



**ADVANCED MANUFACTURING AND
ADVANCED TEXTILE MATERIALS GOING
INTERNATIONAL TO STRENGTHEN
RESILIENCE AND TO EMPOWER
INDUSTRIAL RECOVERY**

Grant Agreement number: 101035895

**Deliverable 2.2: Summarized market studies of Region 1,
Region 2 and Region 3**

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EXECUTIVE SUMMARY

The main objective of WP2 (Strategy development towards an implementation roadmap), is to implement the roadmap for going international in at least three target markets and ensuring the long-term sustainability of the partnership.

One of the first tasks, in the scope of joint actions planning and preparatory activities (Task 2.1), is the development of summarized market study of the three Regions (USA, Japan and Canada), based on the market assessment studies developed during task 1.2 (Joint internationalization strategy development) of this project.

So, this deliverable (D2.2 - Summarized market studies of Region 1, Region 2 and Region 3), includes a summary of the main elements of the market studies of region 1 (USA), region 2 (Japan) and region 3 (Canada), namely the general information about the country (overview, economy overview, commercial agreements European Union – Country, commerce between European Union and the country), advanced textiles materials and advanced manufacturing sector in the country (market outlook in the country, European Union – Country trade trends, international trade value), market opportunities, innovative companies in the country, fairs and other information of interest as well as practical information and links.

KEYWORDS: INTERNATIONALIZATION; CLUSTERS; MARKET STUDY; USA, JAPAN, CANADA, ADVANCED TEXTILES; ADVANCED MANUFACTURING

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1. INTRODUCTION

The present document corresponds to Deliverable D2.2 - *Summarized market studies of Region 1, Region 2 and Region 3*, of the European project ADMANTEX2i –Advanced Manufacturing and Advanced Textile Materials Going International to Strengthen Resilience and to Empower Industrial Recovery, funded by the European Union's COSME Programme under grant agreement No 101035895.

This document aims at presenting the summarized market study of the three Regions (USA, Japan and Canada), based on the market assessment studies developed during task 1.2 (Joint internationalization strategy development) by:

- USA Market Assessment: How2Go
- Japan Market Assessment: Clara Aura Esteve, International Trade Advisor
- Canada Market Assessment: Italian Chamber of Commerce in Canada

So, this deliverable includes a summary of the main elements of the market studies of region 1 (USA), region 2 (Japan) and region 3 (Canada), namely the general information about the country (overview, economy overview, commercial agreements European Union – Country, commerce between European Union and the country), advanced textiles materials and advanced manufacturing sector in the country (market outlook in the country, European Union – Country trade trends, international trade value), market opportunities, innovative companies in the country, fairs and other information of interest as well as practical information and links.

1.1 ADMANTEX2I PROJECT

Industrial digitalization and the green transition are the two pillars of the European Commission for building resilience, as highlighted during the Cluster conference 2020 that builds on top of the new industrial strategy of the European Commission and the EU Green Deal as significant pillars. Furthermore, strengthening digital and green-based SMEs (Small and Medium Enterprises) competitiveness is also a core pillar from the Next Generation EU initiative for recovery.

The primary strategy for this project is bridging the gap between technology producers and users to boost innovation and industrial modernization to catalyze sustainability and circular economy in the textile manufacturing industry.

It will enable the alignment of each cluster strategy with the RIS3 priorities of each region and the uptake of digitalization and advanced production systems as a standard driver for growth via internationalization by exploiting innovation towards sustainability and circular economy. In addition, ADMANTEX2i will provide tools and support to partner's members to be globally competitive for going international.

ADMANTEX2i will also favor the cross-regional value chains involved and foster cross-regional cooperation with specialized eco-systems across Europe, focusing on the industrial smart specialization priorities where all partners are already active. For example, AEI TÈXTILS, CITEVE, and ATEVAL are part of the REGIOTEX platform for textile innovation. In contrast, PRODUTECH, EMC2, and AFIL are members of the S3P-Industry platform within the areas of 3DP and ESM and the participation in the pilot actions under the Vanguard Initiative umbrella.

ADMANTEX2i will continue driving the long-term cooperation strategy among the partners already seeded in CLAMTEX (ESCP4x) and GALACTICA (Innosup-01). The continued fostering of cross-regional and cross-sectoral cooperation among all clusters will provide their members the leverage needed to become globally competitive with digitalization uptake.

The ADMANTEX2i Consortium partners are:

Participant Organization Name	Country
AEI Tèxtils - ASSOCIACIÓ AGRUPACIÓ D'EMPRESSES INNOVADORES TÈXTILS	Spain
ATEVAL - ASOCIACIÓN DE EMPRESARIOS TEXTILES DE LA REGIÓN VALENCIANA	Spain
CITEVE - CENTRO TECNOLOGICO DAS INDÚSTRIAS TEXTIL E DO VESTUÁRIO DE PORTUGAL	Portugal
PRODUTECH - ASSOCIAÇÃO PARA AS TECNOLOGIAS DE PRODUÇÃO SUSTENTÁVEL	Portugal
AFIL - ASSOCIAZIONE FABRICA INTELLIGENTE LOMBARDIA	Italy
EMC2 – PÔLE EMC2	France

Figure 1 - ADMANTEX2i Consortium Partners

1.2 ADMANTEX2I OBJECTIVES

ADMANTEX2i's main objective is to lead international cluster cooperation in advanced manufacturing and advanced textile materials as an enabler for globally competitive sustainable products functional in a broad range of high-end applications. The key specific objectives are:

- To develop a joint internationalization strategy and a roadmap for going international based on the strategic cross-sectoral cooperation between clusters in advanced manufacturing and advanced textile materials which the EU is a strong leader
- To implement the strategy organizing three international business missions
- To foster the cross-sectoral cooperation
- To strengthen the sectoral resilience and boost growth based on internationalization

ADMANTEX2i strategic cooperation vision is that digitalization is a crucial enabler for both sectors to boost circular economy business solutions to strengthen resilience and drive the recovery growth of the economic opportunities of European SMEs (Small and Medium Enterprises). The Partnership comprises three advanced textile materials clusters and three advanced manufacturing clusters from six EU regions and four EU member states in southern Europe.

ADMANTEX2i focuses on three main pillars to build up internationalization opportunities: cooperation development, joint solid value proposition and international business missions as demonstrators.

2. SUMMARIZED MARKET STUDIES

This chapter includes a summary of the main elements of the market studies of the countries considered in ADMANTEX2i, which are USA, Japan and Canada, focusing on the Textile and Advanced Manufacturing sectors, namely the automotive, aerospace, and advanced manufacturing and considering the opportunities for technical and sustainable textile applications.

2.1. USA SUMMARIZED MARKET STUDY

2.1.1. GENERAL INFORMATION

The United States of America is the third most populated country in the world with a population of 334.998.398 people. According to the US Census Bureau, the majority of Americans have a European or Middle Eastern origin, representing more than 73% of the population. In addition, more than 17.6% of the population has Hispanic or Latino roots, 12.7% are African American, and around 5.4% are Asian.

Currently, the United States is positioned as the main economic power in the world, followed in second place by the European Union and by China in third place. Its GDP (Gross Domestic Product) represents approximately 24.7% of the total worldwide, making this country a highly strategic market in the international economy due to its magnitude and its influence on other markets.

Some key structural points of United States:

POLICY	<ul style="list-style-type: none"> • Political stability and low risk • COFACE A2 Country Risk
ECONOMY	<ul style="list-style-type: none"> • Huge economic market with strong growth perspective • 13th country in GDP per capita (more than 60,000 \$USD)
INNOVATION	<ul style="list-style-type: none"> • Innovation and technology-intensive, consolidated R&D investment mentality • Global Innovation Index: 3rd
ENVIRONMENT	<ul style="list-style-type: none"> • Increasing environmental and sustainability sensitivity in consumers, companies and governments • Environmental Performance Index: 25th
LEGAL	<ul style="list-style-type: none"> • Legal security but existence of some trade barriers • Absence of Free Trade Agreement

Figure 2 – USA key structural points

(GDP: Gross Domestic Product; R&D: Research and Development; COFACE: Compagnie Française d'Assurance pour le Commerce Extérieur provides a country risk classification on 7 levels, from very low to very high (A1, A2, A3, A4, B, C, D). From level A2 is advisable to take precautions and cover the risk, and levels C and D discourage investment operations)

2.1.2. MARKET OUTLOOK

The United States market presents consolidated economic, political, environmental, technological and sociodemographic factors, which makes this country as a strategic market to the expansion for internationally focused companies. For the geographic location of the different industries of interest for ADMANTEX2i, they are located in some key States, being critical to focus the commercial actions due to the vast amplitude of the country.

GEOGRAPHY

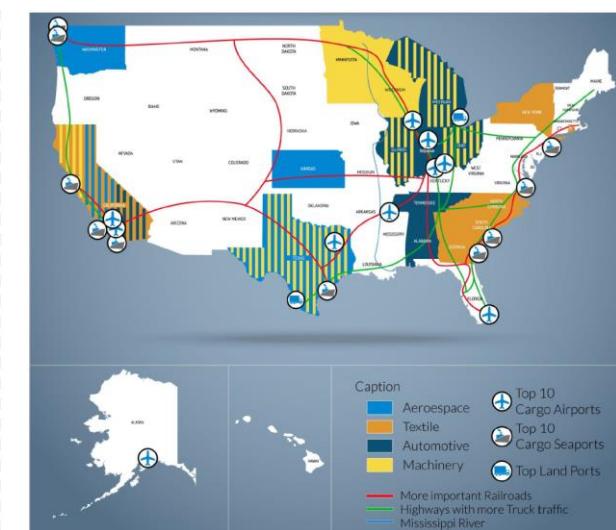


Figure 3 – USA industries of interest for ADMANTEX2i

Automotive

The automotive industry in the United States has a historical concentration in the area known as Auto Alley, which includes a corridor of states that starts from the Great Lakes to the Gulf Coast, in the eastern part of the country (east of the Mississippi River that runs vertically across the country from the center). Without a doubt, Detroit is the most important focus in the sector, which currently concentrates the vast majority of jobs, despite having also been the area that has lost the most jobs in recent decades due to the restructuring of companies, the closure of factories and the transfer of production to other countries with lower labor costs such as Mexico.

Aerospace

The aerospace sector activity is highly concentrated within the country in the main poles, especially Seattle (WA), followed by other important ones such as Los Angeles (CA) or Dallas (TX). However, these territories have lost numerous jobs in the aerospace sector in recent decades, as a result of relocation. Around two dozen major aerospace firms merged into three (Lockheed Martin, Boeing-McDonnell Douglas and Raytheon-Hughes).

Advanced manufacturing

Regarding the textile manufacturing sector, it is worth noting the concentration in two main areas: on the one hand, in the southern states of the east coast (Georgia, North Carolina and South Carolina), and on the other hand in the states north of the east coast, in New York and Massachusetts. It also has a significant presence in the state of California.

Regarding the location of companies dedicated to manufacturing and production technologies, in the United States they are located in different states, depending on where the industries they supply are present. For this reason, companies in this sector are present in areas where the previously analyzed sectors (Aerospace, Automotive and Textile) have a significant concentration, such as California, Illinois, Texas, Wisconsin, Ohio or Michigan.

2.1.3. MARKET OPPORTUNITIES

The legislation and regulations of the market provides a stable framework for the companies that are seeking to expand its business to the United States. However, the absence of a Free Trade Agreement with the European Union implies the application of some trade barriers such as tariffs or the request for certifications that can hinder exports.

The market trends for the sectors aerospace, automotive, textile and advanced manufacturing share some important aspects such as perspectives of a future increase in production due to the reshoring of manufacturing capacity, as well as a highly exigent demand for the quality and environmental impact of the fabrication. This would have a direct impact on the employment of some value-added material on these industries such as technical and sustainable textiles. The main trends for those sectors in terms of technical and sustainable textiles are:

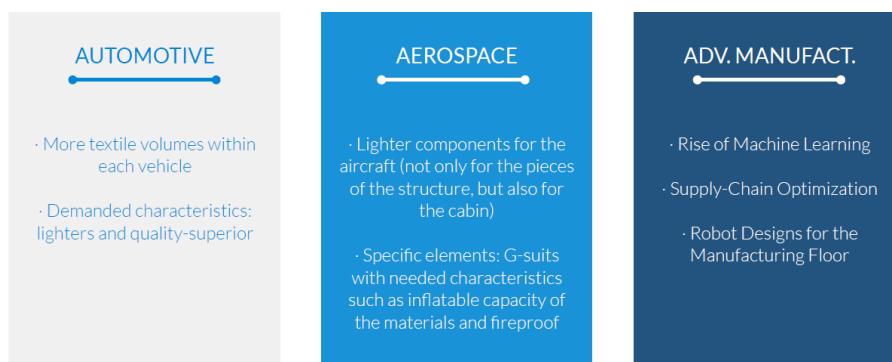
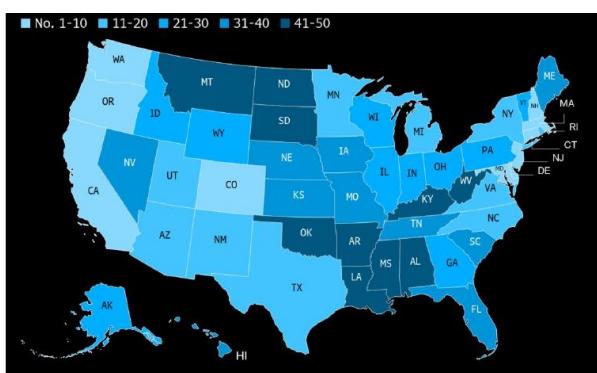


Figure 4 – Main trends for automotive, aerospace and advanced manufacturing sectors

2.1.4. INNOVATIVE COMPANIES

The United States of America is the third most innovative country in the world following the Global Innovation Index. Its strengths are the market sophistication (2nd), the business sophistication (2nd), and the Knowledge and technology outputs (3rd). Nevertheless, they also have negative points, such as their Infrastructure which is ranked as the 23rd. In addition to this, they are ranked 11th in Human capital and research, and 12th in Institutions and Creative outputs.



United States of America Bloomberg Innovation Index by State. Source: Bloomberg, 2021

Figure 5 – USA Innovation Index by State

California and Massachusetts are ranked as the 1st and 2nd innovative states respectively, thanks to their historical commitment with learning and innovation. California is positioned 1st in the ranking because of their great performance in the different fields. It is also ranked as 1st in patent activity, and second for both technological companies' density and concentration of science and engineering degree holders. Both state university systems along with Stanford University were influential in building Silicon Valley for tech companies including Google and Apple. Massachusetts as 2nd in the ranking is the 1st ranked for tech-company density. Before, the pandemic, Boston-based Toast which is a restaurant management platform and one of the favorites for venture-capitalists raised \$400 million at a \$4.9 billion valuation last year. Together with California and Massachusetts, Washington (3rd), Connecticut (4th) and Oregon (5th) are the states that form the Top5 states in innovation of the United States. It is also interesting to see that Colorado is the only state in the Top 10 that is not in the East or West coast.

2.1.5. OTHER INFORMATION

The recommended entry-market actions for the different sectors are:



Sources: IMECE: <https://event.asme.org/IMECE>; Techtextil: <https://techtextil-north-america.us.messefrankfurt.com/us/en.html>; Texprocess: <https://texprocess-americas.us.messefrankfurt.com/atlanta/en.html>

Figure 6 – USA entry-market actions

At the moment of developing commercial talks, although there are similarities between Europeans and Americans, some cultural aspects must be considered. In general, negotiations will be direct and highly demanding, with strong requirements.

2.2. JAPAN SUMMARIZED MARKET STUDY

2.2.1. GENERAL INFORMATION

Japan is one of the five world economic leaders, the third-largest economy in 2020. Despite their modest growth rates in recent years, their unemployment rates remain low, with population ageing as one of its main challenges.

Japan sits at the fourth position in the world trade rankings in both imports and exports, and although its main trading partners remain China, Japan, the USA, South Korea, Saudi Arabia, Hong Kong and Thailand. In recent years, its trade exchange and agreements with the EU are increasing.

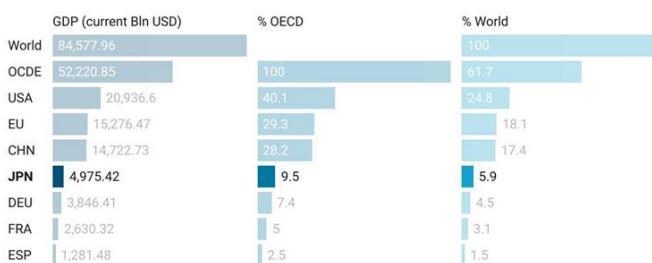


Figure 7 – Current GDP (Gross Domestic Product) of Japan and leading economies

Source: World Development Indicators database (The World Bank 2021))

2.2.2. MARKET OUTLOOK

In Japan, the primary sector accounts for 1.1% of GDP (Gross Domestic Product) and employs 3.4% of the workforce.

The country has few natural resources and relies heavily on imports to meet its raw material and energy needs. One of its greatest assets is fishing, making the country one of the world's largest producers of fish products. With only 11% of the area suitable for cultivation, agriculture is highly subsidized and protected, mainly dedicated to tea and rice.

The secondary sector accounted for 28.7% of GDP (Gross Domestic Product) and 24.1% of the workforce. The industrial sector is diversified and internationalized, ranging from bare steel and paper products to high-tech manufactured goods. The so-called "keiretsu" dominate Japan's industrial landscape. These companies have mutual shareholdings, interlocking boards of directors, and develop joint businesses in long-term commercial relationships. Among the most prominent groups, are some such as Mitsubishi, Mitsui, Sumitomo and Marubeni.

Japan is a highly innovative country where 6% of GDP (Gross Domestic Product) is invested in Research & Development & Innovation.

Japan is a leader in automotive, robotics, biotechnology, nanotechnology and renewable energy sector. There is a substantial investment in Research & Development regarding manufacturing components and materials for high-tech sectors (electronics, automotive, aerospace, medicine, etc.).

The tertiary sector of the Japanese economy contributed 70.2% of GDP (Gross Domestic Product) and employed 72.6% of the workforce. Financial services (banking and insurance), retailing, telecommunications and transportation stand out. Likewise, there has been a strong dynamism in tourism in recent years.

2.2.3. MARKET OPPORTUNITIES

Currently, several opportunities are unlocking to build new economic relations due to the new approach by Japanese authorities and the agreements already signed with Europe in recent years and Japan's agreement to international standardization agreements or patents and trademarks.

The entry into force of the EU-Japan Economic Partnership Agreement (JEEPA) in 2019 represents an important milestone in trade and investment relations between EU and Japan that is the EU's second-biggest trading partner in Asia after China. The bilateral trade between Japan and the EU accounts for 9.2% exports to the EU while imports account for 11.4%.

In recent years, Japan has been trying to open up, to generate new ties and agreements with other economies. It starts with the economies and industries of countries with interests, such as the countries that manufacture vehicles and institutions in the technological, normalization and economic fields. This twist in its traditionally closed philosophy is because the change to society 5.0 will only be possible by creating alliances and learning from other countries. In recent years, in addition to its strong link to the USA economy since World War II and its neighbors, Japan has begun to reach other types of agreements and relations with Europe concerning standardization with Germany and textile innovation clusters with France.

Knowledge linked to both advanced manufacturing and technical and technological textiles from Europe and Japan can be complementary, and therefore collaboration between the two economies can strengthen both parties. The Japanese market is demanding, but today no more complex than any developed economy. In Europe, companies in these sectors have also been trained and have exciting and differential proposals that can be attractive to the Japanese.

Automotive

Japan is among the largest and most technologically advanced producers of vehicles (the world's third-largest domestic automobile car production), industrial robots (global share of approximately 60%), and machine tools (third in the world with a 16,8% market share).

The automotive sector is one of the three main pillars of its economy, and it is meant to continue to be, but as its evolution goes through decarbonization, implying fuels and all kinds of materials used in manufacturing seek to improve collaboration with their business partners to continue at the forefront of the sector.

Aerospace

The international civil aircraft market is a growing market expected to increase by approximately 5% annually.

- By integrating advanced technologies with high-grade materials and components, the aerospace industry utilizes a wide range of supporting industries, and its technology also spreads to other sectors, thus benefiting the whole economy.
- Through high-speed transportation, disaster prevention, and other similar activities, this industry contributes to improving Japan's daily lives.
- As one of the essential defense components, the aerospace industry is directly linked to national security.

Advanced Manufacturing

The advanced manufacturing industry is closely related to the Japanese concept of "Society 5.0"¹, which is described as a human-centered society that balances economic advances with the resolution of social problems by a system integrating cyberspace and physical space.

Japan spends the most significant percentage of its GDP (Gross Domestic Product) on Research & Development. It has vital manufacturing sectors (vehicle, information technology, electronics, robots, and satellites), where industry partnerships are more prevalent than academic ones. Japanese vision is to integrate Advanced Manufacturing (Smart Manufacturing, Intelligent Manufacturing, Internet of Things, ...) throughout the value chains of every industry. In this scope, there are plenty of opportunities when offering solutions that can improve their main sectors and all their industries.

Advanced technological textiles

Japan is a leader in manufacturing advanced technological textiles, especially carbon fiber, and still has many SMEs (Small and Medium Enterprises) that need to adapt to the new reality.

Therefore, the Japanese government is developing programs to promote the modernization and reconversion of this industry. The applications of technological fabrics to the automotive industry and now to the aerospace industry are focused on using light, less polluting fabrics, eliminating migrations during the production process and, in the use of waste, targeting 100% recycling of materials to achieve its circular economy and decarbonization linked objectives. Other efforts in textiles focus on developments with composites, nanocomposites and carbon fibers, mainly concentrated on the application in the automotive and aerospace sectors.

2.2.4. INNOVATIVE COMPANIES

The Toray Group specialized in textiles, fibers and carbon filter composites, among other products, declared will help to reduce global greenhouse gas emissions and help to realize a carbon-neutral world by 2050 by expanding the Green Innovation businesses that have long been a Toray focus, including renewable energy, hydrogen, and materials for electrification, and by developing products that help with greenhouse gas absorption, such as CO₂ separation membranes.

JAMCO specializing in interiors and flighting seats, became one of the major partners when the seat supplier for Airbus failed with technical problems and was requested to resolve them some years ago. As a result, in 2021, the new Venture Pristine clean solution for the aircraft interior was launched.

¹ <https://encyclopedia.pub/entry/123>

Teijin has over 30 years of pioneering expertise in the manufacture of carbon fiber. Committed to quality, innovation, and customer-oriented service and technology has driven into a leading position in the world carbon fiber market. Furthermore, product developments like Carbon Fiber are an incredibly versatile material, with a wide range of applications, including satellite, Launch Vehicle, aircraft, car parts, and several sports goods.

2.2.5. OTHER INFORMATION

Business size can be the most crucial problem; consequently, cooperation between groups or institutions of European companies with Japanese entities of the same level may be advisable to establish business relationships. To provide that cooperation, there are entities and support channels from both the EU through the "EU JAPAN CENTRE" and Japan's JETRO (Japan External Trade Organization).

Japanese business culture is not as difficult to read as most companies believe. Tolerance, honesty, respect for their corporate customs and a long-term commitment to business success are the main components of success in Japan. However, some aspects of Japan's commercial culture, especially the long-term relationships resulting from the Japanese traditionalist sense of loyalty to reliable partners, can be advantageous for foreign companies.

As a result, Japan is a stable, sophisticated and advanced market for business: commitments are honored, things happen on time, and Intellectual property (IP) is well protected. Japanese are demanding and incredibly thorough when evaluating quality, design, and customer service. They appreciate product information, customer support, delivery, and marketing as essential factors for assessing the product's quality and choosing the product that better suits their requirements. Choosing a reputable distributor can simplify market entry, give credibility before local players, and provide proper distribution of your product.

2.3. CANADA SUMMARIZED MARKET STUDY

2.3.1. GENERAL INFORMATION

Canada is a North American parliamentary democracy and a constitutional monarchy with a population of 38 million inhabitants. The country's official languages are English and French. Canada is the largest country after Russia.

The federal country accounts 10 provinces (British Columbia, Quebec, Alberta, Ontario, Nova Scotia, New Brunswick, Manitoba, Prince Edward Island, Saskatchewan and Newfoundland and Labrador) and 3 territories (Northwest Territories, Yukon and Nunavut).

Canada is one country with multiple markets and has a leadership in High Tech sectors. Quebec is Canada's leader in AI, life sciences, transportation, aerospace, green tech and circular economy, smart mobility. Ontario is leader in financial services and automotive. Alberta is Canada's energy province (natural gas, conventional oil, minerals, and oil sands). British Columbia accounts the largest investors in green energy and green tech. Around 98% of companies are SMEs (Small and Medium Enterprises).



Figure 8 – Provinces and territories in Canada

Canada is among the nations with the highest and steadiest economic growth indices. Its strong, stable, and dynamic economy is characterized by high household spending. The country's steady economic growth is supported by an outstanding demographic expansion, which also drives down the country's average age (Millennials now constitute the largest generation of Canadians, representing 27% of the total population). As a matter of fact, thanks to its economic and immigration policies, Canada has one of the highest per capita immigration rates in the world. Its migration rate is 6.375 per 1000 inhabitants and represents the eighth largest one.

Canada has preferential access to the European Union market through the Canada-EU Comprehensive Economic and Trade Agreement (CETA), a bilateral progressive trade agreement whose negotiations began in 2009 and which came provisionally into force on September 21, 2017. CETA represents the best in international trade agreements and sets new standards for trade in goods and services, non-tariff barriers, investment, government procurement, and other areas like labor and the environment. It covers virtually all sectors and aspects of the Canada-EU trade to drastically reduce tariff and non-tariff barriers to international trade, let Canadian and European enterprises participate to the public service and investment markets of the other partner, as well as to strengthen the cooperation between the two in terms of norms and regulatory standards.

2.3.2. MARKET OUTLOOK

Automotive

The automotive sector is concentrated in Ontario. As the Canadian dollar appreciates, production exports from Canada will be less desirable and profitable, hence the reason for automotive offshore manufacturing. The world price of steel and crude oil, and per capita disposable income are also major drivers to consumer demand and industry revenue. Canada has committed to complete net-zero production by 2050. Currently, Canada is in the sixth rank globally in terms of heavy-duty electric vehicle production. Additionally, Canada is number one globally for the most affordable and sustainable hydrogen production. Overall, the Canadian car & automobile manufacturing industry account about \$10.7 billion of revenue. SUV & Light Truck manufacturing \$36.9 billion (forecasted annual growth to 2026: + 3.7%) and Truck a& Bus manufacturing \$3 billion (forecasted annual growth to 2026: +2.6%).

Aerospace

The Canadian aerospace industry is one of the world's top aerospace markets. Canada is the only country that ranks in the top 5 across civil flight simulators, engines, and aircraft subsegments. Montreal is the world's third-largest aerospace hub. Industry revenue is \$15.6 billion and the forecasted annual growth to 2026 is 9.7%.

Advanced manufacturing

Regarding the Canadian advanced manufacturing sector, there is an Advanced Manufacturing Supercluster based in Ontario which is developing next-generation manufacturing capabilities such as advanced robotics and 3D printing, and it connects manufacturers, technology providers, researchers, schools, government, investors, and business networks to speed the design and adoption of these technologies. Canada's advanced manufacturing sector areas of specialization are robotics and 3D printing. Over the next five years, it is predicted to contribute more than \$13.5 billion to Canada GDP (Gross Domestic Product).

For technical textiles, the car & automobile manufacturing industry in Canada has historically been a major market for technical textiles. Additionally, the domestic technical textile market includes geosynthetic textiles and architectural fabrics. Technical textiles accounts for 20.7% of market in Canada's overall textile manufacturing industry.

2.3.3. MARKET OPPORTUNITIES

Ranked as the leading G20 country because of its business-friendly policy, Canada has a good trade potential supported by the excellent air and maritime infrastructure that facilitate continual supply chain and business operations. In fact, Canada is well-placed to serve as a central hub for global trade, via its fourteen trade agreements, notably CETA (EU-Canada Comprehensive Economic and Trade Agreement), CUSMA (Canada-United States-Mexico Agreement), CPTPP (Comprehensive and Progressive Agreement for Trans-Pacific Partnership), giving access to 51 countries and 1.5 billion consumers with a combined GDP (Gross Domestic Product) equal to US\$ 52 trillion.

For EU manufacturers, there are several market opportunities. Canada needs the provision of recycling technologies, raw materials, skilled labor force as well as method and processes to increase the productivity. The automotive industry has a positive correlation with technical textiles. In general, the automotive industry is the most important downstream market for technical textiles. The demand for vehicles is increasing so does that of technical textiles because they are an essential input for vehicle manufacturing. Products that use textiles for automotive manufacturing are interior fitments, safety facilities, tire reinforcement, carpets, fiber composites, sound and thermal insulations, air and oil filters, and many others.

Concerning aerospace, the required property for technical textile includes high specific strength, resistance to chemicals and organic solvents, good fatigue, thermal insulation and resistance, impact and stress resistance, low flammability, and low sensitivity to harmful radiations.

As a general perspective, consumers need higher quality fabrics that are also environmentally friendly for commercial, domestic and industrial use.

2.3.4. INNOVATIVE COMPANIES

Many of the world's leading companies, including the largest Fortune 500, are indeed now expanding existing operations or establishing which is described as new hubs in Canada, which ranked #13 globally in terms of FDI (Foreign Direct Investment) inflows.

In fact, Canada is well-placed to serve as a central hub for global trade. As previously mentioned, Quebec is leader in AI (Artificial Intelligence) and in Ontario is based the Advanced Manufacturing Supercluster that is positioning Canadian companies in leading industrial digitalization. Worldwide, “Made in Canada” is being recognized as excellence in innovative manufacturing. In Quebec there is also the technical textile cluster (Technitextile) that can be an opportunity for EU companies, RTOs (Research and Technology Organizations) and clusters.

2.3.5. OTHER INFORMATION

Entry-market actions for the different sectors can be pursued considering the major events and trade shows as indicated in the figure below:



Figure 9 – Entry-market actions

3. CONCLUSIONS

Based on the market assessment studies of the three regions (USA, Japan and Canada), we can conclude that:

- The USA market offers great expansion opportunities for European companies, which have the capacity to tackle it. These companies, in addition to being aware of the possibility of generating business in the country, must take into account that this market requires a high commitment and dedication of resources for a successful entry. That is why, through collaboration programs such as ADMANTEX2i, synergies can be promoted that allow a process of commercial opening to begin in the United States that can be supported by different companies, both small and medium-sized, as well as larger ones and with more experience in international development.
- In recent years Japan has been trying to open up, to generate new ties and agreements with other economies. This twist in its traditionally closed philosophy is because the change to society 5.0 will only be possible by creating alliances and learning from other countries. On the other side, the entry into force of the EU-Japan Economic Partnership Agreement (JEEPA) in 2019 represents an important opportunity in trade and investment relations between EU and Japan. Nevertheless, EU companies need to be aware of the business and social practices in Japan, considering that Japan is a stable, sophisticated and advanced market for business: commitments are honored, things happen on time, and Intellectual property (IP) is well protected. But Japanese are demanding and incredibly thorough when evaluating quality, design, and customer service. Choosing a reputable distributor can simplify market entry, give credibility before local players, and provide proper distribution of EU products.
- Overall, Canada is a mature and competitive market, and the opportunities must be seized with great awareness. The knowledge of business and social practices in Canada represents one of the key success factors of doing business with the country. As a general perspective, Canada offers great opportunities for EU companies both in advanced manufacturing as well as technical textile. Indeed, Canada offers great opportunities for Industry 4.0, digitalization, and the latest manufacturing technologies and materials. With regards to the technical and sustainable textile industry, the Canadian market offers interesting business opportunities in different fields and sector (automotive, aerospace, medical, etc.).