

BRAZILIAN MINT  
**SUSTAINABILITY REPORT 2016**

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CASA DA MOEDA DO BRASIL

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## ▶ FOREWORD

Transparency is a core value at the Mint.

This value is embodied in the series of publications we periodically issue to report on our management decisions, financial performance and engagement with the Brazilian government and society.

Through our first Sustainability Report, we are further enhancing transparency by compiling information on economic, social and environmental performance in fiscal 2015 and 2016 in a single publication. In it we summarize our most significant projects, process innovations and other achievements.

This report has been prepared in accordance with the guidelines of the Global Reporting Initiative (GRI), a non-profit organization that provides a comprehensive framework for corporate reporting.

We hope you find our report interesting and informative.

# STATEMENT FROM THE CHIEF EXECUTIVE

[GRI G4-1]



“A recent reorganization of the Mint has focused on simple solutions and quick wins to improve productivity and efficiency without raising costs.”

Casa da Moeda do Brasil (“the Mint”) has sought to consistently enhance its management transparency through disclosure of information about performance and production capacity. Our Sustainability Report for 2015/2016, the first in our history, is an important tool as part of these efforts. In two years of significant transformation, the period covered by this Report was punctuated by events that have been etched into our three centuries of history.

We also faced major challenges deriving from the internal and external business environment which required extra effort by all employees and by our management, which was newly appointed in July 2016. This Report summarizes our key achievements in 2015 and 2016 and how we are preparing for the future.

2016 saw the successful delivery of one of the most important projects in our history: the medals, commemorative coins and security print materials for the Rio 2016 Olympic and Paralympic Games. Much was learned from our collaboration with the Rio 2016 Organizing Committee. In addition to driving business opportunities

and providing increased visibility, the project accelerated progress in sustainability by developing materials using environmentally and socially responsible sourcing.

These lessons were incorporated into our environmental management processes, which were certified in 2015 to ISO 14001 (Environmental Management Systems) and OHSAS 18001 (Occupational Health and Safety Management Systems).

This was achieved in a context of major transformation. A reorganization of our departments and management in 2015 restructured the Mint's core business and customer service processes. We will now assess the outcomes from the reorganization over the course of one year and whether any further adjustment will be required. With a focus on our human capital, we have enhanced our knowledge- and capacity-building processes and invested in a new people management committee. We have revised our Code of Ethics and developed a Compliance Policy designed to meet the Mint's requirements and to improve project efficiencies without neglecting good

governance and compliance with applicable laws and regulations.

To “put things in order” during this period of transition, we are implementing a program called “Programa Óbvio” that is focused on finding simple solutions and ensuring existing processes function properly. Results from the program include our successful reestablishment of passport production with an increased focus on machine maintenance and cross-team communications; initial changes for compliance with the Government Companies Act, which came into force in July 2016; and the development of new applications for our digital product tracking and identification technology.

These and other “housekeeping” initiatives enabled us to meet our circulation currency production targets without delays during the year. With this focus on quick-win ideas, allowing us to increase productivity and efficiency without raising costs, we will continue to improve our services and develop new markets in Brazil and abroad.

The whole of these efforts is described in the following pages,

2016 saw the delivery of one of the most important projects in our history: the medals, commemorative coins and security print materials for the Rio 2016 Olympic and Paralympic Games – in a collaboration from which much was learned.”

which tell the story of both our past and our present and what we aspire for the future. Delivering on two of our values – transparency and sustainability – this Report demonstrates our tireless efforts to fulfill our Mission of providing customers with sustainable security solutions in the currency, identification and fiscal control segments.

**Alexandre Borges Cabral**  
w/Chief Executive,  
Casa da Moeda do Brasil





## About the Mint

The Brazilian Mint was founded in 1694. Our manufacturing facility – one of the most modern in the world – produces banknotes, passports, revenue stamps, traceable stamps, physical fiscal stamps and a range of security print materials.

Casa da Moeda do Brasil ("the Mint") has produced Brazil's circulation currency for more than 300 years and today operates one of the world's largest facilities in its segment. Our manufacturing site in Rio de Janeiro (RJ) comprises three plants with an annual production capacity of 3 billion

banknotes and 4 billion coins in three work shifts from Monday to Friday, in addition to chip-embedded passports, revenue stamps, medals and a variety of security documents for the Brazilian and international markets.  
[GRI G4-2, G4-3, G4-5, G4-9]

## Vision, Mission & Values

[G4-56]



### Mission

**Provide customers with sustainable security solutions in the currency, identification and fiscal control segments.**



### Vision

**To be recognized in the domestic and international market and by society for excellence, innovation and sustainability in security solutions across the currency, identification, fiscal control and numismatics segments.**



### Values

Ethics;  
Transparency;  
Commitment;  
Results Orientation;  
Quality;  
Innovation; and  
Sustainability.

## ► MATERIALITY [GRI G4-18]

To inform the development of our first Sustainability Report, the Mint undertook an exercise to develop a list of topics deemed most relevant and essential to its strategy and sustainability, known as a materiality matrix. These topics describe the issues that most significantly affect an organization's decisions, actions and performance and its relations with stakeholders.

Our materiality matrix was developed in a process that included reviews of documentation and publications about the Mint and its social and economic context, interviews with key stakeholders (employees, government spokespersons, suppliers, customers, unions and representatives from civil society and academia) and interviews with our key leadership and management.

The materiality matrix developed as a result of this process has been validated by top management and is reflected not only in the content of this report, but also in our management approach and long-term planning.

Learn more about our material topics [GRI G4-2, G4-19, G4-20, G4-21]:

ISSUE	WHY IT MATTERS	HOW WE ADDRESS IT
1 <b>Ensure financial sustainability</b>	Our long-term financial health relies on customer diversification and product development to improve cash flows and revenue predictability, and minimize dependence on our key customers (the Brazilian Central Bank and Federal Tax Authority)	By performing our core activity (constitutional mandate) to high levels of efficiency; by seeking market opportunities to diversify the business and our customer base
2 <b>Transparency, accountability and anti-corruption mechanisms</b>	These will protect our reputation and good management practices as a crucial requirement in Brazil's current business landscape	By implementing and monitoring compliance mechanisms to improve transparency and relations with government authorities
3 <b>Managing relations with customers and government agencies</b>	This can enhance our product and service offering and provide new business opportunities. It also extends the social reach of our products and services for the benefit of customers and society, as well as mitigating risks related to our core activity	By ensuring high quality of delivery and customer and user satisfaction. Our reorganization in 2015 has strengthened our focus on meeting customer requirements.
4 <b>Developing human capital</b>	Capacity building efforts help to foster innovative thinking in product development and process execution; reduce dependence on third-party staff; improve our internal expertise; and help to develop a specialist workforce	By strengthening our human capital (including our technical and managerial staff) through training and capacity building initiatives that achieve an optimal balance between rewards and compensation and productivity
5 <b>Operational eco-efficiency (water, energy and waste)</b>	It is important that we comply with the sustainability guidelines laid down by the Ministry of the Environment and other government regulations; this also creates opportunities and drives competitiveness	By implementing a management system that ensures continuous improvement and investment in technology to reduce costs and develop competitive advantage
6 <b>Technological development (security and product quality)</b>	Research and development enhances product value and helps to develop new markets, while also providing opportunities for continual improvement of our products and services	By developing the expertise to internationalize technologies and building partnerships (or strategic alliances) to develop new applications
7 <b>Building brand strength and awareness</b>	This helps to strengthen brand awareness and recognition; showcase our differentiators; and extend the Mint's local and global reach	By exploring opportunities to showcase the Mint's competitive differentiators and attributes

## ► PROFILE

**SINCE 1975**  
the Mint has been positioned to serve both local and global markets.

Casa da Moeda do Brasil is a wholly federal government-owned company operating under the auspices of the Ministry of Finance, with private-law legal personality and independent equity and management. It has an exclusive mandate for the production of Brazilian circulation coins and banknotes, federal stamps and fiscal stamps, federal government debt securities, booklets, passports and fiscal control activities under Act 11488/2007 and Act 10833/2003. The Mint is headquartered in Brasília (DF) and has offices and manufacturing sites in Rio de Janeiro (RJ). Since 1975 the Mint has been positioned to serve both local and global markets. To date, we have supplied products and services to Angola, Argentina, Bolivia, Costa Rica, Ecuador, Guinea Bissau, Haiti, Paraguay, Peru, Suriname, Uruguay, Venezuela and Zaire. [GRI G4-2, G4-6, G4-7, G4-8]

The Mint was founded on March 8, 1694 by the then King of Portugal, D. Pedro II, for local production of coinage from Brazil's gold mines. Its first headquarters were in the city of Salvador (BA). Today, the Mint's production facilities are largely located in a complex in the district of Santa Cruz, on the west side of Rio de Janeiro, including our banknote, coinage and medals, and security printing facilities.

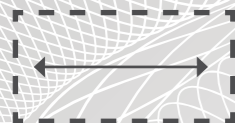
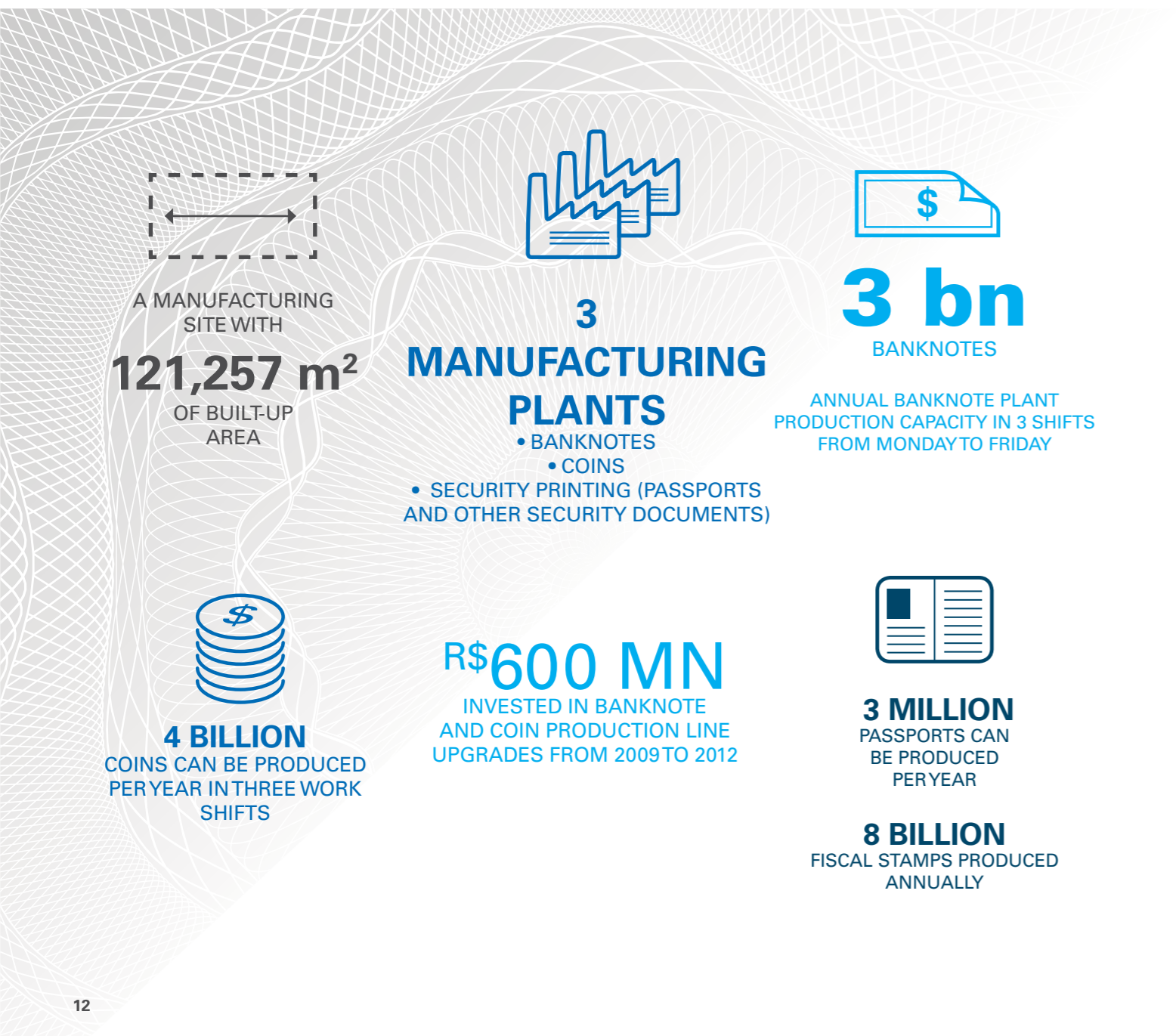


## ► Timeline of the Brazilian Mint



# THE MINT IN NUMBERS

Learn more about the Mint's production capabilities, facilities and product and service offering.



A MANUFACTURING SITE WITH  
**121,257 m<sup>2</sup>**  
OF BUILT-UP AREA



**3**  
**MANUFACTURING PLANTS**

- BANKNOTES
- COINS
- SECURITY PRINTING (PASSPORTS AND OTHER SECURITY DOCUMENTS)



**3 bn**  
BANKNOTES

ANNUAL BANKNOTE PLANT PRODUCTION CAPACITY IN 3 SHIFTS FROM MONDAY TO FRIDAY



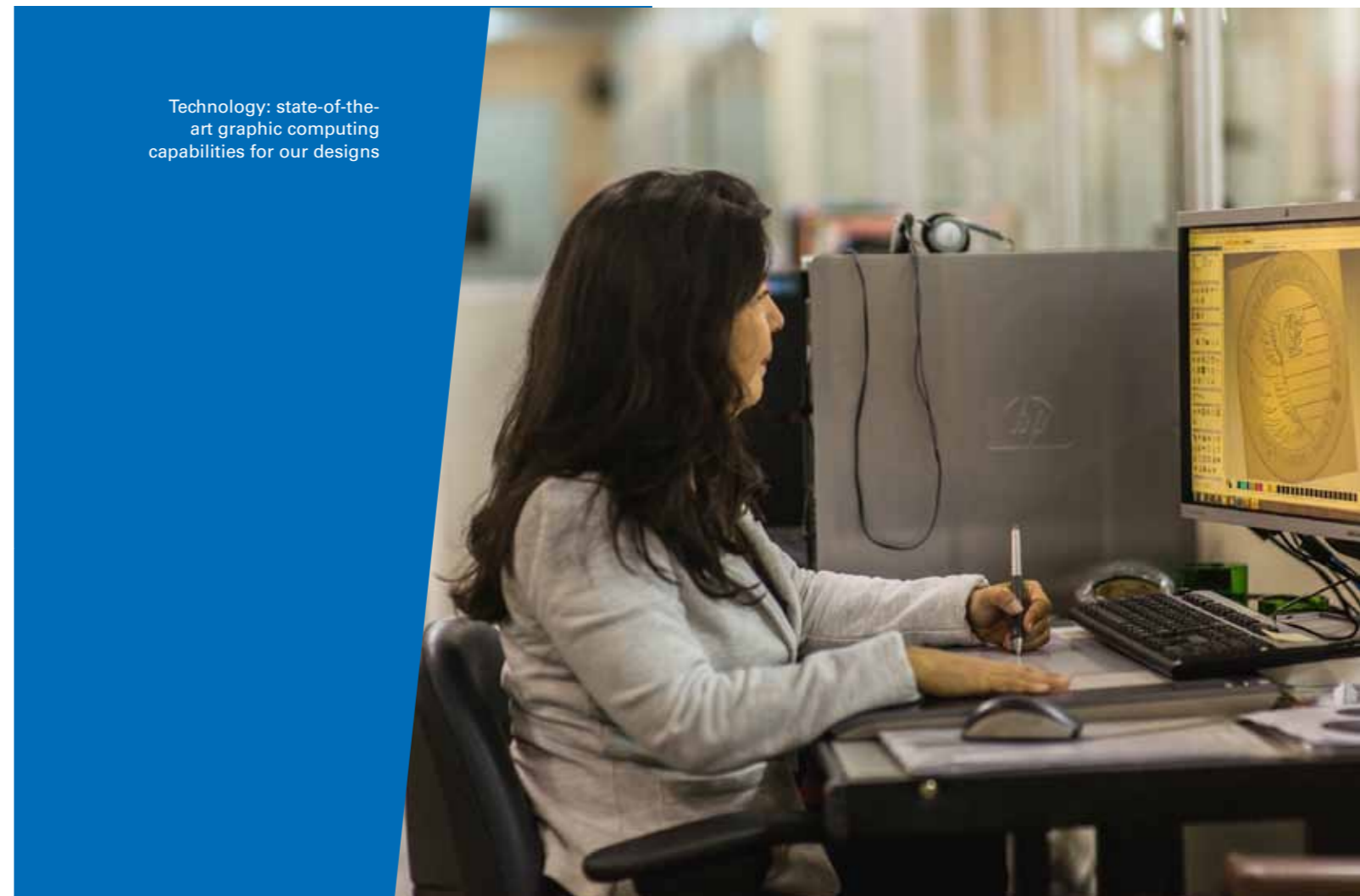
**4 BILLION**  
COINS CAN BE PRODUCED PER YEAR IN THREE WORK SHIFTS

**R\$600 MN**  
INVESTED IN BANKNOTE AND COIN PRODUCTION LINE UPGRADES FROM 2009 TO 2012



**3 MILLION**  
PASSPORTS CAN BE PRODUCED PER YEAR

**8 BILLION**  
FISCAL STAMPS PRODUCED ANNUALLY



Technology: state-of-the-art graphic computing capabilities for our designs



◀ Detailed inspections ensure a high level of product quality

# PRIMARY PRODUCTS AND CUSTOMERS

G4-DMA Product and service labeling

The Mint ensures world-class quality in its design and fully automated production processes.

In addition to our core products (banknotes, coins and security documents, as detailed on the following page), we also provide design and artwork services, metallurgical services (production of metal badges and insignia), security seals and envelopes, laboratory inspection of security prints, tracking, printing and coding and other services.

Printing plates are produced using computer-to-plate (CTP) systems that ensure superior security and information confidentiality. Graphic design software is used to design the background and security features of each product.

The Mint also produces dies using precision machining or laser engraving processes, imparting a high level of detail.

## COMPUTER-TO-PLATE SYSTEMS

provide greater security and information confidentiality



### ▶ PRODUCT PORTFOLIO [GRI G4-4]

PRODUCTS	DESCRIPTION	CUSTOMERS
<b>Banknotes (R\$ 2, R\$ 5, R\$ 10, R\$ 20, R\$ 50 and R\$ 100 denominations)</b>	Brazilian banknotes have security features such as watermarks, magnetic security threads, latent images, obverse/reverse registration, tactile intaglio printing and hologram patches or stripes	Brazilian Central Bank
<b>Circulation coins (R\$ 0.05, R\$ 0.10, R\$ 0.25, R\$ 0.50 and R\$ 1)</b>	Made of bronze-plated steel (R\$ 0.10 and R\$ 0.25), copper-plated steel (R\$ 0.05) and stainless steel (R\$ 0.50). R\$ 1 coins are of stainless steel (core) and bronze-plated steel (ring)	Brazilian Central Bank, Rio 2016 Organizing Committee (read more on page 32), Federal Highway Police, Brazilian Federal Tax Authority, among other customers
<b>Commemorative coins and medals/badges and insignia</b>	Numismatic and non-numismatic products for the domestic and foreign markets with special finishes and noble metals such as gold, silver and other alloys	Brazilian Central Bank, Rio 2016 Organizing Committee (read more on page 32), Federal Highway Police, Brazilian Federal Tax Authority, among other customers
<b>Passports</b>	Since 2005, the Mint has been tasked with personalizing Brazilian Passports, which contain security features such as UV-fluorescent security fibers, watermarks and security threads, as well as offset and intaglio printing. The Mint is also the exclusive manufacturer of chip-embedded passport booklets	Federal Police and Ministry of Foreign Affairs
<b>Smart ID cards with digital certification</b>	Our smart ID cards feature personalized biometric and biographic data in print (laser, retransfer and inkjet) and digital (chip-recorded variable data) form on PVC and polycarbonate substrates. In addition to producing the ID cards proper, in 2010 the Mint became a first-tier certification authority accredited to issue, renew, revoke and manage digital certificates (electronic documents used to guarantee the security and confidentiality of information flowing on the Internet)	Federal Council of Medicine (CFM) and National Aviation Agency (ANAC)
<b>Tracking tax stamps</b>	Cigarettes and spirits are required to bear tax stamps produced exclusively by the Mint. Cigarette stamps have unique tracking codes that are invisible to the naked eye	Brazilian Federal Tax Authority
<b>Diploma and certificate base stock</b>	The Mint produces diploma and certificate stock incorporating safety features such as special inks and papers, hologram patches and custom numbering	National Civil Aviation Agency (ANAC), State Environmental Institute (INEA) and public and private universities
<b>Magnetic tickets</b>	Magnetic tickets are produced using rotary printers, dry offset printing and inkjet printing. Magnetic stripes are printed using a special magnetic ink	Companhia Paulista de Trens Metropolitanos (CPTM) and Metrô São Paulo.
<b>Postage stamps</b>	The Mint is the exclusive manufacturer under law of Brazilian postal stamps. They are recognized by philatelists around the world for their cultural value and artistic taste	Empresa Brasileira de Correios e Telégrafos (ECT)
<b>Professional and civil identity documents</b>	Professional and civil identity documents are produced from collected biometric and biographic data using laser printing on security paper	Brazilian Intelligence Agency (ABIN), Osvaldo Cruz Foundation (FIOCRUZ), and the Federal Tax Authority

Specialized professionals monitor production and evaluate product features against the requirements contained in technical standards and customer specifications.

**LIFECYCLE MANAGEMENT AND IMPACT ASSESSMENT**

[GRI G4-2, PR1], G4-DMA Customer health and safety; G4-DMA Compliance

Quality control at the Mint spans the full product lifecycle and every stage of production, from product design through receipt of raw materials and packaging to finished product scrutiny and inspection prior to delivery.

At our laboratory, security features are assessed in accordance with technical standards, procedures and working instructions. Specialized professionals monitor production and evaluate product features against the requirements contained in technical standards and customer specifications.

Banknotes undergo material and process controls – 100% of security print materials are inspected. Metallurgical products (medals and coins) undergo quality inspections in accordance with internationally recognized standards. Dies are assessed against criteria specified

by the engineering department and are cleared for use only if they pass critical analysis.

A reorganization was implemented in 2015 at the quality assurance and machinery maintenance departments of our banknote and coinage production facilities. The Mint has a laboratory specializing in ink, paper and other chemical analyses for product quality management and control.

Internal assessments are conducted to improve quality control for special coins, which are inspected individually. The Mint has also undertaken studies to draw inspiration from other nations' coinage.

Raw materials for security printing are assessed for strength and conformity to applicable technical standards. In-production controls ensure printing quality at every stage. All security print product designs at the Mint are developed by highly specialized, expert teams.



**100%**  
OF BANKNOTES ARE  
INDIVIDUALLY EVALUATED

## CORPORATE GOVERNANCE AND MANAGEMENT FRAMEWORK

The Mint's highest governance bodies are the Board of Directors and Executive Board. The Board of Directors is composed of five members: a chair (appointed by the Minister of Finance), the Chief Executive and three other members appointed respectively by the Minister of Planning, by the President of the Brazilian Central Bank and by Mint employees. Members serve a renewable term of three years. [GRI G4-34]

The Board of Directors' responsibilities include establishing and monitoring implementation of general business guidance;

overseeing the activities of the Executive Board; and deciding on multi annual plans, programs of activities and investment programs.

**Composition of the Board of Directors (as of December 2016)**

MEMBER	REPRESENTS
Julio Alexandre Menezes da Silva	Ministry of Finance
Alexandre Borges Cabral	Chief Executive
Vania Lucia Ribeiro Viana	Ministry of Planning
Luiz Edson Feltrim	Brazilian Central Bank
Paulo Saltoris de Matos	Mint Employees

The Executive Board is composed of five members (a president and five members), all appointed by the President of Brazil. The responsibilities of the Executive Board include developing the Mint's Internal Regulations, budgets, standards and guidelines for internal processes.

**Executive Board (as of December 2016)**

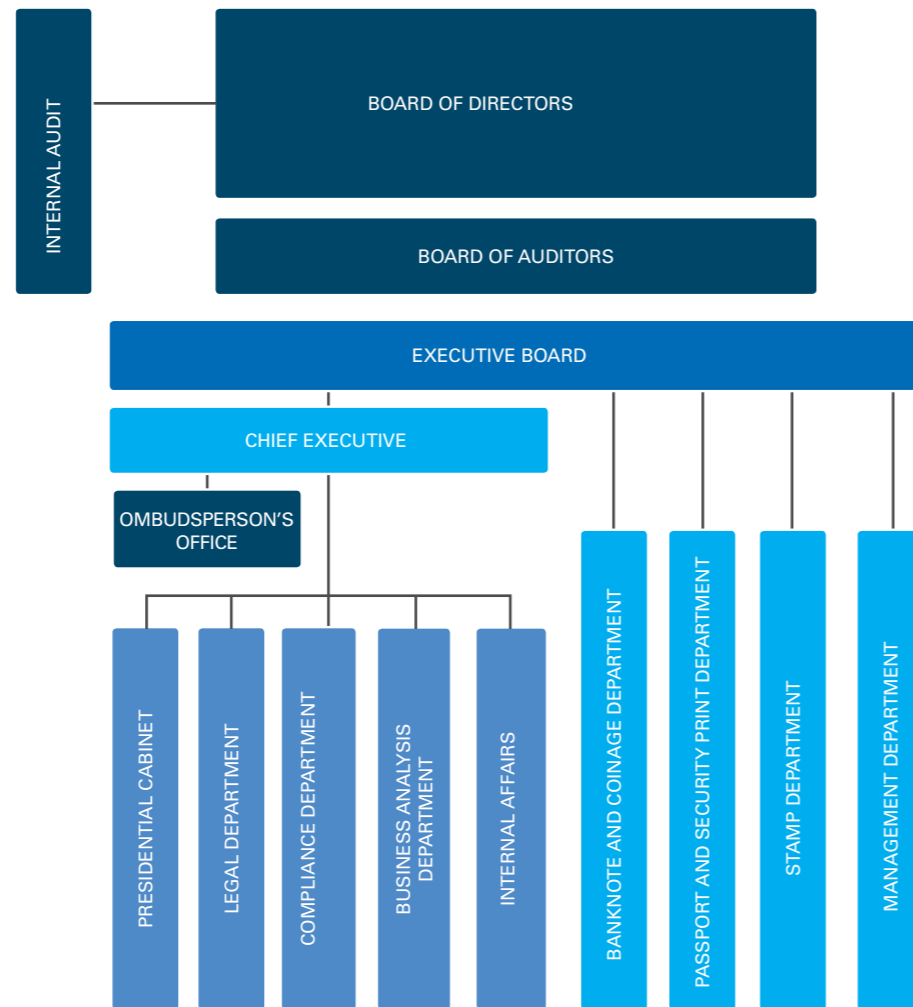
Alexandre Borges Cabral
Roberto Alfredo Paulo
Jehovah de Araújo Silva Junior
Lara Caracciolo Amorelli
Vagner de Souza Luciano

The Executive Board is under the oversight of the Board of Auditors, which is composed of three members and an equal number of substitutes appointed by the Minister of Finance. Two members represent the Minister of Finance and the third represents the Office of the National Treasury.

**Board of auditors (as of December 2016)**

MEMBER	REPRESENTS
Fábio Franco Barbosa Fernandes	Ministry of Finance
Mauro lunes Okamoto	Office of the National Treasury
Edson Leonardo Dalescio Sá Teles	Ministry of Finance

► ORGANIZATIONAL STRUCTURE



- Audit: Internal Audit
- BoD: Board Of Directors
- BoA: Board of Auditors
- PC: Presidential Cabinet
- LD: Legal Department
- CD: Compliance Department
- BAD: Business Analysis Department
- BCD Banknote and Coinage Department
- PSPD: Passport and Security Print Department
- SD: Stamp Department
- MD: Management Department
- Ombd: Ombudsperson's Office



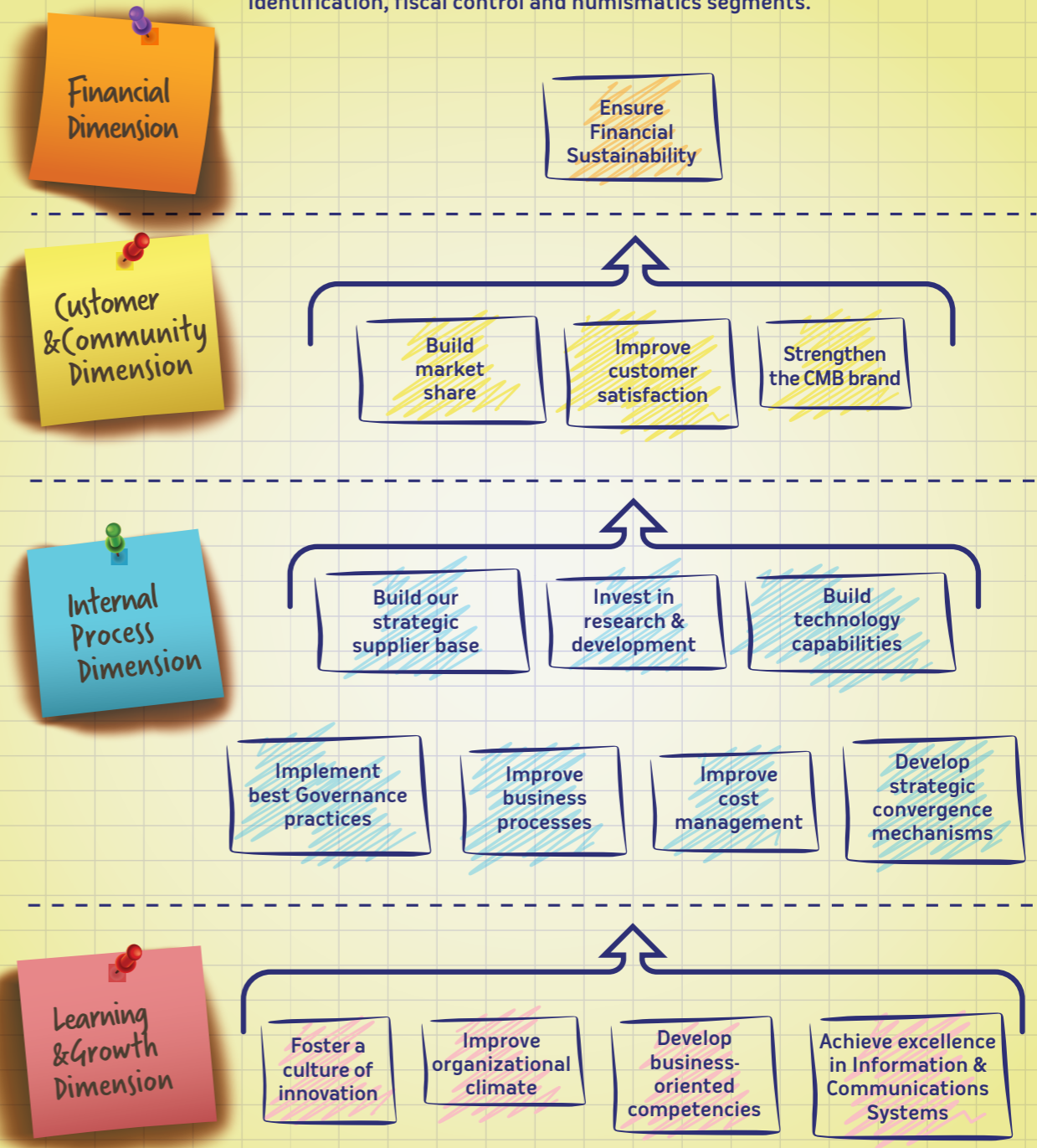
► STRATEGIC PLAN  
2015-2022 [GRI G4-2]

Our Strategic Plan, which was revised and approved at year-end 2015, identifies key management challenges facing the Mint over the coming years. Our planning process includes a review of our Mission, Vision and Values (see page 8) and development of a Strategic Roadmap of goals set for the period from 2015 to 2022. Our Strategic Plan for 2017 to 2022 was reviewed and approved in December 2016.

Our Strategic Plan 2015-2022 identifies key management challenges facing the Mint over the coming years.

# Our Strategic Roadmap

“To be recognized in the domestic and international market and by society for excellence, innovation and sustainability in security solutions across the currency, identification, fiscal control and numismatics segments.”



## our Values

- . Ethics . Transparency . Results Orientation . Quality
- . Innovation . Sustainability . Commitment



Since 2012, our matrix governance structure has undergone improvements to enhance cross-department communication efficiency

► **REORGANIZATION** [GRI G4-13]

In July 2015 a new management framework was approved by the Board of Directors. The Mint has been restructured into business units to make the Company more efficient, competitive and effective. Significant changes included the discontinuance, merging, creation and segmentation of company departments (which required ongoing programs to be migrated across departments); re-managing employees at departments less in demand; and developing a new training and knowledge management system.

The Management Department (MD) is responsible for our management structure and organizational processes, while the Banknote and Coinage, Passport and Security Printing and Staff departments are responsible for each of these three business functions.

Since 2012, our matrix governance structure has undergone improvements to enhance cross-department communication efficiency. The model consists of control points for strategic processes and activities for which results are monitored and ownership is shared in proportion to the levels of authority of each managerial level.

The Mint began fiscal year 2015 under the management of Chief Executive Francisco de Assis Leme Franco, who was appointed in February 2012. In October 2015, Franco stepped down and was replaced by Maurício Visconti Luz on appointment by President Dilma Rousseff. Maurício retained his position until April 2016, when he was replaced on an interim basis by Lara Caracciolo Amorelli. In July 2016, Alexandre Borges Cabral was appointed Chief Executive on a definitive basis.

well as guidance on anti-corruption procedures. Induction procedures for young apprentices were also implemented, including briefing on the Mint's Code of Ethics. [G4-S04]

All employees joining the Mint receive a copy of the Code. We also organize lectures on ethics for new hires and periodic training for all employees.

The Mint's primary sources of reference on ethics management include the guidelines published by the Federal Audit Court (TCU), the Ministry of Transparency, Oversight and General Controllershship (CGU) and the Ministry of Planning, Development and Management (MPOG), and resolutions issued by the Joint Commission for Corporate Governance and

Management of Government Equity Interests (CGPAR).

Transparency, accountability and anti-corruption mechanisms – three issues deemed material for the Mint – are ensured through best-practice recommendations issued by the Brazilian Institute for Corporate Governance (IBGC). Our practices are periodically reviewed by the Federal Audit Court using a Governance Questionnaire, and by the Office for Management and Governance of Government-Owned Companies (SEST, formerly the Department for Management and Governance of Government-Owned Companies) using the Federal Government-Owned Company Management and Leadership Questionnaire.

► **ETHICS, COMPLIANCE AND RISK MANAGEMENT**

[GRI G4-2, G4-56], G4-DMA Anti-corruption

We believe ethics means promoting fair, best practices without discrimination of any kind. In 2015, a review of the Mint's Code of Ethics was initiated by the Board of Ethics. Compliance with good management practices is enforced by the Compliance Department, which coordinates our risk management functions in accordance with the principles laid down in our Integrated Risk Management Policy.

The Mint has an Ombudsman's Office responsible for handling suggestions, complaints and concerns related to our governance procedures and ethics. All concerns are recorded in the Federal Ombudsman Office System of the Ministry of Transparency, Oversight and General Controllershship (CGU), which

monitors compliance with reporting and response requirements and time frames. The Mint also has an Ethics Committee formed of three employees and three substitutes to address matters related to our employees' conduct.

In 2016, a total of 1,014 employees – including 244 middle management employees (24%), 660 operational-level employees (65%) and 110 apprentices (11%) – received anti-bribery training. Attendance levels far exceeded those in 2015 (four employees: one senior management, one middle management and two operational-level employees), with lectures in 2016 targeting all Mint employees.

Education initiatives providing practical training about ethics and corruption were also implemented in 2016. The program includes lectures on ethics for all employees, as



**1,014 EMPLOYEES**

AT ALL ORGANIZATIONAL LEVELS ATTENDED ANTI-CORRUPTION TRAINING IN 2016

**COMPLIANCE POLICY**

The guiding principles of our compliance policy are as follows:

“In striving to attain the highest standards of compliance, the Mint's strategic goals, and sustainable, lawful, ethical and transparent business practices, the Brazilian Mint will:

- a) Use a preventive approach to mitigate the risk of losses and fraud and prevent any bribery and corruption incidents with the potential to cause property and reputational damages to the Mint;
- b) Comply at all times with the laws, standards and internal guidelines and rules on best-practice corporate governance;
- c) Encourage employee commitment to conducting their tasks to the highest standards of excellence and security;
- d) Document and keep up to date Policies and Guidelines and disseminate them to employees through appropriate systems and training;

- e) Ensure that adequate, sound and reliable internal controls are in place and functioning properly to mitigate risks, address the complexity of each process, and protect the organization's information;
- f) Observe the principle of segregation of duties in its activities, processes and limits of authority and prevent conflicts of interest;
- g) Ensure employees build the skills needed for their roles;
- h) Create a participatory and inclusive environment through open and transparent communication across all levels of the organization and encourage respectful, purposeful and constructive criticism in all activities;
- i) Promote a culture of integrity by raising awareness and educating its employees and business partners, based on the principles and values laid down in its Code of Ethics.”

The Mint's draft compliance policy was approved by the Board of Directors in 2016.



## Our performance in 2015 and 2016

The Mint has streamlined its internal processes and continued to invest in innovative products and developing new markets and customers.

G4-DMA Economic performance

Since 2014, Brazil has been engulfed in a combined political and economic crisis that has negatively affected nearly every industry in the country.


In addition to political instability and changes in government, Brazil's economy suffered from the deterioration of several fundamentals. Fiscal imbalance, negative GDP growth, successive basic interest rate rises, a slowdown in the manufacturing and service sectors, rising inflation, the weakening of the real and rising unemployment all contributed to compound the crisis. This affected

the performance of and the strategy adopted by the Mint, which derives its revenue nearly entirely from federal government contracts. To mitigate the most adverse effects from the crisis, the Mint has streamlined its internal processes and continued to invest in innovative products and developing new markets and customers.

number of commissioned positions. Our efforts to improve cash flows were effective in reducing the Mint's indebtedness by approximately R\$ 50 million in August 2015, and by a further R\$ 50 million in October 2016. Lower indebtedness reduced the Mint's debt service costs by approximately R\$ 10 million.

► **STRATEGY AND OUTLOOK** [GRI G4-2]

The Mint's activities under an exclusive legal mandate – which include the production of Brazil's circulation currency, postage and revenue stamps, and passport booklets – mean the organization has a mandatory commitment to its primary government customers.

  
**R\$ 10 MILLION**  
**REDUCTION**  
IN DEBT SERVICE COSTS IN  
2015/2016

With the projected decline in production rates at our coin and banknote manufacturing plants, material purchases were reduced until inventories matched demand.

## MARKET OVERVIEW



**13.75%**

BASIC INTEREST RATE AT 2016. IN DECEMBER 2015, THE BASIC INTEREST RATE WAS 14.15%

**6.28%**

INFLATION AT YEAR-END 2016 (IPCA) ACCORDING TO THE IBGE – LOWER THAN THE INFLATION TARGET CEILING

Two important economic indicators rose significantly in 2015 and 2016: inflation and interest rates. The Broad Consumer Prices Index (IPCA), which is officially used to measure inflation, ended 2015 at 10.67%; at year-end 2016 the index stood at 6.28%, according to the Brazilian Institute for Geography and Statistics (IBGE). In an attempt to curb inflation, the Central Bank raised the basic interest rate successively from 11.65% in 2015 to as high as 14.15% in July that year. In 2016, two rate decreases were approved in October and November.

The Brazilian Central Bank faced budget restrictions in 2014, 2015 and 2016 that led to a reduction in

banknote and coinage orders. The result was a decrease in revenue from circulating coinage and banknote production. In response, the Mint adopted a strategy to minimize the impacts from the negative business environment. With the projected decline in production rates at our coin and banknote manufacturing plants, material purchases were reduced until inventories matched demand. Contracts with suppliers were reviewed to renegotiate prices and terms and conditions, and the Mint's new demand levels were communicated to our procurement staff. Fixed costs were also reduced by limiting overtime work to an absolute minimum and reducing the



◀ Material handling at one of our plants: inventories have been matched to demand

Our manufacturing facilities are state-of-the-art thanks to substantial investment in technology between 2009 and 2013.

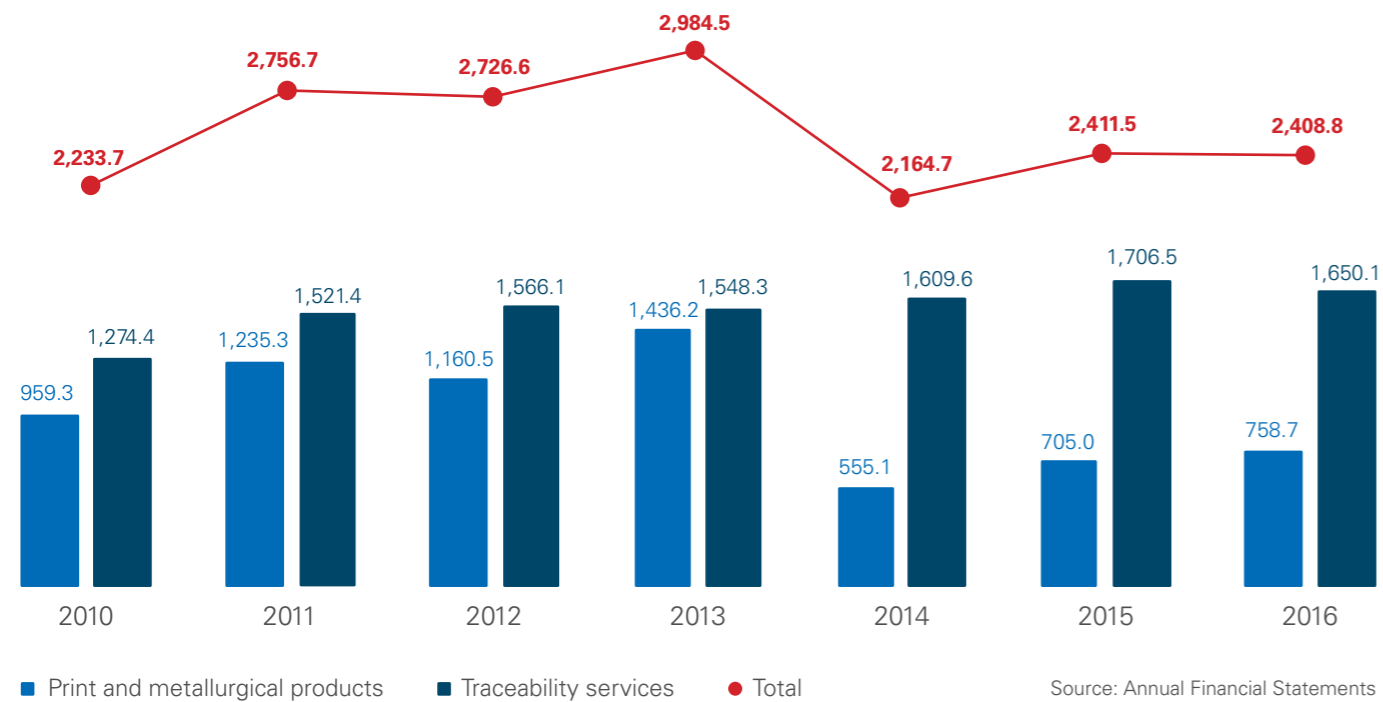
However, we have continued to diversify our product portfolio and develop new markets to optimally use our production capacity and reduce dependence on our two primary federal government customers, the Brazilian Central Bank and Federal Tax Authority.

Our manufacturing facilities are state-of-the-art thanks to substantial investment in technology between

2009 and 2013. Also as part of our product and service diversification strategy, in 2015 a total of R\$ 18 million was invested in new equipment and another R\$ 12.6 million in maintenance and upgrades.

The graph below shows that service revenues have also improved since 2010:

► Changes in gross revenue R\$ million



**R\$ 18.3 MILLION**  
INVESTED IN NEW EQUIPMENT IN  
2015 AND 2016



**R\$ 26.3 MILLION**  
ALLOCATED TO FACILITIES  
MAINTENANCE AND UPGRADES IN  
2015 AND 2016

**167.8 MILLION**  
**100 PESOS**  
BANKNOTES PRODUCED FOR  
ARGENTINA



◀ Argentine 100 pesos banknotes: an example of the Mint's export products

The Banknote and Coinage Division, while primarily serving the Brazilian Central Bank, also works to develop new customer accounts in foreign jurisdictions. The Stamps Division is engaged in efforts to incorporate new value chain tracking technologies for products such as cigarettes and cold beverages. As part of these efforts, the division has invested in training and in programs in collaboration with universities and research centers. The Passports and Security Print Division is working to improve

competitiveness and develop new customer accounts in segments in which the Mint does not have a monopoly.

In 2015 and 2016, the Mint produced 167.8 million 100 pesos banknotes for Argentina.

# 2015 & 2016 HIGHLIGHTS



## ► Medals Club

Created in 1977, the Medals Club of the Brazilian Mint is a cultural organization that brings together enthusiasts with a common interest in medals. The Club disseminates information about numismatics in Brazil through exhibitions and public launches of medals celebrating relevant historical, cultural, religious and sporting events.

Medals are crafted to the Mint's high standards of quality. Each is a unique piece of individually minted workmanship, hand-finished with patina (aging effect), contrast (by juxtaposing polished and matte finish) or color by manually applying resin.

## ► Medals and commemorative coins

### 2015

In March, Rio de Janeiro's 450<sup>th</sup> anniversary was commemorated with a gold, silver and bronze medal drawing inspiration from the skyline of Morro Dois Irmãos and Leblon Beach. The Mint also produced the 1<sup>st</sup> of March Medal granted by the City Hall of Rio de Janeiro to citizens for services rendered to the city.

A medal commemorating the 150<sup>th</sup> anniversary of the birth of Marshal Cândido Rondon, created by the Brazilian Army and designed by our own artists, was launched in May. A mintage of 500 medals (150 gold-plated bronze, 250 bronze, 95 silver and 5 gold medals) was produced. Another medal linked to the Brazilian Armed Forces was launched the following month celebrating the 150<sup>th</sup> anniversary of the Battle of Riachuelo.

Another two medals were sports-related. ABC Futebol Clube, of Natal (RN), commissioned a medal celebrating its centenary, crafted of gold, silver, resinated silver, resinated gold-plated bronze, resinated bronze,

gold-plated bronze and bronze. Clube de Regatas Flamengo (RJ), or simply Flamengo, as it is popularly known, celebrated its 120<sup>th</sup> anniversary with a medal created and designed by the Mint.

In culture, three new medals were launched: in August, a medal celebrating the 30<sup>th</sup> anniversary of the Rock in Rio music festival; in September, a medal celebrating the 50<sup>th</sup> anniversary of the founding of the Museum of Image and Sound of Rio de Janeiro (MIS-RJ); and in October, a medal celebrating the 80<sup>th</sup> birthday of Maurício de Sousa, the creator of the comic series Monica's Gang.

In December, the city of Salvador (where the Mint's headquarters were once located) commissioned a commemorative coin as part of the *World Heritage Cities of Brazil* series.

### 2016

A highlight in 2016 was the launch of the Rio 2016 licensed merchandise medals. Five models were available: Olympic Torch (symbolizing the link between the ancient and modern Olympic Games), Olympic Games in the Modern Era, Mascot Tom and the City, Mascot Vinicius and the City and Mascot Ginga and Team Brazil. The Olympic Torch medal was gold, the

Olympic Games medal was silver, and the other three were bronze.

In August, the Mint launched a medal celebrating 100 years of Brazilian naval aviation, in gold, silver and bronze versions. The following month, the second centenary of the School of Fine Arts of the Federal University of Rio de Janeiro was celebrated by two commemorative coins available in gold, silver with resin and bronze with resin versions.

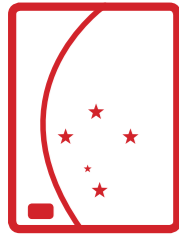
On October 12, a series of medals was launched in celebration of the 300<sup>th</sup> anniversary of the apparition of Our Lady of Aparecida. The medals were unveiled (in gold-plated silver, silver and bronze versions ) in a ceremony held at the Basilica of the National Shrine of Our Lady Aparecida (Aparecida, SP). In November, a commemorative coin in tribute to Olinda (PE) was launched as part to the *World Heritage Cities* Series.

The last new release in 2016 was in Rio de Janeiro: three medals celebrating the 100<sup>th</sup> anniversary of the first samba recording (*Pelo Telefone*, 1916), produced in gold-plated silver, silver and bronze versions.

## ► PRODUCTION AND SALES OF RIO 2016 COMMEMORATIVE COINS

PRODUCT LAUNCHED	RELEASE THEMES	2014		2015		2016	
		1 <sup>ST</sup> RELEASE	2 <sup>ND</sup> RELEASE	3 <sup>RD</sup> RELEASE	4 <sup>TH</sup> RELEASE		
Gold coins	1	5,011	5,011	5,011	5,011		5,011
Silver coins	4	75,320	70,600	70,600	55,400		
Bi-metallic coins	1-coin wallet		80,520	78,720	54,520		58,520
	4-coin wallet	4	5,020	5,020	5,020		5,020
	Circulation coins		79,900,000	79,901,800	79,926,000		79,922,000
<b>Totals</b>	<b>9</b>	<b>80,065,871</b>	<b>80,061,151</b>	<b>80,061,151</b>	<b>80,045,951</b>		

With a total of 320,234,124 units produced, the Mint recorded revenue of R\$ 145,513,118.63 and estimated profit of R\$ 14,551,311.86 in 2016. Source: Monetary System Service Division (SEMO).



► 10-year passport release

The new Brazilian passport, with a 10-year validity period, was released in July 2015 in a joint project of the Mint, the Federal Police Department (DPF), the Ministry of Foreign Affairs and the Federal Data Processing Service (SERPRO). Manufactured exclusively by the Mint, the new passport incorporates a number changes to accommodate the 10-year validity period. These include the use of a new security ink and an encryption model that ensures the integrity of, and restricts access to, the biographic and biometric data recorded on the chip. The Mint invested R\$ 7.5 million in new equipment, increasing annual production capacity to more than three million passports.

There were a number of unexpected disruptions in passport production in 2016. A disruption in the normal supply of materials for production extended over a period of approximately two months, before being finally resolved in June. That same month, one of the



laser perforation units used in the production of passport booklets experienced a critical failure, causing a second stoppage of production and triggering a quick investigation to repair the damaged component.

As a result, the normal timeframe for passport delivery was extended. To meet passport demand in the meantime, the Mint was authorized by the Federal Police Department to produce a special series of passports without the perforated numbering (but fully valid and containing all other security features). Production was stabilized and normal lead times were reestablished in October. An extra effort was required from the departments directly and indirectly involved to produce and deliver a backlog of 190,000 passports.



► Gender and Race Equity Mark

In November 2015 the Mint was presented with a Gender and Race Equity Mark by the Special Office for Women's Policies. In its fifth edition, the award recognizes efforts in industry to create a workplace that is free of discrimination and prejudice on the basis of gender and race. The Mint voluntarily subscribed to the Gender and Race Equity Program in



► Hague Apostille

On August 15, 2016 the Mint and the National Council of Justice (CNJ) launched the Brazilian Hague Apostille. An apostille allows public documents to be recognized in a foreign jurisdiction under the Hague Apostille Convention, to which Brazil acceded in the second half of 2015. Apostilles make the legalization of documents among the 112 signatory countries a simpler and more efficient process, with the mutual recognition of Brazilian documents in foreign jurisdictions and vice versa. Brazilian apostilles are manufactured exclusively by the Brazilian Mint under CNJ Resolution 228 (06/22/2016) and are available from all notary offices.

2013. We have since implemented a number of equity initiatives such as such including same-sex partners as dependents for income tax deductions, using individuals' chosen names within the company and organizing lectures on religious intolerance, human diversity and gender and race issues. [GRI G4-15]



► ABNT Certifications

Adding to our certification to ISO 9001 (Quality Management System), in July 2015 the Brazilian Association of Technical Standards (ABNT) certified the Mint's Quality, Health, Safety and Environment (QHSE) Management System to ISO 14001 (Environmental Management System) and OHSAS 18001 (Occupational Health and Safety Management Systems). These certifications – which were obtained following an audit by ABNT on system conformity – attest that environmental management and health and safety management requirements have been implemented.



In 2016 the Mint was certified to ABNT NBR 15.540 – *Graphic technology*, attesting to sound management of security printing processes. This standard specifies the requirements for companies in the security printing value chain.

Certifications attest to our conformity to quality, environment, health and safety and security printing requirements.



AWARDS IN 2015 AND 2016

*Premio Benchmarking Brasil*

The Mint was presented with awards in 2015 and 2016 by *Instituto Mais* within the *Benchmarking Brasil* program. The program selects the best case studies on corporate environmental management to strengthen and encourage adoption of best practices in social and environmental management among Brazilian companies and organizations. With a case study titled "Voluntary reforestation to neutralize greenhouse gas emissions," the Mint was awarded a technical rating higher than 7.1, ranking 11<sup>th</sup> in the 2015 edition of the program. The following year, the Mint was awarded for a case study titled "Sustainable production," achieving a

rating higher than 7.4 that earned the Company 8<sup>th</sup> place in the program.

**A3P Best Sustainability Practices Award**

This award program is run by the Ministry of the Environment to promote the adoption of social and environmental sustainability principles by government organizations and agencies. In 2016, the Mint was a finalist among the 90 candidates for the award in the Sustainable Use/Management of Natural Resources category, with a case study titled "Reforestation to neutralize greenhouse gas emissions".



# The Mint and Rio 2016

Art, technology and sustainability in sports: learn how the Mint used innovation and skill in crafting medals, commemorative coins and safety print materials for the Rio de Janeiro Olympic and Paralympic Games.

In 2014, the Mint was selected as the official supplier of medals to the Rio 2016 Olympic and Paralympic Games.

The security print materials produced for the event – including Olympic diplomas, participation certificates and commemorative certificates – were also produced by the Mint’s security print facilities. The commemorative coins for the event were designed by artists from the Central Bank and the Mint, with technical support from the Organizing Committee of the Olympic and Paralympic Games. The Olympic and Paralympic medals were designed jointly by the Mint and the Rio 2016 Organizing Committee.

In April and August 2015, two new gold and silver editions of the commemorative coins for the Games were released, as well as a special mintage of the R\$ 1 circulation coin. The coins are inspired by the landscapes of Rio de Janeiro and Olympic sports. A fourth set of coins was released in February 2016.

Beginning in July 2016, the commemorative coins were marketed by the Medals Club of the

Brazilian Mint and at official Rio 2016 merchandise stores in Copacabana and at the Olympic Park. The gold coin paid tribute to Christ the Redeemer and the 100-meter dash. The silver coins paid tribute to Rio de Janeiro: the obverse side depicted its famed landscapes, where city dwellers engage in sports such as rowing, running, cycling and beach volleyball; the reverse side depicts aspects of Rio’s and Brazil’s culture and nature. Harbor porpoises, bromeliads, the Carioca Aqueduct and Bossa Nova are featured in four thematic series: Fauna, Flora, Architecture and Music.



Medal details: ▶ medal designs were created by artists from the Mint



**5,130**  
OLYMPIC  
MEDALS



**93,754**  
PARTICIPATION MEDALS  
70,698 OLYMPIC,  
23,056 PARALYMPIC



**36**  
COMMEMORATIVE  
COINS

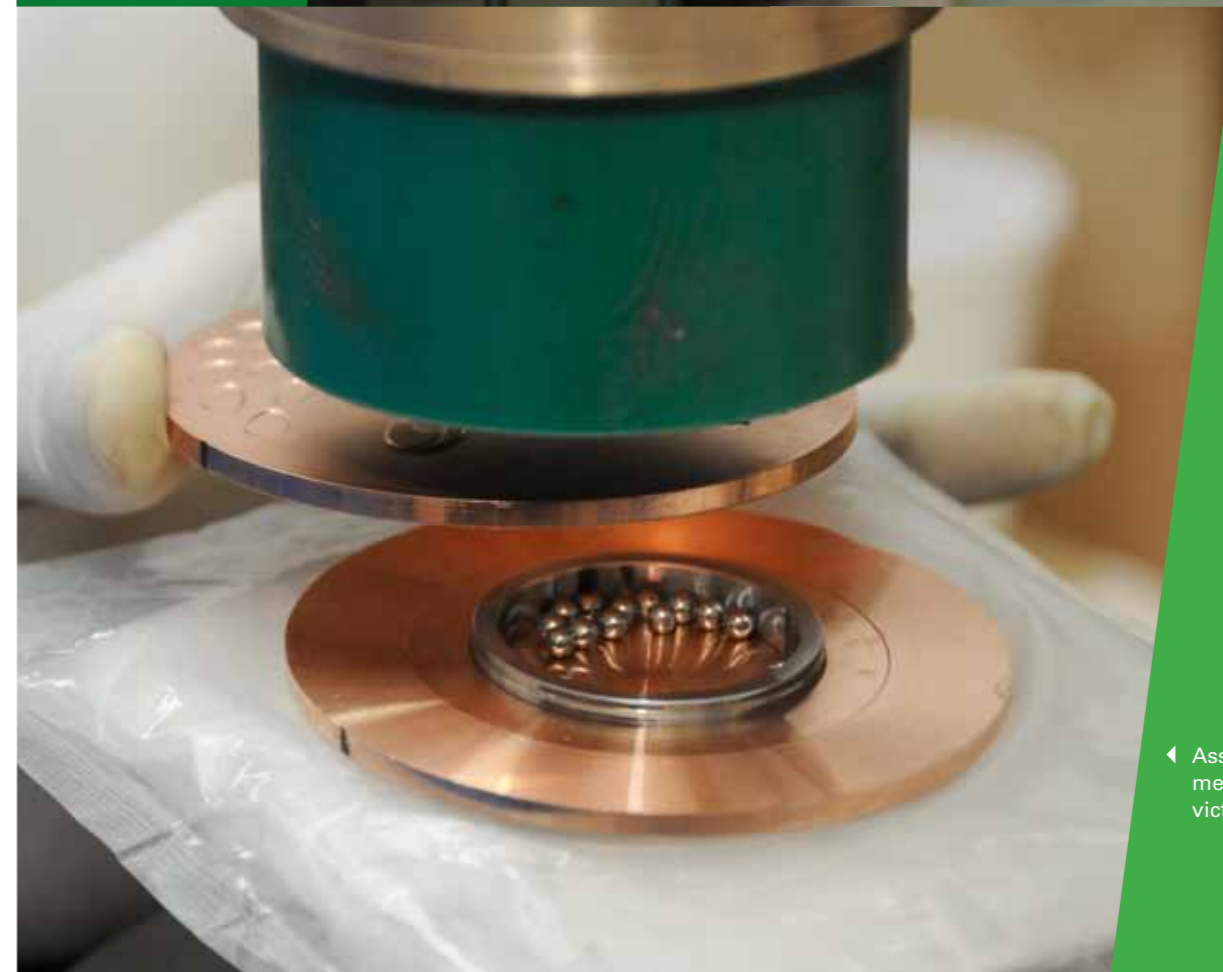


**500g**  
WAS THE WEIGHT OF EACH  
MEDAL

**COMPOSITION**



**GOLD:** 98.8% silver, 1.2% gold  
**SILVER:** 100% silver  
**BRONZE:** 97% copper, 3% zinc



◀ Assembling a Paralympic medal with internal sound-of-victory elements

# THE MOST SUSTAINABLE MEDALS IN OLYMPIC HISTORY [G4-EN2]

The production of Olympic medals and coins has provided a legacy of expertise. While the Mint had already been commissioned to produce the medals for the Pan American Games (2007) and the 2011 Military World Games in Rio, the scope and specifications for the Olympic Games posed a much greater challenge that required innovative solutions in design, materials and manufacturing. More than 100 employees were involved in the various stages of production.

The medals were designed by professionals at the Mint in collaboration with the Organizing Committee of the Games. The team was given free rein in their designs, which included a new depiction of the Greek goddess Nike (who personifies victory) and recurring elements such as seeds and bows. For the first time in Olympic history, the Paralympic medals featured internal elements (steel balls) that produce a distinctive rattle allowing visually impaired athletes to distinguish gold, silver and bronze medals. The Mint combined design innovation with

creative recycling, with the steel balls taken from used machinery and the resonance chambers within the medals made of scrap metal.

In 2015, the Mint initiated a process to obtain certification from the Forest Stewardship Council® (FSC® - FSC-C128498), an international non-governmental organization represented in Brazil by the Brazilian Forest Stewardship Council. FSC certification was a requirement for our partnership with the Rio 2016 Organizing Committee. All forest-derived materials produced by the Mint for the Games were required by the Committee to be supplied by companies conforming to FSC requirements.

The FSC publishes principles and recommendations for the sustainable use of resources from forestry operations. FSC certification assures that all forest-derived raw materials used by a certified organization are

produced using environmentally friendly, socially responsible and law-abiding processes. After developing control and management procedures spanning the entire supply chain, and a training plan based on regulatory requirements, the Mint successfully obtained FSC certification in March 2016. We are the first organization in our segment in Latin America to obtain FSC certification.

A number of other sustainability attributes were also embodied in our products for the Games. The use of recycled materials was a first for the Mint, requiring new processes to be developed for supplier acquisition and evaluation. The process of selecting recycled raw materials required new traceability systems to be implemented, including for waste materials generated by the Mint, as well as inspections and site visits at suppliers, recycling cooperatives, mines and refineries.

Paralympic medals featured internal elements that produce a distinctive rattle for visually impaired athletes to distinguish gold, silver and bronze medals.

Detail ▶  
of the medal  
minting  
process



◀ The Forest Stewardship Council (FSC) certified the Mint for its use of environmentally responsible wood sourcing to produce medal cases



The gold used on the medals was sourced from mining operations that were confirmed not to use mercury in the extraction process, avoiding impacts on the soil and water. Recycled metals (copper and silver) were used in producing alloys. Part of the silver used in the production process came from mirrors, rear automotive defoggers (taken from used parts from the Mint's own fleet), silver-containing welds and x-ray plates. All materials underwent an extraction, smelting and purification process.

More than 40% of all copper used in the production of bronze medals came from industrial waste generated by the Mint in the form of busbars and machining swarf. The materials

The gold used on the medals was sourced from mining operations that were confirmed not to use mercury in the extraction process, avoiding impacts on the soil and water.

were decontaminated and melted at the Mint to produce the alloys needed to make the Olympic medals. The entire recycling process was overseen and monitored by the Rio 2016 Committee. The ribbons for the Olympic and Paralympic medals contained 50% recycled PET materials. The wood for the medal cases was certified to be sourced from environmentally responsible suppliers.

history" through the use of recycled metals and gold extracted in an environmentally and socially sustainable manner.

As of November 2016, the Mint had received 15 Olympic medals for repairs. The medals, which had been damaged by incorrect handling and storage, were polished and varnished to restore their original characteristics. Before being returned, the medals were also analyzed to inform a report on the restoration process. The number of medals returned (about 0.3% of the total produced) is within the expected levels of returns.

These efforts to ensure the proper sourcing and handling of materials used in production were recognized internationally. In a Reuters report published in June 2016, the medals were described as "the most sustainable in Olympic

**374,000**  
SECURITY  
PRINT UNITS SUPPLIED  
WITH FSC CERTIFICATION

**5.130**  
FSC-CERTIFIED  
MEDAL  
CASES

**5,130**  
MEDAL RIBBONS  
PRODUCED FROM  
RECYCLED (PET)  
FIBERS

APPROXIMATELY  
**11Kg OF GOLD**  
EXTRACTED IN A MERCURY-  
FREE PROCESS WITH  
SOCIAL RESPONSIBLE  
WORKING CONDITIONS

**500Kg**  
OF SILVER  
PRODUCED FROM  
RECYCLED MATERIALS  
SOURCED FROM SUPPLIERS  
INSPECTED BY THE MINT

**1,700Kg**  
OF COPPER  
PROCESSED  
FROM SCRAP  
GENERATED BY  
THE MINT



◀ Olympic (above) and Paralympic (below) gold, silver and bronze medals



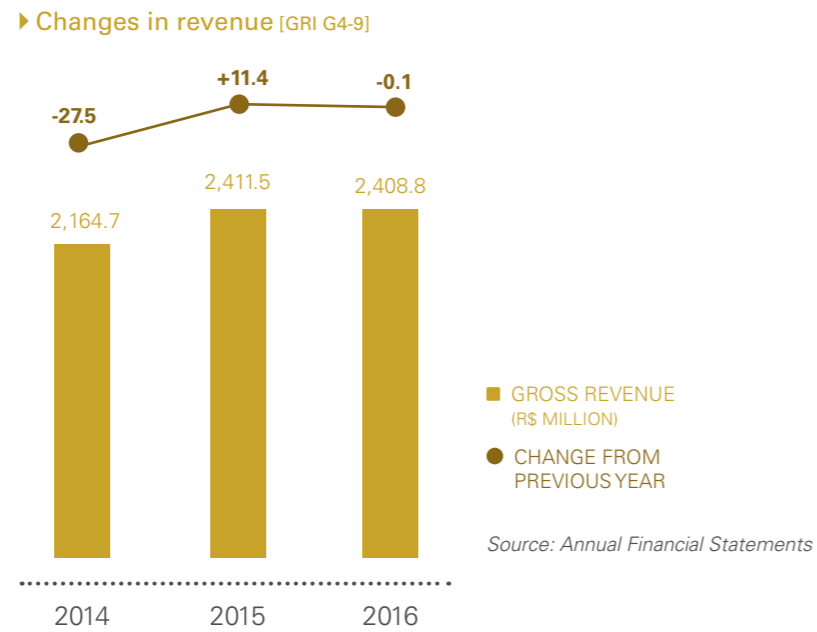
# OPERATIONAL AND FINANCIAL PERFORMANCE

A summary of our headline economic performance indicators and banknote, passport and revenue stamp production figures in fiscal 2015/2016.

G4-DMA Economic performance

Traceability services were the Mint's primary sources of revenue in fiscal 2015 and 2016, accounting for total revenue of R\$ 3.35 billion in the period

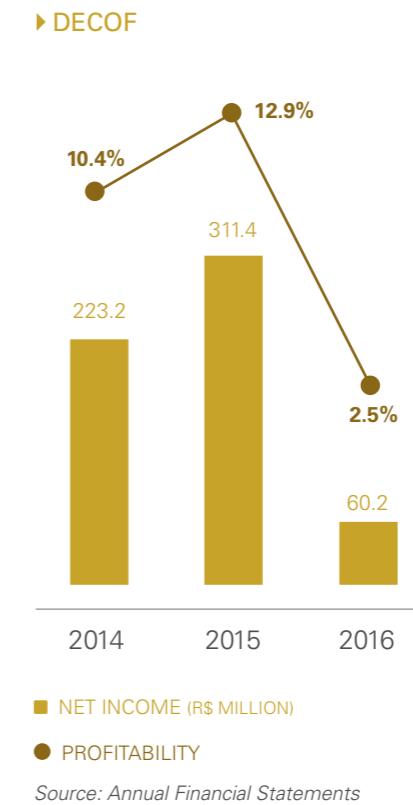
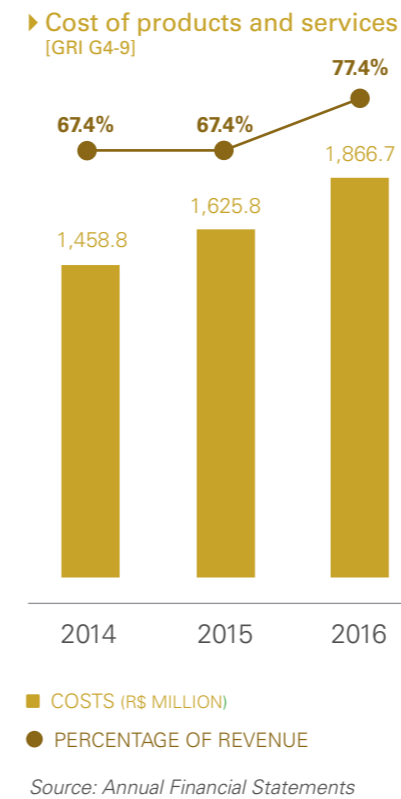
Gross revenue remained largely level in the period, with especially positive revenue from tracking services for the Federal Tax Authority's Beverage Production Control System (SICOBE) and Production Tracking Control System (SCORPIOS). Due to the Central-Bank's budget restrictions, these services accounted for more than 75% of total sales in 2015 and 2016.



► REVENUE BREAKDOWN comparing 2014/2015/2016

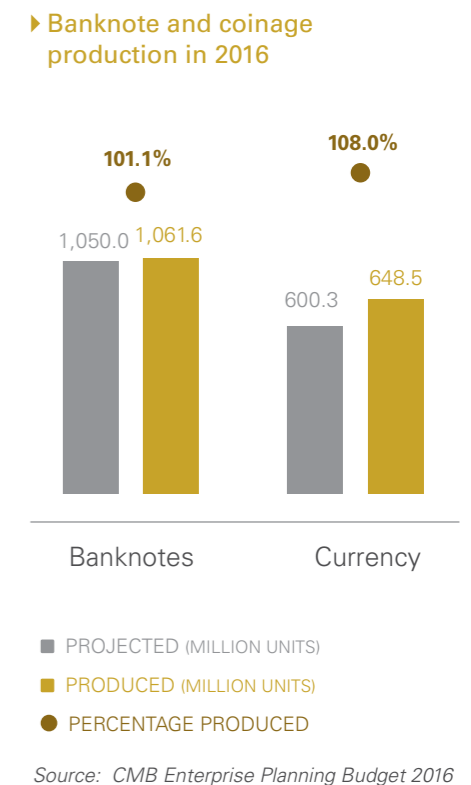
REVENUE BY CATEGORY (R\$ MILLION)	2014	2015	2016	CHANGE (%) 2015/2014	CHANGE (%) 2016/2015
Tracking services	1,609.6	1,706.5	1,650.1	+6.0	-3.3
Brazilian banknotes	223.3	278.6	279.6	+24.8	+0.4
Brazilian coinage	126.5	239.7	261.3	+89.5	+9.0
Brazilian passports	108.7	129.2	157.3	+18.8	+21.7
Postage stamps	5.0	8.9	1.5	+78.0	-83.1
Foreign bank notes	8.9	11.9	2.4	+33.7	-79.8
Other products and services	82.7	36.7	56.6	-55.6	+54.2
<b>Total revenue</b>	<b>2,164.7</b>	<b>2,411.5</b>	<b>2,408.8</b>	<b>+11.4</b>	<b>-0.1</b>

Source: Annual Financial Statements



► Brazilian banknotes and coins

Material sourcing and quality issues prevented the Mint from fully meeting its program projections for 2015. The initial Production and Sales Program projected estimated sales of 1.05 billion banknotes and 600.3 million coins to the Brazilian Central Bank in 2016, well within our plants' annual production capacity. In October 2016, the Mint hired expert printing machinery engineers to assess banknote production line productivity and the condition of plant equipment. Based on this assessment, studies have been initiated toward upgrading production capacity without the need to invest in new machinery.

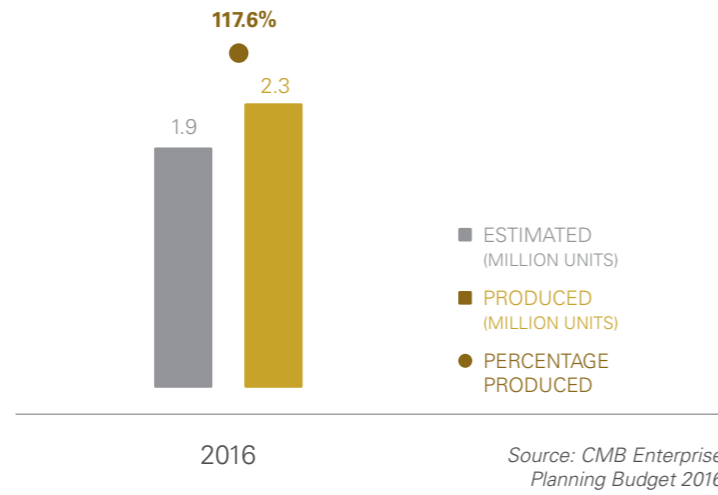


Experts are working to upgrade banknote production capacity without the need for new machinery acquisitions

► **Passports**

Passport demand remained relatively stable in 2015 and 2016 at 2.3 million units, confirming a trend continuing from early in the decade. With the start of production of passports with a 10 year validity period, a significant reduction in demand is expected from 2020, when regular five-year passports are expected to all have been replaced with new passports.

► **Passports sold in 2016**



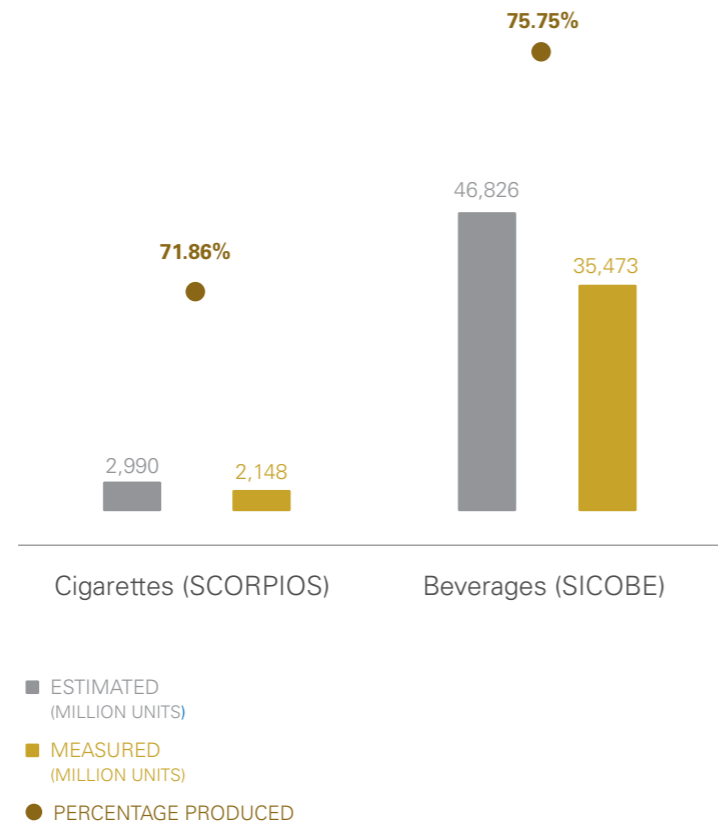
► **Tracking stamps**

Stamp production volumes for the SICOBE (beverage) and SCORPIOS (cigarette) systems were lower than originally estimated.

Revenue from cigarette stamps has decreased since 2012, reflecting a global decline in the consumption of tobacco products due to their adverse health effects. Government efforts to curb smoking also played a role, including laws prohibiting smoking in public places, educational campaigns and higher taxes on the tobacco industry.

Product volumes supplied to the SICOBE have remained stable since 2010, after increasing significantly from 2009 to 2011. The increase was largely due to a change in the tax enforcement methods adopted by the Federal Tax Authority.

► **Number of products invoiced in 2016**



In October 2016, the Federal Tax Authority published a resolution releasing industrial beverage bottlers from the requirement to use the SICOBE system. The resolution negatively impacted our revenues. The Mint is developing an alternative approach to be submitted to the Tax Authority and implemented within 2017.

► **Innovation Projects**

The organization of our innovation and product development programs has changed following a reorganization in 2015. As part of these changes, the Security Print and Passport Department (SPPD) and the Information Technology and Communications Department (ITCD) were both involved in a project to develop a new chip for Brazilian passports with fully homegrown technology, led by Centro Nacional de Tecnologia Avançada S.A. (CEITEC).

Created in July 2015, the Stamp Development and Technology Department (SDTD) has focused on enhancing versatility and developing new applications for revenue stamps. The department has initiated a process to vertically integrate automation and information technology processes (TI) previously handled by third-party service providers. A separation of the production processes will also help expand the Mint's technology provider base.

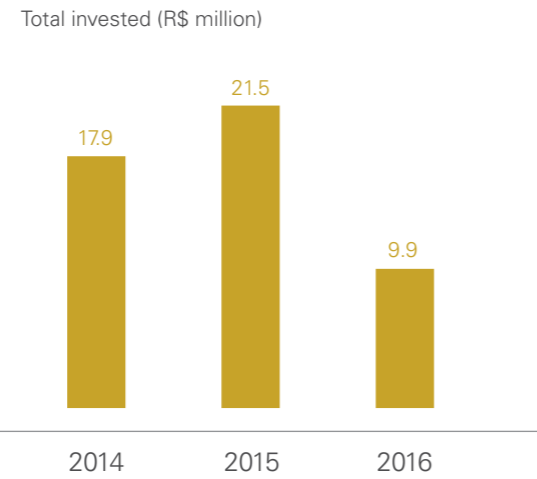


◀ The production team responsible for producing Brazil's new 10-year passports

► **Investment in equipment**

R\$ 18.3 million was invested in new equipment and R\$ 11.2 million in repairs and upgrades in 2015 and 2016. Projects included the initial phase of construction of a new vacuum furnace for the thermal treatment of coinage dies, new letterpress printers for individual banknote replacement, and new pad printing machines for color printing of numismatic coins.

► **Historical investment in technology**



Source: Investment Budget



◀ The Mint invested a total of R\$ 49.3 million in manufacturing plant technology from 2014 to 2016

► **Statement of added value**

G4-EC1

Gross revenue from new additions to our solutions portfolio has increased substantially in recent years, with particularly strong revenues from our track and trace revenue stamp lines for cigarette and cold beverage products. A rising revenue trend ended in 2014 largely due to shrinking demand from the Brazilian Central Bank. However, revenues improved in 2015 on the back of higher services demand.

In 2014 and 2015, employee profit-sharing bonuses were 9.0% of net income for each year. In those same

years, dividend payments to the Federal Government were 38.2% of net income for each year, less legal reserves.

Corporate income tax incentives under the Rouanet Act and the Worker's Nutrition Program are not used by the Mint due to an income tax credit balance accrued as a result of the exclusion from our tax base of 98% of revenues derived from monopoly products. [G4-EC4]

► **ECONOMIC VALUE GENERATED BY THE MINT – HISTORICAL SERIES**

DIRECT ECONOMIC VALUE GENERATED - REVENUE (R\$)*	2014	2015	2016
	R\$ 2,195,312,983.10	R\$ 2,483,472,104.82	R\$ 2,460,333,447.13
ECONOMIC VALUE DISTRIBUTED (R\$)*	2014	2015	2016
Operating costs	R\$ 1,494,856,478.07	R\$ 1,768,201,399.06	R\$ 1,665,647,868.49
Employee salaries and benefits	R\$ 308,357,197.30	R\$ 303,990,648.62	R\$ 553,199,679.50
Payments to providers of capital	R\$ 136,936,449.25	R\$ 157,826,955.62	R\$ 52,688,472.58
Payments to government	R\$ 112,976,377.96	R\$ 55,087,563.43	R\$ 128,621,387.45
<b>Total</b>	<b>R\$ 2,053,126,502.58</b>	<b>R\$ 2,285,106,566.73</b>	<b>R\$ 2,400,157,408.02</b>
ECONOMIC VALUE RETAINED (R\$) ("DIRECT ECONOMIC VALUE GENERATED" LESS "ECONOMIC VALUE DISTRIBUTED")	2014	2015	2016
	R\$ 142,186,480.52	R\$ 198,365,538.09	R\$ 60,176,093.11

Source: Statement of Added Value



# STAKEHOLDER ENGAGEMENT

The Mint engages with stakeholders in a number of ways: as a state company; as an employer; as a customer; and as a supplier of products and services.

In addition to our permanent commitment to the Federal Government as a supplier of banknotes and coins, we engage with a range of stakeholders in a number

of ways: as a state company; as an employer; as a supply-chain customer; and as a supplier of services and products that are essential to Brazilian society. This chapter summarizes

our key achievements in stakeholder engagement in 2015 and 2016.

## OUR KEY STAKEHOLDERS

As part of our materiality process, managers were consulted to identify our key stakeholder groups.

### KEY STAKEHOLDERS [GRI G4-2, G4-24, G4-25, G4-26, G4-27]

STAKEHOLDER GROUP	DESCRIPTION	RELATIONSHIP	TYPE OF ENGAGEMENT	MATERIAL TOPICS
Internal stakeholders	Our internal stakeholders comprise three major groups: employees, managers and senior management (executive directors, the chief executive and boards and committees)	The Mint has people in many different roles all working to deliver high-quality products. We provide a workplace that is suited to their needs and services that help to improve their performance and quality of life.	Continuous through people management initiatives (training, climate survey, internal communications, etc.)	Ensuring financial sustainability; anti-bribery policies and practices; customer relationship management; development of human capital; operational eco-efficiency; relationship with the government and regulators
Federal government	This includes oversight bodies (Ministry of Finance), regulators (Ministry of Planning) and audit bodies (Federal Audit Court, Ministry of Transparency, Oversight and General Controllorship (CGU), and Office for Management and Governance of Government-Owned Companies)	In addition to being our primary customer, the Federal Government also participates in our management, internal controls and ensuring compliance with administrative acts.	Continuous through Board of Directors meetings, management reports and periodic compliance and internal controls questionnaires	Ensuring financial sustainability; anti-bribery policies and practices; accountability and transparency; brand building
Customers	In addition to our primary customers (Federal Government agencies including the Central Bank of Brazil, the Federal Tax Authority, the Federal Police and the Postal Service), several other public and private institutions and companies	We invest in state-of-the-art technology to ensure maximum quality in our products and processes, while delivering efficient customer service and solutions.	Continuous, through our sales and customer relationship departments	Customer relationship management; operational eco-efficiency; technological development; product quality; accountability and transparency
Suppliers	Companies supplying materials and services to the Mint	Suppliers are engaged through competitive procurement and must conform to a number of requirements, including technical, safety, quality and sustainability requirements.	Continuous, through contact with the departments managing competitive procurement, contracting and supplier performance assessments	Customer relationship management; research and development; brand building
Community	The general public and civil society organizations	The circulating currency and passports produced by the Mint are used by the general public. In addition, the Mint invests in social and environmental responsibility and brand-building initiatives such as the <i>Conheça a CMB</i> program and this Sustainability Report. Read more in Social and environmental responsibility initiatives.	Ad hoc initiatives such as social responsibility projects, communications (media office, publications in general, information published on our official website, our Sustainability Report)	Customer relationship management; product quality

Source: The materiality process conducted in 2016 by Report Sustentabilidade

Other stakeholder groups include foreign governments (potential currency and/or passport production customers), third-party employees,

the National Mint Workers' Union, external research centers involved in our projects, competitors and peers in other jurisdictions, and the media.

## INTERNAL STAKEHOLDERS [G4-DMA Employment, G4-9]

At year-end 2016 the Mint had a total of 2,934 employees (including apprentices and interns). Developing our human capital is a material issue for the Mint, and is supported by a range of employee development

and recognition initiatives. All Mint employees work in the Southeast of Brazil (except one employee working in Brasilia). [G4-10]

### TOTAL WORKFORCE BY FUNCTIONAL LEVEL\*

	2014		2015		2016	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Board of Directors <sup>9</sup>	9	3	9	3	9	3
Executive Board	4	1	4	1	4	1
Middle Management <sup>1</sup>	149	70	140	70	141	69
Advisory <sup>2</sup>	40	31	40	23	39	21
Coordinator/Supervisor <sup>3</sup>	101	26	99	24	99	24
Other Bona Fide Positions <sup>4</sup>	43	44	41	40	41	40
Management <sup>5</sup>	624	208	583	195	567	191
Production <sup>6</sup>	742	354	727	334	723	334
Production Support <sup>7</sup>	369	78	356	71	354	70
Apprentices	39	52	30	66	42	68
Interns	17	54	27	78	33	61
<b>Total by Gender</b>	<b>2,137</b>	<b>921</b>	<b>2,056</b>	<b>905</b>	<b>2,052</b>	<b>882</b>
<b>Total</b>	<b>3,058</b>		<b>2,961</b>		<b>2,934<sup>9</sup></b>	

<sup>1</sup> Superintendent; Deputy Superintendent; Executive Manager; Manager; Head of Audit; Cabinet Chief; Ombudsman.

<sup>2</sup> Special Advisor; Advisor to the Executive Board; Advisor; Technical Assistant to the Executive Board; Technical Assistant.

<sup>3</sup> Coordinator; Supervisor.

<sup>4</sup> Senior Consultant; Consultant; Specialist; Inspector; Currency Expert; Floor Operator; Executive Board Secretary; Secretary.

<sup>5</sup> Employees without assigned roles working at: Presi, Gabin, Dejur, Depac, Deemp, Audit, Disel, Dicem, Dipim, Diges, Detic, Decof, Degep, Decec, Delog, Desec, Degec.

<sup>6</sup> Employees without assigned roles working at: Deser, Deced, Demom, Depas, Depim.

<sup>7</sup> Employees without assigned roles working at: Detes, Decos, Detec, Demaq, Decem, Detip, Decop

<sup>8</sup> Board members and substitutes

<sup>9</sup> Our workforce – excluding board members, directors, interns and apprentices – comprises 2,713 employees as specified in the table on page 53.

► EMPLOYEES BY EMPLOYMENT CONTRACT AND GENDER

	2014		2015		2016	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Indefinite term	2079	814	1996	760	1976	752
Definite term*	56	106	57	144	75	129
<b>Total by gender</b>	<b>2135</b>	<b>920</b>	<b>2053</b>	<b>904</b>	<b>2051</b>	<b>881</b>
TOTAL WORKFORCE BY EMPLOYMENT TYPE	2014		2015		2016	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Full time	2096	868	2023	838	2009	813
Part time**	39	52	30	66	42	68
<b>Total by gender</b>	<b>2135</b>	<b>920</b>	<b>2053</b>	<b>904</b>	<b>2051</b>	<b>881</b>
<b>Total</b>	<b>3055</b>		<b>2957</b>		<b>2932</b>	

\* Interns and Young Apprentices.

\*\* Young Apprentices.

Source: ERP System – People Management Module

The rates of employee turnover are explained by the absence of new hires since 2012 combined with voluntary termination programs, retirement and employee transfers

to other government companies and agencies. The last round of new hires was on March 4, 2012.

► TERMINATIONS BY GENDER\*

	2014	2015	2016
Men	57	96	31
Women	12	55	11

► TURNOVER BY GENDER (%)\*\*

	2014	2015	2016
Men	0.020	0.035	0.011
Women	0.004	0.020	0.004

► TERMINATIONS BY AGE GROUP\*\*

	2014	2015	2016
Under 30	5	6	4
31 to 50	22	25	17
Over 50	42	120	21

► TURNOVER BY AGE GROUP (%)\*\*

	2014	2015	2016
Under 30	0.002	0.002	0.001
30 to 50	0.008	0.009	0.006
Over 50	0.015	0.044	0.008

\* Employees, Freely Filled Positions, Seconded Employees.

\*\* Terminations or Hires/total workforce (excluding Board Members, Interns and Apprentices).

Source: ERP System – People Management Module

► Changes in staffing and career progression

Our workforce has declined year-over-year since 2014. Our payroll, however, has increased reflecting real wage improvements generated by the Job, Career and Wages Plan approved in 2014, collective bargaining agreements concluded with the National Mint Workers' Union in 2015 and business-as-usual employee promotion and career progression processes.

► EMPLOYEE CATEGORY X PAYROLL 2014/2016 (IN R\$ MILLION)

	2014	2015	2016
Employees	2879	2743	2713
Interns	71	105	94
Young Apprentices	91	96	110

Source: ERP System – People Management Module.



◀ Part of the operations team at the banknote plant: a larger number of employees underwent performance reviews in 2016

In 2015, 2,479 employees were awarded promotions including 2,210 horizontal and 269 vertical promotions. The results from the promotion process in 2016 will be reported in fiscal 2017. In both processes the criteria used to evaluate entitlement to promotions were the extent to which business and collective targets were achieved, individual performance and attendance in professional development programs. Promotions were announced in official journals and were based on merit or seniority.

Approved in 2014 by the Office for Management and Governance of Government-Owned Companies (SEST), the Mint's Voluntary Termination Plan was implemented in two phases, the first in 2014, with 109 voluntary terminations, and the second in 2015, with 8 voluntary terminations under the terms of the Plan, on a date set within the year.

► % OF EMPLOYEES RECEIVING PERFORMANCE  
REVIEWS [G4-LA11]

EMPLOYEE CATEGORY / GENDER	2014	2015	2016
<b>Board of Directors</b>	0%	0%	0%
Men	0%	0%	0%
Women	0%	0%	0%
<b>Executive Board</b>	100%	100%	0%
Men	100%	100%	0%
Women	100%	100%	0%
<b>Middle Management</b>	58%	87%	87%
Men	68%	85%	85%
Women	32%	95%	92%
<b>Leader/coordinator</b>	98%	99%	99%
Men	99%	99%	99%
Women	95%	98%	100%
<b>Technical/supervisor</b>	91%	96%	100%
Men	91%	98%	100%
Women	92%	91%	100%
<b>Administrative</b>	86%	88%	93%
Men	85%	88%	93%
Women	89%	88%	92%
<b>Operational</b>	97%	99%	99%
Men	95%	99%	99%
Women	100%	99%	99%
<b>Apprentices</b>	100%	100%	100%
Men	100%	100%	100%
Women	100%	100%	100%
<b>Interns</b>	100%	100%	100%
Men	100%	100%	100%
Women	100%	100%	100%
<b>Total</b>	<b>92%</b>	<b>95%</b>	<b>96%</b>
Men	91%	95%	95%
Women	94%	96%	97%

Source: ERP System – People Management Module.

► **Skills management  
and lifelong learning**

[G4-LA10] G4-DMA Training and education

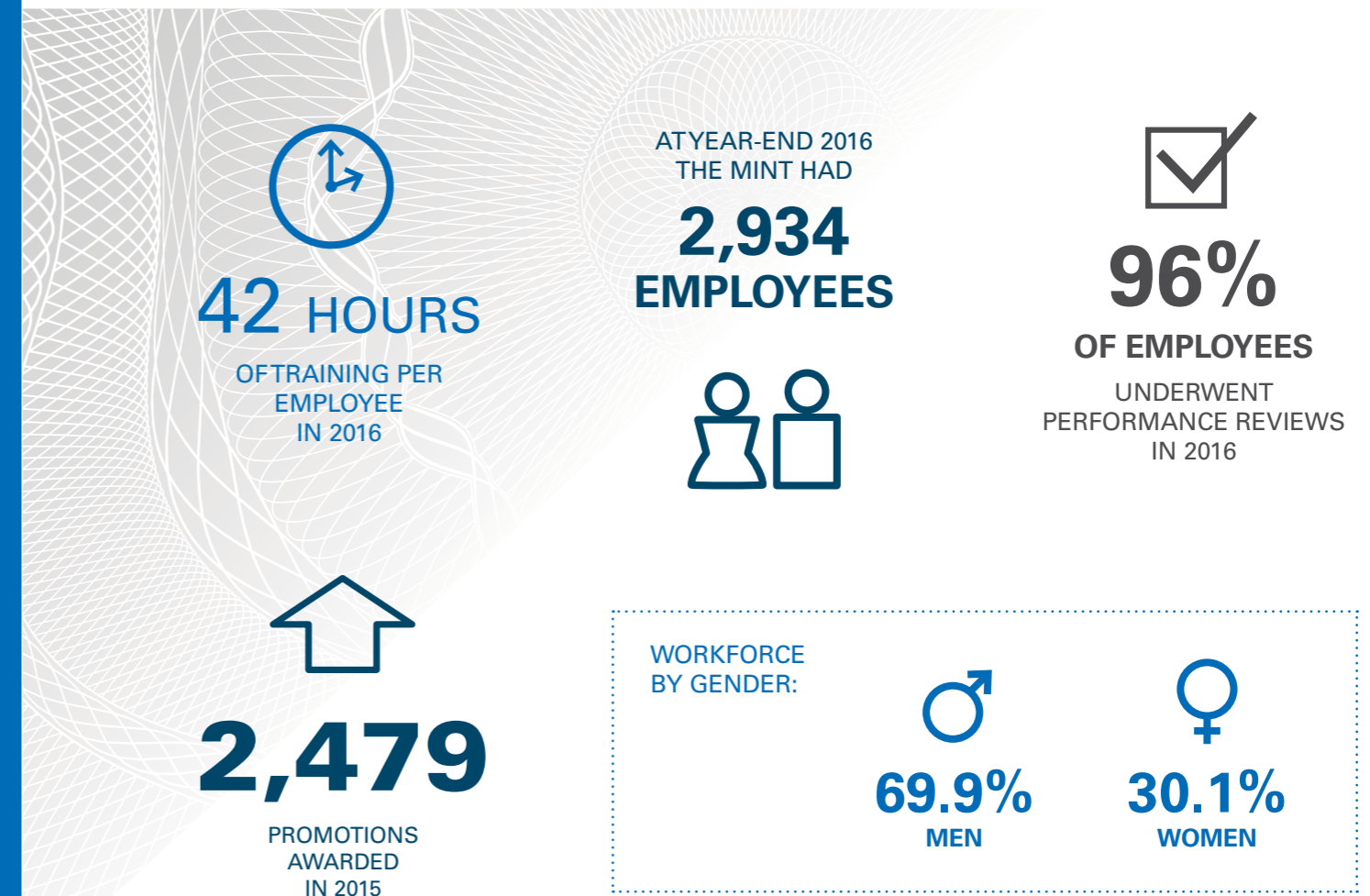
Our training and development model is transitioning from a focus on work execution only to a broader corporate education approach in order to develop required technical and behavioral skills through the development, transfer and practical application of knowledge.

In 2015, a Corporate Knowledge Management and Training Department was created to develop and implement an education strategy focusing on business objectives. Its mission is to provide the corporate skills and competencies needed for

efficient and effective performance. The Department aims to be recognized as a corporate university by 2018.

Other training and education initiatives include a renovation of the training center at our headquarters site in Santa Cruz and the use of the Praça da República Palace in downtown Rio de Janeiro, a historical heritage building, for training activities. Further investment in managerial training and development is also planned.

The Mint's knowledge management model is transitioning from a training and development model to a corporate education model.



Source: ERP System – People Management Module.

▶ AVERAGE HOURS OF TRAINING\* [G4-LA9]

E = EMPLOYEES  
H = HOURS  
H/C = HOURS PER EMPLOYEE

EMPLOYEE CATEGORY / GENDER	2014			2015			2016		
	E	H	H/E	E	H	H/E	E	H	H/E
<b>Board of Directors</b>	10	0	0	9	0	0.0	12	6	0.5
Men	7	0	-	6	0	0.0	9	6	0.7
Women	3	0	-	3	0	0.0	3	0	0.0
<b>Executive Board</b>	5	0	0.0	5	1	0.2	5	0	0.0
Men	4	0	-	4	1	-	4	0	0.0
Women	1	0	-	1	0	-	1	0	0.0
<b>Middle Management</b>	105	238	2.3	95	595	6.3	76	47	0.6
Men	77	234	-	74	204	-	56	35	0.6
Women	28	4	-	21	391	-	20	12	0.6
<b>Leader/coordinator</b>	199	720	3.6	189	972	5.1	130	317	2.4
Men	135	582	-	126	821	-	82	140	1.7
Women	64	138	-	63	151	-	48	177	3.7
<b>Technical/supervisor</b>	187	526	2.8	180	1231	6.8	123	595	4.8
Men	112	451	-	111	737	-	98	486	5.0
Women	75	75	-	69	494	-	25	109	4.4
<b>Administrative</b>	823	3718	4.5	803	5830	7.3	726	3321	4.6
Men	611	3158	-	596	4976	-	499	2213	4.4
Women	212	560	-	207	854	-	227	1108	4.9
<b>Operational</b>	1564	8130	5.2	1475	7801	5.3	1574	14080.9	8.9
Men	1132	6485	-	1078	6472	-	1163	9926.9	8.5
Women	432	1645	-	397	1329	-	411	2284	5.6
<b>Trainees</b>	-	-	-	-	-	-	-	-	-
Men	-	-	-	-	-	-	-	-	-
Women	-	-	-	-	-	-	-	-	-
<b>Apprentices</b>	-	-	-	-	-	-	110	110	1.0
Men	-	-	-	-	-	-	42	42	1.0
Women	-	-	-	-	-	-	68	68	1.0
<b>Interns</b>	-	-	-	-	-	-	-	-	-
Men	-	-	-	-	-	-	-	-	-
Women	-	-	-	-	-	-	-	-	-
<b>Total</b>	2,893	13,332	4.6	2,756	16,430	6.0	2646.0	17407.9	<b>6.6</b>
Men	2078	10910	5.3	1995	13,211	6.6	1911	12,807	6.7
Women	815	2422	3.0	761	3219	4.2	735	3690	5.0

\*Trainees and interns not included. Apprentices not included for 2014 and 2015.  
Source: ERP System – People Management Module.

# 73 CHILDREN

USE THE MINT'S DAYCARE  
CENTER



The Mint has provided day care for employees' children since 1982. A total of 73 children used our daycare center in 2016. Children can use the daycare center up to the year they turn four. Daycare staff include a nutritionist, a psychologist and a head of education, as well as teachers and recreation monitors.



▶ **Climate Survey**

Improving our organizational climate is a strategic objective at the Mint. In December 2015 the Mint conducted an Organizational Climate Survey to measure the levels of employee satisfaction and assess their workplace needs. A total of 960 employees (36.5% of our total workforce) answered the questionnaire, with results showing

that our employee satisfaction target was exceeded by a margin of 5%. The highest-rated dimension was "Company pride", while the lowest rated dimension was "Company bureaucracy".

▶ **Breast-feeding support room**

In March 2015 a breast-feeding lounge was created as an initiative recommended by the Ministry of Health and Planning and the Brazilian Pediatrics Society. Through the initiative, all breast-feeding women in our staff (including employees, interns, apprentices and third-party workers) have a private, air-conditioned space available for breast-feeding (the World Health Organization recommends that children should be breast-fed for two years or more).

## ▶ TRAINING AND DEVELOPMENT INITIATIVES

[G4-LA11], G4-DMA  
Training and education

The Mint's Corporate Education initiatives covered 278 different subjects in 2016. Training was provided on total quality management, business management, printing, metallurgy, sustainability, ethics, diversity management, ideation, healthy diets, sustainable IT and other subjects.

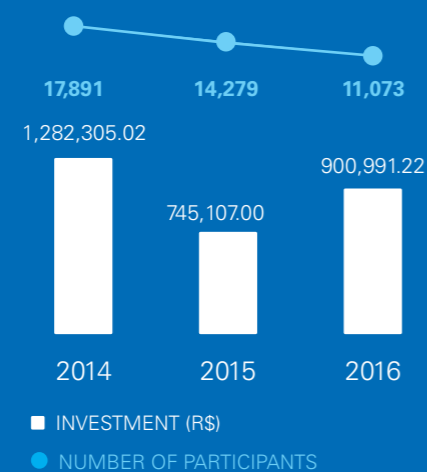
Of the 278 subjects, 107 workshops and training and information sessions were delivered in-house by 187 facilitators. These included: Printing Basics, lectures on the History of the Brazilian Mint and Brazilian Currency, courses on Process Mapping, NR-10 (Brazilian Safety Regulations), English and Spanish (basic) for Rio 2016 volunteers, Safety Standardization, Logistics, Flexo Printing, Silk-screen Printing and Visual Basic for Applications (VBA).

A Technical Printing Process Training Course was also initiated at the industry-led training service (SENAI), in which 28 production staff members were trained as part of the Mint's printing skills training and development initiatives.

The numbers of employees attending Corporate Education training in 2014 to 2016 is shown below. In 2014 and 2015, a large number of corporate education lectures were provided free of charge, with a significant number of employees attending.

In 2016 the Mint's education offering declined due to the high demand placed on production staff to meet the Annual Production Plan/2016 and to accommodate the production of medals and commemorative coins for the Olympic Games. The amount of investment in training, however,

### ▶ EDUCATION INITIATIVES



Source of data for chart:  
ERP system: training module

increased in 2016 due to the nature of the training an education programs provided, such as Printing Process Training (long term), Board Member Training (long term), Coaching for Board Members and Emergency Brigade Retraining.

A new education planning model was also developed in 2016. The new model takes inputs from our Competencies Matrix and is aligned with our Strategic Plan, Job, Career and Wages Plan and Management and Advisory Plan so that it meets the specific needs of each department at the Mint. Developing and approving our Competencies Matrix – which will inform the development of our Corporate Education Program 2017 – will be the next step in the process.

The Mint provides training as established in employees' personal development plans or as requested by their immediate managers. The Company paid all expenses on tuition fees, food, commuting and hospitality, as applicable.

## ▶ EMPLOYEE HEALTH AND SAFETY INDICATORS (OWN EMPLOYEES)

	2014	2015	2016
Total recordable case frequency	20.76	13.73	16.99
Total lost-time workplace injuries	7	10	15
Total lost time and no-lost-time workplace injuries	43	33	57
Workplace injuries (%)	1.5%	1.2%	2.0%
Total injuries (excluding illnesses)	143	90	110
Total occupational illnesses	7	4	2
Total fatalities	0	0	0
Total lost days*	72	93	161

\*Calendar days. Workplace injuries are injuries occurring during an employee's job tasks. The figures are for all business units including the manufacturing plant and offices in Flamengo and Brasilia. 1: Lost time injuries are injuries in which an employee is required to take at least one day of medical leave for recovery. 2: No-lost-time injuries are injuries in which the employee is not required to take medical leave for recovery. Reported injury rates do not include injuries when commuting.  
Source: ERP System - Occupational Health & Safety Module

### ▶ Occupational health and safety

[G4-LA6] G4-DMA Workplace health and safety

The Mint addresses workplace injuries and incidents in accordance with internal procedures on incident investigation, control and record keeping. The Mint has an on-site infirmary with an attending physician, practical nurse and driver available 24 hours a day. Injuries are reported through the infirmary, where first aid is provided. Injury metrics are reported in accordance with ABNT NBR 14.280, Regulatory Standard 4 and Ministry of Labor Resolution 3.214/78. Third-party employees have not been included in injury rates; injury rates for these employees are documented with information provided by contractors, contract managers and the Mint's infirmary.

The total number of workplace injuries declined from 2013 to 2015, reflecting the effectiveness of the Mint's safety program – which includes occupational risk maps, inspections, enhanced Toolbox Safety Talks, internal audits and other initiatives. The total injury

rate increased from 1.2% in 2015 to 2.0% in 2016 due to higher production rates in the last quarter of the year. Safety technicians have initiated daily monitoring of the departments with the highest incidence rates. Their observations about identified risks are included in Toolbox Safety Talks.

Occupational illnesses declined by 43% in 2015 compared with the previous year. A number of workplace

quality initiatives contributed to the positive performance, including:

- **A diet, nutrition and health management program (Nutrivida)** conforming to the National Policy on Diet and Nutrition (PNAN), which provides strategic nutrition management consultations to Mint employees. In 2015, Nutrivida provided 2,146 consultations, a 45% increase from the previous year;
- **Vaccination campaigns**, including vaccinations for influenza, hepatitis A + B, HPV and other diseases. In 2015, the first dose of hepatitis A + B vaccine was administered to 749 employees; the second dose to 711 employees and the third to 21 employees. First-dose HPV vaccination was administered to 1,418 employees, the second dose to 1,312 employees and the third dose to 900 employees. Influenza vaccine was administered to 2,298 employees. Vaccination campaigns covered Mint employees, third-party workers, young apprentices and trainees from the age of 17.



# R\$ 15.2 MILLION

TO BE INVESTED IN FIRE PROTECTION SYSTEMS BY 2020



– **Workplace stretching and exercise** (shown on the right). In addition to regular exercise, since 2014 the Mint has organized a Workplace Exercise Marathon in which employees engage in exercise routines facilitated by physiotherapists to reduce cases of work-related musculoskeletal disorders and medical leave.

– **Initiatives to prevent musculoskeletal disorders**, with a focus on reducing exposure to ergonomic hazards, and implementation of Workplace Ergonomics Assessments.

Fire, panic and emergency readiness planning has included training and further investment in 2015 and 2016. In addition to regular (partial and full) evacuation drills, additional safety equipment has been purchased including insulation mats

for substations and foam forming liquid for fire systems. As part of our Emergency Readiness Plan, civil and volunteer fire brigade training programs were held to supplement regular training taken by Occupational Safety, Maintenance and Project department employees.

New fire detection and alarm systems, automatic sprinkler systems and safety devices for flammables storage areas are planned to be installed by 2020. The total estimated investment of R\$ 15.2 million includes design, training and procurement.

## GOVERNMENT

The Mint uses a proactive approach to engagement with oversight and regulatory bodies

G4-DMA Public policy

The Brazilian Mint is a federal government-owned company under the auspices (and oversight) of the Ministry of Finance. We are also subject to the regulations of and audits by the Federal Audit Court (TCU), the Ministry of Transparency, Oversight and General Controllershship (CGU) and the Office for Management and Governance of Government-Owned Companies (SEST, under the Ministry of Planning, Development and Management).

Pursuant to Decree 2122 of January 13, 1997, the Board of Directors includes representatives from the Ministry of Finance and Planning

and the Central Bank of Brazil. As a Federal Government-owned company, the Mint primarily serves the interests and requirements of the Federal Government, without neglecting, however, its own financial and operational sustainability.

The Mint has used a proactive approach to engagement with regulators and oversight bodies, including regular interaction and efforts to effectively anticipate government needs and requirements.

## CUSTOMERS [GRI G4-2]

The Federal Government and its agencies are the Mint's primary customers.

Our relations with these customers are managed by three different departments depending on the type of product or service provided.

The banknote and coinage sales department is responsible for our contract with the Central Bank of Brazil, which determines the level of demand for Brazilian currency, as well as for our contracts with foreign agencies for the production of circulation banknotes and coins. This department is also responsible for the planning, oversight, coordination and control of medals sales and customer relationship management.

The banknote and coinage department's most significant project in 2015 involved meeting demand from the Rio 2016 Olympic and Paralympic Games. This included producing commemorative coins and developing the designs for medals and other articles for the Games (read more in The Mint and Rio 2016). In addition to regular interaction with the Central Bank of Brazil (which includes sales of commemorative coins), the Banknote, Coins and Medals Sales Department is also responsible for our relationship with

the Central Bank of Argentina (which has commissioned the production of 100 pesos banknotes by the Mint) and has initiated negotiations toward the supply of circulating currency to Paraguay and Venezuela.

The passport and security print sales department is responsible for our relations with the Federal Police Department and the Ministry of Foreign Affairs, which control the production and issuance of Brazilian passports. It also supplies security print materials to more than 30 customers.

The first samples of Brazil's new 10-year passport were delivered in 2015. This department also coordinates sales of smart ID cards with digital certification. A number of new products and services with unique security and production-process features were developed in 2015/2016. These were presented to potential customers, especially in the Midwest and South of Brazil, where most of our government and private customers are located. One of our competitive differentiators in this market is the Mint's reliability and expertise in security print and confidential data storage.

The Revenue stamp department primarily supplies products to the Federal Tax Authority. In 2015 the Mint initiated an important study on logistics systems. Revenue stamps, which currently are delivered to the Federal Tax Authorities, will now be distributed directly to taxpayers. As part of our efforts to expand our customer base, we have further developed our offering of revenue stamp solutions and services.

► **Satisfaction survey** [G4-PR5]

Every year, the Mint conducts a satisfaction survey with our primary customers to measure our performance during the fiscal year and inform improvements as part of the PDCA cycle.

The satisfaction survey methodology consists of tabulating data from questionnaires to provide arithmetic metrics in an impact matrix that weights significance versus satisfaction. In 2013 and 2014, survey questionnaires were answered by the Federal Tax Authority, the Federal Police Department, the Ministry of Foreign Affairs, the Brazilian Postal Service, the Central Bank of Brazil and the Federal Council of Medicine. In 2015, the Civil Aviation Agency and the Federal Office for Legal Aid were included in the survey. Fundação Getulio Vargas (FGV) and Companhia Paulista de Trens Metropolitanos (CPTM) were included in 2016.

Satisfaction rates were shown to have improved in 2016, although not meeting the target rating.

After completing the survey, the Mint implements actions based on survey results to continually improve customer satisfaction levels.

▶ **Customer data security**

[G4-PR8], G4-DMA Customer privacy

All passport-related information is generated and stored in computer systems located in a vault that is monitored 24/7 and protected by access control, redundant assets and business continuity protection.

During the production process, information is reviewed and processed through systematic controls to ensure the validity and integrity of all issued passports. If any problems are identified in finished passports, there are standard procedures in place to ensure proper disposal and production of new passports.

In 2016, the Mint was certified to ABNT NBR 15.540 (*Graphic technology – Management of security*

*printing processes*), attesting to our conformity to all requirements applicable to companies producing security print materials. The Mint is compliant with all government regulations on security printing, as well as conforming to industry best practice.

Any document losses during production or transportation are reported to the customer to ensure that the relevant document number is identified as lost. This ensures customers can determine whether a document is valid.

No reports of breaches or loss of customer data were reported to the Mint's Ombudsman's Office. The passport department received and confirmed 102 reports (11 in 2015 and 91 in 2016) of passports lost by third-party transportation companies. These losses represent approximately

0.04 % (2015) and 0.11% (2016) of the total number of passports shipped per year. Losses can be reported by the customer or by the Mint team.

The banknote and coin production department received no reports of breaches of customer privacy (Central Bank of Brazil). Privacy complaints are not relevant to the digital stamp department as the stamps are produced by customers themselves.



▶ As a federal government company, the Mint initiated a process in 2016 to bring the organization into conformity with the new Government Companies Act

**SUPPLIERS** [GRI G4-12]

▶ **Services and products are procured taking account of social and environmental sustainability criteria**

As a government-owned company, the Mint is subject to the requirements of Act 8.666, which establishes general rules on government procurement and contracting for works, services and purchases. This piece of legislation is designed to ensure that government procurement decisions are fair, in the government's interest and contribute to Brazil's sustainable development. Procurement and contracting processes are managed by the Procurement Management Department, which is responsible for receiving and processing requisitions made by other departments, establishing requirements for each tender procedure, estimating prices and ensuring compliance with any additional legal requirements, which

includes conformity to environmental and social requirements under Act 8.666.

The Mint also establishes price margins within which preference is given to local suppliers, and especially small businesses.

In 2015 and 2016 the Mint's payments to suppliers exceeded R\$ 3.49 billion. Our supply chain includes companies supplying printing materials (ink, solvents, papers, films, etc.), packaging (including cartons, labels, envelopes, glues, seals and adhesives) and metals in general (used in the production of coins and

medals). We also procure services from firms specializing in general services, security, janitorial services, and environmental and waste management services.

Supplier performance and compliance is assessed by our technical departments. These assessments are submitted by contract managers to the Procurement Management Department, and any instances of noncompliance with established requirements (including social and environmental requirements) or failure to achieve required service levels may result in penalties.

▶ **Sustainable procurement**

In 2015 and 2016 the Mint took steps to implement sustainable procurement practices. There have been a number of examples where sustainability requirements have been incorporated in procurement procedures for materials and services, such purchasing paper cups to replace plastic cups at the canteen

and distributing coffee mugs to employees at the workplace.

The Mint was also required to meet a number of sustainability requirements as a supplier to the Rio 2016 Organizing Committee (read more in Social and Environmental Responsibility), and this became an opportunity to incorporate these practices within the organization. These and other requirements (some of which had already been implemented by the Mint) were compiled into a sustainable procurement handbook.

▶ **The New Government Companies Act** G4-DMA Public-policy

Promulgated in July 2016, Act 13.303 (known as the Government Companies Act) contains provisions governing Federal, State and Municipal government-owned or partly government-owned companies and their subsidiaries. The Act governs the management of these companies and seeks to improve

efficiency through mechanisms for enhanced corporate governance and transparency.

Decree No. 8.945, which regulates the Government Companies Act, was published on December 27, 2016. The Mint has a period of two years in which to comply with the new requirements. In 2016, committees were created to amend the Mint's Internal Regulation and Procurement and Contracts Regulation for conformity to the new Act. Also in 2016, the Mint implemented some of the requirements of Act 13.303, such as the new limits for exemption from competitive procurement.

## COMMUNITY

In addition to producing the circulation coins and banknotes used by Brazilian society and the passports issued by the Federal Police, the Brazilian Mint also engages directly with Brazilian society through a range of initiatives. Read about some of our key initiatives below:

### ► Young Apprentice Program

Each year the Mint mentors a group of secondary education students aged 14 to 24 in our Young Apprentice Program. Besides training students for the job market, the program also provides an additional source of income for families living in communities where we operate (Santa Cruz, Itaguaí and Seropédica). At year-end 2016, the Mint had 99 young apprentices from the industry-led education service (SENAI) and another 12 students from Instituto Brasileiro Pró Educação, Trabalho e Desenvolvimento (ISBET).

Students spend four hours each day at the Mint in a range of educational and administrative activities. In addition to earning wages, students receive transportation tickets, meal vouchers and outpatient medical services.

### ► Conheça a CMB

The *Conheça a CMB* program was initiated in 1990 to offer guided visits to the Mint. Initially geared to students from public and private

schools, in 2006 the program was extended to employees' family members and in 2012 the initiative was extended to the general public. The purpose of the program is to create a channel for communication between the company and communities, enhancing transparency about what we do and how we operate. In addition to learning about how things we use in our daily lives – such as banknotes and coins – are produced, visitors can also go back in time and learn about the Mint's 300 years of history.

The program comprises three modules: *Empresa Escola*, which brings together students, teachers and Mint employees in guided activities; *Empresa Família*, which enhances engagement between the Company and employees and family members; and *Empresa Cidadão*, which opens our doors to Brazilian and foreign citizens interested in learning about the Mint's history and manufacturing processes.

Between 2013 and 2016, around 11 thousand people visited the Mint through the program, in a total of 447 guided visits. In visitor satisfaction surveys, nearly all respondents (98.6%) rated their experience

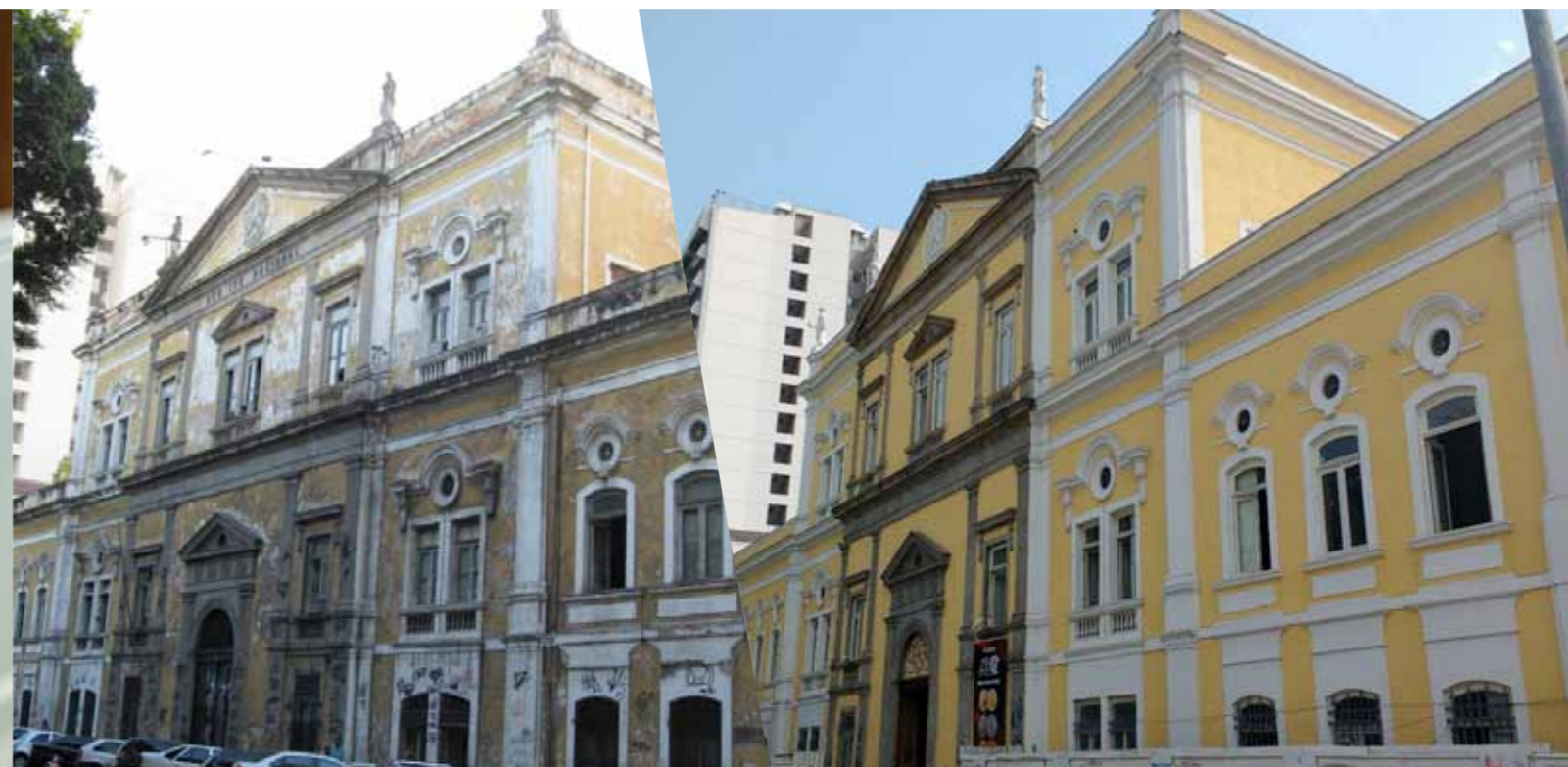
positively across dimensions such as Registration, Security Clearance, Transportation, Reception, Food and Guided Tour.

### ► Restoration of the Praça da República Palace

Work has continued on the restoration of the palace at 26, Praça da República in downtown Rio de Janeiro (shown in the photo below). The 19<sup>th</sup> century building was once home to the Royal Museum (currently the National Museum) and the National Library, and later hosted the Rio de Janeiro State Court of Justice and the Justice Museum. The Mint has owned the building since 1986, and initiated restoration works in 2009.

The project is currently in its third phase, which includes final installation and retrofitting work. The Mint's Knowledge Management and Corporate Education Department is supervising the works in a technical collaboration with Instituto Herbert Levy.

Young  
Apprentice: a  
program geared  
to students in  
communities  
where we  
operate





Stockphoto / Weerapatitadumrong

# SOCIAL AND ENVIRONMENTAL RESPONSIBILITY

Issues such as environmental management, managing impacts, resource efficiency, supporting local communities, and social programs are central to our strategy.



The Mint has identified sustainability as a fundamental value for the business. This translates into a management approach that takes account of the social and environmental – as well as economic – aspects of our activities. Essentially a manufacturing enterprise, the Mint has certified environmental management processes in place to minimize impacts from our production operations. We also invest in social and environmental programs that support the protection and restoration of natural resources as well as human development in the communities where we operate.

A milestone in our corporate responsibility journey was our accession in July 2015 to the Brazilian

Business Council for Sustainable Development (CEBDS), a not-for-profit, civil society organization created in 1997 to engage businesses, government and civil society in promoting sustainable development initiatives in Brazil's corporate community. The Council currently brings together 70 of Brazil's largest business groups and organizes a range of events and meetings to share experience and network. As a member of CEBDS, the Mint has shared experience and lessons learned with other members on issues such as sustainable procurement, energy efficiency, resource management and climate change. [GRI G4-2, G4-16]

## ENVIRONMENTAL MANAGEMENT [GRI G4-2]

Our QHSE Policy supports environmentally responsible operations that protect the health and safety of employees and third-party workers.

Our Integrated Quality, Occupational Health & Safety and Environment (QHSE) Policy was implemented in 2014. In 2015, the Mint's Environmental Management System and Occupational Health & Safety Management Systems were certified by the Brazilian Technical Standards Association (ABNT) to ISO 14001 and OHSAS 18001, respectively. Our approach to environmental management focuses on protecting and respecting people and nature, compliance with statutory and regulatory requirements and identifying and mitigating risks. The Mint's QHSE Policy supports

environmentally responsible operations that protect the health and safety of our staff.

In 2010 the Mint became a signatory of the Government Environment Agenda (A3P), a program run by the Office for Environmental Stewardship and Institutional Coordination under the auspices of the Ministry of the Environment (SAIC/MMA). The purpose of the program is to foster social and environmental responsibility and the incorporation of sustainability criteria in government.

[GRI G4-15]

Key ongoing initiatives include: water recycling systems in our production processes, construction of systems for the use of treated wastewater; energy-saving campaigns; and consumption efficiency programs. The Mint periodically reports to the Ministry of the Environment on the status of proposed initiatives.



## Integrated Quality, Occupational Health & Safety and Environment (QHSE) Policy

The Brazilian Mint, a government-owned company operating under the Ministry of Finance, engaged in the manufacture and supply of circulation coins and banknotes, security print and metallurgical products and information technology services, is committed to:

Meeting the needs and expectations of customers, society and other stakeholders and continually improving our Integrated Management System.

1

Supplying products and services that deliver quality while respecting people and nature and ensuring compliance with applicable Quality, Occupational Health & Safety and Environment regulations and requirements.

2

Identifying hazards and aspects and assessing and managing risks inherent to business tasks and projects in order to prevent and minimize environmental impacts or injuries.

3

Training and developing our human resources to maintain environmentally responsible operations that protect the health and safety of employees and third-party workers.

4

Establishing transparent communications about our operations with suppliers, communities and civil society organizations.

5

► MATERIALS USED [G4-EN1], G4-DMA Materials

A list of the primary materials used in the Mint's manufacturing processes is provided below:

PRINTING MATERIALS IN GENERAL*	UNIT OF MEASURE	2014	2015	2016
Ink (offset, intaglio and magnetic printing)	Kg	35,670	39,466	36,839
Inkjet ink	L	67	45	50
Inkjet solvent	L	26	188	207
N-propyl acetate	Kg	2,796	3,145	2,232
Stock certificate paper	Sheets	7,828,982	7,431,810	1,270,176
Resin paper	Sheets	1,152,174	1,255,862	1,164,359
Phosphorescent coated paper	Sheets	242,753	421,482	243,687
Self adhesive paper	Sheets	234,923	255,197	15,355
Stock certificate paper with coat of arms	Sheets	1,203,258	1,471,454	394,000
Printing cardboard	Kg	122,520	125,301	81,490
Laminate	Sheets	318,222	253,454	360,290
Laminate	Rolls	13	975	1,254
Sewing thread	M	982,056	1,043,000	986,000
Film	Sheets	1,181,022	1,290,656	1,172,334
Cartridge	Units	23,985	21,439	530
Foil	Rolls	160	184	186
Adhesive film	Rolls	87	97	91
PACKAGING MATERIALS	UNIT OF MEASURE	2014	2015	2016
Glue	Kg	3,350	2,950	3,550
Self-adhesive label	Rolls	679	527	392
Self-adhesive label	Rolls	8	8	7
Label without adhesive	Rolls	9	5	1
Carton	Units	24,784	30,164	36,783
Heat shrink film	Rolls	122	119	84
Ribbon	Rolls	151	126	29
Envelope	Units	11,199	8,998	9,954
Pressure-sensitive tape	Rolls	1,237	1,113	808
Thermoplastic adhesive	Kg	225	175	175

\* A determination cannot be made as to whether the materials are from renewable sources as they are purchased from external suppliers.  
Source: ERP System (inventory and cost modules).

MATERIALS USED IN THE PRODUCTION OF BANKNOTES*	UNIT OF MEASURE	2014	2015	2016
Ink	Kg	101,548.04	67,990.40	126,661.18
Flexographic varnish	Kg	22,039.30	22,420.00	24,820.00
Miscellaneous paper	Kg	32,535.50	8,526.00	21,138.41
Holographic band	Rolls	1,121	1,811	1,618.69

\* A determination cannot be made as to whether the materials are from renewable sources as they are purchased from external suppliers.  
Source: ERP System (inventory and cost modules).

PACKAGING MATERIALS	UNIT OF MEASURE	2014	2015	2016
Paper tape	Roll	6,839	670	4,633.01
Flexible PVC box	Unit	5,000.00	45,415.00	59,662.00
Cardboard angle	Unit	100,000.00	88,500.00	117,245.80
Corrugated board	Unit	248,010.00	200,000.00	188,538.20
Self-adhesive label	Roll	4,325.00	0.00	0.00
Polyethylene shrink film (without print and customized)	Roll	1,150	0	0.00
Thermal transfer tape	Roll	0	0	0.00
Security seal	Unit	220,000.00	0.00	68,000.00
Wood pallets, banknote cartons	Unit	1,500.00	1,890.00	1,985.57
Corrugated cardboard pallet top	Unit	5,000.00	4,000.00	1,942.00

Source: ERP System (inventory and cost modules).

MATERIALS USED IN THE PRODUCTION OF MEDALS AND COINS (KG)*	2014	2015	2016
Stainless steel round and rectangular bar stock	3,974.070	5,458.920	4,335.250
Polycarbonate sheet	652.000	744.000	544.000
Stainless steel discs (R\$ 0.50 coin and R\$ 1.00 core)	942,700.000	1,221,797.000	1,501,623.000
Carbon steel discs (R\$ 0.05, R\$ 0.10, R\$ 0.25 coins and R\$ 1.00 ring)	3,119,130.370	3,154,887.698	2,107,352.630
Gold (gold medal/commemorative coin)	30.632	62.845	11.232
Silver (silver medal/commemorative coin)	1,724.721	2,992.976	3,034.542
Bronze/tombac (bronze medal/tombac)	474.980	335.879	12,228.520

\*All materials are from nonrenewable sources.  
Source: ERP System (inventory and cost modules).

PACKAGING MATERIALS (KG)	2014	2015	2016
Cardboard cartons, coins*	12,008.720	12,281.760	10,503.600
Self-adhesive labels*	1,006.000	1,546.000	1,212.000
Polyethylene film	32,367.000	37,010.500	30,403.435
Polypropylene tape	1,458.000	2,535.400	1,290.000
Polyester tape	945.600	1,019.700	804.600
Wood pallet*	55,584.000	57,600.000	49,800.000
Blister packs(PVC)	454.775	747.175	460.250
Capsules (acrylic)	3,558.400	3,566.860	992.360
Coin wallets (paper)*	987.900	2,637.580	497.640
Plastic envelope	148.980	188.922	44.450
Wood cases (Olympic medals)*	0.000	0.000	1,915.920
Paper cases (Olympic licenses/participation medals)*	0.000	0.000	6,192.100
Cases (miscellaneous materials)*	4,430.300	4,237.590	2,305.170
Olympic medal ribbon*	0.000	0.000	53.290
Envelopes (paper)*	15.430	347.500	169.390

\* Materials from renewable sources.  
Source: ERP System (inventory and cost modules).

The disclosures on these pages also indicate whether the materials are from renewable sources

MATERIALS USED IN PRODUCTION (INCLUDING FINAL PRODUCTS)* (KG)	2014	2015	2016
Stainless steel round and rectangular bar stock	3,974.070	5,458.920	4,335.250
Polycarbonate sheet	652.000	744.000	544.000
Stainless steel discs (R\$ 0.50 coin and R\$ 1.00 core)	942,700.000	1,221,797.000	1,501,623.000
Carbon steel discs (R\$ 0.05, R\$ 0.10, R\$ 0.25 coins and R\$ 1.00 ring)	3,119,130.370	3,154,887.698	2,107,352.630
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Envelopes (paper)*	15.430	347.500	169.390

\* Materials from renewable sources.  
Source: ERP System (inventory and cost modules).

► **Waste management**

[G4-EN2] G4-DMA Effluents and waste

Waste management practices at the Mint conformed to Brazil's National Waste Management Policy under Act 12.305/2010. A third-party company works with the Mint's technical team to provide integrated waste management services, from waste sorting at the Santa Cruz plant to final disposal. Industrial and recyclable waste materials are sorted, segregated, weighed and stored temporarily at a 5,200 square-meter waste depot with modern infrastructure.

Since 2015, banknote waste materials have no longer been landfilled and

are now co-processed as a more environmentally friendly disposal method. In addition to extending the useful life of landfills, the new disposal method allows energy to be produced from waste. 173 metric tons of waste were co-processed in 2015. Waste volumes decreased

significantly in 2016 due to the reduced production rates.

The Mint works continuously to reduce waste volumes and develop lower-impact, environmentally friendly disposal methods. While our environmental management department has not yet established a target minimum percentage of recycled raw materials in our production processes, significant progress has been made in this direction: [G4-EN2]

- Development of an environmentally viable solution for recycling ink residues from banknote printing (ink 'cakes') as a raw material for recycled aggregate for use in construction;

**202.8 METRIC TONS**

OF EMPTY DRUMS RECYCLED, GENERATING REVENUES OF MORE THAN R\$ 200,000

NONHAZARDOUS WASTE (IN METRIC TONS, BY DISPOSAL METHOD) [G4-EN23]	2014	2015	2016
Composting	162.5 t	399.7 t	478.4t
Recycling	408.8 t	805.0 t	374.8t
Incineration (mass burn)	6.2 t	6.1 t	0.1t
Sanitary landfill	436.8 t	258.4 t	192.9t
Industrial landfill - Class IIA	1,795.2 t	817.2 t	813.8t
Blending and Co-processing	223.1 t	359.0t	277.4t
<b>Total</b>	<b>2,809.4 t</b>	<b>2,286.5 t</b>	<b>1,009.0t</b>

HAZARDOUS WASTE (IN METRIC TONS, BY DISPOSAL METHOD) [G4-EN23]	2014	2015	2016
Recycling	4.2 t	9.7 t	9.5t
Incineration (mass burn)	48.6 t	12.3 t	12.9t
Blending and co-processing	86.7 t	53.3 t	71.3t
Industrial landfill - Class I	276.7 t	59.5 t	18.1t
<b>Total</b>	<b>416.2 t</b>	<b>134.9 t</b>	<b>111.8t</b>

Source: Waste Manifest

- Feasibility tests on the use of copper scraps in the manufacture of medals. The use of recyclable materials from plant waste will reduce the requirement for externally sourced copper for medal production while creating value from waste materials;
- Use of recycled silver from mirrors and plates disposed of by the Mint;
- Embroidered ribbons for Olympic and Paralympic awards made from recycled PET (polyethylene terephthalate) fibers;

The tables on page 72 show the amount of waste (hazardous and non-hazardous) disposed of from 2014 to 2016, broken down by disposal method and treatment technology.

**173 METRIC TONS**

OF COTTON FIBER PAPER SENT FOR CO-PROCESSING

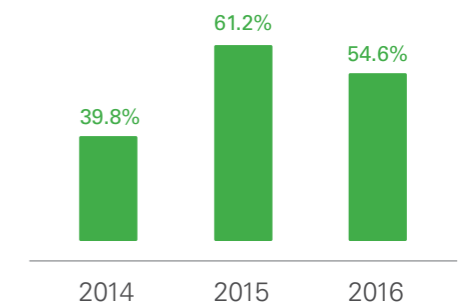
**320.7 METRIC TONS**

OF SCRAP RECYCLED IN THE STEEL MAKING INDUSTRY, GENERATING REVENUES OF R\$ 187,300

The graph on the right shows the Mint's recent waste recycling and reuse figures. Recycling and reuse methods include composting into organic fertilizers, co-processing in cement kilns, reprocessing, metals recovery and re-refining of oil. The disposal of environmental liabilities (disk storage drums) in 2015 increased the percentage of recycled

waste. Without the environmental liabilities, the percentage of waste recycled decreased in 2016.

► **WASTE RECYCLED OR REUSED (%)\***



\*Not including construction waste. Source: Waste Manifest



► **WASTE SEGREGATION**

The Mint has a waste segregation system in place conforming to Decree 5940 of October 25, 2006, including color-coded bins for the different types of waste. In accordance with Conema Resolution 55/2013, blue bins are for recyclable materials and gray bins are for non-recyclable materials. Employees have attended lectures to

raise awareness about the importance of segregating waste materials. Organic waste from the canteen is now sent for composting; each month, 30 metric tons of kitchen waste are composted into fertilizer.

► **Energy consumption**

[G4-EN3, EN5], G4-DMA Energy

Energy intensity is calculated based on generation information contained in the Annual Inventory published by the State Environment Institute (INEA) and electricity consumption data measured at each manufacturing department by the Utilities Management Department.

ENERGY INTENSITY*	2014	2015	2016
Banknote production (kWh/thousand units)	6.92	9.37	8.60
Coin and medal production (kWh/thousand units)	6.07	15.34	6.53

\*Energy intensity measures the electricity consumed within the organization. Calculation - Banknotes: kWh/thousand banknotes. Coins, medals and insignia: kWh/thousand units produced. Source: utility invoices and ERP system (inventory and costs module)

FUEL CONSUMPTION - NONRENEWABLE (IN GJ*)	2014	2015	2016
Piped gas, Rio de Janeiro	4,923.2	5,114.9	4,857.9
Diesel oil	881.6	424.9	528.5
Automotive gasoline	94.7	86.4	160.0
Liquefied Petroleum Gas	49,527.9	35,815.6	34,178.3
<b>Total fuel consumed (GJ)</b>	<b>55,427.4</b>	<b>41,441.8</b>	<b>39,724.7</b>

\* GJ= Gigajoules= 1 billion Joules (unit of measure for energy). 4.2 Joules = 1 calorie. Source: utility invoices and ERP system (inventory and costs module)

TOTAL ENERGY - PURCHASED	UNIT OF MEASURE	2014	2015	2016
Purchase electricity (Manufacturing Plant)	KWh	38,564,266.00	39,957,891.00	38,902,960.00
Purchased electricity (Flamengo Offices)	KWh	122,080.00	146,160.00	153,040.00
Purchased electricity (Brasilia Head Office)	KWh	15,223.00	18,056.00	14,636.00
Purchased electricity (Praça da República Museum)	KWh	91,000.00	134,200.00	97,200.00
<b>Total purchased electricity</b>	<b>KWh</b>	<b>38,792,569.00</b>	<b>40,256,247.00</b>	<b>39,167,836.00</b>

\* Offices acquired in 2013; electricity consumption monitored from September 2013. Source: utility invoices and ERP system (inventory and costs module)

Electricity and piped gas are measured on the basis of monthly emissions indicated in monthly utilities invoices. Diesel oil is used by stationary generators at the Mint; information on fuel consumption is compiled from materials handling reports generated by an automated management system. Gasoline, diesel oil and liquefied petroleum gas are used by the Mint's vehicle fleet and information

has been compiled from the relevant departments to develop the Mint's greenhouse gas emissions inventory. A number of initiatives have been implemented since 2014 to reduce energy consumption. These included a series of lectures delivered to employees to raise awareness and a communication campaign on energy efficiency. The Mint's Ombudsman's

Office has also encouraged employees to raise concerns related to energy saving. In another initiative, the lighting system at our office building was retrofitted with modern, energy-saving luminaries, lamps and ballasts. The Mint's greenhouse gas (GHG) emissions inventory is developed in accordance with the GHG Protocol,

the method most widely used by companies and governments globally to prepare greenhouse gas inventories. Inventory information is independently verified and since 2013 has received a Gold Mark for reporting complexity. For greater transparency, since 2013 the Mint has published its GHG emissions reports on the Public Emissions Register of the Brazilian GHG Protocol Program (<https://registropublicodeemissoes.com.br/index.php/participante/1830>).

NOx, SOx and other significant air emissions are measured twice per year in accordance with the requirements set out in the Mint's Operation and Recovery License. Emissions information is obtained from instantaneous data collected over a maximum period of 18 hours per year. G4-DMA Emissions

► **Water management**

[G4-EN8, EN10], G4-DMA Water

Since June 2013, the Mint has recorded the volumes of chemicals and wastewater produced in the recycling of cleaning solutions used in printing and manufacturing operations. A Water Recycling System (Aguasave) operating since

April 2013 has reduced chemical and water consumption in our printing and manufacturing processes by 90%. From its entry into service to year-end 2016, the Aquasave system has reduced the consumption of cleaning solutions by 34 million liters, generating savings of R\$ 3.7 million from 2014 to 2016.

Our efforts to reduce our usage of materials and natural resources have included lectures, information campaigns and retrofits with more efficient appliances.

GHG EMISSIONS*	TOTAL EMISSIONS BY SCOPE (IN METRIC TONS OF CO2 EQUIVALENT)		
	SCOPE 1	SCOPE 2	SCOPE 3
2014	722.8	5,220.8	3,614.8
2015	1,084.0	4,990.5	4,011.8

\*For emissions in 2016, see the relevant note in the GRI content summary, page 84. Source: greenhouse gas inventories for 2014 and 2015.

WATER CONSUMPTION <sup>1</sup>	2014	2015	2016
Utility water usage (m <sup>3</sup> )	234,030	207,380	173,000
WATER RECYCLED AND REUSED <sup>1</sup>	2014	2015	2016
Total volume of water recycled or reused (m <sup>3</sup> )	5,574	4,436	6,386
Recycling rate (%)	2.38	2.14	3.69

<sup>1</sup> Water consumption metrics include only the Manufacturing Plant, where water consumption has the highest impact compared with other buildings (Office, Headquarters and Museum). Water consumption was measured based on the consumption indicated by the utility company.

## SOCIAL AND ENVIRONMENTAL RESPONSIBILITY INITIATIVES

The Mint has a range of programs in place to promote engagement with local communities. Learn more about our key social and environmental development programs.

[GRI G4-2, EC8, SO1] G4-DMA Indirect economic impacts, G4-DMA Local communities

### ► Supporting recycling cooperatives

In compliance with Federal Decree 5.940, our recyclable waste is segregated and delivered to waste picking associations and cooperatives. The materials we donate to waste picking cooperatives have increased their annual revenues by 1,200% from a June 2014 baseline.

Since 2013, the range of waste materials donated to cooperatives has also been expanded. In monetary terms, the Mint is estimated to have increased cooperative revenues by 700% from 2013 to 2016. This estimate is based on the amounts the Mint was previously paid for these materials under lifecycle waste management agreements. The company relinquished this income in donating the materials to the relevant associations.

In 2015 and 2016, approximately 205 metric tons of waste (including scrap metal, paper, corrugated cardboard and other recyclable materials) generated estimated revenues of R\$ 134,000 for waste picker cooperatives. Cooperatives were invited through a public notice and selected through a draw. All qualified cooperatives receive waste materials from the Mint over a period of six months.

### ► Reforestation in a Federal biological reserve

As part of our efforts to neutralize greenhouse gas emissions from our operations, in 2013 the Mint undertook a voluntary commitment to support a 2,548-hectare Federal biological reserve in Rio de Janeiro State, spanning the municipalities of Rio das Ostras, Casimiro de Abreu and Macaé. The Mint plans to invest R\$ 4 million in the reforestation of a 230 hectare area with Atlantic Forest

species, the original biome in the region. By 2018, an estimated 128 hectares will have been reforested with 205,000 trees.

The reforestation program is managed by environmental consultants Acácia Amarela. Saplings of more than 50 different Atlantic Forest species are being purchased from suppliers in Silva Jardim, Casemiro de Abreu and Rio das Ostras.

The program is especially important given that the reserve is home to 20% of the surviving population of golden lion tamarins, which are native to Atlantic Forest habitats. The Mint's reforestation program will expand the

forest cover in the area and connect islanded patches inhabited by the endangered primates. As the motifs on the R\$ 20 banknotes we produce, golden lion tamarins have a special significance for the Mint.

Associação Mico-Leão Dourado, a non-governmental organization dedicated to the preservation of this endangered species, is also supporting the reforestation initiative.

In addition to contributing to environmental preservation, the Mint is also supporting the regional economy by sourcing saplings and other materials from local suppliers. The workforce for implementing and maintaining the program has

also been sourced locally. These investments have an especially significant impact on low income municipalities such as Casimiro de Abreu, Rio das Ostras, Macaé, Silva Jardim and Rio Bonito), which have a combined average income per capita of only R\$ 390 according to data from the Brazilian Institute for Geography and Statistics (IBGE) for 2013.



20%

OF THE SURVIVING POPULATION OF GOLDEN LION TAMARINS LIVE IN THE FEDERAL BIOLOGICAL RESERVE



◀ The materials we donate to waste picking cooperatives have increased their annual revenues by 1,200% from a June 2014 baseline.



Before (left) and after reforestation: 205,000 trees by 2018



# ABOUT THIS REPORT

Our very first Sustainability Report provides key information about our financial, corporate governance and social and environmental performance.

This Report combines information on financial, non-financial and sustainability aspects into a single publication.

The period for which data and quantitative information has been compiled is from January 1, 2015 to December 31, 2016. The Report has been published in electronic (PDF) and in print versions. Report content has been defined based on the material issues described in the section on Materiality and the interests of our key stakeholders, including employees and managers, government, customers, suppliers and communities. [GRI G4-28]

This Report has been prepared in accordance with the guidelines laid down by the Global Reporting

Initiative (GRI), an internationally recognized source of authority on disclosures about organizations' management approach and their environmental, social and economic performance and impacts. The Report is in accordance with the 'Core' option of the GRI G4 reporting guidelines and has not been independently assured. [GRI G4-32, G4-33]

It includes information about the strategies, initiatives, products, services, projects and operations of all business units within the Mint. Information and limitations relating to specific GRI disclosures are specified in the GRI content summary (at the end of the report) or in the body of the report.

Any questions, critiques and suggestions about the content of this report can be submitted by e-mail to [ouvidoria@cmb.gov.br](mailto:ouvidoria@cmb.gov.br). [GRI G4-31]

# GLOSSARY OF TERMS

## Intaglio

A level 1 (overt) security feature produced by directly applying ink on the polymer or paper substrate using a printing plate on which the art is produced in the form of recesses up to 100 µm deep. The resulting print has a tactile relief.

## Computer to plate (CTP)

A printing plate production process in which art created in a desktop publishing application is output directly to a printing plate by laser engraving or machining.

## Statement of Added Value

A Statement of Added Value is a financial reporting statement that summarizes the wealth created by an organization in a given period and how it has been distributed. As a financial reporting document, the information contained in a Statement of Added Value must be compiled from accounting records in accordance with applicable Accounting Standards and on the accrual basis of accounting [<http://www.portaldecontabilidade.com.br/tematicas/despesas.htm>] Resolução CFC 750 de 1.993 [[https://www.econeteditora.com.br/bdi/res/ant/resolucao750\\_cfc\\_1993.asp](https://www.econeteditora.com.br/bdi/res/ant/resolucao750_cfc_1993.asp)]. The wealth created by a company, when measured based on the concept of added value, is calculated as the difference between the wealth produced by the company and the value of the goods and services produced by third parties and used in the company's production process.

## Electroplated blanks

Raw materials used in coinage production consisting of ferrous discs with a non-ferrous, hot dipped galvanized surface finish to produce the different color tones in the Real coin family.

## Heat shrink film

Plastic film that will shrink in both directions when processed by heated equipment (heat shrink tunnel), but will remain dimensionally stable upon returning to ambient temperature. Used in packaging cartons and other products.

## Intaglio printing

A direct printing process in which ink is transferred from recesses in the printing plate onto a polymer or paper substrate.

## Magnetic stripe ink

A material used to produce magnetic stripes on magnetized tickets (e.g.: subway tickets), consisting of a resin-based vehicle soluble in organic solvents compatible with the depth of the printing cylinder (rotogravure), containing dispersed inorganic pigments of brown-colored magnetic iron oxide. This material is printed on tickets to create a magnetic code with information about the product.

## Biometric information

Biological traits, such as iris patterns or fingerprints, provided for personal identification, access control, etc.

## Pad printing machines

An indirect process of gravure printing on materials of different sizes and surface textures, which consists of transferring ink from the cliché via a pad onto the substrate.

## Watermark

A pattern imprinted in security paper by a mold directly during the manufacture of the paper. A watermark is translucent when seen against light, producing a greyscale image.

## Offset

An indirect printing process in which the inked image is transferred from a flat or cylindrical printing plate to a rubber blanket then to the paper or plastic substrate. The offset printing process can be "dry" or "wet" depending on the type of printing plate. In dry offset printing, the printing plate has photopolymer layers of varying height and the ink is located on top of the printing relief. In wet offset printing, the printing plate has no relief and a wet solution (water) is used. Blank areas are produced by removing ink around the print pattern, which is then transferred to the paper or plastic substrate.

## Digital revenue stamps

Products used by the Federal Tax Authority for control over manufactured products, tax collection, distribution control and as a deterrent against counterfeiting. They differ from physical stamps in that they incorporate a digital stamp printed as characters or a QR code directly on the product being marketed, which is then controlled and tracked via a digital system comprising dedicated applications, networks and servers.

## Flexographic varnish

A nearly transparent finishing film with no pigments, used for protection on security documents. It is applied in liquid form through a printing process using a flexographic printing plate with a polymer surface.

# GRI CONTENT SUMMARY

## STANDARD DISCLOSURES

GENERAL STANDARD DISCLOSURES	PAGE/WHERE ADDRESSED	OMISSIONS
<b>STRATEGY AND ANALYSIS</b>		
<b>G4-1</b> Statement from the most senior decision-maker of the organization	4	
<b>G4-2</b> Description of key impacts, risks, and opportunities	8, 9, 10, 16, 18, 20, 26, 50, 61, 68, 78	
<b>ORGANIZATIONAL PROFILE</b>		
<b>G4-3</b> Name of organization	8	
<b>G4-4</b> Primary brands, products, and services	15	
<b>G4-5</b> Location of organization's headquarters	8	
<b>G4-6</b> Number of countries where the organization operates, and names of countries	10	
<b>G4-7</b> Nature of ownership and legal form	10	
<b>G4-8</b> Markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)	10	
<b>G4-9</b> Scale of organization	8, 42, 43, 51	
<b>G4-10</b> Total number of employees UNGC	51	
<b>G4-11</b> Percentage of total employees covered by collective bargaining agreements UNGC	100% of Mint employees.	
<b>G4-12</b> Description of organization's supply chain	62	
<b>G4-13</b> Significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain	20	
<b>G4-14</b> Whether and how the precautionary approach or principle is addressed by the organization	The precautionary approach is not addressed at the Mint.	
<b>G4-15</b> List externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses	30, 66	
<b>G4-16</b> List memberships of associations (such as industry associations) and national or international advocacy organizations	66	

GENERAL STANDARD DISCLOSURES	PAGE/WHERE ADDRESSED	OMISSIONS
<b>IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES</b>		
<b>G4-17</b> List all entities included in the organization's consolidated financial statements or equivalent documents	Not applicable.	
<b>G4-18</b> Explanation of the process for defining the report content and aspect boundaries	9	
<b>G4-19</b> List of all material aspects identified in the process for defining report content	9	
<b>G4-20</b> For each material aspect, report the aspect boundary within the organization	9	
<b>G4-21</b> For each material aspect, report the aspect boundary outside the organization	9	
<b>G4-22</b> Effect of any restatements of information provided in previous reports, and the reasons for such restatements	Not applicable.	
<b>G4-23</b> Significant changes from previous reporting periods in the scope and aspect boundaries	Not applicable.	
<b>STAKEHOLDER ENGAGEMENT</b>		
<b>G4-24</b> List of stakeholder groups engaged by the organization	50	
<b>G4-25</b> Basis for identification and selection of stakeholders with whom to engage	50	
<b>G4-26</b> Approach to stakeholder engagement	50	
<b>G4-27</b> Key topics and concerns that have been raised through stakeholder engagement	50	
<b>REPORT PROFILE</b>		
<b>G4-28</b> Reporting period (such as fiscal or calendar year) for information provided	80	
<b>G4-29</b> Date of most recent previous report (if any)	Not applicable.	
<b>G4-30</b> Reporting cycle (such as annual, biennial)	Biennial	
<b>G4-31</b> Contact point for questions regarding the report or its contents	80	
<b>G4-32</b> 'In accordance' option the organization has chosen	80	
<b>G4-33</b> Policy and current practice with regard to seeking external assurance for the report	80	
<b>GOVERNANCE</b>		
<b>G4-34</b> Governance structure of the organization, including committees of the highest governance body	17	
<b>ETHICS AND INTEGRITY</b>		
<b>G4-56</b> The organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	8, 20	

► SPECIFIC STANDARD DISCLOSURES

MATERIAL ASPECTS	DMA AND DISCLOSURES	PAGE/ WHERE AD- DRESSED	OMISSION
<b>ECONOMIC</b>			
Economic performance UNGC	<b>G4-DMA</b> Management approach	23-27, 41-47	
	<b>G4-EC1</b> Direct economic value generated and distributed	47	
	<b>G4-EC4</b> Financial assistance received from government	47	
Indirect economic impacts	<b>G4-DMA</b> Management approach	77	
	<b>G4-EC8</b> Significant indirect economic impacts, including the extent of impacts	77, 79	
<b>ENVIRONMENT UNGC</b>			
Materials	<b>G4-DMA</b> Management approach	70-75	
	<b>G4-EN1</b> Materials used by weight or volume	70	
	<b>G4-EN2</b> Percentage of materials used that are recycled input materials	36, 74	
Energy	<b>G4-DMA</b> Management approach	76	
	<b>G4-EN3</b> Energy consumption within the organization	76	
	<b>G4-EN5</b> Energy intensity	76	
Water	<b>G4-DMA</b> Management approach	77	
	<b>G4-EN8</b> Total water withdrawal by source	77	
	<b>G4-EN10</b> Percentage and total volume of water recycled and reused	77	
Emissions	<b>G4-DMA</b> Management approach	77	
	<b>G4-EN21</b> NOx, SOx, and other significant air emissions		To enhance credibility and quality in measuring GHG emissions, all inventories at the Mint undergo third-party verification. Because of this, inventory information could not be published for 2016 as the deadline for delivery of verified inventory information to the Brazilian GHG Protocol Program extends until the end of May each year.
Effluents and waste	<b>G4-DMA</b> Management approach	74	
	<b>G4-EN23</b> Total weight of waste by type and disposal method	74	

MATERIAL ASPECTS	DMA AND DISCLOSURES	PAGE/ WHERE AD- DRESSED	OMISSION
<b>SOCIAL – LABOR PRACTICES AND DECENT WORK UNGC</b>			
Employment	<b>G4-DMA</b> Management approach	51-59	
	<b>G4-LA1</b> Total number and rates of new employee hires and employee turnover by age group, gender and region	51	
Occupational health and safety	<b>G4-DMA</b> Management approach	59	
	<b>G4-LA6</b> Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and gender	58	
Training and education	<b>G4-DMA</b> Management approach	55, 58	
	<b>G4-LA9</b> Average hours of training per year per employee by gender, and by employee category	56	
Training and education	<b>G4-LA10</b> Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	55, 58	
	<b>G4-LA11</b> Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	54	
	<b>CATEGORY: SOCIAL – SOCIETY</b>		
Local communities UNGC	<b>G4-DMA</b> Management approach	50, 78	
	<b>G4-SO1</b> Percentage of operations with implemented local community engagement, impact assessment, and development programs	78	
Anti-corruption UNGC	<b>G4-DMA</b> Management approach	20, 21	
	<b>G4-SO4</b> Communication and training on anti-corruption policies and procedures	21	
	<b>G4-SO5</b> Confirmed incidents of corruption and actions taken		There were no confirmed incidents of corruption at the Mint between 2013 and 2016
Public policy UNGC	<b>G4-DMA</b> Management approach	60, 63	
	<b>G4-SO6</b> Total value of political contributions by country and recipient/beneficiary		The Mint does not make political contributions

MATERIAL ASPECTS	DMA AND DISCLOSURES	PAGE/ WHERE AD- DRESSED	OMISSION
<b>SOCIAL – PRODUCT RESPONSIBILITY</b>			
Customer health and safety	<b>G4-DMA</b> Management approach	16	
	<b>G4-PR1</b> Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	16	
	<b>G4-PR2</b> Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	No incidents were identified	
Product and service labeling	<b>G4-DMA</b> Management approach	14-16	
	<b>G4-PR5</b> Results of surveys measuring customer satisfaction	61	
Customer privacy	<b>G4-DMA</b> Management approach	62	
	<b>G4-PR8</b> Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	62	
Compliance	<b>G4-DMA</b> Management approach	16	
	<b>G4-PR9</b> Monetary value of significant fines for noncompliance with laws and regulations concerning the provision and use of products and services	No incidents were identified	

- ▶ **Project Management:** Environment and Quality Department, Brazilian Mint
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- ▶ **Photos:** Brazilian Mint Archives (except where otherwise specified in credits)
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