



Brazilian Electrical and Electronics Industry Association

**Malaysia & Brazil Innovation Week 2024
Semiconductor Day
Aug 30th, 2024**

www.abinee.org.br

**Entity representative of Brazilian electrical and electronics sector,
founded on 1963 September.**

MISSION

**To ensure and strengthen the competitive development
of electrical and electronics sector in domestic and international markets**

**More than 400 members
11 sectorial areas**

- Industries
- Systems integrators

Companies committed on development and technology.



List of members companies:

<https://www.abinee.org.br/associadas/>

Classified by sector areas

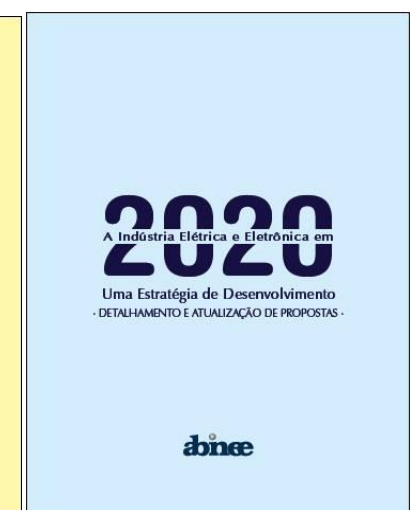
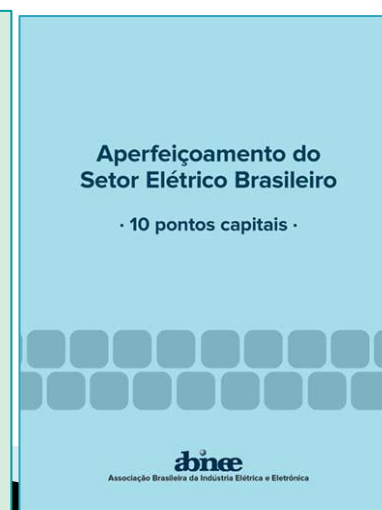
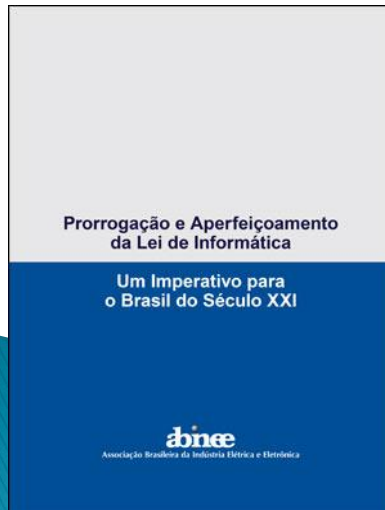
11 SECTOR AREAS BY INDUSTRIAL SEGMENTS

- **BUILDING SECURITY AND SAFETY**
CFTV, access control, fire hazard equipment, ...
- **COMMUNICATION MOBILE DEVICES**
mobile phones, tablets, wearable devices, ...
- **COMPUTERS (IT PRODUCTS)**
desktops, notebooks, printers, servers, monitors, keyboards, ...
- **ELECTRICAL AND ELECTRONIC COMPONENTS**
memories, passive components, PCBs, transformers for electronics, connectors...
- **ELECTRICAL MATERIAL FOR INSTALLATIONS**
switches, plugs, socket-outlets, circuit-breakers, cables, ...
- **ELECTRONIC SERVICES MANUFACTURING**
Assembling IT equipment, mobile phones,
- **GENERATION, TRANSMISSION AND DISTRIBUTION OF ELECTRICAL ENERGY**
generators, turbines, transformers, insulators, photovoltaic cells, wind turbines, ...
- **HOUSEHOLD APPLIANCES**
refrigerators, washing clothes machines, portable appliances, electrical tools, ...
- **INDUSTRIAL AUTOMATION**
PLC, sensors, measurement equipment, industrial drives, inverters, soft-starters, ...
- **INDUSTRIAL EQUIPMENT**
motors, industrial components, traction equipment, rectifiers, ...
- **TELECOMMUNICATIONS**
fixed and mobile infrastructure equipment, Internet of Things ...

ICT
cover all areas
represented by
ABINEE in the
themes
Decarbonization
and
**Digital
Transformation**



Institutional video around 4:00 minutes.
English subtitles.
Please click on the image above.



THEMATIC AREAS of ASSOCIATION' SERVICES

- ECONOMY
- LAWS
- LABOR RELATIONS AND TRADE UNIONS
- **INTERNATIONAL RELATIONS & TRADE**
- SUSTAINABILITY
- SMALL & MEDIUM-SIZE COMPANIES
- TECHNOLOGY & INDUSTRIAL POLICY
- COMMUNICATION
- MARKETING & EVENTS



- **Sectorial Project Management together to Brazilian Agency for Exports Promotion (APEX Brasil)**
- **ALAINEE**
Latin American Association of Electrical and Electronics Industry
- **Follow-up to the negotiations of International Agreements**

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Over 40 pages of Brazilian market statistical information.
Please click on the image above.

INDICATORS	2016	2017	2018	2019	2020	2021	2022	2023
SALES (R\$ billion)	129.4	136.0	146.1	153.0	173.2	211.3	218.2	204.6
SALES (USD billion)	37.2	42.6	40.0	38.8	33.6	39.2	42.2	41.0
SALES/GDP (%) ⁽¹⁾	2.1	2.1	2.1	2.1	2.3	2.3	2.2	1.9
SALES/GDP OF INDUSTRY (%) ⁽¹⁾	9.7	9.8	9.5	9.5	10.1	9.1	8.2	7.4
INDUSTRIAL PHYSICAL PRODUCTION (% year var.) ⁽²⁾	-10.2%	6.5%	1.0%	0.1%	-1.8%	1.4%	-5.8%	-10.6%
EMPLOYEES (thousand) ⁽⁴⁾	232.8	234.2	232.2	234.5	247.3	263.7	267.2	265.6
SALES PER EMPLOYEE (USD thousand)	159.6	181.9	172.1	165.4	135.8	148.5	158.1	154.2
INVESTMENTS ON FIXED ASSETS (% of sales)	1.84%	1.84%	1.84%	1.80%	1.68%	1.70%	1.72%	1.73%
INVESTMENTS ON FIXED ASSETS (R\$ million)	2,381	2,508	2,694	2,754	2,910	3,592	3,753	3,540
UTILIZATION OF INSTALLED CAPACITY ⁽³⁾	71%	77%	74%	78%	78%	79%	76%	73%

(1) Nominal GDP;

(2) PIM - Monthly Industrial Survey - Physical Production - ABINEE's consolidation;

(3) Considering the total capacity = 100%;

(4) CAGED/ABINEE's elaboration.

Sources: IBGE and CAGED - Official Registry of Employees and Unemployed

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 - **TECHNOLOGY & INDUSTRIAL POLICY**
 - COMMUNICATION
 - MARKETING & EVENTS
- Information system for **local production**
 - Legal Statements of exclusivity and local production
 - Standardization and Conformity Assessment
 - **Certification** voluntary and mandatory
 - **Labeling** household appliances - performance
 - **Homologation** of telecom & IoT devices

IEC BR NC



regulatory body
for telecom



Management
Council



Energy efficiency &
Renewable
energies



Electrical and
Electronic
Products



Council
Board



Brazilian Committee of
Conformity
Assessment

Fostering Innovation

Brazilian Association of Research and Innovation Institutions of the Electro-Electronic Complex



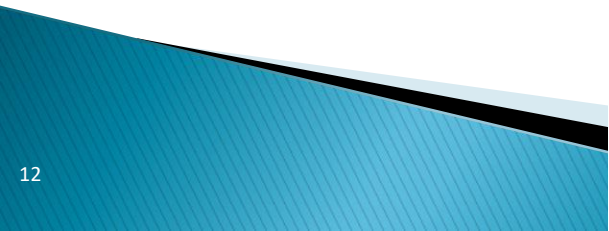
- Constituted by ABINEE in 2005
- **MISSION:** To stimulate research, development and innovation (R&D&I), through the promotion of partnerships between companies and technology-based institutions to increase industrial competitiveness.
- **ACTIVITY:** Support to research, development and technological innovation actions.



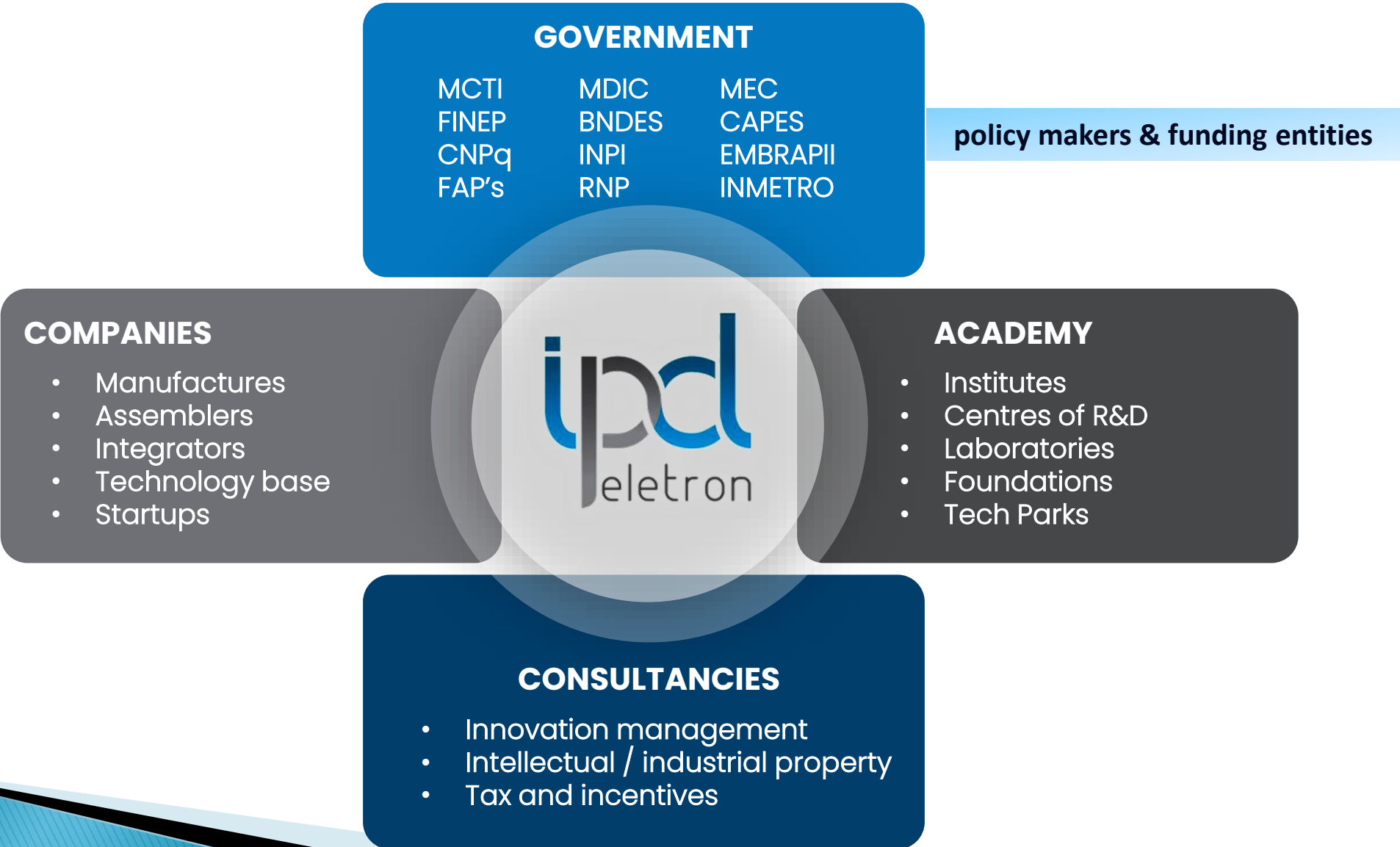


National Distribution

- 39 Innovation institutions members
- 60 R&D centers



Acting at Innovation Ecosystem



THEMATIC AREAS of ASSOCIATION' SERVICES

- ECONOMY
 - LAWS
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 - INTERNATIONAL RELATIONS & TRADE
 - **SUSTAINABILITY**
 - SMALL & MEDIUM-SIZE COMPANIES
 - TECHNOLOGY & INDUSTRIAL POLICY
 - COMMUNICATION
 - MARKETING & EVENTS
- National Policy for Reverse Logistics of Electronics
 - Regulations and Laws
 - Brazilian version of RoHS
 - Sustainable Production and Consumption
 - Foster Circular Economy
 - Climate changes
 - Commitment to the UN SDGs



Network Brazil
WE SUPPORT



Green Eletron – Take Back Scheme

An Association of Producers, a not-for-profit organization, established in 2016, by Abinee (Brazilian Electrical and Electronics Industry Association) as a collective Take-Back Scheme for WEEE and Batteries

- ✓ Assist companies to comply with the Federal Law nº 12.305/10 (National Solid Waste Policy), Decree nº 10.240/20 (WEEE take-back scheme) and Law 401/2008 (Batteries take-back scheme) and other State or Municipal laws
- ✓ Promote the circular economy, aiming at generating value and reducing costs in operations
- ✓ Members: Manufacturers, Importers and Distributors of Electrical & Electronic Products and Batteries
- ✓ Partners: Retailers, Malls, Associations, and others

Company members of Green Eletron – collective Take-Back Scheme



ABINEE entities & ESG principles

SUSTAINABILITY



- Electronics: 82 associates
10,300 tons collected
- Batteries: 31 members
2,250 tons collected
- +80 collection partners
retail, associations, municipalities, etc.

INNOVATION



- 39 associated institutes
60 research units across Brazil
- More than 10 thousand highly qualified researchers
75% with at least college degree
- In 2023:
 - more than 1,900 projects/year
 - USD 600 million of investments in RD&I

Governmental Relations

- **Executive, Ministries & local levels**
- **House of Representatives and Legislative Assemblies** in defense of sectorial themes of interest
 - National Industry Confederation CNI
 - Brazil's Competitiveness Initiative MBC
- **Government institutions related to the electrical and electronic industry:**
 - **Agencies:** Anatel, Aneel, ANP, ABDI, Inmetro, Anvisa, APEX Brasil ...
 - **Funding** entities: BNDES, FINEP, SEBRAE, FAPs

Main themes on work agenda:

- “Lei de TICs” - ICT Law improvements
 - Extension as of 2049
- PL 2338/23 – Brazilian Bill of AI
- Privacy on Internet / GDPR
- 5G bid & implementation
- Policy of broadband Internet
 - Update of Telecom General Law
 - National Plan for Connectivity
- Renewable Energies and Energy Efficiency
- Sustainability & Circular Economy
- National Policy of Solid Waste (PNRS)
- National Policy for Internet of Things
- National Strategy for Industry 4.0

Joint Parliamentary Front for the Development of the Electrical and Electronic Industry.

Led by Deputy Vitor Lippi

Supported by 213 Deputies + 14 Senators

Bills 719/2024 & 13/2020 – Policy for ICT & Semiconductor sector

- **Approved by the Senate on August 21.**
- **Signing of the Presidency of the Republic is expected by September 11th.**

- Improves industrial policy for the **information and communication technology** sector and for the **semiconductor** sector;
- Adjusts the term for granting incentives and stimulating the development of national technology and **local production**;
- Creates the Brazilian Semiconductor Program.

Art. 2º The industrial policy guidelines for the information and communication technology sector and the semiconductor sector are:

- I – increasing the value added in national production;**
- II – increasing investments in research, development and innovation (RD&I) in the country;**
- III – encouraging the development of national technologies and innovations;**
- IV – increasing sectoral and national productivity;**
- V – expanding or maintaining employment in the sector;**
- VI – encouraging public purchases of information and communication technology products and semiconductors developed and manufactured in Brazil;**
- VII – integrating the information and communication technology and semiconductor industries with other national manufacturing industries;**
- VIII – reducing regional and social inequalities;**
- IX – seeking technological sovereignty in the national economy.**

Target: TRANSFER OF TECHNOLOGY

(USD FOB million)

AREAS	2016	2017	2018	2019	2020	2021	2022	2023
INDUSTRIAL AUTOMATION ⁽¹⁾	2,910.1	2,628.5	2,999.4	2,890.8	3,073.3	3,903.6	4,242.2	4,755.7
ELECTRICAL AND ELECTRONIC COMPONENTS ⁽²⁾	13,996.3	17,793.3	18,550.1	17,674.2	16,947.1	21,498.4	22,240.9	19,978.4
INDUSTRIAL EQUIPMENT	2,572.2	2,484.6	2,684.8	3,126.8	3,170.2	4,037.0	4,653.8	4,791.8
GENERATION, TRANSMISSION AND DISTRIBUTION OF ELECTRICAL ENERGY	1,193.2	938.3	1,301.1	2,157.4	2,069.5	3,524.2	6,198.7	5,317.5
COMPUTERS (IT PRODUCTS)	1,447.4	1,539.4	1,817.6	1,858.4	1,947.1	2,106.3	2,512.9	2,109.5
ELECTRICAL MATERIAL FOR INSTALLATIONS	583.4	811.6	797.4	744.0	687.3	812.1	887.5	864.6
TELECOMMUNICATIONS	1,808.0	2,092.3	2,185.0	2,234.7	2,511.4	2,613.9	2,736.2	2,764.1
HOUSEHOLD APPLIANCES ⁽³⁾	1,076.4	1,344.9	1,420.4	1,347.7	1,385.9	1,943.6	1,793.2	2,117.1
TOTAL	25,587.1	29,632.9	31,755.8	32,034.1	31,791.8	40,439.1	45,265.4	42,698.7

(1) Includes measuring equipment and instruments for medical electric equipment;

(2) Includes motor compressors for refrigeration, components for automotive use, parts and assembling parts;

(3) Includes automotive radios.

Source: SECEX/MDIC

Half of the sector's component imports are semiconductors and photovoltaic modules.

(USD FOB million)

PRODUCTS	2018	2019	2020	2021	2022	2023
SEMICONDUCTORS	5,057.7	4,641.9	4,428.8	5,583.9	6,348.0	5,228.0
PHOTOVOLTAIC MODULES	578.9	1,010.0	1,026.2	2,343.8	5,125.2	3,846.8
COMPONENTS FOR TELECOMMUNICATIONS	4,730.4	4,713.4	4,257.2	4,893.8	3,758.1	2,798.4
COMPONENTS FOR COMPUTERS	1,635.9	1,560.4	1,528.8	2,139.4	2,589.3	2,580.7
ELECTRONICS FOR AUTOMOTIVE USE	1,678.5	1,371.1	1,438.7	2,079.8	2,438.5	2,493.0
MEASURING INSTRUMENTS	1,209.2	1,241.2	1,364.4	1,608.7	1,793.8	1,981.7
COMPONENTS FOR INDUSTRIAL EQUIPMENT	1,108.1	1,026.6	1,066.6	1,411.5	1,589.2	1,504.6
ELECTRICAL EQUIPMENT FOR MEDICAL USES	685.2	684.4	638.4	915.3	1,030.7	1,176.6
COMPONENTS FOR ELECTRICAL MATERIAL	641.8	609.7	615.6	853.3	905.8	942.0
STATIC CONVERTERS FOR MOTORS	248.0	392.9	497.7	753.8	1,079.2	923.2

Source: SECEX/MDIC

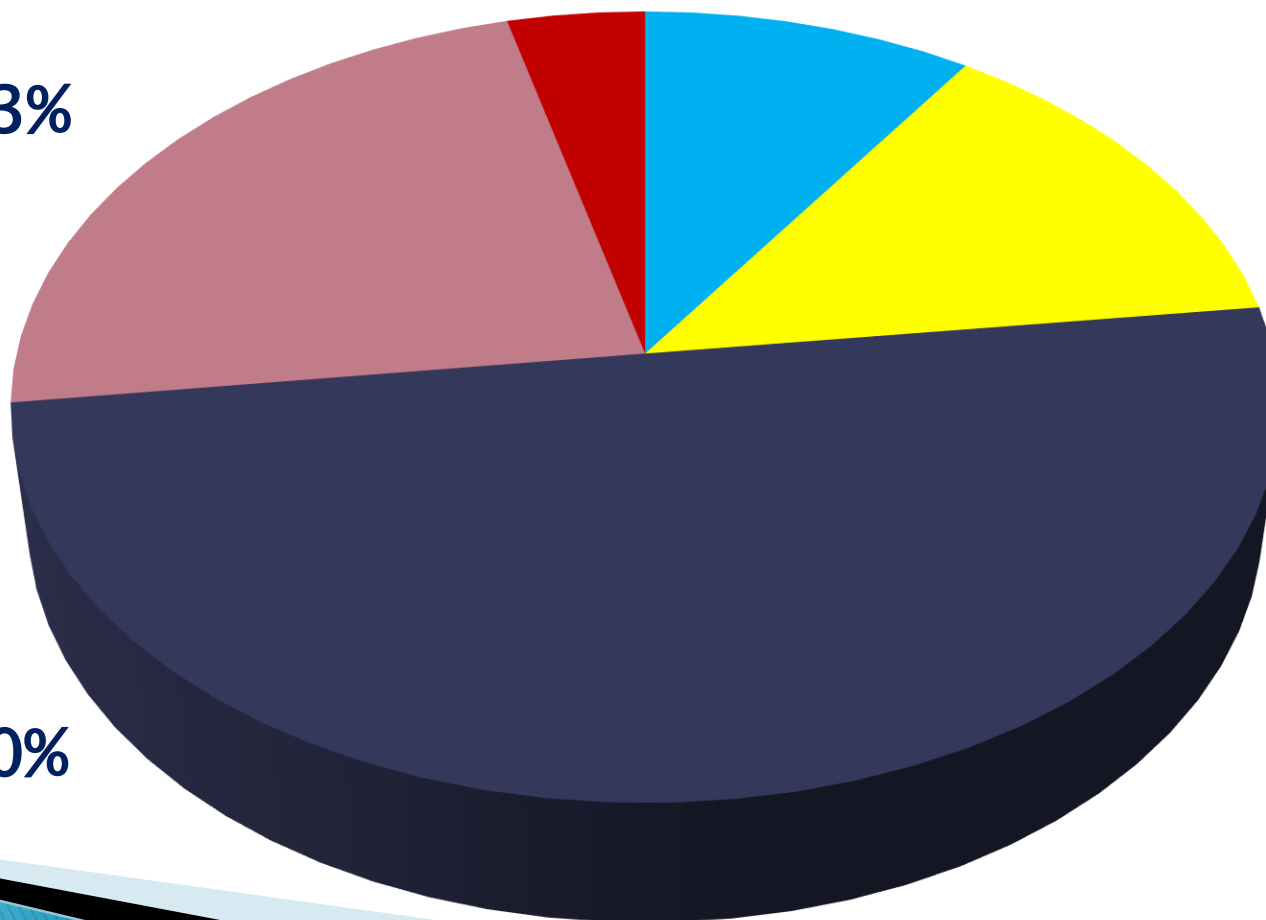


COMPONENTS IMPORTS FROM...



Asia others 23%

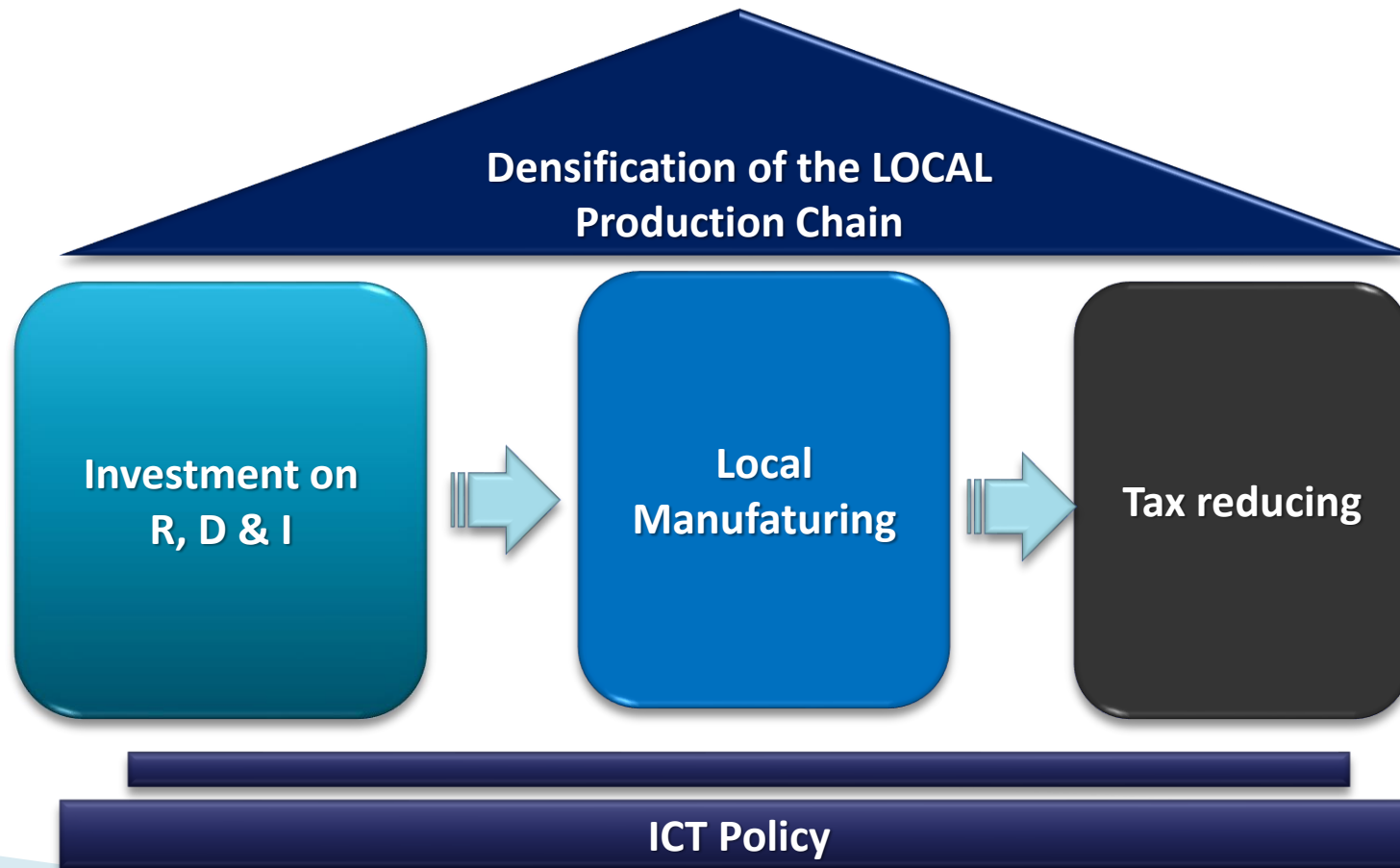
China 50%



Year 2023; Source: SECEX/MDIC



PUBLIC POLICY: 3 MAIN BASIS



(thousand of units)

MARKET	2016	2017	2018	2019	2020	2021	2022	2023
TOTAL MARKET OF PCs	4,501	5,187	5,678	5,845	6,401	8,737	8,601	7,722
- DESKTOPS	1,660	1,734	1,742	1,719	1,367	1,712	2,049	1,946
- NOTEBOOKS	2,841	3,453	3,936	4,126	5,034	7,025	6,552	5,776
OFFICIAL MARKET OF PCs	4,031	4,721	5,207	5,400	5,929	8,187	7,851	7,252
- DESKTOPS	1,209	1,294	1,302	1,308	958	1,207	1,422	1,531
- NOTEBOOKS	2,822	3,427	3,905	4,092	4,971	6,980	6,429	5,721
UNOFFICIAL MARKET OF PCs	470	466	471	445	472	550	750	470
- DESKTOPS	451	440	440	411	409	505	627	415
- NOTEBOOKS	19	26	31	34	63	45	123	55

(thousand of units)

TOTAL MARKET OF TABLETS	3,987	3,794	3,639	3,370	2,914	3,359	2,778	2,163
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Source: IDC

(in thousand of units)

MARKET	2016	2017	2018	2019	2020	2021	2022	2023
TOTAL MARKET OF MOBILE PHONES ⁽¹⁾	52,604	53,762	49,049	53,125	48,744	45,777	42,556	44,405
- FEATURE PHONE	7,093	4,549	3,761	3,871	2,568	2,355	1,925	1,396
- SMARTPHONE ⁽¹⁾	45,511	49,213	45,288	49,254	46,176	43,422	40,631	43,009
OFFICIAL MARKET OF MOBILE PHONES	48,414	50,786	47,040	48,603	44,681	41,861	38,480	33,489
- FEATURE PHONE	4,920	3,085	2,586	3,193	2,364	2,236	1,832	1,339
- SMARTPHONE	43,494	47,701	44,454	45,410	42,317	39,625	36,648	32,150
UNOFFICIAL MARKET OF MOBILE PHONES ⁽¹⁾	4,190	2,976	2,009	4,522	4,063	3,916	4,076	10,916
- FEATURE PHONE	2,173	1,464	1,175	678	204	119	93	57
- SMARTPHONE ⁽¹⁾	2,017	1,512	834	3,844	3,859	3,797	3,983	10,859

(1) Data estimated by ABINEE for the year 2023. For the other indicators of 2023 and the historical series as of 2022, the data was from IDC.

Source: IDC and ABINEE

INDICATORS	2014	2015	2016	2017	2018	2019	2020	2021
NUMBER OF SUPPORTED COMPANIES	510	529	511	495	478	479	448	494
GROSS SALES OF SUPPORTED GOODS (R\$ million)	46,604	46,699	42,065	46,153	50,555	54,286	60,385	74,696
INVESTMENTS ON RD&I (R\$ million)	1,447	1,304	1,521	1,509	1,605	1,784	2,369	3,215
DUES/TAX (R\$ million) ^{(2) (3) (5)}	9,381	9,789	8,960	10,022	10,861	11,771	12,162	9,029
IPI EXEMPTION / FINANCIAL CREDIT (R\$ million) ⁽⁴⁾	5,207	5,022	4,736	5,508	6,112	5,839	6,237	7,240
TOTAL OF HUMAN RESOURCES IN COMPANIES	130,092	117,354	110,582	101,457	165,582	171,140	100,461	100,240
- COLLEGE AND HIGHER EDUCATION	37,906	37,041	35,804	34,276	32,538	55,317	34,230	34,112
- RD&I TOTAL EMPLOYEES	8,436	8,279	8,586	7,210	7,067	9,379	8,885	7,898
- RD&I - COLLEGE AND HIGHER EDUCATION	5,896	6,088	6,540	5,252	5,004	7,363	6,582	5,818

(1) Only Laws 8 248/91 and 13 969/19, except ZFM - Manaus Free Trade Zone; (2) Information on 2020 taxes paid was calculated by the sum of 2020 1st quarter amounts (when the IPI exemption was still in effect) with the amounts from 2020 April to December (new mechanism of financial credit) until the end of the same year; (3) Until the 1st quarter of 2020, these data are formed by the stimulus of the IPI exemption and from April 2020, the calculated values refer to the new mechanism of financial credit; (4) As of 2020 1st quarter, the data is formed by the IPI tax exemption and after April 2020 the values refer to financial tax credit; (5) After year 2021 information of paid tax are refers only to the IPI. Source: Secretary of Entrepreneurship & Innovation - Ministry of Science, Technology and Innovation - MCTI/SEMPI - Report of Achievements of “Lei de Informática” - year-base 2021



Semiconductors are electronic components which are key enablers to tackling major challenges of **decarbonization** and **digital transformation** on the path to an energy-wise society.



White Paper

Power semiconductors for an energy-wise society

THANK YOU !

abinee

snaees

ipcd
eletron

green
eletron
gestora de logística reversa

Electro-Electronic
BRASIL
TECNOLOGIA PARA O MUNDO

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