

Unit 8, Assignment 2 – Legislation & Societal Impact of E-Commerce

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Legislation (P4)

Data Protection Act

- Governs handling of personal information
- Affects both data held in paper and digital forms
- Passed '84, updated '02, still current
- Upheld by ICO
- Healthcare Records
- Criminal Justice
- Financial Institutions
- Biological

All businesses must register with ICO and state what information they hold and why.

The Data Protection Act governs the handling of personal information by organisations. It applies to both data held in physical and digital forms. It requires that all businesses register with the ICO (Information Commissioners Office) and state what information they hold and why.

There are eight principles of the data protection act – they are to make sure that data is:

- used fairly, lawfully, and transparently
- used for specific, explicit purposes
- used in a way that is adequate, relevant and limited to only what is necessary
- accurate and, when necessary, kept up to date
- kept for no longer than necessary
- handled in a way that ensures appropriate security, including protection against unlawful or unauthorised processing, access, loss, destruction or damage.

Computer Misuse Act (1990)

This act prevents unauthorised access to computer systems (hacking) as well as unauthorised access with intent to commit further offences. It additionally covers unauthorised modification of computer material and making, supplying, or obtaining anything which can be used in computer misuse offences.

Consumer Credit Act (1975)

The most applicable part of this act is Section 75, which covers purchases (domestic and abroad) between £100 and £30,000 made with credit cards. Businesses receive money from the card provider if the payment

cannot be made by the customer. If the purchase/service supplied is not up to standard, the customer can request a refund straight from the card supplier rather than the seller.

Trading Standards

Trading Standards exist to ensure legislation that protects consumers is enforced as well as governing the sale of counterfeit goods and age-controlled products. They also work with banks to support scam victims and businesses to assist with following legislation.

Freedom of Information Act (2000)

The FoI Act gives the public the right to request information held about themselves as well as other information from public bodies such as local councils, the government and educational institutions.

Copyright Design & Patents Act (1988)

The C, D & P Act protects intellectual property, such as brand names, stories and designs.

There are different protections that can apply to works: copyright, patents, licensing, and trademarks.

Copyright

Copyright defines rights the creator has over their own work. It also applies to digital work, such as music, videos, code, etc. Does not need to be applied for – it is automatically assumed when you create a piece of work. Copyright makes it illegal to copy work without permission; the owner can take legal action.

Patents

Patents give the inventor the right to decide if/how an invention can be used by others.

Trademarks

Trademarks cover brand names, logos and other “service marks.”

Electronic Commerce Regulations Act (2002)

This regulates any business providing a service electronically.

It requires that prices on websites are unambiguous and that details such as names and company information are available. When placing an order, you must be told the terms and conditions of sale and how to cancel the order contract.

Social Implications of E-Commerce on Society (P5)

Customer Perspective

Added value can be added to the customer experience through a variety of methods.

Discount and coupon codes can be given out and easily applied at checkout. These could be given exclusively to those who are a member of an online loyalty scheme which incentivises people to keep shopping in the same places repeatedly.

On the website, product reviews from other shoppers and detailed product information can provide a greater insight into a product and its capabilities than what would be available in a brick-and-mortar shop.

When shopping online, lengthy, detailed wish lists, watch lists and other lists can be kept and organised to set aside items a shopper wishes to revisit. There is the potential for a limitless basket; a shopper can buy as much as they want without having to worry about needing to carry it home or how heavy it will be.

Electronic Commerce allows shoppers to shop from wherever they want to, at any time. They do not even need to leave the house to place and receive an order.

Economic & Social Impact

Due to the speed of changes, many smaller brick-and-mortar businesses risk being left behind and abandoned. Customers are growing increasingly dependent on being able to, for example, view the stock of a department store or homewares shop before they visit. With the ease of setting up an e-commerce solution or even just a simple landing page, businesses that lack any online presence at all are sparse.

Bricks-and-Clicks businesses are those that have a strong presence both online and on the high street. These allow the customer to shop how they please. The benefits and drawbacks of an online-only solution are detailed below.

Benefits for Customers

Remote Shopping

The most obvious benefit to e-commerce is the ability to shop remotely. This allows the shopper to place orders when and where they choose. The ability to purchase necessities such as groceries, personal care and

homewares allows housebound individuals to gain much-needed independence.

Access to Goods

An e-commerce website does not require a large storefront with products on display. Instead, products can be packed tightly in a warehouse allowing them to stock more products or a bigger variety of product.

Being a global market, many websites offer international shipping. This allows a large variety of regional or cultural items to be bought and sold across the world.

An online store has less overhead than running a brick-and-mortar store, especially one that stocks the same quantity of goods. This allows an online store to charge more competitive prices for the same products.

Drawbacks

Payment Security

The retailer, the payment gateway and the delivery provider all need to be trusted with handling customer data and PII. Many people may be hesitant to give out their information to websites they are unfamiliar with.

Actual Products

Not having the actual product available physically for a customer to try or use can increase the number of returns if the item is not what the customer expected. This adds overhead to the business and inconvenience for the customer.

Reliance on Delivery Services

Most e-commerce retailers do not use their own courier service, instead relying on existing providers such as DHL, UPS or the Royal Mail's parcel arm: Parcelforce.

This opens the door for potential unreliability. If a delivery is later than expected, the customer may blame the retailer before the delivery service, harming the business' reputation.

Deliveries could be disrupted or damaged for reasons outside of the control of the retailer, facilitating a return or an additional item being sent at the business' expense.

Impact on Employment

E-Commerce websites themselves require less staff to operate, generally. One person could feasibly run a small online shop provided they had the know-how. This is significantly different to a brick-and-mortar store where even the smallest will usually require at least a few other staff members.

With larger businesses, the types of employees differ across e-commerce businesses and in-person stores.

Online stores require technical personnel to keep the website and infrastructure operational and the marketing will likely mostly be digital in nature. There are no shop-floor stockists or salespeople required, instead jobs are required in warehouse roles, organising, and managing orders and returns.

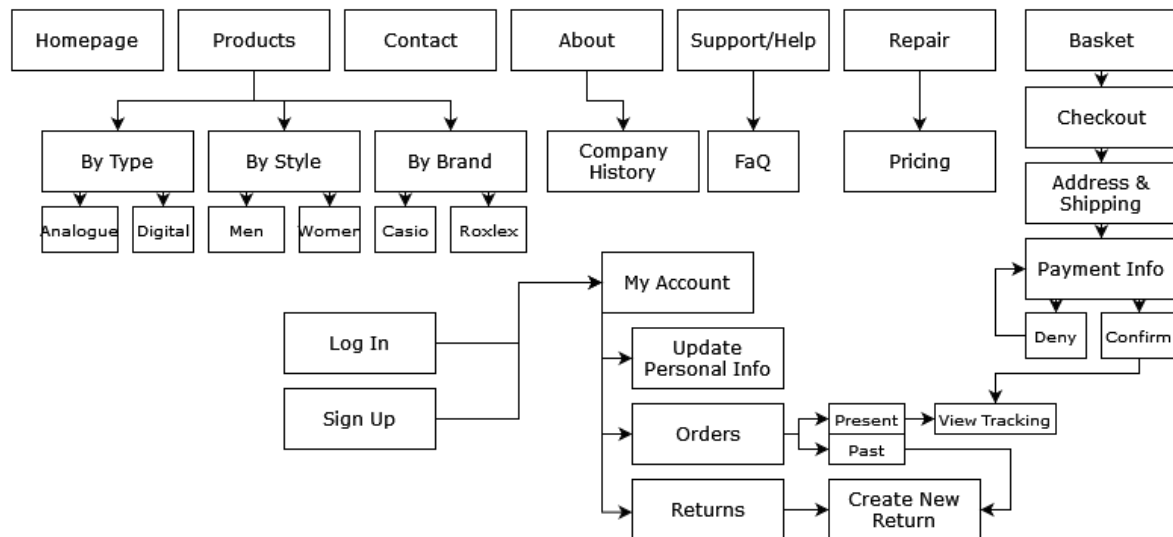
Increased Social Divide

Not everyone is able to access the internet, and not everyone is as comfortable with using technology as others. This creates a social 'divide' between those that live-and-breathe e-commerce and those that are more wary or unable to access it. This dishearteningly and disproportionally effects those who are more elderly and those who are disabled.

Many people may simply just not be comfortable with giving their information over the internet and prefer shopping in person for this reason.

E-Commerce Strategy (P6)

Website Structure



Common Page Features

“Common” components are those that are shared across multiple pages. These include things such as:

- Search Bar
- Hero Images
- Recommended Products
- Menu Bar
- Footer
- Social Links
- Instant Chat

ISPs

PROVIDER	SERVICE	PRICING
VIRGIN MEDIA BUSINESS (DOCSIS)	200Mbps Down 20Mbps Up Unlim UK Calls	£39 per month 24 Month Contract
BRITISH TELECOM BUSINESS (FTTP)	152Mbps Down 29Mbps Up £12 extra for unlimited UK calls	£34.95 per month 24 Month Contract
HYPEROPTIC (FTTP)	150Mbps Symmetrical £10 extra for unlimited UK calls	£55 per month 24 Month Contract £100 after 24mo
ZEN (FTTP)	100Mbps Down	£55.50 per month

From this research, I would select Virgin Media Business as the internet service provider for the business, if it is available. This is since it offers unlimited UK calls and the fastest speeds at a competitive price point when compared to the other Openreach providers and Hyperoptic.

Domain Names

DOMAIN	PROVIDER	YEARLY
HOCKLEYWATCHES.UK	Google Domains	£10
HOCKLEYWATCHES.UK	Gandi	£9
HOCKLEYWATCHES.COM	Google Domains	£10
HOCKLEYWATCHES.COM	Gandi	£15
HOCKLEY.WATCH	Google Domains	£25
HOCKLEY.WATCH	Gandi	£37

I would suggest the purchase of hockleywatches.uk from Gandi since it is the cheapest option and isn't particularly long. In the future, *.watches* domains will be available and I would also suggest that they procure hockley.watches when this is possible.

Web Hosting

PROVIDER	FEATURES	MONTHLY
OVH	Unlimited websites 500GB of HDD storage Guaranteed Performant Server 1000 x 5GB email accounts PHP & 4GB MySQL	£5
HETZNER	Unlimited Traffic 50GB of SSD storage 200 email mailboxes 10 MySQL/PostgreSQL DBs	£5
TSO	Unlimited Websites 90GB SSD storage 4GB RAM/2 Core CPU	£25

For webhosting, I have selected cloud providers rather than hosting the website in-house. This is since it facilitates significantly easier expansion in future and is much faster to get set up and working. My initial provider of

choice would be OVH or Hetzner. They are both well-respected cloud providers and their offerings are similar.

Maintenance

As this is a small business, the website will be self-managed. Many E-Commerce platforms and systems are very user friendly and require little training to use. Examples include Shopify, WooCommerce and Magento. However, the underlying hardware, software and infrastructure still need to be kept up to date and working.

Average wages for a contract sysadmin (systems administrator) in the UK range from £14 to £40 an hour depending on experience. It is unlikely that the upkeep of the website will be laborious enough to employ someone full-time, though in future this may be a necessity.

Training

It is possible that some staff are unfamiliar with the prospect of e-commerce or that some may be unable to use the CMS (content management system) of the website. Both of these scenarios require employees to be trained adequately, which will be performed by an outside company on a temporary basis. New employees can learn through previous employee experience with the system but could be sent for additional training if required.

Access

It is important that staff only have access to what they need to. For example, the employee responsible for fulfilling orders should not be able to update product information and an employee working on the shopfloor only would not need access to the website at all. Staff should have individual user accounts so that their actions can be logged in the event of malpractice or error.

Security

The server hosting the website should be protected with a password-protected public/private key pair. A new keypair and a new account should be generated for each administrator who needs access. Any web accounts should be protected with multi-factor authentication and staff should be briefed on the dangers of phishing and social engineering.

The website itself should be protected with an SSL certificate, which is trivial to setup and costs nothing through providers such as CloudFlare and LetsEncrypt. This will encrypt customer data in-transit to make it less susceptible to basic man-in-the-middle attacks.

Customer data should be handled according to appropriate legislation.

Leasing vs Buying

Leasing equipment such as office computers can be an attractive prospect for a business. It allows what would potentially be a large upfront purchase to be spread out over a set period of time which may allow the business to have access to newer equipment or more equipment that they would otherwise would not have been able to access. Many lease offerings also include generous warranties and some even implement support packages.

A significant disadvantage of leasing equipment is the fact you don't actually own the product. At the end of the lease term, despite having paid for the product many times over in some cases, you will have to return the product or renew the lease. The upside of this is facilitating upgrades to newer technology without having to pay upfront for it.

Buying products outright means that you can modify them as much as you like and then resell if you'd like.

Based on the benefits above and the examples below, I would suggest that the company purchase the devices outright. This is highly likely to work out cheaper for them, even adding in a potential technical support or required repairs.

Comparisons/Examples

Some leasing companies will lease products themselves for a certain rate (Devices as a Service or DaSS), while others will essentially loan a certain amount of money which you can use to purchase from their catalogue.

An example of the latter type: £15,000 worth of equipment purchased from Oaklease paid back over 4 years would end up totalling £17,460.

An example from the former type: HardSoft Computers will lease five Surface Pros, four ThinkPads, three Macbook Airs, two XPS 15s and one iMac for £125 a week. They allow you to swap, replace and return devices for no extra charge.

A three-year term of this plan would total £23,400 with VAT. Purchasing the devices outright would total less than £15,000, however the plan allows flexibility with returning and repairing and upgrading devices along with the ability to pay over a longer period.

Marketing

Advertising for the business can be performed in many ways.

Direct marketing is targeting specific groups of people, using methods such as social media posts, social media advertising and email campaigns. This allows very fine control over who views the advertising, however if

you do not target the correct audience, you run the risk of the campaign costing more to run than you earn from the resulting sales.

Advertising costs vary depending on how many viewers you intend to reach. It is common to set a set budget each month which is then used to influence as many people as possible.

Delivery

The delivery of items will need to be handled by a courier service. There are many options available. Important considerations for a delivery service include reliability and reputation, package insurance and compensation and the pricing of the service. Additionally, the ability to accept returns using pre-paid return labels or drop-off points may be required.

A comparison of some courier service pricing is below, though these are for personal customers rather than business customers who would receive a bulk discount with more generous pricing. The prices are based on shipping a watch box weighing 500 grams to a customer in the UK.

SERVICE	PRICING
DHL NEXT DAY	£6.95
DPD 1-2 DAYS	£7.09
PARCELFORCE EXP48	£7.40
DX	£8.19

Based on these prices, I would suggest the use of DHL. They also ship internationally.

Interfaces (M3)

Hockley Watches
Logo & Wordmark

Account

Basket (1)

[Shop by Category](#) | [Shop by Brand](#) | [Shop by Style](#) | [Repairs](#) | [Support](#)

Watch

Watch Model ABCD1234

5 Stars (3 Reviews)

- Key Feature

- Key Feature

- Key Feature

£123.99

Lorem ipsum dolor sit amet, consectetur adipiscing elit.
Nullam mollis, turpis sed sagittis mollis, lectus justo elementum.

- Key Feature

- Key Feature

- Key Feature

Reviews

J. Blogs

Shrewsbury, Age 34-55

Design—1/10
Comfort—2/10
Features—3/10

Overall—4/10

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A. N. Other

Worcester, Age 18-34

Design—9/10

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Shop Products

Most Popular
Men's
Women's
Brands

Repairs

Repair Pricing
What can we Repair?
Book a Repair
Track a Repair

My Account

Track an Order
Start a Return
My Past Orders
Get Support
My Details

Social Media

Twitter
Facebook
Instagram
TikTok

1234 Whitmore Street
Hockley, Birmingham
B19 1XX

Company Reg 987654

hello@hockley-watches

(c) 2021 Hockley Watch Emporium

Hockley Watches
Logo & Wordmark

Account

Basket (1)

[Shop by Category](#) | [Shop by Brand](#) | [Shop by Style](#) | [Repairs](#) | [Support](#)

Your Basket

Watch

Watch Model ABCD1234

Quantity: 1

£123.99

Remove from Basket

Subtotal

£123.99

Including VAT of

£24.80

Shop Products

Most Popular
Men's
Women's
Brands

Repairs

Repair Pricing
What can we Repair?
Book a Repair
Track a Repair

My Account

Track an Order
Start a Return
My Past Orders
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My Details

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Hockley Watches
Logo & Wordmark

Account

Basket (1)

[Shop by Category](#) | [Shop by Brand](#) | [Shop by Style](#) | [Repairs](#) | [Support](#)

My Account

Wishlist
Orders
Returns
Repairs

Support Tickets

Personal Details
Account Details
Saved Addresses
Saved Cards

Order #1234—Placed on 1st Jan 2021

1x Watch ABC12345 @ £100
1x Watch XYZ54321 @ £200
Delivered by Courier on 3rd Jan 2021

Start a Return

Leave a Review

£300
Paid by VISA xxx69

Order #1234—Placed on 1st Jan 2021

1x Watch ABC12345 @ £100
1x Watch XYZ54321 @ £200
Delivered by Courier on 3rd Jan 2021

Start a Return

Leave a Review

£300
Paid by VISA xxx69

Order #1234—Placed on 1st Jan 2021

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hello@hockley-watches

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Hockley Watches
Logo & Wordmark

Account

Basket (1)

[Shop by Category](#) | [Shop by Brand](#) | [Shop by Style](#) | [Repairs](#) | [Support](#)

Welcome Back!

Forgot Password?

Create an Account

Shop Products

Most Popular
Men's
Women's
Brands

Repairs

Repair Pricing
What can we Repair?
Book a Repair
Track a Repair

My Account

Track an Order
Start a Return
My Past Orders
Get Support
My Details

Social Media

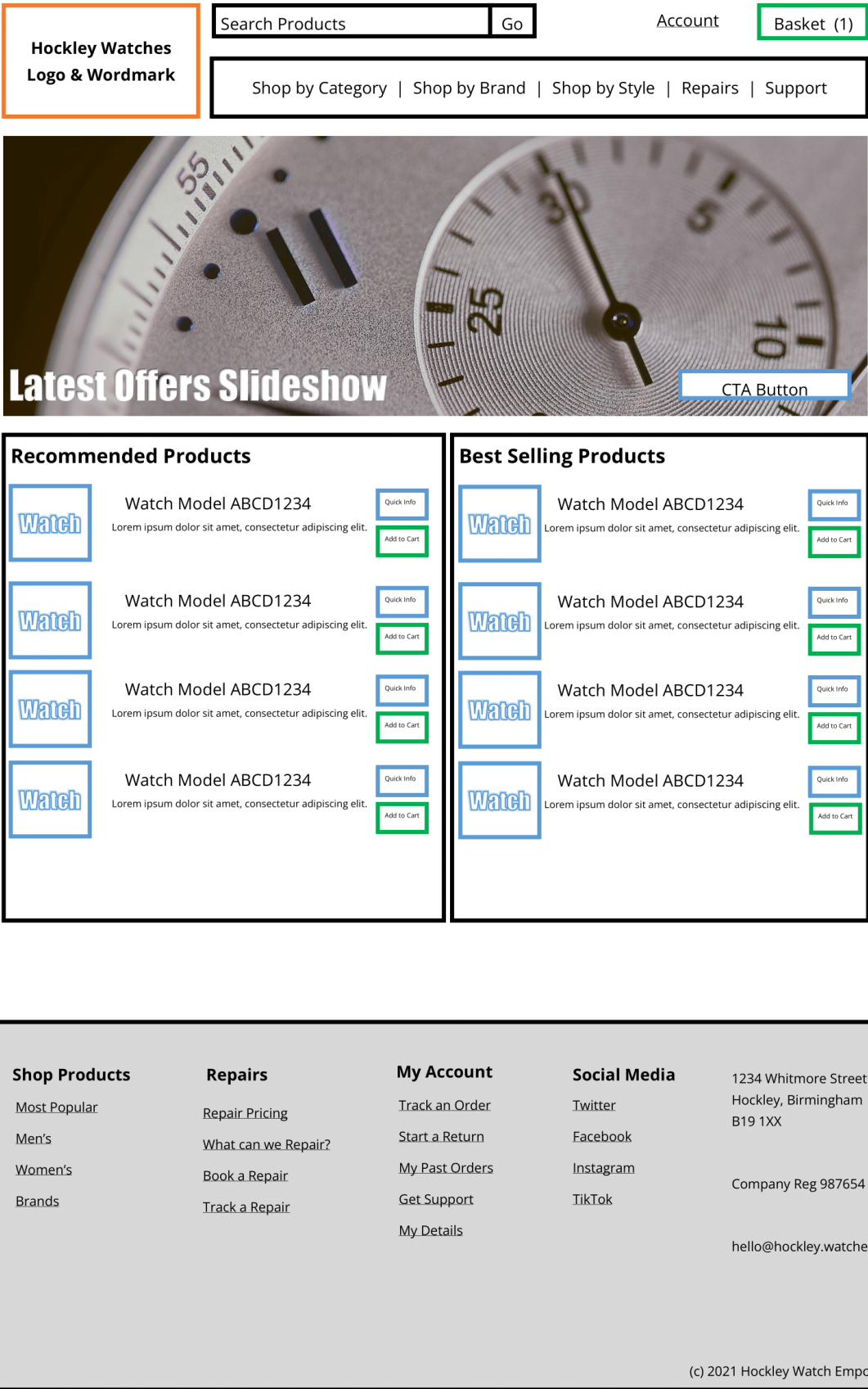
Twitter
Facebook
Instagram
TikTok

1234 Whitmore Street
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Company Reg 987654

hello@hockley-watches

(c) 2021 Hockley Watch Emporium



Payment Methods (D2)

There are many methods of paying for goods and services when using online e-commerce websites. They each have their own pros and cons and reasons why a consumer might choose them over another method.

Stripe

Stripe is a payment gateway and checkout solution that can be integrated into an e-commerce website. Many recognisable companies and brands make use of Stripe's SASS (software-as-a-service) product without consumers even being aware. John Lewis, Deliveroo, ASOS and Booking.com all make use of Stripe.

Stripe supports most cards, making it easily accessible by all. It supports integration with many accounting solutions and e-commerce platforms. Stripe can additionally process several different currencies, facilitating international purchases.

Each transaction will incur a 1.4% fee, plus 20 pence and the product needs to be built into the checkout process by a developer if one isn't using a supported e-commerce solution.

PayPal

Similar to Stripe, PayPal accepts various cards, international payments and can be integrated into many e-commerce solutions with ease. Over 300 million merchants and clients use PayPal, and it handles over 15 billion transactions a year.

PayPal also allows a user to pay with PayPal Finance (a buy-now-pay-later credit solution) or their PayPal balance. These offer flexibility to customers who use either of these services.

PayPal fees are similar to Stripe's, with fees ranging from 1.2% to 2%. Their international currency conversion, however, is known to be particularly unfair.

Additionally, PayPal requires the user to be taken away from the retailer website to complete their payment, which adds significant inconvenience.

Bank Transfer

Bank transfers allow users to pay for products by paying money directly into a bank account. This allows the business to receive money straight into their account with no fees or intermediary agent.

Customers will likely have to add a new payee with their bank in order to pay at a new retailer, which adds a significant amount of friction. If a user

accidentally entered an incorrect account number, money sent could be irrecoverably lost.

Many accounting solutions will not be able to automatically associate incoming bank payments with customer purchases, making accepting bank transfers a hassle. Many banks also may not accept international payments or may incur a large fee when doing so.

Apple/Google Pay

Apple Pay and Google Pay are both fairly new options for e-commerce businesses. They allow customers to quickly and easily pay for items and often times they can allow the customer to completely bypass a checkout flow.

Both methods hide the users' actual card number from the retailer, which increases customer privacy and increases confidence when shopping online. As well as this, the solutions allow the sharing of the customer's name and address with the retailer, which means they do not have to enter in any details at all to place an order.

On Android and in Google Chrome, and on iOS and macOS, these payment methods are integrated. This allows a more seamless experience and also facilitates the use of biometric authentication to confirm the identity of the customer.

Apple Pay and Google Pay both need to be set up by the customer beforehand, however.

Cash/Cheque

Paying with cash and cheque opens up many risks to the retailer. The customer will have to procure postage for the physical item, which may take a significant amount of time, delaying the order's progression. There is the potential for the money to be lost in transit, which would be a detrimental experience for both the customer and the retailer.

Both cash and cheques will need to be deposited or stored physically, which adds extra overhead to the online retailer, which may be striving to become more digital and paperless.

There is additionally the potential for cheques to bounce and for cash to be fake, which adds even more risk to the retailer, who could lose money if this is found out after an order is shipped.

Cryptocurrency

Cryptocurrency relies on blockchain technology, where all crypto users share a "ledger" of transactions and payments. There are many different cryptocurrencies, the most popular being Bitcoin and Ethereum.

Exchanges such as Coinbase offer merchant solutions for accepting many cryptocurrencies, which can be integrated in a similar way to Stripe and PayPal.

Around 70% of surveyed Britons say they have no intention of ever purchasing any sort of cryptocurrency, and the process for paying for an item would be similar to a bank transfer. This means that accepting cryptocurrency is not an attractive option for retailers, since there would likely not be many people who would want to pay with this method.

A potential downside to the business is with the open nature of the blockchain system, all payments to and from the account ("wallet address") of the company are publicly visible. Whether the business would want this information public would be up to them. Additionally, customers are anonymous—only identified with their cryptographic wallet address; this can make it impossible to identify who the customer was if the address was not tied to the order correctly.

PII Benefits

Third-party solutions such as Stripe, PayPal and Apple Pay all allow the retailer to receive payments without receiving the customers' actual bank card information. This increases user privacy, but also increases security for both the retailer and the customer, since the retailer does not need to save more personal information than is required. This means that if the retailer were to succumb to unauthorised access by a third-party, no customer financial information could ever be impacted.

Recommendation

My recommendation would be to accept as many digital payment options as possible. This affords the customer the greatest possible flexibility, making them more likely to finalise an order and purchase from the website. I would prioritise the usage of Stripe or PayPal for accepting cards and Apple Pay & Google Pay for quick purchasing on mobile platforms especially.

I would avoid accepting payments via cash/cheque and cryptocurrency since they are fundamentally risky (cash/cheque) or are not applicable for a significant majority of customers (crypto).