

**supplychainforesight** 2008

Mining & Quarrying Report

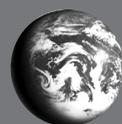
*Supply chain complexity and  
a company's ability to manage  
it, is directly correlated to  
its success in the marketplace.*

Academic Partner



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Survey conceptualised and initiated by



**Barloworld**  
Logistics

## Introduction

# The supplychainforesight report

The **supplychainforesight** report for 2008 seeks to demonstrate clearly and decisively what we have been arguing for five years now: that there is a significant correlation between supply chain reform and business success on many fronts, including both growth and profitability. In this year's research we have sought the answer to the key question: *are South African companies who respond to the challenges of globalisation through strategic supply chain reform more successful than those who do not?*

### Correlating Supply Chain Reform and Business Success

In 2003 Deloitte produced a report in their series The Global Benchmark Study, entitled "Mastering Complexity in Global Manufacturing: Powering Profits and Growth through Value Chain Synchronization". The report shows that 'companies seeking to exploit global market, supply chain and engineering opportunities are hitting an invisible but nonetheless debilitating wall: mounting complexity across the value chain. And, it is bound to get worse.'

Deloitte coined the term 'complexity masters' for the small group of companies – 7 percent of their sample group – who have overcome this complexity in their value chains by synchronising customer, product and supply-chain-related strategies and operations while leveraging strengths in collaboration, flexibility and visibility. In Deloitte's estimation these reforms helped the 'complexity masters' to generate up to 73% higher profits, as well as growth rates that were markedly better than other companies studied.

In this year's **supplychainforesight** study, we seek to present a framework for understanding the urgent challenges facing South African supply chains now – taking our lead from the Deloitte study, which did not deal with Africa at all. We look at the need to deal with the tsunami of globalisation and find competitive advantage in it, and the growth and profitability that are available to companies plotting this route successfully. We also provide a specific

framework for understanding the link between business success and supply chain innovation in the SA market, and a view of supply chain capabilities and the means to deal strategically with complexities brought about by globalisation. Our research thus tests the Deloitte theorem in the value chain context of South Africa's private sector specifically, and points to ways in which the private and public sectors in SA can collaborate to enable more successful supply chains for both.

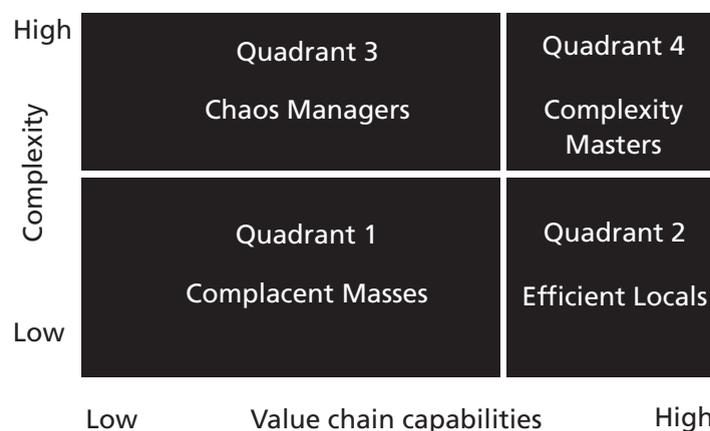
### A Groundswell of Executive Participation

One hugely encouraging factor for our research this year was the record level of participation. Over 400 senior executives in some of South Africa's largest companies responded to our questionnaire this year, almost double the participation of last year's study. Most of these responses again came from major corporations with global operations, and levels of participation by CEOs and General Managers were also at

record levels – up to 29% from 18% last year. There is also a huge increase in the participation of logistics middle management, to 16%, up from 8% last year. In the mining and quarrying sector, 60% of participating companies earn over R5bn in annual turnover, suggesting the participation of the major mining houses.

### The Capability and Complexity Question

In order to understand the place of SA companies on the global supply chain competitiveness map, we began our research this year by asking several questions of company leadership and supply chain executives designed to build on and modify the Deloitte approach to the 'complexity masters'. By mapping the co-ordinates of SA businesses on a grid between measures of supply chain capability and the extent of the complexity faced by their supply chains, we have been able to provide a clear answer to the question about the correlation between supply chain reform and company growth and profitability.



## Mining & Quarrying

### Capability and Complexity in the Mining and Quarrying Sector

#### The Complexity and Capability Question

To map the grid positioning companies across the measures of the complexity of their value chains and the capability of these companies to deal with that complexity, we asked several questions.

On the complexity axis, we asked in which regions companies performed the business

revenue growth, market share growth and customer retention.

We then plotted scores for complexity of the value chain against the company's ability to deal with it, and were then able to organise companies into four different quadrants.

We examined how many of the companies falling into each quadrant had reported having higher success measures than that of their competitors. The measures along the two axes, correlated with these success measures, enabled us to plot two grids, each into four quadrants, which had the following distribution:

These show the next highest degree of success after 'quadrant four', and are well positioned to move into the 'star quadrant'.

Finally, companies in 'quadrant three' have much complexity but relatively little capability to deal with it. Like 'quadrant one' but for different reasons, these businesses are also at risk.

The mining and quarrying sector has proven to be the only industry sector in the entire study that does not support our hypothesis. The sector shows a reasonable degree of

Complexity	High	19% of sample 0% are more successful	6% of sample 0% are more successful
	Low	50% of sample 38% are more successful	25% of sample 25% are more successful
		Low	High
		Value chain capabilities	

activities of sales and marketing, procurement, manufacturing and engineering, in order to gain a picture of the nature and extent of globalisation of the business, and by extension the complexity of the value chain.

On the capability axis, companies were rated in terms of their relative competitiveness on factors such as product innovation, time-to-market, manufacturing flexibility, logistics effectiveness and supply chain reliability. The business success indicator was then determined when companies were asked to rate their success relative to that of their competitors in areas such as profitability,

In the general **supplychainforesight** study this year, our hypothesis was proven correct – that is, that companies who have complex, usually highly globalised, supply chains and who have the capability to manage them, are far more successful than those companies who do not. These companies we placed in our 'quadrant four'. Companies who have neither significant complexity nor capability are in 'quadrant one', and in the current global competitiveness climate, are seriously at risk. Those in 'quadrant two' are businesses which have strong capability in their supply chain but are relatively less complex or globalised.

relative success in the low capability/low complexity quadrant, and none at all in the high complexity/high capability quadrant. Even where capability is high and complexity low, success relative to competitors is modest.

As we shall see, the industry shows a number of other anomalous differences to other industry sectors analysed this year – much of them explicable by the relatively straightforward nature of the mining supply chain.

## Mining & Quarrying

### Mining and Quarrying Objectives and Challenges

The mining and quarrying industry's objectives for the coming year seem to belie the picture of an inward-focused and straightforward industry.

The five highest objectives, in order of priority, are:

- Improve service to customers (100% of the sample)
- Jointly, the objectives of improving collaboration (95% versus 58% for the total sample), and aligning supply chain strategy to business strategy (95% versus 45%)
- Lower sourcing costs

- Reduce out-of-stocks (76% versus 59% for the total group)

These seem to indicate a focus on improving outbound service delivery in a supply-challenged resources environment.

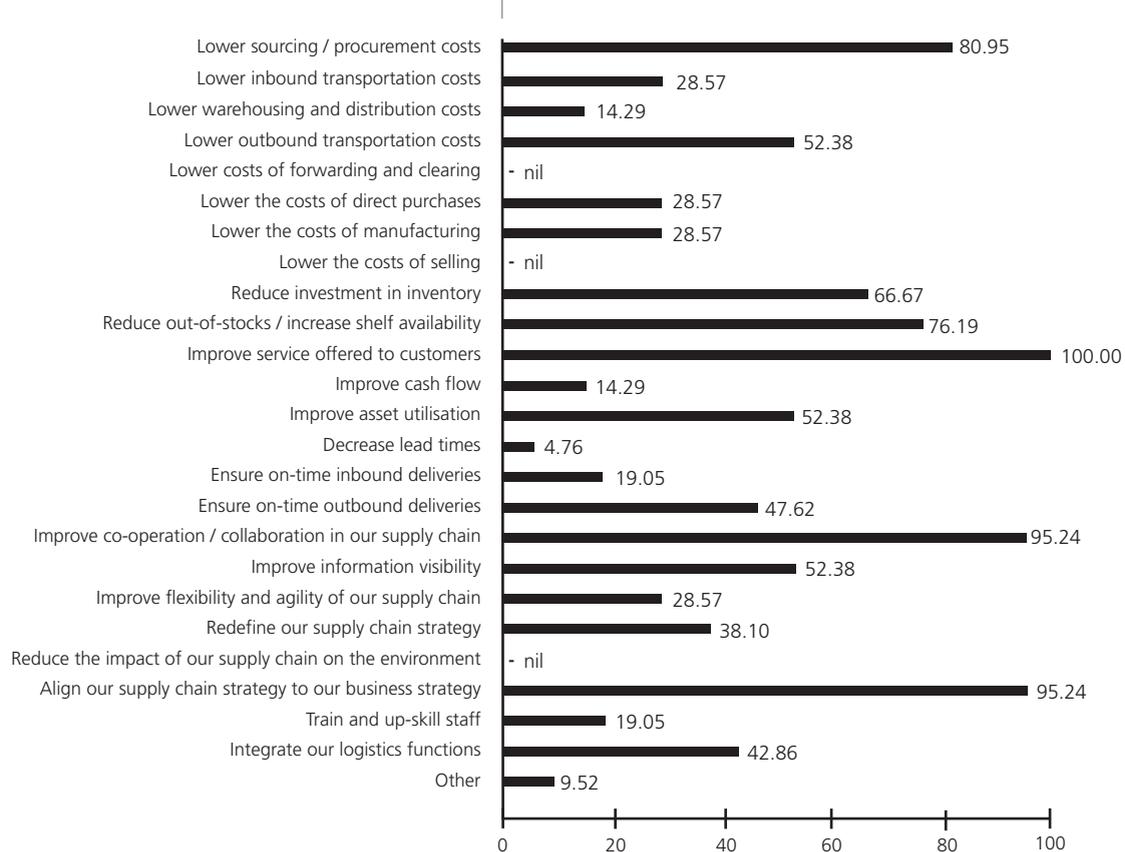
There is also a somewhat surprising realisation that high-level strategic supply chain objectives are important – witness the figures for the objectives of collaboration and alignment of strategy. Implementing these objectives given the quadrant picture of complexity and capability in the sector may prove to be a challenge.

Objectives which scored lower than the numbers for the total sample include: training and upskilling staff (19% versus 40%),

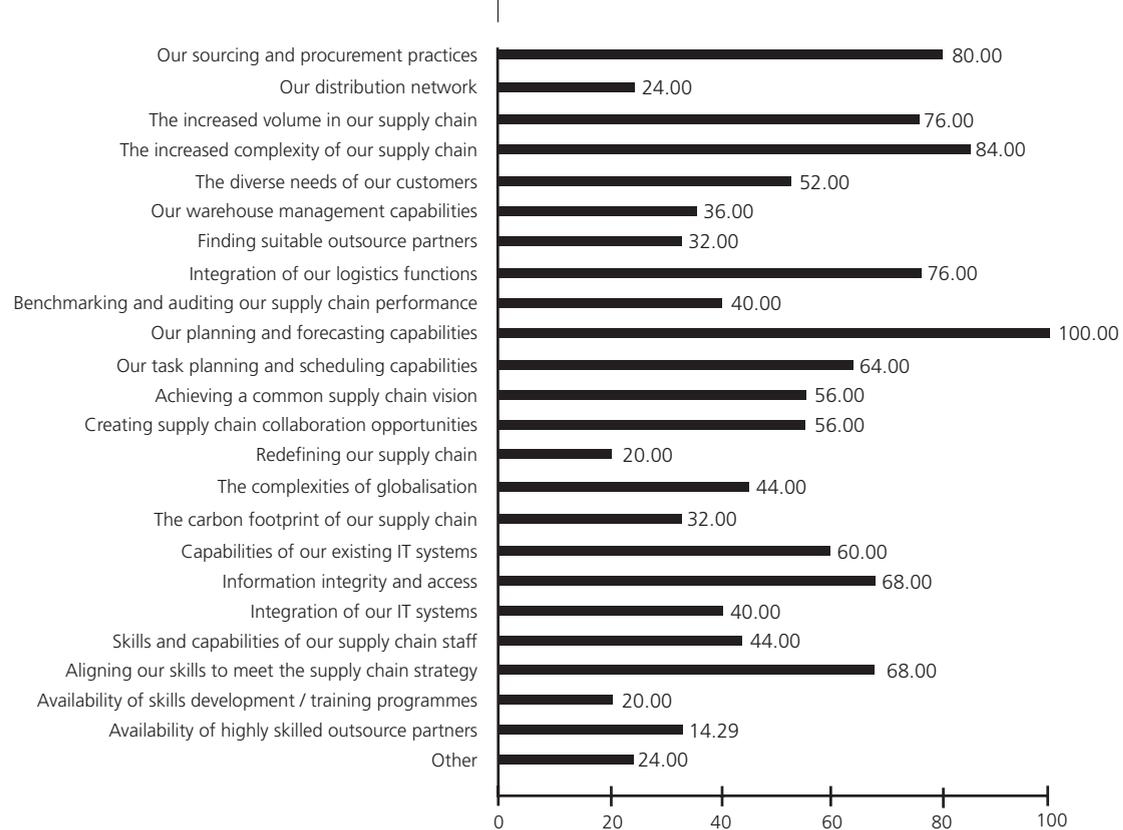
decreasing lead times (5% versus 54%), and lower warehousing and inbound transportation costs.

One obvious point here is that there is no connection between the professed high-level strategic objectives and the low emphasis on training and upskilling. The low focus across the board on cost reduction objectives also reflects the recent high resources prices – the opposite of what we found in 2005, when resources prices were low and the major objectives were lower direct procurement costs and reducing investment in inventory.

#### ► Supply chain objectives: (Mining and Quarrying)



► Supply chain challenges: (Mining and Quarrying)



As far as the challenges to meeting these objectives are concerned, planning and forecasting comes first, followed by increased complexity, sourcing and procurement practices, and the capabilities of IT systems and of staff.

In almost all major categories of challenges given as options, the mining industry scored higher than the total sample group.

Most of the challenges are expressions of how

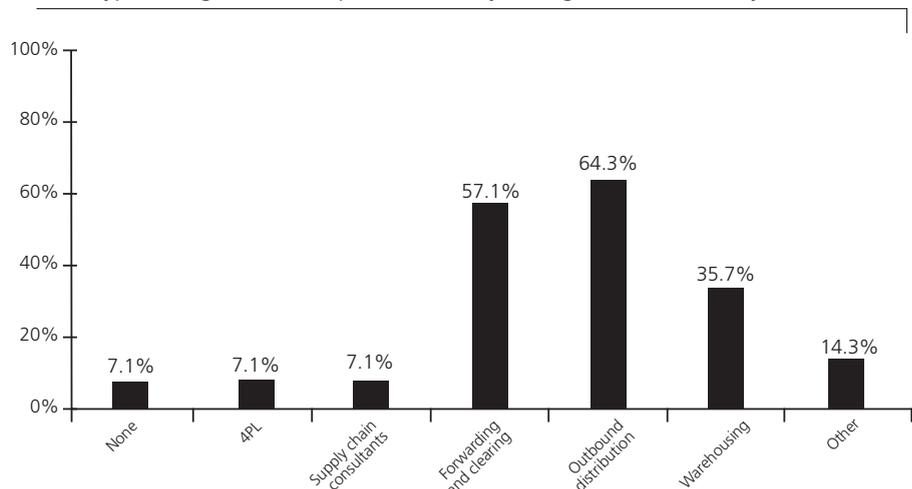
difficult Supply Chain managers are finding the achievement of the high-level objectives they have stated. In particular, in trying to achieve those objectives, volume and complexity, IT and staff capabilities are major stumbling blocks.

**Outsourcing in the Mining and Quarrying sector**

The sector is the least likely of all to use outsourced 4PL and consultative services.

They are much lower users of 4PL service providers, at 7% compared to 16%, and also make radically less use of supply chain consultants, at 7% compared to 24% for the total sample. The generally very low level of outsourcing suggests that they are tackling supply chain challenges and reform inhouse, with a clear lack of success.

► What types of logistics service providers does your organisation currently use?

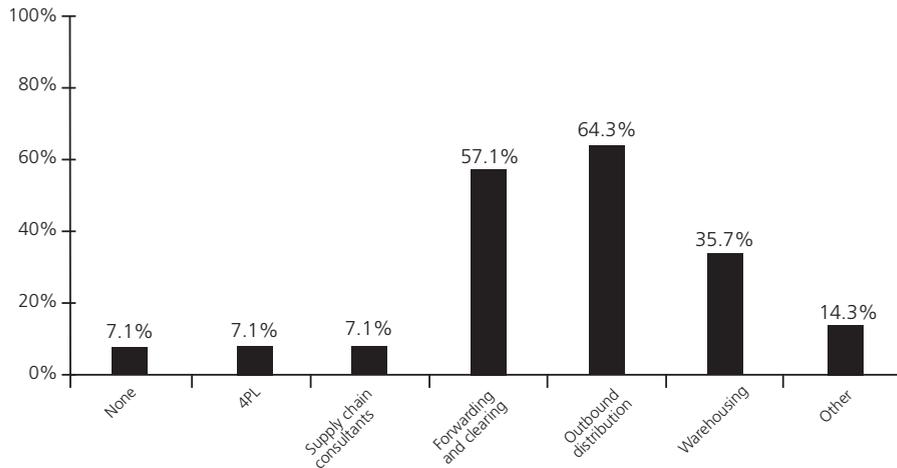


The picture is mitigated somewhat by the expressed intention to use 4PL and supply chain consultants in the coming year.

This may represent the realisation that collaboration with supply chain experts is a better option than DIY solutions.

## Mining & Quarrying

► Is your organisation planning on using any additional logistics service providers within next 12 months? If so, please indicate which types below

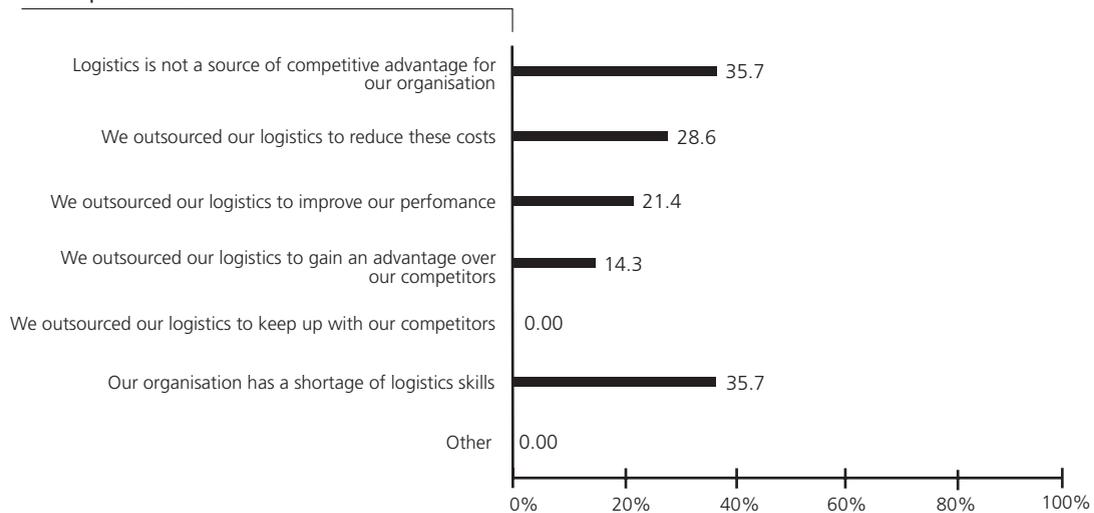


When asked about their reasons for using supply chain and logistics service providers, the sector demonstrates why they are not using supply chain reform to increase their

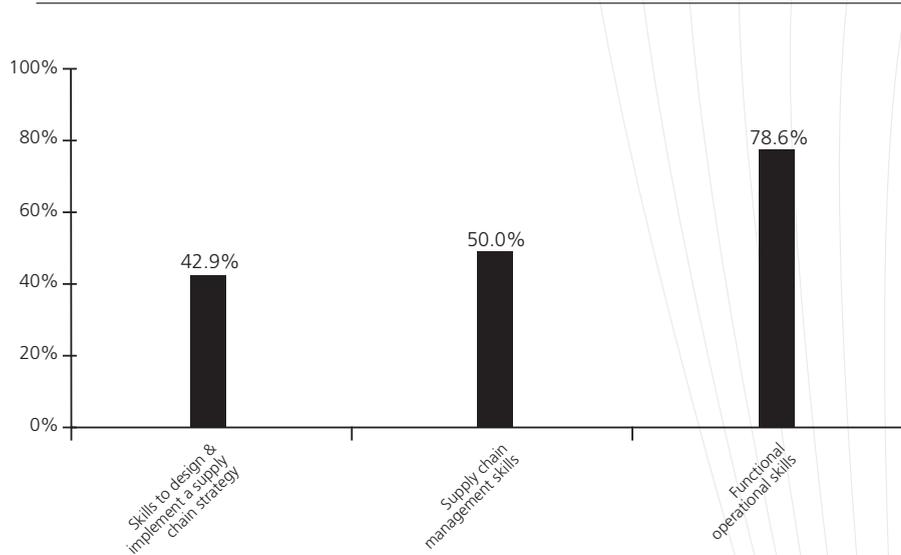
profitability and competitive advantage. A total of 36% stated that logistics is not a source of competitive advantage for their organisation. Another 29% outsource simply

for cost reduction, and a massive 36% because they have no logistics skills. Only 14% of the sample outsource for advantage.

► Which of the following statements most closely reflect your organisation's reason(s) for using logistics service providers?

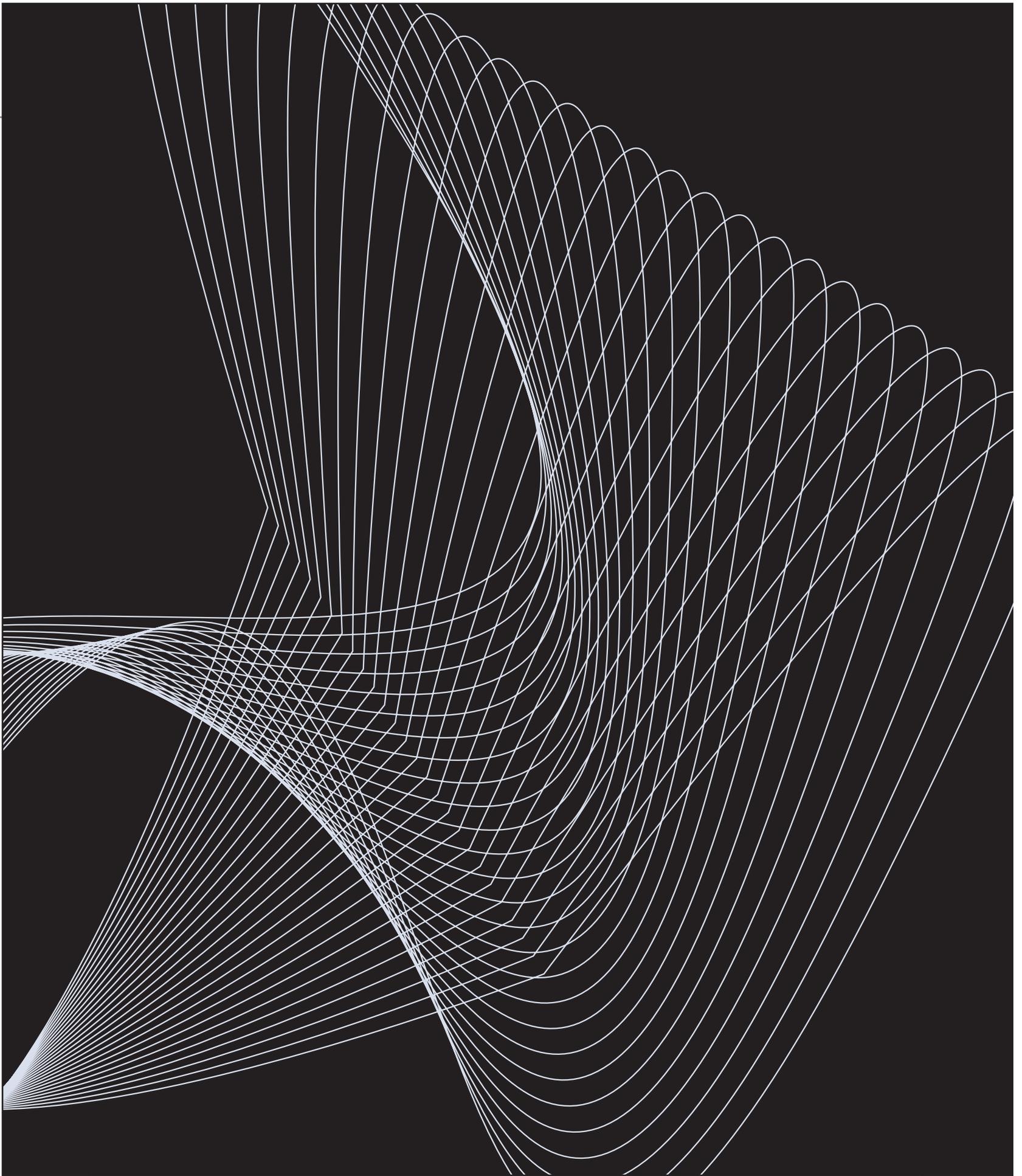


► At what level does your organisation experience a shortage of supply chain skills?



Finally, in terms of the industry's view of its skills base and challenges, there is a recognition of a high level of skills shortage across the board – in a distribution, however, that follows the pattern of the total sample rather than the different emphasis placed on skills by the 'complexity masters' perspective in the total sample – that is, quite markedly greater emphasis on shortages of functional and operational rather than strategic skills.

In general, the mining and quarrying sector perceives a high level of skills shortage in the industry. But this is much more emphatic at operational level, because this is the industry's focus. Realising the strategic objectives expressed in their responses will require the strategic input of 4PL and 3PL partners, if they are to succeed.



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