



BRAZILIAN MEDICAL INDUSTRY





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1. INTRODUCTION

ABIMO

ABIMO (Brazilian Medical Devices Manufacturers Association) in partnership with **ApexBrasil** (Brazilian Trade and Investment Promotion Agency), **launches the new brand of the Brazilian health industry into the international market: *Brazilian Health Devices.***



THE RELATIONSHIPS AMONG ABIMO AND ITS CONFEDERATION, SECTOR ENTITIES, FEDERATIONS AND UNIONS ARE NOT LIMITED TO NATIONAL TERRITORY. EACH NEW BUSINESS MISSION IN ANY PART OF THE WORLD CONTRIBUTES TO THE ASSOCIATION DEEPENING ITS BONDS IN THIS SECTOR, INCREASING THE OPPORTUNITIES THAT STRENGTHEN BRAZILIAN HEALTHCARE EQUIPMENT INDUSTRY AROUND THE GLOBE

The creation of ***Brazilian Health Devices*** represents the maturity of the Brazilian Health industry to reach the foreign market. ABIMO and ApexBrasil are working together to increase the outreach of Brazilian health products beyond the 140 countries where our companies have exported.

ABIMO stands for Brazilian Medical Devices Manufacturers. Its representativeness goes without question. Founded on 1962 by the joining of 25 medical devices manufacturers, it grew up over the decades and today is acknowledged as Brazil's main association due to its efforts and dedication to healthcare industry.

This entity is comprised of about 300 companies. Even producing a wide assortment of products, they share the same trait: the search for innovation and growth, as much at home and at foreign markets.

As a way to keep track of industry demands, ABIMO created designs and solutions side-by-side its quality partners to ensure Brazilian healthcare productive chain and full support, which extends from technical operational and associative features to access to technology and adaptation to industry 4.0 through strategy devising for the creation of new markets.

In order to pay very close attention to each area's necessities, ABIMO was divided in four segments: medical equipment, laboratories, dentistry and rehabilitation. This subdivision empowered the entity, whose focus is to make sure that each device produced in Brazil is secure and produced with quality.

Chief actor of many struggles, ABIMO is in constant interchange with government to represent Brazilian industry in all lawful decisions.

It delves constantly in public hearing carried out on city, state and federation levels. It marks its presence on Congress House and it is always willing to defend the interest of member companies.

ABIMO's vigor was devoted from day one to play its role in Brazil and to represent Brazilian industry in world markets that are demanding and tough. This vigor ended up in the creation of one of the most significant entity's project: Brazilian Health Devices. Put into practice in partnership with ApexBrasil (Brazilian Trade and Investment Promotion Agency), it is on force since 2002 searching for a wide and strong internationalization of Brazilian healthcare production.

Through Brazilian Health Devices, Brazilian industry is on display on main worldwide events in the area, closing new deals, showing its quality and functionality to dealers and buyers from all over the world. The result is an ever-growing motivation in the market, along with a widening of worldwide competition that welcomes, willingly and with great interest, everything that Brazil produces. Such optimization of healthcare processes assures that patients from all over the world are benefited by the most efficient and

interesting solutions currently available.

The relationships among ABIMO and its confederation, sector entities, federations and unions are not limited to national territory. Each new business mission in any part of the world contributes to the association deepening its bonds in this sector, increasing the opportunities that strengthen Brazilian healthcare equipment industry around the globe.

Next pages will describe some of these great moves made by ABIMO over its 60 years of activity in Brazilian Healthcare industry. Besides presenting in further details how the nation economy behaves when facing inside and outside challenges, this publication demonstrates directly everything that the industry has achieved and remains achieving. It will show both the victories on home ground and the victories obtained during its worldwide history. ■





2. MORE ABOUT BRAZIL

Brazil steps firmly on its position as a global player in equipment and healthcare. The competitiveness of the industry drives the market. It has been leveraged by investments in innovation and also by actions that focus on a production with international quality.

By the end of the 1980s Brazilian Constitution stirred a revolution when it stated that "health is everyone's right and a duty of the State". That is when SUS - Brazilian National Health System - was created, acknowledged as one of the largest health systems in the world.



COUNTRY'S GEOGRAPHY IS ALSO ONE FACTOR THAT PROMOTES A GOOD ENVIRONMENT FOR EXPORTS. ITS ACCESS THROUGH THE SHORE IS CONDUCIVE TO CONTACTING COUNTRIES FROM NORTH AMERICA, ASIA AND EUROPE. BECAUSE OF BRAZILIAN TERRITORY EXTENSION GOES UP TO 8,5 MILLION SQUARE KILOMETERS, IT HAS BORDERS WITH ANOTHER TEN COUNTRIES FROM SOUTH AMERICA

Through SUS the whole Brazilian population, now comprised of more than 207 million citizens, has free access to a vast range of medical services, from common procedures to complex processes such as organ transplants. Along with its importance in assuring population health, SUS is also responsible for a large share of internal purchases. Because of this, the relationship between government and healthcare industry is constantly strengthened up.

Due to its focus on providing quality of living and on keeping the population medical support, Brazil invests about 10% of its GDP on healthcare, and shares a worldwide concern: to assure an aging population that they will age and keep their quality of living. From this date up to 2060 a population with 80+ years old will peak to 19 million citizens. In order to keep up with such demand, Brazilian industry is increasingly more dedicated to find solutions that can combine state-of-the-art technology, great cost/benefit ratio and, above all, quality.

As a contribution to the population assisted by SUS, Brazil fosters public-private partnerships which play an outstanding role in research and innovation, filling in the blanks of the system and imparting even more efficiency for healthcare management. Besides, it counts on a complementary healthcare system that is very comprehensive. Most of usual medical consultations occur in this modality. Having more than 45 million beneficiaries, it offers a network of healthcare professionals and organizations through private operators that can be accessed directly by the users. These contractors are mainly financed by the hiring companies that offer healthcare insurances as a benefit to their personnel.

Internal environment stability has been achieved over the last few decades, and it has been maintained even in moments of some political turmoil. This aspect must be highlighted, specially for whoever seeks guarantees. As a MERCOSUR member - sided by Argentina, Uruguay and Paraguay - the country is also a member of WTO - World Trade Organization. Brazil is firm on legislation issues so investors will find due protection. Brazil is a healthy country, has a solid economy and it is good to its word on agreements. Proof of this is the index of confidence among business men and company owners. This index assesses the general status of economy and how expectations are projected for the upcoming months. This index has been on the rise over the last periods analysed.

As a contributing factor to the quality, national productions are backed-up by ANVISA (Brazilian Health Regulatory Agency), a vigorous and able regulation body. It is highly regarded internationally, playing an active role in forums of far-reaching relevance, mostly the definitions of standards which are references to the greatest regulatory authorities in the world. Created in 1999, ANVISA has a strong presence in all Brazilian territory, working in coordination of ports, airports and borders. Besides promoting healthcare for the population through a sanitary control, it also develops an exemplary work on the sector of regulation, record, authorization, supervision, monitoring, education and research.

Furthermore, country's geography is also one factor that promotes a good environment for exports. Its access through the shore is conducive to contacting countries from North America, Asia and Europe. Because of Brazilian territory extension goes up to 8,5 million square kilometers, it has borders with another ten countries from South America. ■



3.

MEDICAL- HOSPITAL

SECTOR IN CONSTANT DEVELOPMENT

Because it has a single, centralized health-care that renders services at no cost to the whole population, Brazil has been a highlight in the sector of devices and solutions for the medical industry. Brazilian industry is able to provide for 95% of any hospital demands, and it has been growing strongly over the last decades. It is now able to extend these quality services and devices around the globe.

1 ABIMO



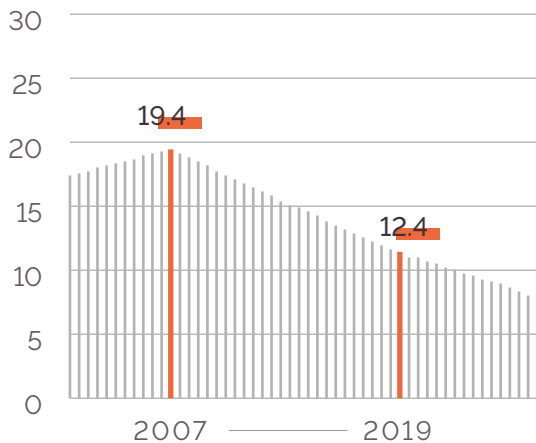
After the 1990s, when an economic opening created the chance for more competition among national companies, the sector experienced a dash, both in growth and in development. So, Brazil, a continental country with many regional subdivisions, each one with particular needs, specialized in understanding the demands from each region. After that, the best solutions could be devised in order to achieve what was demanded. Highly flexible, Brazilian industry of medical devices has a great ability to adapt to any system to be found in the world

Working in tandem with the Brazilian National Health System, the Brazilian supplementary healthcare system provides medical assistance to about ²47,6 millions of citizens by 709 active contractors. Provided mainly by hiring companies as a benefit to their personnel, private health insurances represent a very significant share of medical service to the population, and it is a vital contribution to the free system.

This set of industries is very wide, producing from consumables to specialized equipment for medical-hospital use. It is an aggregation for multiple companies rendering services and offering technological solutions to greater optimization of all instruments produced and marketed. Once again, it is a country going toward progress which has been adding to all subsectors of its economy the optimization proposals of industry 4.0.

Over the last two decades, Brazilian industrial possibilities were significantly transformed, meeting even the most complex market requirements and driving the mo-

BRAZIL WAS ABLE TO DECREASE THE RATE OF CHILD DEATH FROM 19.4 PER THOUSAND BORN ALIVE IN 2007 TO 12.4 BY 2019



2 ANS - National Supplementary Health Agency

mentum into an extensive technological upgrade for the companies. Nowadays, any domestic production, from syringes production to the manufacturing of much more complex devices employing nanotechnology, is culturally open to research, development and innovation. We are referring to a wide range of products like medical electrical equipment, hospital furniture, surgical instrumentation, equipment for physiotherapy, hospital consumables, kitchens and laundries for hospitals.

Simultaneously to this manufacturing structure development, we observe the strengthening of regulatory environment. It became a column of accelerated development due to the standards production that raises the bar along the chain. Another column is the great ability to innovate shown by national business persons.

This boosting is also a result of factors external to the industry (e.g., population ageing). Brazil goes through a transition stage. As the life expectancy rises, ³by 2060 the Brazilian population of 80+ years old will peak to 19 million people. This is a challenge to face: the need to create a system able to provide healthcare and quality of life for this population portion, and this will cause more specific demands each day.

In tandem with the increase of ageing population, the country faces epidemiological changes. We are witnessing the increase of chronic and acute diseases like heart and vas-

cular diseases, and cancer. Such diseases are gaining momentum because of the fast pace of urbanization seen in Brazil. All the changes in these scenarios, experienced rapidly by the population, strengthen our healthcare system and create the need to stir up the economy. Because it gets an ever-increasing number of demands, the industry moves toward a continuous and deep development.

As an instance of how these demands modify the system, we see the switch from curative medicine to preventive medicine, a change that the world is also experiencing. Brazil is doing the proper follow-up on the subject. Having this new profile, the Brazilian industry is each day more dedicated to create ways to foster the prevention culture, investing in diagnosis and previous follow-up of patients. As a result, gains are stimulated over the chain, from hospital stay reduction to the creation of quite feasible alternatives for home care and information technology and communication.

In neonatology alone, technological advancements created continuous improvement both in health numbers and in the marketing of internal production.⁴Brazil was able to decrease the rate of child death from 19.4 per thousand born alive in 2007 to 12.4 by 2019. Furthermore, national industry of incubators and equipment for neonate ICU made a vigorous option for innovation. Because of that, Brazilian companies came to the point of investing ⁵10% of their revenues in research and development. As a

3 IBGE – Brazilian Geography and Statistics Institute.

4 Data SUS - SUS Information Technology Department.

5 ABIMO

highlight in this technological fostering, we own the world's smallest LED phototherapy solution to treat jaundiced skin in newborns. We are also innovative in the segment of critical care and lung ventilation. We produce transport respirators that fit to patients of all ages, rendering complex programming unnecessary.

Counting on so many investments in research and development, Brazil finds itself in a moment of vigorous surplus. In 2019, infant incubators exports reached US\$ 4,222,985.00 and balance of trade was stabilized in US\$ 4,125,471.00. It means that, beyond competently satisfying its internal demands, Brazil earned a successful position on main world markets by showcasing products of neonatology that meet all existing needs.

The industry of medical devices has extended its efforts in order to aggregate technologies and to change systems and processes. To achieve that, it is in constant training of human assets and manufacturing intelligence. From among 889 manufacturers of instruments and materials for medical and dental use and optical articles studied by PINTEC 2014 (an innovation research carried out each three years by IBGE - Brazilian Geography and Statistics Institute), 449 implemented innovations between 2012 and 2014. Among the latter, 217 manufacturers introduced such innovations in the market.

By exposing its internal production to very demanding markets, the sector also fuels com-

petition and, as a result, begins a new movement of growth inside the industrial chain. Exporting more than ⁶123 MCNs (Mercosur Common Nomenclature), the medical sector in Brazil counts on commercial deals established in all continents. Nowadays, more than 141 countries buy healthcare products from Brazilian manufacturers.

Because such service is based on quality, Brazilian medical-hospital sector keeps eyes wide open to everything that happens in major health markets around the globe. Marking its presence on main segment fairs, Brazilian industry keeps close track of whatever is most modern and innovative in the world. This feature is best demonstrated annually on Medical Fair Brasil. This trade show is held in São Paulo and it is responsible for showcasing most of national industry, as well as to propitiate many congresses for debate and content promotion in the area.

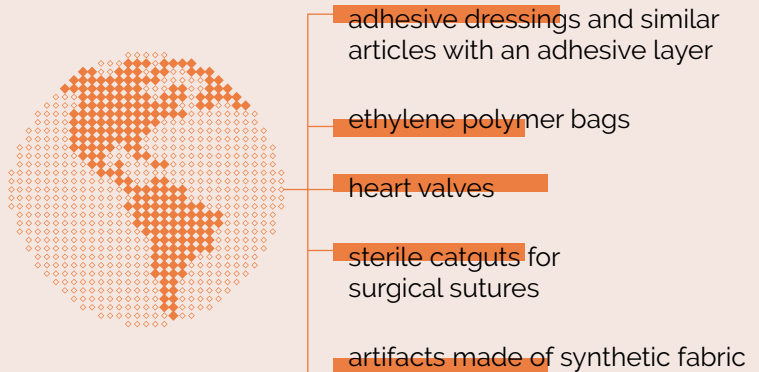
Such strong drive for knowledge enables us to cope with many new discoveries simultaneously, from optimization processes to the employment of new raw materials. The knowledge-sharing culture is already very strong among Brazilian industry, leading national production to very high levels of quality offered at a very attractive pricing. ■

6 2017 Data from ABIMO

Main countries that purchase our products

-  ♦ United States of America
-  ♦ Argentina
-  ♦ Belgium
-  ♦ Chile
-  ♦ Switzerland
-  ♦ Mexico
-  ♦ Paraguay
-  ♦ Colombia
-  ♦ Netherlands
-  ♦ Uruguay

Most exported products



Supplementary health system sizing

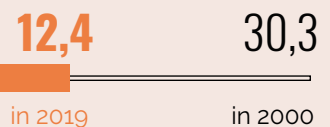
47,6 million people benefited

709 contractors in activity

SUS sizing source: SUS 20 years
How big Brazilian healthcare is

190 million de beneficiarios

Infant mortality decreased per thousand born alive

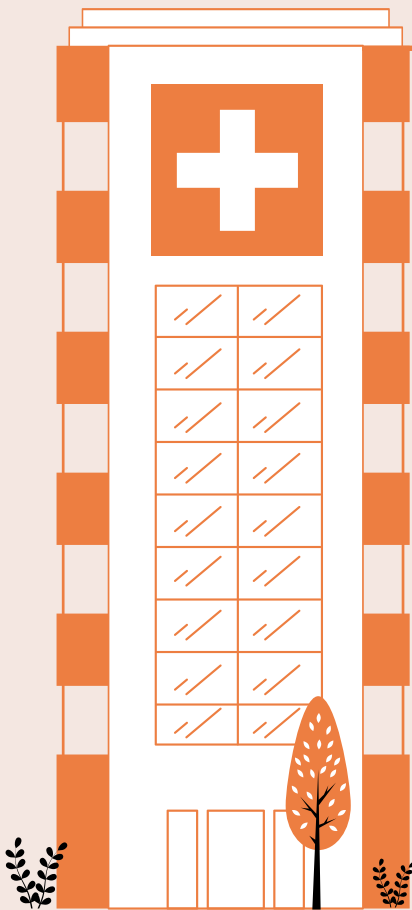


140 million people received care from SAMU (Mobile Healthcare Emergency Unit)

1,4 billion medical consultations in 2014

Around **96%** of the transplant surgeries in Brazil are implemented by SUS through **25** organized transplant state centrals

885 essential medicines provided at no cost



List of major Brazilian medical devices manufacturers and their websites

Agaplastic	agpmed.com.br	Fanem	fanem.com.br
ALFAMED	alfamed.com	First Line	firstlinemedical.com.br
AMed	amed.net.br	GG	ggequipamentos.med.br
Atrasorb	atrasorb.com.br	GlobalTec	globaltechc.com.br
Baumer	baumer.com.br	GMI	gmimedical.com
Bio Brasil	bio-brasil.com	GMReis	gmreis.com
Biomecanica	biomecanica.com.br	Hanisch	plasticoshanisch.com.br
Biotecno	biotecno.com.br	Heal Tech	healtech.com.br
Biotron	biotron.com.br	HPBio	hpbio.com.br
Braile	braile.com.br	HTM	htmeletronica.com.br
Bramsys	bramsys.com.br	Hygia Bio	hygia.bio
Carci	carcioficial.com.br	Ibramed	ibramed.com.br
Cardios	cardios.com.br	Indrel	indrel.com.br
Casex	casex.com.br	Indusbello	indusbello.com.br
CMOS Drake	cmosdrake.com.br	Inpromed	inpromeddobrasil.com.br
Cosmoderma	cosmoderma.com.br	Inspirar	inspirarsolucoes.com.br
Cremer	cremer.net.br	Instramed	instramed.com.br
Deltronix	deltronix.com.br	JP Farma	jpfarma.com.br
DFV	dfv.com.br	Jumper	jumperequipamentos.com.br
DMC	dmcgroup.com.br	Kolplast	kolplast.com.br
Dorja	dorja.com.br	Konex	konex.com.br
Edlo	edlo.com.br	Konica Minolta	konicaminoltahc.com.br
Evolve	evolvetechology.com.br	Lang	lang.com.br
Faga Medical	fagamed.com.br	Lifemed	lifemed.com.br

Loktal	loktal.com	Russer	russer.com
Macom	macominstrumental.com.br	Samtronic	samtronic.com.br
Magnamed	magnamed.com.br	SC Medical	gruposcmedical.com.br
Medical San	medicalsan.com.br	Scav Medical	scavmedical.com.br
Medicone	medicone.com.br	Schioppa	schioppa.com.br
MEDPEJ	medpej.com.br	Sincron	sincron.com.br
Micromed	micromed.health	Síntegra	sintegrasurgical.com.br
Missner & Missner	missner.ind.br	Spine	spineimplantes.com
Neurotec	neurotec.com.br	TEB	teb.com.br
Nexxmed	nexxmed.com.br	Toth Lifecare	tothlifecare.com.br
Nullscar	nullscar.com.br	Traumec	traumec.com.br
Olidef	olidef.com.br	Truckvan	truckvan.com.br
Olsen	olsen.odo.br	TWB Plásticos	twb.ind.br
Opuspac	opuspac.com	Unit	unitcomercial.com.br
Ortho Pauher	orthopauher.com	Vallitech	vallitech.com.br
Ortobio	ortobio.ind.br	Víncula	vincula.com.br
Osteomed	osteomedimplantes.com	VMI Medica	vmimedica.com
Otima Industria	otimaindustria.com.br	Zammi	zammi.com.br
Phoenix Luferco	phoenix.ind.br		
Procell	procell.ind.br		
Procorpus	takecare.ind.br		
Protec	protec.com.br		
Razek	razek.com.br		
Rioquímica	rioquimica.com.br		



4. RE HA BILI TA TION

BULL MARKETS

We are a country of about ¹45 million people dealing with some sort of deficiency. It means that the Brazilian industry of rehabilitation and assistive technologies works to promote a better quality of life to roughly **1/5 of the population**. Once again, we remind that the community in Brazil is rapidly ageing, more than ever before. So, it is necessary to foster this industry sector in order to assure that everyone will have a worthy and just future.

1 IBGE – Brazilian Geography and Statistics Institute.

Other statistical data also drives such preoccupation: only 1% of Brazilian deficient people are engaged in the labor market. Because the population is in a fast pace of ageing, and because a large share of people that could be active in economy is away from any professional activity, the industry of assistive technologies gains an extra weight and significance.

In parallel to this ordinary understanding, a study carried out by CGEE (Center for Management and Strategic Studies), requested by Secis/MCTI (Secretariat of Science and Technology for Social Inclusion of the Ministry for Science, Technology and Innovation) identified that Brazil has an enhanced competence for the development of assistive technology. In order to make this an even greater cause, the nation has been signing solid partnerships among government, associations and industry that promise to stir even more a national market that is about ²US\$ 1.3 billion worth a year.

Aware of this scenario and of current needs in the market, ABIMO volunteered to weave loose ends on this chain so as to foster research and development on rehabilitation sector. It partnered with a big consulting firm and conducted a very wide study that outlined the big picture about the sector. This study is being used as the basis for work groups creation, industrial policies and strategic actions that aim to optimize internal production, clearing paths so that the world can have

access to the best products that Brazil is able to manufacture.

Nowadays, Brazilian industry of assistive technologies is able to supply ³70% of the country internal demands. Now in high gears, this segment is continuously and rapidly being developed, once its estimated growth is ⁴9.4% a year. Considering public health network alone, Brazil offers ⁵198 Specialized Centers for Rehabilitation and 35 Orthopedic Work/Repair Shops. All this support is part of government efforts to provide better quality of life and inclusion for the deficient.

Besides being the guarantor of all such support network, Brazilian Health Ministry has invested R\$ 2.3 million for researches on amyotrophic lateral sclerosis, a progressive degenerative disease that causes muscle atrophy. The ill person requires a wide support from rehabilitation and assistive technology networks for measures related to pain and the prevention against muscle contraction and fixed articulation by means of orthosis use.

Consonantly to these initiatives, there are many efforts from the State Secretariat for the Rights of the Deficient Person, a government body run by São Paulo State that acknowledges and drives the search for inclusion, and that has become a great ABIMO partner in fostering the assistive technology industry. The secretary made a presentation in Geneva, Switzerland, in the headquarters of WHO (World Health Orga-

2 ABIMO - Market analysis for Assistive Technology, 2017.

3 ABIMO - Market analysis for Assistive Technology, 2017.

4 ABIMO - Market analysis for Assistive Technology, 2017.

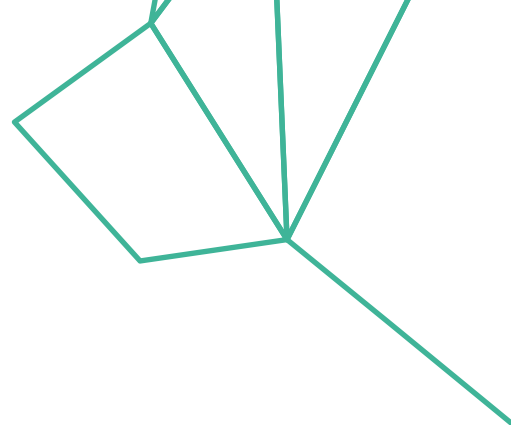
5 Brazilian Health Ministry.

nization) addressing the issue of "Rehabilitation 2030: a call to action", a project that aims to ensure the integration of complete rehabilitation on health systems over the next decade. Among the recommendations made in this call we find the inclusion of rehabilitation unities in hospitals to help deficient patients, to assure financial resources for the sector, and to implement financing policies to promote this industry in order to be able to provide responsible solutions for the better quality of life to all people who live with some type of deficiency.

With so many investments, Brazil is ⁶third place in the world on an industry ranking regarding assistive technologies and rehabilitation. Because of a share of 18% on global market, it is second only the leader Germany and the United States.

Such highlighted position made exports in this area show considerable growth. Between 2019 and 2020 positive variation was ⁷2,61%. Among the most exported products by Brazilian industry of assistive technology are orthopedic articles, instruments and apparatus for medicine and surgery, and compensation devices for deficiencies or illnesses.

In 2020 Brazilian exports reached ⁸US\$ 59.68 million in health products and solutions with focus on rehabilitation. Tracing a world route and observing the countries that are the best buyers for our products on this segment, we find Switzerland in first place because it imported 23,20% of the total sum of Brazilian exports, and



NOWADAYS, BRAZILIAN INDUSTRY OF ASSISTIVE TECHNOLOGIES IS ABLE TO SUPPLY 70% OF THE COUNTRY INTERNAL DEMANDS. NOW IN HIGH GEARS, THIS SEGMENT IS CONTINUOUSLY AND RAPIDLY BEING DEVELOPED, ONCE ITS ESTIMATED GROWTH IS 9.4% A YEAR

6 ApexBrasil - Brazilian Trade and Investment Promotion Agency.

7 ABIMO.

8 ABIMO.

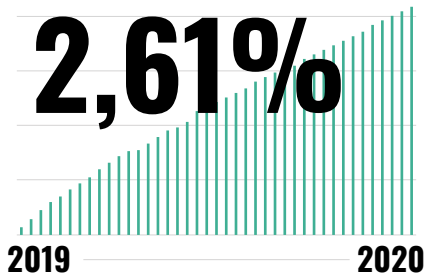
United States in second place, with 16,31%. The list of best five importers of Brazilian technology follows with Colombia, Mexico and Chile.

Wheelchair manufacturing is one of the branches that seized the market opportunity that Brazil represents, for it fulfils 97% of all its need. The remaining 3% of consumption is represented by imports. Involved in continuous processes of innovation and improvements, Brazilian production captured the attention of external market by offering products with high added value, as it is the case of specific equipment for radical sports, which have aluminum suspension, ideal for impact absorption.

This becomes visible because Brazilian wheelchair production chain got prominence.

Lots of visitors are international buyers on main fairs of rehabilitation organized around the world. When considering sports, ABIMO and ApexBrasil promoted Casa Brasil during Paralympic Games in 2016, an event held in Rio de Janeiro which brought more than 4.000 athletes with visual, physical and cognitive deficiency or cerebral palsy to Brazil. It was a showroom for products of assistive technology directed at functionality and well-being of the deficient person. The event presented part of the sector industrialization and served as stage for seminars. The country is now recognized as a reservoir of knowledge and expertise in the segment. ■

Growth on Brazilian exports on the sector



Ranking of the best importing countries for Brazilian assistive technology



Brazilian Market sizing e how much our industry is able to provide for



97%

of wheelchairs demands



70%

of internal demand of rehabilitation



1/4

of Brazilian population dealing with some type of deficiency



1 billion

persons in the world dealing with some type of deficiency



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