

## Case Study

# Enhancing Educational Simulations for Accessibility and Multilingual Impact

Magic  
EdTech

### The Client

The client is a prominent global education figure offering PreK-12 students content and tools, focusing on delivering high-quality lessons, collaboration tools, and professional learning resources for educators to create a lasting educational impact.

### The Challenge

The client was looking for assistance in developing multilingual, accessible K-8 Science simulations to elevate their learning product's effectiveness and market position across regions. They were seeking a partner with expertise in content, design, and technology to successfully deliver the product.

### Critical Success Parameters

- ✓ Develop a simulation engine using VueJS framework to ensure efficiency and scalability.
- ✓ Enable support for both left-to-right (LTR) and right-to-left (RTL) languages to seamlessly integrate and configure content.
- ✓ Ensure that the content maintains scientific accuracy and aligns with the intended educational objectives and outcomes.
- ✓ Maintain a consistent design and UI while incorporating high-quality, visually appealing media, such as artwork and animations.

### Our Approach

- ✓ Magic's IDs & SMEs worked closely with the client to conceptualize enhanced learning experiences through simulations.
- ✓ Implemented a "born accessible" strategy, ensuring WCAG 2.1AA compliance right from the design phase.
- ✓ Extended the VueJS framework by incorporating additional components, accessibility compliance, and an engine-based approach.
- ✓ Adopted an Agile Development workflow, prioritizing rapid iterations and frequent feedback to enhance flexibility and adaptability to changes.



### Key Result Highlights

Leveraged pre-existing frameworks to reduce costs and development time while improving efficiency.

Successfully created and delivered over **50** custom complex simulations from scratch within a **7**-month timeframe.

Implemented a WCAG-compliant development approach, ensuring the simulations were "born accessible" to meet "TX State adoption" accessibility standards.

Designed a robust solution to support multilingual output, accommodating diverse geographies and languages.

Demonstrated efficient and rapid team resource onboarding to adapt to development process fluctuations.