



# Risk Identification Report

PAMPERED PETS

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## Risk Identification Report

Pampered Pets is a small independent pet supply shop based in Hashington-on-the-Water. It employs four staff and is known for selling high quality pet food made with local ingredients. Most sales happen in store with limited use of digital tools. This report evaluates the risks and benefits of digital transformation.

### Current Business Model

The business operates with minimal digital systems and relies on in person sales. A SWOT analysis was selected to evaluate overall business risks, as it is effective for assessing strategic and operational factors in minimal digital environments (Gürel and Akkoç, 2017).

#### Strengths

- Strong local reputation
- High-quality, locally sourced products
- Reliable, short supply chain

#### Weaknesses

- Minimal online presence
- Manual stock tracking and sales processes
- No data backups or formal cybersecurity policies

#### Opportunities

- Expand market reach through online sales
- Growing demand for premium pet food
- Potential to build online brand loyalty

#### Threats

- Loss of customers to digital competitors
- Data loss or disruption from outdated systems
- Limited ability to scale current operations

To address the operational vulnerabilities of the current system and prepare for digital transition, the following mitigations are recommended:

- Implement cloud storage and basic backup procedures.
- Introduce antivirus and firewall software on all devices.
- Develop simple process documentation to reduce reliance on individual staff.
- Consider low-cost CRM or inventory tools to improve tracking.

### Digitalisation

Pampered Pets plans to introduce an e-commerce website along with a cloud-based inventory system and digital marketing tools. The STRIDE model is used to identify security threats by analysing common attack types across digital systems (Shostack, 2014). The DREAD model is then applied to score each threat based on how much damage it could cause, how easily it could be reproduced and exploited, how many users it could affect and how easily it could be discovered (Microsoft, 2002).

#### Stride

Component	STRIDE Category	Threat
E-commerce website	Information Disclosure	Customer or payment data breach
Admin panel	Elevation of Privilege	Unauthorised admin access
User login system	Spoofing	Fake user accounts
Website content	Tampering	Defacement or malicious changes
Online operations	Denial of Service	Website taken offline via DDoS
Transaction system	Repudiation	Users deny making payments or orders

Figure 1 STRIDE Model for Pampered Pets

## Dread

Threat	D	R	E	A	D	Total	Risk Level
Data breach (customer info)	8	7	6	9	8	38	High
Admin access exploit	7	8	6	7	8	36	High
Website defacement	6	6	5	7	7	31	Medium
System downtime (DDoS)	7	6	6	6	5	30	Medium
Fake user accounts	4	6	5	5	6	26	Low
Transaction denial	3	4	5	5	5	22	Low

Figure 2 DREAD Assessment for Identified Threats

## Mitigation

Threat	Mitigation	Purpose
Data breach	Use SSL encryption and secure cloud hosting	Protect sensitive customer and payment data
Admin access exploit	Limit admin rights and audit admin activity	Prevent privilege misuse and detect anomalies
Website defacement	Apply regular updates and monitor for file changes	Prevent tampering and enable fast response
System downtime	Use firewalls and rate-limiting tools	Block or slow down malicious high-traffic attacks
Fake user accounts	Implement two-factor authentication	Reduce risk of account impersonation
Transaction denial	Log all actions and send transaction confirmations	Create traceable records to resolve disputes

Figure 3 Threat Mitigation

## Attack Tree

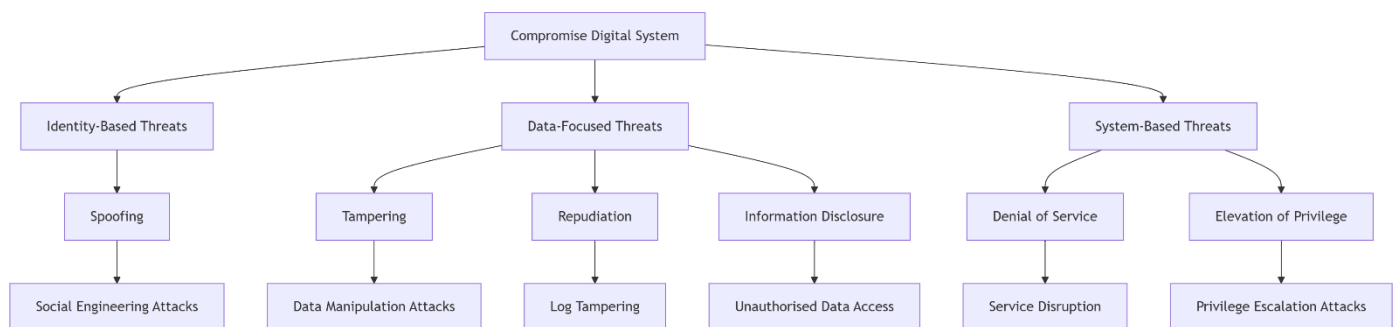


Figure 4 Attack Tree for Pampered Pets Digitalisation

## Question Analysis

### Could an online presence grow the business by up to 50%?

Yes. An e-commerce platform and digital marketing would allow Pampered Pets to reach beyond its local base. UK online retail sales have consistently grown year-on-year, with small businesses seeing significant gains through digital channels (ONS, no date).

### Could changing to an international supply chain reduce costs by up to 24%?

Potentially. International suppliers may offer lower costs through economies of scale (Christopher, 2016). However, this may compromise product quality, increase delivery times and expose the business to global supply chain risks such as delays or shortages (Ivanov and Dolgui, 2020).

### Could the business lose up to 33% of existing customers if it does not provide online features?

Yes. Consumer behaviour has shifted with more UK adults shopping online in 2022 (Statista, 2023). Lack of digital options can drive customers to competitors offering better accessibility and convenience.

## Recommendation

- Launch a basic e-commerce website to expand market reach and meet customer expectations.
- Implement a cloud-based inventory system for better stock management and operational efficiency.
- Install antivirus and firewall protection on all devices and establish regular data backups.
- Develop clear process documentation to reduce reliance on individual staff knowledge.
- Invest in staff training to support adoption of digital tools and reduce implementation risks.

Week	Activities
Week 1	Upgrade systems and network Install antivirus and firewall Define cloud storage setup
Week 2	Set up inventory software Begin cloud integration Draft process documentation
Week 3	Develop website Soft launch Collect feedback
Week 4	Staff training Internal testing Monitor system performance
Week 5	Go live publicly Address any issues or customer queries
Week 6	Post-launch improvements Staff refresher training

Figure 5 Timeline



## Conclusion

This report shows that digital transformation is a realistic opportunity for growth and long-term sustainability at Pampered Pets. The current business model has operational risks and may struggle to stay competitive. Digital systems introduce new technical threats, but these can be managed with the right safeguards. Moving online is the most effective way to stay competitive, improve internal processes and meet the expectations of modern customers.

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