and military applications. These products can include chemicals, electronics, software, and technologies that, while intended for peaceful purposes, may be used in military or weapons development contexts. Businesses must recognize and evaluate the dual-use nature of their products to ensure compliance with export control regulations.

There are numerous examples of dual-use products across different industry sectors. Below are a few of them:



Aerospace: Rockets, satellites, drones, and missile technology can be used for peaceful exploration of space or for launching weapons or surveillance systems.



Biological: Microorganisms, toxins, and biotechnology can be used for medicine or research or for developing biological weapons or bioterrorism agents.



Nuclear: Nuclear reactors, fuel, and technology can be used for generating electricity or for producing nuclear weapons or dirty bombs.



Information and communication: Encryption software, cyber tools, and artificial intelligence can be used for protecting data or enhancing services, or for hacking, spying, or disrupting systems.



Chemical: Fertilizers, pesticides, and industrial chemicals can be used for agriculture or manufacturing or for creating chemical weapons or explosives.

Overview of regulatory landscape

Managing dual-use products across the globe is a complex and challenging task that requires a thorough understanding of the export control regimes and national laws applicable in major countries across the globe. To prevent the proliferation of dual-use products, several multilateral export control regimes have been established to coordinate and harmonize national export controls among their member countries. These regimes are:

- **The Wassenaar Arrangement (WA)** on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, which covers a wide range of items that can be used for military or civilian purposes, such as firearms, sensors, computers, and encryption.
- **The Nuclear Suppliers Group (NSG)**, which aims to prevent the spread of nuclear weapons by controlling the export of nuclear-related materials, equipment, and technology.
- **The Australia Group (AG)**, which focuses on preventing the proliferation of chemical and biological weapons by controlling the export of chemical precursors, biological agents, and related equipment and technology.
- **The Missile Technology Control Regime (MTCR)**, which seeks to limit the proliferation of missiles capable of delivering WMD by controlling the export of missile-related items and technology.



These regimes establish lists of items that are subject to export controls and provide guidelines for member countries to implement these controls in their national laws and regulations. However, these regimes are not legally binding and do not cover all countries or all dual-use products. Therefore, exporters of dual-use products must be aware of the national laws and regulations that apply in their own country and the country of destination. Depending on their national security interests and foreign policy objectives, countries may have different definitions, classifications, and licensing requirements for dual-use products. For example:

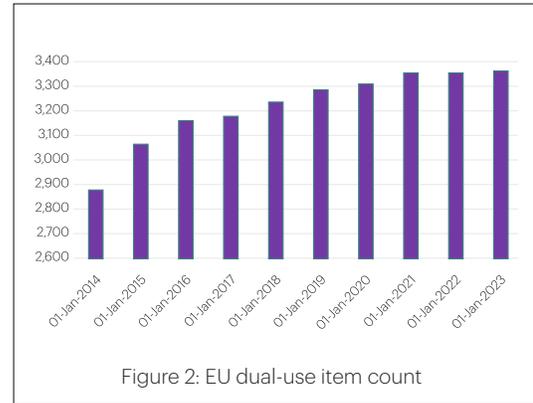
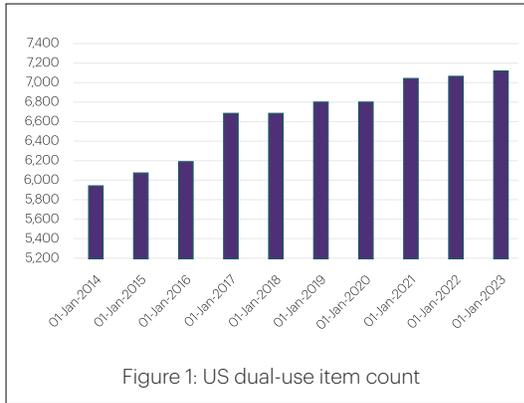
- In the European Union (EU), the key dual-use export control legislation is **Regulation 2021/821**, which sets out EU-wide controls that are directly applicable in all EU Member States. The EU Dual-Use Regulation implements the lists of items agreed upon by the multilateral regimes and includes some additional items specific to the EU. The EU Dual-Use Regulation also imposes controls on exports relating to controlled end uses (such as WMD-related activities) or end users (such as entities subject to EU sanctions).
- In the United States (US), the main dual-use export control legislation is the Export Control Reform Act (ECRA) of 2018, which reestablished nonemergency authority for the President to control dual-use exports for national security and foreign policy reasons. The ECRA also provided policy requirements for setting controls, such as identifying emerging and foundational technologies essential for maintaining or enhancing US technological leadership or national security advantage. **The Bureau of Industry and Security (BIS)** of the Department of Commerce administers dual-use export controls through the Export Administration Regulations (EAR), which include the Commerce Control List (CCL) of dual-use technologies subject to controls.

Besides the United States and the European Union, many other countries and regions have their own export control laws and regulations. Exporters of dual-use products must comply with multilateral and national export controls to avoid legal penalties, reputational damage, or loss of business opportunities. They also need to keep abreast of the changes and developments in the export control regimes and national laws, as these may affect their export activities.

Trends in dual-use products

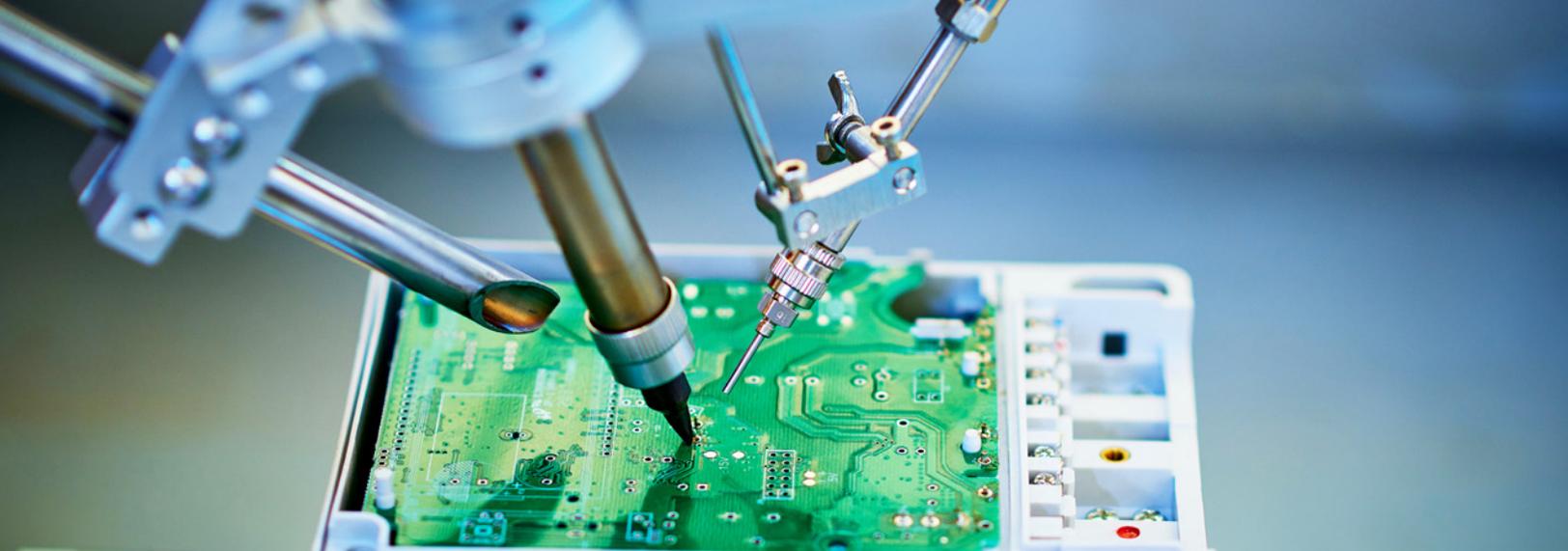
Managing dual-use products across the globe is a dynamic and evolving process that requires constant vigilance and adaptation from exporters.

The chart below, extracted from the e2open Global Knowledge database, illustrates the steady increase in the number of dual-use products for example in the US and EU during the last ten years:



The following are some of the key trends identified by our experts at e2open over the past couple of years:

- The increasing focus is on controlling emerging and foundational technologies essential for maintaining or enhancing US technological leadership or national security advantage over China. The ECRA mandated the identification and control of such technologies through an interagency process led by the Department of Commerce. The BIS has issued several rules to add specific emerging and foundational technologies to the CCL, such as geospatial imagery software, software for training neural networks, and hybrid additive manufacturing/computer numerically controlled tools.
- The growing concern about China's pursuit of civilian and military leadership in advanced technologies through its state-led industrial policies, such as Made in China 2025 (MIC 2025) and the military-civil fusion (MCF) program. These policies seek to create competitive advantages for China in strategic industries by obtaining technology from US and foreign firms. The US has imposed export restrictions or sanctions on certain Chinese entities or individuals that are involved in MIC 2025 or MCF activities, such as Huawei, ZTE, Semiconductor Manufacturing International Corporation (SMIC), and the People's Liberation Army (PLA).
- The impact of the Covid-19 pandemic on global trade and supply chains increased the demand for certain dual-use products related to health care or critical infrastructure. Some countries subjected these products to export restrictions or authorizations to ensure domestic availability or prevent diversion. For example, the EU adopted a regulation in March 2020 that required prior authorization to export specific personal protective equipment (PPE) outside the EU. The regulation was repealed in May 2020 after the situation improved.
- The US and EU sharpened and extended export controls on dual-use goods to target sensitive sectors in Russia's military-industrial complex and limit Russia's access to crucial advanced technology to the maximum extent possible since their war with Ukraine broke out in February of 2022. They have also extended the list of sanctioned entities to whom tighter restrictions apply like never before. These steps will have a huge influence on how dual-use products will be managed across the globe for many decades to come.
- The emergence of new technologies that may pose dual-use risks, such as artificial intelligence, biotechnology, quantum computing, and 3D printing. Existing export control lists may not adequately cover these technologies or will likely require new approaches to control them effectively. Accordingly, more changes can be expected in these sectors.



Staying compliant with dual-use regulations

Exporters must research and understand the applicable laws and regulations of the countries they operate in or intend to export to ensure compliance, or they may face severe penalties, such as fines, sanctions, or even criminal charges. Navigating the national export control laws and regulations requires careful analysis and understanding of each jurisdiction's specific requirements and control lists. Below are a few strategies or steps to consider:

1. **Develop a compliance program:**

Establish a robust internal compliance program that includes policies, procedures, and training to ensure adherence to dual-use regulations. Regularly review and update the program to align with changing regulations and best practices. If you have complex compliance requirements or are unsure about specific regulations, consider consulting with export control experts, legal professionals, or trade compliance consultants specializing in dual-use regulations.

2. **Classification and screening:**

Accurately classify your products under the relevant control lists to determine export control requirements. Implement screening processes to ensure compliance with restricted party lists, end-use/end-user requirements, and prohibited destinations.

3. **Obtain required licenses:**

Identify when export licenses are necessary for your dual-use items and initiate the application process in a timely manner. Maintain accurate records of licenses obtained and ensure compliance with any license conditions.

4. **Due diligence on partners and end-users:**

Conduct thorough due diligence on customers, partners and end users to ensure that they are not prohibited parties and that the legitimacy of their business activities is carefully assessed. Document and retain records of due diligence efforts.

5. **Maintain comprehensive documentation:**

Keep detailed records of all relevant transactions, including contracts, shipping documents, licenses, and compliance-related communications. Retain these records for the required duration specified by the applicable regulations.

6. **Stay informed and updated:**

Regularly monitor changes in dual-use regulations, including control lists, licensing requirements, and compliance obligations. Stay engaged with the industry associations, attend relevant seminars or training sessions, and leverage resources provided by regulatory authorities..



Leveraging technology solutions

Complying with export controls and regulations can be a complex and challenging task for companies operating in multiple markets with diverse supply chains. They need to constantly monitor the changes in the regulatory environment, assess their products' classification and licensing requirements, screen their customers and end users for any red flags, and maintain accurate records and documentation of their transactions. The good news is that many leading global trade and compliance solutions providers in the marketplace can help with these challenges.

E2open offers a comprehensive set of solutions for global trade management, such as export compliance, customs management, duty management, and trade content, among others. E2open Export Management application, as part of the Global Trade application suite, helps companies manage the export of their dual-use products with ease and confidence. It enables them to:

- Access up-to-date global trade content from over 225 countries and territories, covering export controls, sanctions, embargoes, restricted parties, license requirements, and more.
- Automate the classification of their products according to various export control regimes.

- Streamline the license application and approval process with electronic workflows and integrations with government agencies.
- Perform comprehensive screening of their customers, suppliers, intermediaries, and end users against multiple lists of denied or restricted parties.
- Generate audit-ready reports and documentation to demonstrate compliance and support internal and external audits.

E2open

E2open is recognized by IDC as a leader in global trade management and is trusted by many of the world's leading companies in aerospace and defense, high-tech, life sciences, and other industries that specifically deal with dual-use products. With e2open, you can reduce compliance costs, avoid delays and disruptions, and enhance your reputation as a responsible and ethical business partner.

If you want to learn more about how e2open can help you manage your dual-use products effectively and compliantly, please visit our [website](#) or [contact us](#) today.

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