

The concept of European export controls on technology transfers: Risks and strategies for international companies

Philip Haellmigk

Abstract

As foreign economies, especially China, seek to acquire European technology, and digital communication has become an integral part of the business world, technology transfers by European companies are becoming increasingly popular. However, technology transfers to third countries are subject to a rather complex European export control law regime. This article provides an overview of how, and to what extent, European export laws control technology transfers, and shows which risk points European companies should consider in their daily export business.

Introduction

Technology transfer is increasingly coming under close observation in the context of European export controls. There are three reasons for this: first, foreign economies, in particular China, purchase know-how in Europe for manufacturing the product instead of the product itself. Newly industrialised and emerging countries have a strategic interest in acquiring technology to reduce their dependence of traditional industrialised countries. Second, business is becoming more and more digital: every company uses digital media for its internal communication or communication with its clients via emails or the installation of servers for electronic access from abroad. Further, in international projects, electronic exchange of information between business partners is a key factor of business cooperation. Third, certain sensitive countries and organisations continue to seek to obtain weapons of mass destruction. For example, Iran, North Korea, Syria or Pakistan are seeking to obtain sensitive information to develop such programs or to maintain their weapon arsenal. It goes without saying that European companies are rarely approached by direct means, as this approach would be unsuccessful. Instead, these countries undertake their proliferation efforts more covertly: they enter into technology transfer agreements that may appear to have no association with weapon acquisition.

Against this background, companies based in Europe should know the content and scope of European export control laws on technology transfers to identify potential risk points of their export business. Understanding how export controls regulate technology transfer is crucial for addressing this issue in the companies' internal export control compliance programs and thus avoiding, or at least minimising, the risk of export control violations.

This article provides an overview of how European export controls define technology transfer and illustrates when and how business transactions involving technology must be considered technology transfers that are subject to European export control laws. Further, it shows the risk points companies should consider with respect to the exchange of technology.

Concept of technology transfer under European export controls

From the European export control point of view, technology transfer (i.e. the transfer of technical know-how), can occur in two ways. First, it takes place by the export of the technology instead of the good based on the technology (category 1). Here, the question arises, whether this kind of export—as opposed to the export of a good—includes any particularities that must be considered. Second, a technology transfer is carried out via technical assistance (category 2). Under European export controls, technical assistance is an export control concept that is different from the export of technology. Therefore, how and when technical assistance, including the transfer of technology, and which export control restrictions apply to this specific kind of technology transfer, must be analysed.

One must also examine the relationship between these two categories. Which category must be checked first? Is there any order of review? Or is it necessary to check both categories? The companies' internal export control program must provide clear answers to these questions.

Category 1: Technology transfer by export of technology

Which technology is subject to export controls?

European export controls define technology as specific information necessary for the development, production or use of goods. If such information is to be transferred abroad, either in a printed manner or by electronic means (email, fax, phone) this transfer is an export that is subject to export control laws. This applies irrespective of whether goods have previously been exported where their production was based on this technology. The fact that the technology is contained in the goods and thus has been already exported through the goods is irrelevant. The export of technology is a separate export activity; the question of export control restrictions apply to this activity must be reviewed.

This means that a technology export—similar to the export of a good—is regulated by four control criteria: the technology itself, the intended end use, the destination country and the customer.

Therefore, the main control steps are as follows:

- *Does the technology to be exchanged have a European export control classification number?* In the EU, goods and technology with classification numbers are listed in the EU dual-use list (Annex 1 of the Council Regulation (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items and the national military list of the EU member states).¹
- *Does the exporter have knowledge of a sensitive end-use of the technology by the customer?* According to European export controls, sensitive end-use includes mass destruction weapons use and military end-use in an embargoed country. National export control laws can include further sensitive end-use. For example, in Germany, an end-use is also sensitive if used with respect to civil nuclear facilities in certain sensitive countries.²
- *Do specific export control law restrictions apply due to embargo regulations against the destination country?* To date, there are 32 country embargoes, including Iran, Russia, North Korea and Syria.
- *Is the customer (or their business partners) listed on EU sanctions lists that prohibit making available any economic resources to the sanctioned parties?* The EU has established various sanction lists either relating to an embargoed country (such as Iran, Russia, Syria) or relating to terrorist organisations (such as Al Qaeda, Hamas, Tigers of Tamil).

Licence exceptions

These control steps correlate with the control steps for the export of goods. However, with respect to the classification of technology as sensitive technology (dual-use or military), there are various particularities.

As a general rule, technology with an export control classification number is subject to an export licence. However, there are certain exceptions to this principle: technology, even with an export control classification number, is exempt from licence requirements if it is:

- Technology that is not required for the development, production or use of goods under control (this exception does not apply to nuclear technology). Required technology refers to only that portion of technology that is peculiarly responsible for achieving or extending the controlled performance levels, characteristics or functions.³
- Technology that is the minimum necessary for the installation, operation, maintenance, checking or repair of those goods that are not controlled or whose export has been authorised. This means that the export licence issued for the good's export covers the following technology export. However, this exception applies only if the technology export is made shortly after the export of the good (Haellmigk, 2017, p. 429). Further, the end user must be identical.
- Technology that is in the public domain. This is the case if the technology has been made available without restrictions upon its further dissemination; copyright restrictions do not remove technology from being in the public domain. Technology has been made available if it has been published already and thus is available to the public, irrespective whether the acquisition is subject to charges. This applies both to printed or electronic publications (Wolfgang, Simonsen & Rogmann, 2017, para. 26; Haellmigk, 2017, p. 430).
- Technology that results from basic scientific research. Basic scientific research means experimental or theoretical work undertaken principally to acquire new knowledge of the fundamental principles of phenomena or observable facts, not primarily directed towards a specific practical aim or objective.⁴
- Technology that is the minimum necessary information for patent applications (this exception does not apply to nuclear technology).

However, it must be noted, that these exceptions apply only to a limited number of technology exports. When acquiring technology, foreign companies are interested in obtaining that part of the technology that enables the development or manufacture of the goods controlled. Further, companies will not pay for technology that is already in the public domain. As regards the exception for technology that is basic scientific research, this mainly applies to universities and research institutes. If private business carries out research activities they are usually directed towards a specific practical aim, such as developing new or better goods for sale. Therefore, companies are well advised to apply these exceptions restrictively.

Transfer modalities

Technology export can take place by two ways. First, it can be carried out by the export of know-how in a physical manner. This is the export of tangible technology. If technology is printed and then sent to a customer abroad by post, this export is similar to the export of goods. It is irrelevant in which form written technology is exported; this can be descriptions, formula or charts. Due to the digitalisation of business technology, export can also take place via electronic means. This is the export of intangible technology. European export controls do not limit this kind of export to existing electronic media; rather, it intends to comprise all possible and future means of electronic transactions. Therefore, European export controls define export of intangible technology as every immaterial transfer of technology via data transmission from the EU to a third country. It does not matter which kind of data transmission

model is used (Krenzler, Herrmann, Niestedt, 2017, para. 12). European export controls, without being limited to them, explicitly state the current and most popular electronic communication tools as emails, fax or phone (Art. 2 no. 2 iii, Dual-Use Regulation).

The common ground for these types of technology export is that the exporter actively takes part in the exchange of technology: They write and send the email with sensitive data; dial the fax number and send the sensitive document; or pick up the phone and explain the sensitive technology to their customer.

However, even if the exporter does not actively take part in the technology export, European export controls must be considered. This is the situation where information is made electronically available for access from abroad. For example, if a company sets up a server with sensitive technology to allow access from abroad, this is deemed to be technology export. European export controls already consider the fact of allowing such access to be a technology export. It is not required that the technology is actually accessed. The reason for this is that by granting access to the sensitive technology the authorities cannot control who acquires the technology (Dorsch, 2018, para. 26)

With respect to technology export, either physically or electronically, European export controls seek to avoid situations where technology is exchanged without any control before the exchange takes place. Against this background it is clear that intra-company technology transfer is subject to European export controls too (Haellmigk, 2016, p. 31). It is irrelevant whether technology is transferred to a customer or an employee of the same company working in a third country. In both cases, technology is transferred abroad, regardless of who the recipient of the technology may be. Therefore, European companies should carefully analyse their internal and external digital communication in the light of European export controls. This review should not be limited to standard email exchanges. It should also be applied to the use of new electronic media, such as cloud computing.

Category 2: Technology transfer by technical assistance

To understand the concept of European export controls on technology transfer that takes place by technical assistance, technical assistance must firstly be defined.

Definition

Technical assistance is defined as a technical support with respect to a good. Based on this wide definition, technical assistance comprises every kind of support relating to the development, production, repair, maintenance or operation of a good. Similar to the first category of technology export, it does not matter how technical assistance takes place. Technical assistance can be provided by a conversation, a phone call or a presentation of technical documents, either in a written, oral or electronic form (German Federal Office of Economics and Export Control, 2016, p. 24).

Relationship to technology export

When compared, both categories overlap as the scope of application of technical assistance corresponds with the scope of technology export. For example, a phone call with a customer abroad discussing the maintenance of a sensitive facility meets the definition of a technology export as well as that of technical assistance. The same applies if technical documents are provided to a customer abroad. This kind of technology exchange can be considered both a technology export and technical assistance.

Therefore, it is necessary to define the relationship between technology export and technical assistance. When exchanging technology, is a company required to review both categories of technology transfer? Or does a technology export exclude technical assistance? The answer is that both categories of technology

transfer are alternative models of a technology exchange. A technology transfer is either a technology export or a technical assistance; it cannot be both at the same time.

Hence, the order for reviewing exports controls for a technology transfer is as follows: first it must be assessed whether the intended technology transfer meets the definition of a technology export. If so, one must further review whether the technology export is subject to any export restrictions. In this case, the export control concept of technical assistance and its export restrictions do not apply.

If the intended technology transfer does not meet the definition of a technology export, the export control regime for this kind of export does not apply. Instead, one must analyse whether the technology transfer meets the definition of technical assistance. If so, one must further check whether export restrictions for this kind of technology transfer apply (German Federal Office of Economics and Export Control, 2016, p. 24; Haellmigk, 2017, p. 431).

However, the abovementioned overlapping of technology export and technical assistance in terms of scope of application should not be misinterpreted to imply that the concept of technical assistance never or only rarely applies. The concept of technical assistance includes two situations that are not covered by the concept of a technology export.

Scope of application

Transfer of technology in the domestic territory

The concept of technical assistance applies when technology is transferred in the domestic territory.

This is illustrated by the following example. The technical department of an aviation company invites foreign customers at its German site for an advertising presentation that includes sensitive technology for the development of an aircraft engine. Is this technology exchange a technology export or a technical assistance?

According to the order of review established above, it first must be assessed whether this technology transfer meets the definition of a technology export. Conceptually, an export requires that the technology be transferred to a third country. In this case, however, there is no transfer to a third country. The sensitive technology is transferred within Germany only. Therefore, it must be determined whether this technology exchange is technical assistance. As noted above, technical assistance includes every technical support relating, among other things, to the development of a good. It is irrelevant where technical assistance is provided; it can take place at home or abroad.

Therefore, as opposed to technology export, technical assistance applies if technology is transferred in the domestic territory. This is the first separate scope of application of technical assistance (Haellmigk, 2017, p. 431).

Technology transfer involving cross-border movement of a person

Further, the scope of technical assistance applies if technology is transferred abroad through a cross-border movement of a person. Let's assume the technical personnel of the German aviation company from the example above visits a customer in a third country and provides details about how to develop of an aircraft engine. During the meeting, sensitive technology is orally released to the customer. Is this technology exchange a technology export or a technical assistance?

According to the review order established above, one must first check whether this is a technology export. As opposed to the first example, the technology is transferred to a third country. However, the technology transfer takes place only through the cross-border movement of the personnel. European

export controls are not able to control what is in the mind of a travelling person and whether they possess technical know-how. Therefore, if a person who crosses the border does not carry technology with them in a visible form (printed documents, computer, USB stick), this is not a technology export (German Federal Office of Economics and Export Control, 2016, p. 24). In other words, transmission of technology is not a technology export if that transmission involves cross-border movement of persons (Art. 7 Dual-Use Regulation). Hence, the second category of technology transfer applies: releasing sensitive technology in a third country is considered to be technical assistance.

This is the second separate scope of application of technical assistance: technology is transferred to a third country by the cross-border movement of a person, who later provides technology to a third party (Haellmigk, 2017, p. 431).

Export control restrictions

Export control restrictions for technical assistance are based on the following criteria: the use of the goods for which technical assistance is provided; the country in which technical assistance is provided; and the customer for whom technical assistance is provided. Therefore, technical assistance is subject to an export licence if it is carried out in connection with a sensitive use of the good. Further, country embargo regulations may further restrict technical assistance (e.g. the Russia embargo). Finally, it is prohibited to provide technical assistance to sanctioned parties.

European export laws control three sensitive uses. Technical assistance is sensitive if carried out in connection with:

- weapons of mass destruction and missiles capable of delivering such weapons
- military use in a weapon embargoed country
- goods of surveillance communication
- civil nuclear facilities in sensitive countries, such as Algeria, Iraq, Iran, Israel, Libya, North Korea, Pakistan or Syria (German Federal Office of Economics and Export Control, 2016, p. 26–27).

Licence exceptions

However, in some cases, technical assistance, although in connection with a critical use of the product, is exempt from export licensing. These exceptions apply if technical assistance includes information that:

- is the minimum necessary for the installation, operation, maintenance, checking or repair of controlled goods whose export has been authorised
- is in the public domain
- results from basic scientific research
- is provided in non-sensitive countries or to persons from non-sensitive countries. Non-sensitive countries are the EU member states as well as Australia, Japan, Canada, New Zealand, Norway, Switzerland and the USA
- does not include controlled technology (German Federal Office of Economics and Export Control, 2016, p. 27–28).

The rules regarding when these exceptions apply are complex and subject to further requirements that need to be analysed thoroughly. In some cases, these exceptions are further subject to the place where technical assistance is provided (domestic territory or abroad) or apply to some critical uses only. Against this background, European companies exchanging technology should carefully review whether their customers intend a critical use of the products the technical support is provided for. If so, companies should review in a second step whether a licence exception for technical assistance might apply.

Risk points for companies

Due to European export control laws' wide scope of application of a technology transfer, there are many situations where a company's business may be affected by export restrictions. The following checklist provides an overview of the possible risk scenarios when exchanging sensitive technology. Depending on the company's business—product range, sensitivity of goods and technology, foreign markets—the checklist set out in Table 1 needs to be adjusted or amended.

Table 1: Risk points checklist

Enquiry	Reason
Does the company's export business involve EU embargoed countries?	EU country embargos include separate regulations restricting technology export and technical assistance
Does company's business involve technical services such as repair, maintenance or training?	These services can include technology exports and/or technical assistance.
Does company's business involve participation in international research and development projects?	These projects usually include sharing and exchanging technology that can be considered technology exports and/or technical assistance.
Does company's business involve electronic communication with affiliates and employees abroad?	Intra-company technology transfer is subject to export control restrictions.
Does company's business involve business trips abroad?	Transmitting information to an employee who is on a business trip abroad, is subject to export controls. Providing information in a third country by an employee can be technical assistance.
Does company's business involve electronic data transfer models for its employees being abroad?	Using data transfer models can include technology exports and/or technical assistance.
Does company's business involve national site visits by foreign customers including trainings or factory visits?	Training and factory visits in the EU can include technical assistance.
Does company's business involve participation at conferences or symposiums at home and abroad?	Presentations and panel discussions can include a technical assistance.
Does company's business involve seconding its employees abroad?	Working on secondment can include providing information that can be considered technical assistance.
Does company's business involve recruiting foreign employees at national sites?	If a foreign employee is granted access to technology this can be technical assistance.

Conclusions

According to European export controls, technology transfers are divided into two categories: technology export and technical assistance.

Technology export is subject to the same export control restrictions as is the export of a good. Exceptions apply with respect to controlled technology. In certain cases, technology, although controlled, is not subject to export licences. Technology export also includes electronic data transmission abroad and making data available for access from abroad.

European export controls have established a separate concept for controlling technical assistance. Although the concept of technical assistance includes the same activities as technology export, there are two additional situations where technical assistance applies: technical support at home and providing technical support in third countries. Technical assistance is subject to export control restrictions if the technical support is intended for a sensitive use of a good, if specific embargo regulations apply or if the customer is a sanctioned party.

When conducting export business in Europe, companies will be subject to European export controls on technology transfer. The risk points for companies are diverse and include many business activities. Therefore, companies should carefully review whether their businesses involve technology transfers and include such considerations in their internal compliance programs.

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Notes

- 1 See, for example, Germany Annex of the Foreign Trade and Payments Regulation.
- 2 Algeria, Iraq, Iran, Israel, North Korea, Pakistan, Syria, see Sec. 9 of German Foreign Trade and Payment Regulation.
- 3 German Federal Office of Economics and Export Control, 2016, p. 11.
- 4 German Federal Office of Economics and Export Control, 2016, p. 11.

Philip Haellmigk



Philip Haellmigk, LL.M. is an attorney at law and head of boutique law firm HAELLMIGK in Munich, Germany, specialising in foreign trade, export control, compliance and commercial law. He is admitted both as a German attorney at law and as a solicitor (England & Wales). He also holds a degree in French law (Licencié en Droit). He is named a leading expert in these fields of law (i.e., JUVÉ Handbook 2018/2019: ‘frequently recommended’, ‘distinguished expert’; WorldECR 2018/2019: ‘leading expert’). Philip is also a professor of public law at FOM University in Munich, Germany.

