Fuzzy Math Whitepaper

VelocityEHS MSDS Online

Improving safety through Enterprise SaaS UX

Contents

We are a user experience design, strategy, and innovation firm in Chicago.

Through research and design we solve complex user-centered problems that ultimately help our clients make their users happy.

Your team of experts

Our small, stable roster means our clients get **a team of dedicated UX professionals** ready to quickly jump in and start solving problems. We work directly with our clients, forging collaborative relationships that ensure there are no surprises at the end of the project.

User champions

We believe that the best design is one that focuses on the **real people** who will be using it. Through research, experience, and empathy, we identify the current and potential "ugh!" moments and fix them at the source.

Strategy & Planning

We attune our clients to the voice of their customers through primary research and solve challenging business problems through proven design frameworks. We help our clients get a complete picture of their customer experience ecosystem, and formulate roadmaps for future growth.

Organizational Development

We help drive internal improvement by reviewing existing product design and development processes and recommending methods to improve delivery and communication and better integrate voice of the customer. We provide training on user-centered design and implementation of design activities and deliverables.

Interaction Design

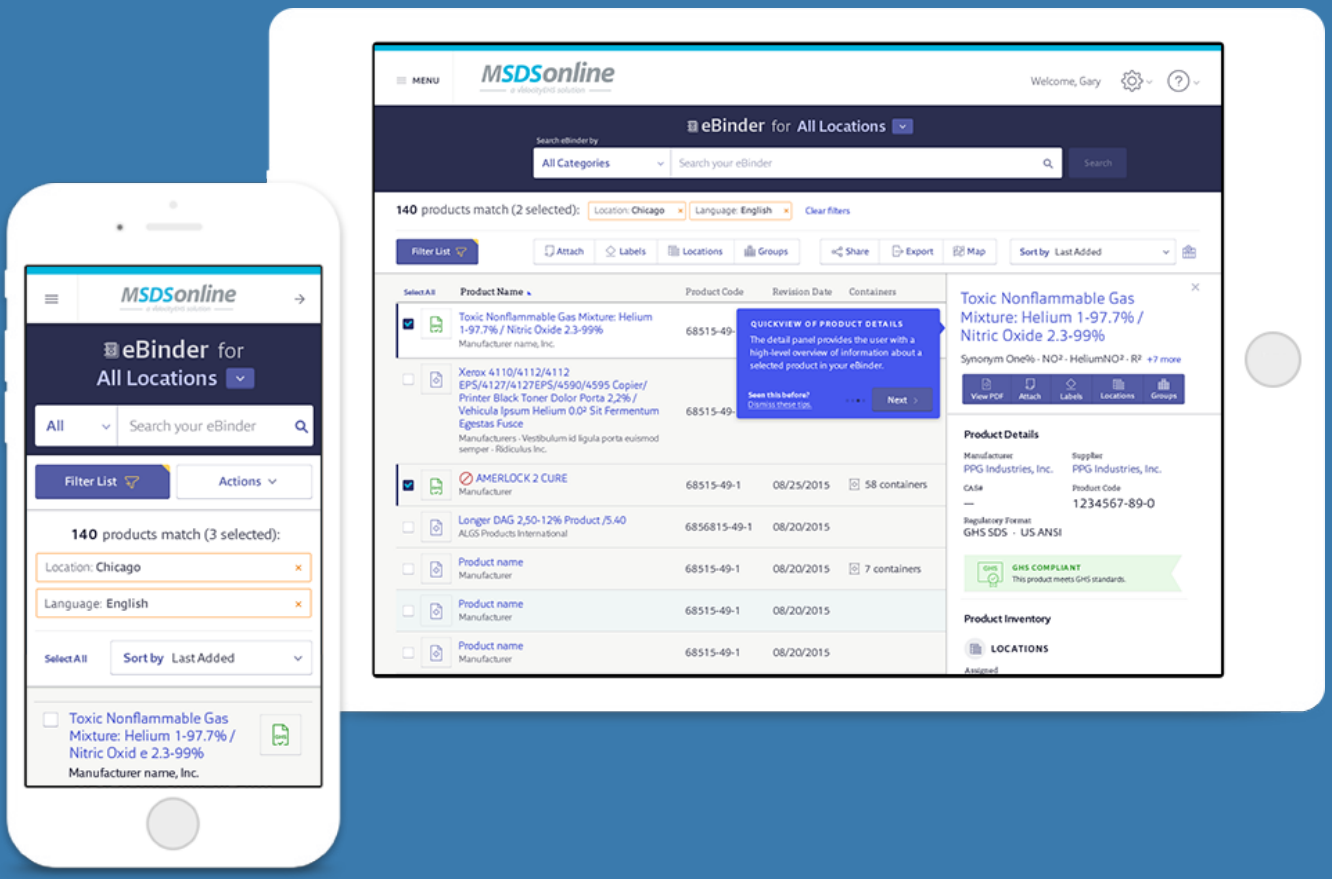
We craft the experience of using a digital interactive tool, product, or application while advocating for the needs of users. We design process and workflows, as well as the organization and classification of information, and create modern, pixel-perfect interface designs and design systems.

We've worked with everything from early-stage startups to some of the largest enterprise businesses in the world, on projects across devices, industries, and continents:

Allstate. HYATT GE SAP Fieldglass Expedia

"The Fuzzy Math team listened well and incorporated the input and experience of our team into their deliverables.... As something of an unintended outcome, our team's practices improved through osmosis – we learned from their approach and have incorporated many of the techniques they used during our project."

MIKE FLYNN
VP Product Development & Strategy, VelocityEHS



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With our research and design support, we upgraded VelocityEHS from its existing version 1.0 of the product into a more comprehensive, intuitive version 2.0 built for usability and longevity. We also gave its product team new systems for identifying patterns within user needs so that they could make decisions in line with the product's strategy and vision, instead of reactive changes that served as temporary fixes to much larger problems.

Synopsis

When new government standards mandated a change in the way industrial workplaces tracked information about their chemical inventories, VelocityEHS knew it was time to upgrade its Safety Data Sheet management tool to provide their customers with a seamless user experience that would eliminate the need for bulky binders and put all of the information at their fingertips.

Fuzzy Math supported VelocityEHS in safeguarding employees and giving their employers every tool to organize chemicals, manage compounds, and access critical information in case of emergency. Through our collaboration, we helped VelocityEHS iterate on its own product to make health and safety standards an empowering experience rather than a procedural pain point.

Backstory

VelocityEHS, formerly known as MSDS online, is a hazardous chemical inventory management platform and niche offering within a suite of environmental, health, and safety standards products. Materials inventory is an industry that's constantly in flux. In fact, at any given time, over 7 million documents are constantly in motion, being searched for, receiving updates, and requesting orders.

Designed to modernize record-keeping processes once relegated to thick paper binders, VelocityEHS offers robust tools for companies required by OSHA laws to track chemical inventory and maintain procedural steps for cleanup in case of a spill or other toxic event in factories, warehouses, and other industrial job sites. In some cases, these companies are required to keep their chemical history for decades in case of latent health issues that arise, or lawsuits that require review.

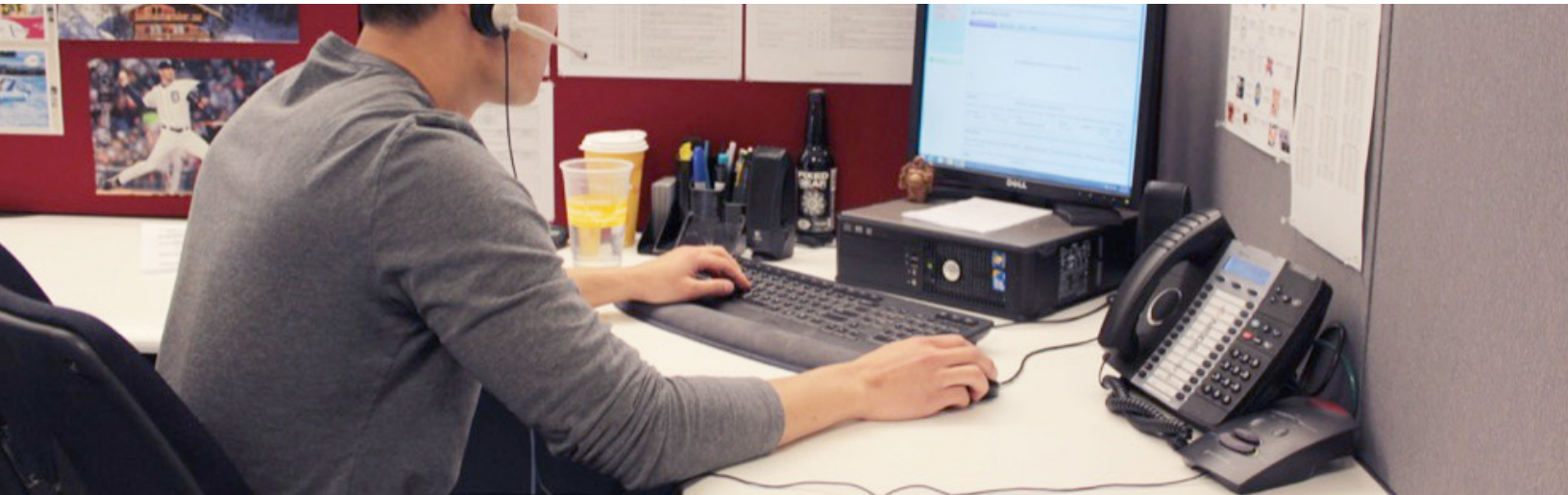
A complex tool that takes the complexity out of important procedures, VelocityEHS is aimed at satisfying the needs of the 'every user', inclusive of the varied experience levels and technological skill of employees across the organizational spectrum. From senior-level chemical safety managers who specialize in product safety to entry-level laborers who need immediate access to safety protocol, VelocityEHS's customers rely on the product's ease of use to help them adhere to safety standards, so that they can help the companies they work for meet the strict legal guidelines that keep them operationally sound.

Climate & Context

Prior to our introduction to VelocityEHS, a major global regulatory shift was occurring in the way that hazardous chemical were classified and labeled. Based on oversight by the United Nations, the Global Harmonized System of Classification and Labeling of Chemicals (or GHS) was established which effectively standardized a framework for identification and communication of chemicals around the world in order to better protect the environment and human health.

A major catalyst within the industry, this change affected not only VelocityEHS's product, but also its business model, as an influx of customers were now signing up for the tool to comply with the new GHS regulations..

VelocityEHS knew that for customers struggling to comply with this new standard, let alone the transition from paper-based chemical management to digital, its product had to be dead simple for any user to navigate without compromising the power of the platform or losing its lead in the market.



Opportunity

While VelocityEHS had already been working within a user-centered design methodology, it struggled on two fronts: designing to meet the needs of users across the spectrum, and implementing their tactical feedback in a way that connected to a unified product strategy.

Users would often request buttons or changes to navigation, but lacked the peripheral vision necessary for examining how it could elevate the overall experience. VelocityEHS needed help getting out from under the noise of literal requests, to better understand how to design a more innovative user experience.

Turning Point

VelocityEHS' team was aware that the time and effort involved in conducting user research, framework design, and interaction design was beyond their day-to-day capacity. At the time (2014), they were also in the midst of merging with Knowledge Management Innovations (KMI), and were navigating the internal changes that come with a changing company structure and soon-to-be reorganization under a new brand strategy, both happening in tandem with core changes to their product. To avoid overwhelm and put the project's goals in the hands of an external partner, VelocityEHS hired Fuzzy Math to take over the heavy lifting of the user experience design.

On the first day of the project's kickoff, we asked ourselves:

"How do we use the roadmap we already have to drive the relationship we want and make the changes users need?"

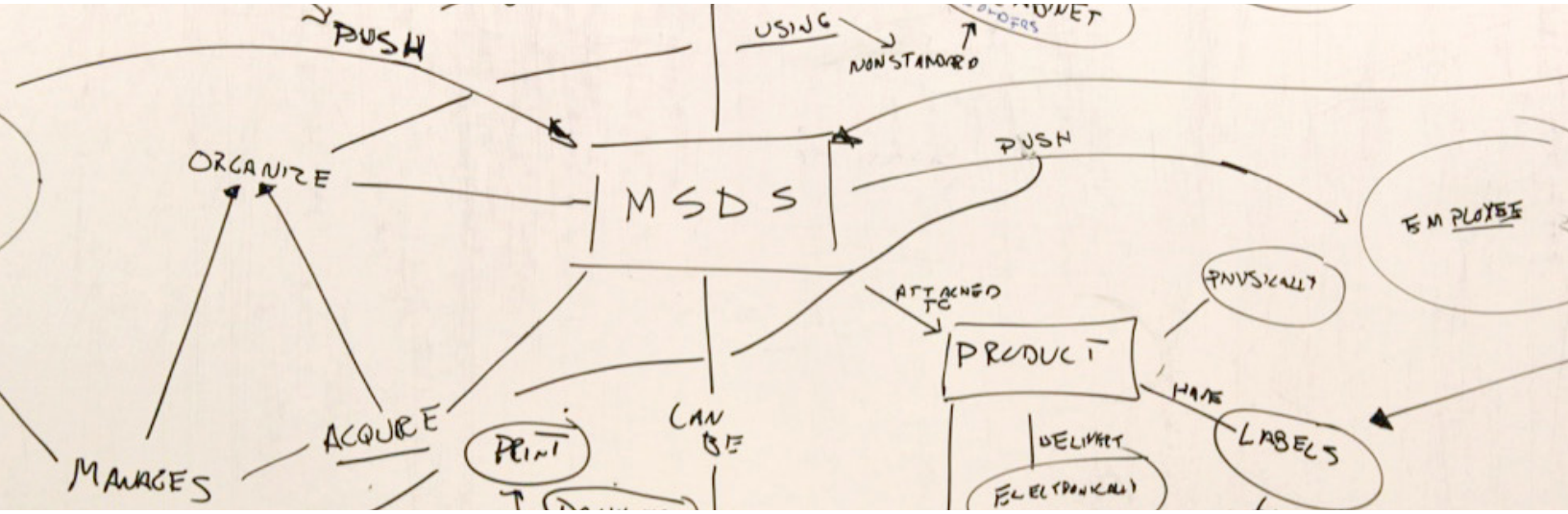
Process

With so many moving parts, we knew that naming a primary point of contact early on was necessary, a designated team responsible for reviewing our work and taking governance over

it. VelocityEHS's product design team filled this role, and we met every week through the project's lifecycle to discuss updates and host workshops to provoke feedback and gauge the team's energy prior to design sprints.

Early in the Discovery phase, we worked with this team to outline project goals and objectives that would give us benchmarks for success, such as:

- Allowing any user at any experience or skill level to complete common tasks within the interface
- Removing confusion about vague actions, controls, and interactions by ensuring that they did what they implied.
- Prioritizing information in an emergency-first context, so that information about chemicals, concentrations, proper storage and cleanup protocol were accessible in the fewest number of steps.



We also thought about more long-term goals that supported the company's vision, including:

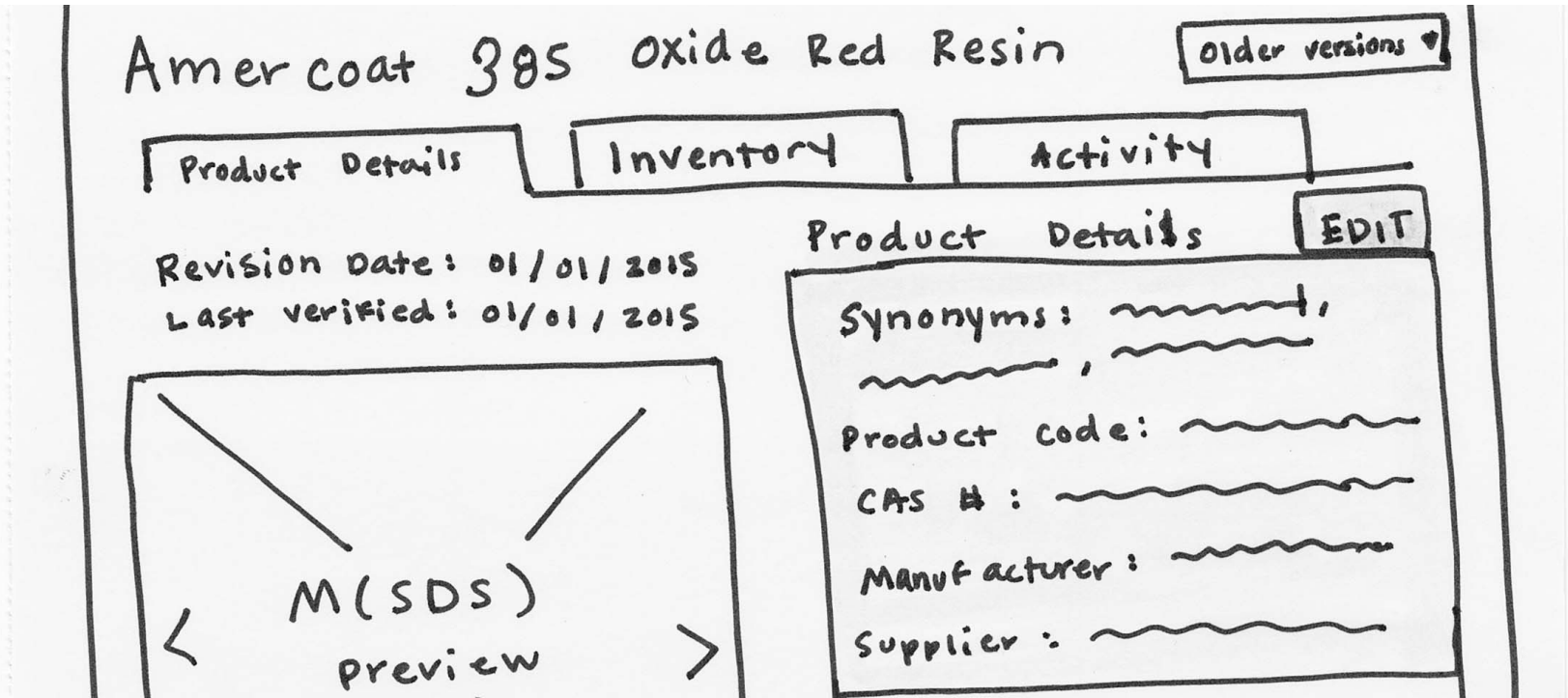
- Rethinking the chemical inventory industry 'status quo' to uncover latent opportunities through user research, best practices, and expert review.
- Leading the charge for greater usability for safety managers and end users, by intuitively considering and delivering on their needs.
- Building a highly usable, long-lasting product that offsets the cost of VelocityEHS' investment by being indispensable to users.

We then moved into more strategic research that included persona definition, customer journey mapping, and ecosystem mapping. These would help us understand the various points of entry that sales and support had within the product, and inform design decisions, but also opportunities for client feedback.

Next, we gathered contextual research by becoming a wall to VelocityEHS's everyday functions. Fuzzy Math sat in on meetings to learn how the company onboarded new clients, listened in on support calls to hear the real-world pain points of users, and even embedded ourselves in the company culture and its processes for two full days to absorb its workflow. We then went out into the field to see how the product was used at everyday facilities like parks departments and warehouses, and we observed real users responsible for chemical management to better understand the ecosystem in which the product existed. Throughout we documented insights and obvious points of friction and frustration – both for VelocityEHS's internal teams and its users – that would later become critical to resolve in the design phase.

Concepting

Once we collected the research necessary for understanding how VelocityEHS operated, we wanted to know: how did these pieces of information form a relationship within the system that ultimately benefitted the user? We drew sketches, conducted analogous research about what other, non-chemical management companies were doing to solve similar problems, and hosted collaborative sessions with the goal of not only discussing concepts, but prioritizing them for impact.

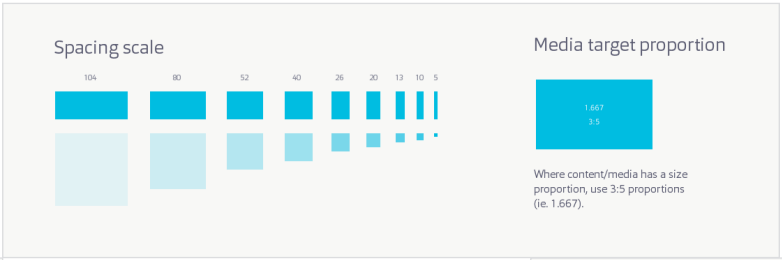


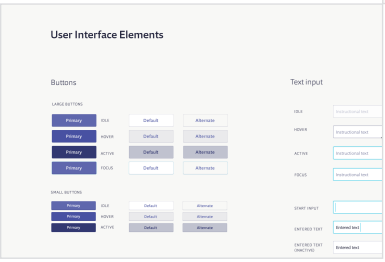
Framework Design

We then began building the structure of the system, including architecting information in order of importance to the user, developing navigational patterns, and a visual language consistent throughout the platform and across devices. During this project's lifecycle, we weren't just designing for visual appeal -- we were designing for behavioral accuracy.

As UX practitioners, we know that interaction design is a fine line between giving users what they need, and giving them what they don't know they need...and we certainly walked that line in this stage. We didn't want to assume what they needed, but we also wanted their experience using the platform to feel intuitive, and ultimately natural.

As we worked on building out the platform's framework, we also began planning the way that complex chemical regulatory information would be displayed to scale in format, across device sizes and classifications. We went through dozens of iterations, tweaking, simplifying, and improving as we went.

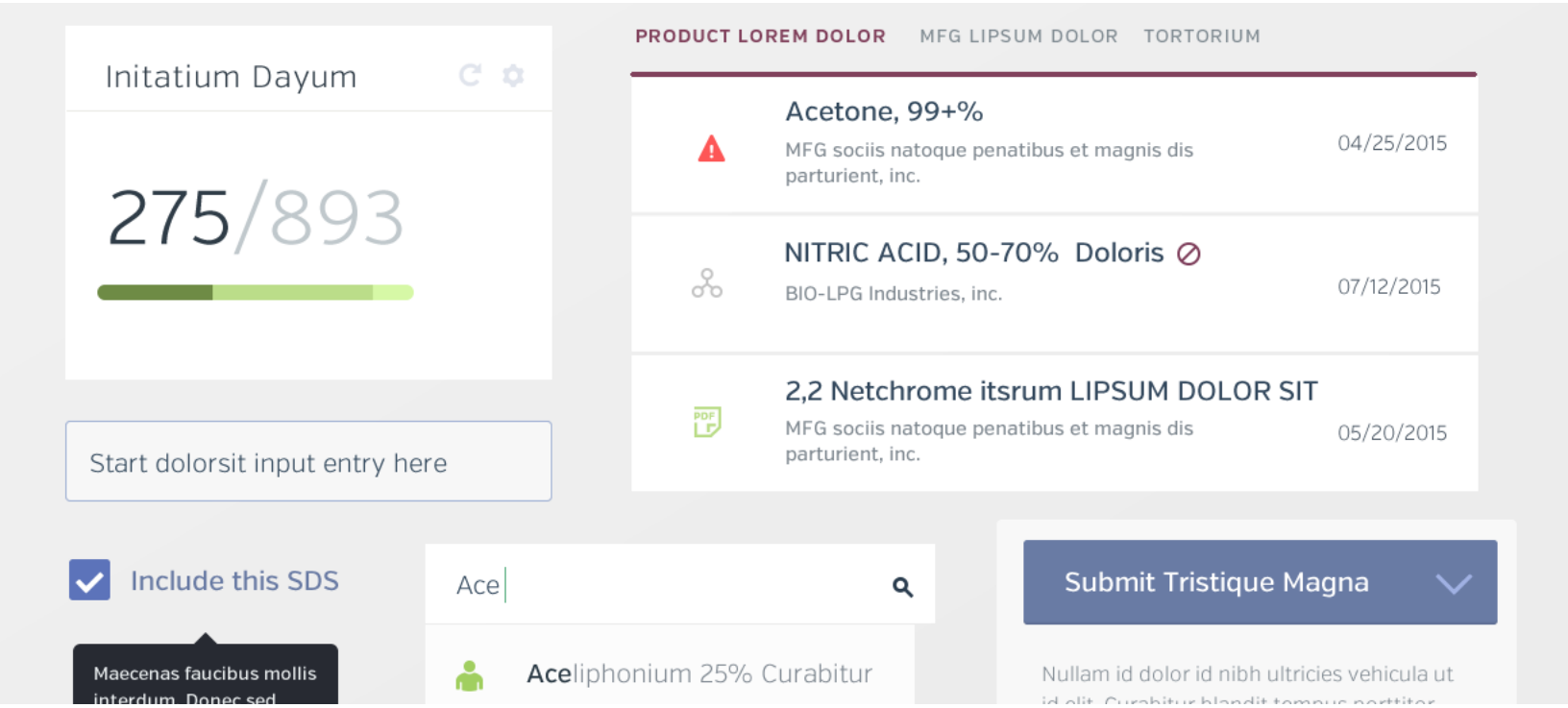




Design Sprints

We then ran two overlapping design sprints, which allowed us to move features and pages within the platform from rapid sketch to bare-bones wireframe, and ultimately, to a final design. Our team collaborated with VelocityEHS during each of these stages to agree on concept sketch directions, then built wireframes and tested their interactive elements in tandem with the platform's visual design, which we applied as full color page designs. Though these pages were complex with many states of information and specific user flows, we delivered a core set

of UI elements and interaction patterns that could be replicated and repurposed throughout the platform, offering a consistent user experience no matter where users ventured, or what their level of expertise was.



Challenges

Due to the new brand due to launch at the end of the project's anticipated timeline, we had to plan for and adapt our new visual design system in a way that could flex with VelocityEHS's new brand without also compromising the complex client customization and white labeling that the visual design language had accounted for.

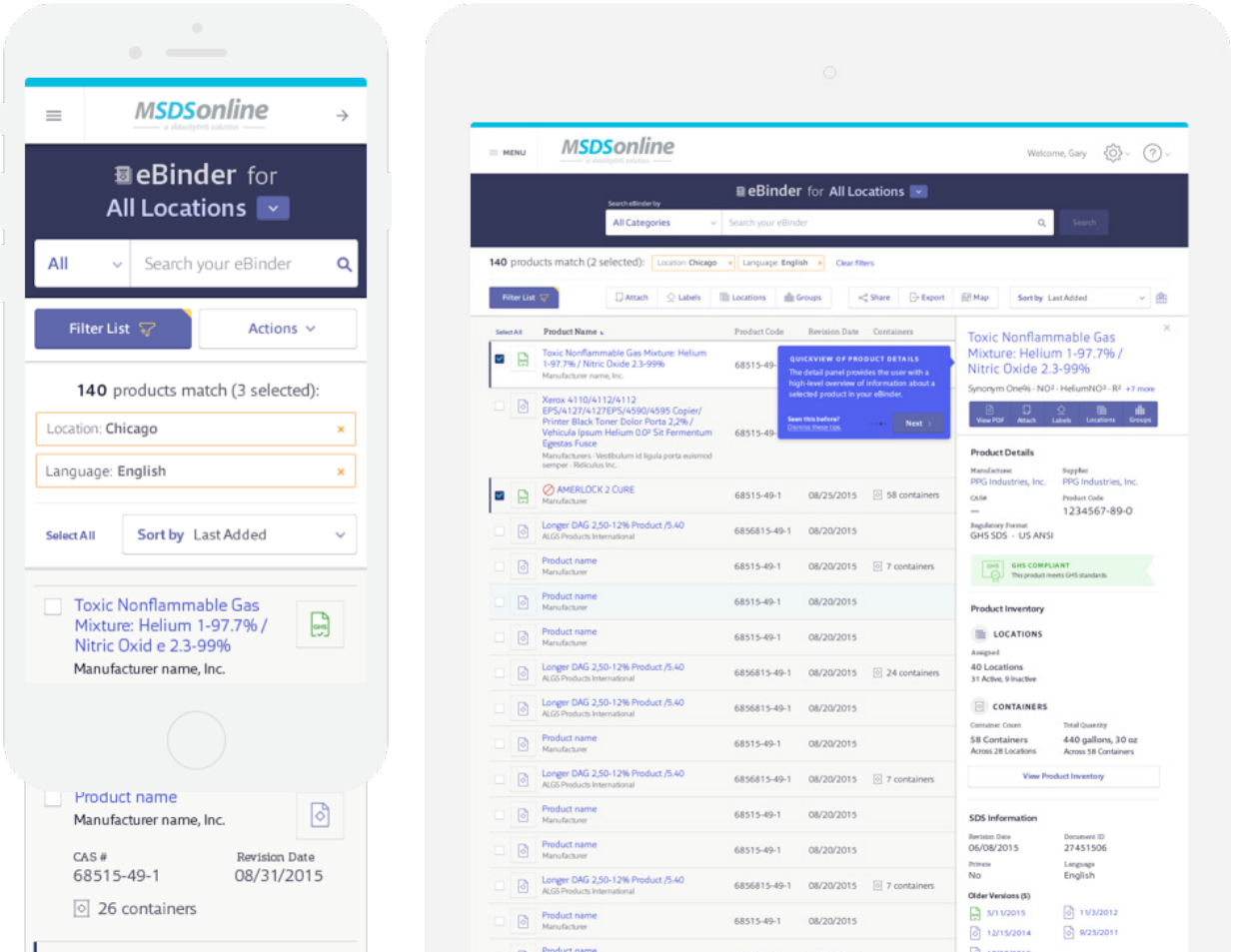
Much like the safety data sheets at the heart of the industry that VelocityEHS serves, this project was in a constant state of flux and complex. We organized chaos by structuring our own team adaptively, like spokes working together to power the hub. During each design sprint, we assigned Fuzzy Math designers to specific aspects of the project so they could become subject matter experts on a specific feature's user flow and information requirements, leading the team through concept development and iterations. This allowed us to shine as advocates for the user, while ensuring flexibility and completion of the project on time and within budget.

Conclusion

VelocityEHS is a secret weapon against health hazards that makes anyone the hero at work when chemical information is needed or something goes wrong. For that reason, access to that secret weapon should be easy and seamless. We helped VelocityEHS remove some of the complexity within management and inventory for chemicals stored in any workplace around the world. As a result, better human health and environment safety can be achieved and employees in a hazard can locate the information they need in a moment's notice.

With our research and design support, we upgraded VelocityEHS from its existing version 1.0 of the product into a more comprehensive, intuitive version 2.0 built for usability and longevity. We also gave its product team new systems for identifying patterns within user needs so that they could make decisions in line with the product's strategy and vision, instead of reactive changes that served as temporary fixes to much larger problems.

Now, instead of being managed by outdated procedures and cluttered systems, employees can manage the chemicals they work with through a tool that feels like an extension of themselves exactly when and where they need it.



Interested in Working With Us?

We're user experience practitioners that believe design is at its best when it can translate, mediate, and unify the needs of businesses and their customers. We don't chase technology philosophies, strict methodologies or rigid frameworks. We don't adhere to strict protocols. There's no 'one size fits all' thinking here. Instead, we apply what we know to how businesses operate, all in the name of helping our clients solve for their problems in context. The result is highly specialized solutions resulting in easier decisions and more enjoyable experiences.

Interested in working with us?

Just send us an email at hello@fuzzymath.com.