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BUSINESS **9609/32**

Paper 3 Business Decision-Making **May/June 2025**

INSERT **1 hour 45 minutes**

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INFORMATION

- This insert contains the case study.
- You may annotate this insert and use the blank spaces for planning. **Do not write your answers** on the insert.

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Pura AI Robots (PAIR)

PAIR was set up in 2012 by Kaarina Laine, a graduate in Applied Artificial Intelligence. PAIR is a private limited company in country F. Kaarina, the Managing Director, owns 70% of the shares. Four other directors own the remaining shares.

PAIR's mission statement is 'to transform business use of robots'. PAIR designs and manufactures robots which use artificial intelligence (AI) to support business operations. PAIR's most successful robot, the KB1, is an autonomous cleaning robot. In 2024 the KB1 had the leading market share in country F. It is also a successful export for PAIR. The global market for autonomous cleaning robots is competitive with many brands available.

Growth

The first version of the KB1 was launched in 2013. PAIR's sales strategy focused on leasing to businesses to provide a cost-effective solution to cleaning the workplace. Initially sales growth was slow, led by the sales team contacting prospective customers to arrange product demonstrations and trials.

However, global economic growth after the pandemic led to labour shortages which affected the recruitment of cleaning employees. Consequently, many schools, offices and hotels approached PAIR to lease the latest version of the KB1. Revenue grew rapidly from 2021 but PAIR was unable to fully meet demand due to production constraints.

Innovative technologies

PAIR invests 7% of revenue in Research & Development (R&D) compared to the industry average of 5%. In 2023, the eighth version of the KB1 was launched providing a more innovative, powerful and quieter cleaner. This version has a longer battery life and can clean different floor types. It uses video technology to learn as it cleans.

In 2024, PAIR began development of a new AI delivery robot, Delbot, which will target the hotel market. It will deliver food, towels and other items to hotel rooms. Kaarina confirmed, in a press release, that the Delbot will be available to customers from early 2026. She commented that the whole process from concept to product launch will only take 18 months.

Organisational structure

PAIR has a flat organisational structure and is divided into functional departments. The R&D department uses a matrix structure creating one-off teams for specific projects. In 2024 PAIR employed a total of 120 employees.

Quality defects

At the end of 2023 PAIR's Operations Director reported increasing quality problems:

- the annual percentage of defective KB1s, reported by quality control inspectors, had doubled to 2%
- increased customer reports of KB1s not working properly
- increased complaints of poor customer service.

In June 2024 PAIR began the process of replacing quality control with quality assurance. This included:

- improved training of employees
- all production employees made responsible for quality
- targets for technicians to fix any faults reported by customers within 24 hours.

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Table 1.1 provides production and employee data for the KB1 factory. In 2024 PAIR had a labour productivity target of 2200 KB1s per employee.

Table 1.1 End of year production and employee data for the KB1 factory

	2024	2023
Production employees	50	40
KB1 output	105 000	85 000
KB1 output failing to meet quality standards	2.1%	2%
Number of production employees leaving	2	4

Kaarina is concerned whether the decision to introduce quality assurance has been beneficial for PAIR.

Increase dividends?

Kaarina plans to expand the product portfolio and enter new international markets. PAIR's growth has been financed from retained profit and long-term borrowing. Kaarina is now considering whether to change PAIR to a public limited company. Table 1.2 shows selected financial data and ratios for PAIR.

Table 1.2 Selected financial data and ratios for PAIR

	2024	2023
Revenue ($m)	95	65
Operating profit ($m)	10.4	5.85
Interest and tax ($m)	6.4	4.05
Dividends paid ($m)	0.56	0.56
Gearing	40%	35%
Current ratio	0.8:1	0.96:1

The other four shareholders are dissatisfied with PAIR's dividend payments and are pressuring Kaarina to increase dividends for 2025.

Contingency planning

In February 2025 a battery in one of the latest KB1 robots overheated causing a fire at the school where it was operating. The Operations Director investigated and found that there was a fault in the battery supplied to PAIR. Following the investigation PAIR issued a press release in April identifying the battery supplier as being responsible for the fire. The Marketing Director is concerned about PAIR's lack of contingency planning. She has finally persuaded Kaarina to call an emergency board meeting to consider the benefits of contingency planning.

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