

Bridging the Data "Gap"

Web Data Analytics
Team Project

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About Gap Inc

Background

Founded:
1969, SF, California

Core Brands:
Gap, Old Navy, Banana Republic, Athleta

Business Model:
Retailer of clothing, accessories, and personal care products

Global Presence:
Company-operated stores, franchise stores, e-commerce sites

2021 Net Sales:
\$16.7 billion

Big Data & Marketing

Approach

Emphasis on a data-driven model to refine inventory, enhance customer engagement, and predict trends

Challenges & Opportunities

Balancing data analytics with creative processes to maintain brand authenticity and appeal

Future Outlook

Strategic Focus

Enhancing omni-channel retailing, expanding product offerings, and building on the purpose-led portfolio.

Market Trends

Navigating the evolving retail landscape shaped by technology, sustainability, and changing consumer preferences.

Recent Initiatives

Sustainability

Digital Transformation

Collaborations & Partnerships

Diversification

Challenges faced by Gap Inc

1

Brand Stagnation

- Historical Struggles
- Relevance Issues

2

Economic Headwinds

- Post-lockdown Effects
- Cost Pressures
- Inflation rate hikes
- Reduced Spending

3

Leadership Void

- CEO Absence
- Strategic Misstep
- Need for modern Leadership
- Strategic Misdirection
- Lack of Vision

4

Store Closures and Online Strategy

- Physical vs. Digital
- Online Penetration
- Consumer Behaviour

5

Financial Underperformance

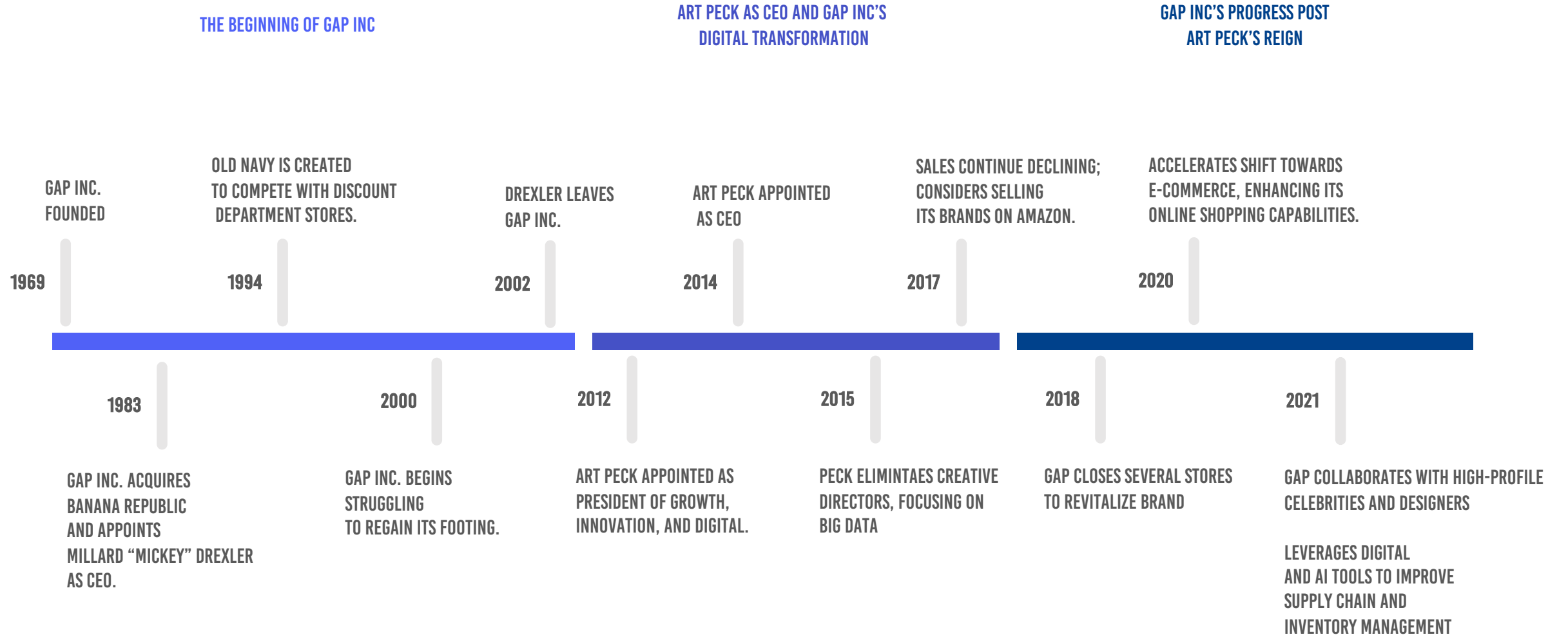
- Operational inefficiencies
- Revenue Stagnation
- Questionable financial decisions

6

Competitive Landscape

- Underperformance
- Market Share Loss
- Valuation Concerns

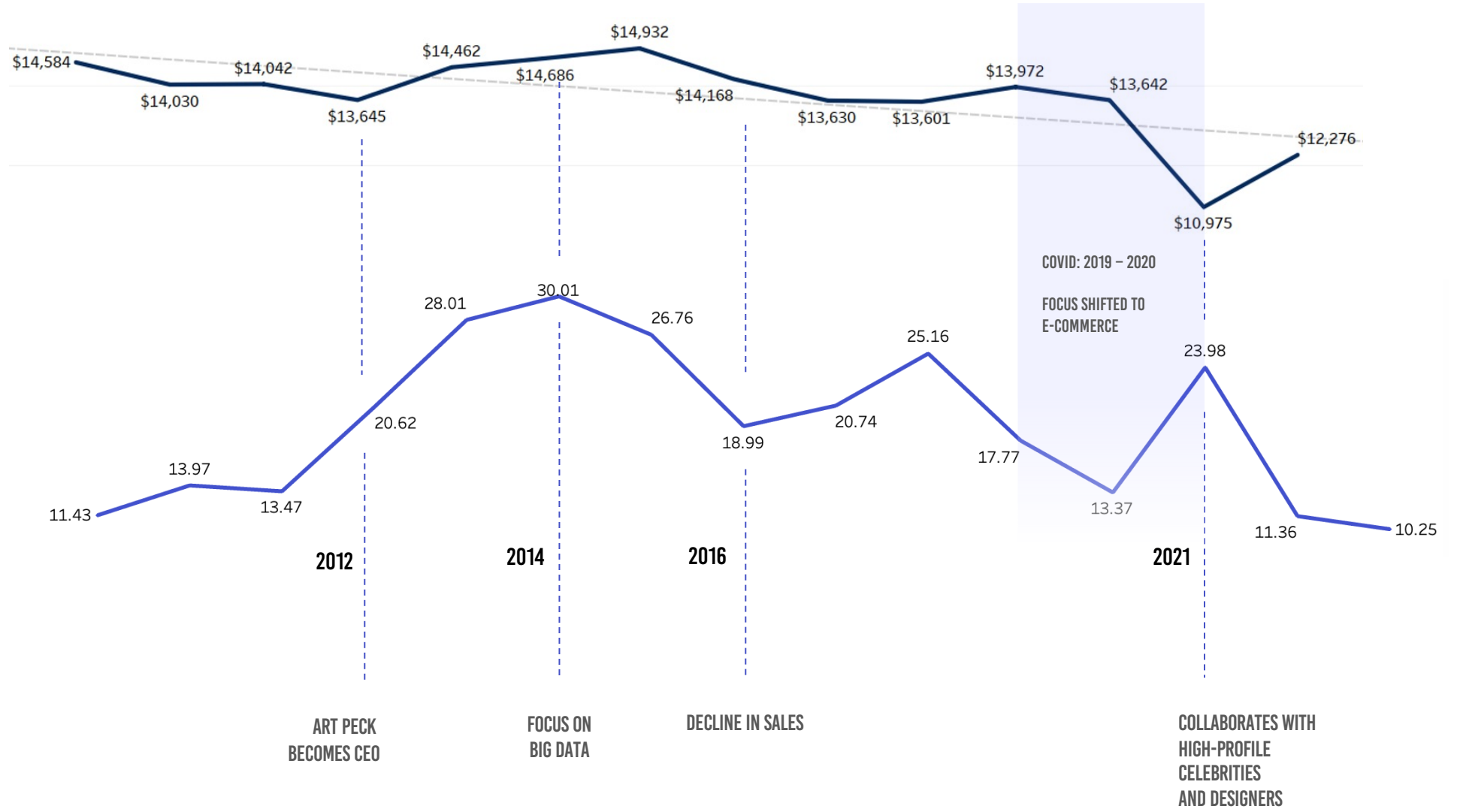
Bringing it together



Gap Inc trends: 2009 - 2022

INFLATION
ADJUSTED
REVENUE

STOCK PRICE



Art Peck and his data strategy

Art Peck

Positions Held

- 2012, President of Growth, Innovation & Digital
- 2014, CEO

Peck's Changes at GAP

- Focus on big data
- Reduced Reliance on Creative Directors
- E-commerce Expansion
- Technology Investments
- Fast Fashion Adaptation
- Inventory Management
- Brand Revitalization

Challenges and criticism faced during Peck's period

Performance Pressure: Peck faced pressures due to declining sales and profits, and his strategies, particularly the heavy reliance on data, were under scrutiny for not delivering the expected turnaround in the company's fortunes.

Leadership Changes: There were also significant leadership changes during his tenure, marking a period of transition and adjustment for the company.

Experiment to check if Peck's strategy was impactful

We ran a hypothesis test using the average revenue between 2009 - 2015 and 2016 - 2022 to check the impact of Peck's strategy

H_0 = mean revenue (2009 - 2015) \leq mean revenue (2016 - 2022)

H_a = mean revenue (2009 - 2015) $>$ mean revenue (2016 - 2022)

Results

p-value = 0.03870

Rejecting H_0 , mean revenue (2009 - 2015) is not less than mean revenue (2016 - 2022)

Conclusion

The test serves as the statistical basis that Art Peck could not revive sales/ revenue as CEO. In conclusion, his decision to fire creative directors becomes questionable.

There are always some decisions where Art and science just have to come together.

What data to collect to aid the data-driven creative process

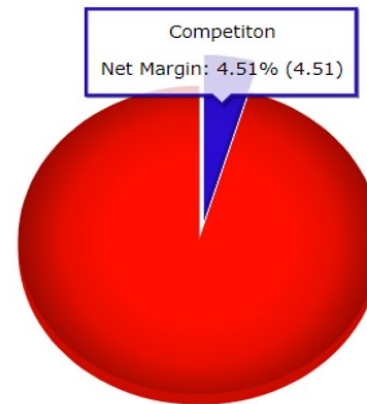
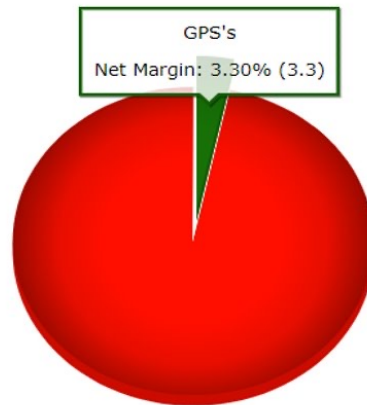


What price points are popular: Trend reports and market analysis to inform designs for next season's collection, based on economic conditions helps us decide materials within our price points to maximize margins



Popular product launches in the past: Enrich product ideation by collaborating with AI agents that generate creative options (for example, new ideas, variations) from data. This scenario became reality in December 2022, when a group of Hong Kong-based fashion designers from the Laboratory for Artificial Intelligence in Design (AiDLab) held a fashion show featuring generative-AI-supported designs
Every fashion business owner knows that to lead the industry, one should be a trendsetter. Retail analytics helps launch new products based on the mass appeal in the consumer market

https://csimarket.com/stocks/compet_glance.php?code=GPS



Competitors averaged :

Abercrombie and Fitch Co
Nordstrom Inc
Urban Outfitters Inc
Dillard s inc
Delta Apparel Inc
Ever glory International Group Inc
Fossil Group inc
Kohl s Corp
Macys Inc
Ross Stores Inc
Target Corporation
The Tjx Companies Inc
Guess Inc etc

What data to collect to aid the data-driven creative process



Popular customer preferences: AI algorithms predicting trends and analyzing customer preferences, fashion businesses can create designs that are more likely to be popular with their target market and reduce the risk of producing designs that don't sell. A **"made-to-order" approach** using data and analytics leverages consumer insights to make goods that are custom-made for the buyer and guaranteed to sell, reducing waste



Current customer sentiment of the brands products: The majority of Amazon customers have a positive view of GAP products, with 64.33% expressing favorable sentiments. However, while negative feedback is minimal at 2.03%, a significant 30.25% remain neutral, suggesting the brand meets basic expectations but may have areas for improvement.



Customer behaviour : Brands can always provide their valued or premium customers with personal shoppers that assist their buying decision as well as notice their consumer behavior. Product performance on social media and the analytics consisting of likes, shares, and comments can predict the success of the product before launch. Data can be collected from the purchases made online and the information filled by the customer while making those purchases.

Reviewed in the United States on September 19, 2023

I was sent the wrong hoodie. Wanted the red with black lettering ...was sent the red with a darker red velvet like lettering. Purchased on Amazon day for 20 bucks so I will gift it not worth returning. 5 stars for being a quality Gap product.

[Read more](#)

Reviewed in the United States on September 15, 2023

Soft feeling inside the sweater. Looks great, and it reminds me back when I was in middle school and freshmen year of High School. Awesome!

[Read more](#)

Reviewed in the United States on September 25, 2023

Fits well, Very warm and comfortable

[Read more](#)

Reviewed in the United States on September 24, 2023

Luh calm hoodie

[Read more](#)

Reviewed in the United States on September 1, 2023

SÃper agradable , muy buena calidad , ajuste perfecto , me encanto

[Read more](#)

Reviewed in the United States on August 23, 2023

Percentage of 'positive' sentiments: 64.33%
Percentage of 'negative' sentiments: 2.03%
Percentage of 'neutral' sentiments: 30.25%
Percentage of 'mixed' sentiments: 3.39%

What data to collect to aid the data-driven creative process

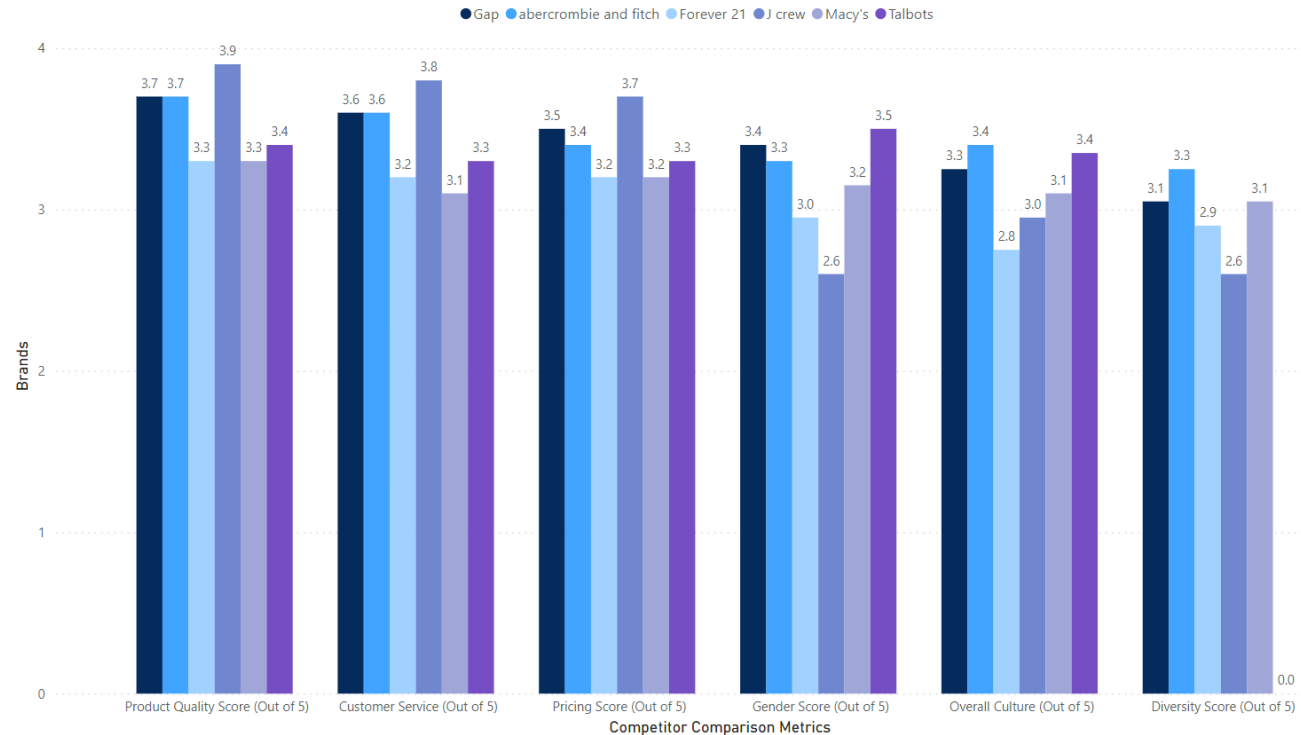


Competitor comparison metrics

- **Competitor revenue, customers, branding**
- Products (features, prices)
- Marketing methods (digital marketing, offline marketing, channels, customer service)



Brands by Competitor Comparison Metrics



<https://www.comparably.com/companies/gap/competitors>

Competitor Analysis

Gap Inc. is a strong competitor in the retail industry, ranking 2nd in CEO Score when compared to rivals like Abercrombie & Fitch, Talbots, Macy's, J. Crew, and Forever 21. It also holds commendable positions in other categories, securing 2nd place in Gender Rank, Product Quality, and Pricing. However, there's room for improvement in areas like eNPS, Diversity, NPS, and Customer Service, where Gap Inc. ranks 3rd among its competitors.

Old Navy

Brand Identity: Value-based, family-oriented, and fun; offers trendy, high-quality clothes at an affordable price point



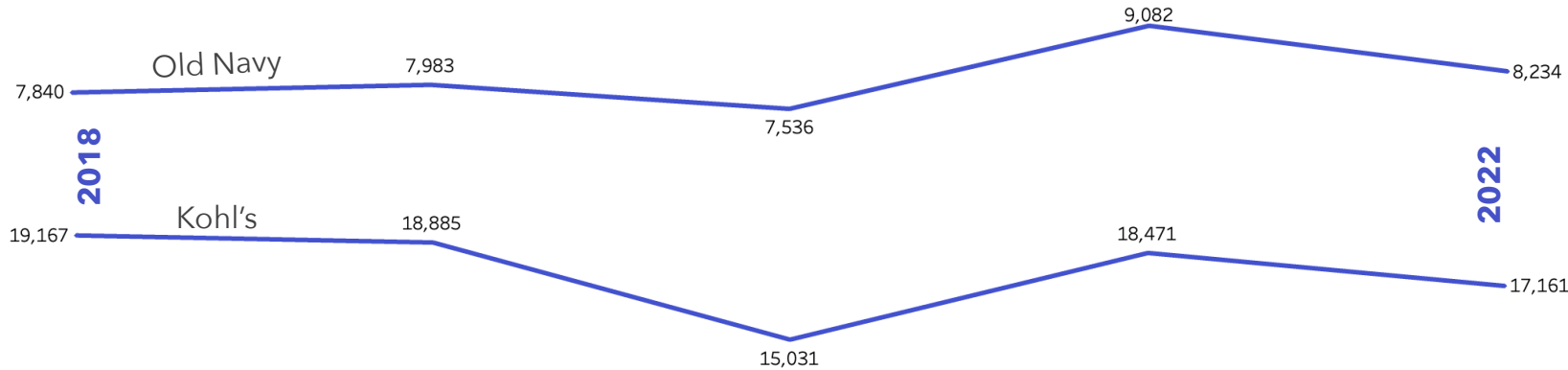
About the brand

Old Navy is Gap Inc.'s family-friendly brand, recognized for its affordability without compromising on style or quality. With its fun, quirky campaigns and broad range of sizes, Old Navy promotes inclusivity.

Big Data Approach?

Old Navy being a mass fashion brand needs to focus more on the "time-to-market" aspect of fashion compared to the design aspect. Therefore in order to get the product out in the market quickly at a competitive price, the role of data becomes important for the supply chain of Old Navy.

Competitor Analysis: Net Sales from 2018 - 2022



Data Requirement Recommendations		
Design	→	High Impact
Production	→	High Impact
Marketing	→	Medium Impact

Kohl's

Kohl's is a leading American department store, that emphasizes value, variety, and convenience for families. Catering to a broad demographic, Kohl's offers a wide range of products from apparel to home goods, blending national brands with exclusive labels. The brand prides itself on its commitment to community and sustainability, often engaging in charitable initiatives. With its loyalty programs and regular promotions, Kohl's positions itself as a destination for savvy shoppers seeking quality and value. The brand's ethos revolves around inspiring and empowering families to lead fulfilled lives by offering products that enhance their everyday experiences.

<https://www.sec.gov/edgar/browse/?CIK=39911&owner=exclude>



Brand Positioning

Fun, family-oriented brand offering affordable and trendy clothing.

Department store emphasizing value and discounts.

Strengthen brand identity, like family matching outfits and inclusive sizing.

Product Range

Primarily apparel with a consistent style.

Broad range including various brands and non-apparel items.

Explore collaborations or introduce limited-time collections.

Pricing and Promotions

Known for frequent sales and promotions.

Heavy discount model with Kohl's Cash and loyalty incentives.

Introduce a loyalty program or subscription model.

Store Experience

Consistent, recognizable store design.

Larger stores with various departments.

Enhance in-store experiences with tech integrations.

Online Presence

Strong online presence with engaging campaigns

Significant online presence, could benefit from dynamic content.

Leverage user-generated content and engage with influencers.

Sustainability Initiatives

Efforts towards sustainability but could be emphasized more.

Various sustainability initiatives and promotes eco-friendly products.

Launch sustainable collections and emphasize eco-friendliness in branding.

Customer Engagement

Engages with sales, email campaigns, and a credit card program.

Kohl's Cash program and a credit card offering rewards.

Introduce a points-based loyalty program or exclusive member events

Collaboration & Partnerships

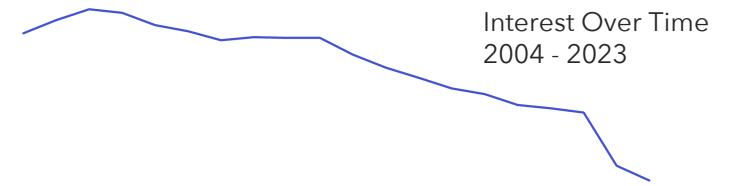
Occasional collaborations with designers or celebrities.

Partners with high-end brands and designers for exclusive lines.

Explore more high-profile collaborations to attract a broader customer base.

Gap

Brand Identity: Iconic American style, modern, optimistic, and versatile apparel rooted in denim and khakis



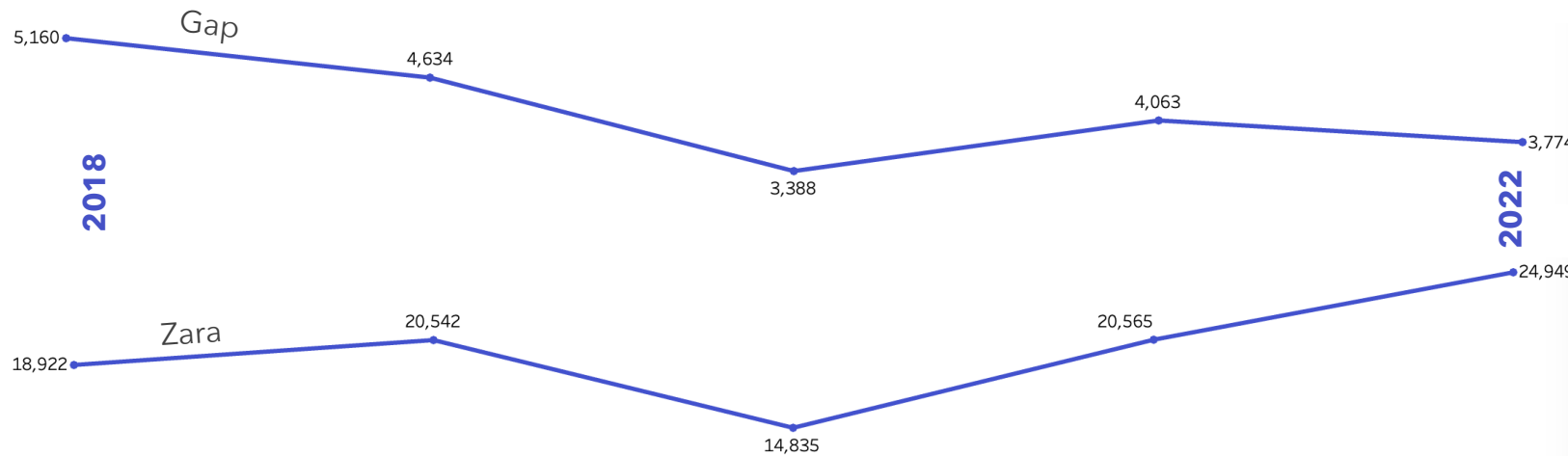
About the brand

Standing as a cornerstone of American casual style, GAP is all about optimistic, relaxed, and accessible fashion. While it started with a single shop selling jeans, it soon became symbolic of relaxed American style.

Big Data Approach?

GAP can harness big data to identify real-time fashion trends, optimize stock levels, and tailor its online shopping experience, ensuring its mid-tier fashion remains appealing and relevant to a broad, global audience.

Competitor Analysis: Net Sales from 2018 - 2022



Data Requirement Recommendations

Design	→	High Impact
Production	→	Medium Impact
Marketing	→	High Impact

Zara

Zara, a flagship brand of the Inditex Group, epitomizes fast fashion, offering the latest trends at accessible prices. Renowned for its rapid turnaround of styles, Zara captures the zeitgeist of contemporary fashion, translating runway designs into wearable pieces for the masses. The brand operates on a unique business model, with a robust supply chain that allows for quick adaptation to market demands. Zara's stores, with their minimalist design, serve as a canvas for its ever-evolving collections. The brand's essence lies in its ability to democratize fashion, making the latest styles available to everyone, everywhere, in record time.



Brand Positioning

Classic, American style with a focus on basics and denim.

Fast fashion, trendy, and up-to-date with current global styles.



Rebrand to emphasize modern, sustainable, and inclusive fashion.

Product Range

Basics, denim, and seasonal collections.

Rapidly changing collections based on current fashion trends.



Introduce limited-time collections inspired by global trends.

Pricing and Promotions

Mid-range pricing with frequent sales and promotions.

Competitive pricing with fewer promotions.



Consider a dynamic pricing model and reduce frequency of sales to maintain brand value.

Store Experience

Consistent store design with a focus on heritage.

Modern, frequently updated store layouts showcasing the latest collections.



Modernize store layouts and introduce tech-enhanced shopping experiences.

Online Presence

Strong online presence but could benefit from more dynamic content.

Strong online presence with quick updates on new arrivals.



Enhance online shopping experience, streamline checkout process, and use AI for personalized recommendations.

Sustainability Initiatives

Some sustainability efforts, but not heavily emphasized.

Growing emphasis on sustainable collections and practices.



Launch and promote more sustainable collections, emphasizing eco-friendly sourcing and production.

Customer Engagement

Engages through sales, email campaigns, and loyalty programs.

Engages customers through social media, showcasing latest trends and collections.



Increase engagement on social media platforms with lifestyle content and behind-the-scenes looks.

Collaboration & Partnerships

Occasional collaborations with designers or celebrities.

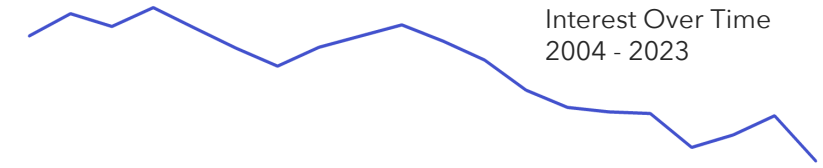
Limited collaborations, but when they occur, they are with high-profile designers.



Collaborate with global designers or influencers to introduce exclusive collections and attract a diverse audience.

Banana Republic

Brand Identity: Elevated lifestyle brand offering modern, refined clothing and accessories



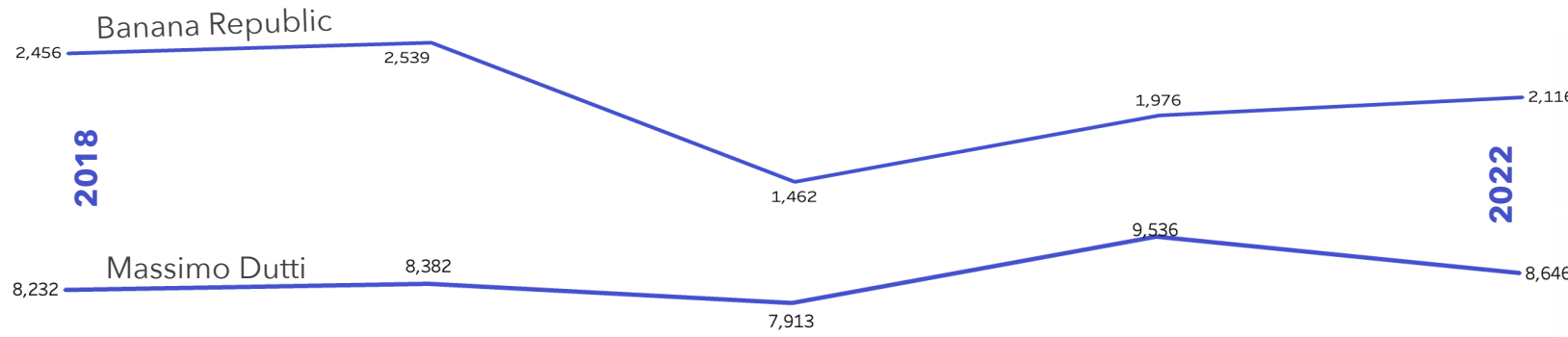
About the brand

Originally conceptualized as a travel-themed brand, now has evolved into a luxury clothing and accessory brand that radiates a modern, refined style for professional men and women.

Big Data Approach?

Big Data approach would not work for Banana Republic since it is into luxury clothing which requires creative directors always keeping in mind it's unique craftsmanship.

Competitor Analysis: Net Sales from - 2022



Data Requirement Recommendations

Design	→	Low Impact
Production	→	High Impact
Marketing	→	Medium Impact

Massimo Dutti

Massimo Dutti has carved a niche in the fashion industry as a brand that amalgamates classic elegance with contemporary style, offering high-quality, versatile, and sophisticated garments. Its successful omni-channel retail strategy, international appeal, commitment to quality, and strides towards sustainability are pivotal in enhancing its brand identity, attracting a diverse consumer base, and driving its ongoing success in the competitive fashion landscape.

<https://www.sec.gov/edgar/browse/?CIK=39911&owner=exclude>



Massimo Dutti

Brand Positioning

Upscale, classic, and versatile fashion for professionals.

Sophisticated, urban, and modern fashion with a European touch.



Emphasize modern, sustainable, and globally-inspired fashion.

Product Range

Classic workwear, casuals, and seasonal collections.

Elegant and timeless pieces with a mix of casual and formal wear.



Introduce globally-inspired collections and limited-edition pieces.

Pricing and Promotions

Premium pricing with regular sales and promotions.

Premium pricing with selective promotions.



Introduce a premium line with limited promotions to elevate brand perception.

Store Experience

Classic store design with a focus on showcasing collections.

Modern, European-inspired store layouts with a premium feel.



Modernize store layouts, introduce tech-enhanced shopping experiences, and host exclusive in-store events.

Online Presence

Strong online presence but could benefit from more interactive content.

Robust online presence with a focus on visual storytelling.



Enhance online shopping experience with immersive visuals and streamline the checkout process.

Sustainability Initiatives

Some sustainability efforts, but not as prominent.

Emphasis on sustainable collections and eco-friendly practices.



Launch and promote more sustainable collections, emphasizing eco-friendly sourcing and production.

Customer Engagement

- Engages through sales, email campaigns, and loyalty programs.

Engages customers through social media, showcasing lifestyle and fashion stories.



Increase engagement on social media platforms with lifestyle content and behind-the-scenes looks.

Collaboration & Partnerships

- Occasional collaborations with designers

Limited collaborations, focusing more on in-house designs.



Collaborate with global designers or influencers to introduce exclusive collections and attract a diverse audience.

Art or Science?

Advantages of Big Data in Marketing



Trend Identification: By analysing vast datasets, businesses can spot emerging market trends. GAP Inc.'s use of real-time fashion trend tracking is a testimony to this capability.



Supply Chain Optimization: Predictive analytics can enhance supply chain management, ensuring the right products are available at the right time.



Consumer Personalization: Big data aids in personalizing online experiences. GAP's strategic collaborations, like that with Amazon, focus on offering tailored product recommendations.

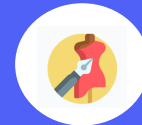


Marketing Campaign Optimization: Analytics offers insights into which marketing initiatives are yielding results, facilitating the allocation of resources to successful campaigns.

Limitations of Big Data; The journey to bridge art and science



Authentic Storytelling: The art of crafting a brand's narrative relies on authenticity and emotion, areas where data might not always provide clarity.



Design & Innovation: True innovation may not always align with current data trends. Brands might need to take intuitive leaps, like Banana Republic's emphasis on "self-expression."

$$\frac{2\epsilon^2}{v} \sum_{i=0}^{\infty} \text{Resistance} \cdot \frac{1}{\lambda_0} \cdot \frac{1}{\sqrt{m^2+n^2+p^2}} \cdot \frac{1}{\sqrt{A^2+B^2+C^2}}$$

$$R = \frac{\rho \cdot l}{S} = \frac{\rho \cdot l}{A_m + Bn + Cp}$$

$$S = ?$$

$$\psi = \sum_{i=0}^{\infty} \exp(-i \cdot D \cdot W / (k \cdot T))$$

$$\frac{1}{\lambda_0} = \frac{1}{\text{Resistance} \cdot \text{light} \cdot \text{lower}}$$

$$\frac{1}{\lambda_0} = \frac{1}{\text{Resistance} \cdot \text{light} \cdot \text{lower}} \cdot \frac{1}{\sqrt{m^2+n^2+p^2}} \cdot \frac{1}{\sqrt{A^2+B^2+C^2}}$$

Marketing: Art vs Science

Leveraging Web Data

Understand the Audience: Web data provides granular details about customer behaviors, preferences, and shopping patterns. By analyzing this, the marketing team can deduce what resonates with their audience.

Personalized Marketing: Using web data, GAP can segment its audience and create tailored marketing campaigns. For instance, if a subset of users frequently buys kids' clothing, they could receive content about the baby Gap-branded nursery furniture, coupling data-driven targeting with artful presentation.

A/B Testing: Before launching a full-fledged campaign, GAP's marketing team can test different design concepts, messaging, or user journeys. The one that performs better, as determined by web data, gets rolled out extensively. This approach merges the art of creating diverse campaign concepts with the science of empirical testing.

Influencer Collaborations: Web data can pinpoint influential figures resonating with GAP's audience. Collaborating with them for artistically crafted campaigns, grounded on data insights, can effectively merge art and science.

Feedback Loop: Online reviews, comments on social media, and direct customer feedback provide invaluable data. By blending this feedback with creative strategies, GAP can address concerns artistically, narrating stories of improvement or emphasizing its dedication to customer satisfaction.

Science

When Science Should Rule:

Decision Making: When large-scale investments or changes are at stake, data provides a safety net.

Operational Tasks: Areas like inventory management, sales forecasting, and ad targeting demand a data-first approach.

Feedback & Improvement: Quantifiable customer feedback, online reviews, and performance metrics guide refinement.

Art

When Art Should Rule:

Brand Building: Crafting a brand's image, mission, and vision relies on intuition and creativity.

Engagement & Loyalty: Establishing emotional connections with consumers, especially during crises or celebratory moments.

Innovation: When introducing new products or services, sometimes businesses need to venture beyond what the data suggests.

Gap's collaboration: Gap x Dapper Dan DAP Logo Hoodie

Reseller Data

Release Date

30 Nov 2022

Collaborator

Dapper Dan

Highest price

\$377

Popularity on the day of release

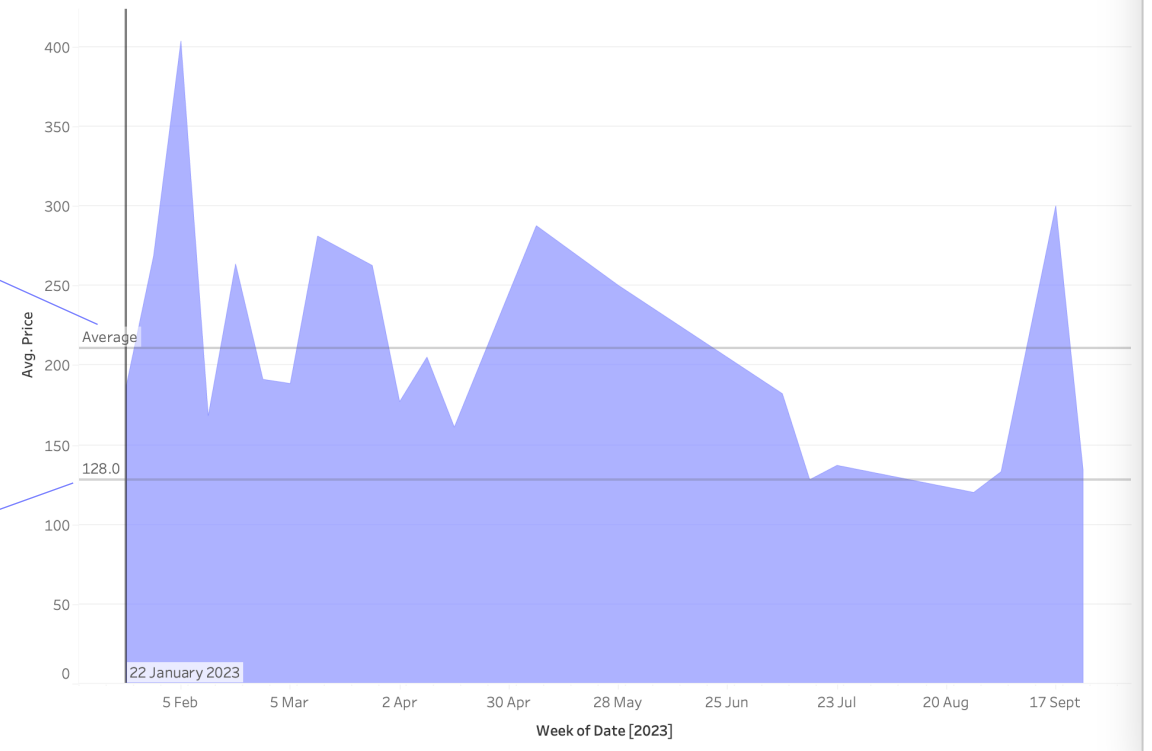
5 / 5



Average price since release
\$210

Retail price with limited inventory
\$128

Sales price since release



Limitations of the data, insights and approach

1

Data Availability:

Comprehensive and up-to-date data was not readily available. For instance, private competitors had not disclosed all their financial or operational data.

2

Data Quality:

The data collected was inconsistent in certain areas, incomplete, or outdated, which could have led to inaccurate analysis.

3

Historical Bias: In the recommended predictive models, we are relying heavily on historical data that might not account for recent changes in market dynamics or consumer behavior.

4

Subjectivity: A section of our analysis is based on qualitative data, such as brand perception or customer sentiment, can be subjective and open to interpretation.

5

External Factors: Economic, political, or environmental factors that influence consumer behavior are not accounted for in the data.

6

Granularity: Data might not be detailed enough. For instance; revenue, stock price information scraped was at a year level, which can miss out on short-term trends.

7

Analytical Bias: Preconceived notions or biases can influence how data is interpreted or which data is deemed relevant.

8

Generalization: Conclusions drawn from specific datasets can lead to overgeneralization, missing out on nuances

Bridging the Data "Gap"

by

Aishwarya | Madhur | Siddhant | Varun

Thank you



Bibliography

<https://www.macrotrends.net/stocks/charts/GPS/gap/revenue>

<https://www.macrotrends.net/stocks/charts/GPS/gap/stock-price-history>

<https://oldnavy.gap.com/browse/division.do?cid=5360&mmlink=5151,topNav,visnav&nav=meganav%3AWomen%3A%3A>

https://oldnavy.gap.com/browse/category.do?cid=1185233&mmlink=5151,1,HP_Prim_2_b

<https://oldnavy.gap.com/browse/category.do?cid=1031099&&nav=meganav%3AMen%3AShop%20Men%E2%80%99s%20Categories%3AShop%20All%20Men%27s#pagelid=0&department=75>

<https://www.sec.gov/Archives/edgar/data/39911/000003991116000269/fy201510-k.htm>

<https://www.sec.gov/Archives/edgar/data/39911/000003991116000269/fy201510-k.htm>

https://www.amazon.com/Clothing-Shoes-Jewelry-Gap/s?rh=n%3A7141123011%2Cp_4%3AGap

<https://www.thedrum.com/news/2021/07/02/gap-where-did-it-all-go-wrong-the-iconic-90s-brand>

<https://www.cnbc.com/2022/08/24/3-things-gap-needs-to-fix-to-turn-its-struggling-business-around.html>

<https://www.cnn.com/2022/07/13/business/gap-history-old-navy-retail/index.html#:~:text=Over%20the%20decades%20since%20the,fashion%20trends%20today%2C%20analysts%20say.>

<https://www.comparably.com/companies/gap/competitors>

https://static.inditex.com/annual_report_2022/pdf/Inditex-group-annual-report-2022.pdf

https://csimarket.com/stocks/compet_glance.php?code=GPS

<https://www.gapinc.com/en-us/news/gap-inc>

<https://www.sec.gov/edgar/browse/?CIK=39911&owner=exclude>

