

ID#220203

PUBLISHED ON
FEBRUARY 15, 2022

Continuous Quality Monitoring via Data and Analytics at The Estée Lauder Companies

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“The intelligent use of data, analytics and consumer insights is at the center of everything we do.”¹

— Fabrizio Freda, President and CEO, ELC, October 2020

In July 2020, Jane Lauder, a longtime executive at The Estée Lauder Companies (ELC) and granddaughter of the company’s founder, was appointed executive vice president, enterprise marketing, and chief data officer. The appointment followed her tenure as the ELC brand Clinique’s global brand president, during which she championed the use of technology and analytics to drive sales growth. While at Clinique, Lauder was also a key participant in an enterprise-wide digital transformation project, an experience that paved the way to her being named ELC’s first chief data officer. In her new position, Lauder was tasked to develop and lead ELC’s strategy on using data and analytics across ELC’s business to improve the efficiency and effectiveness of everything from forecasting and marketing to customer service and supply chain management.

In the decade prior to Lauder’s appointment, data and analytics had become an increasingly important tool at ELC, especially in aggregating, reviewing, and responding to consumer feedback. ELC had long tracked all feedback from consumers but had traditionally done this via manual processes, which were labor intensive and time consuming. In 2019, the company introduced an automated platform to handle consumer feedback resulting in faster response times, improved analytics, and a better understanding of consumer feedback which was used to resolve issues, promote consumer engagement, and inform ongoing product development.

This data-driven approach to consumer comments allowed ELC to respond quickly and decisively—and to identify and remedy potential quality issues at the source before they adversely impacted sales and/or consumer experiences. Lauder’s data and analytics team rose

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Acknowledgements

Sarah Abbott provided research and writing support for this case. The authors thank Samantha Fleisher MBA '14 and Anurag Avlash for their invaluable conversations with the authors and important contributions to this case.

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to this occasion in mid-2020, when they noticed an uptick in consumer comments from Asia. Their analytics-focused approach and strong commitment to quality allowed them to quickly identify and resolve the issue allowing them to continue to ensure the experience and product reliability their consumers expected.

Company Overview

ELC was a leading manufacturer and marketer of prestige skincare, makeup, fragrance, and haircare products (see Exhibit 1 for a breakdown of sales by product category). The company was founded by Estée and Joseph Lauder in 1946. It owned more than 25 brands, including: Estée Lauder, Clinique, Origins, M·A·C, and Bobbi Brown, and sold its products in nearly 150 countries and territories. ELC also held the license to manufacture and sell products for a number of third-party brands.

Every ELC brand each had its own image, supported by distinctive logos, packaging, and advertising. Price points and distribution channels varied in keeping with each brand's market positioning (see Exhibit 2 for a list of the company's major brands). As players in the prestige beauty category, ELC brands were sold primarily through high-touch channels including department stores and dedicated free-standing stores, in addition to online channels. In 2020, the company owned and operated 1,600 free-standing stores, each under a single brand name (e.g., Origins). Third parties operated an additional 800 company-branded stores, primarily located in Europe, the Middle East and Africa. ELC products were also sold in duty-free locations and online via both dedicated brand and authorized third party websites.² Consumers in China, the United States and the United Kingdom generated the bulk of the company's online sales— these countries had online penetration in the 25% to 30% range.³

By 2020, ELC increased global annual sales to \$14.3 billion (see Exhibit 3 for a geographic breakdown of sales, Exhibit 4 for summary financials and Exhibit 5 for share price performance).

ELC described its marketing strategy as “Bringing the Best to Everyone We Touch,” a strategy formulated by Estée Lauder herself. The company built on high-touch service and high-quality products with ELC marketing via traditional media (including print media, television, billboards, and direct mail) and digital channels (including websites, social media, and e-mails).⁴

Product development was conducted by the company's team of over 900 research and development employees. In addition to its in-house facilities, the company also had partnerships with a number of medical and educational facilities. As the company's business had become more global, research and development had begun to incorporate regionally targeted products, particularly in Asia/Pacific. In 2020, ELC spent \$228 million on research and development.⁵ ELC utilized company-owned and third-party manufacturers to produce its goods with products primarily manufactured in the United States, Belgium, Switzerland, the United Kingdom and Canada.⁶

Data and Analytics at ELC

In the 10 years preceding Lauder's appointment as chief data officer, analytics and data drove the company's marketing strategy,⁷ as ELC continued to invest in digital and social marketing capabilities.⁸ In 2011, an internal group was formed to set up "the Compass," a forecast of beauty trends for the next decade. The team updated the Compass every two years,⁹ and this analytics-based work was viewed as a critical driver of the company's recent sales growth. In his 2020 annual review, ELC President and CEO Fabrizio Freda commented:

Our 10-year Compass, which serves as a high-level, directional roadmap, is updated every few years using cutting-edge research, data and analytics to reflect the most promising growth areas in prestige beauty across geographies, channels, categories and consumers, as well as shifts in global economic, demographic and social trends.¹⁰

Technology was also used to deliver on ELC's "high-touch" consumer service. Representatives increasingly began to use consumer chat, an online tool that allowed sales representatives to connect with their clients. Tulie White, ELC's vice president of global learning and development, explained that the company was using technology tools to provide "scale and advanced virtual teaching" opportunities and "high-touch virtual interaction/engagement."¹¹

These customer service tools took on an even greater importance during the global COVID-19 pandemic of 2020 as brand teams began live streaming consumer tutorials.¹² During the first quarter of FY 2021ⁱ, the company reported it had hosted more than one million virtual try-on sessions with its consumers, with the average session lasting more than 30 minutes.¹³ Sales representatives were also using digital appointment-booking platforms to schedule consumer appointments.¹⁴ Freda noted that this tool had also been particularly effective in China during the Covid-19 outbreak, allowing constant communication with clients despite store closings. Freda explained, "That's one of the reasons for China's fast recovery [and why] we never lost our clients in the shadow. We were with them all the time."¹⁵

ELC's investment in people and technology to empower data-driven decision making to fuel growth was supported by a successful cross-functional coordination and a fine-tuned investment prioritization plan. To that end, and to achieve its vision at scale, ELC established the Global Business Intelligence and Analytics (BI&A) group to lead a coordinated data and analytics strategy and capability, built across the company's 30 plus brands, six regions, and numerous functions.

Widespread acceptance of data tools was helped along by senior leadership who championed these initiatives and continued to stress the importance of data and analytics in presentations to investors. During his 2019 Investor Day call, Freda said,

ⁱ ELC's fiscal year ran from July to the end of June.

[O]ur innovation is also inspired by concrete data analytics and consumer insights. Data...provides rich intelligence and increases our ability to focus resources on the best opportunities. When we combine our deeper understanding of consumer and our innate creativity, amazing results happen.¹⁶

And in 2020, Freda wrote,

The intelligent use of data, analytics and consumer insights is at the center of everything we do. Our ability to identify growth segments and trends across categories, geographies and consumer segments allows us to maximize value by delivering innovative, high-quality products and experiences. As consumer behavior continues to quickly evolve during this time, we are harnessing more data than ever before and leveraging our analytics to generate actionable intelligence to help deliver value at both the brand and enterprise level, now and in the future.¹⁷

JANE LAUDER: CHIEF DATA OFFICER

In July 2020, Lauder was named ELC's chief data officer and executive vice president of enterprise marketing. Lauder was the first person to hold the role of chief data officer. Lauder's job was to build and oversee ELC's "data-empowered, digitally-directed priorities to accelerate growth," use data to optimize brand marketing, and integrate all of ELC's analytics.¹⁸ Lauder would also report directly to Freda¹⁹ who said, "We are focused on delivering the very best, high-quality products that leverage consumer insights from our enhanced data analytics."²⁰

Lauder joined ELC in 1996 and had worked at Clinique, Origins, Ojon, and Darphin before being named global brand president for Clinique in 2014.²¹ Lauder had championed the use of technology and analytics while at Clinique and led an enterprise-wide digital transformation project. In 2018, she talked about how technology had driven meaningful changes in the marketplace during her time there:

I think back to five years ago when I started in this job, and there's not one thing that's the same —the way we communicate, the store dynamics, what was happening in brick and mortar, in markets around the world...Influencer marketing was just starting back then and now it's so huge. It's a very complicated process.²²

Under Lauder's leadership, Clinique's online business had tripled.²³ "She has successfully leveraged data and analytics capabilities to drive strong long-term growth at both the brand and enterprise level," commented Freda.²⁴ In a 2017 interview Lauder talked about how Clinique was successfully using technology to drive sales explaining

We have online Clinique consultants who enhance consumer relationships. Consumers are four times more likely to come into the store to buy after their online research or online chat. Before, it was about product knowledge. Now, it's about technique and listening to skin concerns.²⁵

Lauder's new appointment represented a sea-change for the company and was significant for several reasons. First, ELC's BI&A group, corporate marketing, and the marketing and consumer support technology functions would all report into Lauder. (The BI&A group also had matrix line reporting to the CFO.)²⁶ Prior to this, these functions had been largely siloed. The objective in combining them under Lauder's control was to "enable the facilitation and free flow of data among business units to help these teams to mine, analyze and share strategic insights more effectively."²⁷ Lauder commented,

As an organization, we have so much incredible information — consumer insights, data and analytics, all of the different ways we touch consumers across so many different areas...Today, they are separate departments. In this role, I'll be bringing them together and streamlining the organization so it's cohesive. We will be positioned to be the best in consumer knowledge and understanding how to connect with consumers throughout the whole journey.²⁸

Lauder was charged with coordinating ELC's use of analytics to maximize efficiency in areas such as supply chain management and forecasting and to maximize marketing effectiveness. She explained that these pieces were linked:

We have to make sure we have the right product available when the consumer wants it. For example, we're pivoting to what we're seeing now with consumers and a higher interest in skin care and masks. Getting those early signals and being able to connect it to our supply chain is critical.²⁹

Second, Lauder would oversee the management of digital partnerships with external companies including Facebook, Google, and newly emerging players in the digital space. Finally, Lauder was tasked with managing ELC's HR initiatives within the marketing and consumer engagement space.³⁰ "Part of the transformation is to be leading and thinking about the future, because this whole space is moving so quickly and there is so much new technology and new ways to connect with our consumer," commented Lauder.³¹

CONSUMER CARE ANALYTICS & INSIGHTS

Lauder also oversaw ELC's Consumer Care Analytics and Insights group, a New York City-based team with a mission to centralize the analysis of consumer feedback. Anurag Avlash, executive director of this critically important group, explained the group's mandate was to capture as much consumer feedback as possible, aggregate that information, analyze it, and convert it into meaningful, actionable insights that would allow for better consumer engagement, product quality, and regulatory compliance.

Inbound consumer contacts reached ELC via phone, email, chat, and social media channels (e.g., Instagram, Facebook, Twitter and other). In FY 2019, ELC received almost three-quarters of a million contacts. Estée Lauder, M·A·C, Clinique and La Mer were the ELC brands with the most contacts (around a quarter of total feedback in aggregate). If a consumer referenced more than one issue in a single call or email, each issue was logged as a separate contact.

Historically, countries and brands across ELC had processed this feedback using different tools, (e.g., Salesforce, Excel, etc.). However, all inbound contacts were assigned to an ELC Consumer Care representative who manually recorded the relevant information about the consumer and their verbatim comments. The feedback in its various forms had traditionally been sent to the Consumer Care Analytics and Insights group who were then responsible for aggregating the data and manually producing monthly and quarterly reports. The amount of detail recorded for each contact allowed the team to discern patterns, identify widespread problems, and gain general insights into ELC's consumers. (See Exhibits 6a and 6b for a graphical depiction of this manual process.) The team also tracked units shipped for each geographic area, brand, and product. This allowed them to normalize the consumer contact data by looking at contacts per units sold. This method was successful in surfacing any areas of concern, but it was time consuming. It often took several weeks before issues on the ground percolated through each of the product- and region-specific systems and reached Avlash's team.

In 2019, in connection with a broader technology transformation that was happening across the organization, all ELC's consumer feedback channels were integrated onto a single platform. Feedback from consumers around the globe was aggregated onto this new platform. The data was then analyzed, and three output reports were produced—all of which happened automatically. (See Exhibit 7 for a schematic of the automated consumer care process.) These reports included the following:

- 1.) Alerts: These were effectively red flags for critical events recorded at any of the global care centers. There were a few ways these were used. Alerts were set to immediately notify relevant stakeholders about certain critical complaints (such as foreign material being found inside a product). Alerts could also be set to generate when less critical complaint types reached a certain threshold. When a predetermined threshold was crossed, the system triggered the notification. Alerts could be used to monitor a new brand launch or new product formula. Employees involved in those projects could set up alerts to track how consumers were reacting. Finally, the technology allowed alerts to be tailored individually. So, if a particular group was focused on one product or color, they could set up alerts, so they were notified when feedback of that type came in.
- 2.) Voice of Consumer: This output portal (or dashboard) provided automated, real-time output on consumer contacts. It tracked all feedback in total and by brand, product and geographic area. The output portal also showed the data on a normalized basis—with feedback for a particular brand, product, or country shown as a percentage of total units sold. (See Exhibit 8 for screenshots of this portal.)

- 3.) Consumer Listening Reports: These reports were still produced but now the emphasis was less on data and graphs and more on insights, actions, and getting to the root of problems.

By automating, the Consumer Care Analytics and Insights the team was able to get access to consumer feedback and share results in a timelier manner. This information was critical for ELC to track product performance and consumer experience in order to ensure the highly quality consumers associated with the ELC brands. Information that once took weeks to process and turn into reports under the old system was now available and in the hands of the brands in real time. This process was also less labor intensive—allowing data analysts to focus on insights and conclusions rather than manually producing reports.

INCREASING CONTACTS IN ASIAⁱⁱ

In August 2020, Avlash and his team noticed there had been a spike in consumer contact volumes. A preliminary look at the data suggested that the increase was coming largely from Asian markets. The team also noticed the increase was driven almost exclusively by complaints, while compliments and question volumes remained within normal historic ranges. (See Exhibit 9 for monthly data.) Avlash hoped that the problem would turn out to be product or retailer specific, as that would make it easier to track down the root cause and identify potential interventions to reduce complaints. This was particularly important as ELC had a 100% return policy with no questions asked, so consumer complaints might lead to returns and lost revenue. Indeed, ELC's proactive quality management approach ensured that if there were systematic factors resulting in increased complaints/returns, they could be quickly identified and eliminated.

Over the years, the team had found their analytics platform was critical in making it easier to track down root causes and to identify potential interventions to improve ELC's performance. This incident was no different. Because of the automation of the many reports he had just invested in building, Avlash had developed a keen sense of the data. With the automated tools, the data and analytics now at his fingertips allowed him to isolate the root cause in just a few moments – a task that would have taken a painstaking number of hours before. He would next draft an e-mail to Lauder detailing the team's findings, and proposing next steps—all supported by the data generated.

ⁱⁱ This is a fictionalized scenario to illustrate how the ELC analytics team was empowered to handle similar events. All data referenced has been created for educational purposes only.

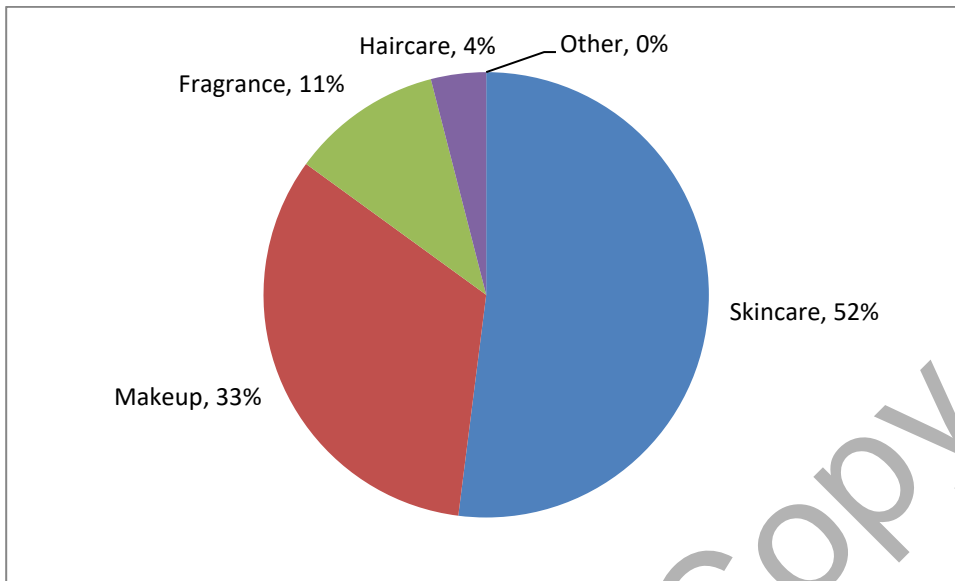
Questions for Discussion

1. ELC and Avlash's team were well on their way to understanding the root cause of the increased consumer contacts. What do you believe are some potential root causes of the increased consumer contacts? What data supports your belief?
2. Based on your hypotheses for root causes, what type of analysis do you recommend? What potential interventions do you recommend?

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Exhibits

Exhibit 1: Company Sales by Product Category



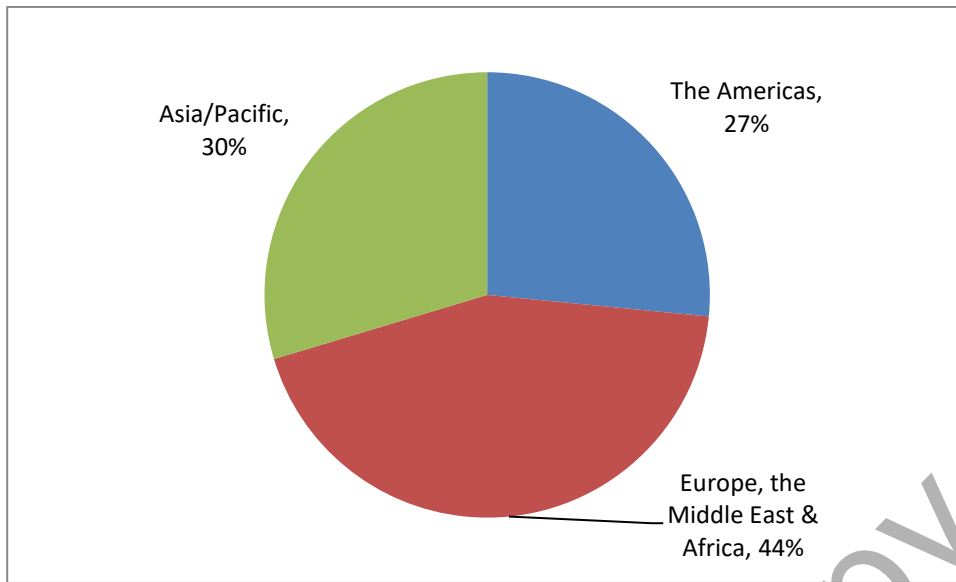
Source: The Estée Lauder Companies Inc, "Form 10-K," (New York, NY, 2020)
<https://media.elcompanies.com/files/e/estee-lauder-companies/universal/investors/investor-resources/toolkit/form-10k-200820-a.pdf>, p. 3.

Exhibit 2: Estée Lauder Brands

Estée Lauder	Est 1946. Flagship brand; skin care, makeup and fragrances.
Clinique	Est 1968. Skin care and makeup products are all allergy tested and 100% fragrance free and have been designed to address individual skin types and needs.
Origins	Est 1990. High-performance natural skin care
M·A·C	Acquired in 1998. The leading brand of professional cosmetics
La Mer	Acquired in 1995. Leading global luxury skin care brand
Jo Malone London	Acquired in 1999. Scented British lifestyle brand
Bobbi Brown	Acquired in 1995. Makeup and skin care brand
Aveda	Acquired in 1997. High-performance, naturally-derived hair care products, as well as skin care, makeup and fragrance.
AERIN	Est 2012. Luxury lifestyle beauty and fragrance brand created by Aerin Lauder.
Aramis	Est 1964. Men's fragrance, grooming and skin care products.
Lab Series	Est 1987. High performance, specialized skin care solutions for Men
Bumble and bumble	Acquired in 2006. New York-based hair care brand.
Darphin	Acquired in 2003. Paris-based, prestige skin care brand known for its high-performance botanical skin care.
Smashbox Cosmetics	Acquired in 2010. Los Angeles-based, photo studio-inspired makeup brand.
Le Labo	Acquired in 2014. Hand-crafted and personalized fragrances.
GLAMGLOW	Acquired in 2015. High performance skin care with a Hollywood-vibe
Tom Ford	In 2005, ELC entered into a license agreement to develop and distribute products under the Tom Ford brand name.
Les Editions de Parfums Frédéric Malle	Acquired in 2015. Fragrances.
By Kilian	Acquired in 2016. Fragrances.
BECCA	Acquired in 2016. Makeup brand.
Too Faced	Acquired in 2016. Makeup brand.
Dr. Jart	Acquired in 2019. Seoul-based, global skin care brand.

Source: The Estée Lauder Companies Inc, "Form 10-K," (New York, NY, 2020) <https://media.elcompanies.com/files/e/estee-lauder-companies/universal/investors/investor-resources/toolkit/form-10k-200820-a.pdf>, pp.5- 7.

Exhibit 3: Geographic Sales Breakdown



Source: The Estée Lauder Companies Inc, “Form 10-K,” (New York, NY, 2020) <https://media.elcompanies.com/files/e/estee-lauder-companies/universal/investors/investor-resources/toolkit/form-10k-200820-a.pdf>, p. 25.

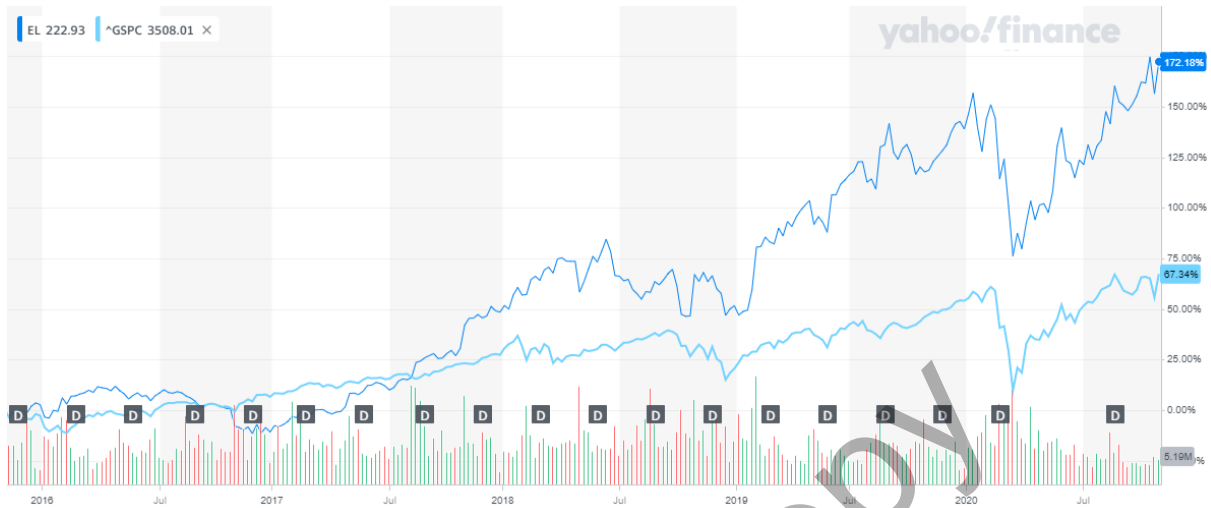
Exhibit 4: Summary Financial Statistics (in \$ millions)

	Fiscal Year				
	2020	2019	2018	2017	2016
Statement of Earnings Data:					
Net sales	\$14,294	\$14,863	\$13,683	\$11,824	\$11,262
Net earnings	\$684	\$1,785	\$1,108	\$1,249	\$1,115
Balance Sheet Data:					
Total assets	\$17,781	\$13,156	\$12,567	\$11,568	\$9,223
Total debt	\$6,136	\$3,412	\$3,544	\$3,572	\$2,242

Source: The Estée Lauder Companies Inc, “Form 10-K,” (New York, NY, 2020) <https://media.elcompanies.com/files/e/estee-lauder-companies/universal/investors/investor-resources/toolkit/form-10k-200820-a.pdf>, p. 24.

Note: Estée Lauder’s fiscal year ends on June 30th.

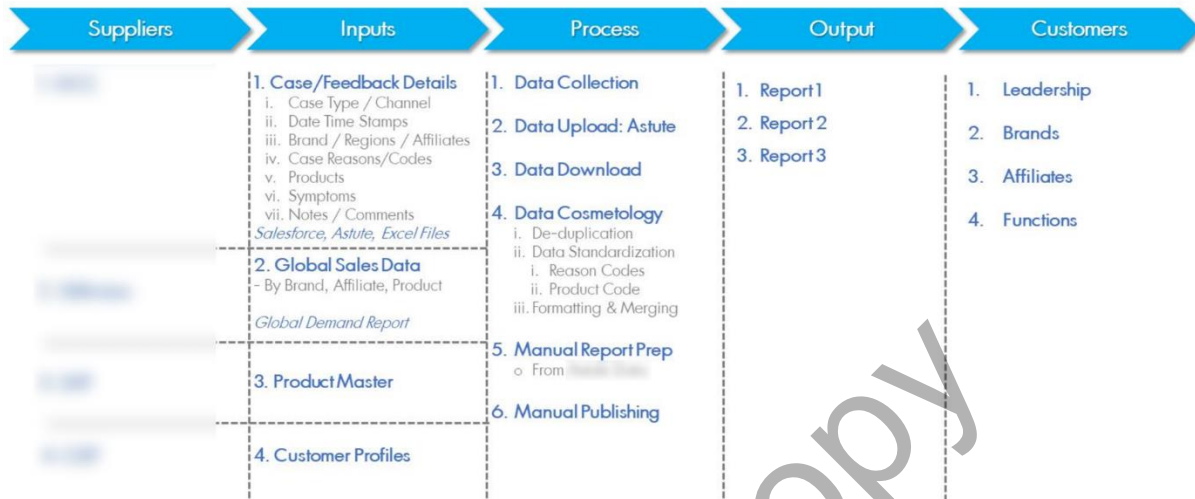
Exhibit 5: ELC: Five Year Share Price Performance Relative to the S&P 500



Source: Yahoo Finance

Exhibit 6a: Historic Consumer Care Case Flow

Global Consumer Care Analytics & Insights SIPOC

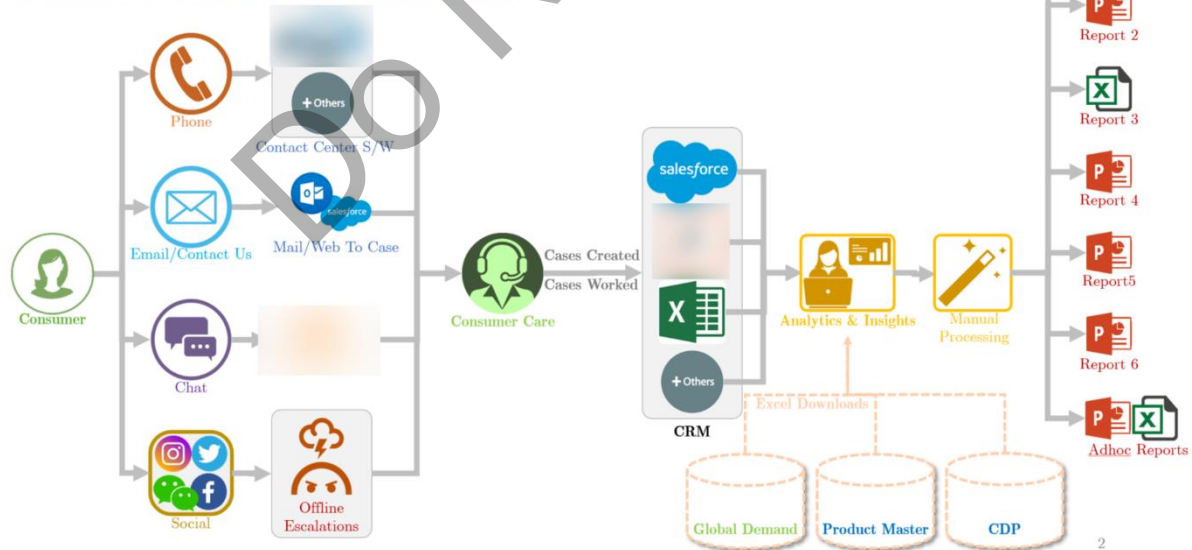


Parts of this image has been intentionally obscured to protect information proprietary to ELC.

Exhibit 6b: Historic Consumer Care Case Flow

Reports & Analytics

Process & Data Flows: Current State



Parts of this image has been intentionally obscured to protect information proprietary to ELC.

Exhibit 7: Automated Consumer Care Case Flow

OUR PROCESSES & OUTPUTS

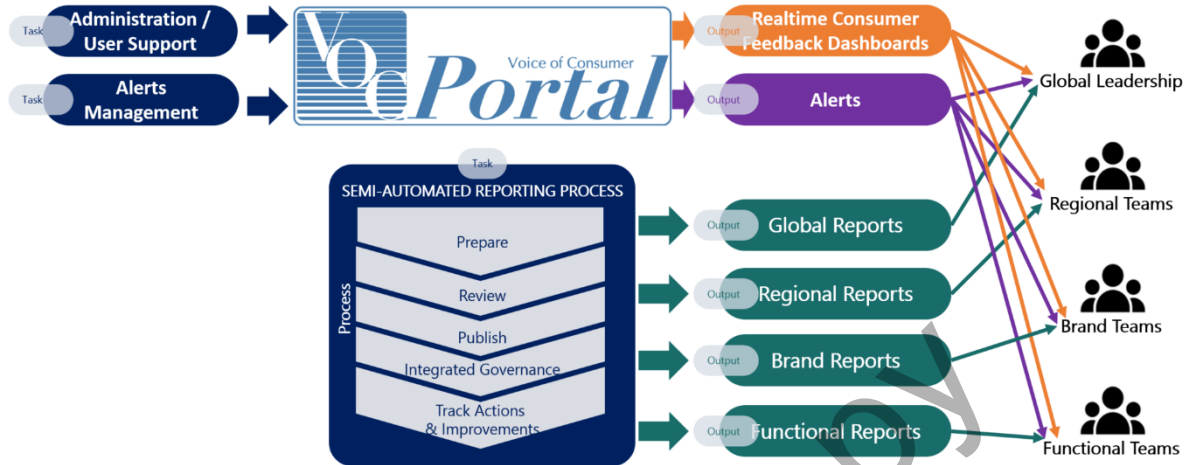
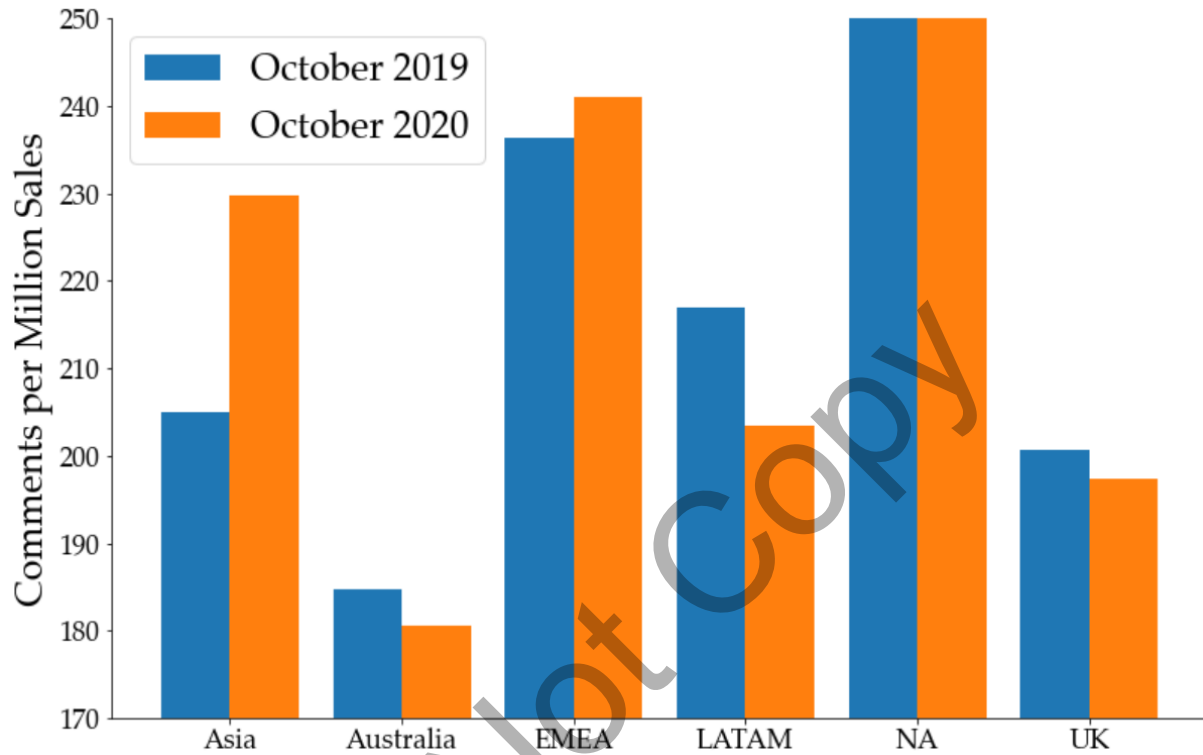


Exhibit 8: Voice of Consumer Portal



Parts of these images have been intentionally obscured to protect information proprietary to ELC.

Exhibit 9: Comments Per Million by Region All Comments



(Note: this plot was produced using the synthetic data provided with this case, to protect proprietary ELC data)

Appendix A – Consumer Feedback Data

This case uses synthetic data over the two-year period spanning from January 2019 to December 2020, which was generated to replicate the data collected by the Estée Lauder Companies, with key details changed (such as using an unnamed brand and generic terms to describe products) to protect proprietary information.

The data comprises two sources of information.

The first summarizes the monthly sales for each of the products in the database. Each row lists the sales of a specific product in a specific region, at a specific retailer, during a specific month. It comprises the following columns:

- `date`: the date this row pertains to; this will always be the *last* day of the month. For example, a row with a date of January 31st 2019 pertains to all sales in January 2019.
- `region`: the region the row pertains to. ELC tracks its sales in six distinct regions: Asia, Australia, EMEA, LATAM, North America, and the UK.
- `product_code`, `category`, `sub_category`: the product code of the product this row pertains to, its category (eg: skin), and its sub-category (eg: lotion). Each product has its own distinct sub-category, so category and sub-category taken together uniquely identify the product.
- `retailer`: the retailer this row pertains to; retailer names have been fictionalized for this case. Note that some retailers only operate in certain regions.
- `sales`: the number of units of that product sold.

The second lists every distinct consumer contact. Each row corresponds to one single contact, and comprises the following columns:

- `date`: the date on which the consumer contacted ELC
- `region`: the region of the consumer who established contact
- `product_code`, `category`, `sub_category`, `retailer`: the product about which contact was established, and the retailer at which the consumer purchased the item. These data are collected as part of the conversation with the consumer service representative; any contacts missing these details is omitted from the dataset.
- `contact_modality`: the channel used to initiate the contact; chat, e-mail, SMS, Facebook, or phone.
- `consumer_name`: the name of the consumer
- `contact_type`: the type of contact – complaint, compliment, or question
- `contact_summary`: a summary of the context, typed up by the consumer representative. In this dataset, this field contains a random set of words to obscure confidential data.

Appendix B – A Business Intelligence Dashboard

The data sets underlying the feedback system are often quite large and stored in multiple different files, which can make it difficult to analyze them in Excel. This is a common challenge that arises as companies modernize their data and analytics – more data means more modern tools are needed to work with that data. In this appendix, we will discuss a Business Intelligence system similar to the one ELC uses to handle the vast amount of data being collected. See Exhibits 8 for screenshots of the system ELC uses.

The dashboard can be found at <http://guetta.org/elc>. It allows the user to create control charts based on various slices of the data. There are two parts to the dashboard:

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Filters allow the user to determine which subsets of the data to use in plotting the control chart. Clicking on the down arrow will bring up all available options, and clicking “ALL” will select all of them.

Note that these filters are all linked; for example, the “retailer” filter will only allow the user to select retailers that operate in the region selected in the first

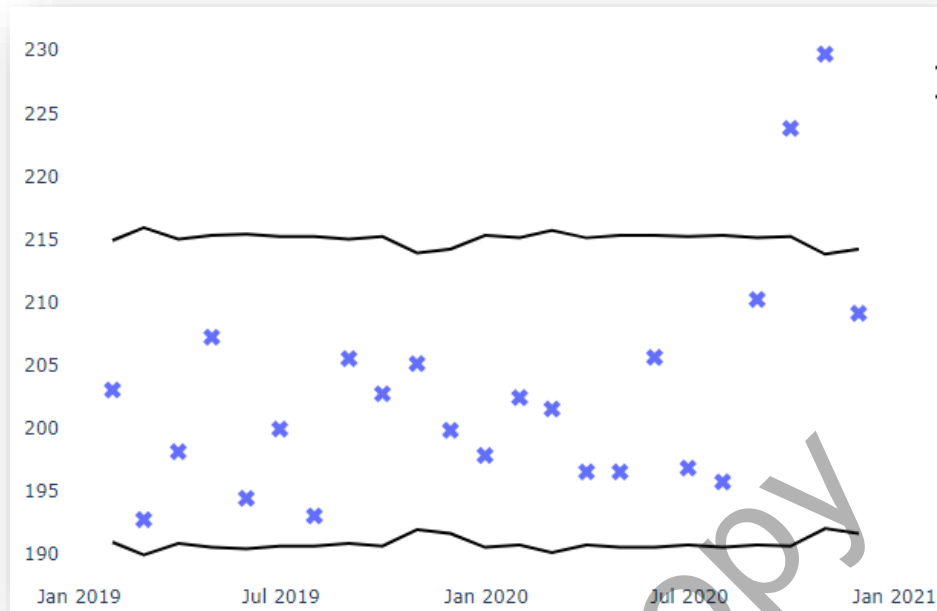
The screenshot shows a dashboard control panel with two main sections: 'Filters' on the left and 'Chart x-axis' and 'Chart type' on the right. The 'Filters' section includes dropdown menus for 'Region' (set to 'Asia'), 'Product category', 'Product sub-category', 'Retailer', 'Contact type', and 'Contact modality', each with an 'ALL' button. The 'Chart x-axis' section has radio buttons for 'Time' (selected), 'Category', 'Sub-category', and 'Retailer'. The 'Chart type' section has radio buttons for 'Sales chart', 'Number of contacts chart', and 'Contacts per million sales control chart' (selected). A 'Time range' section at the bottom shows a timeline from '19 Mar to Sep No'. A large 'Not Copy' watermark is overlaid on the image. Two blue arrows point from the text boxes to the 'Region' dropdown and the 'Contacts per million sales control chart' radio button.

Control chart parameters allow the user to select the categories to use in plotting the control chart, as well as the specific values to plot.

To familiarize yourself with the way the dashboard works, and to reproduce the analysis Avlash’s team, carry out the following steps:

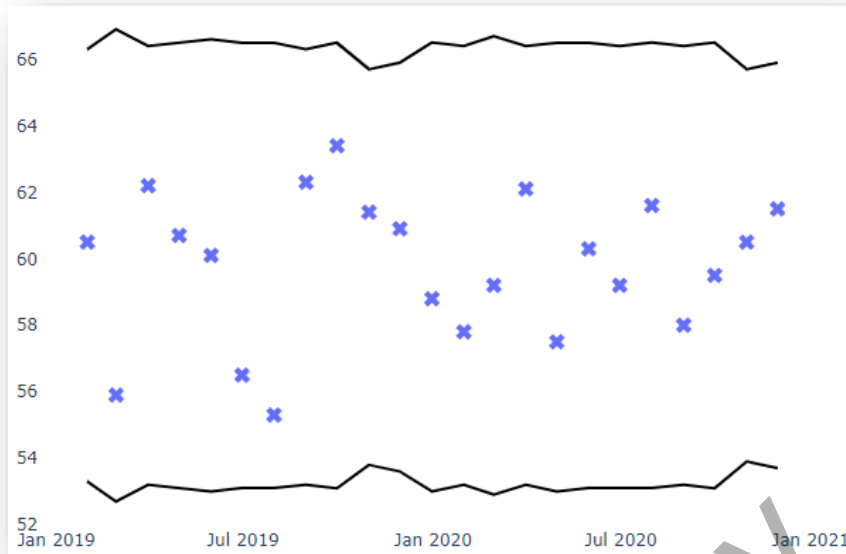
- Select “Asia” in the first drop down
- Click “all” for each of the filters on the left of the dashboard
- Ensure the entire date range is selected
- Under “control chart x-axis”, select “Time”
- Under “control chart y axis”, select “Contacts per million sales”
- Click the “Update Control Chart” button

The following control chart should be generated:

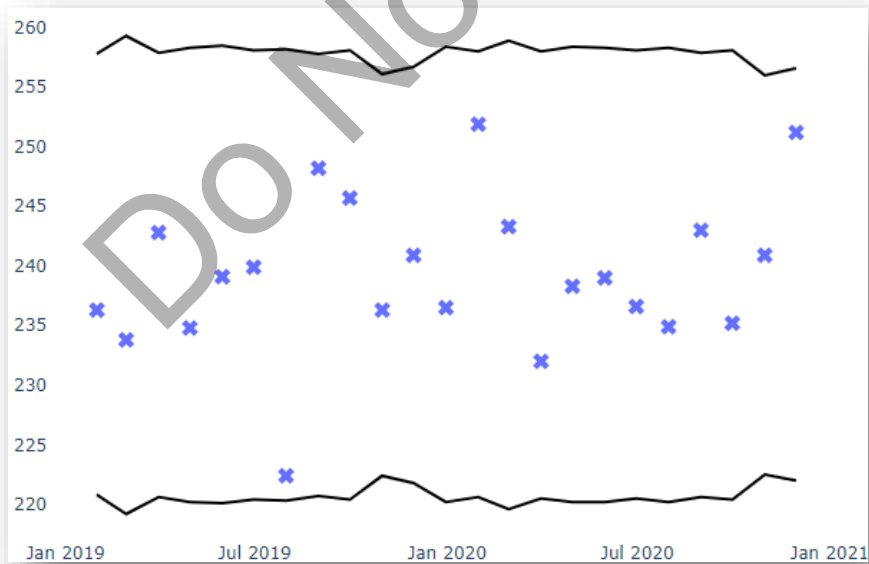


This chart clearly demonstrates Avlash and his team's findings – the number of contacts per million sales was considerably increased in the later part of 2020. The control chart distinctly distinguishes these months from the rest of the time period.

To verify that this increase comprises complaints only, and not questions or compliments, go back to the "contact type" filter and click on the "x" next to "complaint", to remove complaints from the control chart. Click on "update control chart" again. All points are now in control:



Now go back to the “contact type” filter and add complaints back in. Under the “Region” filter, select “EMEA” instead. Notice that when you select EMEA, the selected retailers in the lower filter will change to reflect those retailers that trade in that region. Click on “update control chart”. Once again, the resulting control chart will be in control, demonstrating there is no significant uptick in complaints in the EMEA region:



Put yourself in the position of a member of Avlash’s team and use the dashboard to carry out the analysis required to identify the root cause of the increased complaints in the summer of 2020.

Business Intelligence Dashboards such as that just described are useful because they give non-technical executives the ability to directly work with large and unwieldy datasets. That said, they are also limited to provide answers to the questions they were specifically designed to consider. Modern programming languages such as Python allow more flexible analyses of large datasets such as these.

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Endnotes

1. The Estée Lauder Companies, “Message from Fabrizio Freda,” ELC website, October 2020, <https://www.elcompanies.com/en/investors/year-in-review-2020/message-from-fabrizio-freda>.
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