

AI in Athleisure Retail

The Impact of Generative AI on
Generation Z Pricing and Conversion

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Proprietary Virtual Try-On is the most effective AI tool for increasing Gen Z pricing and tolerance

Generative AI is moving from a basic customer service tool to a core driver of sales and profitability in the retail sector. As the global athleisure market heads toward a projected \$730 billion valuation by 2033, mid-market apparel brands face an existential threat: traditional product discovery is collapsing. Generation Z is bypassing standard search engines in favour of visually driven platforms and AI-powered concierges.

This shift has created a strategic battle over platform ownership. When third-party platforms (like ChatGPT or Google) intercept a customer's product search, brands risk immediate commoditisation. However, this study finds that when brands successfully embed AI directly into their own websites, they can actively generate new margin.

Primary Research: Virtual Try-On increases willingness to pay

Based on a controlled, scenario-based quantitative survey of 105 Gen Z consumers, Proprietary Virtual Try-On (VTO) is the singular AI investment that drives a statistically significant increase in consumer willingness to pay. Participants exposed to a brand-native VTO tool demonstrated a 5% increase in their absolute maximum willingness to pay for a standard athleisure garment. Conversely, text-based chatbots and external visual models failed to generate any significant financial shift.

Shift investment to visual technology

To survive this increasingly intermediated future, mid-market brands must shift capital allocation away from standard text-based conversational commerce and internalise their visual discovery ecosystems.

Gen Z bypasses traditional search, favouring visual platforms and AI to discover new apparel

AI Adoption

61%

of Gen Z consumers relied on AI tools to assist with an online purchase in the past year.

Over 50% of apparel shopping journeys begin online, but traditional "search-and-scroll" discovery is collapsing. Gen Z now bypasses standard search engines for conversational AI. This rapid shift to agentic commerce forces brands to evaluate how AI intercepts the customer journey before they ever reach a direct website.

Market Opportunity

\$730B

projected value of the global athleisure market by 2033.

Driven by a 9.5% compound annual growth rate, this expanding market demands technical apparel that transitions seamlessly to social settings. However, because athleisure requires an exacting fit, online purchase hesitation is high. Emerging AI technologies that mitigate fit anxiety will be able to justify premium price points

Shifting Trust

23%

of Gen Z shoppers now trust AI product recommendations more than human influencers.

Consumer trust is pivoting as influencer fatigue peaks. Gen Z increasingly views algorithms as objective and data-backed, rather than motivated by paid sponsorships. As traditional marketing wanes, understanding exactly which AI formats build true consumer purchasing confidence is an existential requirement for modern brands.

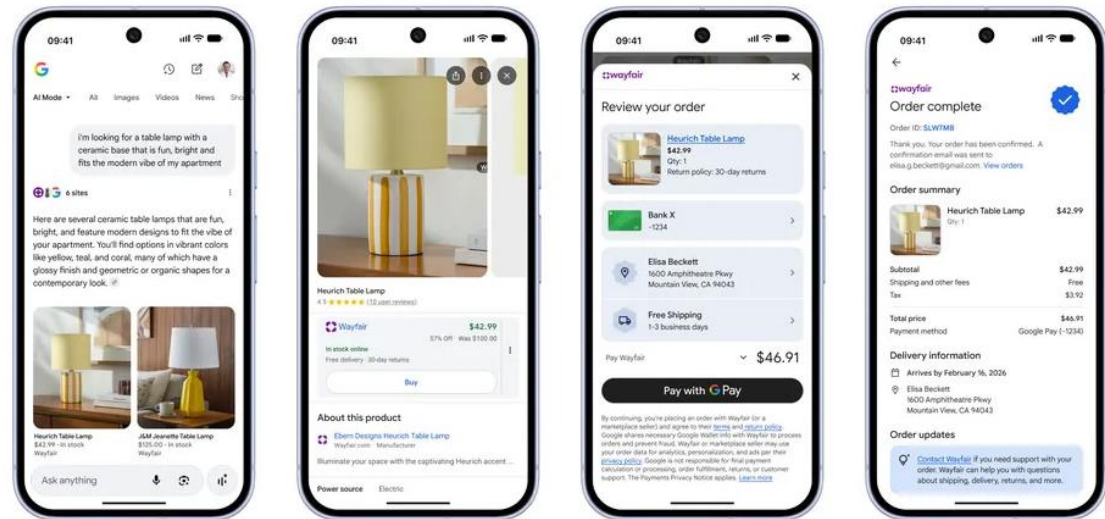
External AI intercepts shoppers early, making it harder for mid-market brands to compete

Third-party platforms intercept searches

Generative AI is currently disrupting the retail landscape through two distinct technological avenues. The first is Off-Platform AI, which acts as a massive intercept point for new product discovery.

ChatGPT and Google act as middlemen

Shoppers increasingly begin their journeys on third-party platforms like ChatGPT or Google's Universal Commerce Protocol. These platforms function as ultimate shopping intermediaries. They filter out simple price-sorting distractions and orient the consumer toward functional value before the shopper ever navigates to a retailer's direct site.



Google UCP AI interface. Search Engine Roundtable.

The battle for the first touchpoint

The business risk of brands losing control of the initial customer interaction is severe. Relying on third-party search platforms for visual discovery effectively commoditises the product, stripping the retailer of its ability to build direct brand equity or control the narrative around premium pricing.

Hosting AI natively on brand websites increases shopper retention and average order value

On-site AI increases order value

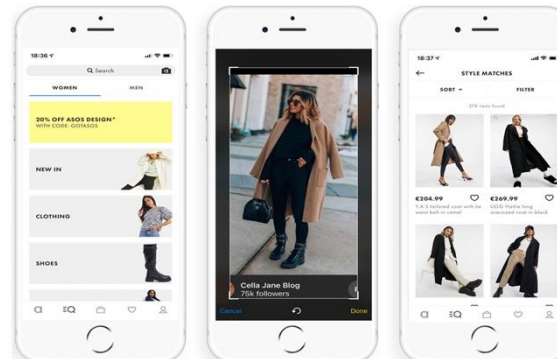
The second avenue is on-site AI. To combat upstream interception, brands are embedding AI directly into their proprietary ecosystems. Retailers are heavily investing in advanced Virtual Try-On (VTO) technologies and agentic assistants. By seamlessly integrating these tools into the mobile checkout flow, brands can hyper-tailor product feeds based on browsing history. This strategy autonomously drives up average order value by selling complete, curated looks rather than single items, keeping the consumer locked within the brand's walled garden.

Sephora: Implementation of proprietary AI-powered VTO significantly reduced uncertainty in visually driven product categories, leading to users being 3x more likely to complete a purchase.



Sephora Virtual Try-On. The Verge.

ASOS: The deployment of AI stylists to generate personalised outfits effectively lowered the cognitive cost of browsing, directly combatting the friction that usually leads to cart abandonment.



ASOS AI stylist. Recommend.

Other mid-market brands: Fast-growing mid-market players, such as Alo Yoga and Vuori, are adopting visual validation tools to justify their premium price points without relying exclusively on expensive influencer marketing campaigns.

Virtual Try-On justifies premium pricing by removing fit risk and simplifying purchase decisions

AI justifies premium prices

While consumers rarely accept explicit price premiums simply because a brand uses AI, the technology indirectly and powerfully drives behavioral willingness to pay through two primary psychological mechanisms:

1. VTO removes fit anxiety

Athleisure clothing often requires an exact, compressive fit. VTO technologies allow users to visualise exactly how a garment drapes on their specific body. Gen Z is more willing to pay full, premium prices when they have visual certainty, effectively paying to avoid the future friction and perceived risk of processing a return.

2. Chatbots make shopping easier

Conversational commerce drastically lowers the cognitive cost of shopping. By replacing endless grid-based scrolling with natural dialogue, the effort required to find the perfect item plummets. This streamlined experience increases a consumer's tolerance for spending.

Research question

While it is clear that AI accelerates discovery, a critical gap remains:

To what degree do platform ownership and interaction type of Generative AI impact Generation Z's willingness to pay in the mid-market athleisure sector?

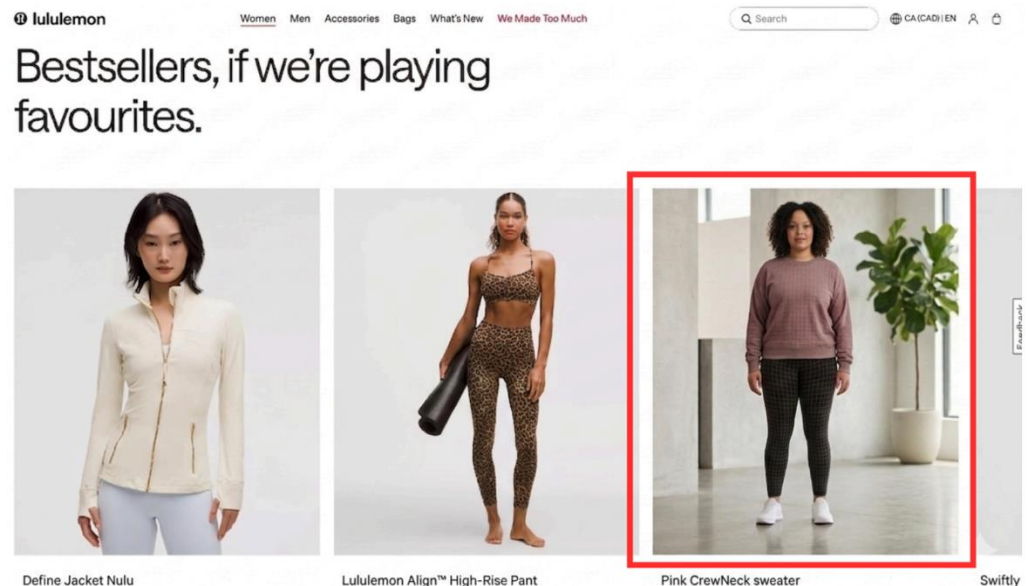
A scenario-based survey measured how AI tools impact Gen Z's maximum willingness to pay

Survey design

To evaluate how artificial intelligence impacts Gen Z consumer behavior, a scenario-based quantitative survey was designed, focused on isolating the effect of specific AI interventions on a shopper's willingness to pay. To ensure statistical validity and relevance to the mid-market athleisure sector, the study utilised a rigorously filtered sample size of 105 completed and verified responses from the Gen Z demographic (ages 18-27).

Setting the control product

The survey opened by capturing standard consumer habits to ensure the exact change in willingness to pay could be calculated once the AI tools were introduced. For the control product, a basic Lululemon pink crewneck sweater was selected. This specific garment was chosen because it is a recognisable, versatile staple. Using an everyday item minimised extreme personal style biases, ensuring that any shifts in perceived value were driven entirely by the AI shopping experience. Participants indicated their expected price and maximum willingness to pay for this control item across standardised price tiers ranging from \$50 to \$119.



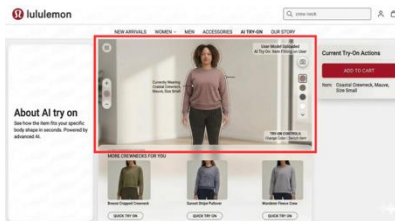
The survey tested four internal and external AI setups to measure consumer trust

How AI was tested

Following the control, participants evaluated the same product through four isolated digital scenarios. These interventions were designed to test two critical comparisons: visual versus text-based assistance, and proprietary brand AI versus general-purpose external AI.

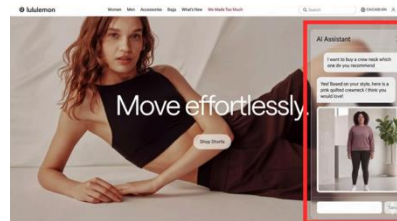
Participants were exposed to the following simulated digital environments:

1 Proprietary Virtual Try-On:



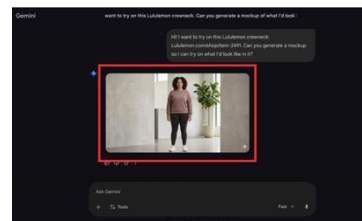
A simulated feature embedded directly on the brand's product page showing how the garment would fit the user's specific body shape.

2 Proprietary Onsite Chatbot:



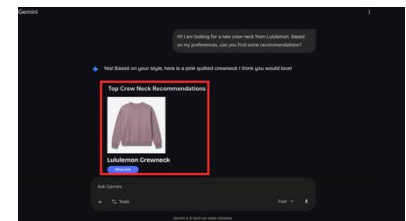
A conversational AI assistant integrated directly into the brand's website that recommended the product via a text interface.

3 General Purpose Visual Model:



A visual mockup generated by a third-party AI platform (Google Gemini) depicting a user wearing the requested crewneck.

4 General Purpose Text Model:



A text-based product recommendation provided by a third-party AI platform in response to a conversational query.

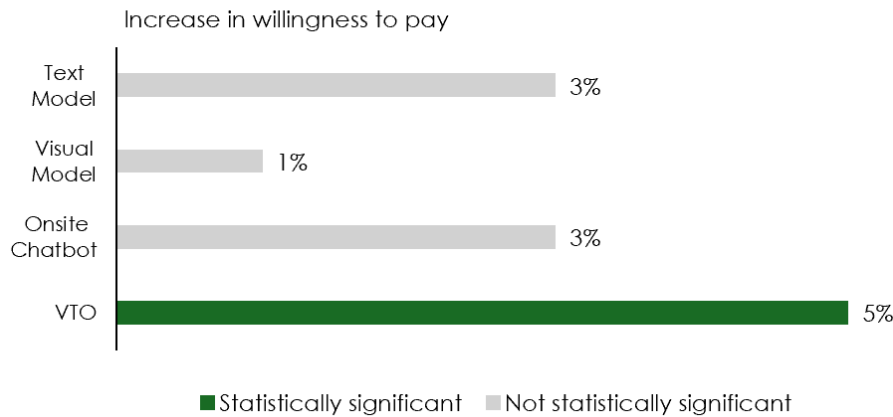
Proprietary Virtual Try-On drove a statistically significant 5% increase in willingness to pay

VTO is the only profitable tool

An analysis of the commercial impact of the four digital interventions against the baseline revealed a clear strategic directive: Proprietary Virtual Try-On stands as the singular AI investment that actively generates new margin.

Participants exposed to the brand-native VTO tool demonstrated a statistically significant 5% increase in their maximum willingness to pay compared to the baseline. For a high-friction category like athleisure, consumers assign direct, quantifiable financial value to visual certainty. The brand eliminates the anticipated friction of processing a return, and consumers are willing to pay a premium for that frictionless confidence.

Proprietary Virtual Try-On (VTO) is the sole AI intervention proven to drive a statistically significant increase in willingness to pay.



Other models failed to increase price

Conversely, both text-based AI models and the general-purpose external visual model failed to generate any statistically significant shift in willingness to pay.

The external visual model, despite providing a visual output, failed because it lacks proprietary accuracy. Generation Z consumers intuitively recognise that a third-party generative AI does not have access to a brand's precise sizing metrics, fabric draping physics, or verified SKUs. Therefore, it is perceived as a synthetic approximation rather than a true validation of fit, failing to unlock premium pricing leverage.

Chatbots aid discovery, but visual AI is required to close premium sales

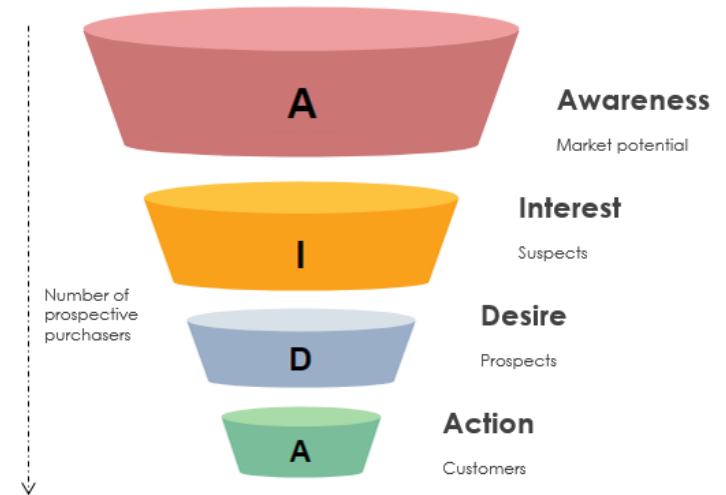
AI in the sales funnel

The disparity in commercial impact between visual and text models aligns directly with the classic AIDA consumer framework of Attention, Interest, Desire, and Action.

Text AI works for search

Text-based AI models and conversational chatbots operate almost exclusively at the top of the funnel during the Attention and Interest phases. They function as highly efficient discovery and search engines. While they successfully guide Gen Z consumers to a product and answer technical queries, they do not provide the sensory validation required to push a consumer into the final purchasing stages.

Consumer profile data from the survey also supports this behaviour, with over 50% of users indicating that they primarily use AI in styling assistants or AI visual models. This suggests that Gen Z consumers use AI as a confirmation mechanism rather than as a replacement for traditional product discovery.



AIDA funnel framework. LinkedIn Article Assets.

Visual AI closes the sale

Conversely, proprietary VTO operates seamlessly across the Desire and Action phases. A consumer's maximum willingness to pay is determined in the final moments before checkout, a stage where physical fit risk and financial hesitation peak. Because VTO acts as the ultimate validation mechanism right before the Action phase, it is the only technological intervention positioned to confidently capture surplus margin.

High-quality, personalised digital tools significantly improve a brand's overall perceived value

VTO makes brands feel premium

While VTO successfully elevated the absolute ceiling of what Gen Z will pay, an analysis of their underlying price expectations revealed a critical nuance in consumer psychology.

The data indicates that VTO does not blindly expand profit margins by tricking consumers into overpaying for standard goods. Instead, it improves the overall brand perception, triggering a "Premium Halo Effect". Ultimately, a highly personalised digital experience elevates the perceived value of the entire brand ecosystem.

Shoppers expect higher prices

When analysing the Pricing Power Gap (Maximum Willingness to Pay minus Expected Price), the gap remained relatively stable across interventions. Consumers implicitly raised their baseline expected price in parallel with their maximum willingness to pay. Because the digital experience successfully removed their fit anxiety, they naturally assumed the garment would carry a higher price tag and they were entirely willing to meet that elevated expectation.

The Premium Halo Effect

A cognitive bias where a sophisticated digital experience elevates perceived brand value, shifting price expectations upward across the entire product ecosystem, not just the item being viewed.

Improving purchasing confidence

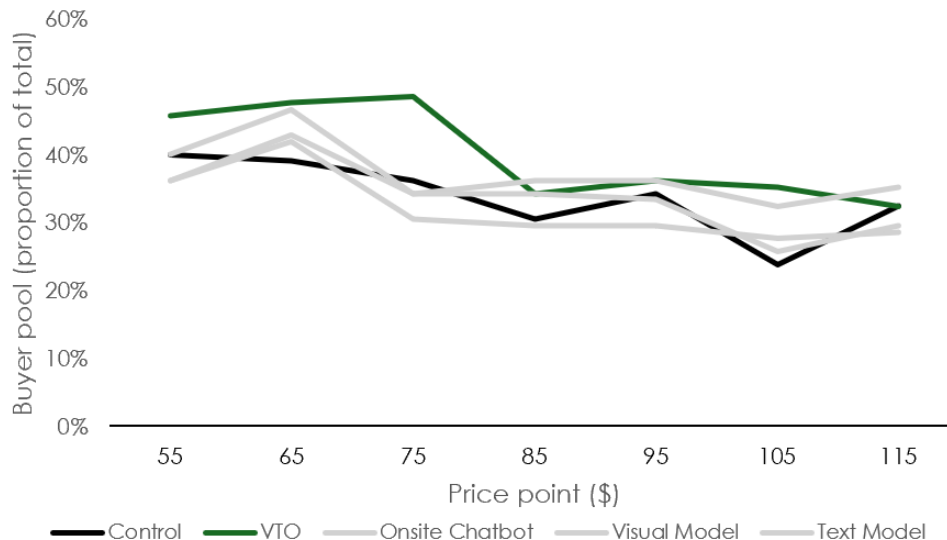
Many participants reported an increased positive shopping experience after interacting with the VTO interface, with positive purchase responses increasing from 35% in the control condition to 54% under the VTO condition. As VTO visually stimulates ownership and reduces perceived fitting risks, it creates a stronger sense of certainty and reassurance compared to text-based models or chatbots, which are less effective at validating purchase decisions.

Virtual-Try On sustains sales volume at higher price tiers by building purchase confidence

Tracking sales volume by price

To understand how these AI tools impact sales volume at scale, purchase intent was aggregated across standardised price tiers to construct comparative demand curves.

Proprietary visual validation expands pricing power, while text-based AI and third-party tools fail to outperform the baseline.



Sales volume drops sharply at \$75

Under baseline conditions, the brand experiences a sharp "pricing cliff" at the \$75 mark, where purchase intent begins to aggressively fracture and volume drops off. However, the introduction of the VTO intervention fundamentally altered this behavior, pushing the brand's price resilience significantly higher.

VTO sustains sales at higher prices

At the critical \$75 premium tier, the VTO scenario captured a substantially larger proportion of the buyer pool compared to the control. This retained volume represents customers who would normally abandon a premium purchase due to fit anxiety but are recaptured by visual validation. The text and external visual models clustered tightly around the baseline, visually reinforcing their inability to defend sales volume against premium price hikes.

Mid-market brands must prioritise internal visual discovery tools over text-based chatbots

How brands should invest

These findings present a critical inflection point for capital allocation, requiring mid-market athleisure brands to strategically realign their generative AI investments.

To survive the intermediated future of retail, investments should focus on the following core directives:

1 Divest from Conversational Pricing Strategies

Capital deployment into text-based conversational commerce should be restricted to customer support budgets. These tools do not possess the psychological leverage required to justify premium pricing or expand margins.

2 Internalise the Visual Discovery Ecosystem

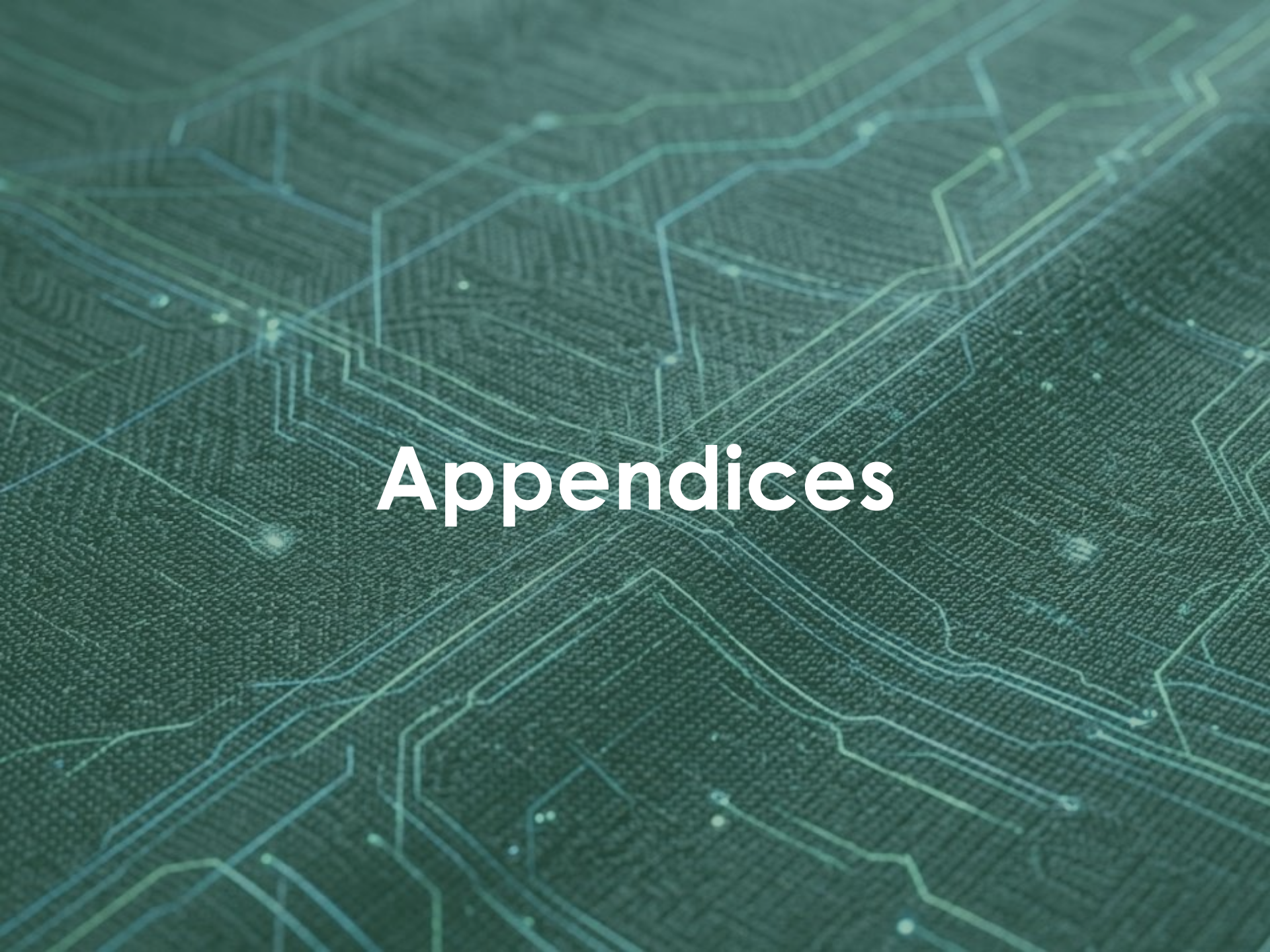
Relying on third-party search platforms for visual discovery commoditises the product. Brands must implement proprietary VTO as an integrated component of their native checkout flow to capture the margin premium.

3 Monetise VTO via Premium Product Expansion

Because Gen Z consumers remain highly price-resilient at premium tiers when validated by VTO, retailers should exploit this segment by launching ultra-premium product lines exclusively accessible via native VTO interfaces.

Brand building

Ultimately, visual validation extends well beyond immediate margin expansion. When implemented as a seamless component of the branded shopping experience, VTO functions as a core trust-building system. By neutralising fit risk at the exact moment of conversion, it provides the reassurance necessary to not only close the premium sale but to foster long-term Gen Z brand loyalty.



Appendices

Testing Framework and Significance Thresholds

To evaluate the commercial impact of the four generative AI interventions, paired samples t-tests were conducted. This repeated-measures framework isolated the technology's effect by comparing each participant's baseline valuations against their valuations under the isolated AI scenarios. We set the statistical significance threshold at a 95% confidence interval with critical value $p < 0.05$.

Variance Testing: Maximum Willingness to Pay

The analysis of the absolute ceiling of consumer spending yielded one statistically significant intervention:

- Proprietary Virtual Try-On: +5% increase ($p < 0.05$). Statistically significant.
- Proprietary Onsite Chatbot: +3% nominal increase ($p > 0.05$). Not statistically significant.
- External Text Model: +3% nominal increase ($p > 0.05$). Not statistically significant.
- External Visual Model: +1% nominal increase ($p > 0.05$). Not statistically significant.

Variance Testing: Pricing Power Gap

The Pricing Power Gap (Maximum Willingness to Pay minus Expected Price) was analysed to test for perceived brand value. Across all four interventions, the change in the gap was not statistically significant ($p > 0.05$). For the Virtual Try-On scenario, this mathematically validates the "Premium Halo Effect." Consumers implicitly raised their baseline expected price in parallel with their willingness to pay, proving that high-fidelity native visual tools elevate the premium perception of the entire brand ecosystem.

Sample Size and Qualification

To ensure statistical validity and relevance to the mid-market athleisure sector, the study utilised a filtered sample size of N = 105 completed and verified responses. All participants were screened to ensure they fit within the Generation Z demographic cohort (defined for this study as ages 18 to 27).

Demographic Breakdown

- **Age:** The median age of respondents was within the ages of 21-23 years old, aligning with the core purchasing block of the Generation Z athleisure market.
- **Geography:** The sample was drawn exclusively from Canadian consumers to maintain relevance to mid-market brand pricing expectations.
- **Purchasing Frequency:** 75% of the sample identified as frequent athleisure buyers (purchasing 3 or more items per year), ensuring the baseline pricing expectations were rooted in active market context.
- **Spending Profile:** Most respondents reported spending between \$50 and \$150 per purchase, indicating that the sample reflects a strong mid-market consumer base.

Mockup Generation

Google Gemini was used to generate the visual mockups shown to survey participants. Strict prompt engineering techniques were applied within Gemini's image generation tool to standardise specific variables across all visual outputs, including clothing type, user interface layout, lighting conditions, and demographic representation. This ensured high realism and brand consistency, preventing poor image quality from introducing negative bias into the willingness-to-pay responses.

Data Collection

Participants were asked to evaluate their willingness to pay by answering the following set of questions for this item under four isolated scenarios.

How likely would you be to purchase this product if you were shopping for athleisure?

	Extremely unlikely		Somewhat unlikely		Neither likely nor unlikely		Somewhat likely		Extremely likely
	1	2	2	3	3	4	5	5	6
Please choose a number									

What prices would you purchase this product at?

	\$50-\$60	\$60-\$70	\$70-\$80	\$80-\$90	\$90-\$100
What price would you expect to pay for this product?	☐	☐	☐	☐	☐
What is the maximum price you would be willing to pay for this product?	☐	☐	☐	☐	☐

How likely would you be to purchase this hoodie at the following prices?

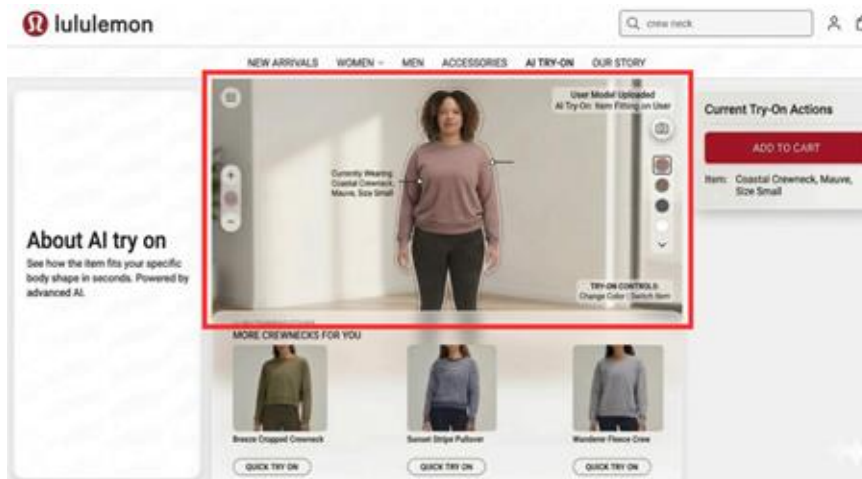
	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
\$50-\$59	☐	☐	☐	☐	☐
\$60-\$69	☐	☐	☐	☐	☐
\$70-\$79	☐	☐	☐	☐	☐
\$80-\$89	☐	☐	☐	☐	☐
\$90-\$99	☐	☐	☐	☐	☐
\$100-\$109	☐	☐	☐	☐	☐
\$110-\$119	☐	☐	☐	☐	☐

Survey Questions

To prevent anchoring bias and ensure consistent evaluation, all participants were presented with the exact same standard Lululemon pink crewneck sweater as the baseline product.

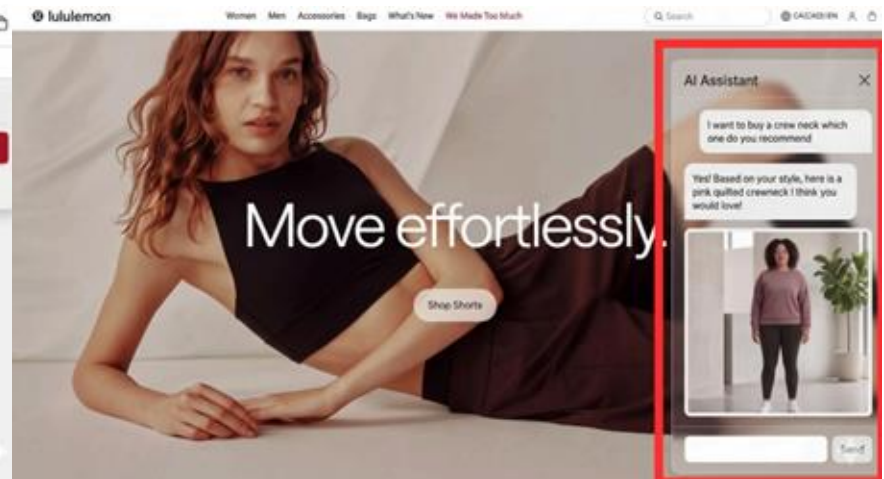
Scenario 1: Proprietary Virtual Try-On (Brand-Native Visual)

"Imagine you are viewing this sweater on the brand's official website. You click a 'Virtual Try-On' button. The website uses your uploaded photo to generate a highly accurate, 3D image showing exactly how this specific garment drapes and fits your unique body shape."



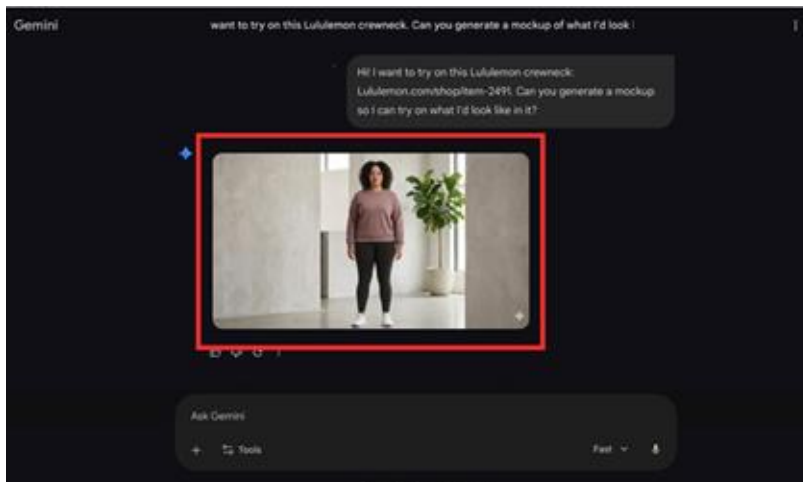
Scenario 2: Proprietary Onsite Chatbot (Brand-Native Text)

"Imagine you are on the brand's official website. You engage with an integrated chat window. The automated text assistant asks a series of questions about your lifestyle and fit preferences, subsequently recommending this exact sweater as the optimal choice for your needs."



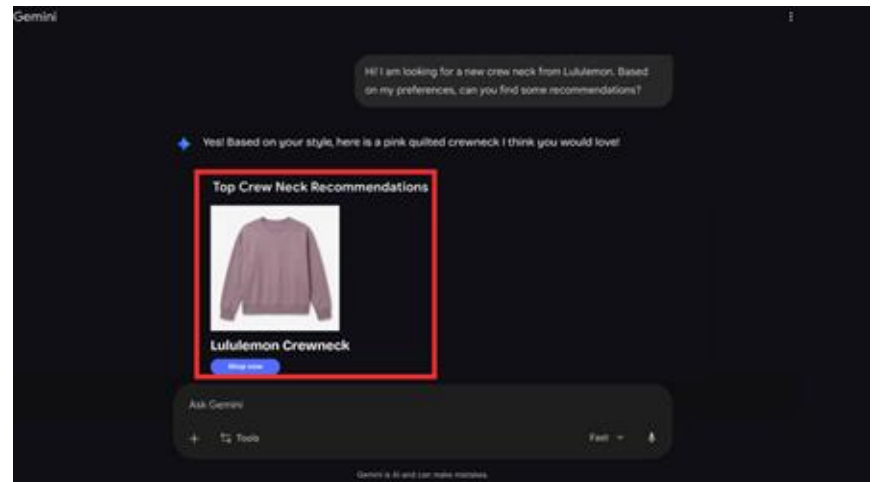
Scenario 3: General Purpose Visual Model (External Visual)

"Imagine you are using a third-party AI platform, such as Google Gemini. You ask the AI to generate a visual mockup of a person with your exact height and build wearing this Lululemon sweater so you can approximate how the style looks before you search for it online."



Scenario 4: General Purpose Text Model (External Text)

"Imagine you ask a third-party AI platform, such as Google Gemini, for athleisure recommendations. The AI provides a detailed text response explaining why this specific Lululemon sweater is highly rated and technically suited for your specific workout requirements."



Hypothetical Bias

The primary limitation of this scenario-based quantitative survey is the inherent presence of hypothetical bias. Because participants are not executing a live transaction with personal funds, the psychological "pain of paying" is artificially reduced. Consequently, the absolute revenue maximization curve derived from this data is likely more inelastic than real-world market conditions. The strategic recommendations account for this limitation by focusing on margin defense and baseline protection rather than aggressive, absolute price hikes.

Brand and Category Specificity

The control garment selected for this study was a recognizable item from Lululemon, a premium mid-market brand. The 5% pricing premium generated by Virtual Try-On is heavily reliant on the pre-existing brand equity of the retailer. Lower-tier or discount retailers may not experience the same "Premium Halo Effect" when introducing native AI tools. Furthermore, these findings are highly specific to high-friction, fit-dependent apparel and may not translate linearly beyond athleisure to low-friction retail categories such as accessories or cosmetics.

Execution and Interface Friction

The survey evaluated the conceptual psychological value of these AI tools. In a live commercial environment, the success of Proprietary Virtual Try-On is entirely dependent on the quality of the user interface. High latency, inaccurate visual rendering, or a complex user journey will introduce new friction that can completely negate the 5% margin premium identified in this controlled study.

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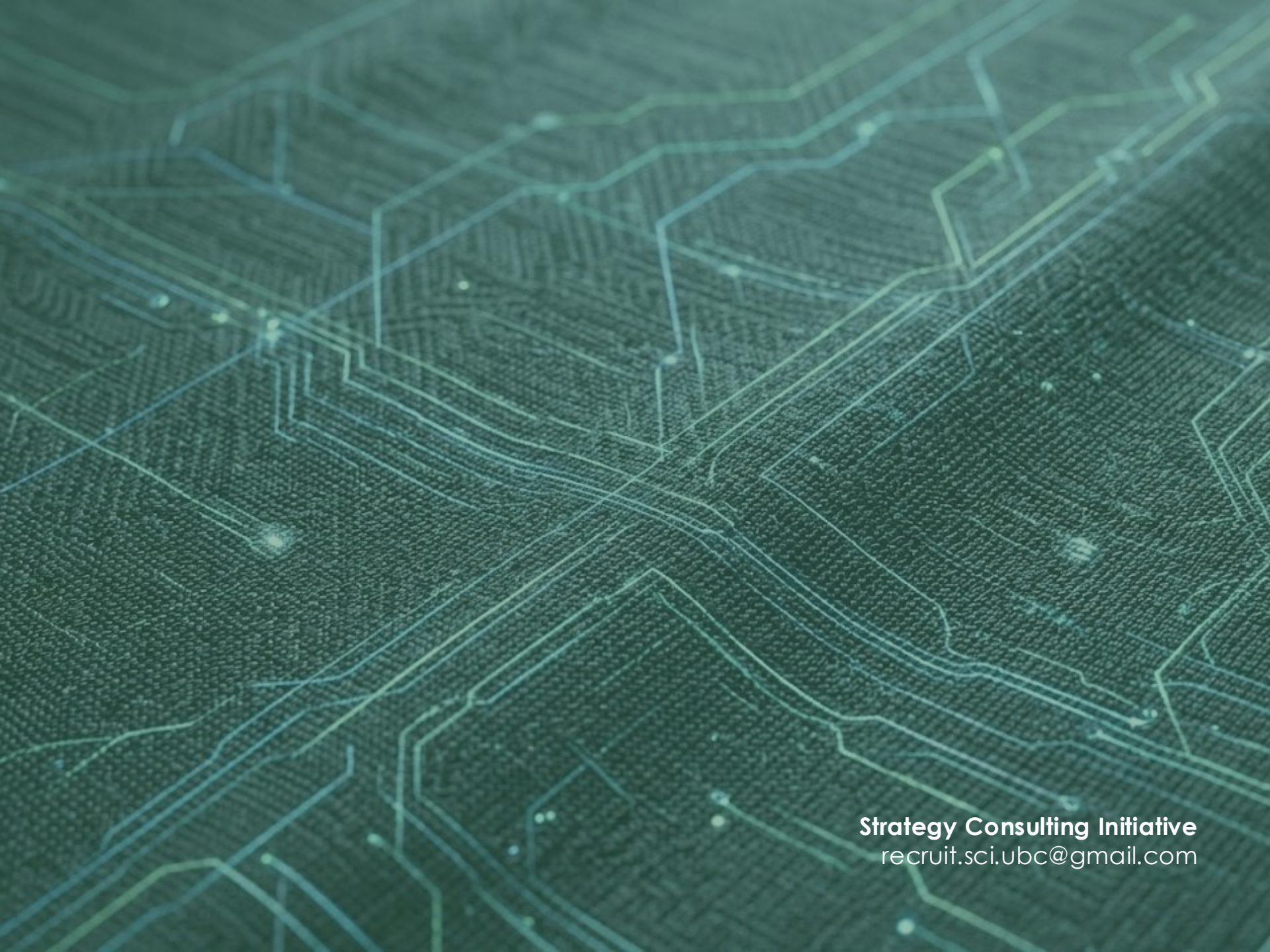
Figures:

Figure 1: Google UCP AI Mode interface. Source: *Search Engine Roundtable*.

Figure 2: Sephora Virtual Artist UI mockup. Source: *The Verge*.

Figure 3: Style Match Visual Search Tool layout. Source: *Recommend.pro*.

Figure 4: Consumer Psychology / Funnel framework. Source: *LinkedIn Article Assets*.



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