Department of Information Engineering and Computer Science

Master's Degree in

Human-Computer Interaction and Design
& ICT Innovation

FINAL DISSERTATION

Unleashing the Potential

Experimental Study on the Effectiveness of Nudging Strategies in Webpage Design for Emerging Fintech Startups

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ACADEMIC YEAR 2022/2023

Abstract

This thesis endeavours to address the multifaceted challenges encountered by emerging fintech startups at various stages of their development journey, with a specific focus on elevating the design of their landing pages to effectively bridge the gap in adoption curve dynamics. At the heart of this specific objective lies the concept of "nudging," a subtle and non-intrusive approach for influencing decision-making within the framework of a given choice architecture, steering individuals toward more favourable choices while upholding their individual autonomy.

This thesis is structured around two core objectives: 1) In-depth Analysis of Emerging Fintech Strategies; The first objective involves conducting a comprehensive analysis of the strategies adopted by emerging fintech startups. This analysis will be conducted through a meticulous review of existing literature following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method. In addition to this, real-world fintech startups will be scrutinised through market research and website evaluations, providing valuable insights into their approaches and challenges. 2) Experimental Study on Nudging Techniques; The second objective entails the formulation and execution of an experimental study designed to assess the effectiveness of three distinct nudging techniques. These techniques will be selected based on their relevance and applicability to fintech landing pages. The chosen nudging strategies will then be rigorously implemented and tested within the context of a startup's webpage. The ensuing experiment will yield valuable data, which will be analysed and discussed to draw meaningful conclusions about the efficacy of these techniques in influencing user behaviour.

The final part of this thesis will involve a comprehensive synthesis of findings, followed by a thorough examination of the study's limitations and opportunities for future research. By combining an exploration of real-world fintech strategies with a robust experimental approach, this thesis aspires to offer tangible insights and practical recommendations that can help emerging fintech startups enhance their landing page design and navigate the challenging terrain of market adoption.

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1. Introduction

The lifecycle of a startup can be divided into several stages (Carter et al., 1996). The adoption curve is the most crucial stage in determining the success or failure of a startup's entry into the market (Gbadegeshin et al., 2022; Rogers, 1962). The curve includes various phases in which a product is introduced to customers, starting from a small group of "early adopters" and progressing to the broader market of "early majority" and "late majority." However, overcoming the gap between the initial customers and the wider audience is the challenge every startup must face. As such, this presents an opportunity for market research and experimentation.

When attracting new customers, a company's landing page plays a pivotal role, serving as the gateway to generate interest in its products. The success of a business heavily relies on presenting itself and its concept in an accessible and user-friendly manner. This requires careful consideration of marketing and design and understanding user behaviour and decision-making processes. To address the previously introduced challenge, this research project aims to investigate the effectiveness of using specific *nudging* strategies in the design of a startup's landing page, with the ultimate goal of bridging the adoption curve gap.

The idea of *nudging* is based on the concept that by shaping the environment, often referred to as choice architecture, we can significantly influence individuals' likelihood of choosing one option over another. This approach employs gentle, inexpensive, and indirect methods to influence people towards making better choices without imposing restrictions or mandates on their decisions (Thaler & Sunstein, 2008). By leveraging the principles of *nudging*, we can foster positive behavioural changes while preserving individual freedom and autonomy.

1.1. Decision-Making Processes and Cognitive Bias

Decision-making is a fundamental and ubiquitous cognitive function that relies on various other cognitive processes, including perception, attention, language, and memory. At its core, decision-making involves the intricate task of choosing one course of action from among multiple alternatives, guided by the information at hand (Wang et al., 2004; Wilson & Keil, 2001; Wang & Ruhe, 2008). The decision-making process always involves some sort of conflict – between choices, desirability, and probability, as well as between personal goals and those of

others. Successful decision-making necessitates the resolution of such conflicts to attain the most advantageous results. Given that this process is considered one of the most fundamental and intricately layered features of the human brain, it holds a significant place of interest and is a subject of study in numerous fields of expertise. Various disciplines, such as economics, cognitive informatics, psychology, mathematics, decision science, and sociology, each delve into different aspects of this cognitive function (Berger, 1990; Edwards & Fasolo, 2001; Hastie, 2001; Matlin, 1998; Payne & Wenger, 1998; Pinel, 1997; Wald,1950; Wang et al., 2004; Wilson et al., 2001).

Traditionally, two approaches can be identified in the study of decision-making processes: the normative and the descriptive. These two perspectives offer distinct lenses through which researchers and scholars analyse and understand the human decision-making process. The normative approach to decision-making is rooted in the pursuit of identifying optimal or rational decision-making strategies. It serves as a theoretical framework that seeks to answer the question of how decisions should ideally be made to achieve the best possible outcomes. In this approach, decision-makers are assumed to possess complete and accurate information, engage in systematic and logical thinking, and aim to maximise expected utility or achieve specific goals. Central to the normative approach are concepts such as utility theory, which quantifies the perceived value or satisfaction associated with different outcomes, and expected value, which involves calculating the probability-weighted average of potential outcomes. Decision theorists often employ mathematical models and formal logic to prescribe decision rules that, when followed, lead to choices consistent with the principles of rationality. Critically, the normative approach provides a benchmark against which real-world decision behaviour can be evaluated.

In contrast, the descriptive approach to decision-making shifts the focus from how decisions should ideally be made, as emphasised in the normative approach, to how individuals actually make decisions in the real world. It acknowledges that human decision-making is often influenced by a wide array of psychological, cognitive, and social factors, which can lead to deviations from the normative ideal of rationality. Key to the descriptive approach is the recognition of cognitive biases and heuristics that affect decision-making. Cognitive biases are systematic patterns of deviation from normative rationality (see more on this below), and heuristics, on the

other hand, are mental shortcuts or rules of thumb that individuals use to simplify complex decision situations. Psychologists and researchers employing the descriptive approach conduct experiments and observational studies to gain insights into how people make decisions under various conditions. This approach allows for a better understanding of how emotions, framing effects, social influences, and other contextual factors shape choices individuals make. By studying these real-world decision behaviours, researchers aim to uncover the nuances and complexities of decision-making, ultimately offering insights that can be applied in fields such as behavioural economics, psychology, and marketing.

In summary, the descriptive approach provides a more nuanced and realistic perspective on decision-making, acknowledging that human choices are often far from the idealised rationality outlined in the normative approach. It highlights the importance of considering the psychological and behavioural factors influencing our decisions and offers valuable insights for improving decision processes in various practical contexts. As just mentioned, cognitive biases are central to the descriptive perspective. They are systematic errors, similar to visual illusions: they are challenging to eliminate, persistent and widespread. These cognitive dispositions or tendencies in human thinking and reasoning often differ from the principles of logic, probability reasoning, and plausibility. These ingrained and automatic inclinations form the foundation of human judgement, decision-making, and subsequent behaviour. Psychological frameworks posit that biases arise from the (inappropriate) utilisation of cognitive heuristics, which individuals employ to address data constraints, limitations in information processing, or a lack of expertise (Korteling & Toet, 2022).

Cognitive bias	*Short description*
Confirmation bias	The tendency to selectively search for or interpret information in a way that confirms one's preconceptions or hypotheses
Conjunction fallacy	The tendency to assume that specific conditions are more probable than a single general one
Endowment effect	The tendency that people often demand more to give up on an object than they would be willing to pay to acquire it
Fundamental attribution error	The tendency to overemphasize personal factors and underestimate situational factors when explaining other people's behavior
Gambler's fallacy	The tendency to think that future probabilities are changed by past events, when in reality they are unchanged (e.g., series of roulette wheel spins)
Halo effect	The tendency for a person's positive or negative traits to extend from one area of their personality to another in others' perceptions of them
Hindsight bias*	A memory distortion phenomenon by which with the benefit of feedback about the outcome of an event, people's recalled judgments of the likelihood of that event are typically closer to the actual outcome than their original judgments were
Hot-hand fallacy*	The expectation of streaks in sequences of hits and misses whose probabilities are, in fact, independent (e.g., coin tosses, basketball shots)
Illusory correlation	The tendency to identify a correlation between a certain type of action and effect when no such correlation exists
In-group bias	The tendency for people to give preferential treatment to others they perceive to be members of their own group
Mere exposure effect	The tendency by which people develop a preference for things merely because they are familiar with them

Figure 1: Example of well-known cognitive bias (Wilke & Mata, 2012).

1.1.1. Nudging

In decision-making, human choices often exhibit imperfections, particularly when individuals lack experience, information, or access to timely feedback. Even seemingly inconsequential factors can exert subtle but significant influences on people's decisions. Recognising the prevalence of decision biases and the potential for their exploitation, the concept of “Nudge” has emerged. Originating in the pioneering work of Professor Cass Sunstein and Richard Thaler in their 2008 book aptly titled “Nudge”, this theory introduces a novel approach to influencing choices. The term “nudge” conveys the concept's essence – gently guiding or capturing someone's attention. At its core, nudging centres on the idea that by thoughtfully designing the environment, often referred to as *choice architecture*, we can markedly impact an individual's likelihood of selecting one option over another. Crucially, this approach employs subtle, cost-effective, and indirect techniques to steer individuals toward making improved decisions, all without imposing mandates or restrictions on their choices (Thaler & Sunstein, 2008). Positive behavioural changes while upholding individual freedom and autonomy can be fostered by leveraging the

principles of nudging. In this context, an effective nudge must fulfil three key criteria: preserve personal choice, maintain transparency, and enhance individuals' decisions according to their own judgement (Thaler & Sunstein, 2008).

The concept of nudging takes inspiration from the idea of libertarian paternalism introduced by Thaler and Sustain in 2003. At its core, libertarian paternalism represents a unique approach to policymaking that seeks to reconcile individual freedom of choice to improve overall societal welfare. It acknowledges that people's decisions are often prone to cognitive biases and irrationality (Thaler & Sustain, 2003; Thaler & Sustain, 2009). However, instead of imposing strict regulations or mandates, libertarian paternalism suggests that policymakers can gently guide individuals toward better choices by designing the choice architecture to make beneficial options more salient or easier to choose while preserving the freedom to opt for other alternatives. In essence, it recognises that nudging can be a powerful tool to encourage people to make decisions that are in their best interests without infringing upon their autonomy. This approach has been influential in various policy domains, from retirement savings to public health, where small, well-crafted nudges have led to positive societal outcomes while respecting individual choice (Cai, 2020).

At its essence, nudging techniques revolve around choice architecture: the arrangement and presentation of choices available to individuals. Choice architecture involves deliberately designing various ways to display options and information to consumers, with a keen awareness of how this presentation influences decision-making. Choice architects are the professionals responsible for crafting and orchestrating these presentations, with the primary objective of ensuring that individuals maintain their freedom to make choices aligned with their preferences and desires.

Choice architects come from diverse fields and disciplines, each with their unique purposes and contexts. They play a pivotal role in shaping decisions, whether they are doctors introducing treatment options to patients, educators offering guidance in the realm of education, or professionals in the digital sphere who design interfaces for computer applications and services. Regardless of their specific domain, these choice architects wield significant influence over how options are presented to the public, ultimately affecting individuals' choices. Their responsibility lies in designing choice environments that are conducive to informed, autonomous decision-making.

1.1.2. Digital Environments and Nudges

The emergence of the digital age has ushered in a new dimension for the concepts of nudge, choice architecture, and the role of choice architects. In the digital landscape, the choice environment often triggers a more automatic and intuitive decision-making model (Benartzi & Lehrer, 2015). The digital realm is characterised by high visual stimulus and abundant available information, sometimes leading to choice overload and decreased sustained attention spans.

Furthermore, the extensive integration of technology into people's daily lives over the past decades has transformed their fundamental cognitive processes, including perception, memory, and attention, which are essential components of the decision-making process. Memory, for instance, has been affected by the shift away from deep and concentrated reading on digital screens, leading to rapid attention shifts and reduced deliberation. The rise in multitasking is associated with increased distractibility and diminished executive control abilities. These factors make individuals more susceptible to judgement errors when processing digital information. Adapting choice architecture to digital applications has become crucial to address these challenges. This adaptation involves the creation of innovative tools and functionalities aimed at enhancing the effectiveness of nudging interventions in the digital realm. Examples of such tools include filter options, recommender systems, feedback mechanisms, targeting methods, and personalisation techniques.

Since decisions often rely on the specific context, User Interface (UI) designers have the flexibility to employ and integrate design nudges. These design nudges include uncomplicated interventions tailored to particular usage contexts and objectives (Mirsch et al., 2017). Since digital nudges involve minor adjustments to an already established UI, they can be incorporated quickly and cost-effectively. This is also a fundamental characteristic of nudge applications, thus helping users better navigate the environment.

When discussing digital nudges, drawing a clear distinction from **dark patterns** is crucial. Digital nudges are centred around the concept of persuasion, aiming to influence individuals in ways that align with their own interests and objectives, ultimately benefiting the nudgee. Conversely, dark patterns involve coercion, where individuals are manipulated to serve the desires and needs of the

choice architect, often at the expense of the user's goals. This approach teeters on the edge between legality and illegality.

Dark patterns represent a collection of tactics deployed on websites and apps, designed to subtly guide users into actions they did not initially intend, such as making an unintended purchase or signing up for a service. Companies, including giants like Amazon, leverage these patterns, like the “Roach Motel”, which makes it intentionally complex for customers to cancel their Prime subscriptions. This illustrates the ethical quandary posed by deceptive design practices.

In this context, it is imperative for designers to grasp the impact of their designs on users' choices. Therefore, they themselves have to face a critical choice: to implement designs that nudge users transparently and ethically or to minimise the influence of their designs on user choices, ultimately enhancing individual autonomy and free will. (Cai, 2020).

1.1.3. Ethical Considerations

Implementing behavioural interventions to engage automated and emotional cognitive processes to shape individual behaviour closely aligns with the core tenets of nudging approaches (Hansen & Jaspersen, 2013; Barton & Grüne-Yanoff, 2015; Lembcke et al., 2019). The construction of choice architectures and their subsequent interactions primarily aims to subconsciously influence behaviour by leveraging individual biases or utilising a secondary bias to counteract the effects of another (Soman & Liu, 2011; Michalek et al., 2016; Lembcke et al., 2019).

In the broader context of examining how individuals behave as sellers and buyers within economic settings, this discourse is inextricably linked to political and cultural factors that are inherent to nudge interventions and influence them simultaneously. This complex interplay has led to extensive critique and ethical concerns, as highlighted (Hagman et al., 2015; Lembcke et al., 2019). Consequently, in response to these issues, Thaler and Sustain have formulated three fundamental ethical principles aimed at preserving the integrity of the original nudge concept.

First, “to qualify as a nudge, an intervention needs to preserve the individual’s freedom of choice, also represented by the lack of obstacles, barriers and constraints" (Lembcke et al., 2019, p. 5; Thaler & Sustain, 2008; Thaler & Sustain, 2003). “A person has freedom of choice iff she lacks constraints on the reasoned selection and performance of one or more of the items on an action-menu” (Carter,

2004, p. 69; Dobson & Hawkins, 2016). Under this assumption, absolute freedom of choice is present only if individuals can make “reasonable” decisions without restrictions. This concept of autonomy is, however, controversial. Indeed, when nudged, individuals are no longer “authors" of their choices, but a neutral architecture is impossible. In terms of rationality, because nudges work through irrationality, they fail to treat humans as rational agents, but using the development of descriptive theories as proof, humans are irrational a priori, and without nudges, they would not be more rational, especially given the continuous external stimuli (Sustain, 2014). On the extreme side, it may be argued that this type of strategy and exploitation of bias can be used to exercise control over citizens by decreasing individual control. However, nudges do not differ from other public policies and regulations (Quigley, 2013).

Secondly, critics such as Clavien (2018) manifest that nudging interventions cloud the availability of options accessible at the moment of the decision, endangering informed and free choices. Hence, transparency must be preserved, and rules such as the following two are necessary to be an ethical intervention. First, nudgees must be able to easily recognise when and where they are subject to being nudged. Even though this brings up an ethical question raised by Lembcke (2019) related to “how much effort on the behalf of individuals is justified to preserve their freedom?” Second, the nudger’s goals of the intervention have to be transparent: how and why the nudge is working. This is to avoid falling into deceptive designs such as Bait-and-switch (more in chapter 3) that are often characterised by using a conventional pattern to make the user falsely assume something.

Thirdly, nudges can be oriented to three, not necessarily elusive, goals (Clavien, 2018; Hangman et al., 2015): selfish goals of the nudger (e.g. own benefit, profit), pro-social/social goals (e.g. public welfare, gender equality) or pro-self/nudgee-driven goals (e.g., participating more in sports if the individual has already formed an attitude for this; Lembdecke et al., 2019). The first type of goal, which stems from selfishness, is unjustifiable ethically, as also supported by Thaler and Sustain. The pro-self goal has also been criticised, as it is rather challenging for architects to know precisely what the nudgees want. This stems from the assumption that the user crowd is homogeneous, which realistically it is not, and therefore leaves the challenge to design an intervention that satisfies all the heterogeneous groups and their needs (Lembcke et al., 2019). For the pro-self goal to be justifiable, then, it

has to have ethically acceptable goals (Ismaili M'hamdi et al., 2017), thus ensuring that users do not make "decisions that they would make if having unlimited time, information and analytic capacity" (Hagman et al., 2015, pg 451). From here, it stems from the arguments that Clavien proposed in 2018 and are often used to declare nudges ethically acceptable: 1. Nudge helps achieve some desirable outcome or fulfil important values or moral principles, 2. The nudger's goal stems from good intentions, and one can provide evidence that nudgees do or would share the goals pursued by the choice architect.

1.2. Fields of application

As previously mentioned, nudging strategies have garnered significant interest across a wide range of academic disciplines and practical applications. These strategies find particular relevance in fields such as finance, health, environmental conservation, education, and even aspects of personal relationships (Cai, 2020). Among these domains, health and finance stand out as the most prominent arenas where nudging interventions are frequently deployed. In the health sector, nudges serve as powerful tools to encourage individuals to prioritise self-care, a crucial aspect often overlooked in the face of medical challenges.

The inception of behavioural economics spurred the initial interest in the field, and its relevance continues to grow, especially in the context of evolving e-commerce and financial technology. However, it is worth noting that most nudging research has been conducted in offline settings, primarily focusing on physical health issues. As the digital realm plays an increasingly integral role in our lives, a pressing need arises for cross-disciplinary studies to explore the challenges and effectiveness of nudges in digital spaces (Cai, 2020). These digital nudges open up numerous avenues for further research and application, as highlighted by Mirsch et al. (2017).

This leads to the core focus of this thesis: to bridge the gap between the utilisation of digital nudges and web design, with a specific emphasis on their application within the dynamic field of fintech. I aim to investigate the potential and effectiveness of these strategies in assisting emerging fintech startups and engaging novice customers interested in the services they offer. Consequently, this thesis has two primary objectives: (1) an in-depth analysis of the nudging strategies employed by emerging fintech startups and (2) the proposal of an experimental study aimed at comparing the efficacy of three distinct nudging techniques.

Table 2 Example applications of digital nudging and their effects

Use case/IS field	Nudging example/behavior change intervention	Effect on organizational or societal level
Business process management	Structuring complex input screens	Organizational
E-business and e-commerce	Displaying limited room inventory during a hotel-booking process	Organizational
E-finance and insurance	Setting defaults for frequently selected insurance plan options	Societal
E-government	Setting defaults to opt in for organ donation	Societal
E-health	Step counter app that provides feedback on activity levels	Societal
E-learning	Reminder to learners to engage with course content	Organizational and/or societal
Green IS	Smart meters to encourage energy savings	Societal
Security and privacy	Displaying the strength of selected passwords	Organizational and/or societal
Social media	Giving incentives, such as badges, for sharing or other activities	Societal

Figure 2: Example application of digital nudging and its effects (Weinmann et al., 2016).

2. Fintech

2.1. Definition

The financial landscape underwent a seismic shift following the 2008 financial crisis, leading to what is now known as Financial Technology or fintech. This dynamic field seamlessly merges digital technologies like the internet, smartphones, and artificial intelligence (AI) with traditional financial services (Smith, 2001; Takeda, 2021). It is worth noting that the term 'financial innovation' precedes fintech and encompasses the development of novel financial products, services, or methodologies.

In essence, fintech involves the integration of digital solutions to enhance existing financial services. This transformation extends across various sectors, including retail banking, investment, and payment services, ushering in consumer behaviour and personal financial management shifts. Within this realm, artificial intelligence, blockchain, cloud computing, and big data are collectively recognised as the "ABCD," representing the four pivotal domains of fintech (Li et al., 2019).

Fintech also encompasses various applications and services that leverage technology to streamline and revolutionise financial processes (Puschmann, 2017). Concrete examples include Mobile Payment Apps and Services, such as PayPal, Venmo, and Square Cash, facilitating convenient fund transfers via mobile devices. Cryptocurrency and blockchain have experienced significant growth, with prominent names like Bitcoin and Ethereum offering decentralised digital currencies and transparent transaction technologies. Digital banks specialising in fintech, like Chime and N26, provide online-only banking services, offering features like fee-free checking accounts and user-friendly mobile applications. Crowdfunding Platforms, typified by Kickstarter and Indiegogo, empower individuals and businesses to secure funding from a community of backers. Trade and Investment Platforms like Robinhood and eToro also offer accessible interfaces for trading various assets, from stocks to cryptocurrencies.

As the fintech landscape rapidly evolves, it has given rise to numerous new sectors and opportunities, resulting in a noticeable influx of entrepreneurs eager to introduce their unique perspectives and services to this burgeoning market by establishing innovative startups (Section 2.2).

However, this surge of entrepreneurial activity also makes it imperative for these entrepreneurs to grasp the significance of financial education and literacy (Section 2.3). This understanding is crucial to enhance the likelihood of success since customers and investors increasingly seek well-informed decision-makers.

At this juncture, the concept of nudging takes centre stage (Section 2.4). In the best-case scenario, nudging assists customers in improving their decision-making awareness. In the worst case, it subtly influences decisions to enhance the return on investment for the entrepreneurs behind the startup.

2.2. Startup in Fintech

The lifecycle of a startup can be divided into several stages (Carter et al., 1996). In the initial concept or idea stage, entrepreneurs embark on turning their innovative ideas into viable business opportunities. This phase is characterised by brainstorming, conducting market research, and assessing the feasibility of the concept.

As the concept gains validation, startups transition into the development or early-stage phase. Here, the focus is on building a prototype or a Minimum Viable Product (MVP) to have a concrete view and example of what the product or service they are proposing looks like. This is fundamental as it is also the step in which the initial funding necessary to take their idea to the next level is secured. Financing options commonly include personal savings, angel investors, or crowdfunding.

With an MVP, startups can officially bring their product into the targeted market. This stage marks the beginning of acquiring early customers and gaining market traction. To generate interest is fundamental, as well as secure initial sales. Funding efforts continue, often involving angel investors or venture capitalists providing seed funding to support the company's growth.

Here starts the adoption curve with “the chasm” (Figure 3), which is part of the most crucial stage determining the success or failure of a startup's entry into the market (Gbadegeshin et al., 2022; Rogers, 1962). The curve includes various phases in which a product is introduced to customers, starting from a small group of "early adopters" and progressing to the broader market of "early majority" and "late majority." However, bridging the divide between initial customers and a broader

audience poses a fundamental challenge for every startup. This challenge also represents an opportunity for market research and experimentation.

Suppose a startup garners sufficient interest and support from customers and investors. In that case, it can progress through subsequent stages, including the Growth/Early-Adopter Stage and Scaling/Growth Stage, eventually culminating in the Maturity Stage, where the startup establishes stability in the market. At this juncture, with stabilised revenue, the startup may pursue either an exit or an expansion strategy, aiming to attain the status of an established company within the sector.

As Mr. Jain (2023), founder of Xponents Ventures, reported in his article “A Look Behind the Success of Fintech Startups", recent statistics reveal a sobering truth: in the world of Fintech startups, a staggering 75% meet an untimely demise despite initial investor support. While Fintech undeniably holds immense promise and potential, many startups grapple with realising their intended impact.

This statistic is not too far from a rule of thumb that the Adjunct Professor at the Cattolica University of Milan (Italy), Imanuel Baharier, mentioned during our interview in May 2023 while painting a challenging landscape for fintech entrepreneurs. According to this rule, approximately 80% of new fintech startups face failure, 10% are integrated into larger corporations, and another 10% successfully scale up and shed their startup status. This underscores the critical juncture in a startup's lifecycle, where navigating the path from inception to maturity becomes pivotal. Founding a startup, therefore, implies due consideration to financial knowledge by relevant entrepreneurs and, more importantly, by customers as well as investors who are more and more determined to make informed financial decisions.

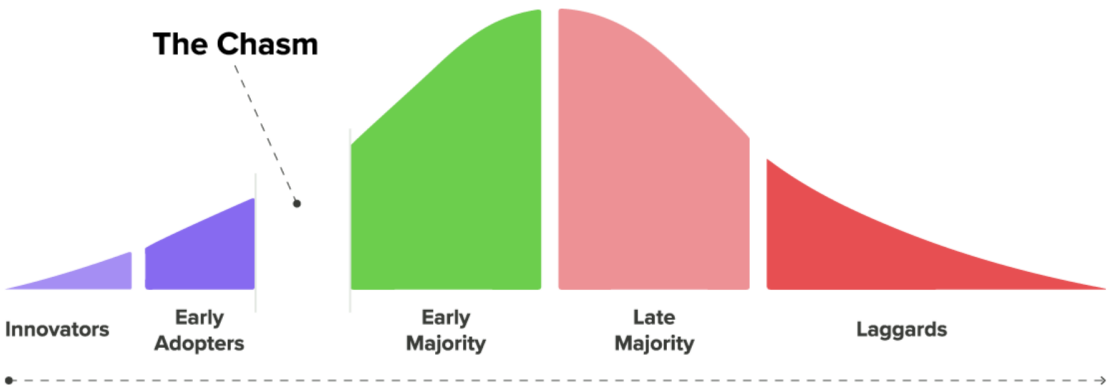


Figure 3: Representation of the Adoption Curve and the Chasm (Singlemann, 2022).

2.3. Financial Education and Literacy

Digital innovations have brought a paradigm shift in financial education and literacy. With the widespread adoption of digital technologies, such as digital money and online/mobile financial services, individuals now have unprecedented access to a plethora of digital financial tools and services. While this presents exciting opportunities for enhancing personal money management, it also ushers into new challenges. To navigate this evolving landscape effectively, it is imperative to establish robust financial education, consumer protection, and inclusion policies. The emerging ecosystem of digital financial services (DFS) not only offers tailored, easily accessible financial products but also introduces new risks and unintended consequences that can pose significant threats to both individual and societal financial well-being.

Financial literacy is a dynamic concept that extends beyond traditional educational settings. Personal experiences, life events, and environmental shifts continually shape it. The research underscores the correlation between higher financial literacy and improved economic outcomes. A strong foundation in financial literacy empowers individuals to make sound decisions in their everyday financial activities and long-term financial planning, encompassing savings, investments, and borrowing. Additionally, it equips them with the skills to detect and mitigate financial fraud, contributing to greater financial security and stability. Therefore, fostering financial literacy is essential in harnessing the benefits of the digital age while safeguarding individuals and society from potential financial pitfalls.

2.4. Fintech and Nudging

Given the increasing consideration paid to informed financial decisions, the strategic application of nudging within fintech platforms holds immense potential for addressing several critical issues. Firstly, nudges can significantly enhance financial literacy by guiding users towards educational resources and relevant information. This empowers individuals to make more informed decisions about their finances. Secondly, nudging can encourage responsible financial behaviour, such as saving and budgeting, by gently reminding users to adhere to their financial goals and

budgets. Thirdly, nudges can promote financial security by alerting users to potential risks or suspicious activities, thereby safeguarding their financial well-being.

Moreover, by harnessing the power of behavioural insights, fintech companies can personalise nudges to cater to individual preferences and needs, thereby improving the user experience and outcomes.

Indeed, in Cai's (2020) review of the application of the nudge theory to financial markets, he contends that certain institutions have recognised this potential and begun implementing it by (i) customising the presentation of investment options for investors and (ii) strategically disseminating information in a targeted manner.

In summary, the strategic integration of nudging strategies in fintech not only fosters financial literacy and responsible behaviour but also enhances user engagement and security, contributing to a more robust and user-centric fintech ecosystem.

3. Literature Review

3.1. PRISMA Method

To conduct a comprehensive and rigorous literature review, the widely recognised PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method was employed (Page et. al., 2021). This approach allows the identification of relevant scientific records to be included in the review. The PRISMA method consists of a three-step process: 1) identification, 2) screening and 3) Inclusion.

The process identification commenced with a meticulous selection of relevant keywords in the Scopus database (Elsevier, The Netherlands), enabling the identification of a broad range of scholarly articles that could contribute to this experimental project. The initial set of keywords used was "DIGITAL AND NUDGING AND FINANCE," and the search was performed for the fields of Scopus “Article title, Abstract and Keyword”, resulting in 6 papers. However, to broaden the scope and provide a more comprehensive overview of the published works related to the thematic focus of this thesis, a second round of the identification phase was carried out using the keywords "DIGITAL AND NUDGING" for the same fields of the first round which led to the selection of 273 papers.

To refine the selection, filters based on language (i.e. papers not written in English), field of interest, and author's keywords (i.e. if both are out of the topic) were applied. This helped to focus on the most pertinent papers and resulted in 122 documents to be screened, which were exported to a CSV file and analysed in Excel. This approach ensured a clear and organised method for assessing each article's quality and relevance.

To guarantee the rigour and validity of the findings, I initially performed data cleaning by carefully excluding any papers lacking authors or abstracts. Subsequently, I screened the remaining papers based on their abstracts, identifying those best aligned with the research's thematic scope. This thorough and systematic process allowed me to confidently sort on Excel a set of 41 papers that met the predetermined criteria related to digital nudging and finance for further analysis and synthesis.

Moreover, as I noticed that the found set of 41 contained some outliers, a second round of the screening phase was conducted manually, with a comprehensive review of each paper's title, keywords, and, when necessary, the abstract. This process resulted in the selection of the final set of five research papers deemed to have substantial potential:

- Gross, F. (2017). Artificial senses: Measuring finance and the economy at the relevant speed and scale.
- Puaschunder, J. (2020). Behavioral economics and finance leadership. Springer Books.
- Benner, D., Schöbel, S., & Janson, A. (2021). It is only for your own good, or is it? Ethical Considerations for Designing Ethically Conscious Persuasive Information Systems. In AMCIS.
- Zhang, Y. (2021). The design of a Mobile app to promote young people's digital financial literacy. In the International Conference on Human-Computer Interaction (pp. 118-136). Cham: Springer International Publishing.
- Reeck, C., Posner, N. A., Mrkva, K., & Johnson, E. J. (2023). Nudging App Adoption: Choice Architecture Facilitates Consumer Uptake of Mobile Apps. Journal of Marketing, 00222429221141066.

Only a subset of the papers mentioned above of the final set were accessible, and I will incorporate the findings of these later in the chapter.

Overall, employing the PRISMA method provided a structured and meticulous approach to the literature review, ensuring the inclusion of all relevant papers while enhancing the reliability and validity of the findings. This approach allowed me to conduct a comprehensive and rigorous literature review that will serve as a valuable resource in my research efforts.

3.2. Results and Discussion

The idea that the connection between fintech and nudging is still evolving is supported by the studies identified using the PRISMA method. It has been observed that rather than being thoroughly tested and explored, the utilisation of digital nudging within the fintech industry is currently undergoing more extensive research and analysis.

A comprehensive review of the literature reveals that the majority of articles reporting or investigating case studies and the application of (digital) nudging strategies have primarily focused on topics such as health, eating behaviour, and dietary nudges (Cai, 2020; Mettler & Stepanovic, 2023). For instance, one study examined supermarket decision-making to determine whether nudges enlighten, overwhelm, or guide customers towards healthier choices. Additionally, Kwan's (2020) systematic review explored nudge theories and strategies employed to influence adult health behaviour and outcomes in diabetes management. Furthermore, the literature extensively delved into environmental conservation, recycling, climate change, and education. For instance, Bartmann (2022) discussed the ethical use of Artificial Intelligence (AI) for sustainability, while Wambsganss et al. (2022) explored how nudging can enhance students' argumentation learning. Zimmermann et al. (2023) conducted a study to motivate changes in commuters' behaviour for sustainability, and Luger-Bazinger et al. (2021) researched the effects of nudging and gamification methods on cities and sustainable behaviour. Numerous studies and practical implementations of nudging strategies have been carried out in these domains.

Conversely, domains such as sustainable consumption in tourism, agriculture, music, and transportation have seen fewer reports and tests. For instance, Singh and Kapoor (2023) focused on configuring farmers' platforms to align with their digital preferences in design, while Ranson and Guttentag (2019) employed nudges to motivate altruistic behaviour among Airbnb guests.

Despite the success of nudges in achieving improved and more predictable results, research about nudging has predominantly been conducted in offline contexts (Schneider et al., 2017; Weimann et al., 2016).

3.2.1 Fintech

The literature at the intersection of nudging and fintech can be broadly categorised into three primary domains. Firstly, a considerable body of research has scrutinised the risks and privacy concerns associated with financial nudging, as evidenced by the work of Benner, Schöbel, and Janson (2021). This line of inquiry is dedicated to addressing potential ethical and regulatory challenges that may surface when employing nudging techniques in the context of fintech. Secondly, there has

been a notable emphasis on elucidating and defining the science of nudging and its potential applications in the financial sector, exemplified by the seminal contributions of Thaler and Sunstein (2009) and additional insights from Cai (2020). These articles aim to establish a solid foundation by explicating the fundamental principles and constraints of nudging within the financial landscape. Finally, the literature encompasses studies that have delved into the potential implications and outcomes arising from the utilisation of nudging strategies in the financial industry, as illustrated by the research conducted by Benartzi (2017). These investigations seek to uncover the behavioural consequences, consumer reactions, and economic repercussions resulting from implementing nudges in financial decision-making, such as in Haki's research on using digital nudging for technical debt management (Haki et al., 2023).

Notably, among the various behaviour modification approaches explored, gamification has emerged as one of the most frequently adopted strategies. Gamification employs elements reminiscent of games to heighten user engagement and shape behaviour (Sousa, 2022; Jeon et al., 2021). This approach has exhibited significant promise, particularly within the realm of behavioural therapies, notably in the context of financial interventions.

Furthermore, the research underscores that although nudging is garnering attention within the fintech sector, its practical application and empirical testing still need to be revised. Further investigation and exploration are imperative to gain a comprehensive understanding of the potential of nudging techniques in fostering advantageous financial habits and outcomes.

Considering the overview above, it becomes evident that current research within the fintech domain concerning digital nudging can be categorised into three primary domains:

1. The exploration of the significance of employing digital nudging strategies to enhance financial education and literacy.

2. The scrutiny of risks and ethical considerations associated with utilising digital nudging strategies.

3. Experimental studies that investigate the impact of digital nudging strategies on specific financial behaviours and choices.

The last of these categories encompasses the works that will be emphasised, aligning with the objectives of this experimental study. However, it is noteworthy that experimental studies incorporating website design, nudges, and fintech applications

are relatively scarce. This scarcity can be attributed to the prevalent marketing focus on interventions geared toward facilitating consumer adoption of a service (Zhang, Y., 2021). Consequently, these interventions often prioritise the market value of the product to be launched within a particular niche rather than addressing a specific fintech application.

Furthermore, an illuminating case study showcasing how even minor alterations in the choice architecture of a user interface can significantly influence app adoption can be found in Reeck's research titled "Nudging App Adoption: Choice Architecture Facilitates Consumer Uptake of Mobile Apps" (2023). This study delves into the mobile app marketing funnel, which encompasses a series of steps ranging from app download and installation to navigating through onboarding screens and making choices related to privacy, notifications, and other app features (Bagherjeiran et al., 2010; Chiong et al., 2017).

Previous research has explored the impact of choice architecture on decision-making, involving strategies such as product or information highlighting (Milosavljevic et al., 2012). In their comprehensive study, Reeck and her research collaborators conducted six lab experiments and one field experiment, all of which were pre-registered. These experiments vividly illustrate how modifying aspects like colour, wording, and the number of decisions of an app can influence a user's decision to adopt such an app. Of particular note, the fifth and sixth experiments employed salience in the choice architecture, and their results suggest that its pairing with a colour perception strategy is nearly as effective as the most potent nudge: the default option.

To substantiate the effectiveness of salience in practical application, studies conducted by Chetty et al. (2009) and Pahuja and Tan (2017), especially the research by Bammert (2020) exploring the potential of digital nudging in business processes, have consistently ranked salience among the top three most effective nudges. It stands just behind the default option and incentives regarding its impact.

3.3. Final Considerations

To summarise, this literature review comprehensively explores the dynamic relationship between digital nudging and the fintech industry. It delineates three critical domains within this intersection: addressing risks and privacy concerns,

establishing foundational principles of nudging in finance, and exploring real-world outcomes of nudging in financial decision-making.

The review underscores the increasing significance of digital nudging within the fintech sector, reflecting a broader shift towards digital solutions. While the potential of nudging techniques gains recognition, the practical application and empirical testing of these strategies, particularly in website design and fintech applications, still require refinement.

Consequently, the Salience bias has been chosen to centre the experimental phase. While the Default bias is widely acknowledged as highly effective (Bronchetti et al., 2013; Henkel et al., 2019; Friis et al., 2017; Rapoport et al., 2014), it presents challenges within the context of this experimental study's primary objective: facilitating user exploration and guiding them towards a fintech product's free trial. The objective of this project aligns with the overarching goal of enhancing communication strategies in finance through the utilisation of mental heuristics, biases, and nudges (Puaschunder, 2020). In this context, the Salience bias emerges as a promising strategy to achieve this project's objectives effectively. The Salience bias operates on the principle that individuals tend to allocate their attention differentially to specific elements in their environment, thereby assigning those elements disproportionate weight in subsequent judgements (Taylor & Thompson, 1982). Consequently, in contrast to the default approach, incorporating the Salience bias into an alternative version of a potential fintech startup webpage would draw users' attention to the "free trial" option. This approach informs users about the option's availability without automatically pushing them towards it if no action is taken, thus promoting more open communication and less constrained choice compared to utilising a default option.

Moreover, the application of the Salience bias in interventions has demonstrated favourable outcomes in encouraging individuals to make more informed decisions, particularly in the field of economics. For instance, consider the realm of taxation, where Chetty et al. (2009) established that individuals' engagement with taxation-related information increases when it is brought to their attention, leading to the conclusion that "salience is a critical determinant of behavioural responses" (Vol. 44, pg. 1175). Alternatively, Pahuja and Tan's (2017) short paper presented the application of the Salience technique to mitigate racial stereotypes in the sharing economy. Their application was specific to platforms like

Airbnb, where guests present themselves to hosts through personalised profiles. They conducted tests using two profile versions: one integrated with the Salience bias, highlighting guests' hobbies, professions, and languages spoken, and another without such integration. They concluded the paper by saying that the former choice architecture will lead hosts to categorise their guests by hobbies and employment rather than cultural background, thus helping tackle digital discrimination.

In conclusion, based on the literature review, the Salience bias was chosen as the primary focus for the experimental phase. However, to fulfil the initial objective of exploring three nudges, the next chapter will involve conducting a market research study to select two or three fintech startups. This research will provide insights into the current real-world application of nudging strategies and facilitate the selection of the two missing biases.

4. Case Studies

4.1. Introduction

As analysed in the previous chapter, most studies investigating the effectiveness of (digital) nudging tactics have primarily focused on health and eating behaviour, as well as environmental conservation, recycling, climate change, and education. However, despite the growing interest in using nudging strategies in the fintech industry, further research is still needed to explore their application and efficacy. Most articles in the literature address the use of digital nudging to improve financial education and literacy, as well as the associated risks and ethical considerations. Few studies have specifically examined the effectiveness of digital nudges for specific financial behaviours and choices. As a result, many startups currently use nudging strategies in their landing pages, but the efficacy of these strategies has yet to be scientifically tested. Therefore, more research and exploration are required to fully understand the potential of nudging tactics in the field.

In order to fulfil the first objective of this thesis - to analyse nudging strategies currently used by emerging fintech startups - and to address the (presumably not guided by specific experimental evidence) use of cognitive bias in startups' homepages, I searched for emergent fintech companies that offer the same (or similar) services as Betterfront Technology - the firm I interned at. Then, I analysed their landing pages, identified their goals, and checked whether they had implemented any nudging strategies to achieve them. To conclude, the two most used ones will be taken into consideration in the experimental part of this thesis.

4.2. Betterfront

Betterfront Technology GmbH is a Munich-based investment technology company established in 2019 by Michel Geolier, Worathiti Manosroi, and Sergi Case. Dedicated to the private capital markets, it offers data analytics solutions to streamline private market funds' fundraising and investment processes. Its mission is to leverage data and technology to empower smarter investment decision-making. Betterfront provides a platform and services for both General Partners (GPs) and Limited Partners (LPs) in the Financial Technology (Fintech) sector. As an emerging startup, its customer base mainly includes other startups like Cello. One of Betterfront's key strengths lies in its passion for its business field, evident in its

products and direct communication with customers for feedback and support. (www.betterfront.io)

4.3. Startup Selection

To establish the criteria for selecting relevant case study startups, I first researched Betterfront's profile and characteristics on Crunchbase (www.crunchbase.com), a comprehensive company database covering businesses from early-stage startups to Fortune 100 companies. Crunchbase offers insights into companies, tracks fundraising rounds, and provides analytics on both companies and investors.

However, my initial search of Betterfront on Crunchbase only yielded basic information like the founding date, co-founders' names, business location, and industry tags, lacking deeper insights into funding stages and investors.

Moreover, to identify startups similar to Betterfront, I defined specific search criteria to follow: the startup must have been founded in 2019, maintain a public homepage, offer a free trial or product demo, provide marketplace services for LP and GP, and be at the seed, Series A, or Series B fundraising stage. Additionally, they should have received at least one investment. Despite my efforts on Crunchbase, I could not find suitable matches due to its limited free usage.

Subsequently, I turned to the Italian Association of Private Equity, Venture Capital, and Private Debt (AIFI - www.aifi.it) and explored their venture capital monitor while analysing reports from 2019 to 2023. Unfortunately, the concept of marketplaces is not widespread in Europe, leading to no relevant companies within the AIFI dataset.

In response, I resorted to traditional methods, manually searching Google for companies offering LP-GP marketplace services. LP-GP marketplace services involve a Software as a Service (SaaS) platform designed for showcasing listings and attracting investors or selling fund shares, focusing on facilitating communication and information sharing rather than monetary transactions. Although the list was limited, the results aligned well with my objectives and I meticulously cross-referenced each potential company with Crunchbase's database.

Through this exhaustive process, several startups emerged as notable candidates. Notably, Cepres and Altivia were excluded due to their age, having been founded in 2001 and 2006, respectively. Opting for a more contemporary choice, I

selected Palico, which stood out with substantial funding of $7,300,000 and frequent mentions during my time at Betterfront, serving as a source of inspiration for a number of their product features. Velvet also proved to be an ideal fit, founded in 2019 with a GP-LP marketplace platform and securing funding through a single round by Material V (www.materialv.com), an investor focused on disruptive software and technology-enabled ventures.

Given Palico's robust competitiveness and advanced stage, I sought a third startup for analysis. Although NayaOne (www.nayaone.com) seemed promising, the lack of funding and investor details prompted me to broaden my criteria. This led me to Federato, a Series B Risk Ops Platform founded in 2020, aligning with the financial and investment sector and offering valuable insights for a comprehensive study of the startup landscape.

4.4. Website analysis criteria

The market research reported in the previous section was necessary to find emergent fintech startups that are already operative to analyse each company's webpage to understand the typical approach to fintech startup design and the use of nudging strategies, whether intentional or not.

The website analysis followed the structure recommended by the Business Development Bank of Canada (BDC - www.bdc.ca), a Canadian bank offering flexible financial solutions and expert advisory services to entrepreneurs and those seeking to enhance their marketing presence and market reach. BDC provides a wealth of publicly accessible articles and tools for professionals.

Notably, BDC published an article structured and written according to Dr. David Girolami’s expertise, a Senior Business Advisor at BDC Advisory Services, offering insights from a company's perspective. Dr. Girolami's article divides the analytical segments to align entirely with the customer and user standpoint. The article includes a diagram (Figure 4) explaining the key areas to consider when analysing a website.

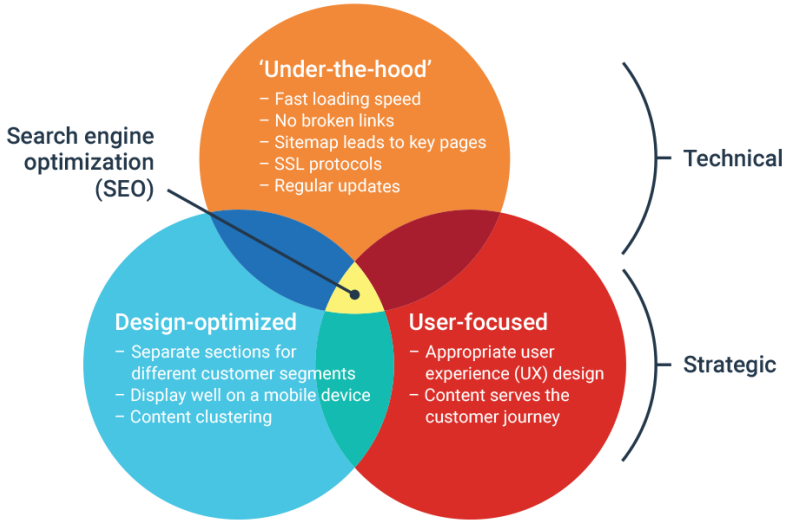


Figure 4: How to conduct a website analysis (BDC website, 2023)[1]

To facilitate a comprehensive website analysis, I utilised the BDC toolkit, providing valuable insights into technical aspects. The toolkit includes an executive summary with key findings, a link analysis to assess website navigation, and an evaluation of 28 essential criteria covering various aspects of website performance, focusing on mobile user accessibility and user experience. The toolkit delves into behind-the-scenes data crucial for site optimisation, enhancing technical functionality and performance. The toolkit's output summarises website information, including social media presence, website structure, and organic search performance. The technical report from the toolkit can be found in the appendix for this case study, as my focus is primarily on strategic analysis.

To analyse the strategic aspects of the website (Figure 4), I relied on my academic knowledge and the toolkit report results. Additionally, I conducted a sentiment analysis of the homepages of the three startups using an online tool provided by MonkeyLearn, a Machine Learning platform for Text Analysis (www.monkeylearn.com).

Sentiment analysis, or opinion mining, involves computer-based assessment and categorisation of sentiment expressed in text, such as determining whether it is positive, negative, or neutral (Medhat et al., 2014). This technique finds applications in various areas, including customer review analysis, social media sentiment monitoring, and brand reputation evaluation. Sentiment analysis employs different

[1] https://www.bdc.ca/en/articles-tools/technology/create-website/how-conduct-website-analysis

techniques, including machine learning models like Support Vector Machines (SVM) and recurrent neural networks (RNNs) (Kiritchenko et al., 2014). These methods generate a sentiment score ranging from 0 to 100, where 100 signifies the most positive sentiment and 0 the least. Positive words receive a +1 score, while negative words receive -1. The final score represents the overall sentiment strength.

In conclusion, the forthcoming sections will analyse the three selected startups: Palico, Velvet, and Federato. This analysis will begin with brief descriptions of their services, followed by an examination of their websites and an exploration of identified cognitive heuristics.

4.5. Palico

4.5.1. Description

Palico provides specialised services tailored to the private equity sector through two dedicated marketplaces. The Primary Marketplace serves Limited Partners (LPs) and General Partners (GPs), facilitating connections between LPs and GP funds aligned with their investment strategies. It offers a diverse array of GP funds spanning global private equity strategies. Simultaneously, GPs can showcase their funds through digital profiles, attracting interest from potential LPs and fostering deeper engagement.

In parallel, the Secondary Marketplace enhances value for sellers by presenting Limited Partner (LP) stakes to a broad online community. This platform optimises returns for those seeking to divest their private equity fund stakes. It ensures seamless and confidential interactions between sellers and prospective buyers, simplifying the intricate secondary sales process within the private equity realm.

Users can discreetly share details about their fund stakes within a secure virtual data room, ensuring anonymity while facilitating efficient interactions between sellers and potential buyers. This secure environment streamlines the secondary sales process in the private equity industry. (source:www.palico.com).

4.5.2. Website Analysis

Palico's website composition reflects a considerable presence in the market, evident through the substantial investment in its User experience (UX)/User interface

(UI) design. The platform has been meticulously crafted to cater to a diverse range of customer segments. Notably, it offers services for both primary (LPs and GPs) and secondary markets, thoughtfully organising these offerings into distinct sections via two separate tabs.

Moreover, Palico's platform design ensures a seamless experience on mobile devices, affirming its mobile-friendly approach as corroborated by the BDC toolkit (Figure 5) and its commitment to accessibility.

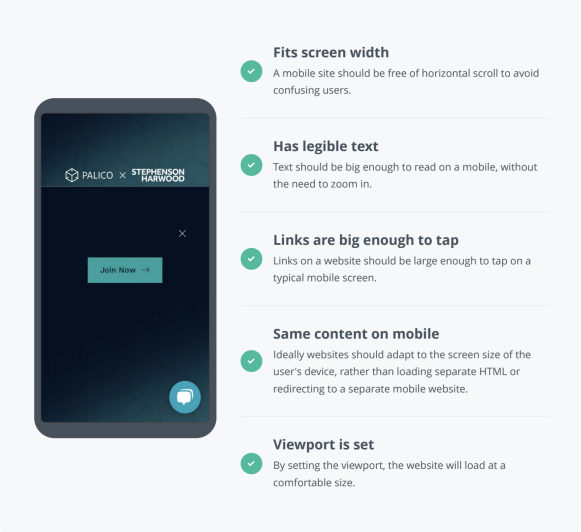


Figure 5: Mobile-friendliness of Palico's website (Source: BDC toolkit result report).

Content clustering is another area that has been thoughtfully addressed. The menu tab effectively displays key information that first-time visitors might seek, including details about their services catering to different customer types, insights into the company's background, contact information, news updates, references, and a demo to provide a firsthand experience of their product's functionality.

The platform's user-focused approach is readily apparent, ensuring convenient accessibility to contact and help resources, thereby fostering seamless user interactions. However, one aspect requires refinement. While the inclusion of a pop-up promoting and encouraging visitors to register for their masterclass is a commendable concept, there is a noticeable drawback. The persistence of this pop-up across tab changes or page reloads could potentially become frustrating for users uninterested in the event. Balancing the promotional intent of this feature with the potential for visitor annoyance warrants careful consideration.

In terms of the customer journey, the content provided holds significant value. The top menu bar remains consistently accessible, and the overall tone is predominantly positive. The inclusion of a 'media centre' tab proves highly advantageous, offering a diverse range of content. This content not only features articles about the company but also provides access to its podcast and blog posts, enabling users to access comprehensive information about both the company and their operational domain.

To conclude, the sentiment analysis of Palico's homepage reveals a score of 79.1%. While a favourable sentiment score is typically considered to be 80% or higher, it is reasonable to conclude that Palico's website generally provides a positive customer experience.

4.5.3. Nudges

As this is a study about nudging strategies, particularly those that may have voluntarily or not been used by startups in their websites, I paid close attention to whether any of the selected companies had used them. In particular, I focused on those that may have been employed to nudge users to initiate contact with the team, such as signing up for a free trial, scheduling an appointment or simply guiding users' attention to an option rather than to another.

Overall, looking at the website, it can be said that the two main strategies used are Social Proof and Isolation/position.

Social proof is a heuristic by which individuals "view a behaviour as correct in a given situation to the degree to which we see others performing it. Whether the question is what to do with an empty popcorn box in a movie theatre, how fast to drive on a certain stretch of highway, or how to eat chicken in a restaurant, the actions of those around us will be important guides in defining the answer" (Cialdini, 1993, pg 95). According to social proof, people often look to the actions and behaviours of others in uncertain or unfamiliar situations to guide their own actions and decisions. It is a cognitive shortcut that stems from the idea that if many other people are doing something, it must be the correct or appropriate thing to do. This concept is rooted in the assumption that if others engage in a particular behaviour, it reduces the perceived risk and uncertainty associated with that behaviour, making it more likely for an individual to adopt the same behaviour. Accordingly, social proof is

most influential when decision-makers are uncertain about the value of a course of action and when they are able to observe the actions of similar others (Rao et al.,2001). Social proof is also known as the Bandwagon effect or herd mentality.

In website design, this usually translates in different forms. Where there might not be product descriptions or prices, there will probably be a list of companies that have used the product, a list of user testimonials, reviews or proud success stories. This is indeed Palico's approach, and they effectively capitalise on the social proof heuristic. In fact, the landing page presents their product prominently and immediately beneath a list of five featured articles from diverse sources, further enhancing their credibility. The featured articles list is always displayed when browsing the product tabs. Moreover, they have dedicated an entire tab named "Media Center," where they share podcasts, educational financial materials, and an archive of press articles mentioning the company.

The second strategy employed by Palico refers to isolation and position. The Isolation Effect, also known as the Von Restorff Effect, is a cognitive phenomenon that refers to the tendency of people to remember and pay more attention to items or information that stand out due to their distinctive or unique characteristics. This effect was named after Hedwig von Restorff, a German psychiatrist and psychologist who first described it in the 1930s (Haut, 2022).

In situations where a list of similar items is presented, if one item is noticeably different from the rest in terms of colour, size, shape, or any other distinguishing feature, it is more likely to be remembered than the other items. This distinctiveness makes the item stand out and captures the individual's attention, making it easier to recall later (Von Restorff, 1993).

In Palico's case, users are frequently presented with two calls-to-action (CTAs), where one blends in with the style, colour, font, and weight of the rest of the text, while the other is presented in a bright colour that clearly draws users' attention to that option.

Regarding positioning, a well-established finding in adult scene viewing literature is the presence of general tendencies in viewing behaviour (Tatler & Vincent, 2009; Tatler & Vincent, 2008). The most notable is the centre bias (Tatler, 2007; Clarke & Tatler, 2014), which refers to the phenomenon where people tend to perceive items located in the central or middle portion of a visual field more

accurately and quickly than items located towards the edges. This bias can impact how people perceive and remember information within a scene or image.

The centre bias is particularly prominent in visual search tasks and scene perception. When people are asked to search for a target item within a complex visual array, they often focus their attention on the central area of the display. This is because human visual system is optimised to gather high-resolution information from the fovea, the central region of the retina. As a result, items in the centre of said visual field are processed with greater detail and efficiency. (Tatler, 2007; Clarke & Tatler, 2014; Van Renswoude, 2019). The term 'centre bias' must be understood in the context of looking at a computer screen. Next to the centre, the position bias also describes the tendency of users to interact with items at the top of a list with a higher probability than with items at a lower position, regardless of the items' actual relevance (Collins, 2018).

For example, Palico used it by placing 'Become a Member' at the very top and the Primary/Secondary Marketplace CTAs in the centre of the screen.

4.6. Velvet

4.6.1. Description

Velvet revolutionises private fund investment by departing from conventional methods. The platform offers a streamlined process, presenting a wide array of funds for users to choose from while automating due diligence and emphasising transparency strongly. Users can effortlessly discover investment opportunities within the Velvet platform, establish connections with fund managers, assess track records, and seamlessly invest, whether for clients or themselves.

The overarching aim of this approach is to simplify and empower all stakeholders involved, ensuring that private funds become accessible and transparent, ushering in a new era of accessibility and clarity in the realm of private fund investments. (source: https://www.velvetfs.com/).

4.6.2. Website Analysis

The platform's design approach uses a selective colour palette to focus on minimalism. However, an abundance of text on the website may overwhelm the user experience, potentially leading to the loss of vital information. To enhance the design,

the platform introduces distinct sections catering to different customer segments. Information is methodically organised based on customer type, with dedicated tabs for institutions, individuals, and Private Funds. For institutions and Private Funds, key actions are streamlined to "Contact Sales" and "Request Access," while individual customers are provided with clear Calls to Action (CTAs) like "Sign Up" and "Contact Sales." Ensuring a seamless experience across devices, the design is optimised to display effectively on mobile devices, a fact confirmed by the BDC toolkit (Figure 6).

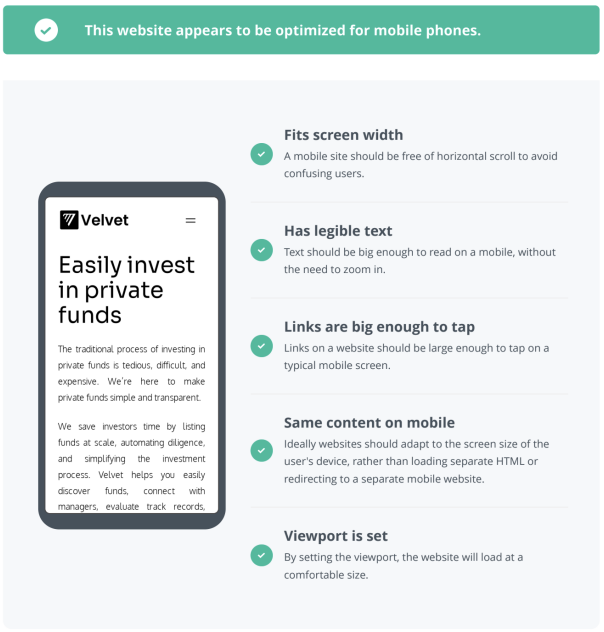


Figure 6: Mobile-friendliness of Velvet's website (Source: BDC toolkit result report).

However, the content clustering on the organisation's website appears somewhat disorganised, leading to visitor confusion. Notably, the information lacks well-defined headings, making navigation less intuitive. This is especially critical considering the website contains a substantial amount of text, totalling 10,526 words distributed across nine pages.

From a UX perspective, some areas could benefit from refinement. While minimalist, the chosen black and white colour palette falls short of the recommended minimum of five colours for optimal UI and information organisation. In the case of Velvet, the header bar tends to blend in with the rest of the website's content, potentially affecting overall clarity. Additionally, no visual cues indicate the user's location within the website. While the content appears to cater to the customer journey, there are instances where this flow is disrupted. For example, in the

institutions' tab, the product description is intermittently interrupted by three sections discussing the hesitance of the private finance world to embrace online platforms and the issues within the private fund realm, followed by reasons why Velvet is the solution to these issues. This interruption, combined with temporary changes in text justification, could potentially confuse or distract users, impacting the coherence of the customer journey.

To conclude, the sentiment analysis of Velvet's homepage reveals a score of 84.7%, slightly higher than Palico’s score and well above the 80% threshold for an overall positive customer experience.

4.6.3. Nudges

To delve further into Velvet’s website design, the following three behavioural concepts have been identified.

The First is the Endowment Effect, which in behavioural finance “describes a circumstance in which an individual places a higher value on an object that they already own than the value they would place on that same object if they did not own it” (Ganti, 2023). This can be detected in the wording choice and content displayed to hint at the founders' pride and passion for their work. In UX, designers can fall prey to the Endowment Effect by overvaluing their own product or service. This particular trait is specifically present in the institutions' section, as the page's content emphasises the challenges within the private funds world and positions Velvet as a potential solution to these issues.

The second concept is Isolation, which is the same concept used by Palico in the previous section. In the case of Velvet, they employ a minimal colour palette on their website. When browsing, each action button is outlined in black except for one option per tab, which is entirely black and highly noticeable. This design choice could also exploit traits of the salience bias, a cognitive bias that predisposes users to focus on items that are more prominent and striking (Taylor & Thompson, 1982).

Analysing the page, furthermore, they use another strategy known as Bait and Switch, which in UX mainly refers to the practice of making the user believe that their action will result in one outcome when, in reality, something entirely different ends up happening (Pfeifer, 2019). In this context, it is not a third nudge but rather a dark pattern and is part of a deceptive design. For example, Velvet’s website exhibits

elements of this pattern when users are directed to the same 'Contact Sales' page after clicking either the 'Contact Sales' or 'Request Access' CTAs. However, it does not necessarily constitute a dark pattern in this case, as it does not mislead or infringe on user freedom. It is more likely a result of design or wording oversight. Similarly, this situation applies to actions like 'Sign Up as Fund' and 'Request Access as an Institution'.

4.7. Federato

4.7.1. Description

Founded in 2020, Federato is on a mission to transform the $1 trillion+ Property & Casualty and Specialty insurance sector. Harnessing cutting-edge deep reinforcement learning and AI technologies, their goal is to empower insurance providers to deliver streamlined and cost-effective coverage to traditionally underserved communities, individuals, and entities. This commitment extends even to navigating intricate societal challenges and risks, including the pressing issues of our time, such as the climate crisis, cyber attacks, and the impact of social inflation (source: www.federato.ai/).

4.7.2. Website Analysis

The platform's design prioritises a practical user experience. While it does not segment content to cater to different customer segments, it maintains a consistent and user-friendly design suitable for a broad audience. Notably, the platform is adept at rendering content seamlessly on mobile devices, ensuring a smooth interaction for users on various screen sizes (Figure 7).

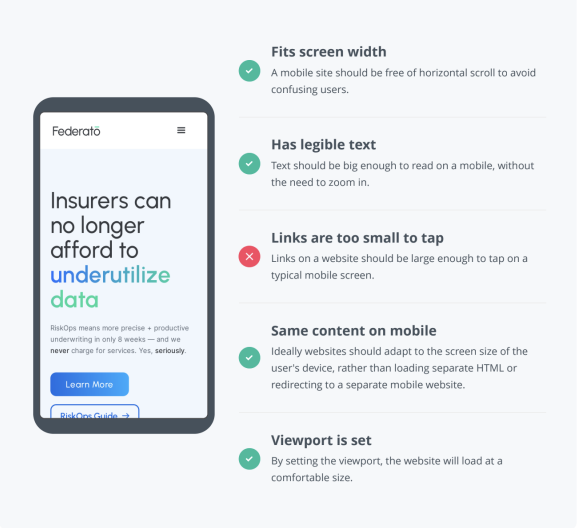


Figure 7: Mobile-friendliness of Federato's website (Source: BDC toolkit result report).

Regarding content organisation, while the platform does not host an extensive volume of content, the existing material is sensibly arranged. This thoughtful approach enables users to access and comprehend the available information without feeling overwhelmed by excessive content. Furthermore, the platform ensures a user-friendly experience with easily readable content and intuitive navigation. However, further optimisation of the customer journey could involve structuring the content on the homepage into distinct sections.

In conclusion, Federato's homepage received a sentiment score of 72.8%, the lowest among the three startups and notably below the 80% positive threshold, suggesting room for improvement in the overall customer browsing experience.

4.7.3. Nudges

Federato, along with Palico, employs the social proof strategy, which refers to the tendency of human beings to follow the actions of others when making decisions, placing weight on these actions to make the correct decision (Cialdini, 1993). On Federato's website, testimonials and quotes are prominently displayed just below the main content, complemented by a 'Learn More' option, thereby leveraging the psychological principle of social influence. Moreover, the landing page highlights recent updates, skillfully incorporating numerical data and quotes from testimonials to solidify credibility and enhance appeal. Adding to its comprehensive approach, the platform dedicates an entire tab to a Forum, effectively harnessing the potential for user-generated content and fostering community engagement.

Furthermore, Federato has employed the colour perception bias for their website. As we understand them, colours consist of waves with varying frequencies on the electromagnetic spectrum. These waves are received by the “cone” cells in the eyes and translated into images by the brain (Lee-Jacobs, 2019). Existing studies have identified that colour combinations satisfy specific rules and can produce subtle biases. When complementary colours - pairs of colours opposite a typical Newton's colour circle (e.g., red-green or blue-yellow), would be perceived as more saturated than they virtually are (Yang et al., 2020). However, there is a systematic tendency of individuals to perceive and interpret colours in a non-neutral manner due to various cognitive and contextual factors. This bias can lead to subjective differences in how people perceive and describe colours, which may deviate from the objective properties of the colours themselves. Centuries of use have altered how colours are perceived and added numerous subconscious associations. Indeed, the interpretation of colour is subjective and heavily influenced by factors such as age, gender, nationality, and personal experiences (Lee-Jacobs, 2019).

The platform adeptly employs a palette that captures attention and intuitively guides users through its content. Notably, the strategic utilisation of blue - associated with qualities such as peacefulness, trustworthiness, and power - alongside green - symbolic of new beginnings, abundance, and happiness - resonates harmoniously with the desired emotional response for an Insurance RiskOps company. These design choices collaboratively contribute to crafting a visually captivating and user-centric atmosphere. Furthermore, the strategic use and placement of these vibrant colours may indeed be aligned with the salience bias, as they are exclusively employed for CTAs such as "Learn More" and "Get a Demo."

4.8. Final Considerations

Considering the previously discussed factors and the comprehensive analysis conducted, the current selection primarily revolves around elements such as the spatial arrangement of page components, purposeful creation of focused isolation, and skilful utilisation of social proof. Given these considerations, biases associated with Positioning/Isolation and Social proof emerge as pivotal. As a result, these two biases will be thoughtfully incorporated as the primary nudges under scrutiny for comparative evaluation in the subsequent experimental phase. This careful selection

is rooted in the acknowledgement of their potential to influence user behaviour and shape decision-making patterns profoundly (Salmon et al., 2015; Das et al., 2014; Vashistha, 2019; Ruffini, 2022; Chandrasekaran et al., 2018), underscoring their significant relevance to the experiment's objectives.

5. Experimental Design

Building on the groundwork laid in previous chapters, this study focuses on evaluating the effectiveness of various nudge strategies when applied to the design of a startup's landing page. The overarching goal is twofold: to significantly narrow the adoption curve gap and enhance users' comprehension of available services. This dual objective is achieved by facilitating access to a free trial period through targeted utilisation of nudge strategies.

In this chapter, I will address the research procedure and detail the setup of the online experiment, which has been crafted to compare the effectiveness of three distinct nudging techniques.

The experimental study reported in this chapter has received the approval from the Ethical Committee of the University of Twente.

5.1. User Testing

5.1.1. User Profile and Recruitment

Online participant recruitment was done through Prolific Academic (http://prolific.ac), one of the most popular and reliable crowdsourcing platforms for behavioural research (see Palan and Schitter 2018). To determine the minimum required sample size, an a priori power analysis was performed using G*Power 3.1 (Faul et al., 2009) to detect at least a small/medium effect size ($w = .20$) at $\alpha = .05$ and $1 - \beta = .90$. This analysis resulted in a total sample size of 317 participants, to be divided into three groups, with approximately 106 participants per experimental condition.

The selection and recruitment criteria for participants followed the target audience of fintech (investments) startups, as identified in a 2021 study by the robo-advisor Personal Capital. These criteria include:

- age between 25-50 (<25 mainly invests in crypto for fun or has no availability to);
- no gender requirement (M/F/D);
- fluent in the English language (>B1);
- education level: high school or above.

5.1.2. Experimental Procedure

The research procedure involved an online experiment that compares the effectiveness of three selected nudging techniques in encouraging users to sign up for a free trial while evaluating the webpage of a fintech startup. The chosen strategies that leverage the Position/Isolation, Social Proof, and Salience biases were called Strategy A, B, and C, respectively and can be summarised as follows:

1) Strategy A uses the Position bias, which describes the tendency of users to interact with items at the top of a list (Collins et al., 2018). The Position bias was paired with the Isolation bias, which proposes that when one item differs from multiple similar objects present, the differing item is more likely to be remembered (Von Restorff, 1933).
2) Strategy B uses the Social proof bias, which is a heuristic expression by which we "view a behaviour as correct in a given situation to the degree to which we see others performing it" (Cialdini, 1993, p. 95).
3) Strategy C is based on the Salience bias which fuels on the phenomenon that "one's attention is differentially directed to a portion of the environment rather than others, and that information will receive disproportionate weighting in subsequent judgement" (Taylor & Thompson, 1982).

These strategies were selected (and presented) in chapters 3 and 4 based on their plausibility and commonality, and they will be implemented in a synthetic environment replicating Betterfront's website (the startup I interned at).

Participants were randomly assigned to one of the three experimental groups, each corresponding to one of the nudges (A, B, or C), and were given 5 minutes to explore the affiliated websites. The primary dependent variable is participants' access to the free trial section, but it is essential to mention that the sign-up for the free trial process in the judgement is intentionally simulated, thus eliminating the necessity for participants to provide any personal information or data when they reach the "sign-up" window. No private emails or identifying details were either requested or stored upon clicking the sign-up button. Instead, participants were provided with a unique code and accompanying instructions guiding them to input the code in the post-questionnaire. This code determined whether a participant would explord that specific area of the website, which was my primary objective: encouraging users to engage with the "free trial" section.

Therefore, participants were fully informed upon reaching the sign-up area and receiving the code. This is particularly true because the essential information was already provided - whether the participant reached the sign-up area - and the main focus was to assess whether participants exposed to a nudge strategy accessed the area more frequently than those exposed to another strategy.

5.1.3. Nudge implementation

Version A's design centred around utilising the Position and Isolation biases. This approach leaned towards conventionality, drawing from the practice observed in all three case studies and other websites, where the placement of CTAs (Call to Actions), information, and actions are strategically positioned to capture user attention and enhance memorability.

In line with this, the "start free trial" CTA was deliberately positioned at the eye level, just below the main text on the page. This placement aimed to capitalise on the Position bias, as it aligns with how users typically navigate and engage with web content. Furthermore, to reinforce the Isolation bias, the action was crafted as a distinct button, rendered in the brightest colour available within Betterfront's palette. Additionally, placing the button on the left adhered to Western reading conventions as we read from left to right, further enhancing its visibility and impact.

Link to prototype: A. Position/Isolation

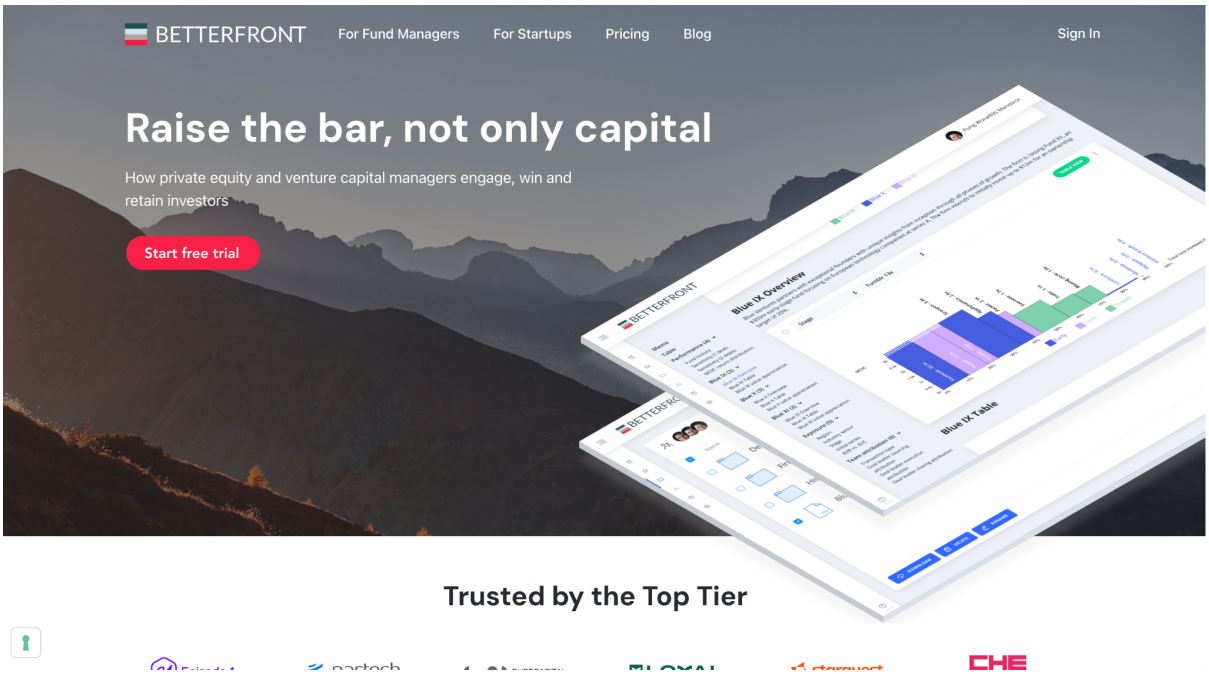


Figure 8: Screenshot of version A prototype using position and isolation bias.

Version B was based on the Social Proof bias, and its implementation was two-fold. On the landing page, a "Learn More" button was strategically positioned just below the "Trusted by the Top Tier" title and above the list of client companies (as depicted in Figure 9). This placement was intended to pique user curiosity about performance and testimonials about the offered product.

Subsequently, if the user clicked the "Learn More" button, a modal window opened, unveiling five client testimonials (which are already part of Betterfront's website content) along with the "Start Free Trial" button (as shown in Figure 10). , The free trial window code was revealed by clicking the "Start Free Trial" button within the modal window.

Link to prototype: B. Social Proof

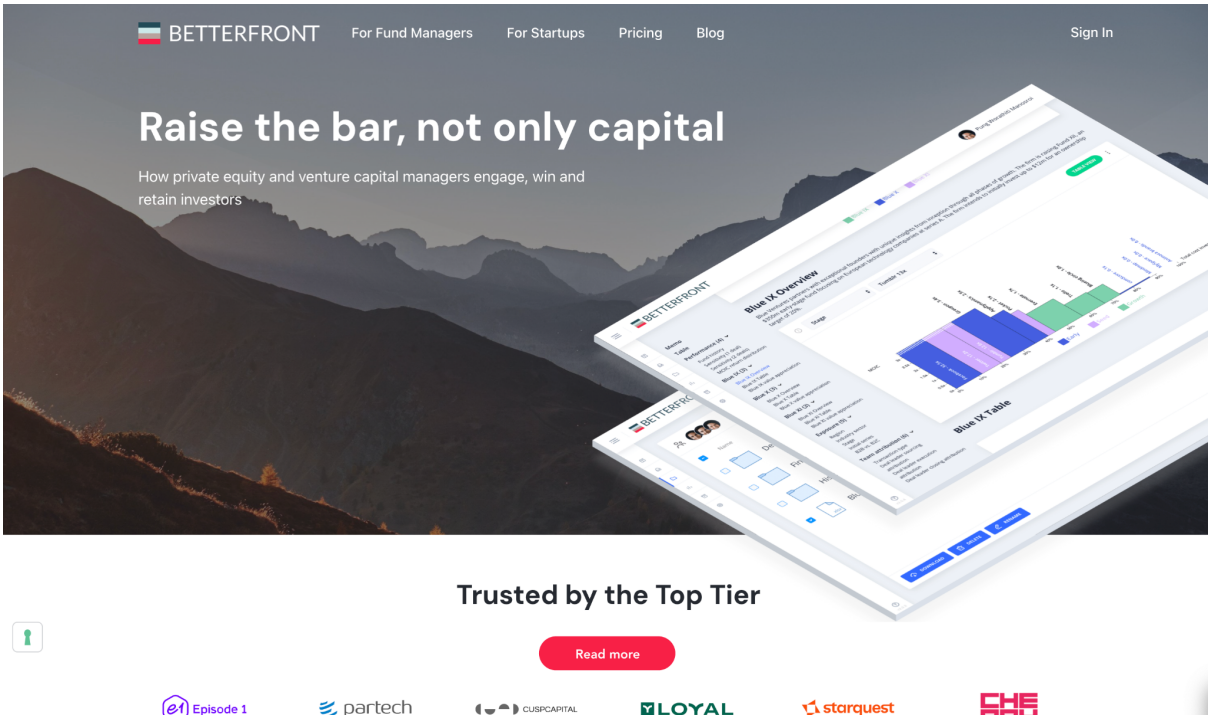


Figure 9: Screenshot of version B prototype using Social Proof bias - Landing page design.

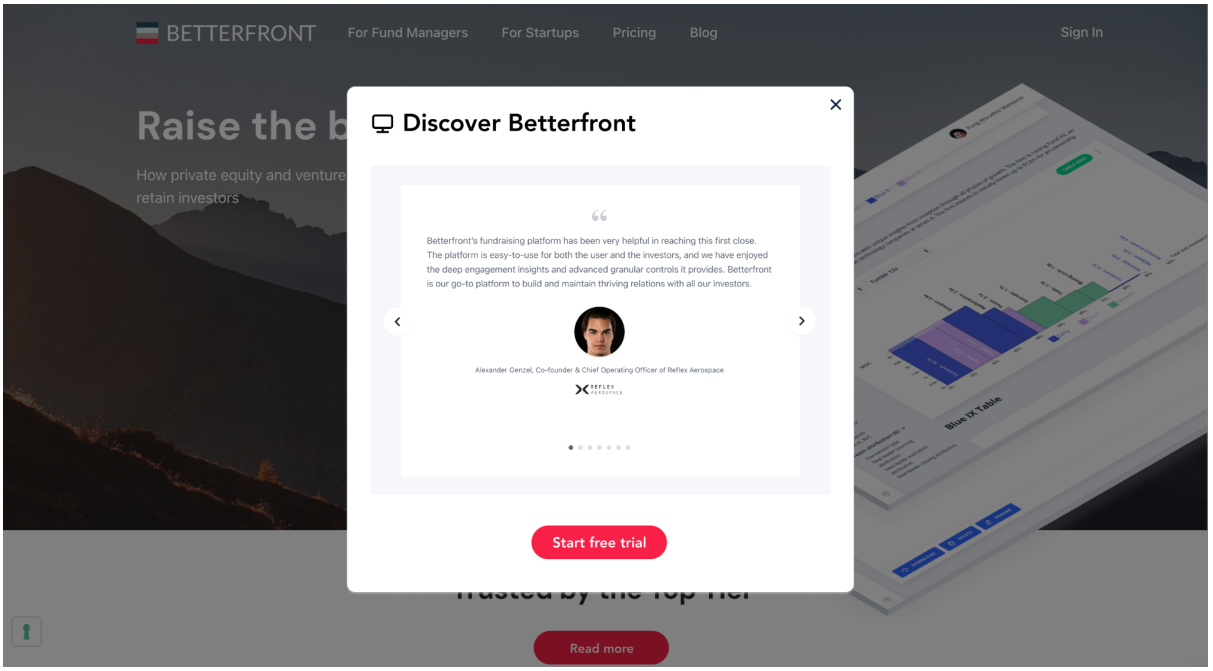


Figure 10: Screenshot of version B prototype using Social Proof bias - modal view with CTA

Version C was rooted in the Salience bias, recognised in the literature as one of the most potent biases, following closely behind the default and incentives biases. This choice was made considering the specific objectives and tasks users were expected to undertake.

The implementation of this strategy was notably more assertive compared to the previous two versions. Upon reaching the landing page, after a brief delay of 2000 ms, a modal window would materialise in the centre of the screen (as shown in Figure 11), presenting the user with two options for proceeding. The first option was to explore the free trial window, presented as a conspicuous, brightly coloured button adorned with an icon. The second option, in contrast, was to explore the website, indicated by a subtle, small, black, underlined text positioned beneath the first choice. Multiple choices are given to preserve user decision freedom clearly.

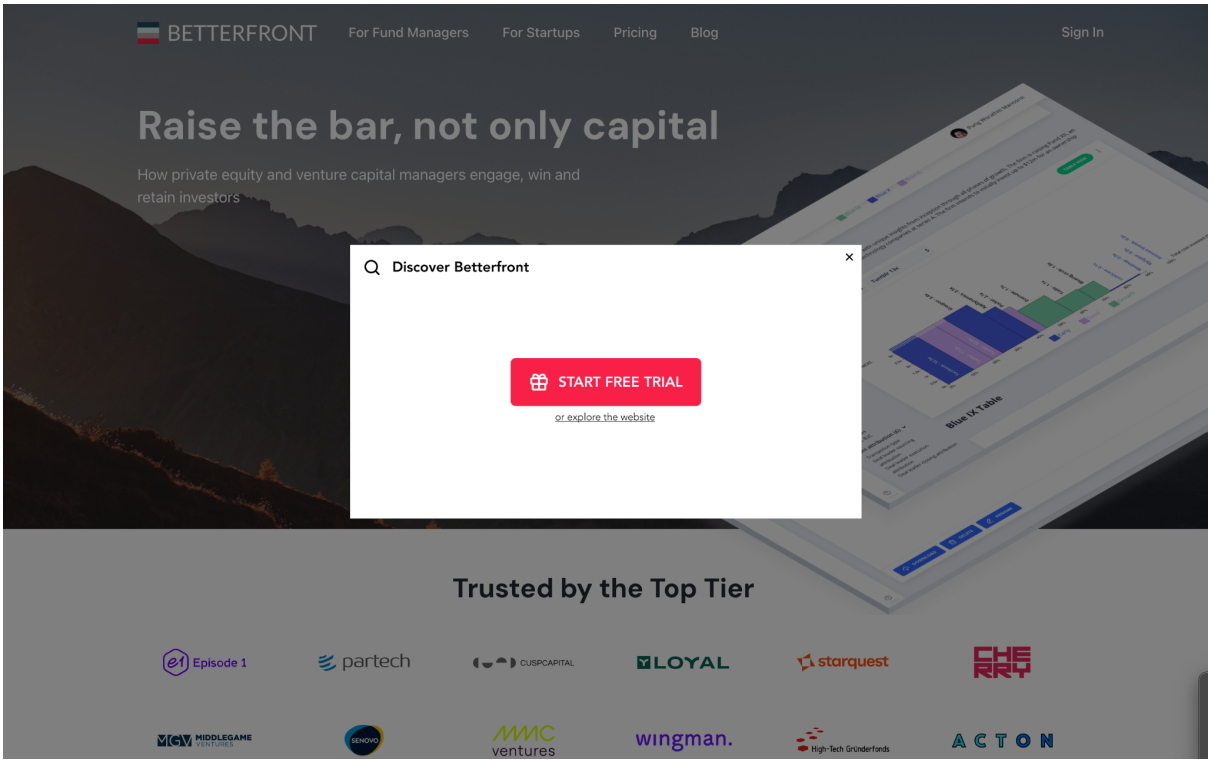


Figure 11: Screenshot of Version C prototype using Salience bias - modal view with CTA

This design decision was deliberate, as it accentuated the salience of the free trial option, aligning with the primary goal of the experiment. Furthermore, it capitalised on the human propensity to remember better the first and last elements they encounter. Therefore, even if users opted to close the modal and explore the website, the former would persist as a reduced-size icon, consistently positioned on the left side of the window (as illustrated in Figure 12). The icon's presence stimulated recall and recognition while ensuring easy accessibility due to its fixed location.

Link to prototype: C. Salience.

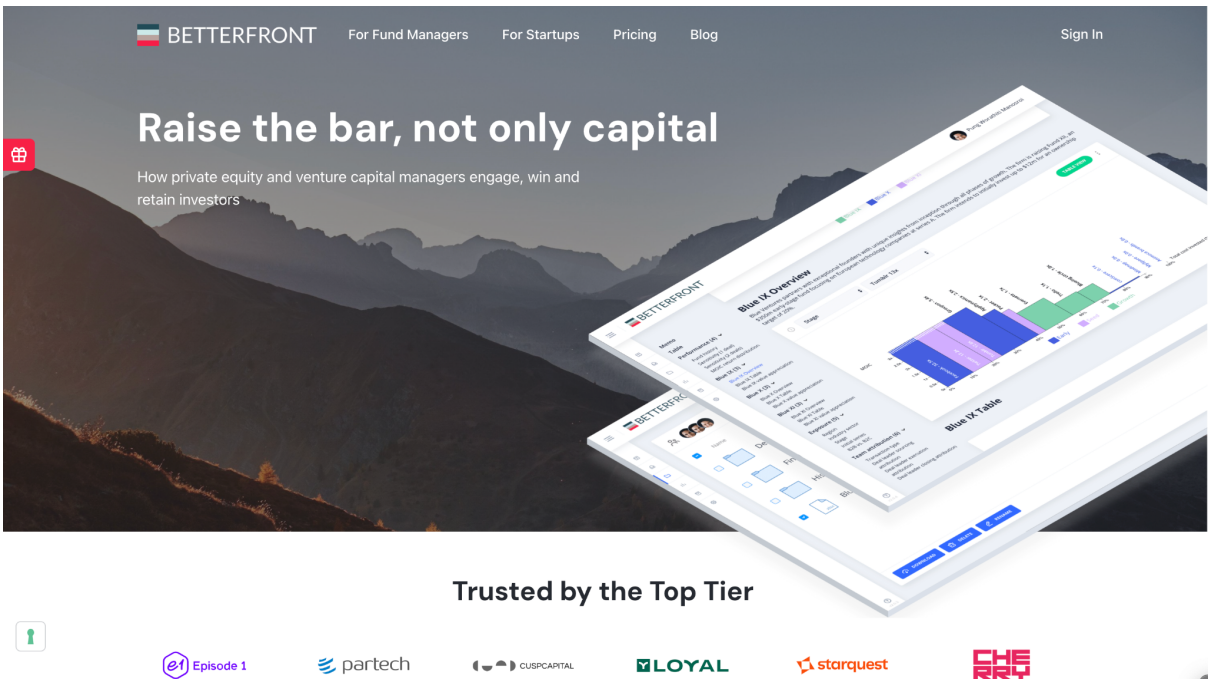


Figure 12: Screenshot of Version C prototype using Salience bias - minimised modal view on the left side of the website.

To systematically recognise and categorise user activity and assess the success of each strategy, a code system was implemented. This system involved the appearance of a modal when users reached the trial window, displaying the corresponding code and the accompanying instructions (as depicted in Figures 13 and 14).

In essence, users had three primary pathways they could follow:

1. They could explore the webpage until the allocated 5 minutes expired.
2. They could reach the trial window through the implemented nudging strategy.
3. They could reach the trial window through alternative means or select the "Contact Us" and “Sign Up options.

Considering the three different versions of the prototype, a total of 12 distinct codes were implemented to account for these various pathways (refer to Table 1).

Version	Time is up	Trial Nudge	Trial	Contact us	Signup
A	TUP01	ISOTR01	OTH01	CONUS01	SIGUP01
B	TUP01	PROTR02	OTH02	CONUS02	SIGUP02
C	TUP03	SALTR03	OTH03	CONUS03	SIGUP03

Table 1. Code system used to monitor user exploration results.

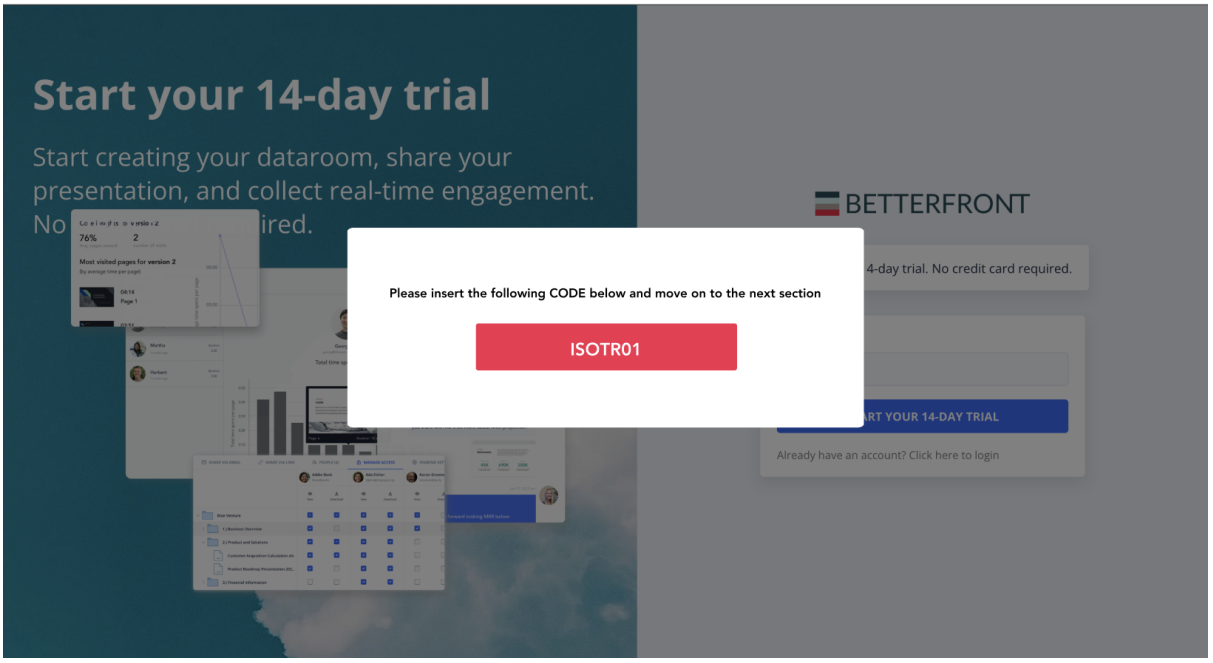


Figure 13: Screenshot of modal shown in version A when the user reached the free trial window through the designed strategy path.

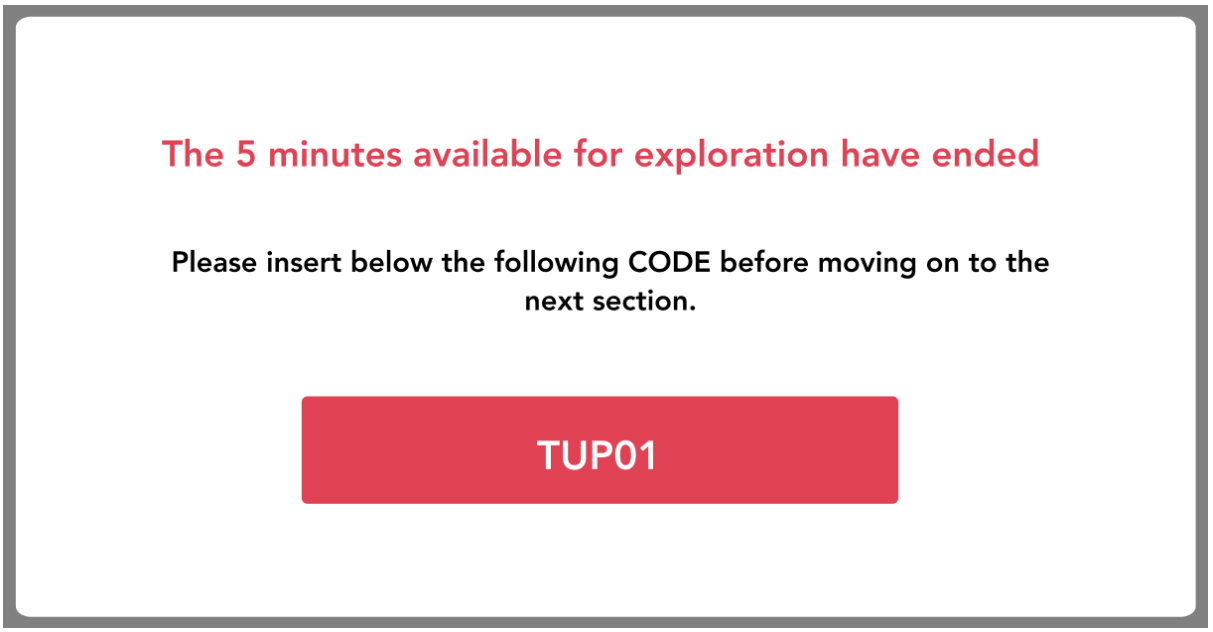


Figure 14: Screenshot of modal shown when the exploration time of 5 minutes elapsed.

5.1.4. Measures

The primary dependent variable in this study pertains to the user's enrollment in a free trial, which represented a binary outcome. No personally identifiable information was collected. Instead, user engagement with the sign-up area was monitored discreetly through a unique numerical code that was presented via a pop-up modal for those participants that accessed the designated website section.

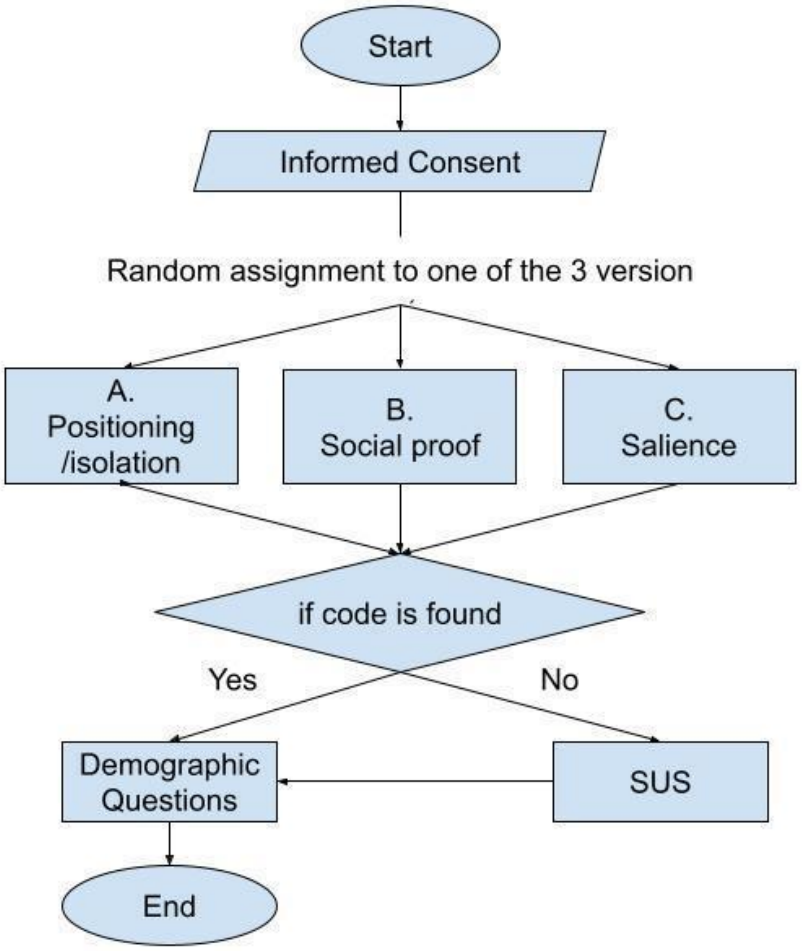
The modal also provided additional instructions, prompting users to input the numerical code in the questionnaire and confirm their successful interaction with the sign-up area.

The second measure used was the post-experiment questionnaire; two data types were collected: usability test performance such as the System Usability Scale (SUS - questions in Appendix D; Brooke, 1996) and demographic information. The SUS questions were included as a buffer for all those participants that would not reach the trial window in order to make up for and validate their 5-minute exploration of the website, but their answers were not considered in the analysis or conclusion of the results. The demographic information included details about the participant's academic career type, occupation, prior interaction with the fintech field, history of monetary investments, and any previous occupation in the fintech field.

5.2. Experiment session

Overall, the test session was organised according to the following timeline:

1. Prolific user accesses experiment on Qualtrics.
2. Consent was given before accessing the experiment.
3. Participants were presented with one of the three versions of the webpage prototype.
4. Participants had 5 minutes to explore said webpage:
    a. If they reached the “start trial” or “contact us” area, participants received a code to continue to the next section.
    b. If no code was found and the 5 minutes were oper, then participants were automatically redirected to the next section.
5. Participants had to fill in a post-experiment questionnaire:
    a. If the participant found the code, they had to answer some demographic questions.
    b. If no code was found, they had to respond SUS questions and then the demographic ones.



Graph 1: Flowchart of experiment.

5.3. Hypotheses

To support this endeavour, an initial directional hypothesis was introduced. Given the implementation of nudging strategies in all three versions, I anticipated that regardless of the type of nudge, more than 50% of participants would navigate to the trial section, rather than waiting for the allocated exploration time to elapse.

Moreover, the implemented nudging strategies were either commonly used by startups or demonstrated positive impacts in the literature. Given the limited specific data regarding their relative efficacy, formulating specific predictions or directional hypotheses was not feasible. The aim here was exactly to explore potential differences among the three. Furthermore, I wanted to understand whether, in the presence of such variations, these outcomes would be influenced by participants' education, work experience, or their prior knowledge of Betterfront's services, particularly in the context of capital investment.

6. Results

6.1. Participants

The online experiment involved 321 individuals (168 females, M_{age}=36, ranging from 25 to 50), all with UK nationality and English as primary language. Age distribution in the sample was well-balanced, encompassing individuals from various age groups. One recruitment criterion was holding at least a high school diploma: within the sample, only 49 participants (15.36%) had prior experience working in a startup, and 13 (4.05%) had worked in the Fintech sector. Overall, only 3 (0.94%) had experience with fintech startups. One individual specialised in SMS greetings and was responsible for software testing in foreign exchange applications. Another participant worked in financial services consulting, focusing on analysing UX journeys for major banks. Lastly, one participant contributed as a UI/UX designer for financial software in a company providing tracking services to automobile manufacturers.

Beyond these experiences, participants brought a wide range of expertise, spanning fields such as childcare, health, theology, accounting, criminology, art, engineering, education, science, and more.

6.2. Results

The responses of 2 participants were invalid and not considered for analysis, resulting in 319 valid responses. Among these, 56 users encountered issues with the “trial code” task and completed their exploration before the allotted time expired. These users improvised by inserting their reflections and other placeholder text due to the absence of the necessary code and instructions, leading to confusing feedback about their progress in the trial (the distribution of such participants is reported in Table 2, column “Other comments”).

Table 2 provides a breakdown of participants who reached the trial window based on the prototype version they were randomly presented with. Versions A and C have very similar percentages per outcome. Respectively, 29.5% and 32.4 % of the participants did not reach the trial window but explored the respective website version up to the allocated time expired (see column “No trial”). In terms of trial window, participants had two possible paths: the first consisted of the nudge-based design that was taken by 34.4 % of users for version A and 44.4% for version C. Alternatively, 17.1% and 12.1% of participants reached the trial window through

alternative paths, for example, through the ”Contact us” option (see column “other design”).

Version B had somewhat different proportions compared to the other two strategies: about 47.2% of participants waited for the time to be up, 7.6% reached the trial window through the nudge-designed path and 22.6% through alternative paths.

Version	No trial	Free Trial		Other comments	Total
		Through nudge	Other design		
A	31 (29.5%)	36 (34.3%)	18 (17.1%)	20 (19.1%)	**105 (100%)**
B	50 (47.2%)	8 (7.6%)	24 (22.6%)	24 (22.6%)	**106 (100%)**
C	35 (32.4%)	48 (44.4%)	13 (12.1%)	12 (11.1%)	**108 (100%)**

Table 2: Number of participants (and percentages) per possible outcome per condition. The first possible outcome was to explore until the time is up and thus reach “no trial", the second to reach the free trial window through the designed nudge strategy and the third to reach the trial through other designs such as the “contact us” CTA. Lastly, an alternative outcome was to leave other comments where a code was required, a consequence of potential misunderstanding.

After removing these 56 participants, the sample size was reduced to 263 users, distributed across the three proposed design versions: 85 for version A, 82 for version B, and 96 for version C.

Upon examining the observed data, it became evident that the number of participants who reached the trial window exceeded those who did not (p<.001, according to a binomial test), thus supporting the initial hypothesis that more than 50% of participants would reach the trial window (see Table 2). However, a closer look reveals that this hypothesis holds true for versions A and C but not for version B.

As regards the success rates of different design strategies, version A (based on Isolation and Position bias) and version C (based on the Salience bias) achieved the highest success rates, with 34.3% and 44.4% of participants who reached the free trial through the nudge, respectively. In contrast, strategy B (Social Proof) demonstrated a consistently lower success rate of 7.6% (Table 2). The difference among the three versions was found to be statistically significant ($\chi^2(2, N = 319) = 37.2$, p<.001), and post-hoc comparisons (Bonferroni adjusted) confirmed that versions A and C did not differ significantly ($\chi^2(2, N = 214) = 2.47$, p=.116), while

both differed significantly from version B ($\chi^2(2, N = 211) = 22.18$, $p<.001$, and $\chi^2(2, N = 213) = 37.26$, $p<.001$, respectively).

In order to investigate the second exploratory hypothesis, I examined whether participants' education levels influenced the significant differences mentioned earlier. Table 3 provides an overview of the distribution of participants across prototype versions, categorised by their educational background. Among the participants, 26 held high school degrees, 33 had undergraduate degrees, 136 had graduate degrees, and approximately 68 held doctorate degrees.

Within the high school degree group, 54% successfully reached the trial window through the respective nudges, with version A being the most successful at 38.8%. In the undergraduate subgroup, 37.4% succeeded, with version C leading the way at 24.2%. The graduate sample was the largest of the four groups, but only 26.4% of participants reached the trial through the nudge design pathway. Lastly, in the doctorate subgroup, 42.7% successfully passed, with percentages similar to the undergraduate group, and the Salience-based strategy leading at 26.5%.

Version	High school (*n* = 26)			Undergraduate (*n* = 33)			Graduate (*n* = 136)			Doctorate (*n* = 68)		
	Trial		No trial	Trial		No trial	Trial		No trial	Trial		No Trial
	Nudge	Other		Nudge	Other		Nudge	Other		Nudge	Other	
A	8 (30.8%)	2 (7.7%)	3 (11.5%)	6 (10.2%)	/	5 (15.15 %)	14 (10.3 %)	12 (8.8%)	14 (10.3 %)	8 (11.8%)	4 (5.9%)	9 (13.2%)
B	2 (7.7%)	2 (7.7%)	5 (19.2%)	1 (3%)	3 (9.1%)	5 (15.15 %)	2 (1.4%)	14 (10.3 %)	27 (19.9 %)	3 (4.4%)	5 (7.4%)	13 (19.1%)
C	2 (7.7%)	1 (3.9%)	1 (3.9%)	8 (24.2%)	2 (6.1%)	3 (9.1%)	20 (14.7 %)	8 (5.9%)	25 (18.4 %)	18 (26.5%)	2 (2.9%)	6 (8.8%)

Table 3: Number of participants (and percentages) by their education level and the respective experiment outcomes. Every participant had to indicate their highest level of education among four options: high school diploma, undergraduate degree, graduate degree and doctorate degree. Per category the number of participants that reached the trial window through any designed paths or not.

Another potential influencing factor is the participants' expertise in the fintech industry and startup development: table 4 provides a structured breakdown of participants who had prior experience working in fintech startups and in startups in general, categorising them based on whether they reached the free trial or not, as well as by prototype version.

Among the total of 263 participants, only 41 had prior experience working in a startup, with just 2 of them having worked in fintech startups. Interestingly, neither of these two participants reached the trial window through the nudge pathway. Among the 41 participants with startup experience, approximately 41.4% successfully reached the trial window through the designed nudge strategy path, with version C showing the highest percentage at 26.8%.

Out of the 8 participants who had worked specifically in fintech, only one of them reached the trial window through the nudge pathway. More precisely, this individual achieved this through strategy A, which is based on the Position/Isolation bias.

Version	Worked in startup (*n* = 41)			Worked in fintech (*n* = 8)			Fintech and Startup (*n* = 2)		
	Trial		No trial	Trial		No trial	Trial		No trial
	Nudge	Other		Nudge	Other		Nudge	Other	
A	5 (12.2%)	3 (7.3%)	5 (12.2%)	1 (12.5%)	3 (37.5%)	/	/	1 (50%)	/
B	1 (2.4%)	3 (7.3%)	7 (17.1%)	/	/	3 (37.5%)	/	/	1 (50%)
C	11 (26.8%)	2 (4.9%)	4 (9.8%)	/	1 (2.5%)	/	/	/	/

Table 4: Number of participants (and percentages) who have worked in startups and/or in fintech and the respective experiment outcomes

Given the focus on capital investment by Betterfront, I also inquired about participants' knowledge and experience in this area (Tables 5 and 6).

Table 5 categorises participants based on their capital investment knowledge and experience in investing personal or foreign capital. Two individuals had to be removed from this category as they provided an invalid response, thus resulting in a total sample of 261 participants.

Despite about 65% of the participants claiming a lack of knowledge in this domain, 10.7% of them had indeed invested some amount of capital. Likewise, among users who indicated knowledge of capital investment, almost 74% have invested some amount of capital.

Version	No investing knowledge (*n* = 169)		Yes investing knowledge (*n* = 92)		Total
Invested	**Yes (*n* = 18)**	**No (*n* = 151)**	**Yes (*n* = 68)**	**No (*n* = 24)**	
A	3 (1.8%)	52 (30.8%)	22 (23,9%)	7 (7.6%)	**85 (32.4%)**
B	9 (5.3%)	42 (24.9%)	19 (20.7%)	12 (13%)	**82 (31.3%)**
C	6 (3.6%)	57 (33.7%)	27 (29.4%)	5 (5.4%)	**95 (36.3%)**

Table 5: Distribution of investing options according to capital investment knowledge. 261 participants were asked if they had any investing knowledge and if they have ever invested any amount of capital.

Table 6, in particular, provides insight into the impact of participants' knowledge of capital investment on the success of specific design strategies.

Nearly two-thirds of the sample lacked knowledge of capital investment. Out of these 169 participants, 53.2% successfully reached the trial window, a proportion comparable to the success rate of participants with capital investment knowledge, which stood at 59.8%.

Specifically, in the first condition, 34.3% reached the trial window through the nudge pathway. Notable differences exist between versions A and C, with higher success percentages than version B's.

Similarly, among the 35% of participants who declared having knowledge of investing, 37% of them reached the free trial through the nudge design. This was distributed with 15.2% and 17.4% in versions A and C, and only 4.4% in version B.

Version	No investing knowledge (*n* = 169)			Yes investing knowledge (*n* = 92)		
	Trial (*n* = 90)		No trial (*n* = 79)	Trial (*n* = 55)		No trial (*n* = 37)
	Nudge	**Other**		**Nudge**	**Other**	
A	22 (13%)	11 (6.5%)	23 (13.6%)	14 (15.2%)	7 (7.6%)	8 (8.7%)
B	4 (2.4%)	16 (9.5%)	31 (18.3%)	4 (4.4%)	8 (8.7%)	19 (20.7%)
C	32 (18.9%)	5 (3%)	25 (14.8%)	16 (17.4%)	6 (6.5%)	10 (10.9%)

Table 6: Success rate (and percentages) per condition according to capital investment knowledge.

Thus, to further explore potential disparities in the effectiveness of the three implemented nudging strategies, additional analyses were conducted. Specifically, separate logistic analyses were undertaken to assess whether the following three factors impacted the efficacy of the three distinct nudging strategies: 1) participants' educational background, 2) expertise in the fintech industry and startup development, and 3) knowledge and experience in capital investment. The findings indicate that none of these factors significantly influenced the likelihood of reaching the free trial through the nudge (all *ps* > .05), nor did they interact with the type of nudge employed (all *ps* > .05). These results suggest that the superior effectiveness of strategies A and C, as compared to B, remains consistent across participants with varying levels of education, experiences, and competencies.

6.3. Discussion

As confirmed by the analyses performed in the previous section, versions A and C do not exhibit significant differences between them, but they both significantly differ from version B. This may be because strategy B (Social Proof) involved more steps, which may explain its lower adoption rate, with only eight participants following through, while 24 opted for alternative approaches. Conversely, Strategy A's (Isolation/Positioning) design was more straightforward and aligned with conventional methods. Similarly, Strategy C (Salience) had a rather intrusive design, capitalising on the Salience bias discussed extensively in the literature. This aligns with a body of research exploring various interventions designed to counteract the Salience bias. Therefore, the inclusion of the Salience bias as a fundamental element of a nudge strategy can only amplify the power and efficacy of that strategy.

Overall, this initial data analysis suggests that the first and third design strategies are equally effective.

These findings offer valuable insights into the most effective of the three proposed nudging strategies for fintech startup website design: this study also considers potential influencing factors and the conclusions remain consistent irrespective of users' educational backgrounds, degree fields, work experiences, contextual knowledge, or their affinity with the startup's service.

6.3.1. Limitations

This study presents two main limitations that should be acknowledged. One notable limitation is the exclusion of 58 responses from the sample due to issues related to response and technical corruption. These responses had to be removed to maintain data integrity, but their exclusion inevitably resulted in a reduction in the overall sample size. This reduction can potentially impact the generalisability of the study's findings to a broader population.

Additionally, it is worth delving deeper into the design of version B, which was grounded in a strategy based on the social proof bias. Unlike the other two versions, version B involved an additional step in the user journey. This particular design choice may have played a significant role in the notable disparity observed in the number of participants who successfully reached the trial window and entered the code compared to the other two presented versions. The added complexity of version B could have potentially deterred some users, leading to fewer successful conversions. Furthermore, it raises questions about the user experience and whether this extra step was perceived as a hurdle or an enhancement by participants. Exploring user feedback and perceptions regarding the additional step in version B could provide deeper insights into the observed differences among the three versions.

6.3.2. Future work

There are several potential avenues that could enhance this study; firstly, addressing the issue of the code and instruction modal within the prototype window on Qualtrics, which participants voiced to have struggled with, is essential. This adjustment is necessary to prevent users from feeling uncertain about what to do, thereby reducing the likelihood of them leaving random comments to proceed to the next section. By addressing this concern, a more robust set of answers can be ensured and a more accurate overview and analysis of the results can be achieved.

Secondly, expanding the scope of the study by testing with a more diverse and extensive sample would provide valuable insights. This broader sample would help determine whether the observed lack of differences between the Salience-based and Positioning-based strategies persist across a wider range of participants or are context-dependent. Additionally, opening up participant

recruitment to different geographic locations or countries could shed light on whether geographic factors and lifestyles influence the results.

Thirdly, exploring the applicability of the nudging strategies A and C on other landing pages, and offering different fintech services from Betterfront, could yield valuable insights into the strategy's versatility and effectiveness in various contexts.

These potential future directions have the potential to enrich our understanding of nudging strategies, their impact, and their efficacy in different settings, thereby opening up new avenues for alternative research and application interests.

7. Conclusion

The inception of this experimental thesis was ignited during my internship as a UX/UI designer at Betterfront, a fintech startup specialising in capital investment platforms. This immersive experience granted me an in-depth understanding of the intricate challenges inherent in introducing and promoting a new product within the dynamic and expansive fintech landscape. Navigating these challenges prompted me to contemplate the untapped potential of nudging strategies.

This initial consideration gained momentum through both valuable customer feedback and a thorough examination of Betterfront's website. Surprisingly, I discovered a noticeable absence of prior direct implementations or studies on the application of nudging strategies in this context, particularly within the domain of startup website design. This realisation became the catalyst for the initiation of this thesis, with the overarching goal of introducing a novel perspective to address the unique challenges faced by startups, primarily from a design standpoint.

Consequently, this thesis embarks on a dual mission: the first objective revolved around conducting a comprehensive analysis of the strategies employed by emerging fintech startups. By employing the PRISMA method, this analysis delved into existing literature while also scrutinising real-world fintech startups through market research and website evaluations. The incorporation of case studies within the thesis served a dual purpose: rectifying the apparent underutilisation of nudging techniques in fintech startup website design and aligning with the prevalent usability practices commonly employed by startup web developers and designers, whether intentionally or inadvertently.

The second objective involved the formulation and execution of an experimental study which was carefully designed to evaluate the effectiveness of three distinct nudging techniques, that were selected based on their relevance and applicability to fintech landing pages, as discussed in chapters 3 and 4. Subsequently, these chosen nudging strategies were implemented and tested within the dynamic context of a startup's webpage.

Notably, while the initial concept was rooted in a profit-oriented organisational perspective, it is essential to emphasise that the entire experimental procedure was meticulously crafted with an unwavering commitment to user-centred practices.

Despite the relatively modest scale of the results, this project has yielded satisfactory outcomes. It effectively demonstrates that the deliberate application of nudging design strategies can yield tangible results, promoting user exploration and facilitating well-informed decision-making when navigating a company's potentially novel services.

Finally, the results of this study underscore the innovative and powerful synergy that emerges at the intersection of decision-making and startup development. It highlights the significant potential that collaborative efforts between nudging strategies and user-centred design hold. Additionally, it reveals that users' backgrounds do not significantly influence the effectiveness of these designs, suggesting the potential for broader-scale applications in diverse contexts.

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Appendix

A. Informed consent

STUDY ON WEBPAGE DESIGN

Project responsible: Dr. Stefania Pighin.
Experimenter: Costanza Siani

EXPERIMENTAL PROCEDURE
You will be presented with the webpage of a potential company who offers technological services for financial investments. During the experiment you will be asked to browse and analyze such landing page and then fill in a short questionnaire about your subjective evaluation of the webpage design.

TIME REQUIRED
About 8 minutes.

DATA PROCESSING
The data collected will be strictly confidential; the data will be stored and processed anonymously.

WILLINGNESS TO PARTICIPATE AND RIGHT TO WITHDRAW FROM THE STUDY
It is your right to stop and withdraw from the experiment at any moment and without providing any reason for your withdrawal. In such case, you will not receive any payment.

○ By clicking here, I declare to have examined the information provided about the study and I agree to participate in the proposed study by my own free choice.

B. Instructions

Q_Instructions

By clicking the "Next" button, you will be directed to the webpage of a potential company that offers technological services for financial investments.

You will have **5 minutes** to explore the webpage. Feel free to navigate through the sections that interest you.

At the end of the 5 minutes, you will be automatically redirected to the survey.

Important: No personal information will be requested during your exploration of the webpage.

Feel free to either close or select 'Do Not Allow' when the cookies option appears.

C. Demographic questions

1. Education level
    a. Up to high school diploma
    b. Undergraduate Degree
    c. Graduate Degree
    d. Doctorate Degree
2. Minor/Major (if applicable)
3. Graduate-Degree field (if applicable)
4. Have you ever attended a course in Economy and Finance?
    a. Yes
    b. No
5. If yes, at what level?

   a. High school
   b. Bachelor
   c. Master
   d. PHD
6. Have you ever worked in a startup?
   a. Yes
   b. No
7. If yes, briefly describe the company's services
8. Have you ever worked in FINTECH?
   a. Yes
   b. No
9. If yes, briefly describe your responsibilities
10. Do you have any knowledge about capital investment?
11. Have you ever invested capital?
   a. Yes, for myself
   b. Yer, for others
   c. No

D. SUS

Please, indicate your level of agreement with the following statements.

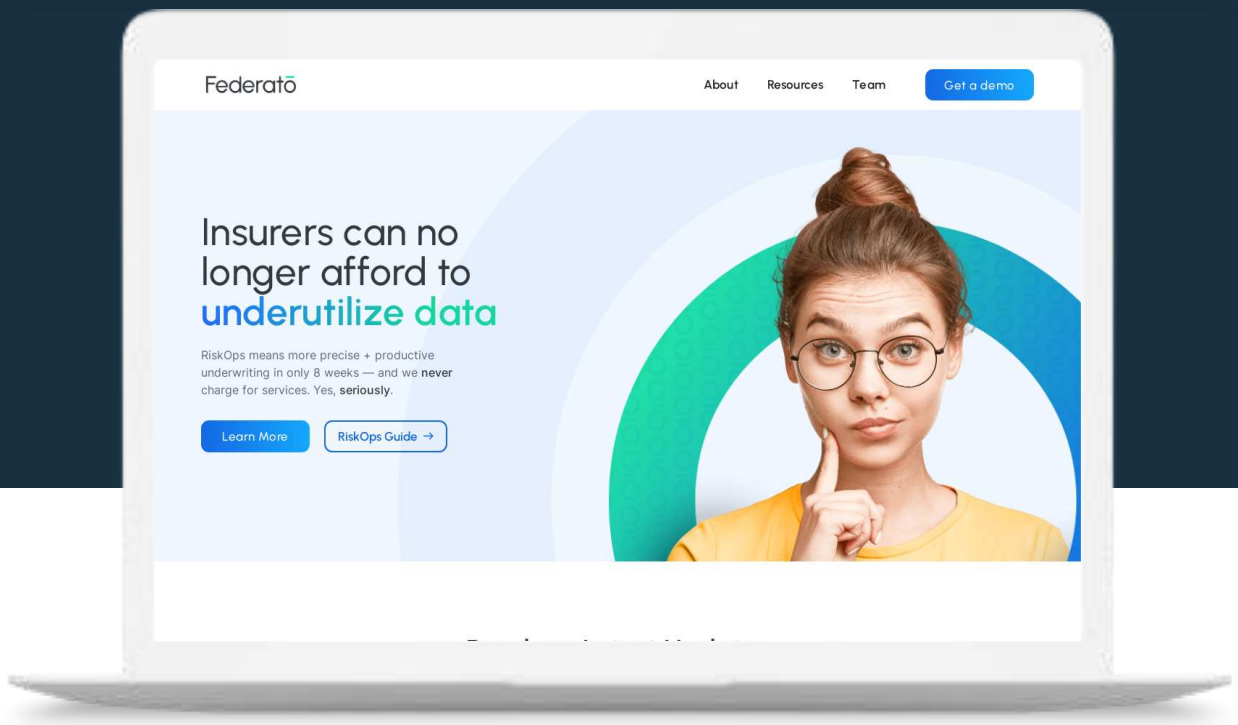
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1. I think that I would like to use this website frequently.	○	○	○	○	○
2. I found this website unnecessarily complex.	○	○	○	○	○
3. I thought the website was easy to use.	○	○	○	○	○
4. I think that I would need the support of a technical person to be able to use this website.	○	○	○	○	○
5. I found the various functions in this website were well integrated.	○	○	○	○	○
6. I thought there was too much inconsistency in this website.	○	○	○	○	○
7. I would imagine that most people would learn to use this website very quickly.	○	○	○	○	○
8. I found the website very cumbersome (inconvenient) to use.	○	○	○	○	○
9. I felt very confident using the website.	○	○	○	○	○
10. I needed to learn a lot of things before I could get going with this website.	○	○	○	○	○

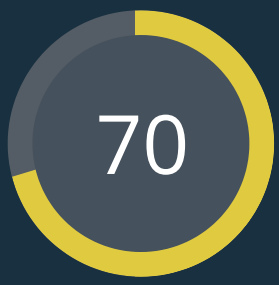
E. BDC Toolkit Reports

Report for

www.federato.ai

Generated on August 8, 2023



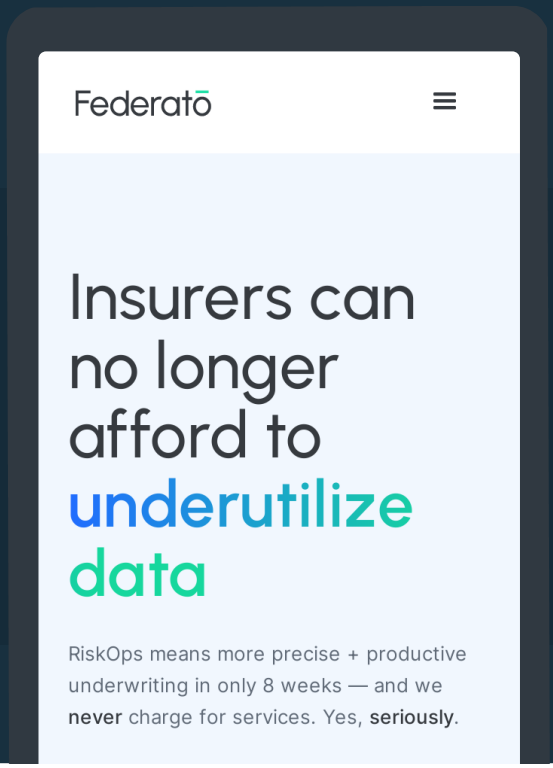


Your overall digital marketing score

This is a weighted average of all the factors in this report.

www.federato.ai

www.federato.ai



Some image links on this organization's website do not have a text equivalent.

Is everyone welcome?

Alternative text provides a description of each image on a website. This is used by visually impaired website visitors and search engines.

This website contains images that are used as links, with no alternative text provided.

- Images used as links must contain a text alternative as a fallback.
- If the image fails to load, visitors may not be able to see or click on the link.
- Visitors using assistive technology like a screen reader may not be able to visit the link at all.

The organization's website appears to have a high bounce rate.

65%

Estimated bounce rate for this website

Keep your visitors engaged

The bounce rate represents the percentage of visitors who view only a single page within the site before leaving. A low bounce rate shows that the content on the site is engaging to the users.

What can I do to improve it?

Improve your website's bounce rate.

- A website with a low bounce rate keeps visitors engaged for longer.
- A website with a high bounce rate may not have engaging content, or may be optimized for the wrong search terms.
- A website with a high bounce rate may not have a clear call to action for the users.

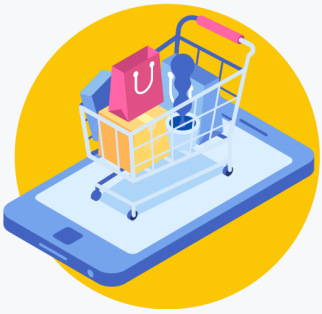
Source: SimilarWeb

Bounce rate is estimated based upon a sample of visitors and their behavior. Private data collected by the website owner using a service like Google Analytics may be more accurate.

We were not able to detect a recognized ecommerce solution on this organization's website.

Sell online

With an ecommerce website you can sell your products online and reach a wider audience.



What can I do to improve it?

If appropriate, consider getting an ecommerce enabled website.

- Selling online can increase sales while reducing your cost base.
- Online storeping is growing and currently accounts for 18% of consumer spending in the UK.
- 37% of people aged 30-39 store online at least once per week.

We were unable to find a Facebook page for this organization. Either they do not have an account or the link from the website to the page is missing.

Engage with your customers

Facebook pages are a popular way of engaging with customers and prospects online. Businesses can advertize, run promotions and interact with their customers via Facebook.

This organization's website may not contain a link to the Facebook page.

- We we unable to find a link to the Facebook profile on the website
- Visitors to the website will be unable to find the Facebook page.

What can I do to improve it?

Consider using a Facebook page to interact with your customers.

- Facebook is the world's most popular mobile app and 2nd most popular website.
- Over 1.45 billion people use Facebook every day.

Source: Facebook

We looked at this organization's website and did not find a link to a valid Facebook page.

There was no Google Business Profile listing found for this business

Be visible to your audience

A Google Business Profile page appears on the right hand side when potential customers are searching for your business.

What can I do to improve it?

Ensure your business is listed on Google Business Profile.

- Having a Google Business Profile listing is very important for helping potential customers find your website.
- Not having a listing will harm the amount of traffic your website receives, and potentially give an advantage to your competitors.

Source: Google Business Profile

We couldn't find this organization's Instagram account. There may be one, but if we can't find it, it's likely real customers can't either.

Show what you do in a creative way

Instagram accounts are a popular way of engaging with customers online. Businesses can advertise, run promotions and interact with their customers via Instagram.

What can I do to improve it?

Consider using an Instagram account to interact with your customers.

- Instagram can be used to promote your organization and bring more traffic to your website.
- Instagram delivers an engagement rate of 4.2% per follower, which is 58 times more engagement than Facebook.
- Instagram is especially useful for businesses that sell to consumers (B2C).

We looked at the website for this organization and did not find a valid link to a Instagram account. If the organization has a Instagram account but it is not linked to from their website we may not be able to detect it..

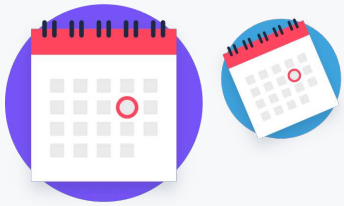
This website does not appear to have been updated recently.

96

Days since last update

Keep it fresh

Regularly updated content is critical for user engagement and search engine ranking.



Recent updates

Date	Type	URL
7/31/23	Page content	/blog
7/21/23	Page content	/blog
6/27/23	Page content	/blog

What can I do to improve it?

Keep this website up-to-date.

- Stale websites may appear lower in Google search results.
- Out of date content can discourage visitors from trusting your website.

We use a wide range of methods to determine the likely last-updated date of this website, including technical indicators and machine-readable dates within the text we have analyzed on the website. This gives us a best approximate for when a website was updated, but we cannot know for certain. Some websites cannot be dated at all.

This website appears to be receiving very little organic traffic from search engines.

Less than 50 / month

Estimated visitors from search

Under 10 search terms

Estimated number this website is listed for

Get traffic from search engines

Make sure you're being found in search engines for the right terms.

What you're found for today

Keyword	Position	Searches / mo	Traffic (%)	CPC	Page	Last seen
federato	1	70	100.00	$0.00	Home page	2023-07-21
groundspeed	73	30	0.00	$0.00	/articles/speed-precision-groundspeed-federato-accelerate-submission-to-bind	2023-07-22
alex jabbour	27	30	0.00	$0.00	/team	2023-07-16
skysolver	90	40	0.00	$0.00	/articles/the-perils-of-legacy-it-southwest-airlines-fiasco-a-wakeup-call-for-insurers	2023-08-01
steve mcormond	52	110	0.00	$0.00	/blog	2023-07-19

Best keyword opportunities

Keyword	Position	Searches / mo	CPC	Page	Last seen
skysolver	90	40	$0.00	/articles/the-perils-of-legacy-it-south west-airlines-fiasco-a-wakeup-call-for -insurers	2023-08-01
groundspeed	73	30	$0.00	/articles/speed-precision-groundspeed-federato-accelerate-submission-to-bind	2023-07-22
steve mcormond	52	110	$0.00	/blog	2023-07-19
alex jabbour	27	30	$0.00	/team	2023-07-16
federato	1	70	$0.00	Home page	2023-07-21

These are high traffic search terms that the business has a low ranking for. Consider optimizing for relevant terms.

What can I do to improve it?

Consider search engine optimization (SEO).

- SEO can bring you significantly more organic traffic.
- Generally SEO requires that you build up your content, links and the quality of your website.
- SEO takes time, but once the initial investment is made you can get more visitors for free.

Source: SEMrush

Analysis covers CA traffic only. Traffic is estimated by a 3rd party source using a sample of search engine results. Subdomains and websites with very low volumes of traffic are less likely to be detected.

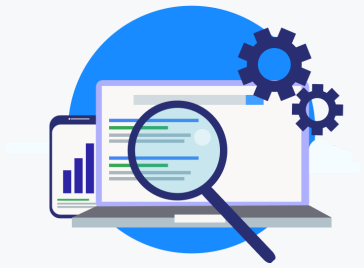
This organization's website does not have unique titles and descriptions on each page.

Federato
https://www.federato.ai/
Insurers can no longer afford to underutilize data RiskOps means more precise + productive underwriting in only 8 weeks — and we never charge for services. Yes, seriously.

This is how the organization's homepage will appear on a search engine result page.

Control your search listing

Your website's title and description are displayed by search engines and when the website is shared on social media.



Some pages of this organization's website do not have a unique meta description.

- Without a meta description, search engines will select a snippet of text from the web page to display. This organization is missing an opportunity to select the text that appears in search results.

What can I do to improve it?

Add unique page titles and meta descriptions to your website.

- The title and description are crucial in setting your website apart in search results.
- Don't include the same title and description on every page as search engines penalize duplicate content.

The length limits used for titles and descriptions in this test are intended to be used as a guideline only. It is recommended that human judgement should be used to verify whether a long title or description is appropriate.

This website does not appear to use Google Ads, the most popular way to advertise online.

Skip to the top of Google

Google Ads shows ads in Google search results. You can choose the search terms you wish to appear for. This makes Google Ads a highly effective way of targeting interested customers directly.

We may not be able to detect ads by unverified Google advertisers.

- We use the Google Ads Transparency Center to detect whether this business is using Google advertising.
- The Ads Transparency Center is a searchable directory of ads served by verified advertisers.
- Only if a company is verified will you see the information.

What can I do to improve it?

Consider a Google Ads advertising campaign.

- Ideal for businesses who want to help find more visitors, and therefore more business, on their website.
- You pay only when people click on one of your ads.
- Results are easy to measure.

Sources: Google Ad Library SpyFu SEMrush SimilarWeb

Analysis covers CA ads only. Data is estimated from a combination of 3rd party sources using a sample of search engine results. Websites with low Google Ads budgets are less likely to be detected.

We could not find a Snapchat account for this organization. There may be one, but if we can't find it, it's likely real customers can't either.

Connect with a new audience

Snapchat is a great way to connect with a younger, fashion conscious audience. 45% of Snapchat users are between 18 and 24.

What can I do to improve it?

Consider using a Snapchat account to interact with your customers.

- Snapchat is popular with younger audiences.
- Snapchat is used by 90% of all 13-24 year-olds in the US.
- Over 190 million people use Snapchat every day.

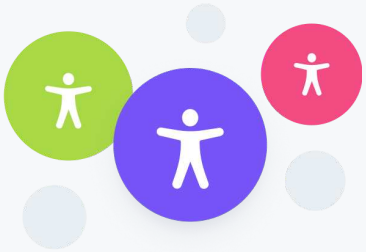
We are only able to detect an organization's Snapchat account if it is linked to from their website in one of the pages we analyze as part of our report.

This organization's website complies with accessibility guidelines.

0	0	0
WCAG 2.0 **A** Issues	WCAG 2.0 **AA** Issues	WCAG 2.0 **AAA** Issues
CRITICAL	DESIRABLE	ASPIRATIONAL

Open to everyone

Making sure your website is accessible means that everyone can find your products and services. The Web Content Accessibility Guidelines (WCAG) form the standard by which accessibility is measured.



For performance reasons, we can only check the homepage in this analysis. It is also limited to the WCAG accessibility guidelines that can be checked with automated testing. For a complete picture, a manual audit should be conducted.

This organization's website has a reasonable amount of text.

12040

Words on 15 pages

42

Pages discovered

Build your content

Websites with a good volume of quality content are likely to rank higher in search engines.

We only count words that are visible on the page when it first loads. Words that are revealed after a user interacts with the page (e.g. in drop-downs or pop-ups) won't be counted.

Amount of content discovered

Page	Visible words	Has enough content
Home page	670	✓
/blog	1508	✓
/team	647	✓
/demo	106	✗
/about	513	✓

Content is measured by looking at a limited section of this organization's website. Websites built with Flash or other non-standard technologies may contain content that cannot be measured by us.

This organization is measuring how many visitors it has by using a website analysis service.

Know your website visitors

Website analytics allows you to measure the behavior of people on a website. This information can help guide your marketing decisions.

Analytics tools discovered

Name
Matomo Analytics
HubSpot Analytics
Hotjar
Google Analytics

This website is linked to by at least 300 other websites.

600

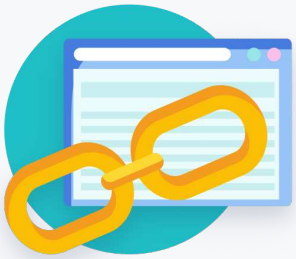
Estimated backlinks

300

Estimated websites linking

Build your trustworthiness

When another website links to yours, this is called a backlink. Websites with more relevant backlinks tend to appear higher in search results.



Source: Ahrefs

Backlinks are measured from a sample of webpages which is updated periodically. Certain links may be omitted from this analysis (in particular directory websites).

This organization's website does not appear to contain any broken links.

Point to the right place

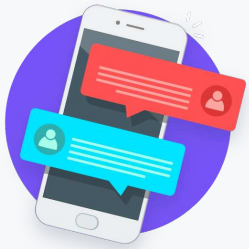
If you link to a webpage that is later removed, this creates a broken link that will confuse your website visitors.

Only the first 42 links encountered on the organization's website were checked.

This website appears to include contact details.

Be contactable

Prominent contact details on your website mean your customers can contact you when they need to.



Email addresses discovered

Email address	Found on
info@federato.ai	Home page
info@federato.ai	/blog
info@federato.ai	/team
info@federato.ai	/demo
info@federato.ai	/about

What can I do to improve it?

Ensure contact details are clearly shown on your website.

- Many visitors will be coming to your website to find contact information.
- Contact details increase your website's credibility.

We look for email addresses and phone numbers written on the organization's website. Websites built with Flash or other non-standard technologies may contain content that can't be found.

This organization's website uses mostly well defined headings.

	Heading	Found on	
H6	Federato Raises $25M in Series B Funding to Continue Catalyzing Insurance's "AI Moment" Out of hierarchy	Home page	✗
H6	Learn More	Home page	✓
H1	Insurers can no longer afford to underutilize data Multiple H1s on page	Home page	✗
H3	Read our Latest Updates Out of hierarchy	Home page	✗
H4	Federato Raises $25M in Series B Funding Hidden on the page	Home page	✓

Structure your website content

Well defined headings help users and search engines understand and prioritise your website content.

This organization's website should have one top-level heading on every page

- To optimize search ranking it is recommended to have only one top level heading per page.
- A top-level heading should describe the content of that page.

What can I do to improve it?

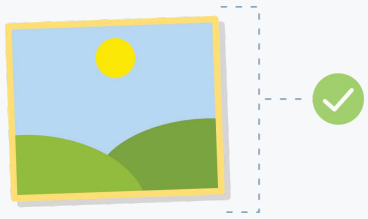
Ensure headings are well defined throughout your website.

- Make sure keywords you want to rank for are mentioned in your headings.
- Headings should be used in the correct hierarchy, starting with a top level heading (H1).
- Each page can contain multiple subheadings (H2-H6), but should only include one main heading (H1).

The images on this organization's website are all web friendly.

Get your images right

Pictures on the web should be optimized for fast loading without being stretched out of proportion.



This website appears to be optimized for mobile phones.

Fits screen width

A mobile site should be free of horizontal scroll to avoid confusing users.

Has legible text

Text should be big enough to read on a mobile, without the need to zoom in.

Links are too small to tap

Links on a website should be large enough to tap on a typical mobile screen.

Same content on mobile

Ideally websites should adapt to the screen size of the user's device, rather than loading separate HTML or redirecting to a separate mobile website.

Viewport is set

By setting the viewport, the website will load at a comfortable size.

We load the homepage for this website in a simulated smartphone, and then perform an analysis on the resulting code of the webpage. Some unusual websites can confuse this analysis. If in doubt, consult the screenshots above to determine if they look mobile-friendly.

This organization's website is using SSL to secure visitor data.

43 days

Left until expiry

Sep 20, 2023

Date of expiry

Encrypt everything

SSL ensures that information flowing to and from your website visitors is kept secure.

Although this organization's website uses SSL, it is not configured to use HSTS.

- HTTP Strict Transport Security (HSTS) helps to protect websites against man-in-the-middle attacks.
- Web browsers should interact with the website using secure connections.

A valid and up-to-date sitemap was found for the organization's website.

Sitemap URL	Valid	Pages discovered
/sitemap.xml	✓	44

Help search engines find you

A sitemap tells search engines about the content that you have on your site and how often it's updated.

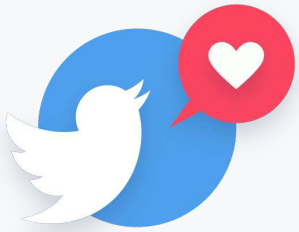
It looks like this business has a Twitter account.

Twitter profile

https://twitter.com/Federato_AI

Build up a following

Twitter accounts are a popular way of engaging with customers and prospects online. Businesses can run promotions and interact with their customers via Twitter.



We are currently unable to verify Twitter accounts.

- We currently can not verify twitter accounts or fetch information about them as Twitter has changed its policy to only allow logged in users.

This organization's website appears to contain a video.

Vimeo

Video detected

Video improves conversion rate

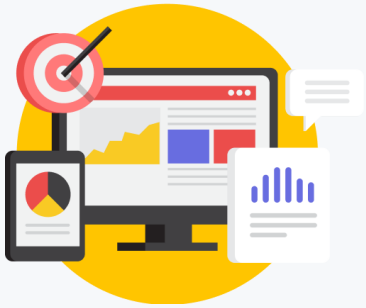
Websites with a video have a higher conversion rate and 77% of consumers say they've been convinced to buy a product or service by watching a video

We check a limited number of web pages for the most common video technologies. Obscure or highly customized video technologies may not be detected.

This organization appears to have a high number of website visitors each month.

Increase your total traffic

The total traffic represents the number of visits your site is receiving on a monthly basis.



Source: SimilarWeb

Number of visitors is estimated based upon a sample of visitors and their behavior. Private data collected by the website owner using a service like Google Analytics may be more accurate.

Sorry, we aren't able to determine the age of .ai domains.

Older and wiser

Older domains are more likely to rank well in search results. Search engines are known to mistrust very recently registered domains.

We couldn't determine if this organization appears in any directories at this time.

Some business listings may not have been discovered.

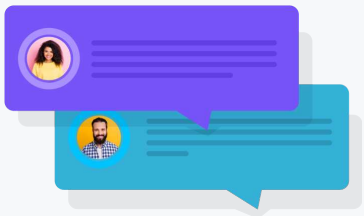
- As business information was not provided when starting the scan, we may not find all business listings.
- For best results, re-run the analysis and provide known correct business details for comparison.

We use a variety of techniques to identify which directories an organization is listed in. We may not discover a listing if the contact details do not match those on the website. This test covers many popular directories but cannot cover them all.

We couldn't determine if this organization has any reviews at this time.

Build up trust

Reviews help build consumer trust in your brand and products. 90% of customers say that their buying decisions are influenced by online reviews.



We looked for reviews of this organization in a limited number of tools. We use a combination of techniques to identify these, including matching by phone number and business name. If reviews are missing, they may be listed with conflicting contact information.

15

Number of pages tested

42

Number of pages found

The following pages were analyzed:

https://www.federato.ai/

https://www.federato.ai/blog

https://www.federato.ai/team

https://www.federato.ai/demo

https://www.federato.ai/about

https://www.federato.ai/privacy

https://www.federato.ai/terms-of-use

https://www.federato.ai/resources/riskops-guide

https://www.federato.ai/articles/itc-talkdesk-product-launch

https://www.federato.ai/articles/about-federato

https://www.federato.ai/articles/federato-riskops

https://www.federato.ai/articles/insurance-needs-ai

https://www.federato.ai/articles/itc-beyond-automation

https://www.federato.ai/articles/insurances-ai-problem

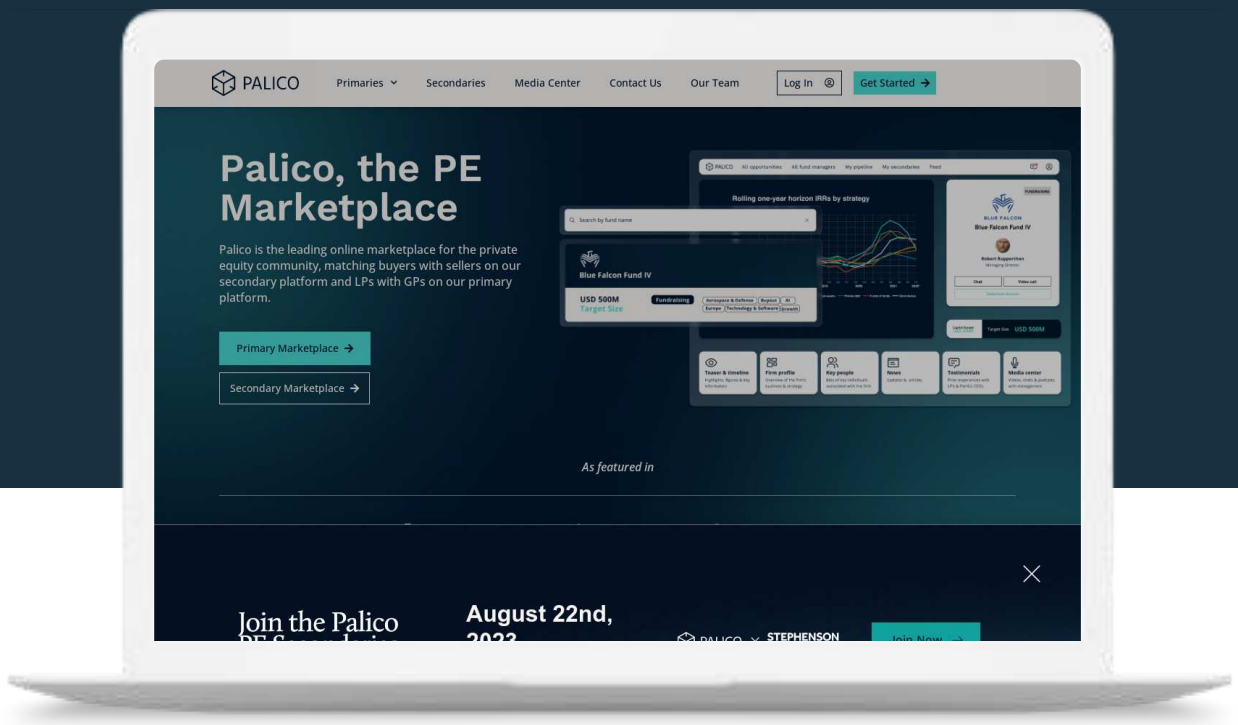
https://www.federato.ai/articles/why-i-fell-for-federato

For speed of analysis, we check no more than 15 pages from a website. In the vast majority of cases this will give results which are indicative of the whole website but, as with any technique which only deals with a limited sample, we cannot guarantee that those pages we have analyzed are representative of those we have not.

Report for

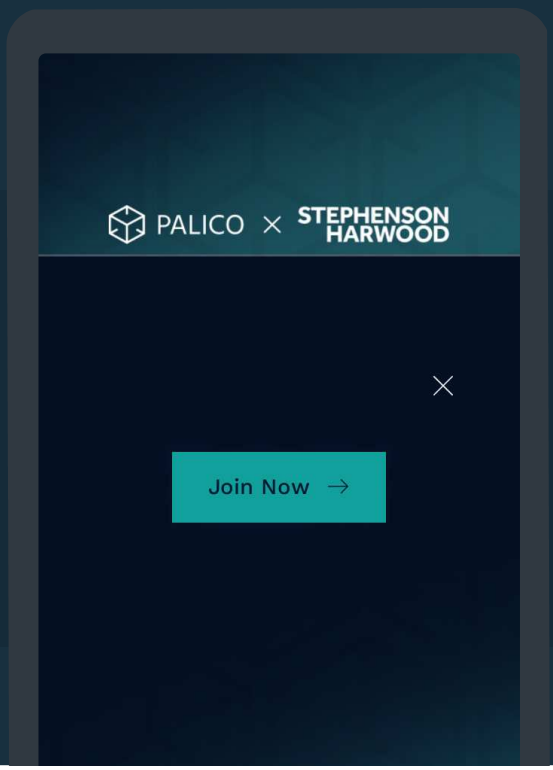
www.palico.com

Generated on August 8, 2023



Your overall digital marketing score

This is a weighted average of all the factors in this report.



www.palico.com

www.palico.com

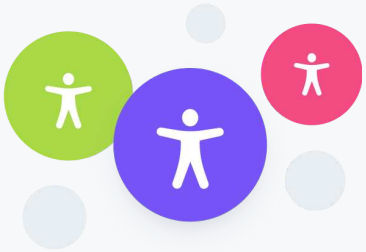
531 060 374

This organization's website does not comply with accessibility guidelines.

4	5	5
WCAG 2.0 **A** Issues	WCAG 2.0 **AA** Issues	WCAG 2.0 **AAA** Issues
CRITICAL	DESIRABLE	ASPIRATIONAL

Open to everyone

Making sure your website is accessible means that everyone can find your products and services. The Web Content Accessibility Guidelines (WCAG) form the standard by which accessibility is measured.



What can I do to improve it?

Resolve the accessibility issues found on your website.

- Having an accessible website means that more people can find your products and services.
- In some parts of the world, organizations have a legal duty to comply with accessibility standards.

For performance reasons, we can only check the homepage in this analysis. It is also limited to the WCAG accessibility guidelines that can be checked with automated testing. For a complete picture, a manual audit should be conducted.

Some image links on this organization's website do not have a text equivalent.

Is everyone welcome?

Alternative text provides a description of each image on a website. This is used by visually impaired website visitors and search engines.

This website contains images that are used as links, with no alternative text provided.

- Images used as links must contain a text alternative as a fallback.
- If the image fails to load, visitors may not be able to see or click on the link.
- Visitors using assistive technology like a screen reader may not be able to visit the link at all.

This organization's website appears to have very little text, which will harm its ranking in Google.

177

Words on 15 pages

38

Pages discovered

Build your content

Websites with a good volume of quality content are likely to rank higher in search engines.

We only count words that are visible on the page when it first loads. Words that are revealed after a user interacts with the page (e.g. in drop-downs or pop-ups) won't be counted.

Amount of content discovered

Page	Visible words	Has enough content
Home page	12	✗
/contact-us/	12	✗
/lp-gp/	9	✗
/members/	12	✗
/partners/	12	✗

What can I do to improve it?

Add more content to your website.

- Google may penalize websites with too little content by placing them lower in search results.
- Relevant content will help attract and engage visitors.

Content is measured by looking at a limited section of this organization's website. Websites built with Flash or other non-standard technologies may contain content that cannot be measured by us.

The organization's website appears to have a high bounce rate.

79%

Estimated bounce rate for this website

Keep your visitors engaged

The bounce rate represents the percentage of visitors who view only a single page within the site before leaving. A low bounce rate shows that the content on the site is engaging to the users.

What can I do to improve it?

Improve your website's bounce rate.

- A website with a low bounce rate keeps visitors engaged for longer.
- A website with a high bounce rate may not have engaging content, or may be optimized for the wrong search terms.
- A website with a high bounce rate may not have a clear call to action for the users.

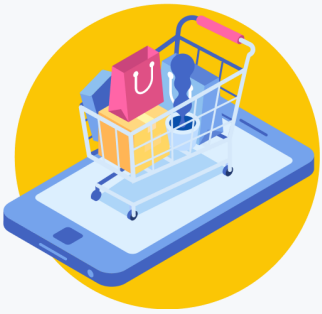
Source: SimilarWeb

Bounce rate is estimated based upon a sample of visitors and their behavior. Private data collected by the website owner using a service like Google Analytics may be more accurate.

We were not able to detect a recognized ecommerce solution on this organization's website.

Sell online

With an ecommerce website you can sell your products online and reach a wider audience.



What can I do to improve it?

If appropriate, consider getting an ecommerce enabled website.

- Selling online can increase sales while reducing your cost base.
- Online storeping is growing and currently accounts for 18% of consumer spending in the UK.
- 37% of people aged 30-39 store online at least once per week.

We were unable to find a Facebook page for this organization. Either they do not have an account or the link from the website to the page is missing.

Engage with your customers

Facebook pages are a popular way of engaging with customers and prospects online. Businesses can advertize, run promotions and interact with their customers via Facebook.

This organization's website may not contain a link to the Facebook page.

- We we unable to find a link to the Facebook profile on the website
- Visitors to the website will be unable to find the Facebook page.

What can I do to improve it?

Consider using a Facebook page to interact with your customers.

- Facebook is the world's most popular mobile app and 2nd most popular website.
- Over 1.45 billion people use Facebook every day.

Source: Facebook

We looked at this organization's website and did not find a link to a valid Facebook page.

There was no Google Business Profile listing found for this business

Be visible to your audience

A Google Business Profile page appears on the right hand side when potential customers are searching for your business.

What can I do to improve it?

Ensure your business is listed on Google Business Profile.

- Having a Google Business Profile listing is very important for helping potential customers find your website.
- Not having a listing will harm the amount of traffic your website receives, and potentially give an advantage to your competitors.

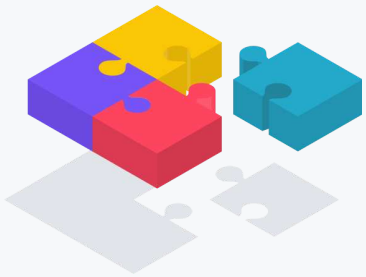
Source: Google Business Profile

This organization's website does not use well defined headings.

	Heading	Found on	
H1	Missing H1	Home page	✗
↳ H4	As featured in Out of hierarchy	Home page	✗
↳ H2	Primary Marketplace Hidden on the page	Home page	✓
↳ H4	Primaries for LPs Hidden on the page Out of hierarchy	Home page	✗
↳ H4	Primaries for GPs Hidden on the page	Home page	✓

Structure your website content

Well defined headings help users and search engines understand and prioritise your website content.



This organization's website should have one top-level heading on every page

- To optimize search ranking it is recommended to have only one top level heading per page.
- A top-level heading should describe the content of that page.

What can I do to improve it?

Ensure headings are well defined throughout your website.

- Make sure keywords you want to rank for are mentioned in your headings.
- Headings should be used in the correct hierarchy, starting with a top level heading (H1).
- Each page can contain multiple subheadings (H2-H6), but should only include one main heading (H1).

We couldn't find this organization's Instagram account. There may be one, but if we can't find it, it's likely real customers can't either.

Show what you do in a creative way

Instagram accounts are a popular way of engaging with customers online. Businesses can advertise, run promotions and interact with their customers via Instagram.

What can I do to improve it?

Consider using an Instagram account to interact with your customers.

- Instagram can be used to promote your organization and bring more traffic to your website.
- Instagram delivers an engagement rate of 4.2% per follower, which is 58 times more engagement than Facebook.
- Instagram is especially useful for businesses that sell to consumers (B2C).

We looked at the website for this organization and did not find a valid link to a Instagram account. If the organization has a Instagram account but it is not linked to from their website we may not be able to detect it..

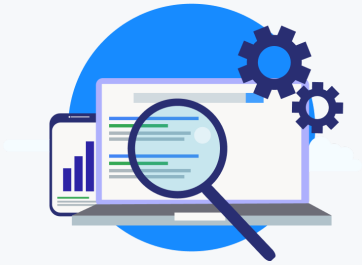
This organization's website does not have unique titles and descriptions on each page.

Palico Home - Palico
https://www.palico.com/
Palico is the leading online marketplace for the private equity fund community, matching buyers with sellers on our secondary market and LPs with GPs on the primary market.

This is how the organization's homepage will appear on a search engine result page.

Control your search listing

Your website's title and description are displayed by search engines and when the website is shared on social media.



Some pages of this organization's website do not have a unique meta description.

- Without a meta description, search engines will select a snippet of text from the web page to display. This organization is missing an opportunity to select the text that appears in search results.

More than one page of this organization's website has the same meta description.

- Duplicate meta descriptions are ignored by search engines and may have a negative impact on rank.

What can I do to improve it?

Add unique page titles and meta descriptions to your website.

- The title and description are crucial in setting your website apart in search results.
- Don't include the same title and description on every page as search engines penalize duplicate content.

The length limits used for titles and descriptions in this test are intended to be used as a guideline only. It is recommended that human judgement should be used to verify whether a long title or description is appropriate.

This website does not appear to use Google Ads, the most popular way to advertise online.

Skip to the top of Google

Google Ads shows ads in Google search results. You can choose the search terms you wish to appear for. This makes Google Ads a highly effective way of targeting interested customers directly.

We may not be able to detect ads by unverified Google advertisers.

- We use the Google Ads Transparency Center to detect whether this business is using Google advertising.
- The Ads Transparency Center is a searchable directory of ads served by verified advertisers.
- Only if a company is verified will you see the information.

What can I do to improve it?

Consider a Google Ads advertising campaign.

- Ideal for businesses who want to help find more visitors, and therefore more business, on their website.
- You pay only when people click on one of your ads.
- Results are easy to measure.

Sources: Google Ad Library SpyFu SEMrush SimilarWeb

Analysis covers CA ads only. Data is estimated from a combination of 3rd party sources using a sample of search engine results. Websites with low Google Ads budgets are less likely to be detected.

Some pages from this organization's website are not included in its sitemap.

Sitemap URL	Valid	Pages discovered
/fund-sitemap.xml	✗	0
/sitemap.xml	✓	11
/gp-sitemap.xml	✓	12,010

Help search engines find you

A sitemap tells search engines about the content that you have on your site and how often it's updated.

Pages missing from the sitemap

Page
/lp-gp/
/media-center/
/onboarding-lp/
/onboarding-gp/
/secondaries-demo/

The sitemap did not include some pages of this website.

- Pages not in the sitemap may not be listed in search engine results.
- Sitemaps can become out of date if the website is modified after the sitemap was generated.

What can I do to improve it?

Make sure you have a valid sitemap and that it is up-to-date.

- A sitemap allows search engines like Google to find the pages of a website faster and more accurately.
- Having all of your pages listed in the sitemap ensures your website is represented correctly in search engines.
- Your sitemap should comply with the widely-accepted standard.

We could not find a Snapchat account for this organization. There may be one, but if we can't find it, it's likely real customers can't either.

Connect with a new audience

Snapchat is a great way to connect with a younger, fashion conscious audience. 45% of Snapchat users are between 18 and 24.

What can I do to improve it?

Consider using a Snapchat account to interact with your customers.

- Snapchat is popular with younger audiences.
- Snapchat is used by 90% of all 13-24 year-olds in the US.
- Over 190 million people use Snapchat every day.

We are only able to detect an organization's Snapchat account if it is linked to from their website in one of the pages we analyze as part of our report.

This organization's website does not appear to have a video on any of the pages we tested.

Video improves conversion rate

Websites with a video have a higher conversion rate and 77% of consumers say they've been convinced to buy a product or service by watching a video

What can I do to improve it?

Consider adding a video which promotes your products and services.

- 96% of consumers find videos helpful when making purchase decisions online.
- Approximately 73% of consumers are more likely to make a purchase after watching a video that explains the product or service.

We check a limited number of web pages for the most common video technologies. Obscure or highly customized video technologies may not be detected.

This organization is measuring how many visitors it has by using a website analysis service.

Know your website visitors

Website analytics allows you to measure the behavior of people on a website. This information can help guide your marketing decisions.

Analytics tools discovered

Name
Matomo Analytics
Linkedin Insight Tag
HubSpot Analytics
Hotjar
Google Analytics

This website uses Google's Universal Analytics.

- Beginning July 1st, 2023, Universal Analytics will no longer process new hits.
- It is recommended that you upgrade your analytics solution to Google Analytics 4 before this date.

This website is linked to by at least 900 other websites.

4,500

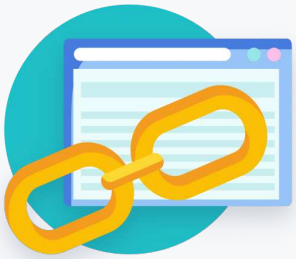
Estimated backlinks

900

Estimated websites linking

Build your trustworthiness

When another website links to yours, this is called a backlink. Websites with more relevant backlinks tend to appear higher in search results.



Source: Ahrefs

Backlinks are measured from a sample of webpages which is updated periodically. Certain links may be omitted from this analysis (in particular directory websites).

This organization's website does not appear to contain any broken links.

Point to the right place

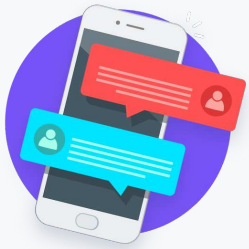
If you link to a webpage that is later removed, this creates a broken link that will confuse your website visitors.

Only the first 50 links encountered on the organization's website were checked.

This website appears to include contact details.

Be contactable

Prominent contact details on your website mean your customers can contact you when they need to.



Phone numbers discovered

Number	Found on
531 060 374	/legal-notices/
75531060374	/legal-notices/

Email addresses discovered

Email address	Found on
info@palico.com	Home page
info@palico.com	/legal-notices/
info@palico.com	/video-library/
press@palico.com	/podcast/
info@palico.com	/podcast/

We look for email addresses and phone numbers written on the organization's website. Websites built with Flash or other non-standard technologies may contain content that can't be found.

This website is using an established domain name (palico.com).

Nov 13, 2007

Date of first registration

Nov 13, 2025

Date of domain expiry

Older and wiser

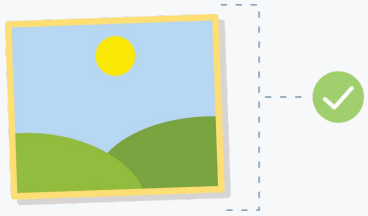
Older domains are more likely to rank well in search results. Search engines are known to mistrust very recently registered domains.

Source: GANDI SAS

The images on this organization's website are all web friendly.

Get your images right

Pictures on the web should be optimized for fast loading without being stretched out of proportion.



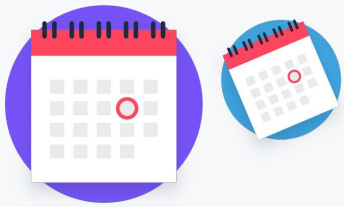
This website appears to have been updated recently.

0

Days since last update

Keep it fresh

Regularly updated content is critical for user engagement and search engine ranking.



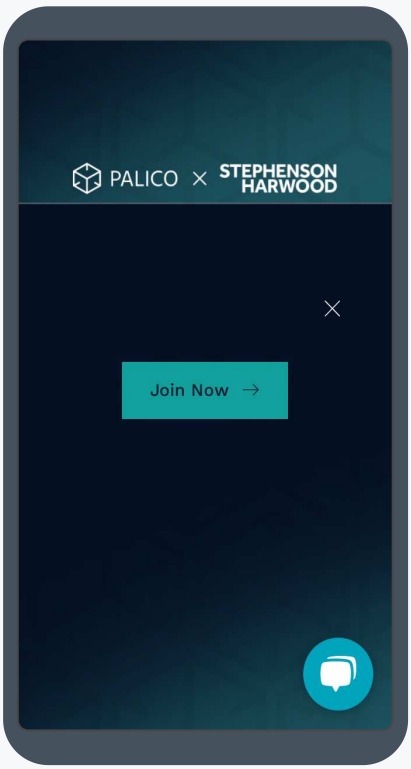
Recent updates

Date	Type	URL
8/7/23	Resource updated	www.palico.com/wp-content/themes/astra/assets/css/minified/menu-animation.min.css
8/7/23	Resource updated	/wp-content/themes/astra/assets/css/minified/style.min.css?ver=4.1.7
8/7/23	Resource updated	www.palico.com/wp-content/themes/astra/assets/css/minified/style.min.css

We use a wide range of methods to determine the likely last-updated date of this website, including technical indicators and machine-readable dates within the text we have analyzed on the website. This

gives us a best approximate for when a website was updated, but we cannot know for certain. Some websites cannot be dated at all.

This website appears to be optimized for mobile phones.



Fits screen width

A mobile site should be free of horizontal scroll to avoid confusing users.

Has legible text

Text should be big enough to read on a mobile, without the need to zoom in.

Links are big enough to tap

Links on a website should be large enough to tap on a typical mobile screen.

Same content on mobile

Ideally websites should adapt to the screen size of the user's device, rather than loading separate HTML or redirecting to a separate mobile website.

Viewport is set

By setting the viewport, the website will load at a comfortable size.

We load the homepage for this website in a simulated smartphone, and then perform an analysis on the resulting code of the webpage. Some unusual websites can confuse this analysis. If in doubt, consult the screenshots above to determine if they look mobile-friendly.

This website is receiving traffic from search engines.

200 / month

Estimated visitors from search

1,500 search terms

Estimated number this website is listed for

Get traffic from search engines

Make sure you're being found in search engines for the right terms.

What you're found for today

Keyword	Position	Searches / mo	Traffic (%)	CPC	Page	Last seen
palico	1	320	53.02	$0.00	Home page	2023-07-24
papef	1	90	14.76	$1.06	/funds/portfolio-advisors-private-equity-fund-i-papef-i/ed96986b7d0c4a9c8eb9cedaaf9840ad	2023-07-30
civc	9 (⬇1)	2400	9.39	$0.00	/funds/civc-partners-fund-v/d4a05dea19d14595b27c3087d5e583a1	2023-08-05
altas	10	1000	4.02	$0.00	/general-partners/altas-partners/8eb677a8670c4f43b100284ca56269b0	2023-08-04
novacaps	8	880	3.35	$0.00	/funds/novacap-investments/e78bd11bd25c4ea6a8c98cb20ba81805	2023-08-04

Best keyword opportunities

Keyword	Position	Searches / mo	CPC	Page	Last seen
hexagone 2	100	590	$2.16	/funds/fip-hexagone-croissance-2/7c0db2d457e547b5802ab59fa2da5d8c	2023-08-01
teñe	99	210	$0.00	/general-partners/tene-capital/a25d3162805e46adba91fe17e4c8de88	2023-07-29
living bridge	99	50	$0.00	/general-partners/livingbridge/a8a7f6c032344200985ba2f92bdef413	2023-07-26
grams squared	99	210	$3.98	/funds/g-squared-opportunities-fund-iv/9adddc21382345a1be79c18b8c929e9d	2023-07-27
acón	98	110	$13.85	/general-partners/acon-investment-partners/8fbc8574812845e38541220212f96452	2023-07-10

These are high traffic search terms that the business has a low ranking for. Consider optimizing for relevant terms.

What can I do to improve it?

Consider search engine optimization (SEO).

- SEO can bring you significantly more organic traffic.
- Generally SEO requires that you build up your content, links and the quality of your website.
- SEO takes time, but once the initial investment is made you can get more visitors for free.

Source: SEMrush

Analysis covers CA traffic only. Traffic is estimated by a 3rd party source using a sample of search engine results. Subdomains and websites with very low volumes of traffic are less likely to be detected.

This organization's website is using SSL to secure visitor data.

90 days

Left until expiry

Nov 6, 2023

Date of expiry

Encrypt everything

SSL ensures that information flowing to and from your website visitors is kept secure.

Although this organization's website uses SSL, it is not configured to use HSTS.

- HTTP Strict Transport Security (HSTS) helps to protect websites against man-in-the-middle attacks.
- Web browsers should interact with the website using secure connections.

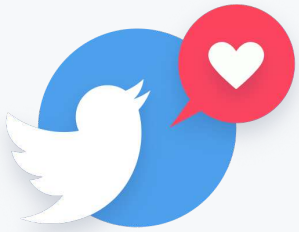
It looks like this business has a Twitter account.

Twitter profile

http://twitter.com/Palico

Build up a following

Twitter accounts are a popular way of engaging with customers and prospects online. Businesses can run promotions and interact with their customers via Twitter.



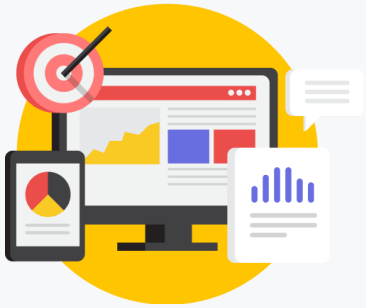
We are currently unable to verify Twitter accounts.

- We currently can not verify twitter accounts or fetch information about them as Twitter has changed its policy to only allow logged in users.

This organization appears to have a high number of website visitors each month.

Increase your total traffic

The total traffic represents the number of visits your site is receiving on a monthly basis.



Source: SimilarWeb

Number of visitors is estimated based upon a sample of visitors and their behavior. Private data collected by the website owner using a service like Google Analytics may be more accurate.

We couldn't determine if this organization appears in any directories at this time.

Some business listings may not have been discovered.

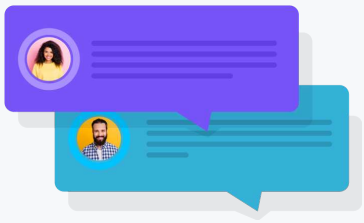
- As business information was not provided when starting the scan, we may not find all business listings.
- For best results, re-run the analysis and provide known correct business details for comparison.

We use a variety of techniques to identify which directories an organization is listed in. We may not discover a listing if the contact details do not match those on the website. This test covers many popular directories but cannot cover them all.

We couldn't determine if this organization has any reviews at this time.

Build up trust

Reviews help build consumer trust in your brand and products. 90% of customers say that their buying decisions are influenced by online reviews.



We looked for reviews of this organization in a limited number of tools. We use a combination of techniques to identify these, including matching by phone number and business name. If reviews are missing, they may be listed with conflicting contact information.

15

Number of pages tested

38

Number of pages found

The following pages were analyzed:

https://www.palico.com/

https://www.palico.com/contact-us/

https://www.palico.com/lp-gp/

https://www.palico.com/members/

https://www.palico.com/partners/

https://www.palico.com/secondaries/

https://www.palico.com/media-center/

https://www.palico.com/legal-notices/

https://www.palico.com/onboarding-lp/

https://www.palico.com/onboarding-gp/

https://www.palico.com/privacy-policy/

https://www.palico.com/secondaries-demo/

https://www.palico.com/newsroom/

https://www.palico.com/podcast/

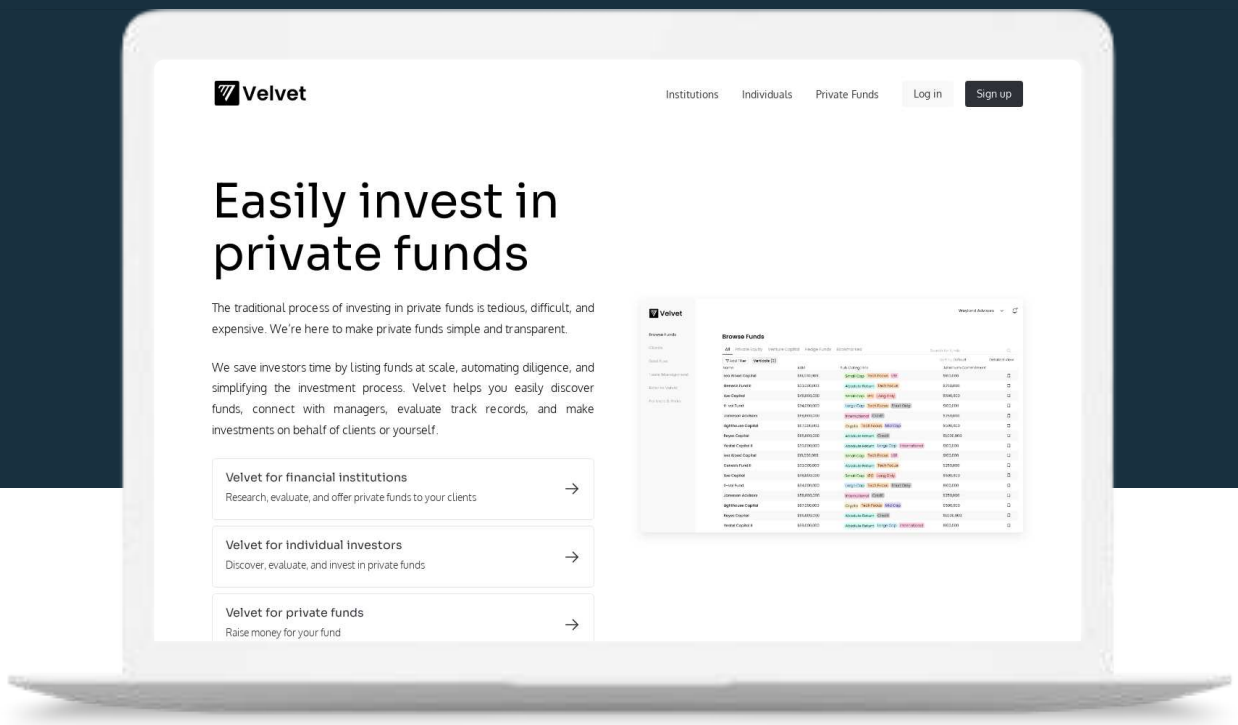
https://www.palico.com/video-library/

For speed of analysis, we check no more than 15 pages from a website. In the vast majority of cases this will give results which are indicative of the whole website but, as with any technique which only deals with a limited sample, we cannot guarantee that those pages we have analyzed are representative of those we have not.

Report for

www.velvetfs.com

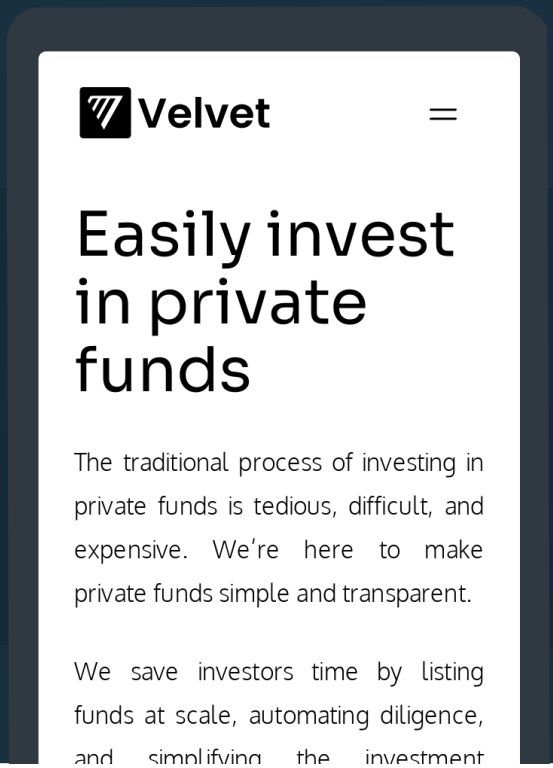
Generated on August 8, 2023



Your overall digital marketing score

This is a weighted average of all the factors in this report.

www.velvetfs.com
www.velvetfs.com
8019704280



The organization's website appears to have an average bounce rate, but there is room for improvement.

47%

Estimated bounce rate for this website

Keep your visitors engaged

The bounce rate represents the percentage of visitors who view only a single page within the site before leaving. A low bounce rate shows that the content on the site is engaging to the users.

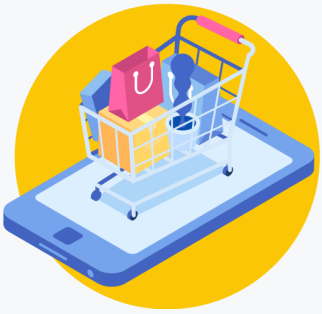
Source: SimilarWeb

Bounce rate is estimated based upon a sample of visitors and their behavior. Private data collected by the website owner using a service like Google Analytics may be more accurate.

We were not able to detect a recognized ecommerce solution on this organization's website.

Sell online

With an ecommerce website you can sell your products online and reach a wider audience.



What can I do to improve it?

If appropriate, consider getting an ecommerce enabled website.

- Selling online can increase sales while reducing your cost base.
- Online storeping is growing and currently accounts for 18% of consumer spending in the UK.
- 37% of people aged 30-39 store online at least once per week.

We were unable to find a Facebook page for this organization. Either they do not have an account or the link from the website to the page is missing.

Engage with your customers

Facebook pages are a popular way of engaging with customers and prospects online. Businesses can advertize, run promotions and interact with their customers via Facebook.

This organization's website may not contain a link to the Facebook page.

- We we unable to find a link to the Facebook profile on the website
- Visitors to the website will be unable to find the Facebook page.

What can I do to improve it?

Consider using a Facebook page to interact with your customers.

- Facebook is the world's most popular mobile app and 2nd most popular website.
- Over 1.45 billion people use Facebook every day.

Source: Facebook

We looked at this organization's website and did not find a link to a valid Facebook page.

There was no Google Business Profile listing found for this business

Be visible to your audience

A Google Business Profile page appears on the right hand side when potential customers are searching for your business.

What can I do to improve it?

Ensure your business is listed on Google Business Profile.

- Having a Google Business Profile listing is very important for helping potential customers find your website.
- Not having a listing will harm the amount of traffic your website receives, and potentially give an advantage to your competitors.

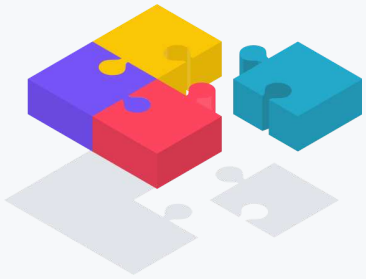
Source: Google Business Profile

This organization's website does not use well defined headings.

	Heading	Found on	
H1	Easily invest in private funds	Home page	✓
↳ H6	Velvet for financial institutions Out of hierarchy	Home page	✗
↳ H6	Velvet for individual investors	Home page	✓
↳ H6	Velvet for private funds	Home page	✓
↳ H2	Discover dozens of vetted private funds in minutes	Home page	✓

Structure your website content

Well defined headings help users and search engines understand and prioritise your website content.



This organization's website should have one top-level heading on every page

- To optimize search ranking it is recommended to have only one top level heading per page.
- A top-level heading should describe the content of that page.

What can I do to improve it?

Ensure headings are well defined throughout your website.

- Make sure keywords you want to rank for are mentioned in your headings.
- Headings should be used in the correct hierarchy, starting with a top level heading (H1).
- Each page can contain multiple subheadings (H2-H6), but should only include one main heading (H1).

We couldn't find this organization's Instagram account. There may be one, but if we can't find it, it's likely real customers can't either.

Show what you do in a creative way

Instagram accounts are a popular way of engaging with customers online. Businesses can advertise, run promotions and interact with their customers via Instagram.

What can I do to improve it?

Consider using an Instagram account to interact with your customers.

- Instagram can be used to promote your organization and bring more traffic to your website.
- Instagram delivers an engagement rate of 4.2% per follower, which is 58 times more engagement than Facebook.
- Instagram is especially useful for businesses that sell to consumers (B2C).

We looked at the website for this organization and did not find a valid link to a Instagram account. If the organization has a Instagram account but it is not linked to from their website we may not be able to detect it..

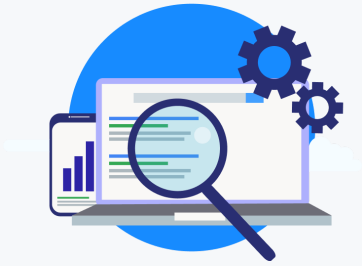
This organization's website does not have unique titles and descriptions on each page.

Velvet - The marketplace to source, evaluate, and invest
https://www.velvetfs.com/
Velvet is the marketplace to source, evaluate, and invest into Crypto Funds, Hedge funds, Venture Funds, Debt Funds, and private equity funds.

This is how the organization's homepage will appear on a search engine result page.

Control your search listing

Your website's title and description are displayed by search engines and when the website is shared on social media.



Some pages of this organization's website do not have a unique page title.

- Without a page title, search engines will select a snippet of text from the web page to display. This organization is missing an opportunity to select the text that appears in search results.

Some pages of this organization's website do not have a unique meta description.

- Without a meta description, search engines will select a snippet of text from the web page to display. This organization is missing an opportunity to select the text that appears in search results.

More than one page of this organization's website has the same meta description.

- Duplicate meta descriptions are ignored by search engines and may have a negative impact on rank.

What can I do to improve it?

Add unique page titles and meta descriptions to your website.

- The title and description are crucial in setting your website apart in search results.
- Don't include the same title and description on every page as search engines penalize duplicate content.

The length limits used for titles and descriptions in this test are intended to be used as a guideline only. It is recommended that human judgement should be used to verify whether a long title or description is appropriate.

This website does not appear to use Google Ads, the most popular way to advertise online.

Skip to the top of Google

Google Ads shows ads in Google search results. You can choose the search terms you wish to appear for. This makes Google Ads a highly effective way of targeting interested customers directly.

We may not be able to detect ads by unverified Google advertisers.

- We use the Google Ads Transparency Center to detect whether this business is using Google advertising.
- The Ads Transparency Center is a searchable directory of ads served by verified advertisers.
- Only if a company is verified will you see the information.

What can I do to improve it?

Consider a Google Ads advertising campaign.

- Ideal for businesses who want to help find more visitors, and therefore more business, on their website.
- You pay only when people click on one of your ads.
- Results are easy to measure.

Sources: Google Ad Library SpyFu SEMrush SimilarWeb

Analysis covers CA ads only. Data is estimated from a combination of 3rd party sources using a sample of search engine results. Websites with low Google Ads budgets are less likely to be detected.

Some pages from this organization's website are not included in its sitemap.

Sitemap URL	Valid	Pages discovered
/sitemap.xml	✓	5

Help search engines find you

A sitemap tells search engines about the content that you have on your site and how often it's updated.

Pages missing from the sitemap

Page
Home page
/contact
/about-us
/decheque
/individuals

The sitemap did not include some pages of this website.

- Pages not in the sitemap may not be listed in search engine results.
- Sitemaps can become out of date if the website is modified after the sitemap was generated.

What can I do to improve it?

Make sure you have a valid sitemap and that it is up-to-date.

- A sitemap allows search engines like Google to find the pages of a website faster and more accurately.
- Having all of your pages listed in the sitemap ensures your website is represented correctly in search engines.
- Your sitemap should comply with the widely-accepted standard.

We could not find a Snapchat account for this organization. There may be one, but if we can't find it, it's likely real customers can't either.

Connect with a new audience

Snapchat is a great way to connect with a younger, fashion conscious audience. 45% of Snapchat users are between 18 and 24.

What can I do to improve it?

Consider using a Snapchat account to interact with your customers.

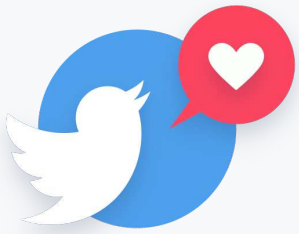
- Snapchat is popular with younger audiences.
- Snapchat is used by 90% of all 13-24 year-olds in the US.
- Over 190 million people use Snapchat every day.

We are only able to detect an organization's Snapchat account if it is linked to from their website in one of the pages we analyze as part of our report.

We couldn't find this organization's Twitter account. There may be one, but if we can't find it, it's likely real customers can't either.

Build up a following

Twitter accounts are a popular way of engaging with customers and prospects online. Businesses can run promotions and interact with their customers via Twitter.



What can I do to improve it?

Consider using a Twitter account to interact with your customers.

- Twitter is the 11th most popular website in the world.
- 23% of adults with internet access use Twitter.
- Over 100 million people use Twitter every day.

We looked at the website for this organization and did not find a valid link to a Twitter account. If the organization has a Twitter account but it is not linked to from their website we are not able to detect it.

This organization's website does not appear to have a video on any of the pages we tested.

Video improves conversion rate

Websites with a video have a higher conversion rate and 77% of consumers say they've been convinced to buy a product or service by watching a video

What can I do to improve it?

Consider adding a video which promotes your products and services.

- 96% of consumers find videos helpful when making purchase decisions online.
- Approximately 73% of consumers are more likely to make a purchase after watching a video that explains the product or service.

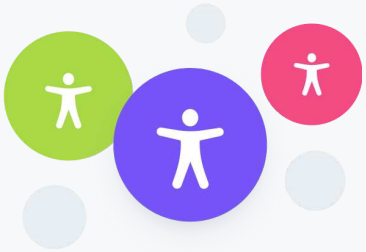
We check a limited number of web pages for the most common video technologies. Obscure or highly customized video technologies may not be detected.

This organization's website complies with accessibility guidelines.

0	1	1
WCAG 2.0 **A** Issues	WCAG 2.0 **AA** Issues	WCAG 2.0 **AAA** Issues
CRITICAL	DESIRABLE	ASPIRATIONAL

Open to everyone

Making sure your website is accessible means that everyone can find your products and services. The Web Content Accessibility Guidelines (WCAG) form the standard by which accessibility is measured.



For performance reasons, we can only check the homepage in this analysis. It is also limited to the WCAG accessibility guidelines that can be checked with automated testing. For a complete picture, a manual audit should be conducted.

Every image on this organization's website has a text equivalent.

Is everyone welcome?

Alternative text provides a description of each image on a website. This is used by visually impaired website visitors and search engines.

This organization's website has a reasonable amount of text.

10526

Words on 9 pages

9

Pages discovered

Build your content

Websites with a good volume of quality content are likely to rank higher in search engines.

We only count words that are visible on the page when it first loads. Words that are revealed after a user interacts with the page (e.g. in drop-downs or pop-ups) won't be counted.

Amount of content discovered

Page	Visible words	Has enough content
Home page	1273	✓
/contact	569	✓
/about-us	699	✓
/decheque	3	✗
/individuals	765	✓

Content is measured by looking at a limited section of this organization's website. Websites built with Flash or other non-standard technologies may contain content that cannot be measured by us.

This organization is measuring how many visitors it has by using a website analysis service.

Know your website visitors

Website analytics allows you to measure the behavior of people on a website. This information can help guide your marketing decisions.

Analytics tools discovered

Name
Google Analytics

This website is linked to by at least 95 other websites.

200

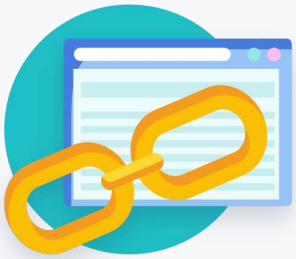
Estimated backlinks

95

Estimated websites linking

Build your trustworthiness

When another website links to yours, this is called a backlink. Websites with more relevant backlinks tend to appear higher in search results.



Source: Ahrefs

Backlinks are measured from a sample of webpages which is updated periodically. Certain links may be omitted from this analysis (in particular directory websites).

This organization's website does not appear to contain any broken links.

Point to the right place

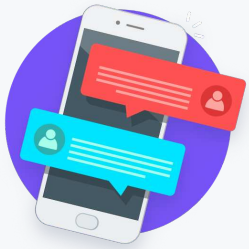
If you link to a webpage that is later removed, this creates a broken link that will confuse your website visitors.

Only the first 7 links encountered on the organization's website were checked.

This website appears to include contact details.

Be contactable

Prominent contact details on your website mean your customers can contact you when they need to.



Phone numbers discovered

Number	Found on
8019704280	/privacy-policy

Email addresses discovered

Email address	Found on
support@velvetfs.com	/about-us
support@velvetfs.com	/privacy-policy
support@velvetfs.com	/terms-and-conditions
support@decheque.com	/privacy-policy

We look for email addresses and phone numbers written on the organization's website. Websites built with Flash or other non-standard technologies may contain content that can't be found.

This website is using an established domain name (velvetfs.com).

Jun 30, 2021

Date of first registration

Jun 30, 2024

Date of domain expiry

Older and wiser

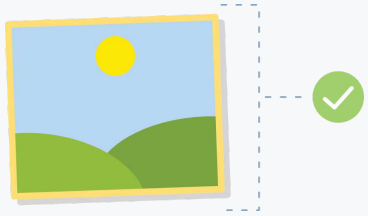
Older domains are more likely to rank well in search results. Search engines are known to mistrust very recently registered domains.

Source: Google LLC

The images on this organization's website are all web friendly.

Get your images right

Pictures on the web should be optimized for fast loading without being stretched out of proportion.



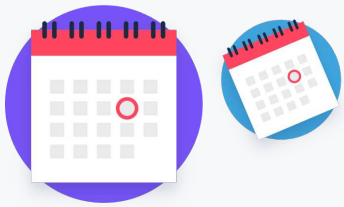
This website appears to have been updated recently.

9

Days since last update

Keep it fresh

Regularly updated content is critical for user engagement and search engine ranking.



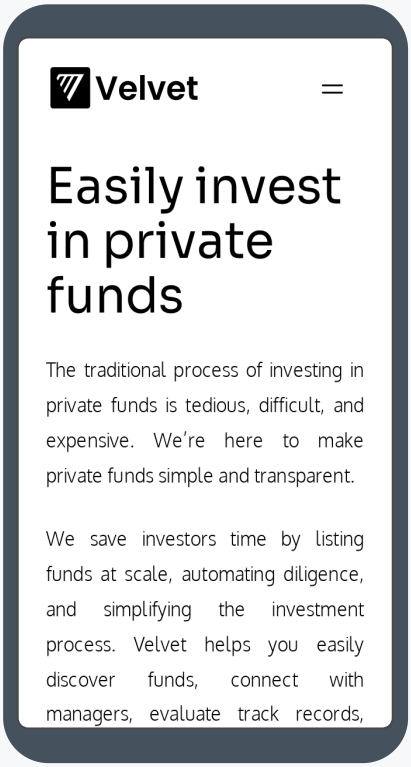
Recent updates

Date	Type	URL
7/30/23	Resource updated	/_next/image?url=%2F_next%2Fstatic%2Fmedia%2Frias.cd9902cf.png&w=3840&q=75
7/28/23	Resource updated	/_next/image?url=%2F_next%2Fstatic%2Fmedia%2Finvestment2.506c0061.png&w=3840&q=75
7/24/23	Resource updated	/_next/image?url=%2F_next%2Fstatic%2Fmedia%2Falternatives.93e87fbd.png&w=3840&q=75

We use a wide range of methods to determine the likely last-updated date of this website, including technical indicators and machine-readable dates within the text we have analyzed on the website. This

gives us a best approximate for when a website was updated, but we cannot know for certain. Some websites cannot be dated at all.

This website appears to be optimized for mobile phones.



Fits screen width

A mobile site should be free of horizontal scroll to avoid confusing users.

Has legible text

Text should be big enough to read on a mobile, without the need to zoom in.

Links are big enough to tap

Links on a website should be large enough to tap on a typical mobile screen.

Same content on mobile

Ideally websites should adapt to the screen size of the user's device, rather than loading separate HTML or redirecting to a separate mobile website.

Viewport is set

By setting the viewport, the website will load at a comfortable size.

We load the homepage for this website in a simulated smartphone, and then perform an analysis on the resulting code of the webpage. Some unusual websites can confuse this analysis. If in doubt, consult the screenshots above to determine if they look mobile-friendly.

This website is receiving traffic from search engines.

Less than 50 / month

Estimated visitors from search

10 search terms

Estimated number this website is listed for

Get traffic from search engines

Make sure you're being found in search engines for the right terms.

What you're found for today

Keyword	Position	Searches / mo	Traffic (%)	CPC	Page	Last seen
vellvet	61	70	0.00	$1.96	Home page	2023-07-11
velvate	97	70	0.00	$1.96	Home page	2023-07-21
marketplace gp	70	50	0.00	$0.00	Home page	2023-07-25
velvat	57	40	0.00	$1.96	Home page	2023-07-16
velvet	82 (⬆4)	5400	0.00	$1.73	Home page	2023-08-05

Best keyword opportunities

Keyword	Position	Searches / mo	CPC	Page	Last seen
velvate	97	70	$1.96	Home page	2023-07-21
celvet	93	70	$1.96	Home page	2023-07-22
vevlet	91	70	$1.96	Home page	2023-08-01
velvet	88 (⬇6)	5400	$1.73	Home page	2023-08-06
velvey	77	320	$1.96	Home page	2023-08-03

These are high traffic search terms that the business has a low ranking for. Consider optimizing for relevant terms.

What can I do to improve it?

Consider search engine optimization (SEO).

- SEO can bring you significantly more organic traffic.
- Generally SEO requires that you build up your content, links and the quality of your website.
- SEO takes time, but once the initial investment is made you can get more visitors for free.

Source: SEMrush

Analysis covers CA traffic only. Traffic is estimated by a 3rd party source using a sample of search engine results. Subdomains and websites with very low volumes of traffic are less likely to be detected.

This organization's website is using SSL to secure visitor data.

41 days

Left until expiry

Sep 18, 2023

Date of expiry

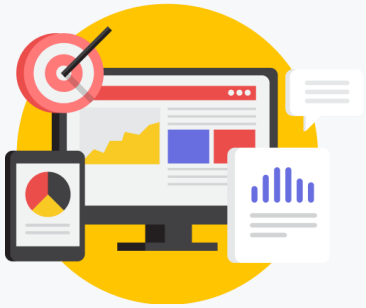
Encrypt everything

SSL ensures that information flowing to and from your website visitors is kept secure.

This organization appears to have a good number of monthly website visits.

Increase your total traffic

The total traffic represents the number of visits your site is receiving on a monthly basis.



Source: SimilarWeb

Number of visitors is estimated based upon a sample of visitors and their behavior. Private data collected by the website owner using a service like Google Analytics may be more accurate.

We couldn't determine if this organization appears in any directories at this time.

Some business listings may not have been discovered.

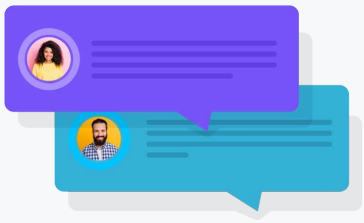
- As business information was not provided when starting the scan, we may not find all business listings.
- For best results, re-run the analysis and provide known correct business details for comparison.

We use a variety of techniques to identify which directories an organization is listed in. We may not discover a listing if the contact details do not match those on the website. This test covers many popular directories but cannot cover them all.

We couldn't determine if this organization has any reviews at this time.

Build up trust

Reviews help build consumer trust in your brand and products. 90% of customers say that their buying decisions are influenced by online reviews.



We looked for reviews of this organization in a limited number of tools. We use a combination of techniques to identify these, including matching by phone number and business name. If reviews are missing, they may be listed with conflicting contact information.

9

Number of pages tested

9

Number of pages found

The following pages were analyzed:

https://www.velvetfs.com/

https://www.velvetfs.com/contact

https://www.velvetfs.com/about-us

https://www.velvetfs.com/decheque

https://www.velvetfs.com/individuals

https://www.velvetfs.com/institutions

https://www.velvetfs.com/private-funds

https://www.velvetfs.com/privacy-policy

https://www.velvetfs.com/terms-and-conditions

For speed of analysis, we check no more than 15 pages from a website. In the vast majority of cases this will give results which are indicative of the whole website but, as with any technique which only deals with a limited sample, we cannot guarantee that those pages we have analyzed are representative of those we have not.