

Last Updated: April 2023

Mining & Quarrying is the largest sector of Bahrain's economy contributing 17.7% towards real GDP in 2022, with crude petroleum and natural gas as the main drivers. The industry's total gross value-added reached a sum of 2.366 billion BHD in 2022. The sector employs 2.9% of the total workforce in the private sector with a Bahrainization rate of 5.9%.



Sector Opportunities & Trends

01. Automation and Robotics

Automation and robotics technologies are becoming increasingly popular in the mining and quarrying sector, as they can help to increase efficiency, reduce costs and improve safety. For example, autonomous drilling rigs can operate without human intervention, reducing the risk of accidents and increasing productivity.

02. Artificial Intelligence (AI)

AI can be used to analyze data collected during mining and quarrying operations, providing insights into performance and improving decision-making. For example, AI can be used to optimize drilling patterns, leading to more efficient extraction and reducing the risk of accidents.

03. Drones

Drones can be used to collect data on mining and quarrying operations, providing real-time information on performance, safety and environmental impact. They can also be used to create 3D models of mining sites, improving planning and reducing the risk of accidents.

04. Wearable Technology

Wearable technology such as smart helmets and vests can improve safety by monitoring workers' vital signs and alerting supervisors in the event of an emergency. They can also be used to track workers' movements and prevent them from entering hazardous areas.

05. Internet of Things (IoT)

IoT can be used to monitor and control mining and quarrying equipment, thereby optimizing performance and reducing downtime. It can also be used to monitor environmental factors such as air quality and noise levels to improve safety and reduce environmental impact.

06. Virtual and Augmented Reality (VR, AR)

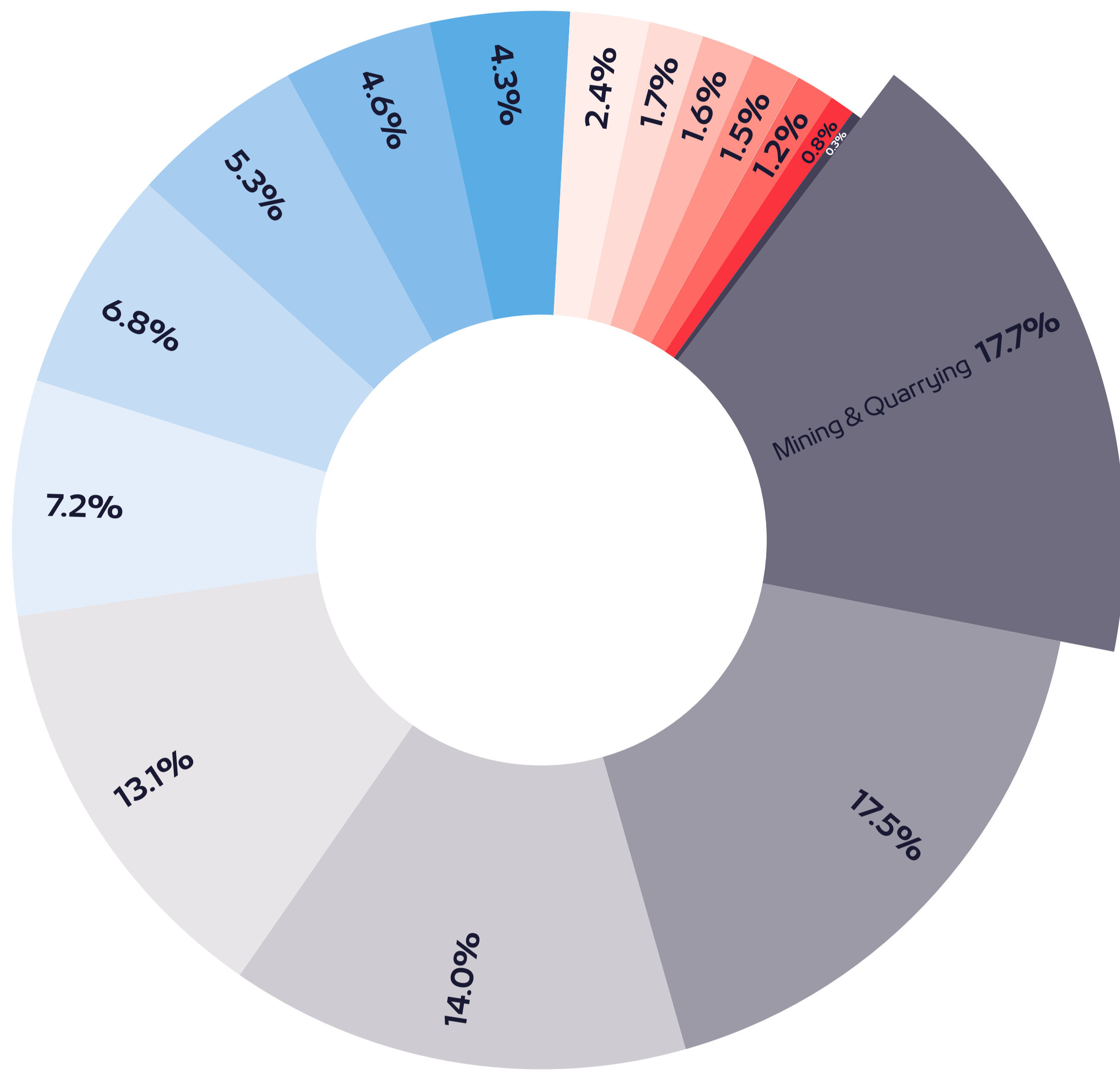
VR and AR can be used for training purposes, allowing workers to practice operating equipment and handling emergencies in a safe simulated environment.

Mining & Quarrying Sector Economic Indicators

iGA-National Accounts, Q4-2022

Mining & Quarrying Sector Contribution to Real GDP

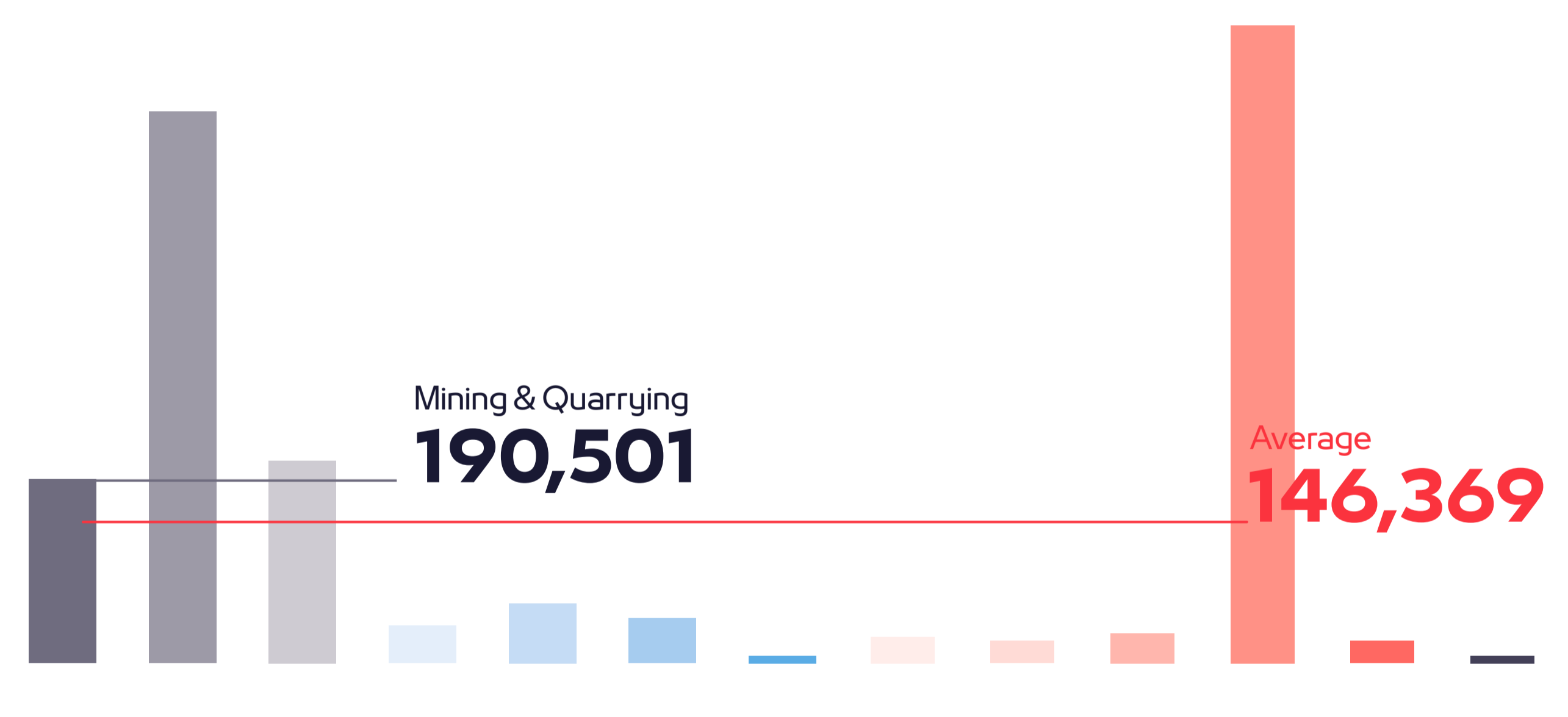
(%, Q4 2022)



Mining & Quarrying	17.7%	Trade	4.3%
Financial Corporations	17.5%	Private Education Services	2.4%
Manufacturing	14.0%	Hotels & Restaurants	1.7%
Government Services	13.1%	Other Social & Personal Services	1.6%
Construction	7.2%	Electricity & Water	1.5%
Transport and Communication	6.8%	Private Health Services	1.2%
Real Estate & Business Activities	5.3%	Others**	0.8%
Net tax on Products	4.6%	Agriculture & Fishing	0.3%

GVA per company

(BHD, Q4 2022)



*Gross Value added (GVA) measures the value of goods and services produced in an area, industry or sector of an economy
 **Others includes (Private Non-Profit Institutions, Households with Employed Persons)

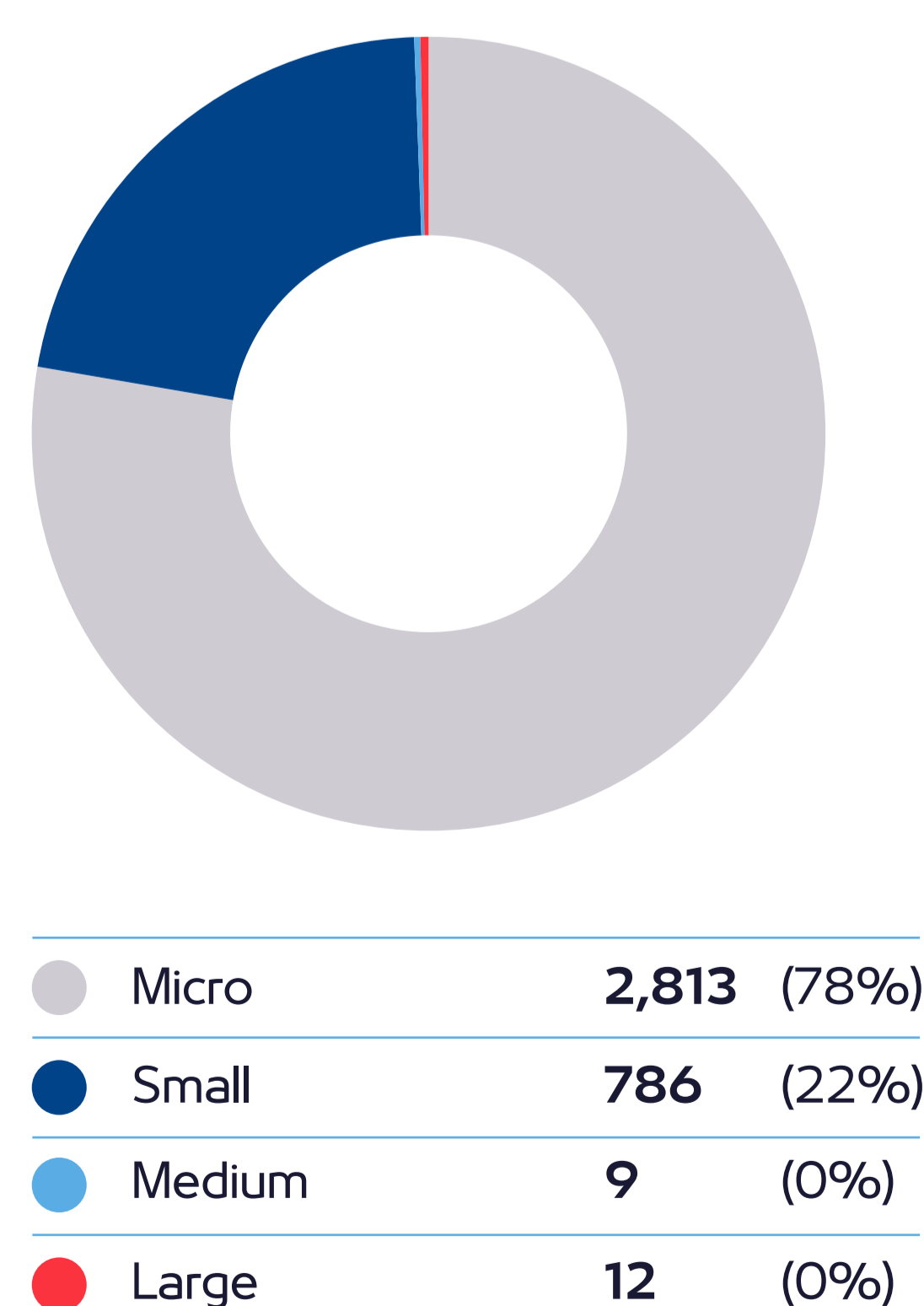
Mining & Quarrying Sector Enterprises

LMRA, 2022 - BLMI

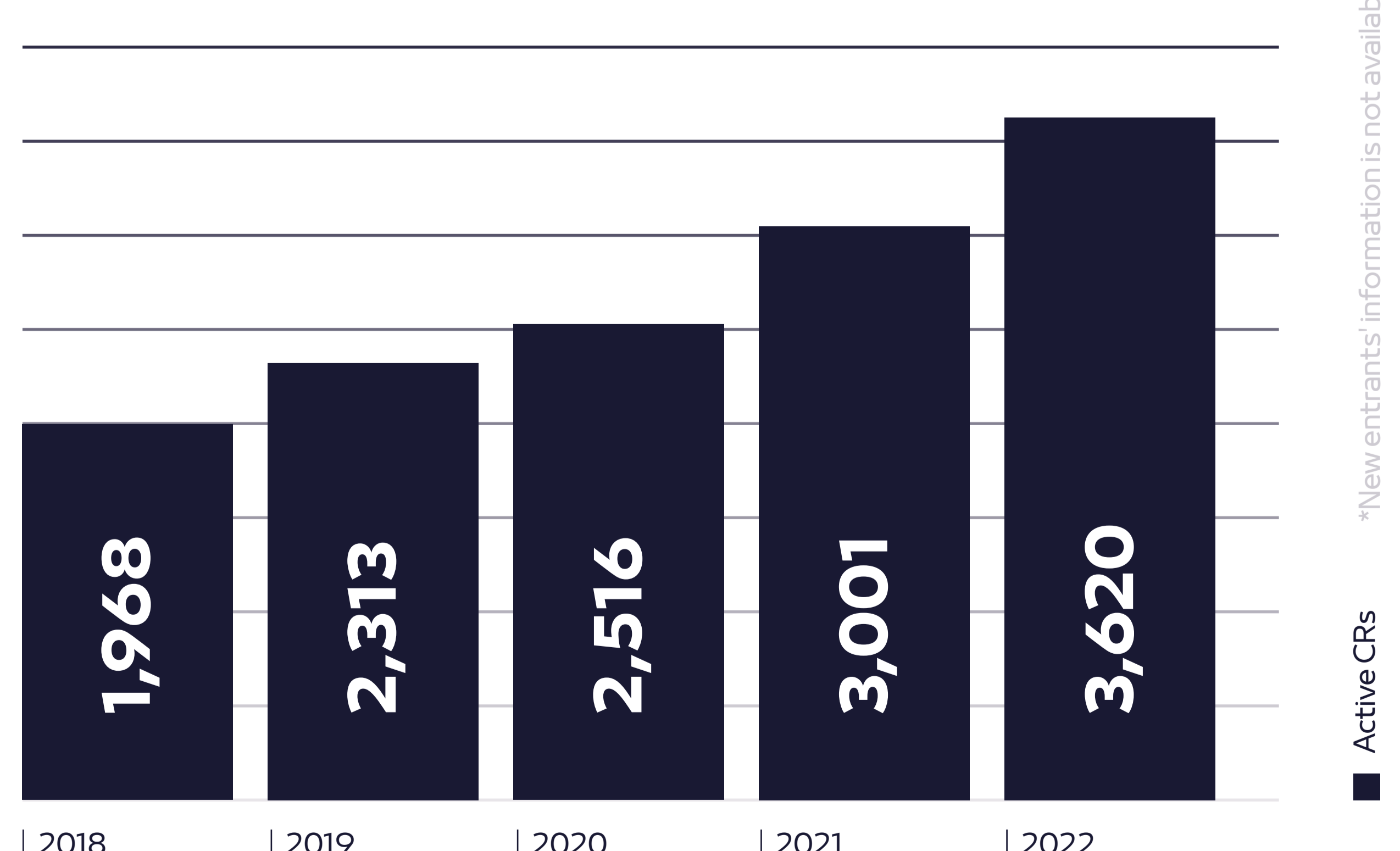
3,620
Active CRs

5%
of total Active CRs in Bahrain

Mining & Quarrying Sector by Enterprise Size (%), Q4 2022

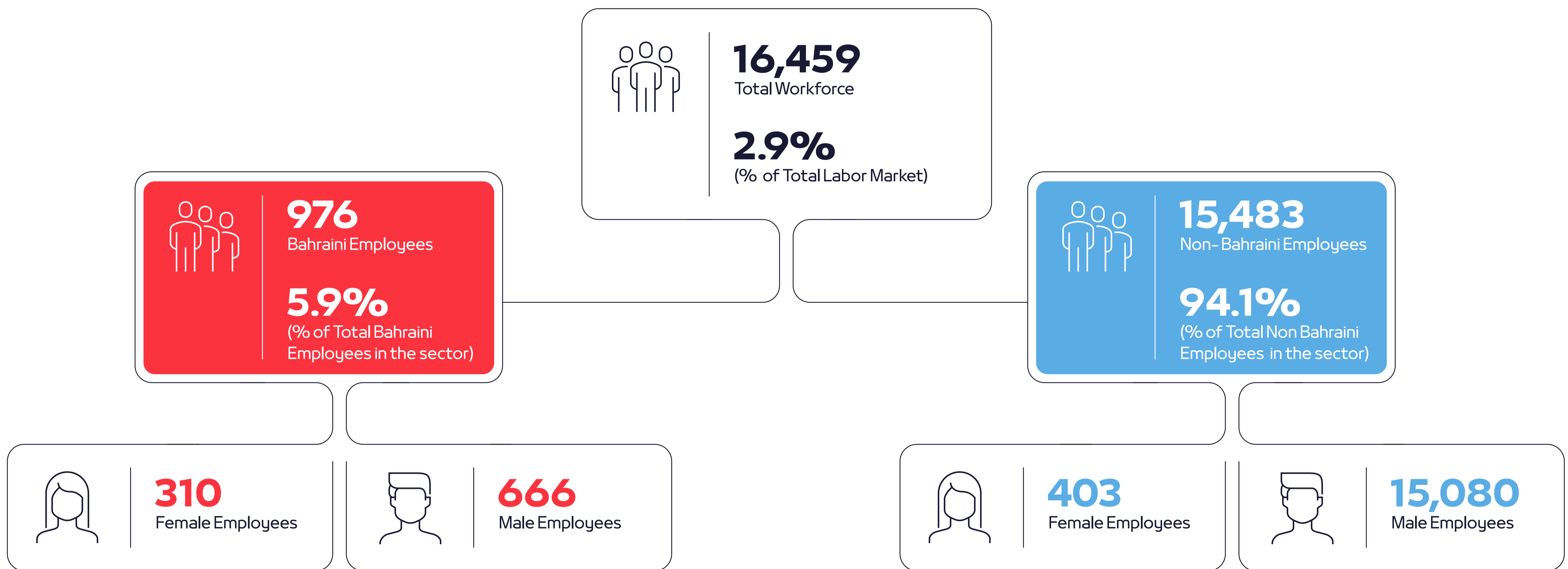


Mining & Quarrying Sector Active Commercial Registrations (2018 - 2022)



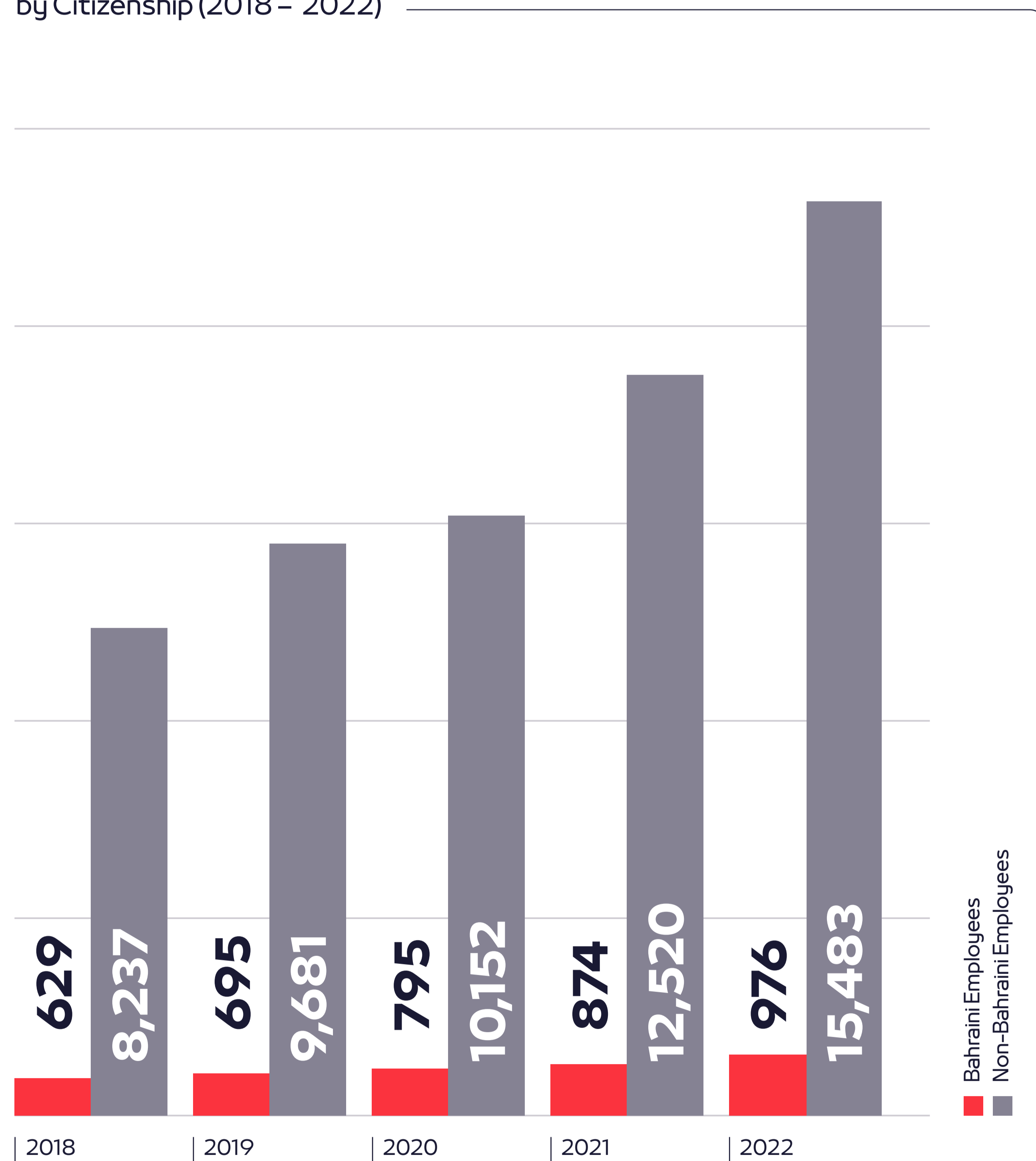
Mining & Quarrying Sector Employment

LMRA, Q4 2022- BLMI / iGA-National Accounts

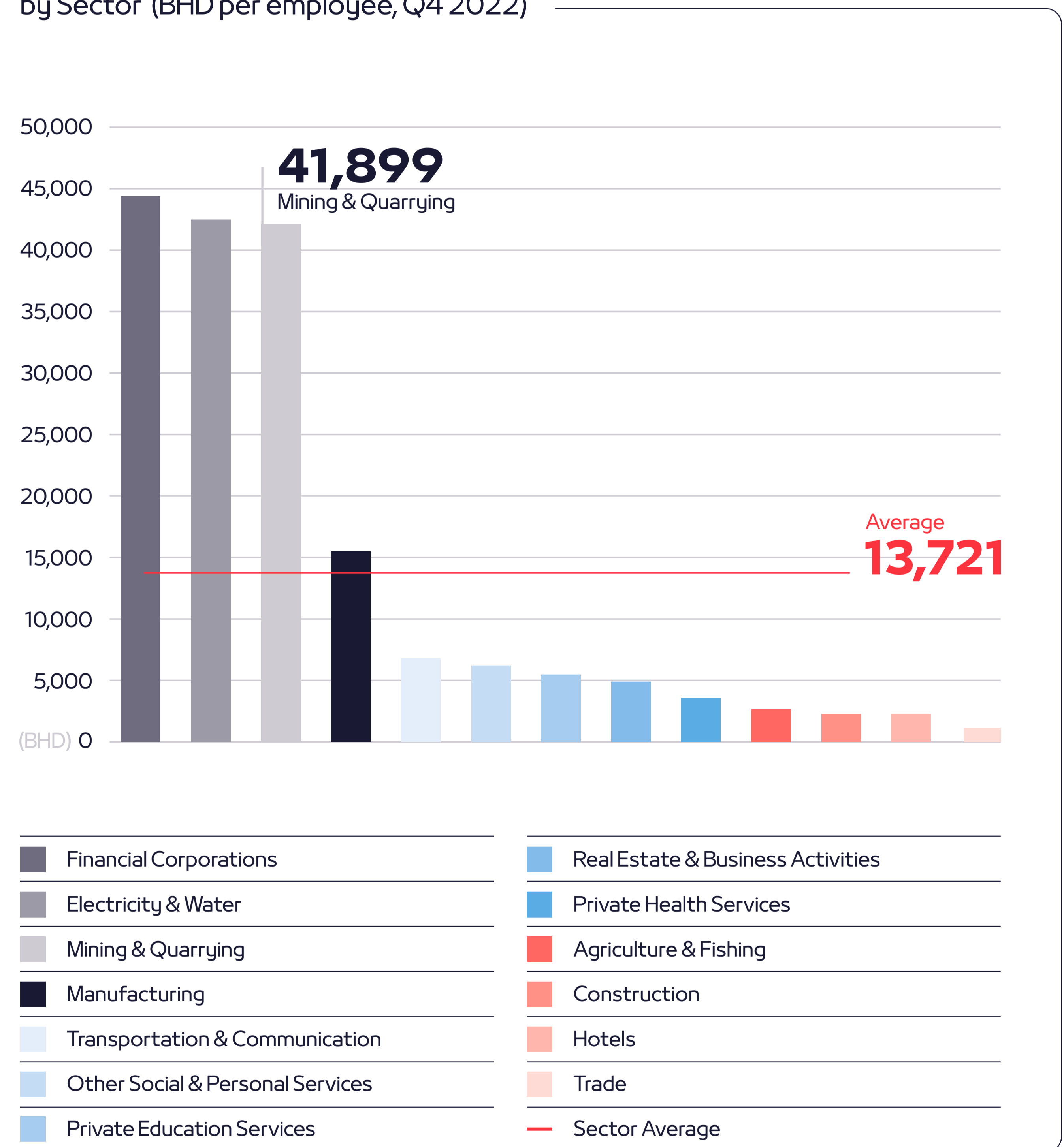


*Data extracted from LMRA, BLMI Table 6. Number of workers by sex, Bahraini, Non-Bahraini citizenship, and branch of economic activity: 2022 December

Mining & Quarrying Sector Employees by Citizenship (2018 - 2022)



Mining & Quarrying Sector Labor Productivity by Sector (BHD per employee, Q4 2022)



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