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# **Profit and Loss Analysis for the Swansea Aquarium**

## **Operations Management**

### **Leisure, Events, Tourism & International Travel & Tourism Management**

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#### Executive Summary

This report analyses the financial performance of the Swansea Aquarium focusing on the profit and loss statement. The profit and loss statement covers the first year's

projected revenue and costs, financial viability, revenue potential, cost structure, and long-term sustainability.

The profit and loss shows that Swansea Aquarium is financially viable with a net profit is £900,000 as it will have strong ticket sales as its main source of income however it has high fixed and operating costs highlighting the need for tighter cost control and more efficient financial management.

The aquarium is expected to generate £10.4 million from total revenue with ticket sales being the largest revenue stream. However, it faces high fixed variable and semi-variable costs due to staffing utilities and life-support systems which significantly reduces overall profitability. The profit and loss statement shows that despite strong revenue streams the aquarium's £9.5 million in total leaves a net profit of £900,000 which shows financial viability and high potential for a strong second year but limited profit margins in its first year.

The Key Point Analysis (KPI) shows strong pricing and visitor spending through high Average Daily Rate (ADR), Revenue Per Available Room (RevPAR) and Total Revenue Per Available Room (TRevPAR) however there is weak Gross Operating Profit Per Available Room (GOPPAR) because of the elevated operating costs which shows there is a need for improved cost control.

The risk analysis identifies external pressures such as rising travel costs, reduced leisure spending, and strong free competitors, all of which may lower visitor numbers and threaten revenue stability.

The main recommendation is to strengthen cost control and financial resilience through tighter budgeting, dynamic pricing, and off-peak promotions.

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## Introduction

The business is an aquarium attraction in Swansea Civic Centre and has £20 million worth of funding from the UK Government (Swansea Bay News, 2024). It is planned to boost the economy by £17 million a year and create hundreds of jobs. It will combine marine exhibits with digital experiences (WalesOnline, 2024). The target market is families and schools due to its educational aspect, tourists in Swansea, locals and environmental enthusiasts who are interested in marine conservation (Swansea Council, 2026).

A profit and loss (P&L) statement is a financial report that displays the total income a business earns and its expenses over a certain period. This shows whether the business has made a profit or loss and helps businesses understand their financial performance and sustainability (Atrill and McLaney, 2022).

This report analysis the P&L for the Swansea aquarium. This will determine whether the revenue the attraction makes is enough to cover major costs such as animal care, staffing and digital exhibit maintenance. This helps the aquarium to assess financial viability and seasonality, manage seasonality and justify public investment (Cooper, 2020). The following sections discuss the financial analysis.

## Main Findings

### Revenue Analysis

The aquarium doesn't state what they will use for revenue streams however a typical aquarium's main revenue streams come from ticket sales, memberships, the gift shop, food and beverage and special events. According to the Association of Zoos and Aquariums, 40% to 50% of revenue is made up of ticket sales (AZA, 2023).

Monitoring P&L statements is essential because aquariums have high costs and staff are a big expense and the number of staff needs to be monitored (Atrill and McLaney, 2022). (Jones and Haven-Tang, 2005).

Peak tourism season is during school holidays also during the summer and is when occupancy will be at its highest.

Monitoring occupancy ensures that high and low profit periods are effectively managed so the attraction can maintain financial stability, optimise revenue and allocate resources efficiently (Lundtorp and Wanhill, 2020; Cuccia, Guccio and Rizzo, 2021).

### Cost Structure Analysis

There are three main types of cost. Fixed costs do not change such as animal care and rent. Semi-variable costs like electricity, have a base level but increase during busy periods (Drury, 2017). Variable costs change depending on visitor numbers such as staffing or cafe supplies (Horngren, Datar and Rajan, 2021). The highest costs are staffing, electricity and water-treatment systems (Lundtorp and Wanhill, 2020).

When fixed costs remain constant and revenue grows, profitability improves because more of each sale contributes to profit. However when visitor numbers increase so does variable and semi-variable costs meaning a lower profit is earned from a sale. Understanding cost behaviour allows managers to forecast profit, set prices, and control costs (Drury 2017).

### P&L Statement

Since the aquarium isn't officially open these P&L tables are an estimate based on real aquarium statistics and not based on data from the Swansea aquarium (BIAZA, 2023; Statista, 2024; AZA, 2023; DCMS, 2023). Around 400,000 visitors visit aquariums annually and the revenue from them is around £26 so the total revenue calculation is  $400,000 \text{ visitors} \times £26 = £10,400,000$ .

The table below shows the profit and loss statement for the first year of opening.

| Revenue              | £ Amount           | Remark                                                                                                   |
|----------------------|--------------------|----------------------------------------------------------------------------------------------------------|
| Ticket Sales         | £8,000,000         | Majority of revenue ( $\approx 75\%$ typical for aquariums)                                              |
| Gift Shop            | £900,000           | Retail Spend Averages £2-3 per visitor                                                                   |
| <u>Cafè/F&amp;B</u>  | £700,000           | Based on £1.75 per visitor average                                                                       |
| Events & Education   | £300,000           | School visits + seasonal events                                                                          |
| Sponsorship/Grants   | £500,000           | Typical for conservation-focused attractions (not based on the Swansea aquarium just a general aquarium) |
| <b>Total Revenue</b> | <b>£10,400,000</b> | Matches ARPV x visitors                                                                                  |

SOURCE: Author

These next tables display the expenses

Direct Costs:

| Direct Costs                      | £ Amount          | Remark                                     |
|-----------------------------------|-------------------|--------------------------------------------|
| Animal Care (food, vet, welfare)  | 1,200,000         | High due to species needs                  |
| Filtration & Life Support Systems | £900,000          | Aquariums have extremely high energy costs |
| Retail Cost of Goods Sold         | £350,000          | 40% of typical retail revenue              |
| <b>Total Direct Costs</b>         | <b>£2,450,000</b> |                                            |

#### Operating Costs:

| Operating Costs                               | £ Amount          | Remark                                     |
|-----------------------------------------------|-------------------|--------------------------------------------|
| Staffing (keepers, educators, guest services) | £3,200,000        | Labour-intensive industry                  |
| Utilities (water, electricity)                | £1,000,000        | Filtration + Climate Control               |
| Marketing                                     | £400,000          | Standard for new attraction                |
| Maintenance & Repairs                         | £600,000          | Tanks, pumps, digital exhibits             |
| Insurance                                     | £250,000          | High due to public liability + animal care |
| Admin & IT                                    | £300,000          |                                            |
| <b>Total Operating Costs</b>                  | <b>£5,750,000</b> |                                            |

#### Fixed Costs:

| Fixed Costs                     | £ Amount         |
|---------------------------------|------------------|
| Building Lease/Depreciation     | £1,000,000       |
| Loan Repayments (if applicable) | £300,000         |
| <b>Total Fixed Costs</b>        | <b>£1,300,00</b> |

These are the profit calculations

#### Gross Profit:

Revenue – Direct Costs

$$£10,400,000 - £2,450,000 = £7,950,000$$

#### Operating Profit:

Gross Profit – Operating Costs

$$£7,950,000 - £5,750,000 = £2,200,000$$

#### Net Profit:

Operating Profit – Fixed Costs

$$£2,200,000 - £1,300,000 = £900,000$$

A P&L statement is crucial to the success of an attraction's first year because it shows financial sustainability by comparing income and expenses (Atrill and McLaney, 2022). The P&L statement shows the aquarium is profitable, making £10.4 million in revenue against £9.5 million in costs, leaving a £900,000 net profit.

### Key Performance Indicators (KPI)

Key Performance Indicators provide a structured way to evaluate the aquarium's financial efficiency, pricing strategy, and operational performance. When compared with the P&L statement, these KPIs highlight where performance is strong and where financial issues remain (Van de Ven et al., 2023).

The average daily rate shows the average revenue earned per visitor. If it is high, it means visitors are paying good prices, which shows there is a strong pricing strategy. However, if it is high but the total ticket income is only slightly above budget, it shows there is good pricing and not enough visitors (Hotel News Now, 2022). This matches the profit and loss statement where income is positive, but profit is still low.

Revenue per available capacity measures how effectively the attraction turns its available visitor capacity into revenue. If it is strong, it means both pricing and attendance are performing well (STR Global, 2023). The aquarium's RevPAR is likely strong because the total income is high which supports the P&L's positive income variance.

Gross Operating Profit per Available Capacity measures operational profitability by dividing gross operating profit by total capacity. A strong RevPAR paired with a weak GOPPAR typically signals cost control issues (Kimes, 2016). The aquarium's costs reduce profit to only £22 after adjustments. This means GOPPAR would be weak, even though revenue is strong which contradicts the positive income results and highlights cost control problems.

Total Revenue per Available Capacity includes all revenue streams which is important for attractions when the secondary spend boosts financial performance (Okumus, 2010). Catering (£220) and merchandising (£130) both exceed budget, indicating strong TRevPAR which supports the P&L's favourable income variance. However, because profit remains low, TRevPAR also shows that additional revenue is being offset by high operating costs.

### Risk Factors

The Swansea Aquarium faces several financial and operational risks that can affect its profitability, stability, and long-term performance.

There are a few reasons why people may not visit the aquarium. Jet Fuel Prices have doubled since the Iran War which means less tourists will be flying out (Euronews, 2026). Due to the cost-of-living crisis 78% of people in the UK have cut back on leisure spending so wouldn't be able to afford to go to the aquarium (VisitBritain, 2024). Some competitors may be seen as better value for money because they are free such as Swansea Museum (2026) or Swansea Castle (2026).

If people don't go to the aquarium as often as expected they cannot recover the revenue they would have made from the ticket sales which makes it harder to reach income targets (Lumsdon, 1997). This is made more difficult as demand for tourism is influenced by external factors such as weather, economic conditions, and school holidays which makes revenue forecasting less reliable (Page and Connell, 2020).

Cost behaviour theory analyses how specific costs change in response to fluctuations in business activity levels. High-fixed costs increase pressure during low-attendance periods reducing profit margins and weakening financial resilience which the aquarium needs to allow for in its budget report (Lumsdon, 1997). Staff shortages, overtime or training could affect labour costs. The tourism industry relies heavily on staff performance and poor service could reduce visitor satisfaction and repeat visitors (Baum, 2015) (Zeithaml, Bitner and Gremler, 2018).

Revenue management requires balancing ADR, occupancy, and RevPAR. If prices are set too high, visitor numbers may fall; if too low, revenue may not cover fixed costs. Poor pricing decisions directly impact RevPAR and overall financial performance (Hayes and Miller, 2011).

## Conclusion

The profit and loss statement shows the aquarium will approximately generate £10.4 million in revenue and £9.5 million in total costs, resulting in a net profit of £900,000 which means its financially viable in its first year. It has strong ticket sales which makes up the majority of its revenue however it has a healthy secondary spend from the café and gift shop. KPIs such as ADR, RevPAR and TRevPAR indicate strong pricing and visitor spending. The negatives are that it has high fixed and operating costs and profitability is vulnerable to seasonality and fluctuating demand. The aquarium is sustainable in the short term however to succeed long term the profit and loss statement shows there is a need for better forecasting, tighter budgeting, and stronger cash-flow management.

## Recommendations

The aquarium is a strong business model, however there are some changes that I would make to strengthen it.

The aquarium can introduce off-peak promotions, family bundles and local discounts and use dynamic pricing based on demand, seasonality and competitor rates. This will help manage the uncertainty of ticket sales and seasonality whilst strengthening pricing and revenue management (Neubert, 2022). They can also introduce annual memberships for people frequently visiting the attraction to secure upfront revenue and make sure people are always in the attraction which makes money for secondary sources such as the cafe and gift shop (Garrod, Fyall and Leask, 2007).

They can hire experienced staff with good customer service skills to save on training costs and hire part time staff so that they are well equipped to handle busy periods (Baum, 2019).

The aquarium needs a good relationship with their supplier so that they can have staggered payment plans and get better deals so that they can save money and don't have to spend a big amount of money in one sum (Vu et al., 2025).

They should balance their income throughout the year so that they can accommodate low-income periods and seasonality. They should also maintain a contingency reserve of 10 – 15% of their income so that they are equipped to manage unexpected costs (Wang and Ritchie, 2012)

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