



padtec



padtec.com

*Updated in August/24



Padtec goes where no one else goes_

by bringing high-capacity connections to life.
From Brazil to the Americas, from the smallest
to the largest business, we are where you are.

padtec.com





With a history that spans more than 20 years, _

we are honored to be a Brazilian multinational company that works alongside our customers to offer services that bring people together.

We live and breathe technology_

using our expertise to design new futures. We leverage connections and create new realities in a world that does not stop evolving.

Padtec by the numbers

Headquarters

Campinas, São Paulo (Brazil)

Rua Doutor Ricardo Benetton Martins, 1.000

Polo II de Alta Tecnologia

Tel.: +55 19 2104-9600

CEO

Carlos Raimar Schoeneringer

National offices

São Paulo – Rio de Janeiro – Brasília – Fortaleza – Curitiba

International offices

Argentina – Chile – Colômbia – USA – Peru

R\$ 319.5 mi

Net revenue (LTM* 2Q24)



R\$ 35.5 mi

EBITDA (LTM* 2Q24)



PDTC3

B3



610+

Employees
(June/2024)



*LTM: corresponds to the results of the last 12 months

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We transform technology so that technology can transform the world_



Brazilian multinational

with more than two decades of experience in the Telecom market;



Global supplier

with a strong presence in Latin America;



It operates in a global market

worth US\$14 billion per year.



Develops, manufactures and markets

solutions for high-capacity broadband networks, based on DWDM technology;



Service Unit

for communication networks, today with more than 40 points of presence in Brazil, Argentina and Colombia.



Leaders The people that drive our connections



CEO AND INVESTOR
RELATIONS DIRECTOR

**Carlos Raimar
Schoeninger_**

With a Master in Business Administration from Fundação Getúlio Vargas (FGV), Raimar has over 20 years of experience in executive positions in the telecommunications, electromechanics, oil products and food sectors.

In the telecom sector, he held senior positions in large companies such as Telefônica Vivo and Globenet. Raimar, who has served on Padtec's Board of Directors as an independent member since 2016, took over the leadership of the company in 2021



VP OF EQUIPMENT
OPERATIONS

**Argemiro
Sousa_**

An Electronic Engineer who graduated from the University of São Paulo (USP) and has a Master's Degree in Electrical, Electronics and Communications Engineering from Unicamp, Argemiro took over Padtec's Business Leadership in 2008. The executive has more than 30 years of experience in the telecommunications, working in large companies in the segment, such as Alcatel-Lucent.



Leaders

The people that drive our connections



CEO OF PADTEC AMERICA AND
SVP OF INTERNATIONAL
OPERATIONS

Manuel
Andrade_

An Electronic Engineer with a Master's degree in Computer Science from IME (Instituto Militar de Engenharia), Manuel has more than 30 years of experience, working in countries in the Americas, Asia and Europe. Prior to his arrival at Padtec, Manuel held the position of vice president at large companies in the telecommunications sector – such as Xtera, ECI, Westell and Moddata. He has served as CEO of Padtec SA from 2015 to 2020.



VP OF PLATFORMS
AND SOLUTIONS

Alexandre
Piovesan_

A Systems Analyst graduated from the Pontifical Catholic University of Campinas (PUC), with an Executive MBA in Business Management from the Getúlio Vargas Foundation (FGV), the director has more than 30 years of experience in the areas of operations and services, working in large companies in the telecommunications sector – including Embratel.



Leaders The people that drive our connections



CHIEF LEGAL COUNSEL
AND COMPLIANCE OFFICER

Patricia
Iqueda_

A lawyer who graduated from the University of São Paulo (USP), Iqueda has more than 15 years of experience in the legal field, working for large companies in the telecommunications sector, such as Vivo and Oi.



CFO

Ramon
Cabral_

Business Administrator with an MBA in Financial Management, Controllershship and Auditing from Fundação Getúlio Vargas (FGV), Ramon Cabral Pereira has more than 10 years of experience in the financial area, working in companies from different sectors of the economy.



Leaders

The people that drive our connections



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RELATIONS DIRECTOR

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VP OF EQUIPMENT
OPERATIONS

Argemiro
Sousa_



CEO OF PADTEC
AMERICA AND SVP
OF INTERNATIONAL
OPERATIONS

Manuel
Andrade_



VP OF PLATFORMS
AND SOLUTIONS

Alexandre
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CHIEF LEGAL COUNSEL
AND COMPLIANCE
OFFICER

Patricia
Iqueda_



CFO

Ramon
Cabral_



Values



Exceed expectations

Our bar is set high. We always look ahead, investing in excellent, long lasting and exceptional solutions.

Working together to increase knowledge

In our universe, everything depends on teamwork. We value our collective intelligence, as diverse as the challenges we solve.

Respect people, respect the future

We exist to improve people's lives. Respect, accessibility, honesty, transparency and ethics in relations are our values; to make an increasingly positive impact on the sector is our goal.

Challenge the complexity

Whether it's a new technology or service, special requirements or network performance, or even the analysis of a large volume of information, our industry seems complex – and it is.

But for us, it is an opportunity to take on and overcome challenges.

Create value for everyone

Each part of our ecosystem should benefit from our actions, improve their outcomes, differentiate themselves and retain their customers.

The world connects and both society and the economy win.

In short: we connect Brazil and the world and our shareholders receive the return they deserve.



History



2001



Padtec starts_

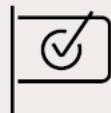
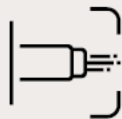
as a spin-off from CPQD's optical communication laboratories, manufacturing and supplying long distance DWDM systems.

Padtec acquires important clients_

and begins its expansion throughout Brazil.



2002 - 2006



2010 - 2013

It completes a decade of operations_

with more than 100,000 km of backbone networks installed throughout South America and attracts a new investor: BNDESPar, the BNDES' shareholding arm. It also opens its commercial office in the United States.

Padtec connects Brazil and the world _

in the greatest World Cup of all times, performs the Sea Trial of its submarine repeater in the Caribbean Sea and implements a system with sub-fluvial cable in the Rio Negro, in Manaus.Negro, en Manaus.



2014 - 2016



2017 - 2019

Delivers its first deployment of an underwater optical network to Google_

Padtec completes the sale of the subsea systems division and its OTN Switching business unit to important multinationals in the sector.

Padtec completes the merger of its shares into Padtec Holding_

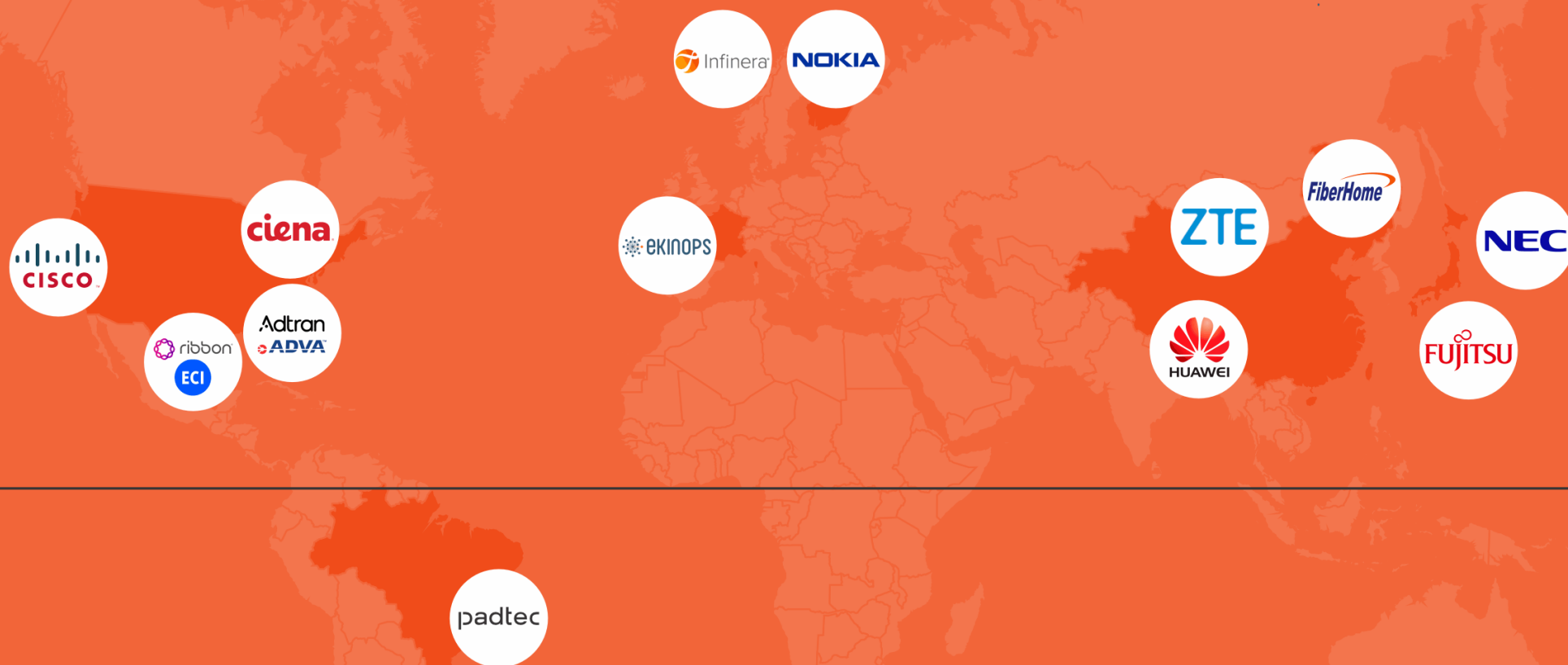
to raise capital on the stock exchange and expand its investments in the development of cutting-edge technology and expansion into new markets. Enters the switches and routers market.



2020 - 2023



Geopolitics of the DWDM market_

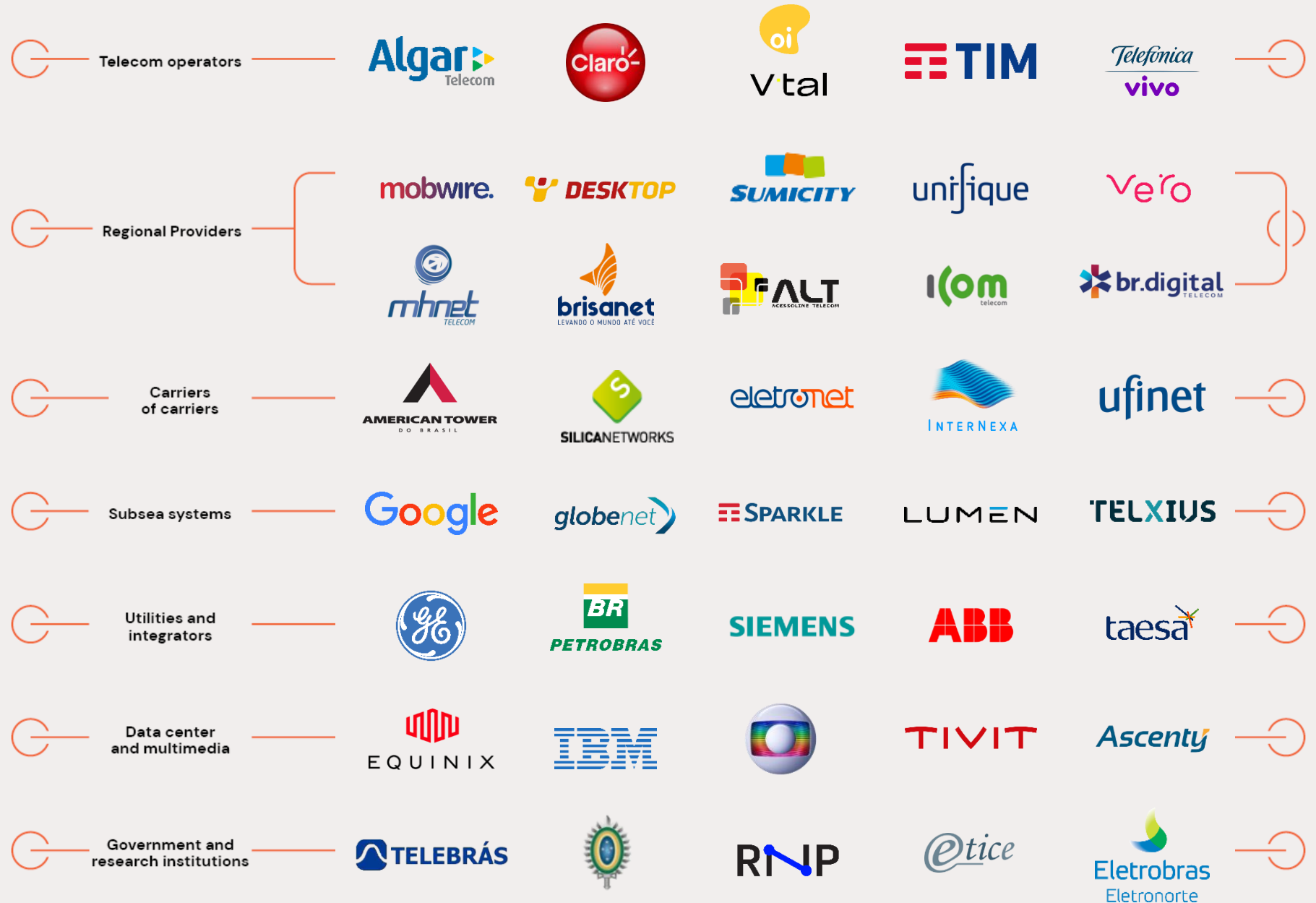


Equator Line



Customer portfolio

We've said it before and we'll say it again: from Brazil to the Americas, from the smallest to the biggest business, we're where you are.



Made by people, for people



610⁺



employees and
interns working in
person, hybrid or
fully remote

440⁺



employees at
the company's
headquarters in
Campinas

170⁺



Employees spread throughout Brazil,
Argentina, Colombia, Chile and the USA

86%

is the engagement
rate of the company's
employees*

63%

of employees with
college

4%

with completed
doctorate and
master's degrees

25%

of the company's
employees are
engineers

22%

of employees are
women

27%

of women in
leadership positions

Generations**

1.1%

Baby boomers
(born between 1940
and 1959)

24.5%

Generation X
(born between 1960
and 1979)

65.1%

Generation Y
(born between 1980
and 1999)

9.3%

Generation Z
(born between 2000
and 2010)

* Source: Padtec Climate Survey 2023

** Definition by Sidnei Oliveira

Data from June/2024

A man and a woman in business attire are standing in a server room, looking at a laptop. The man is on the left, wearing a light blue shirt and a lanyard, smiling. The woman is on the right, wearing a dark blue blazer, glasses, and a lanyard, also smiling. They are both looking at a laptop held by the woman. The background is a server room with many rows of server racks and blue lighting. The entire scene is framed by a large, dark, circular graphic element.

Business Units

Understand how we create
new realities.



Business units



Products

- LightPad Platform i6400G
- LightPad Max Platform (2.4T)
- DCI Generation Platform (1.2T)
- 400G Standalone
- Switches and Routers
- QSFP-DD Transceivers
- LightPad OTDR Platform



Services

- Network Maintenance
- Network Management
- Characterization
- SPaaS (Spare Part as a Service)
- Fiber Monitoring
- Training



Digital Solutions

- Smart Site
- Smart Workspot
- InovaTEC





Products

Business units

LightPad i6400G Platform

LightPad i6400G: a platform for the most diverse solutions

Our platform delivers a carrier-class solution for high-capacity multi-service transport across diverse network architectures.

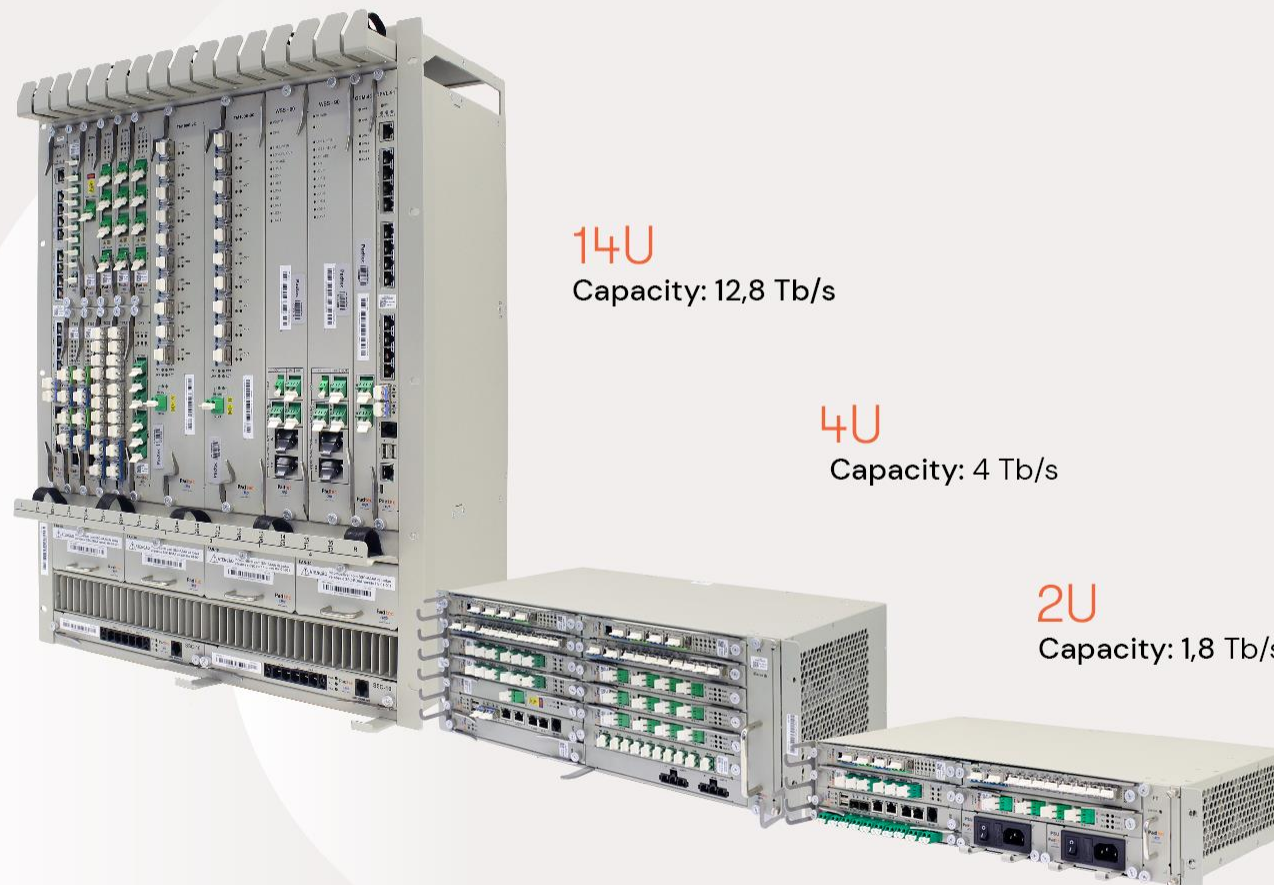


Applications

- Terrestrial and submarine backbones
- Metro and aggregation networks
- DCI and SAN extension scenarios

Technologies

- DWDM (*Dense Wavelength Division Multiplexing*)
- ROADM WSS (*Wavelength Selective Switch*)
- OTN (*Optical Transport Network*)
- ODU-XC (*ODU cross-connect*)





Products

LightPad i6400G Platform

Product family



Muxponder Dual 400G TMD400G

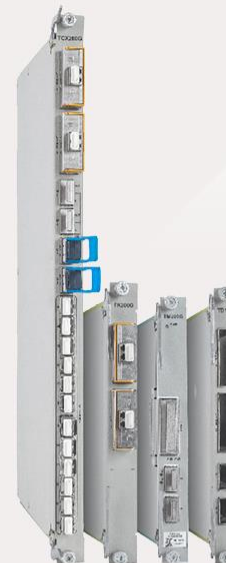
Network Interfaces

- 2x CFP2-DCO 400G
- Rate configurable from 100 Gb/s to 400 Gb/s
- Client Interfaces
- QSFP28 SR or LR
- Up to 8x 100G
- Port activation by license
- 4x100G dual muxponder application
- ALO protection features (Auto Laser Off), Loopback y OSNC



Combiner 200G TCX200G-9A

- Line interfaces
- CFP2-DCO, applications:
- 1x CFP2 200G
- 2x CFP2 100G
- Client Interfaces
- QSFP+
- 2x QSFP+/QSFP28 up to 100G
- Protocols: 4x10G/40G/100G
- SFP+ client interfaces
- 12x SFP+ up to 16G

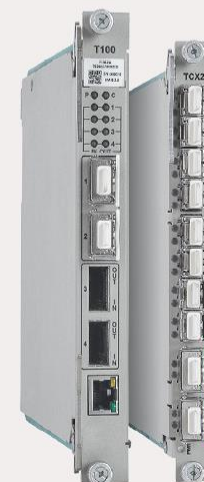


Business units

Linecards

100/200 Gb/s

- Muxponder 200G (2x100G)
- Regenerador 100/200G (2x100G)
- Dual 100G ((2x100G)



Linecards

10Gb/s

Applications

- Dual Terminal
- Protected ring (x-connect)

Operation mode

- 2x OTU2
- 3x OTU1

Functionalities

- OSNC protection (route)
- ALO for use with optical switch



Products

Business units

LightPad i6400G Platform

Passive Solutions

Mux/Demux

Low Loss

- Low loss Mux/Demux developed specifically for this application
- Network design and performance guaranteed by Padtec
- Possibility of using amplifiers for link extension



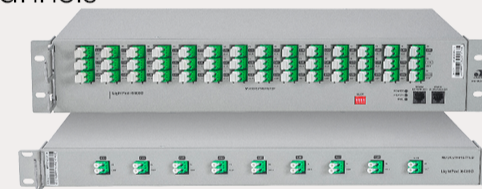
Mux/Demux

48 channels with and without VOA

Complete portfolio for Add/Drop channels.

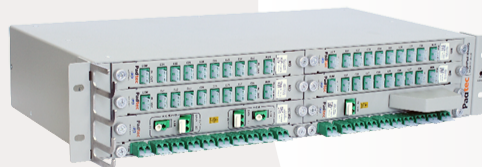
Mux/Demux from 4 to 96 channels

- Standalone mechanics
- Options with VOA
- Colorless Options
- 2, 4 and 8 channel OADMS



Passive Box

- Entry solution for DWDM technology
- Colored SFP+ for use directly with switches and routers



OADM

Optical/Add-Drop/Multiplexer





Products

LightPad i6400G Platform

Amplifiers

High performance, low noise figure



Amplifiers EDFA



Raman and ROPA

C Band EDFA

- 18 dBm family

C+ Band

- EDFA 21 dBm
- Raman 29 dBm
- Hybrid EDFA + Raman

Hybrid R2

- Super compact Hybrid Amplifier with integrated Transmit EDFA, Receive EDFA and Raman stages

Special solutions

- Raman 33 dBm
- ROPA C+
- ROPA optimized for few channels

Business units

Optical switches

OPS-Hx (Optical Protection System)

Characteristics

- Switching time <15 ms
- Route monitoring
- Single and Multimode Models
- One or two switching units on the same module





Products

Business units

LightPad i6400G Platform ROADM



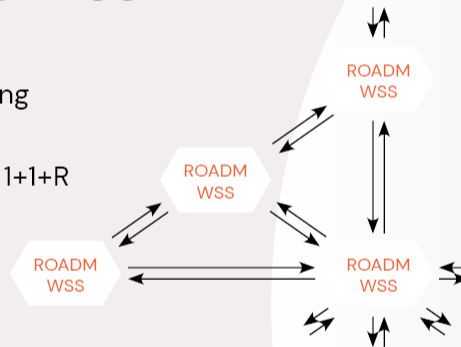
Wavelength Selective Switch WSS9-9A and WSS4-9A

Functionalities

- End-to-end provisioning
- Automatic EQ
- Protection 1+1, 1+R and 1+1+R

Architecture:

- Directed
- Directionless
- Colorless
- FlexGrid



Wavelength Selective Switch WSS2-HA

- 2 degrees

Characteristics:

- Ring topology
- Low insertion loss
- Embedded OCM
- Protection and restoration ready



OCM-HR High Resolution - Optical Channel Monitoring

- Power monitoring and OSNR of DWDM channels
- 8 independent monitoring ports
- Compatible with FlexGrid channels
- Applications for networks without WSS or at WSS nodes





Products

Business units

LightPad Max

Double Muxponder 2.4 Tb/s::

- Up to 2x 1.2 Tb/s channels
- Programmable (68 to 138 GBd)



Supervision:

- Ports for DCN, GL and cascading

Lines 2x CIM8:

- 800G
- 1T
- 1,2T

Energy:

- 2x redundant DC 0/-48V lanes

**Customers
6x (per Line):**

- up to 6x QSFP28
- up to 2x QSFP-DD
- 100G/200G/400G



Removable fans from the rear panel





Products

Business units

DCI Generation Platform

Padtec Muxponders 1200G and 800G

If you have Padtec technology,
capacity is included.

The TM1200G and TM800G muxponders
are ideal for very high capacity applications
in short, medium and long distance DWDM



TM1200G

- Transmission rates from 100 Gb/s to 600 Gb/s
- Configurable modulations: DP-QPSK to DP-64QAM
- Transmission capacity of 38.4Tbps in the C+ Band
- Support for Fine Tuning
- Compatible with MicroMux module
- 27% SD-FEC* for "Ultra High Gain"
- Maximum power consumption: 340W



TM800G

- Transmission rates from 100 Gb/s to 400 Gb/s
- Configurable modulations: DP-QPSK to DP-16QAM
- Transmission capacity of 25.6Tbps in the C+ Band
- Support for Fine Tuning
- Compatible with MicroMux module
- 27% SD-FEC* for "Ultra High Gain"
- Maximum power consumption: 340W



Products

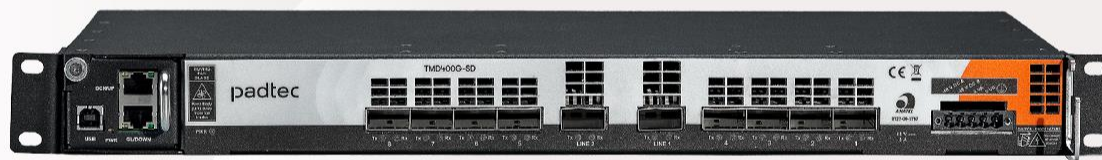
Business units

Dual 400G Transponder

Standalone transponder with up to 400 Gb/s (per optical channel)
ideal for point-to-point applications
or traditional DWDM solutions

TMD400G-SD

- Standalone mechanics with low rack space requirements (1RU height)
- Low cost coherent solution from 100G to 400G
- Used in single wavelength point-to-point systems
- Traditional DWDM application
- Network interface based on the new 400G ZR standard
- Entry level solution with built-in supervisor





Products

Switch and router platform

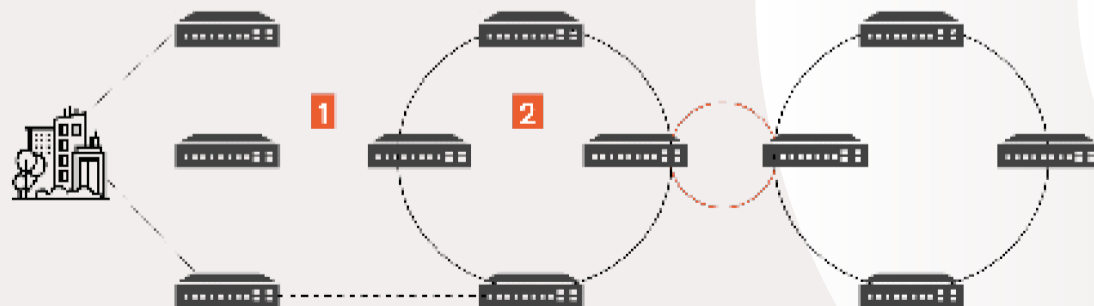


Access networks S9510-28DC

Responsible for providing direct connectivity to residential and corporate users, the access infrastructure provided by the partnership between Padtec and **UfiSpace** features open access routers that are temperature resistant, compact and easy to maintain.

- 2 doors 100/400G QSFP-DD
- 2 doors 40/100G QSFP28
- 24 doors SFP28 10/25G
- 800 Gb/s switching capacity

1 S9500 Family
2 S9600 Family



Business units

Aggregation networks S9600-56DX



The aggregation systems delivered by the partnership between Padtec and **UfiSpace** use switching techniques and advanced routing, to aggregate traffic from multiple access points, effectively directing you to the highest capacity aggregation nodes.

- 8 doors QSFP-DD 40/100/400G
- 48 doors QSFP28 de 40/100G
- 4 doors 1/10/25G SFP28
- 4,8 Tb/s switching capacity

Network Operating Systems

The functionalities are enabled through OcNOS (**IPInfusion** software).

Funcionalidades:

- Routing (Layer 3)
- Multiprotocol Label Switching (MPLS)
- Layer 2 VPN (L2VPN)
- Layer 3 VPN (L3VPN)
- Virtual Extensible LAN (VxLAN)
- Segment Routing (SR)



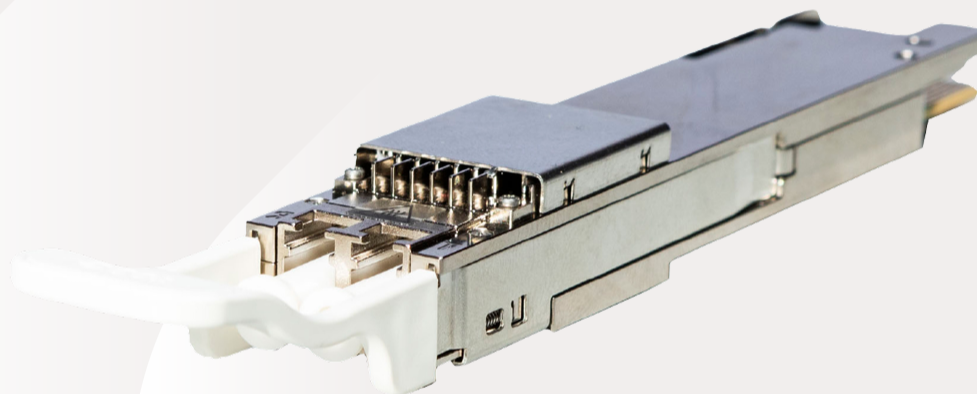
Products

Business units

QSFP-DD Transceivers

Now, DWDM extends to routers and switches.

Padtec launches the 400G QSFP-DD module, a high-density pluggable solution compatible with switches and routers from various manufacturers. Ideal for 100G to 400G transmissions, this module is perfect for ROADMs systems, simplifying networks and reducing costs. Following the OpenZR+ standard, it offers high performance and interoperability, making it efficient for DCI, regional, and long-distance applications.





Products

Business units

LightPad OTDR Platform Optical Time-Domain Reflectometer

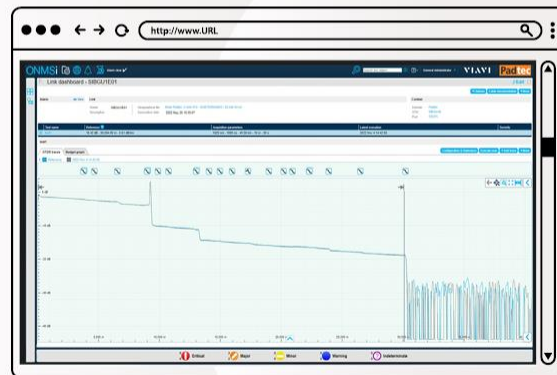
**Monitoring, in real time, the
status of your network.**

The latest generation product, which is part of VIavi's OTDR OTU-5000 series, remotely and automatically monitors the integrity of optical fibers.

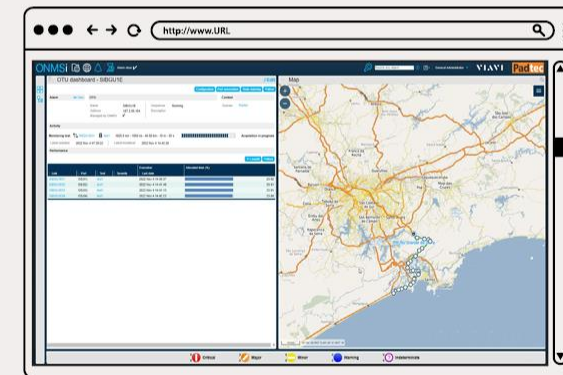
- Unit with 3 slots for OTDR or WDM filters
- Number of fibers monitored: 4, 8 or 16
- Low power consumption (10W)
- Range of ~120 km (Dynamic Range: 39 dB)
- Monitoring of active or dark fibers
- Network operating band 1260 nm to 1580
- Graphical interface with conventional OTDR traces



Monitoring Software



Monitoring chart example





Products

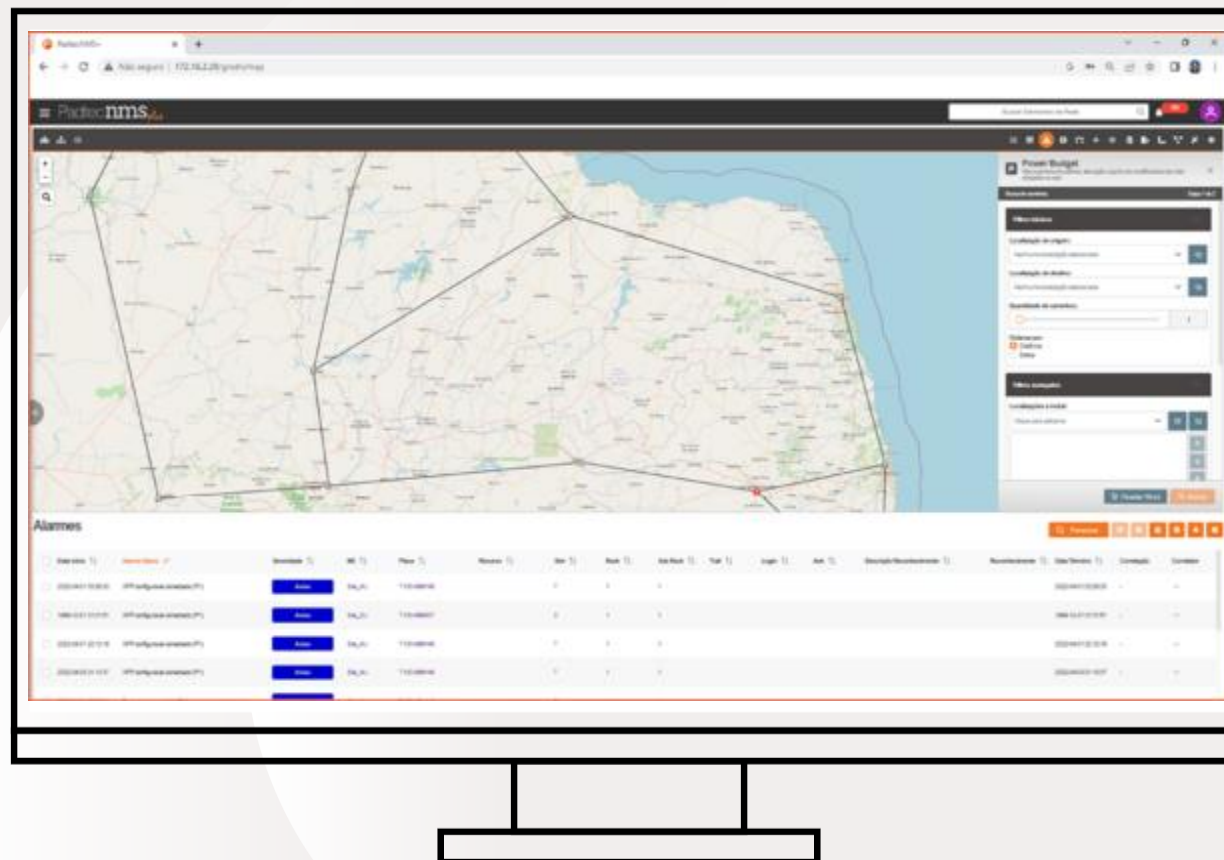
Business units

Padtec NMS+

It's never been easier to manage your network

Comprehensive web management platform for DWDM networks.

- Web interface for board management
- New platform administration tools
- Supports high availability platforms
- Graphical interface for managing geolocated networks
- Addition of new provisioning features and restoration services
- External authentication support
- Displays a list of correlated alarms
- Web based





Services

Business units



Network Operation and Maintenance

- More than 40 MCs (Maintenance Centers) throughout Brazil, Argentina and Colombia;
- Four-hour service agreements (SLA) for the start of service in any section of a monitored network.



Network Management (NOC)

Padtec is always with you.

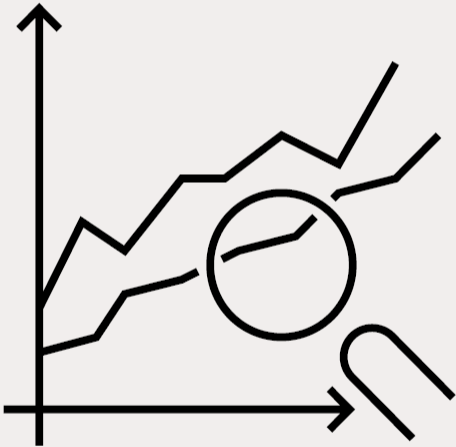
To fully monitor and manage routes, built with different technologies, in real time, Padtec also offers network operation and maintenance services from its Network Operations Center (or NOC).

- 24x7 operation;
- Performance Reports;
- Real-time monitoring.



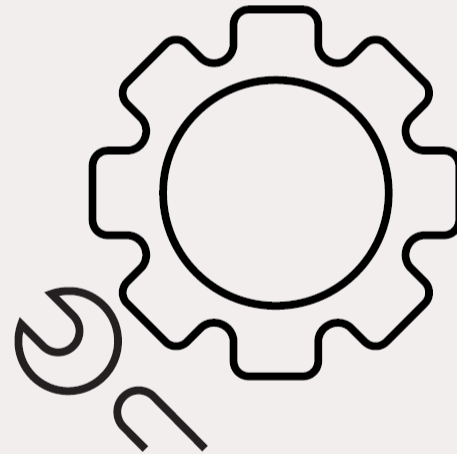
Services

Business units



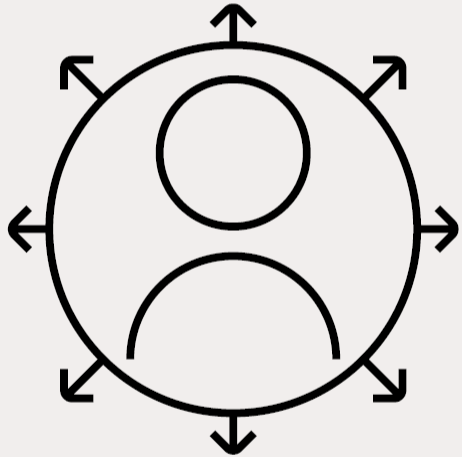
Characterization

For systems already in operation, the fiber characterization service helps plan expansions or even identify bottlenecks that are affecting the network's competitiveness.



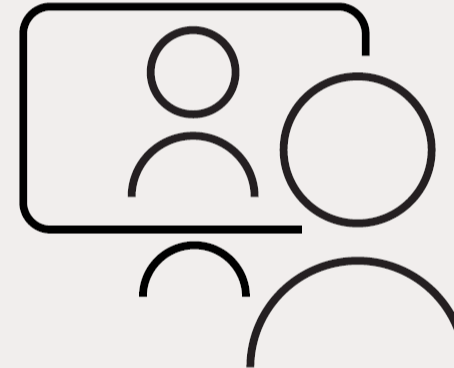
Spaas - Spare Part as a Service

Service for contracting spare parts for immediate replacement in cases of original equipment failure.



Fiber Supervision

Through its NOC, Padtec offers the supervision of both the monitoring systems and the fiber itself, providing information on degradation events, and precise geolocation of faults, in addition to attenuation history.



Training center

Basic and advanced modules for entry level and ongoing training.

Padtec's varied training portfolio includes theoretical courses in the areas of network planning and engineering and practical courses in the areas of operation and maintenance of DWDM networks.



Services



Network Operation and Maintenance

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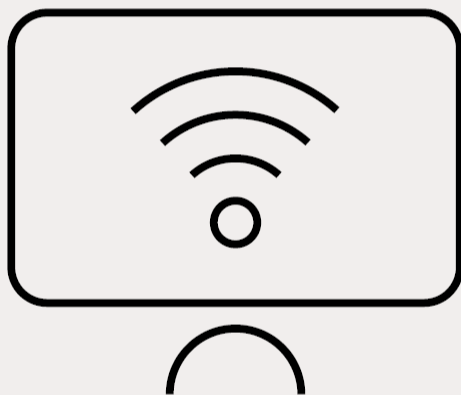
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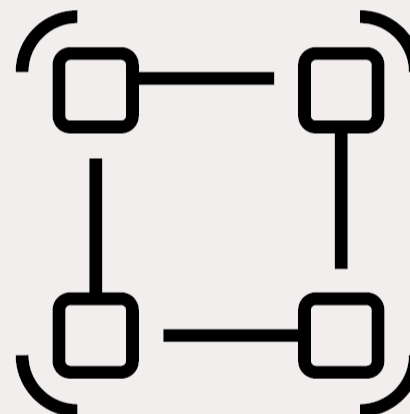
Digital Solutions

Business units



Smart Site

Monitor your site from anywhere: with the service, operators and ISPs can remotely monitor and control the elements that make up the infrastructure of their network environments in real-time.



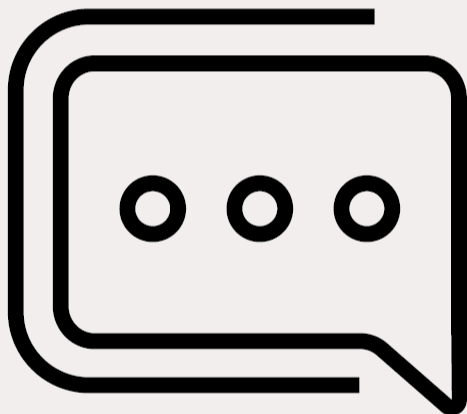
Smart Workspot

Developed in-house, the software enables integrated management of teams and response times, and can be customized for each operation. The Smart Workspot includes an app with offline access, ensuring productivity and data updates even in remote locations or areas with limited connectivity.



Digital Solutions

Business units



InovaTEC

Padtec, through InovaTEC, offers consultancy services to transform the telecommunications sector with innovative digital solutions. InovaTEC develops customized strategies, enhancing efficiency and sustainability with a flexible and agile approach that anticipates future demands.



Digital Solutions



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Business units



Results LTM 2Q24

*LTM: Last 12 months



Net
Revenue

R\$ 319.5 mi



R&D x Net
revenue

R\$ 43.5 mi

(13% of net revenue)



Revenues from the
international market

R\$ 74.7 mi



Adjusted EBITDA

R\$ 35.5 mi

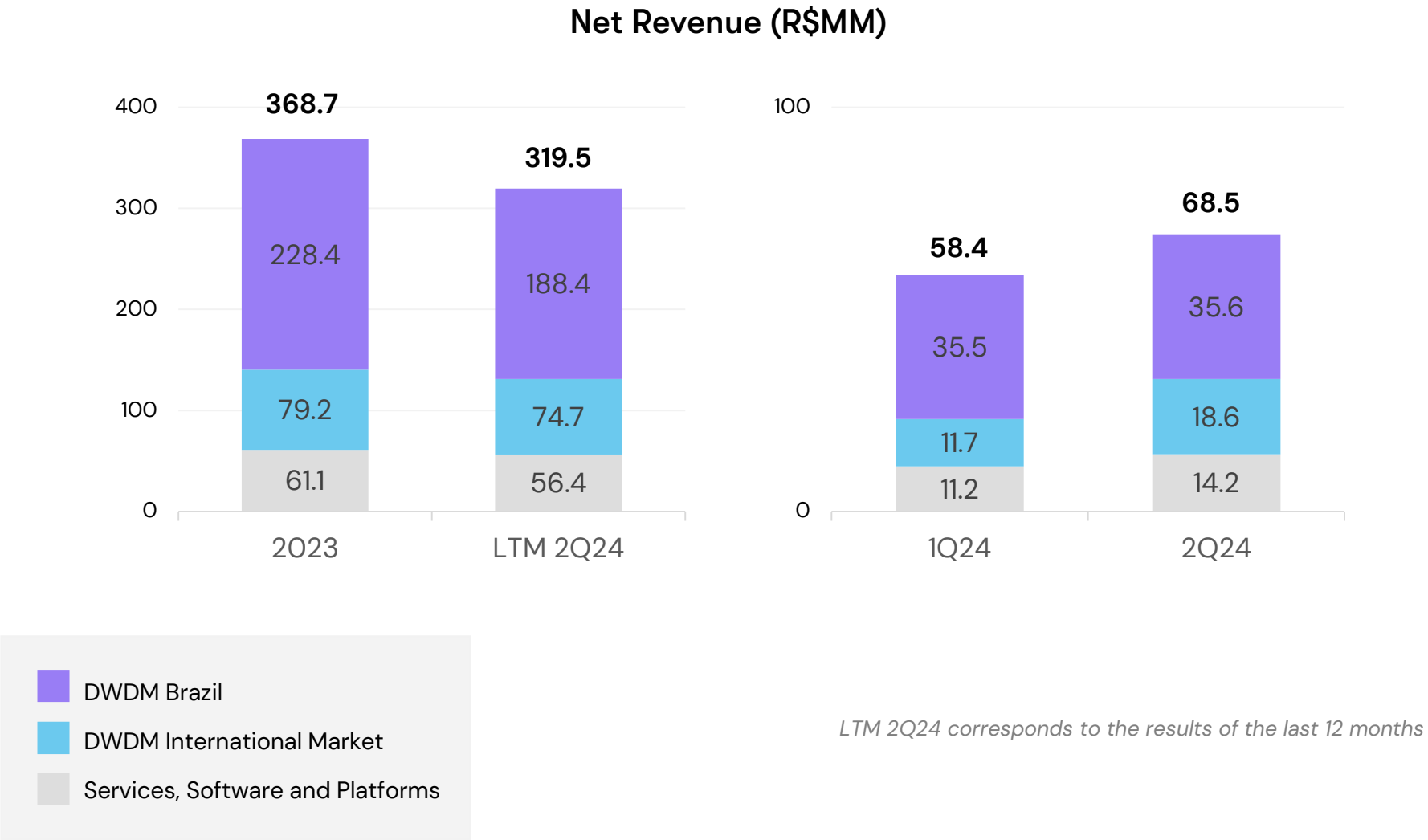


Gross
Margin

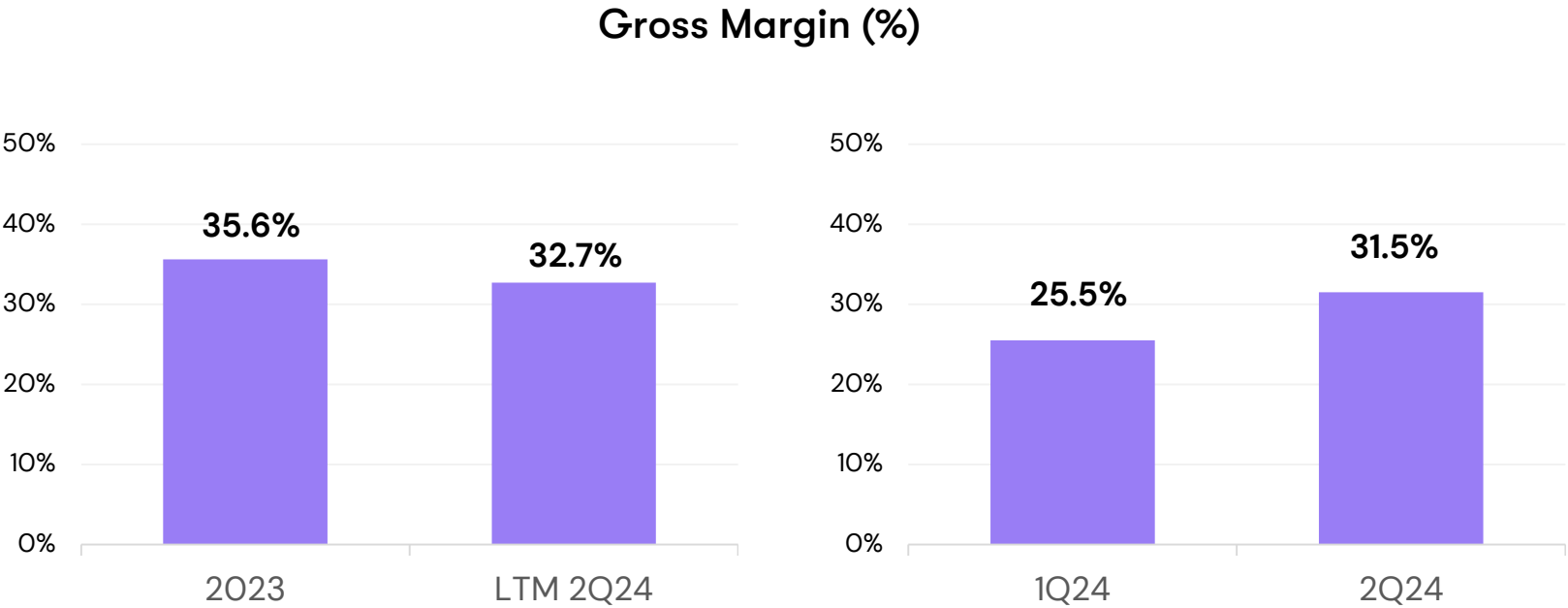
32.7%



Results



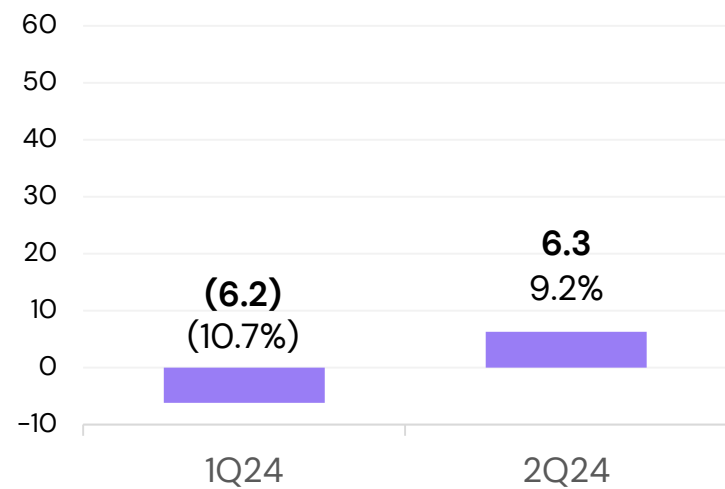
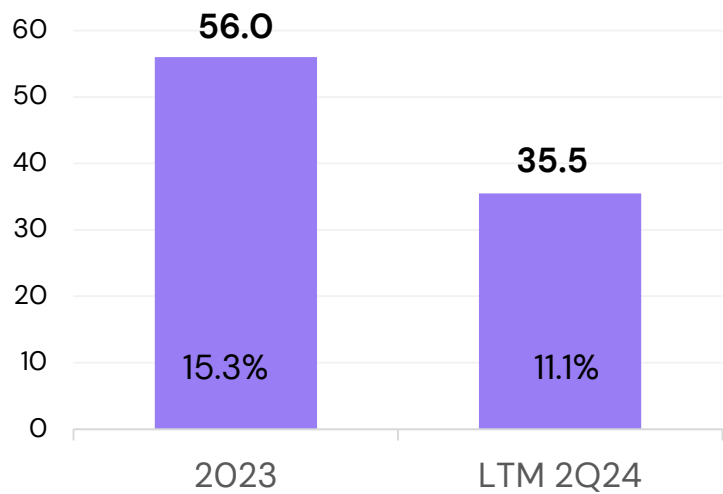
Results



LTM 2Q24 corresponds to the results of the last 12 months

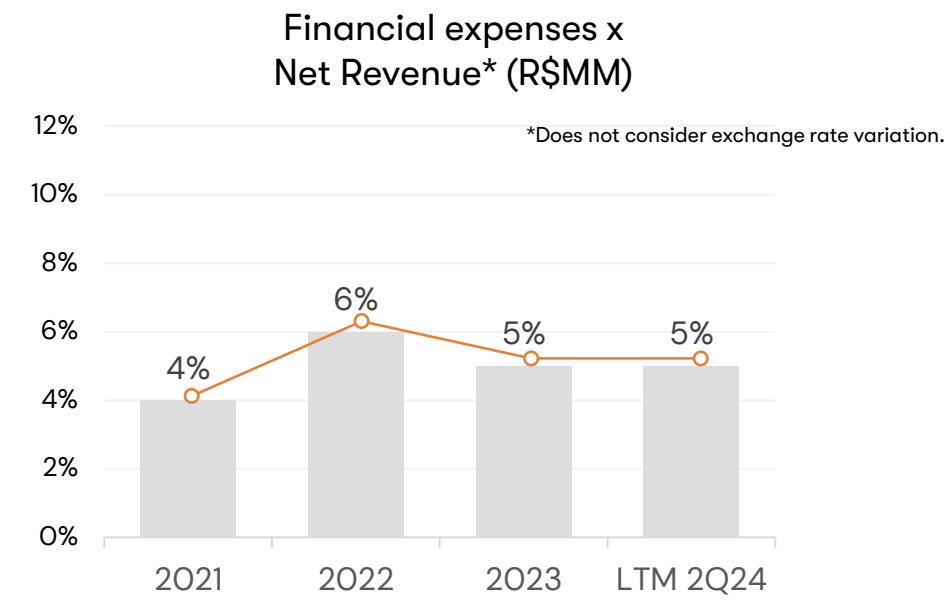
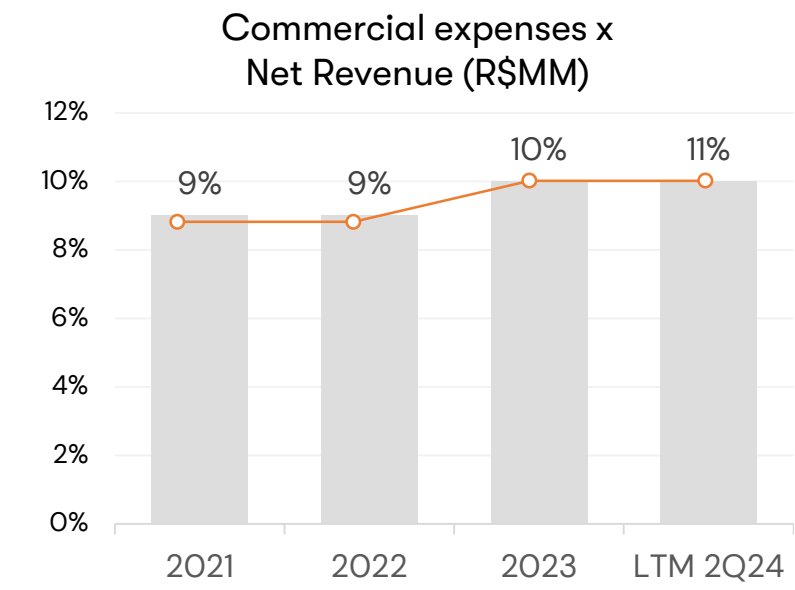
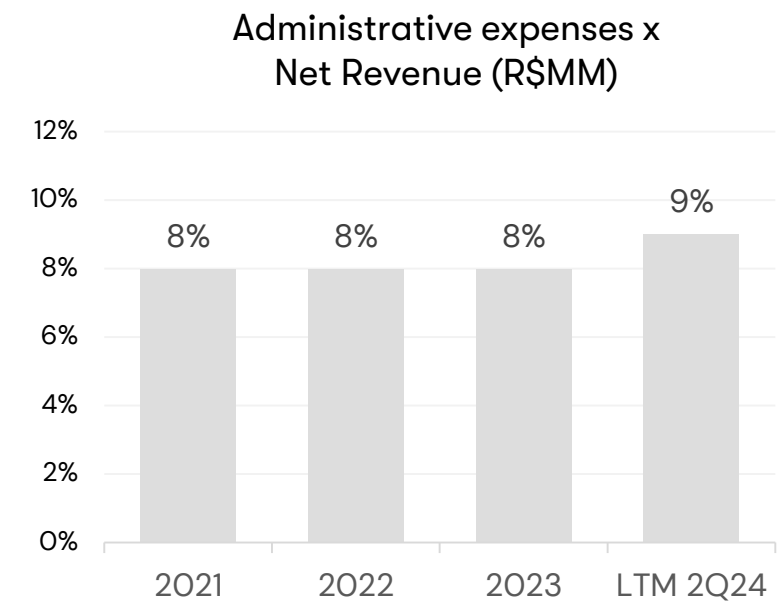
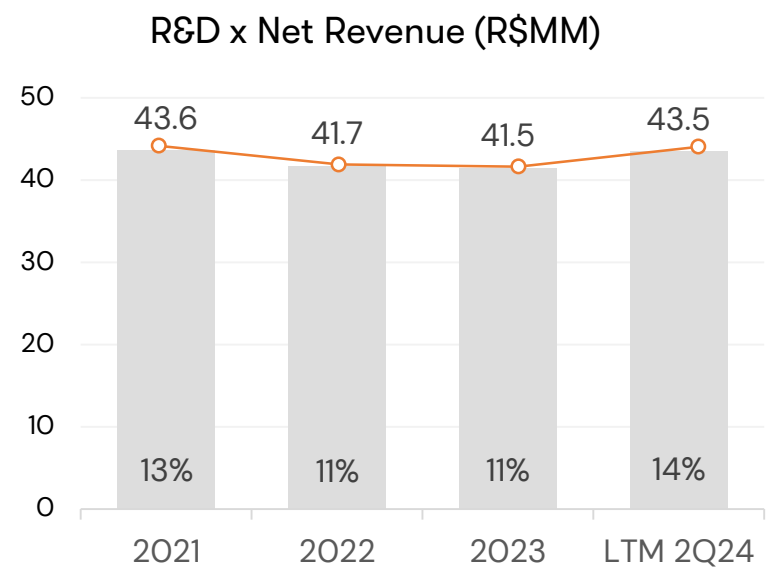
Results

EBITDA (R\$MM); EBITDA Margin (%)



LTM 2Q24 corresponds to the results of the last 12 months

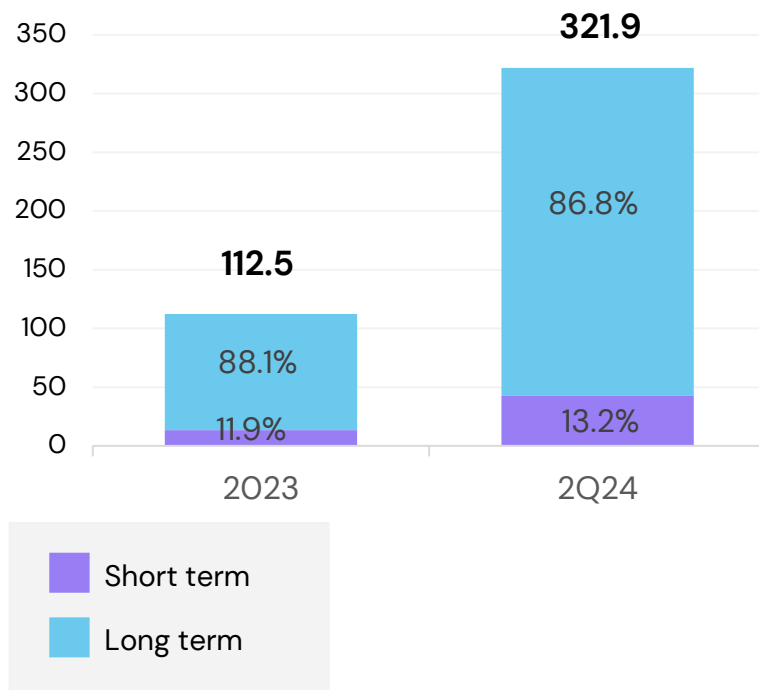
Results



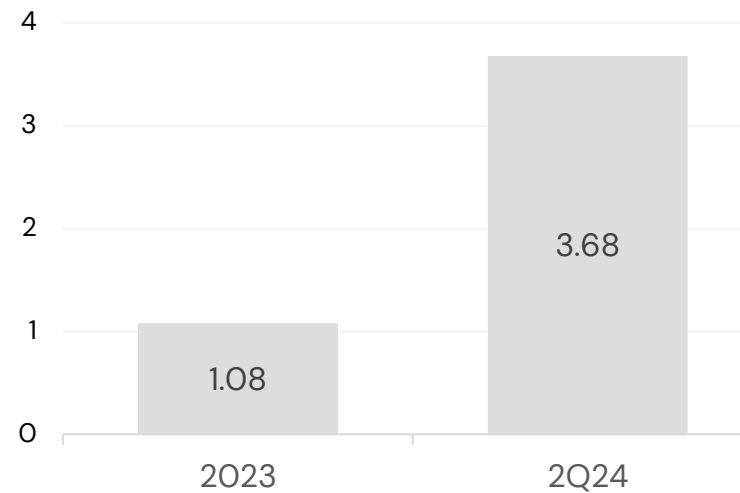
LTM 2Q24 corresponds to the results of the last 12 months

Results

Loans: long vs. short term (R\$MM)



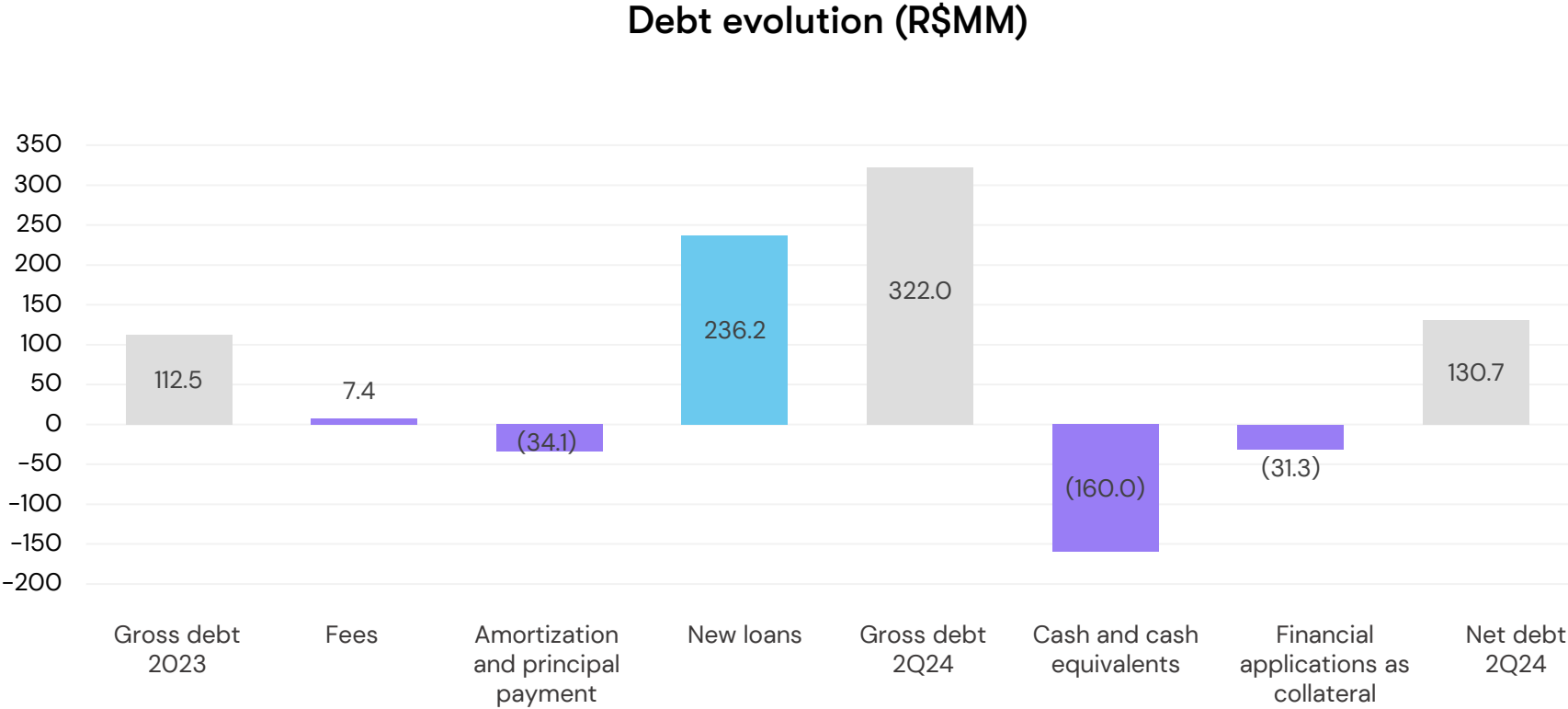
Net Debt / LTM EBITDA ¹ (X)



¹LTM EBITDA corresponde ao somatório do EBITDA registrado nos últimos 12 meses.

- Debt restructuring carried out at the beginning of 2024 with extension of maturity terms
- Increased cash resources result in greater liquidity availability and room to support organic growth
- 87% in long-term obligations, average cost of funding: **7.93%** per year in 2Q24

Results





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