



Customer Success Story

Daffodil helps one of the leading retail technology companies re-engineer their flagship CRM platform



Customer: A Leading Retail Tech Company

Country: United States

Industry: Software & Technology

Our Role: Software Engineering

About the Client

The client is one of the leading software development companies, based out of New York with operations across the globe. The client has a large clientele consisting of luxury brands such as Gucci, Cartier, Reiss, Marc Jacobs and many more. The client provides a complete set of solutions for retail teams to connect with prospects, engage clients and work smarter. Their flagship CRM solution provides retail stores to drive qualified traffic with tailored digital services, help teams prioritize sales opportunities as well as maximize team's productivity and collaboration. The business is led by a technology entrepreneur who has 12 years of experience in CRM & retail, advising and implementing business strategy for global luxury brands.

>30%
of code reused

40%
operational cost
savings

5
years of ongoing
engagement

9
DevOps engineers
deployed



"I want to thank you sincerely for an excellent job done so far on this project. And shout out to the 2 members for pulling resources together and helping with so much testing to fine-tune the solution. Also, thanks to the leading team members for managing our complex projects, always."

— CEO

The Situation

It is no longer a well-kept secret that customer demographics and behaviors have radically changed within the last few years. Expectations from internal and external stakeholders alike are moving from shiny TV adverts towards true excellence in customer relationship building and customer experience. Companies need to adapt their marketing and sales strategy to meet these evolving customer needs

Our client had a proprietary Customer Relationship Management (CRM) platform that helped its clientele of global luxury brands in the fashion, lifestyle, beauty, and jewelry industry, to improve sales, marketing & promotion campaigns, and maintain customer loyalty. The CRM could be customized according to the customer's unique requirements and could manage elementary information about the customer, product, and sales; which could further help in creating reports for business analysis. However, as customer behaviors and expectations changed, their customers started experimenting with novel business models in order to create new revenue streams. In these new business models, continuous customer engagement was the key to generating sustainable revenue streams, reaching profitability and turning recent adopters into loyal long-term customers.

However, the underlying technology platform of our client's CRM was not able to adapt to these changing business requirements of the customers and neither was able to scale according to growing numbers of users.

Their product development team was engaged in fixing existing bugs and wasn't able to make time to modify the core framework. The CRM also lacked a modern user interface, thus making adaptability among the users a difficult phenomenon.

Thus, the client was on a look around for a technology partner who could help them to upgrade their CRM platform to a cutting edge technology stack as well as a modern user interface. One of the cornerstones of the engagement was the ability to proactively contribute to designing, ideation, and evolution of their CRM rather than just provide development services under close supervision. The client chose Daffodil Software based on our unparalleled experience in developing robust CRM solutions as well as the best cost/value balance. The requirement was to:

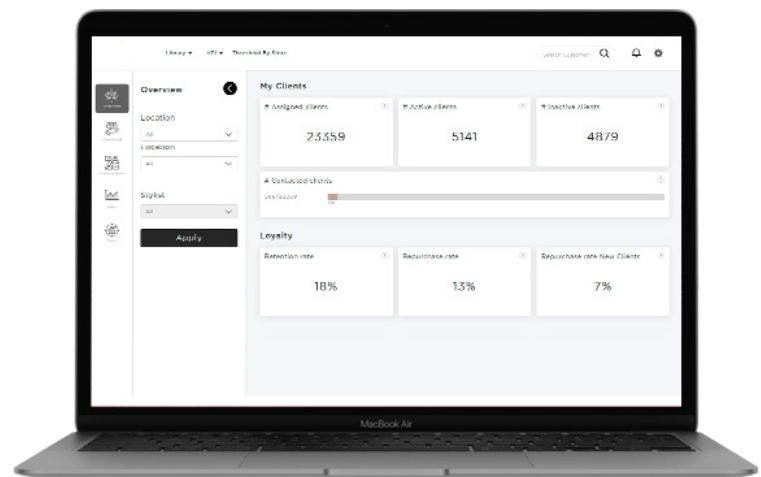
- To evolve the core technology stack of the CRM platform and make it more robust, scalable and customizable according to ever changing business requirements of the customers.
- To act as a technology arm for the client and help them bring innovative features to the market through conceptualization, UI/UX, development, QA as well proactively contribute to designing, ideation, and evolution of new features.

- Incorporate features and tools to make the process of relationship building internally transparent, allocate resources based on data insights and track progress of initiatives using traditional and customer-based KPIs. To build three different suites of products for different stages of retail management such as acquisition, clienteling and productivity.
- To migrate more than 2TB of customer data such as product images, product information, meta data, organizational information etc. in to the new CRM, while maintaining data integrity and minimal downtime

The Solution

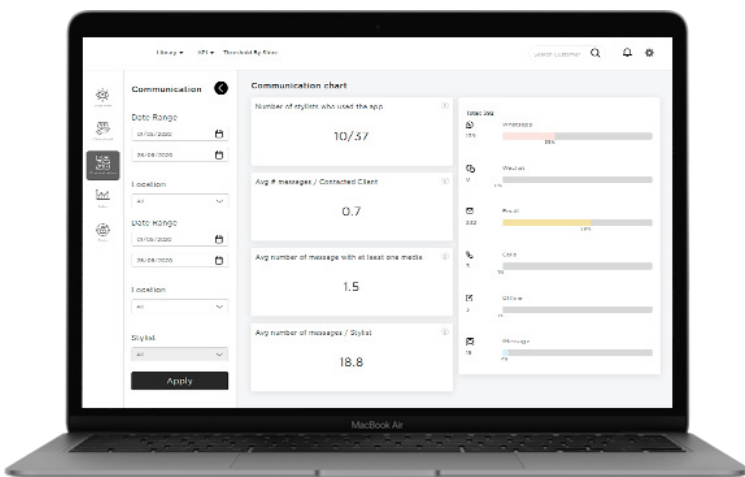
Team Daffodil started by auditing the code-base of their existing CMS platform to understand the part of code that can be used in the new CMS. Since the former solution was built on an outdated technology, it was necessary to refine the usable part of the code before integrating it with the newer one. Our business analytics and software architects outlined the optimal architecture of the platform, refined the functional requirements and developed a complete product vision and its development roadmap.

Daffodil software developed a cross platform web based CRM platform that automates the entire array of tasks related to day to day functioning of a sales team of a retail outlet. As much as 30% of the code was reused in developing the new CRM, which resulted in significant savings in time, cost and development efforts.



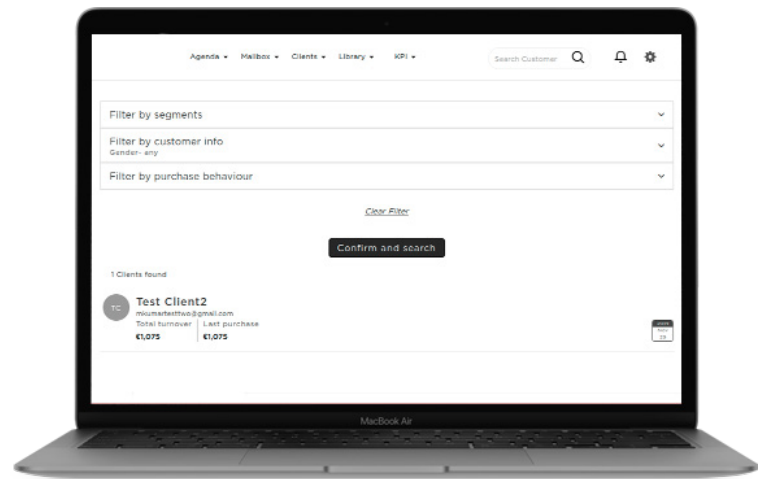
The primary focus was placed on increasing the user-friendliness and granular level customization of the system. A large set of functionalities were incorporated to seamlessly manage customer, product, and sales information which could help retailers in improving their sales, customer loyalty, and execute marketing/promotion campaigns.

Depending upon the role, such as store manager, store associates, brand admin, area manager, etc. corresponding activities could be performed in the CRM. For example, the store associates can keep track of their customers like their last purchase, price-value of their purchase, the net worth of their purchases so far. Likewise, they can figure out the customers who haven't shopped from the last three or six months and engage them to improve loyalty.



During development, team Daffodil had to ensure service continuity, scalability, and cost into consideration. For that, the CRM's infrastructure was built on Amazon Web Services (AWS). For application server hosting, Amazon Elastic Compute Cloud (EC2) service was utilized and for managing and scaling the relational database, Amazon RDS service was used. For seamless development, test, and release of the solution, our CloudOps team continuously checked for backend connectivity, security implementation, load maintenance, cloud usage for various activities such as S3 for image optimization, upfront capacity planning, etc.

Since the requirement was to make the solution scalable, Amazon Elastic Load Balancing service was utilized. The load balancer ensured that the resources scale up or scale down as the requirement strikes. Since small and multiple instances were used instead of a single server, it saved 30-40% of the operational cost for the application. All images and static data in the application was saved on Amazon Simple Storage Service (S3). The S3 images are served through Amazon CloudFront for quick retrieval of images in different geographical zones.



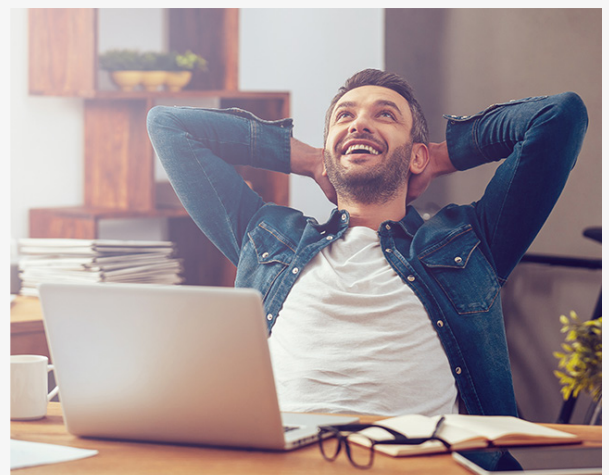
For securing the application against third party attacks, Amazon Web Application Firewall (WAF) was used. WAF has a predefined set of rules that recognizes common attack patterns such as DDoS, SQL injection, or cross-site scripting and blocks them. Along with this, Sucuri Firewall protection was used to speed up load times of the CRM.

Some of the key features and their enablement technologies that we incorporated in the CRM platform are:

- For direct communication with the customers and marketing/promotional campaigns, the CRM is integrated with Whatsapp, iMessage, and email channels. For SMS and emailing predefined, multilingual templates are provided in the CRM solution. For emailing, Sailthru API was used. Along with the emailing provision, the API allows saving the stats such as email open/view rate, click-through rate, etc. These stats are visible to the CRM users.
- For audio/video communication between the customers and offline store associates, a custom video conferencing module is integrated within the CRM solution. The module in the CRM was customized using the Twilio SDK.
- The CRM generates reports in tabular and graphical format. The report can have different types of information like customer purchase history, active/inactive sales associates, the number of customers SAs followed up with, customers with 50% or 90% profile completion, customers with purchase value within a price range, etc.
- For quick retrieval of data from large datasets, having multiple conditions, MYSQL views are created. The large data queries were converted into short tables and then those queries were converted into MYSQL views.
- The CRM solution is multilingual. Depending upon the store location, the CRM language can be switched to English, Arabic, German, French, Japanese.
- For improved user experience, the CRM on the mobile web has the push notification option so that the store associates can timely check for updates in the notification tray.

The Impact

Following the successful development and revamp of the CRM platform, the client has been successful in providing its customers with a seamless, flexible and easy to use CRM system. The platform has evolved as one of the most advanced CRM systems and could be customized as per any requirements or business model. Considering the tech expertise, on-time project deliveries, and on-demand support, the client has Daffodil as its technology partner for the last 5 years. Team Daffodil is behind the development of the client's proprietary CRM and is handling 11 major projects for global luxury brands.



>30%

of code reused

40%

operational cost
savings

5

years of ongoing
engagement

9

DevOps engineers
deployed

Technology Stack













- ReactJS
- Drupal 8
- AWS
- Twilio
- Jenkins
- Google Analytics
- Memcache
- Sucur
- Sailthru

About Daffodil

Daffodil Software is a software engineering partner to 100+ organizations across the globe and has been helping them in making their software products more robust, teams more productive and processes more efficient. Our ability to look beyond technologies to deliver innovative solutions with scale and speed has been lauded by our clients as well as the tech community worldwide.

Since our inception, we have invested in organic growth; building on our engineering capabilities, organizational processes, and culture required to deliver a truly collaborative ecosystem for solving technology challenges. At the core of Daffodil lies a culture rooted in innovation, learning and a result-oriented mindset.

GRANDVILLE, USA

2885, Sanford Ave SW
#28585, Grandville,
MI 49418 USA

GURGAON, INDIA

9th Floor, Tower B1,
DLF SEZ Silokhera,
Sector 30, Gurgaon
122001

DUBAI, UAE

Suite No.: 407- 412,
Clover Bay Tower,
Business Bay, Dubai
United Arab Emirates

HISAR, INDIA

6th Floor, Metropolis Mall,
Industrial Area, Hisar,
Haryana - 125005



✉ info@daffodilsw.com

🌐 www.daffodilsw.com