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THE EU-JAPAN CONNECTIVITY PARTNERSHIP – ROADWAYS AND ROADBLOCKS

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Abstract. Connectivity, including infrastructure development ('hard connectivity') as well as regulatory measures, the digital field, people-to-people ties, etc. ('soft connectivity'), is increasingly becoming an area of great-power competition. A key driver has been China's Belt and Road Initiative (BRI), a large-scale project based on foreign investments and infrastructure development in third countries launched in 2014. This article zooms in on how the European Union and Japan have sought to propose an alternative model by creating a Partnership on Sustainable Connectivity and Quality Infrastructure in 2019. The article starts off by defining connectivity and elaborating on its link with geopolitics. It depicts connectivity as a theatre for both cooperation and competition, including by way of an analytical framework comprising six spheres and six logics. After sketching the synergies, complementarities and shared interests, the article surveys the EU-Japan partnership's progress on the ground. The concluding sections outline limitations and possible ways forward.

Keywords: connectivity, European Union, Japan, infrastructure development, investment cooperation, sustainability, great-power competition

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1. Introduction

China's Belt and Road Initiative (BRI), a large-scale project based on foreign investment and infrastructure development in third countries launched in 2014, can be seen as a geo-economic means to create spheres of influence in Asia, Africa and Europe. In response to China, key actors have sought to balance against Beijing by proposing their own strategies to develop infrastructure in all its forms, both regionally and globally. As a result, *connectivity* has become a key driver of global power competition today. Of particular interest are the responses of two players who, explicitly or implicitly, see China as an economic competitor and systemic rival, namely the European Union and Japan. How do they aim to counter China in the sphere of connectivity? Importantly, does their view of cooperating with each other through a connectivity partnership stand any chance of success? Can the partnership deliver or does it punch vastly below its weight?

As for methodology, this article applies the analytical framework devised by Gaens et al. (2023) to the connectivity endeavours by Japan and the EU. The framework allows for an assessment of connectivity projects in a comprehensive range of spheres, including material infrastructures, economic/financial transactions, institutional frameworks of governance, knowledge exchange, socio-cultural exchange and security. It furthermore provides the basis for an analysis of connectivity from the vantage points of cooperation, copying, cushioning (hedging), contestation, containment and coercion.

The article starts off by defining connectivity, which has become a very trendy buzzword in international relations today, but often remains ill-defined. The same section also elaborates on the link between connectivity and geopolitics, including the possibilities for cooperation through the so-called infrastructure alliances, as well as for competition as key actors aim to establish contending spheres of interest through infrastructure development. The article thereafter elucidates the theoretical framework of analysis referred to above. Subsequently the article sketches the background of the EU-Japan bilateral relations as well as synergies, complementarities and shared interests that led to the creation of the connectivity partnership in 2019. The ensuing section surveys the EU-Japan partnership's progress on the ground, using the logics and spheres provided by the analytical framework as structuring tool. The article closes by outlining the limitations of the partnership, and pointing out some possible ways forward.

2. Connectivity and its conceptual and theoretical underpinnings

2.1. Connectivity as a concept

As argued by Pieterse (2021), connectivity is recent term, derived from the world of cyber technologies and social media. However, the notion in all its dimensions has been around for a very long time, and can even be regarded as the prerequisite of nearly all action, in view of the fact that social cooperation, networks and social

capital are at the core of all human relations. Connectivity is strongly interlinked with both globalization and regional integration. Historically, the concept of connectivity has been instrumental to globalization, or the expansion of international cultural, economic, and political interaction and integration worldwide. 'Globalization' gained prominence in the 1990s as a result of the strong increase in international connectivity in the post-Cold-War world. While positive outcomes of this increased connectivity include global growth, increased productivity, new technologies, and more jobs, the term also acquired negative connotations, in the context of cultural homogenization, unfair working conditions, or environmental problems. Connectivity has also been at the core of regional integration. For the Association of Southeast Asian Nations (ASEAN), for example, connections and infrastructure development have been key tools for economic integration, while avoiding the strong political undertone of EU-style integration.[1] The adoption of the organization's *Master Plan on ASEAN Connectivity* in 2010 was instrumental in launching the term connectivity within the field of diplomacy and international relations.

After connectivity turned into a political buzzword, policy-making circles have aimed to define the concept. A useful but very comprehensive definition of connectivity originates from the Asia-Europe Meeting (ASEM), a multilateral forum for dialogue and cooperation between 51 states from Asia and Europe, and also including the European Union and the ASEAN Secretariat. Following preparatory work by the ASEM Pathfinder Group on Connectivity (APGC) starting in 2016, the 13th ASEM Foreign Ministers' Meeting in Myanmar in 2017 agreed on a definition of connectivity, stipulating that, in general, connectivity is about bringing countries, people and societies closer together. The concept includes 'hard' connectivity such as infrastructure projects, but also comprises 'soft' aspects (people-to-people, institutional and social-cultural linkages). It covers "all modes of transport (aviation, maritime, rail and road)" and also includes "institutions, infrastructure, financial cooperation, IT, digital links, energy, education and research, human resources development, tourism, cultural exchanges as well as customs, trade and investment facilitation". ASEM furthermore agreed that connectivity has to be in line with international standards and based on full transparency, and that sustainability needs to be a quality benchmark, including the implementation of the Sustainable Development Goals (SDGs) (ASEM Pathfinder Group on Connectivity 2017, Becker et al. 2019).

Scholarly literature has subsequently attempted to further make sense of connectivity, as it presents itself in international relations today. Providing a concise definition, Ries (2019) has outlined the term as comprising "all the ways in which states, organisations (commercial or else) and societies are connected to each other and interact across the globe", including physical flows, information flows, infrastructures, regulatory measures and socio-cultural ties. Furthermore, building on ASEM's definition, Kacparek (2020) has argued that it is essential to take account

[1] ASEAN considers physical (e.g., transport, ICT, and energy), institutional (e.g., trade, investment, and services liberalization), and people-to-people linkages (e.g., education, culture, and tourism) as key means to achieve an integrated ASEAN community (ASEAN 2016).

of a threefold characteristic of connectivity: its strategic intent, its critical role as a modern foreign-policy tool, and its basis in investments in both physical (roads, digital cables and satellites) and non-physical infrastructure (cultural exchanges, research cooperation and customs facilitation).

As one of the best-known scholars on, and proponents of, connectivity, Parag Khanna stands out. For Khanna (2018), connectivity is a mega-trend, a 'meta-pattern of our age', and a prime paradigm of global organisation, in which infrastructure is central as a key means to facilitate flows of people, commodities, goods, data, and capital. Connectivity is *sine qua non* for growth, social mobility, and economic resilience, and, in view of the global population growth and urbanization, an indispensable tool to create jobs and meet the gap between infrastructure supply and demand. Importantly, Khanna makes a distinction between geography and political borders. Rather than being rooted in legal and political spaces, the basis of the world's organization today lies in functional connections. Furthermore, connectivity is intrinsically geopolitical: trade routes, cross-border infrastructure, and supply chain mastery are deeply entangled with the 'high politics' of security, alliances, and arms control.

2.2. Connectivity as theatre for cooperation and competition

It is clear from the above that connectivity in all its dimensions offers, first of all, possibilities for cooperation. Khanna has argued that the era of 'infrastructure alliances' marked by connectivity and flows has started, and China has taken on a leading role in building these geo-economic partnerships with third countries. Beijing is successfully accessing raw materials in third countries to feed its export-oriented industry, and uses infrastructure development and supply chain mastery as drivers of geopolitical status and influence (Khanna 2016a). Following China's example, other actors have increasingly tried to establish functional partnerships and engage in connective endeavors as a means to obtain mutual benefits at the bilateral, region-to-region and multi-stakeholder levels. In recent years several collaborative plans have been devised by major players within Asia-Europe relations and in the Indo-Pacific. In 2017 at the African Development Bank (AfDB) meeting, Japan and India announced a partnership agreement, labeled the *Asia-Africa Growth Corridor (AAGC)*, focusing on economy, technology and infrastructure development in the Indo-Pacific and Africa. The US and Japan also launched the *Japan-U.S.-Mekong Power Partnership (JUMPP)* focused on energy sector reform. Furthermore, in 2022 the G7 Summit relaunched the Build Back Better World (B3W) plan as the *Partnership for Global Infrastructure and Investment (PGII)*, pledging USD 600 billion to infrastructure projects over the next five years. Other recent cooperative endeavors include the *Japan-U.S. Clean Energy Partnership (JUCEP)* to support decarbonization efforts in the Indo-Pacific, and the *U.S.-Japan Global Digital Connectivity Partnership (GDCP)* to promote international rules of data flow. Finally, the US, Japan and Australia launched the *Blue Dot Network (BDN)* in 2019 in order to devise a certification mechanism to promote quality infrastructure investment

that complies with inclusivity, transparency and environmental and sustainability standards.[2]

Connectivity partnerships are increasingly becoming part of the EU's toolbox. As noted most recently by the Council of the EU, Connectivity Partnerships with other countries and regions such as Japan, India, ASEAN and the US, can "promote compatibility of policy approaches and complementarity in preparation, implementation and financing of sustainable projects" (Council of the European Union 2021). The EU-India Connectivity Partnership was concluded in May 2021, and a partnership with ASEAN promoting connectivity within and between both regions is in the works (Council of the European Union 2020). In recent years, the EU has focussed on the promotion of digital partnerships with other actors in order to tackle the digital divide and to strengthen its ties beyond Europe. In line with the EU's own Digital Compass Strategy, partnerships aim to promote the four pillars of skills, infrastructures, transformation of business, and of public services. The EU has partnerships with Japan, South Korea and Singapore, and an EU-ASEAN Digital Connectivity Partnership is in the works, following the ASEAN-EU Comprehensive Air Transport Agreement (CATA). Most importantly for the focus of this paper, already in September 2019 the EU and Japan concluded a Partnership on Sustainable Connectivity and Quality Infrastructure.

At the same time, connectivity is a key tool and battleground for competition in the sphere of Asia-Europe relations, as key actors aim to establish contending spheres of interest through infrastructure development. As such, connectivity is deeply ingrained in notions such as geoeconomics (Wigell 2016), economic statecraft (Baldwin 2020) and weaponized interdependence (Farell and Newman 2019). For some, the interconnected infrastructure of the global economy is increasingly replacing conventional warfare as the battleground of conflict. Marked by the disruption of trade and investment, international law, the internet, transport links, and the movement of people, 'connectivity wars' play out through economic warfare, the weaponization of international institutions, and infrastructure competition (Leonard 2016). Defining connectivity as the building of "seamless transportation, energy, and communications infrastructures among all the world's peoples and resources", Parag Khanna has argued that, in the 21st century, unitary nation-states will give way to a world of interconnected regions across former frontiers (Khanna 2016b). As recent developments have shown, conventional geopolitics, geographical borders, and state-centric policies and actions are certainly not off the radar. However, Khanna may have a point in that, more than just about borders, global organisation is increasingly about the management of flows and frictions (cf. also Aaltola et al. 2014). As pointed out above, for Khanna geopolitical competition is increasingly transforming from war over territory to war over connectivity, with special economic zones or infrastructure alliances becoming key tools in a global tug-of-war (Khanna 2016b: xvi-xvii).

[2] For more examples of collaborative endeavors, cf. Gaens and Sinkkonen 2023.

2.3. Connectivity: a framework of analysis

A recently published article by Gaens et al. (2023) has aimed to further develop the notion of connectivity conceptually and theoretically. The authors argue that connectivity can be comprehensively analysed in the context of six *spheres*, i.e., material and human fields of interaction. The most elementary of these six spheres covers all *material infrastructures*, including energy and transport networks, e.g., roads and bridges, aviation and train connections and digital infrastructures that make the flow of information, ideas and capital possible. The second sphere consists of all kinds of *economic transactions*, including economic/financial exchange, economic corridors and special economic zones, and trade integration and facilitation. The third sphere concerns the *institutional frameworks of governance* and the concomitant norm and rule production of the world. These frameworks can be global or regional in nature, they can be highly specific or fairly general, even regime constellations within a field. They include, for example, climate change agreements or privacy laws, international governance institutions, and interpretations and reformulations of international law. As for the fourth sphere, *knowledge exchange* plays a hugely important role in the current world, as the successes of developing Covid-19 vaccines have shown. Research diplomacy, i.e., cooperation in R&D, sharing expertise and exchanging data and information clearly belongs to this sphere. The fifth sphere covers all kinds of *socio-cultural* exchange. This people-to-people context comprises educational exchanges, cultural mimicking, tourism, but also 'darker' aspects such as contending narratives of history, visa regimes, forced migration, evictions and resettlements. The final sphere is that of *security,* in many respects also an overarching theme, one that possibly underlies all the other efforts to establish connectivity within a region and in world politics more generally. This category naturally encompasses a plethora of activities, from joint operations to patrol the high seas through traditional alliance building, all the way to using hybrid tools to influence political decision-making in other countries.

Furthermore, in order to make sense of the cooperation/competition dynamics embedded in connectivity, six underlying logics can be detected. *Cooperation* comprises the creation of inclusive connections based on absolute gains. *Copying* stands for the emulation or diffusion of 'best' connectivity practices or regulatory frameworks. *Cushioning*, a form of hedging, can reduce risks by establishing connections with multiple connectivity actors. *Contestation*, in turn, refers to actors promoting connections in order to gain advantages over competitors. *Containment* is aimed at shutting out others through disconnection or the establishment of exclusionary connectivity spheres. *Coercion*, finally, aspires to compel others to connect in a particular way or refrain from connecting entirely.[3]

In light of these observations, it is indeed important to bear in mind that connectivity often goes hand in hand with *disconnectivity*. For example, a sense of disconnection among the British population in terms of collective identity, social and class divisions, and political culture resulted in the UK voting in 2016 to leave the European Union, officially parting ways with the regional bloc in 2020. In the

[3] See Gaens et al. (2023) for a more elaborate account of these logics, including empirical examples.

economic realm, countries can impede commercial transactions by way of tariffs and even sanctions, with the aim to disconnect.

Before applying these conceptual and theoretical insights onto the EU-Japan partnership and assess how it plays out against the background of the foresaid spheres and logics, the next section will assess synergies between both players culminating in their 2019 connectivity partnership.

3. The EU and Japan: from synergies to a partnership

The EU-Japan bilateral relations have traditionally been rooted in trade and economy. Political relations took off on the occasion of the very first EU-Japan summit with the adoption of the Hague Declaration on EU-Japan Political Relations in 1991, resulting in a number of ad hoc policy dialogues going beyond trade and economy. However, in spite of a plethora of declarations and actions plans, cooperation in other fields has been patchy and pragmatic. In 2004 the EU and Japan reaffirmed the importance of cementing a solid 'strategic partnership' buttressed by a number of area-specific policy dialogues. Cooperation since then tended to focus on 'strategic pragmatism', marked by "ad hoc, issue-led agendas focusing not on overarching relations but more specifically on issues of mutual concern," including energy, climate change, and development, in particular based on the concept of human security (Hook et al. 2012: 275, 309).

The initially patchy development of bilateral relations and their underwhelming outcomes may have been unexpected in view of the numerous synergies and convergences between the EU and Japan. First, the EU and Japan are primarily trading powers, that aim to play a global role foremost by focusing on civilian and soft power, as opposed to military power. As a region, the EU is the largest economy in the world, whereas Japan is the third largest globally. Together, the EU and Japan account for approximately a quarter of the world's GDP. Second, in addition to economy, both actors play major global roles in terms of development cooperation with third countries, and their development aid practices have gradually converged (Gaens 2017, see also Gaens 2021). Just like Japan, the EU now recognizes the need to shift from aid dependence to self-reliance, and increasingly emphasizes economic infrastructure rather than social/administrative infrastructure. These are both elements that have been part and parcel of Japan's traditional aid philosophy. Furthermore, the EU is increasingly aware of the need to support private sector involvement in development, and to leverage private sector investment in order to satisfy infrastructure demands. Third, both actors see each other as global partners sharing the same basic values, including democracy, a market economy, human rights, human dignity, freedom, equality, and the rule of law. Fourth, the EU and Japan are equally aware of the trade-security-development nexus, in the sense that all trade- or development-related partnerships necessarily have political and security ramifications.

Similarities and convergences between the EU and Japan are also apparent in the field of connectivity. First, both actors are undoubtedly connectivity superpowers.

Connectivity has been part and parcel of the EU's regional integration, in particular through the Trans-European Transport networks (labelled TEN-T) and their extension in the European neighbourhood. Since the 1990s Brussels has tried to connect these networks to Asia, starting with the Transport Corridor Europe Caucasus Asia (TRACECA), running from Europe to Central Asia, in 1993. In more recent years, as stated in the European Union's Global Strategy for Foreign and Security Policy of June 2016, Brussels has become increasingly aware of the importance of a connected Asia for European prosperity (European Union 2016: 37). Connecting the TEN-T to networks in Asia remains an important goal (European Parliament Think Tank 2018, Council of the European Union 2021). Japan, as well, has been a 'connectivity superpower' long before the concept of connectivity became the word of the day. As the largest ODA provider in Asia with a heavy focus on economic infrastructure investment, Japan's connectivity-related involvement in Southeast Asia is still larger than China's (The Economist 2021). Based on the Japan-ASEAN Connectivity Initiative, Japan is further strengthening its involvement in the region, linking investments, in particular in economic infrastructure, with development cooperation (Gaens and Sinkkonen 2023).

Third, both the EU's and Japan's connectivity strategies are firmly rooted in domestic policy papers, and both implicitly aim to provide an answer to China's BRI. The EU's connectivity strategy for Asia, officially called "Connecting Europe and Asia – building blocks for an EU strategy" was published in September 2018 (European Commission 2018). Clearly intended to be the basis for a European response to the BRI, the paper emphasized that connectivity has to be economically, fiscally, environmentally and socially sustainable, comprehensive across sectors and financial frameworks, and based on international rules and an open and transparent investment environment. The connectivity strategy for Asia has led the way to the EU's global connectivity strategy, the "Global Gateway" (GG) published in 2021 (European Union 2021a). The GG marks the EU's attempts to increase infrastructure investments in Africa and Asia amounting to 300 bn euro through 2027.

Japan's Partnership for Quality Infrastructure (PQI) was launched in 2015 (Ministry of Foreign Affairs of Japan 2015). The strategy emphasizes 'quality', which Tokyo defines as having connotations of economic efficiency, safety, resilience, environmental and social sustainability, and contributions to local society and economy. This denounces a clear attempt to set Japan's policy off against China's, and counterbalance the BRI (Pascha 2020: 14). As of 2016, Japan has framed its connectivity strategy within the vision for a *Free and Open Indo-Pacific (FOIP)*. In that year the Indo-Pacific idea came to the fore in the context of a collective rhetorical commitment to a region that is 'stable', 'open', 'free', and is connected to fundamental values including freedom, democracy and human rights as well as strategic interests, particularly freedom of the sea lanes.

In December 2017 this gradual convergence process bore fruit when the EU and Japan finalised negotiations for an Economic Partnership Agreement (EPA), marking a milestone in the interaction between both players. A Strategic Partnership

Agreement (SPA), a binding political arrangement, was concluded in parallel.[4] The latter shows that both the EU and Japan increasingly combine economic diplomacy with a more comprehensive approach, including a stronger political and security-related dimension. As a first tangible outcome of the SPA, both actors concluded the Partnership on Sustainable Connectivity and Quality Infrastructure in September between the EU and Japan in 2019 (European External Action service 2019). Implementation of the EU-Japan connectivity partnership has been cited as one of the key factors in the realization of the EU's Indo-Pacific strategy (European Union 2021b).

4. Achievements of the EU-Japan partnership: logics and spheres

Has the EU-Japan connectivity partnership been translated into progress on the ground? Applying the analytical framework devised by Gaens et al. (2023), it is tempting to give an affirmative answer to that question as numerous examples can be found in nearly all connectivity spheres and logics.

The logic of *cooperation* is obvious in all connectivity spheres in which the EU and Japan engage. This logic aims at obtaining mutual benefits, based on relations of trust and normative expectations of the implementation of shared values such as sustainability and quality infrastructure, for example. It entails exercising power *with* as opposed to power *over* others, and increased interactions and transactions between actors can even lead to social learning (ibid.). In 2021 Japan and the EU compiled a factsheet, including a long list of synergies, complementarities, and tangible cooperation in the field of development cooperation in Southeast Asia, the Pacific region, Central Asia and Africa in 2021 (Ministry of Foreign Affairs of Japan 2021). Indeed, if we agree that "the mere coordination of policies to serve some commonly agreed-upon end state meets the criteria of cooperation" (ibid.), then we can agree with Söderberg (2021: 6) that the implementation of the connectivity partnership agreement is progressing.

Both actors show a vast array of complementarities in their respective cooperation with third partners (see Ministry of Foreign Affairs of Japan 2021). As for *infrastructure* development, Brussels and Tokyo are both engaged in the sustainable development of the Mekong River, Japan contributes human resources to the Maritime Technology Cooperation Centre (MTCC-Pacific) set up by the EU in Fiji, and both players aim to enhance connectivity in the African region. In the sphere of *economic and financial* exchanges, joint institutional financing is slowly taking off (cf. Table 1). In 2019 the European Investment Bank (EIB) and the Japan International Cooperation Agency (JICA) signed a Memorandum of Understanding (MOU) to cooperate more in the fields of transport, quality infrastructure investment, microfinance and renewable energy sources (European Investment Bank 2019). As a tangible outcome, JICA and the EIB co-finance the expansion of a geothermal power plant in Western Kenya, the Olkaria I (Reed 2022). This was preceded in 2018 by two other cooperation

[4] Both EPA and SPA came into force in 2019.

agreements involving the EIB, namely one with the Nippon Export and Investment Insurance (NEXI) and one with the Japan Bank for International Cooperation (JBIC) (European Investment Bank 2018, 2021). The European Bank for Reconstruction and Development (EBRD) joined forces with Japan's NEXI in 2020 to support the development of sustainable infrastructure (Zgheib 2021).

Table 1. Memoranda of Understanding between European and Japanese financial institutions

Europe	Japan	MOU
EIB	JBIC	2018 (expanded 2021)
EIB	NEXI	2018
EIB	JICA	2019
EBRD	NEXI	2020

Compiled by author based on European Investment Bank 2018, 2019, 2021, Zgheib 2021. EIB: European Investment Bank; EBRD: European Bank for Reconstruction and Development; JBIC: Japan Bank for International Cooperation; NEXI: Nippon Export and Investment Insurance; JICA: Japan International Cooperation Agency.

In the sphere of *institutional* exchange, both actors support ASEAN in capacity-building for disaster management, and contribute to border management in Central Asia. In the sphere of *knowledge* exchange, more specifically in the field of climate change, the EU-Japan Green Alliance was created in the sidelines of the bilateral summit of 27 May 2021, in order to facilitate cooperation on energy transition, environmental protection, and promote regulatory and business cooperation, research and development, and sustainable finance. In the field of space technology, the European Space Agency (ESA) and the Japan Aerospace Exploration Agency (JAXA) have maintained close relations, and have reached several milestones, such as the first communication between optical satellites in 2005, and formal EU-Japan cooperation in positioning services started in 2016. In 2018 the BepiColombo mission was launched, sending a European-Japanese spacecraft on a seven-year journey to Mercury.

In the *socio/cultural* sphere, as of August 2019, the EIB and JICA co-finance a women-focused microfinance fund in Sub-Saharan Africa (European Investment Bank 2019). As of 2021, the EBRD also cooperates with JICA and JBIC, among other international development finance institutions, in an initiative called the 2X Challenge, aiming to step up investments in gender equality and the empowerment of women (Zgheib 2021). Educational exchanges between the EU and Japan, for example under the Erasmus+ program, offer another example of socio/cultural exchanges.

In 2019 Japan was successful in this international standard-setting when the G20 summit adopted Japan's concept of quality infrastructure as a set of new principles for infrastructure projects, including sustainable growth, economic efficiency, environmentalism, resilience, social awareness, and governance including openness

and transparency of procurement. They have been adopted under the acronym PQII (Principles for Quality Infrastructure Investment). This provides a good example of the logic of *copying*. Within the EU-Japan partnership, the agreement of early 2019 on mutual data adequacy, allowing for the free flow of personal data between the two economies based on strong protection guarantees, can also be seen as an illustration of the copying logic within the institutional sphere.[5] Furthermore, the proliferation of the entire idea of an Indo-Pacific regional constellation, and especially the adoption of the originally Japanese notion of a Free and Open Indo-Pacific (FOIP) in policy circles in the US as well as the EU, including the adoption of an Indo-Pacific strategy (see European Union 2021b) form other examples.

Increased European and Japanese presence in regions such as Africa or the Indo-Pacific offers countries the opportunity for *cushioning* or hedging, in other words allowing them to position themselves between two or more major actors for their own economic benefit. Collaborative efforts to (re)construct roads in Mozambique and Burkina Faso, or joint funding for larger connectivity projects such as the West Africa Growth Ring Master Plan in Côte d'Ivoire or Nigeria offer alternatives to Chinese infrastructure development projects. At the below-state level of private actors, a wide range of examples can be found of cooperation between Japanese and European companies in third countries, in particular in the fields of transportation, water & waste management, energy, and IT & Telecommunications (see Appendix 1). Cooperation with French companies in particular stands out, which can arguably be explained by the country's historically strong presence in Africa and its interests in the Indo-Pacific due to the presence of overseas territories and accompanying exclusive economic zones.

Forms of cooperation include collaboration, partnership, joint-venture, consortium, investment, acquisition, and contractor/supplier relationship (Marbot 2020: 12-13).

From the perspective of the EU and Japan, the activities at the official and below-state levels in all the above-mentioned spheres, constitute examples of *contestation*, in other words "competing in or over markets, geographical spaces (whether on land, at sea, or in aerospace), the production of knowledge, as well as construction of and wrangling over institutions and norms" (Gaens et al. 2023).

Containment, then, entails actors aiming to exclude or to disconnect another actor or group of actors, or considerably circumscribe its or their ability to act within a particular sphere, while at the same time enhancing connectivity with others (ibid.). Japan has successfully promoted its Quality Infrastructure concept in the international community, including in the partnership with the EU, as an alternative to the controversial BRI. In the sphere of maritime security, in 2021 the EU and Japan conducted joint naval exercises off the coast of the Gulf of Aden and of the Arabian Sea, combining the EU Naval Force Somalia (Operation Atalanta) and the Japanese Maritime Self-Defence Force. This followed a joint EU-Japan-Djibouti naval exercise of May 2021. Japan's attempts to build up the maritime law enforcement capabilities

[5] 'Institutional' is here used in the sense of investment and trade treaties, coordination on international standards, principles and procedures, as well as agreements on data protection systems, for example.

of regional partners are (at least implicitly) meant to enhance their ability to resist China's forays into disputed waters. The EU, as well, supports national and regional maritime agencies, for example in the Indian Ocean, enhancing maritime security coordination and information exchange (Ministry of Foreign Affairs of Japan 2021).

Coercion, the sixth and final potential logic undergirding (dis)connectivity endeavors, is the least tangible one in the case of the EU-Japan interaction. Both Japan and the EU have the need to keep open the options for cooperation with China, which is why the geopolitical driver is downplayed in military security cooperation, in upholding Sea Lines of Communication (SLOC) security, and in non-traditional security collaboration (Atanassova-Cornelis and Sato 2022). Having said that, Japan aligning itself with Western sanctions against Russia can be seen as an example of coercion through disconnectivity, even if Japan continues to import Russian gas and Japanese companies remain invested in natural-gas projects in Russia.

5. Caveats and further opportunities

In view of the above, the EU-Japan relations have doubtlessly evolved. Nevertheless, a few caveats are in order. First, when looking at the implementation of the EU-Japan connectivity partnership as such, progress been slow thus far, with arguably underwhelming results. After nearly four years since the partnership agreement was signed, the focus remains on the identification of feasible joint, concrete projects. The MOUs signed between EIB, JICA, JBIC and NEXI have not led to tangible projects, with a few exceptions, as indicated above. Furthermore, quite a few of the examples above, such as Japan-EU projects in Africa at the official as well as private sector levels, predate the connectivity partnership. Looking at Appendix 1, 35 out of 50 of the collaborations were formalized in or before 2019, and thus have roots in the years before the EU-Japan Connectivity Partnership was concluded. While the partnership agreement may give the impression of a top-down approach to business cooperation in third markets, the original bottom-up approach remains dominant (Arnu 2021: 67). Importantly, among Japanese and European companies alike the connectivity partnership as a brand has not been disseminated sufficiently. The partnership is not heard of, and the term connectivity is not really understood (Marbot 2020: 107).

Second, the Covid-19 pandemic has certainly placed the connectivity issue under tremendous stress, having had a detrimental impact on people-to-people exchanges due to frequently changing border regulations and a stoppage of long-distance travel, as well as constraining trade (Ström et al. 2020). The EU-Japan trade picked up again in 2021 and caught up to pre-pandemic levels (€124 billion), and bilateral trade flows further increased in 2022 by 13.4% to €140.6 billion (European Commission 2023).

Third, Japan's continuing reliance on the US in security terms, the country's constitutional restraints, and the EU's expectations-capability gap continue to have an impact, for example, at least for now, stalling a Framework Partnership Agreement (FPA), which would allow Japan to participate in Common Security and Defence

Policy (CSDP) missions (Benaglia and Macchiarini Crosson 2022: 5). As a possible step forward, Japan could participate on an *ad hoc* basis in civilian CSDP missions, as well as be involved in the EU's second regional capacity building Critical Maritime Routes Situational Awareness Initiative (CRIMARIO II) (ibid.). This initiative provides training and capacity-building in maritime security and peacekeeping in Southeast Asia and Africa (European External Action Service 2021).

Further progress can be made in other fields as well. In the sphere of knowledge, joint research can be conducted in the Arctic (Gaens 2021). The EU has already mobilised 200 million euro over the past seven years into Arctic research, in areas like Earth observation, polar science and climate action (Borrell 2021). As this also constitutes a priority area for Japan, visible through its flagship project ArCS II, joint Arctic research could be conducted, including on environmental impact assessments, for example. Indirectly related to the Arctic, 'peaceful' civilian use of space is another area for potential cooperation. Primarily through its Earth Observation Programme, Copernicus, the EU already possesses strong capabilities in Earth observation and environmental monitoring covering the Arctic. Japan has excellent expertise in satellites used for Arctic environmental monitoring, with the Japan Aerospace Exploration Agency (JAXA) operating numerous observation satellites.[6] As noted by the Council of the EU, space solutions play a key role for Arctic policy: mitigating and adapting to climate change and safeguarding the Arctic Environment; ensuring sustainable development in and around the Arctic; as well as advancing international collaboration on Arctic issues (Council of the European Union 2019). The EU and Japan could share expertise and exchange data and information on issues such as long-term monitoring of the Arctic environment and climate change, or emergency management. Furthermore, joint research could help foster free and open services promoting transport connectivity, environmental policy, and energy and telecommunication interconnections.

Lastly, in the sphere of infrastructure, the connectivity partnership needs to be promoted in the private sector. As noted above, the need for investment from the private sector is essential for the implementation of both the EU and Japan's connectivity strategies. However, private investors often shy away due to unpredictable political, regulatory and economic risks, in spite of risk-mitigating policies such as those of the EU. In addition, an institutional ecosystem that allows for a speedy shift from the conceptual stage to a pipeline of bankable projects, is lacking (Grieger 2021: 11-12). It therefore seems essential to create more awareness among the EU and Japanese companies of the benefits offered by the Connectivity Partnership, including financial injections and investment guarantees.[7] Complementarity is also of essence (Arnu 2021: 84) – whereas Japan has capital to invest, has wide expertise

[6] For more details, see Arctic Science Ministerial 2021, 58-59 (EU) and 76-77 (Japan).

[7] As pointed out by Marbot (2020), key drivers of cooperation are a pre-existing long-term relationship between European and Japanese companies, complementary technologies and expertise, financial considerations (reducing cost and securing funding), market intelligence/local knowhow/human resources, pooling risks, expansion of business opportunities, strategic importance of the Japanese subsidiary, and compliance standards and corporate culture. Barriers are language, culture, and management; and being both partners and competitors.

in the management of large projects, is looking at emerging markets, and is well accepted in third markets, the EU companies are already active in third markets and are seeking to expand their business; whereas the EU is a gateway to Eastern Europe, Western Balkans, Africa, Latin America and Central Asia, Japan is a gateway to ASEAN and the Pacific; and in fields where Japan is lagging behind, such as the digital one, more advanced EU companies can take the lead in developing innovative digital solutions.

6. Conclusion

To summarize, after many years of unfulfilled potential, the existing synergies and complementarities between the EU and Japan materialized in an Economic Partnership Agreement, a Strategic Partnership Agreement, and a Partnership on Sustainable Connectivity and Quality Infrastructure in 2019. Bilateral relations therefore have certainly evolved, as is clear from the analysis above on cooperation in six spheres and interaction grounded in six logics. Even so, when zooming in on the connectivity partnership, it is clear that limited action has taken place on the ground so far. Obstacles and challenges remain, including brand awareness, resources, private sector involvement and a smooth administrative machinery.

However, currently the stars seem aligned for further cooperation. Previously it was said that the EU and Japan are located in rather different regional contexts and security environments, especially in light of Japan seeking closer ties with Russia in order to inch closer to settling the territorial dispute over the Northern Territories. This all changed since the start of Russia's war of aggression against Ukraine. Japan is now much firmer in the 'Western' camp, aligning with the EU and the US in terms of condemnation and sanctions. The EU for its part, increasingly turns to likeminded countries such as Japan, as China is strengthening its strategic partnership with Russia. These dynamics were highlighted in the EU-Japan summit in Tokyo in May 2022 as well as the G7 summit in Hiroshima of May 2023. In addition, the trilateral security agreement between Australia, the United Kingdom and the United States (AUKUS) of September 2021, which snubbed France and by extension the EU, has shown Europe the importance of being perceived as a reliable security partner (Benaglia and Macchiarini Crosson 2022).

Opportunities for further cooperation therefore abound, and the broader shift in geostrategic regional and global landscape increasingly drives the EU and Japan into each other's arms. In view of the challenges, the EU and Japan will likely need to prioritize strategically central connections and spheres of connectivity.

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References

Aaltola, Mika, Juha Käpylä, Harri Mikkola, and Timo Behr (2014) "Towards the geopolitics of flows". *FIIA Report* 40.

Arctic Science Ministerial (2021) "Knowledge for a sustainable Arctic". *3rd Arctic Science Ministerial Report*. ASM3 Science Advisory Board. June. Reykjavik: Ministry of Education, Science and Culture. Available online at <https://www.asm3.org/library/Files/ASM3_Final_Report.pdf>. Accessed on 30.11.2022.

Arnu, Florence (2021) *EU-Japan business cooperation in third markets: focus on the digital economy*. EU-Japan Centre for Industrial Cooperation. March. Available online at <https://www.eu-japan.eu/sites/default/files/publications/docs/2021_03_eujp_business_cooperation_3rd_markets_digital_economy.pdf>. Accessed on 24.01.2023.

ASEAN (2016) *ASEAN Masterplan on Connectivity 2025*. Jakarta: ASEAN Secretariat. Available online at <https://asean.org/wp-content/uploads/2016/09/Master-Plan-on-ASEAN-Connectivity-20251.pdf>. Accessed on 09.03.2023.

ASEM Pathfinder Group on Connectivity (2017) *Chair Summary (21 June)*. European External Action Service. Available online at <https://eeas.europa.eu/sites/default/files/ chair_summary_apgc_21_june_2017-final.pdf>. Accessed on 09.03.2023.

Atanassova-Cornelis, Elena and Yoichiro Sato (2022) "Asia and Europe in Japan's alignment policies: drivers, strategic expectations and future outlook". *Asian Affairs* 53, 3, 520–541.

Baldwin, David A. (2020) *Economic statecraft.* New ed. Princeton, NJ: Princeton University Press.

Becker, William, Marcos Dominguez-Torreiro, Ana Fragoso Neves, Carlos Tacao Moura, and Michaela Saisana (2019) *Exploring ASEM sustainable connectivity – what brings Asia and Europe together*. Luxembourg: Publications Office of the European Union. DOI: https://doi.org/10.2760/738153

Benaglia, Stefania and Dylan Macchiarini Crosson (2022) "A pillar of stability in an unstable world. Strengthening EU-Japan security cooperation in the Indo Pacific". *CEPS Policy Brief*, 2022-04, April. Available online at <https://www.ceps.eu/wp-content/uploads/2022/04/CEPS-PB2022-04_Strengthening-EU-Japan-security-cooper ation.pdf>. Accessed on 24.04.2023.

Borrell, Josep (2021) *The Arctic, a key region for the EU and global security*. European External Action Service, 3 February. Available online at <https://eeas.europa.eu/headquarters/headquarters-homepage/92500/arctic-key-region-eu-and-global-security_en>. Accessed on 03.02.2023.

Council of the European Union (2019) *Council conclusions on "space solutions for a sustainable Arctic"*, 21 November. Available online at <https://data.consilium.europa.eu/doc/document/ST-13996-2019-INIT/en/pdf>. Accessed on 30.11.2022.

Council of the European Union (2020) *EU-ASEAN joint ministerial statement on connectivity,* 12 July. Available online at <https://www.consilium.europa.eu/en/press/press-releases/2020/12/01/eu-asean-joint-ministerial-statement-on-connectivity/>. Accessed on 24.04.2023.

Council of the European Union (2021) *A Globally Connected Europe. Council Conclusions*, 12 July. Available online at <https://data.consilium.europa.eu/doc/document/ST-10629-2021-INIT/en/pdf>. Accessed on 24.04.2023.

EU-Japan Centre for Industrial Cooperation (2022) *Case studies of trilateral business cooperation between Africa, the EU and Japan*, February. Available online at <https://www.eu-japan.eu/sites/default/files/imce/EJP3A/Case_studies_EU_Japan_Africa_business_cooperation.pdf>. Accessed on 30.11.2022.

European Commission (2018) *Connecting Europe and Asia – Building blocks for an EU Strategy.* Joint Communication to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank, JOIN (2018) 31 final, 19 September. Available online at <https://eeas.europa.eu/sites/eeas/files/joint_communication_-_connecting_europe_and_asia_-_building_blocks_for_an_eu_strategy_2018-09-19.pdf>. Accessed on 30.11.2022.

European Commission (2023) "EU-Japan trade surges 13% after catching up to pre-pandemic levels". *News Article*, 4 April. Directorate-General for Trade. Available online at <https://policy.trade.ec.europa.eu/news/eu-japan-trade-surges-13-after-catching-pre-pandemic-levels-2023-04-04_en>. Accessed on 17.05.2023.

European External Action Service (2019) *The partnership on sustainable connectivity and quality infrastructure between the European Union and Japan.* Brussels: EEAS. Available online at <https://www.eeas.europa.eu/sites/default/files/the_partnership_ on_sustainable_connectivity_and_quality_infrastructure_between_the_european_union_and_japan.pdf>. Accessed on 30.11.2022.

European External Action Service (2021) *EU-Japan strategic partnership: factsheet*. Brussels: EEAS, May. Available online at <https://www.eeas.europa.eu/sites/default/files/eu-japan_factsheet.pdf>. Accessed on 24.04.2023.

European Investment Bank (2018) *EIB new cooperation with the Japan Bank for International Cooperation (JBIC) and with the Nippon Export and Investment Insurance (NEXI)*. Available online at <https://www.eib.org/en/press/all/2021-352-eib-and-japan-bank-for-international-cooperation-jbic-to-work-on-joint-investments>. Accessed on 22 May 2023.

European Investment Bank (2019) *EIB expands its partnership with Japan's JICA*, 27 September. Available online at <https://www.eib.org/en/press/news/eib-expands-partnership-with-japan>. Accessed on 30.11.2022.

European Investment Bank (2021) *Japan: EIB and Japan Bank for International Cooperation (JBIC) to work on joint investments*. Available online at <https://www.eib.org/en/press/all/2021-352-eib-and-japan-bank-for-international-cooperation-jbic-to-work-on-joint-investments>. Accessed on 22 May 2023.

European Parliament Think Tank (2018) "Prospects for EU-Asia connectivity: The 'European way to connectivity'". *European Parliament Briefing*, October. Available online at <https://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI(2021)690534>. Accessed on 05.04.2023.

European Union (2016) *shared vision, common action: a stronger europe – a global strategy for the European Union's foreign and security policy*. Luxembourg: Publications Office of the European Union. Available online at <http://eeas.europa.eu/archives/docs/top_stories/pdf/eugs_review_web.pdf>. Accessed on 05.04.2023.

European Union (2021a) *The Global Gateway*. Joint Communication to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank. JOIN (2021) 30 final. Available online at <https://ec.europa.eu/info/sites/default/files/joint_communication_global_ gateway.pdf>. Accessed on 05.04.2023.

European Union (2021b) *The EU strategy for cooperation in the Indo-Pacific*. Joint Communication to the European Parliament and the Council. Brussels, 16.09.2021, JOIN (2021) 24 final. Available online at <https://www.eeas.europa.eu/sites/default/files/jointcommunication_2021_24_1_en.pdf>. Accessed on 24.04.2023.

Farrell, Henry and Abraham L. Newman (2019) "Weaponized interdependence: how global economic networks shape state coercion". *International Security* 44, 1, 42–79.

Gaens, Bart (2017) "Comparing Japan and the European Union: the development cooperation policies of two civilian powers". In Andre Asplund and Marie Söderberg, eds. *Japanese development cooperation: the making of an aid architecture pivoting to Asia*. London: Routledge.

Gaens, Bart (2021) "Taking Europe-Asia connectivity to the Arctic: cooperation between the EU and Japan". In Bart Gaens, Kristi Raik, and Frank Jüris, eds. *Nordic-Baltic connectivity with Asia via the Arctic: assessing opportunities and risks*. EFPI/ICDS Report, September.

Gaens, Bart and Ville Sinkkonen (2023) "Contentious connectivity – the USA, Japan, and the free and open Indo-Pacific". *East Asia.* DOI: https://doi.org/10.1007/s12140-023-09407-7

Gaens, Bart, Ville Sinkkonen, and Henri Vogt (2023) "Connectivity and order: an analytical framework". *East Asia*. DOI: https://doi.org/10.1007/s12140-023-09401-z

Grieger, Gisela (2021) "Towards a joint Western alternative to the Belt and Road Initiative?" *Briefing*. European Parliamentary Research Service, PE 698.824, December. Available online at <https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698824/EPRS_BRI(2021)698824_EN.pdf>. Accessed on 24.04.2023.

Hook, Glenn D., Julie Gilson, Chris W. Hughes, and Hugo Dobson (2012) *Japan's international relations: politics, economics and security.* 3rd ed. London and New York: Routledge.

JETRO (Japan External Trade Organisation) (2022) *Dai san koku shijô ni okeru Nihon to EU kan no bijinesu kyôryoku / rentai ni tsuite.* [Business cooperation and alignment between Japan and the EU in third-country markets.] Compiled by Yamane Natsumi, 28 March. Available online at <https://www.jetro.go.jp/biz/areareports/2022/3f8ee9e12bb27444.html>. Accessed on 30.11.2022.

Kacperek, Marcin (2020) "(Re)defining connectivity". *Opinions*. Warsaw Institute, 21 October. Available online at <https://warsawinstitute.org/redefining-connectivity/>. Accessed on 24.04.2023.

Khanna, Parag (2016a) "A new map for America". *The New York Times*, 17 April. Available online at <https://www.nytimes.com/2016/04/17/opinion/sunday/a-new-map-for-america.html>. Accessed on 24.04.2023.

Khanna, Parag (2016b) *Connectography: mapping the future of global civilization*. New York: Random House.

Khanna, Parag (2018) "Bridges to everywhere? Connectivity as paradigm". *Horizons* 12, Summer, 42–65. Available online at <https://www.cirsd.org/files/000/000/006/ 2/52bd93a41c0905e9d069ece20cd615591d0d3461.pdf>. Accessed on 24.04.2023.

Leonard, Mark, ed. (2016) *Connectivity wars: why migration, finance and trade are the geo-economic battlegrounds of the future*. The European Council on Foreign Relations.

Marbot, Masami (2020) *Analysis of EU-Japan business cooperation in third countries*. EU-Japan Centre for Industrial Cooperation, April. Available online at <https://www.eu-japan.eu/sites/default/files/publications/docs/report_masami_marbot_april_2020_0.pdf>. Accessed on 30.11.2022.

Ministry of Foreign Affairs of Japan (2015) *Partnership for quality infrastructure. investment for Asia's future*. 21 May. Available online at <https://www.mofa.go.jp/ files/000081298.pdf>. Accessed on 24.04.2023.

Ministry of Foreign Affairs of Japan (2021) *Japan-EU development cooperation factsheet made by Japan (the Ministry of Foreign Affairs) and the EU (Directorate-General for International*

Partnerships), 5 February. Available online at <https://www.mofa.go.jp/files/100146628.pdf>. Accessed on 24.04.2023.

Pascha, Werner (2020) "Silk subway: Japan's strategy for an age of international connectivity activism". *Working Papers on East Asian Studies* No. 126/2020. Duisburg: University of Duisburg-Essen, Institute of East Asian Studies (IN-EAST).

Pieterse, Jan N. (2021) *Connectivity and global studies*. Springer Nature.

Reed, Ed (2022) "KenGen preps for more geothermal power in low-cost push". *Energy Voice*, 30 March. Available online at <https://www.energyvoice.com/renewables-energy-transition/399605/kengen-olkaria-geothermal-power/>. Accessed on 24.04.2023.

Ries, Tomas (2019) "Security aspects of connectivity". *Security Policy Brief*. Egmont: The Royal Institute for International Relations. Available online at <https://www.egmontinstitute.be/security-aspects-of-connectivity/>. Accessed on 24.04.2023.

Ström, Patrik, Marie Söderberg, and Åsa Malmström Rognes (2020) "The EU-Japan strategic partnership agreement". *Sweden through the Crisis*. Available online at <https://www.hhs.se/en/research/sweden-through-the-crisis/the-eu-japan-strategic-partnership-agreement/>. Accessed on 30.11.2022.

Söderberg, Marie (2021) "EU-Japan connectivity promises". *Policy Brief* 2021/22. EUI Global Governance Programme, May. Available online at <https://cadmus.eui.eu/ bitstream/handle/1814/71619/QM-AX-21-022-EN-N.pdf?sequence=1&isAllowed=y>. Accessed on 16.03.2023.

The Economist (2021) "A glimpse into Japan's understated financial heft in South-East Asia". *The Economist*, 14 August. Available online at <https://www.economist.com/finance-and-economics/2021/08/14/a-glimpse-into-japans-understated-financial-heft-in-south-east-asia>. Accessed on 11.05.2023.

Wigell, Mikael (2016) "Conceptualizing regional powers' geoeconomic strategies: neo-imperialism, neo-mercantilism, hegemony, and liberal institutionalism." *Asia Europe Journal* 14, 135–151.

Zgheib, Nibal (2021) *EBRD joins 2X Challenge to empower women*. The European Bank for Reconstruction and Development (EBRD), 9 June. Available online at <https://www.ebrd.com/news/2021/ebrd-joins-2x-challenge-to-empower-women.html>. Accessed on 24.04.2023.

Appendix 1. EU-Japan private sector cooperation in third markets

	Japan	Sector	Third market	Year
Thales (FRA)	Sumitomo	Transportation	Philippines	2013
Construcciones y Auxiliar de Ferrocariles (ESP)	Mitsubishi	Transportation	Turkey, Australia, Philippines	2014
Thales (FRA)	Mitsubishi Heavy Industries Ltd; Mitsubishi Co.; Kinki Sharyo Co., Ltd	Transportation	Qatar	2015
Ansaldo STS (ITA)	Hitachi	Transportation	Panama	2018
CAF (ESP)	Mitsubishi shoji	Transportation	Myanmar	2020
Astaldi (ITA)	IHI	Transportation	Romania	2018
Razel-Bec (FRA)	Daiho	Transportation	Ivory Coast	2017
Veolia Environnement (FRA)	Hitachi	Water & waste management	Middle East, Africa and Asia-Pacific	2014
Suez (FRA)	Itochu	Water & waste management	Serbia	2017
Acciona (ESP)	Mitsubishi	Water & waste management	Portugal, Australia, Chile, Qatar	2009
Boreal Light (GER)	Ebara	Water & waste management	Kenia	2021
Suez (FRA)	Itochu	Water & waste management	Saudi Arabia	2021
Suez (FRA)	Itochu	Water & waste management	Serbia	2017
Egis (FRA)	Mitsubishi	Water & waste management	Ivory Coast	2016
BP (UK); Equinor (NOR); TPAO (TUR); Eni (ITA); Total (FRA)	Inpex; Itochu	Energy	Azerbaijan, Turkey, Georgia	2002
Engie (FRA)	Sumitomo	Energy	Indonesia	2010
Vestas Wind Systems (DEN)	Mitsubishi Heavy Industries	Energy	Europe, Asia, America	2013
Thyssenkrupp (GER)	Mitsubishi Corporation; Toshiba Plant Systems & Services Co.	Energy	Philippines	2014
Siemens (GER)	Marubeni	Energy	Thailand	2017
Engie (FRA)	Toyota Tsusho	Energy	Egypt	2017
Ciel et Terre SAS (FRA)	Tokyo Century; Kyudenko; Kyuden Mirai Energy	Energy	Taiwan	2018
Electricite de France (FRA)	Mitsubishi	Energy	Africa	2018
Engie (FRA)	Tokyo Gas	Energy	Mexico	2019

YUSO (BEL)	Nippon Koei	Energy	Europe	2019
Engie (FRA)	Toyota Tsusho	Energy	Egypt	2021
EDF Renewables (FRA)	Mitsui Bussan	Energy	Morocco	2020
Besix (BEL)	Itochu	Energy	UAE	2020
Technip Energies (FRA)	Chiyoda kako kensetsu	Energy	Qatar	2021
Total Energies	Marubeni	Energy	Qatar	2020
Lufthansa Group (GER); Siemens Energy (GER)	Marubeni	Energy	UAE	2021
Engie (FRA)	Marubeni, Tohoku denryoku	Energy	Indonesia	2022
Engie (FRA)	Sumitomo shoji	Energy	Indonesia	2019
Siemens Energy (GER)	Sumitomo denki kogyo	Energy	India	2021
Suez (FRA)	Toshiba Infrastructure Systems	Energy	India	2020
EDF (FRA)	Mitsubishi	Energy	Ivory Coast	2018, 2020
Vinci (FRA)	Toshiba	Energy	South Africa	2018
Everis Participaciones (ESP)	NTT DATA	IT & Telecommunications	Latin America	2013
Citibeats (ESP)	NTT DATA	IT & Telecommunications	Global	2018
Bolt Technology (EST); Combinostics (FIN); Einride (SWE); Flexound Systems (FIN); MaaS Global (FIN)	Honda Motor; OMRON; Panasonic	IT & Telecommunications	Global	2019
IoTerop (FRA)	ACCESS	IT & Telecommunications	Southeast Asia	2019
InTouch (FRA)	Toyota tsusho	IT & Telecommunications	West Africa	2021
Augumenta (FIN); Iristick (BEL)	JICA	IT & Telecommunications	Ghana and Zambia	2021
Rocla (FIN)	Mitsubishi Heavy Industries	Machinery & Industrial equipment	Europe	2008
Industrie De Nora (ITA)	Chlorine Engineers	Machinery & Industrial equipment	China/Asia	2011
Bouygues (FRA)	Taisei	Construction	Myanmar	2017
Ingérop (FRA)	Azusa Sekkei	Construction	Europe, Africa, Asia	2018
CFAO (FRA)	Toyota Tsusho	Wholesale & Retail trade	Africa	2012
CFAO (FRA)	Suzuki	Wholesale & Retail trade	Mauritius	2020
Bolloré (FRA)	Toyota Tsusho; NYK LINE	Wholesale & Retail trade	Kenya and Egypt	2016, 2020
AXA (FRA)	Mitsui Sumitomo Insurance	Insurance	Africa	2014

Compiled by author based on Marbot 2020, Jetro 2022, and EU-Japan Centre for Industrial Cooperation 2022.