QUEENSLAND resources COUNCIL

QRC **STATE OF THE SECTOR**

JUNE 2021 QUARTER


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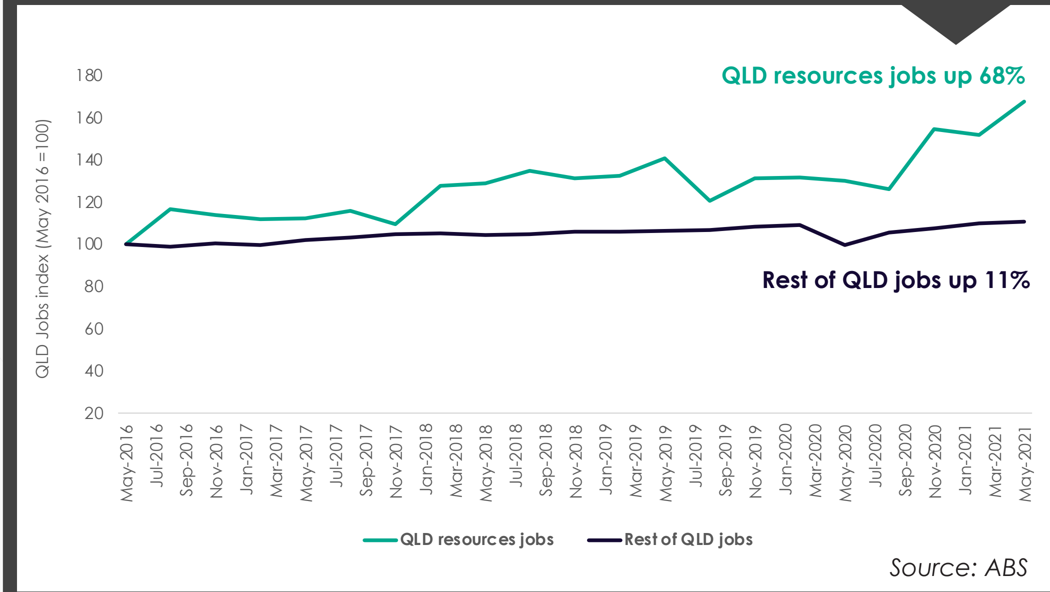
QRC CEOs LOOK TO SKILLS FOR THE FUTURE

Almost every QRC report mentions jobs for a good reason. Over the past five years, the number of jobs in Queensland's resources sector has increased by more than two-thirds to a record high of almost 85,000 jobs in May 2021.[1] The resources jobs growth, which has surged since COVID, is around six times the relative growth achieved across the rest of Queensland's workforce over the same five years (see chart below).

Looking to the next five years, the jobs growth is likely to continue. The world's increasing demand for traditional resources will be complemented by growing demand for new-economy minerals to build everything from microchips to electric vehicles. This demand will provide a growing and increasingly diverse pipeline of jobs for Queenslanders, with the National Skills Commission projecting employment in Queensland resources to grow by a further 8% to 2025.[2]

CHART 1: RESOURCES AND THE REST: FIVE YEAR JOBS GROWTH COMPARISON



Source: ABS

The same high-tech future that will increase demand for Queensland resources will also shape Queensland resource operations. Previous editions of the State of the Sector have found that QRC members are increasingly looking to digital devices and data to turn their sector high-tech.[3] Everything from remote sensing for mine site rehabilitation to remote operating practices will help operations lower costs, increase safety and reduce waste.

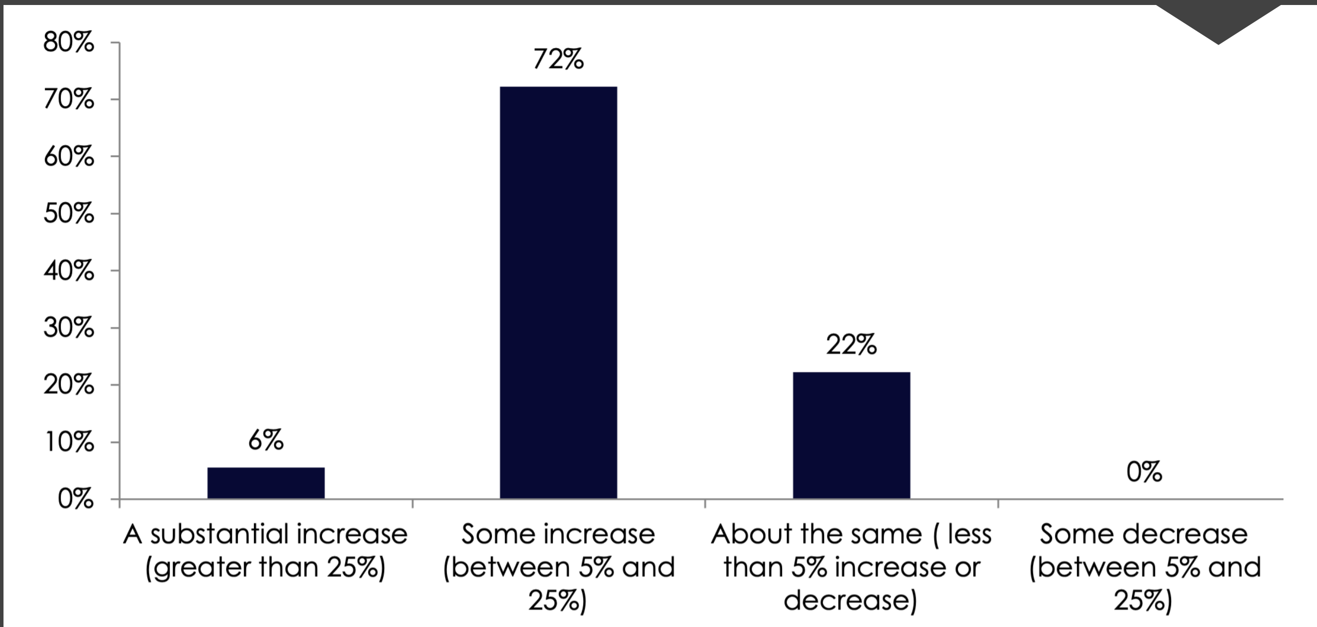
> *"The advantages are many and the risks deemed manageable. With the mining industry embarking on a path to a digital future, the only question remains the speed of adoption."*
>
> Argus media, June 2020 [4]

Given the benefits on offer, it's no surprise that according to this quarter's survey, 78% of member CEOs considered digital initiatives important to the success of their organisation. This focus on digitalisation is set to grow too. According to the same survey, 89% of member CEOs said digital initiatives will be important to the success of their organisation in three years' time, with one third of CEOs labelling digital initiatives as extremely important.

[1] ABS, Labour Force Australia, Detailed
[2] 2020 Employment Projections - for the five years to November 2025
[3] QRC State of the Sector June - 2018
[4] Argus Media, Digitalisation of mining to weather future storms

New technology will require new skills and the challenge for the Queensland resources sector will be ensuring the future supply of skills necessary for a high-tech resources sector. When asked for their expectations over the next five years, 72% of member CEOs said they expected some of the skills in demand at their operations to change, with 11% saying the skills in demand will change significantly in the future.

CHART 2: FIVE YEAR CEO OUTLOOK: DEMAND FOR STEM GRADUATES AT RESOURCES OPERATIONS



Source: QRC

> *We must keep up with advancements in technology, automation, new equipment and ways of working."*
> QRC member CEO, August 2021

CEOs have pointed to science, technology, engineering and maths (STEM) skills as a key area for growth. 77% of member CEOs said their demand for STEM graduates will increase over the next five years (see chart) and less than a quarter of CEOs expect their demand to remain at the same level. Significantly, no QRC member CEO expects a decrease in their demand for STEM skills.

> *The importance of digital technology and automation will increase."*
> QRC member CEO, August 2021

The sector's growing demand for digital skills is a microcosm of a broader skills challenge. Last quarter, the QRC's CEO sentiment survey found that almost two thirds of CEOs considered improving the availability of skills and labour was an industry priority. This quarter, the QRC's CEO sentiment survey finds that attracting and retaining skilled employees is now the top concern for CEOs (see QRC CEO Sentiment Index below).

QRC member CEOs are taking proactive steps to build skills and ready their workforce for the future. Several CEOs said their organisations are looking to provide on-site training and development activities to enhance and upskill their existing employees. Others are looking to the next generation of workers.

The key message from member CEOs is that industry must partner with Government, training organisations and other stakeholders to secure the skills pipeline of the future. 89% of CEOs agreed that whole-of-industry funding and support for career pathway programs such as those run by the Queensland Minerals and Energy Academy (QMEA) are an effective tool for addressing the sector's skills needs.

We are partnering with a university for a mining engineering program"

"[We will undertake] ongoing investment in training and development of our workforce"

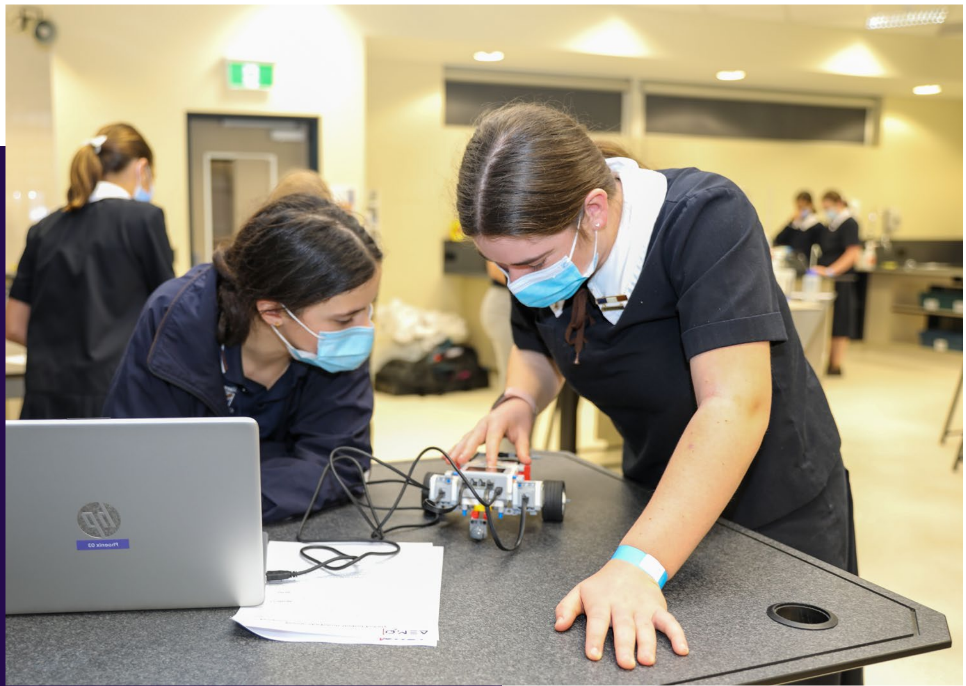
QRC member CEOs, August 2021

The QMEA, which operates in almost 90 schools across Queensland, is working with QRC member companies to encourage students to take up a career in STEM. Through school-based programs and camps, the QMEA broadens student and teacher knowledge of the sector and places students on pathways into the sector and other STEM industries.

More than one quarter (28%) of CEOs said they are considering funding or undertaking programs to grow student interest in STEM fields.

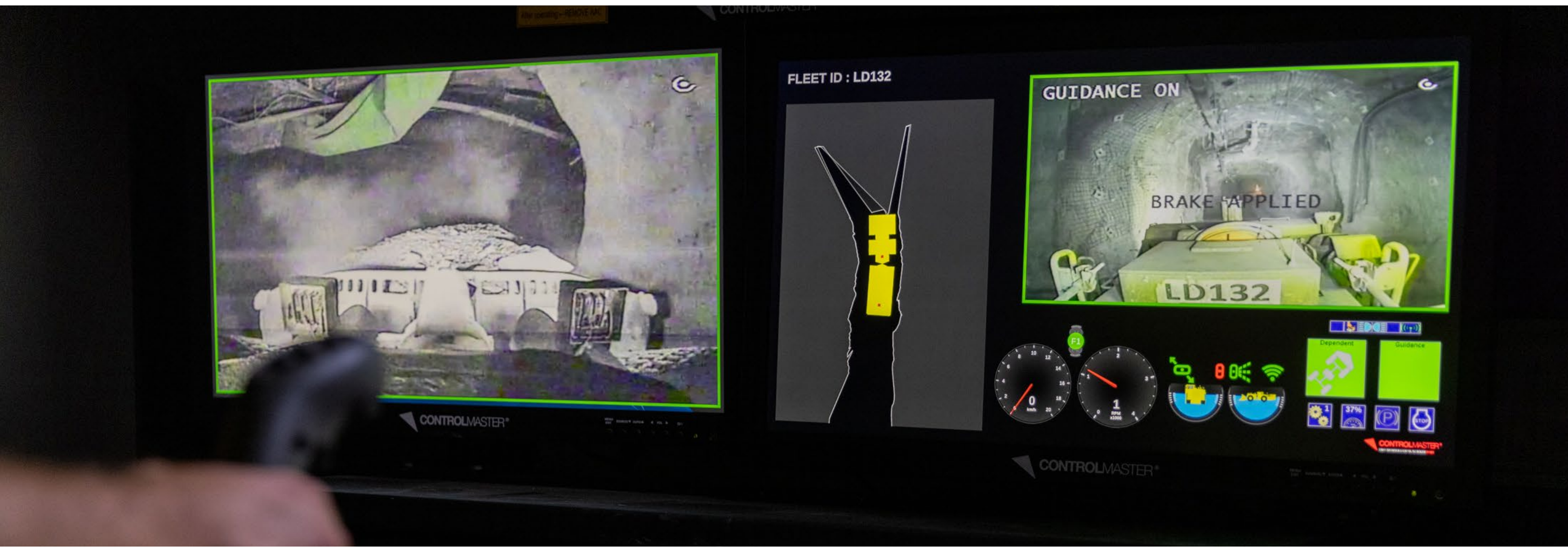
The initiative has delivered results. According to its 2020 Outcomes Report, 25% of QMEA students in post-school study chose engineering and related technologies compared to 15% from non-QMEA students. Thanks to these strong results, the QMEA is set to expand to more schools with an ambition to be working with teachers and students in 100 secondary schools in Queensland by 2023.

25% of QMEA students in post-school study chose engineering and related technologies compared to 15% from non-QMEA students.



While career pathway programs are delivering results, CEOs considered more can be done. More than three quarters (78%) of CEOs said the industry must work with Government and other stakeholders to develop new strategies for securing the sector's talent pipeline.

The Queensland Government's commitment to develop a Queensland Resources Industry Development Plan has come at the right time. This is a genuine opportunity for the Queensland Government to work with industry to shore up the talent pipeline and prepare the next generation for an increasingly high-tech industry.



[5] QMEA Outcomes 2020

KEY INDICATORS

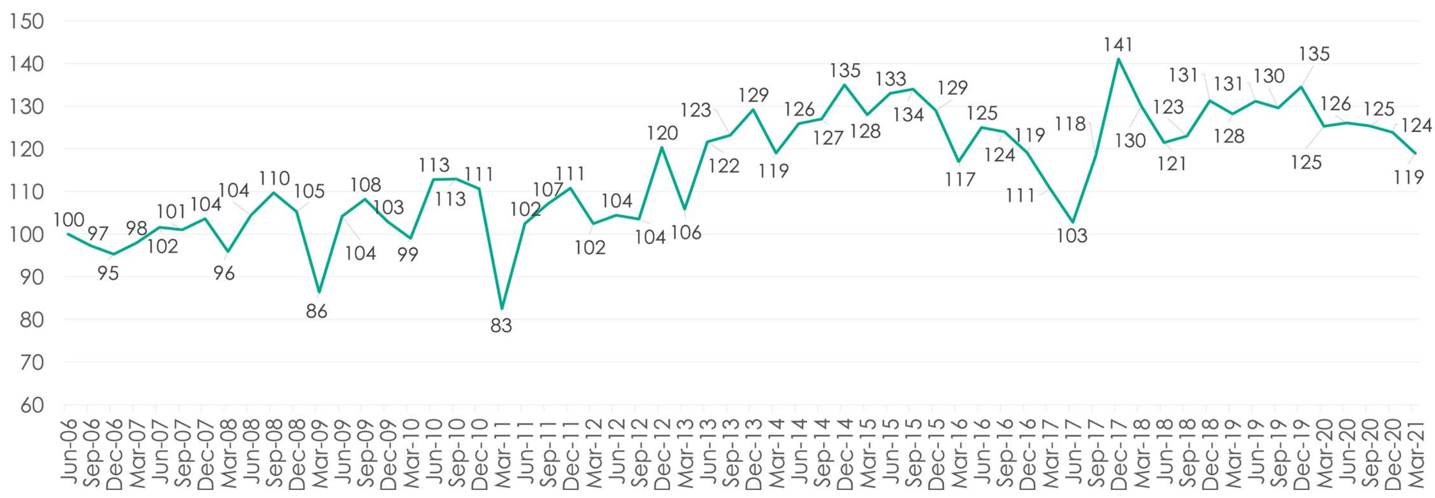
QRC PRODUCTION VOLUME INDEX -
PRODUCTION EASING OVER THE QUARTER

The QRC's quarterly Production Volume Index tracks changes in the total production of Queensland's major commodity exports—alumina, aluminium, bauxite, coal, copper, gold, lead, LNG, silver and zinc.

The Production Volume Index is weighted by the production volume of each commodity. This means changes in the volume of coking coal - which is over half of the total index value - has a larger impact on the quarterly index result than, for example, changes in thermal coal volumes which represent approximately 10–15 % of total value.

For the March 2021 quarter (latest available data), the QRC's Production Volume Index decreased slightly to 119 points — five points down on the December 2020 quarter and six points down on the March quarter in 2020. Queensland's gold (-16%), LNG (-6%) and coal (-4%) production led the decline over the quarter while silver and bauxite were the only commodities to enjoy a lift in production (up 3% and 1%). Despite the production declines for the third quarter in a row, Queensland is still producing 19% more resources than when the index began in 2006.

CHART 3: QRC PRODUCTION VOLUME INDEX — MARCH 2021 QUARTER



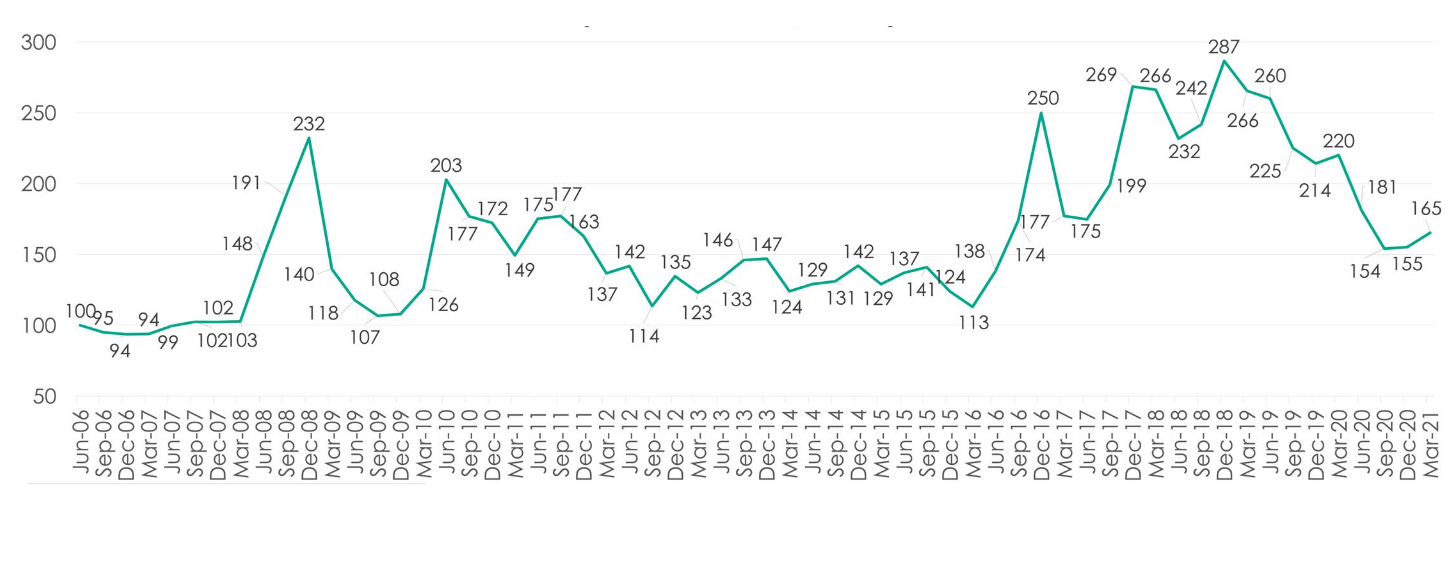
Source: QRC, OCE, EnergyQuest, IHS McCloskey

QRC PRODUCTION VOLUME INDEX -
PRICE GROWTH RETURNING

QRC's Value of Production Index reflects changes in the prices of the resources that Queensland produces. The weighted index reflects the same mix of commodities as the QRC Production Volume Index, which includes LNG production from the December 2016 quarter.

Over the March 2021 quarter, the QRC's Value of Production Index continued to rise, lifting ten points. Higher benchmark prices for thermal coal (36%), copper (18%), hard coking coal (18%) and LNG (14%) more than offset the impact of lower production, while gold was the only Queensland commodity to see a small price decline over the quarter (-4%). This index result shows Queensland's resources production value remains nearly two-thirds (65%) higher than when the index first began in 2006.

CHART 4: QRC VALUE OF PRODUCTION INDEX – MARCH 2021 QUARTER



Source: QRC, OCE, IHS

CEO SENTIMENT INDEX

Each quarter, the QRC prepares its CEO Sentiment Index by surveying its full member CEOs. The survey typically receives between 20-35 responses from mining and energy, minerals processing, contracting, exploration, electricity generation and oil and gas extraction members in Queensland.

The survey asks CEOs to nominate the extent to which they expect a series of eleven factors will impact on their organisation's objectives over the next 12 months. Since the March 2020 edition, the QRC has also included "Public Health Impacts of COVID-19" as an additional sentiment factor.

The QRC weights the responses to create a single sentiment value for each of the sentiment factors. The weighting means the factors generating the greatest concern receive the lowest scores and are lower on the negative axis.

Attracting and retaining skilled employees rose from fourth to the top concern for QRC member CEOs this quarter—this is this particular sentiment category's first time in the top three since June 2019. CEOs pointed to COVID restrictions and increasing demand, compounded by competition for skills nationally and decreased skilled migration as major drivers of labour shortage:

> *"COVID is impacting labour availability which is impacting production"*
>
> *"The limitation on international travel also prevents some influx of skills from overseas"*
>
> *"a number of our employees travel across the QLD/NSW border and are impacted negatively when the borders are closed"*
>
> QRC member CEOs, August 2021

The shortage of labour has CEOs watching their costs closely, with several coal CEOs particularly concerned that shortages will translate into higher costs:

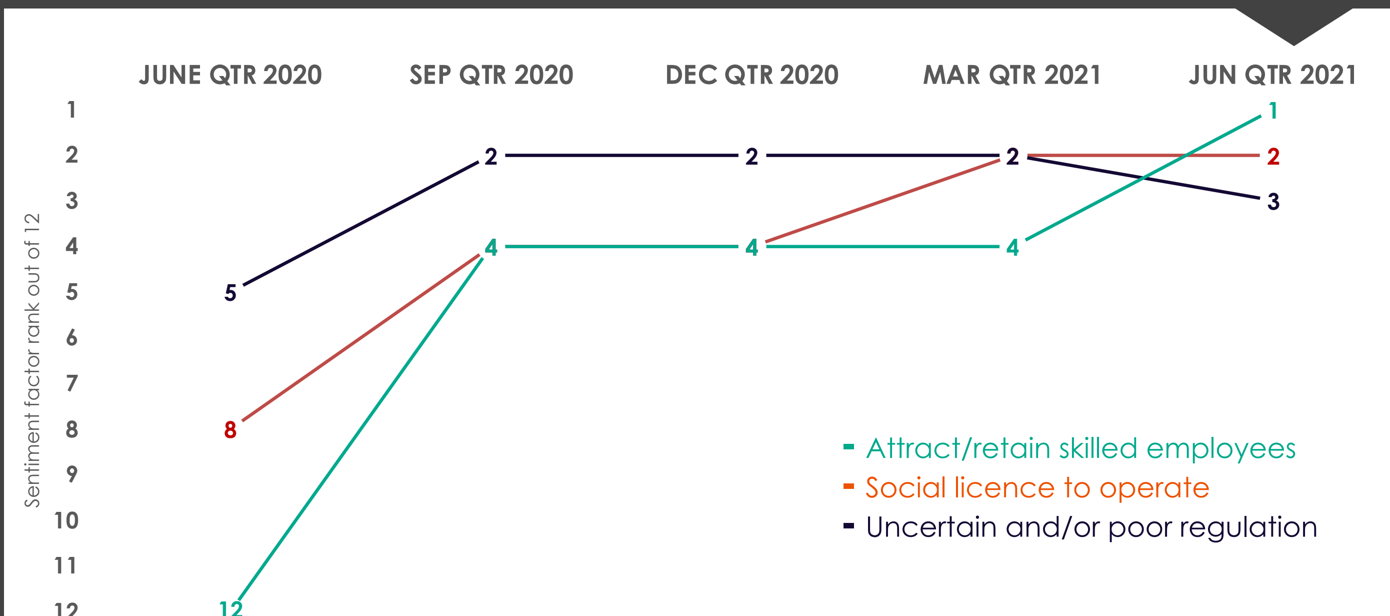
> *"concerns around inflationary pressures on labour and the potential impact of Covid Delta outbreaks in mining industry"*
>
> *"With coal prices high, there are more projects and operations ramping up and drawing on the talent pool making it more challenging to attract and retain."*
>
> *"The coal sector is at the point in the cycle which always stretches resources and pushes up direct and indirect input costs."*
>
> QRC member CEOs, August 2021

CEOs said social licence to operate (2nd) and uncertain or poor regulation (3rd) are the other major challenges this quarter. Sentiment towards the categories remained steady in the quarter yet several member CEOs continued to draw the link between social licence, uncertain climate and energy policies and their project pipeline:

> *"the uncertainty around climate change policies and geopolitical actions mean that the market could be quite volatile"*
>
> *"The ability to access capital and insurance is being severely impacted by lack of coherent positions on reliable energy sources from all levels of government.[this will] likely impact decision making on expansion/extension projects in our business"*
>
> QRC member CEOs, August 2021

Chart 5 illustrates the change in sentiment over recent quarters for our member CEOs' top three concerns.

CHART 5: CEO SENTIMENT INDEX RESULTS – TOP THREE CONCERNS FOR QRC MEMBER CEOs



Source: QRC

> *Increasing public awareness towards decarbonisation may impact strongly on our company's business"*
>
> QRC member CEO, August 2021

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