



Tech profile

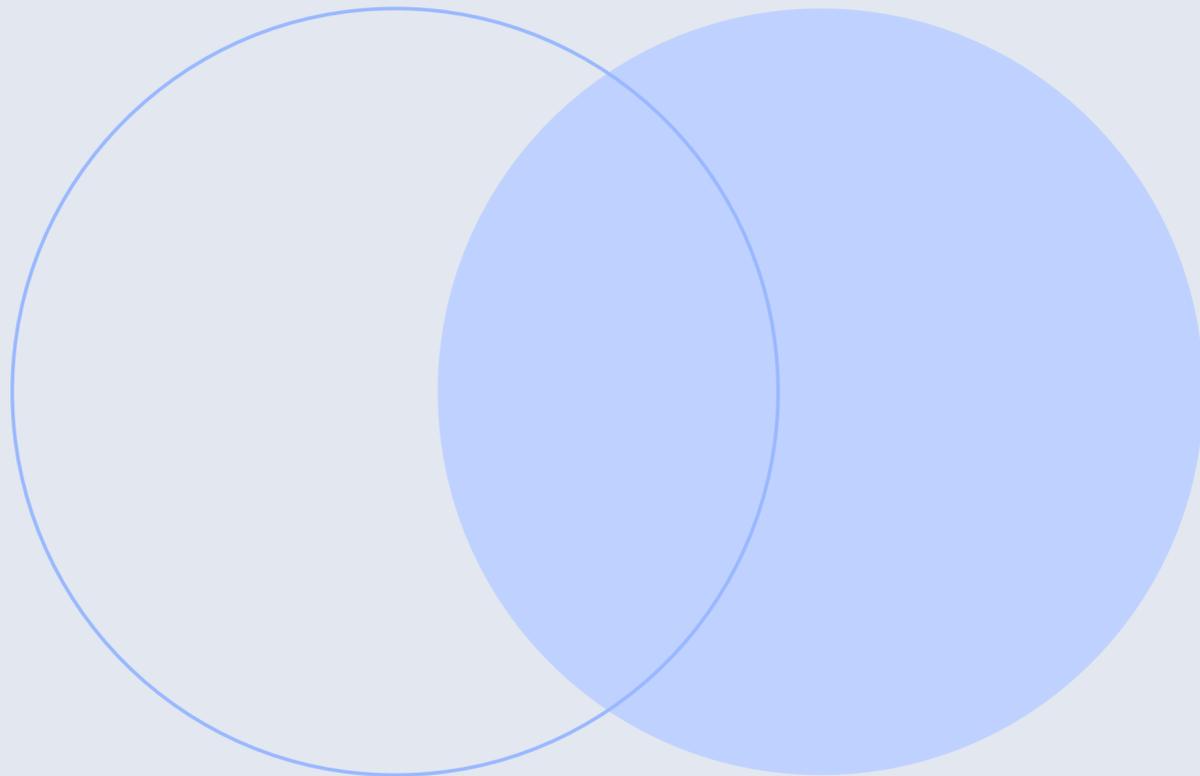
# Modernization and AI, one engineered journey

From strategy to adoption, no handoffs



Modernization and AI won't wait.  
Yet, most enterprises stall at  
strategy decks, tangled in legacy  
tech or pilots that never scale.  
We fix that.

WHO WE ARE



CME delivers tech strategies built to run, with engineering depth to turn plans into production. That's why mission-critical systems serving 80M users run on CME delivery, and why 90% of our clients stay with us for more than a decade.

#### WHY CLIENTS TRUST US

<b>40+ years</b> delivering mission-critical systems	<b>80M</b> users served every day	<b>50%</b> of clients are Fortune 500 brands	<b>650</b> AI-augmented engineers
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OUR CLIENTS · OUR CLIENTS · OUR CLIENTS

## 9 out of 10 clients come through referrals

### Clients choose us because we deliver differently

- Tech strategy, engineering, and AI enablement co-created with your team
- Modernization + AI treated as twins and advanced together
- Fast, flexible delivery, even in complex environments
- Impact across government, insurance, banking, energy, retail, logistics, education, and more

### SOME OF OUR CLIENTS



ONE PARTNER FOR THE FULL JOURNEY · ONE PARTNER FOR THE FULL JOURNEY · ONE PARTNER FOR THE FULL JOURNEY

TECH STRATEGY

ENGINEERING

AI ENABLEMENT

## TECH STRATEGY

## WHAT YOU GET

1. Modernization & AI priorities set for real enterprise environment
2. Roadmaps grounded in feasibility, data readiness, and delivery capacity
3. Strategy, governance, and architecture aligned to accelerate implementation

## WE FOCUS ON

- **Unified modernization + AI strategy:** one plan that aligns data, architecture, and delivery models so transformation compounds instead of fragmenting
- **Feasibility and readiness:** integration complexity, data quality, security posture, and ROI assessed before any commitment
- **Architectural foundations:** secure cloud/data blueprints, modularization paths, migration stages, performance and reliability targets
- **Governance engineered-in:** decision rights, compliance, telemetry, and risk controls designed directly into operating and delivery models
- **Responsible AI & regulation:** ISO 42001, NIST, GDPR, and GCC-aligned frameworks tied to lifecycle, auditability, and enterprise oversight

## ENGINEERING

## WHAT YOU GET

1. Modernized systems delivered without disruption
2. AI deployed as a core capability with full observability and lifecycle control
3. Secure, cloud-native platforms that scale reliably under real-world load

## WE FOCUS ON

- **Build for evolution:** modular, API-first, event-driven, and cloud-native systems that safely integrate with legacy estates
- **Reliability by design:** observability, automated recovery, performance telemetry, and continuous feedback loops
- **Automation with discipline:** CI/CD, infrastructure-as-code, automated testing, self-healing environments, and AI copilots accelerating engineering
- **Embedding intelligence:** predictive monitoring, governed ModelOps, adaptive optimization, and AI-driven operations
- **Evolution with you:** shared toolchains, paired delivery, and structured handover that build client autonomy and future-readiness

## AI ENABLEMENT

## WHAT YOU GET

1. AI embedded into how your teams build and deliver
2. Automation, copilots, and telemetry woven into key workflows
3. AI-ready teams equipped to operate independently and improve continuously

## WE FOCUS ON

- **Readiness and architecture:** evaluating tools, workflows, data maturity, and governance to build the right AI foundation
- **AI-integrated workflows:** embedding copilots, automation, validation and observability throughout the delivery lifecycle
- **Human-AI operating models:** defining roles, decision flows, and interaction patterns for effective collaboration
- **Governed AI pipelines:** implementing monitoring, auditability, and secure decision rights across model lifecycles
- **Performance loops:** using metrics, telemetry, and feedback to continuously refine models and operations
- **Sustained capability:** establishing practices, assets, and routines that make AI adoption continuous and self-sufficient

# Deep capabilities, powering every stage of delivery

From AI to IoT and systems to UX, our capabilities span the full stack. Here are the specialized skills we bring into every implementation, engineered with the governance, security, and precision every enterprise demands.

## Systems & software

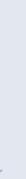
- Modernization of legacy systems
- Custom enterprise application development
- API-first and event-driven architectures
- Cloud-native engineering (containers, infra-as-code) with security-by-design
- Identity and access management; observability and SRE practices for resilience
- DevOps, CI/CD, and intelligent automation pipelines
- User-centered UX/UI, design systems, accessibility, and cultural adaptation

## AI & data

- Machine learning, predictive & generative AI (LLMs, RAG, copilots, multimodal) engineered for production
- Computer vision & natural language processing for automation, insight extraction, and agentic workflows
- Advanced analytics and decision intelligence
- Data architecture, migration, and platform engineering built for scale, observability, lineage, and real-time pipelines
- ModelOps & data governance frameworks aligned with ISO/NIST/GDPR, ensuring lifecycle control, auditability, and quality

## Connected & intelligent devices

- Smart device engineering and manufacturing
- IoT platform and solution development
- Edge computing and on-device intelligence for real-time decisions
- Full device lifecycle management: firmware, OTA pipelines, diagnostics, certifications (CE/FCC/UL)
- Security, identity, and governance frameworks for enterprise-grade deployment





AI in production: how we move beyond pilots to enterprise-scale results.

## Healthcare market research (survey targeting)

### Problem

Spray-and-pray invitations hurt user experience and engagement.

### Solution

An **AI-driven targeting engine** predicts response likelihood using **deep learning models** built with **Keras** and deployed on **AWS Lambda**. Data is stored and managed in **AWS S3**, **DynamoDB**, and **PostgreSQL**, with pipelines orchestrated in **Python**. Delivered as a REST API integrated into the CI/CD pipeline, the system includes a feedback loop and scheduled retraining based on monitored metrics (accuracy, dropout, response rates).

### Impact

Boosted response rates **+150%** in **<5 months** by deploying an AI targeting engine; improved panelist satisfaction with HIPAA-compliant operations.

## Energy technology provider (AI knowledge assistant)

### Problem

Knowledge locked in documents created bottlenecks and slowed decisions.

### Solution

An **AI knowledge assistant** with multi-agent **RAG on Amazon OpenSearch** and **Bedrock**, managed via **LangGraph** for multi-turn context. **OCR** digitizes scanned docs; both structured and unstructured sources indexed. A built-in analytics agent runs data queries in natural language. **Quality validation** uses a 5-point user feedback loop and a **reranker** ML model to select high-quality responses.

### Impact

Eliminated hours of manual search and improved answer accuracy vs. comparable agents, scaling across **10,000+ legal** and **3,000+ data sheets**.

## Cloud business solutions (AI invoicing)

### Problem

Manual, slow, and compliance-heavy invoicing workflows.

### Solution

Deployed **4 AI models** across the invoicing chain:

- **Invoice categorization** using **OCR**, feature engineering, and decision-tree models.
- **Bank statement reconciliation** (OCR + ML) to match transactions and reduce reconciliation time.
- **Validation & correction** model with a feedback loop and an analysis dashboard to compare predictions vs. corrections and improve over time.
- **RAG-based chatbot** to answer invoice/functional queries in real time, reducing support load.

### Impact

Automated categorization, faster reconciliation, improved compliance, real-time AI support assistant.

## U.S. Energy-as-a-Service (AI + IoT platform)

### Problem

Scaling fast and staying efficient without letting complex systems turn into reactive decisions.

### Solution

Implemented **5 AI-driven solutions**:

- **Predictive models** to forecast energy use, site performance, and HVAC behavior.
- **Chat-based tools** powered by LLMs that search the in-house knowledge base and support teams with instant answers.
- **HVAC optimization** models that cut energy waste while maintaining comfort.
- **Data extraction automation** that turns invoices and scanned files into usable, structured data.
- **Anomaly detection** to spot equipment issues early and improve efficiency.

### Impact

Faster insights, proactive decision-making, and measurable efficiency gains, with improvements reaching up to **40%** in key processes.



Modernization engineered: how we develop tech to empower new models.

Retail

# Revamping online and physical retail digital experiences for 6M users per month



TRANSFORMATION STORIES

## The background

→ A leading discount retailer with over 20,000 locations across the US, offering the most popular brands at low prices online and in-store, was looking to take their e-commerce presence to the next level. As a top priority, the maintenance-intensive legacy application had to be replaced by a scalable digital solution that would provide shoppers with an exceptional user experience.

## What we did

After carefully studying and understanding the target audience, we developed a new digital front-facing solution, including a multi-purpose mobile app and a website, centered on user conversion, retention, and service.

The new digital solution was fully integrated within the client's extensive tech ecosystem and partner network. It has reshaped the client's e-commerce presence, enabling customers to easily browse products, check prices, and make purchases online. We implemented dynamic features such as a digital wallet, coupons and discounts, rewards, and targeted offers based on user behavior and profiles, considerably improving overall customer engagement and spend.

In physical stores, the app acts as a shopping companion. It offers a cart calculator, allowing customers to scan items with their phones as they shop and check a running tab in real-time. Mobile self-checkout was also rolled out shortly after the first release.

For buy-online-pickup-in-store (BOPIS) orders, we created a dedicated handheld terminal application, promoting convenience and a robust value proposition.

## The results

Revamping digital retail experiences for <b>6M users monthly</b>	<b>4.8 ★★★★★</b> App Store rating 688k reviews	<b>4.7 ★★★★★</b> Play Store score 615k reviews
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Recognizing the difference the new digital front-facing solution has made across all fronts, the client assigned us several new projects, including building a mobile app from scratch for one of their subsidiary brands, which achieved comparable success.

## The team

Our team comprised iOS and Android developers, QA specialists, and back-end, database, and API engineers. They played a key role in developing and launching the client's inaugural mobile app within the first year of collaboration.

Financial services

# Replacing legacy systems with future-proof technology

## The background

→ A prominent medical third-party administrator (TPA) based in MENA, servicing customers across five countries in the region for over 50 years, has faced limitations due to legacy systems that lacked scalability and agility, hindering their operational efficiency, business performance, and regulatory compliance. In short, they were in dire need of a tech refresh.

## What we did

We designed and implemented a comprehensive, future-proof technology architecture strategy that entails developing a modern platform encompassing the core system, associated portals, and a mobile application.

### Core system

The medical insurance core system covers every aspect of the medical insurance value chain:

- Underwriting and policy administration: Manages customer relationships, product pricing, agent handling, and policy renewals.
- Provider management: Handles managing profiles, financial details, contracts, and network management for providers.
- Approvals processing and claims adjudication: Automates and streamlines the approval and claims process through advanced engines.
- Receivables and payables: Provides detailed accounting for transactions related to claims and reimbursements, integrating seamlessly with financial systems.
- Regulatory compliance: Ensures compliance with regulatory requirements across multiple jurisdictions.

- Customer care: Delivers comprehensive customer support through health records management and integration with communication systems.

### Portals

The three human-centric portals are tailored to enhance engagement and streamline processes:

- Provider portal: Efficient profile and contract management, batch claim submissions, and comprehensive reporting features.
- Partner portal: Tools for managing portfolios, requests, billing, and performance metrics, used by brokers, agents, and employers.
- Member app: Access to policy details, claims submission and tracking, provider networks, and potential up-sell or cross-sell opportunities, monitoring and reporting.

### IT operations

Backed by our industry-specific expertise, we act as our client's trusted consultant, readily suggesting potential improvements and necessary changes. We also provide full support for their IT department, helping their DevOps team implement best practices.

## The results

<p><b>x2</b></p> <p>active covered lives within 5 years</p>	<p><b>Waste reduction</b></p> <p>through automated tracking of member utilization</p>	<p><b>-40%</b></p> <p>decrease in operational costs in specific areas</p>
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## The team

Our team, composed of insurance experts and software engineers, brings diverse expertise in system architecture, database management, and application development, ensuring comprehensive and tailored support for industry-specific needs.

Telecommunications and entertainment services

# Reimagining mobile and entertainment technology in 31 emerging markets

## The background

→ A world-leading mobile network operator and home entertainment provider, with an expansion that reached over 18 million subscribers across 31 countries, was looking to elevate their tech game by delivering the best user experience to their customers. Constant innovation, rapid time-to-market, cost-efficiency, and adaptation to unique remote region challenges were the main baseline requirements the client had to establish.

## What we did

For over 13 years of collaboration, a team of CME experts has served as an extension to the client's IT department, offering support and development services, as well as proactively collaborating on bringing proof-of-concept solutions to life.

Self-care application (mobile and web) **10M+ downloads**

We created a subscriber access and management app with a holistic approach, handling everything from the technology architecture and user interface to back-end services and essential systems integration.

Sports entertainment mobile applications **1M+ downloads**

We developed the front end of a mobile application dedicated to sports, prioritizing user experience with a focus on personalization and customization.

TV mobile applications **600K+ downloads**

We developed the front end of a TV service mobile application, delivering a robust performance, user experience, and coverage for different target markets.

## Identity service solution

We implemented a single sign-on (SSO) feature across different applications. The platform supports oAuth 2.0 protocols, which grant secure service exposure to third-party applications and user-protected resources.

## Customer experience and loyalty

By leveraging gamification elements, we developed an innovative reward service into the self-care app. The architecture was designed for flexibility, scalability, and seamless integration with third parties.

## USSD menu manager

Our client users relied heavily on USSD messaging to manage their lines and subscriptions. We built a centralized USSD menu manager to facilitate the design and publishing of USSD menus, offering a flexible and quick adaptation to users' needs.

## Legacy applications enhancement and support

In addition to the services developed by CME, we also supported our client on their legacy applications created by other vendors, such as the provisioning, catalog management, and lifecycle engine systems.

## The results



## The team

Our team consists of skilled software engineers who bring a diverse set of proficiencies in system architecture, application development, and database management. Their broad expertise ensures comprehensive, customized technology solutions across various platforms.

Market research

# Updating an opt-in panel to a global modern insights mobile app

## The background

→ A leading global data, insights, and consulting firm wanted to elevate the performance, user experience, respondent quality, and engagement of its well-established opt-in research panel.

## What we did

CME's first order of action was to assemble and transplant a diversified team of engineers into the client's development ecosystem. In a short period of time, the team was able to achieve the following:

- Transitioned the panel from cross-platform implementation to iOS and Android, yielding faster loading times, improved accessibility, and a streamlined login process.
- Enhanced user targeting through preference-based push notifications.
- Implemented a robust fraud detection system, strengthening the client's process integrity.
- Introduced advanced security features in the mobile app to make it significantly more difficult for hackers to reverse engineer, use emulators or bots, or employ rooting tools to manipulate the survey-taking experience.
- Provided valuable analytics to track the success rate of marketing campaigns through Meta and Google Ads.
- Added advanced analytics, instrumentation, and monitoring tools to easily detect any problem allowing for early investigation and issue fixing in a timely manner.

- Adopted the behavioral-driven development methodology to deliver new releases every two weeks, allowing testers ample time to provide feedback.
- Added unit testing to make sure the business logic is meeting our client's technology standards and always flowing as expected.
- Integrated automated testing processes into the new app, enhancing quality control and product stability, while reducing regression issues and enabling better time and resource allocation.
- Created a continuous delivery system that automatically builds and uploads Android and iOS apps to Google Play Store and Apple App Store, respectively, after getting scanned by third-party tools for code quality and license issues.

## The results

The mobile app was a massive success. It helped the client achieve expansion into 13 new markets. With the new features, the panel's performance has significantly improved, achieving the following:

**+140%**

increase in new apps installs

**-12%**

decrease in monthly average users' loss rate

**+99%**

crash-free rate

## The team

A team of experts consisting of iOS and Android developers, back-end engineers and quality assurance specialists worked alongside our client to attain optimal results.

Materials science and digital identification

# Building innovative inventory and operations solutions for a Fortune 500 leader

## The background

→ A leader in materials science and digital identification solutions was looking to optimize their inventory management systems. As one of the world's major RFID market key players, the company specifically wanted solid software support. Our end-to-end operations management solutions, developed under our spinoff ZippyYum, captured their interest so they approached us to explore the possibility of adapting these solutions to their technology.

## What we did

In a matter of months, we adapted and integrated RFID technology, along with the preexisting barcode scanning capability, into our inventory and operations management applications. Subsequently, the client decided to acquire our solution suite, which today plays an essential role in their operations and business performance. The suite consists of:

### Inventory app

Thanks to the app's advanced inventory management capabilities, inventory operations can be performed in a matter of minutes, thus more frequently. Powered by smart algorithms, the app supports the whole supply management workflow and creates a fully paperless experience, from ordering to inventory taking to waste tracking.

### Operations app

The operations app streamlines day-to-day operations with a specific focus on the food industry. From designing and automatically generating custom labels and nutritional facts to providing easy access to training material, a daily activities checklist, and kitchen prepping instructions, the app drastically boosts restaurant performance. The app is compatible with proprietary and third-party printers and supports RFID encoding.

### Food safety app

The app ensures that food is stored safely by streamlining temperature checks and automatic ingredient recognition using AI algorithms and a phone's camera, all while logging in meaningful data. It then walks users step-by-step through corrective action workflows to ensure compliance with procedures. Additional sensors support continuous temperature tracking and an advanced automatic notification workflow in case an unusual pattern is detected.

### Dashboards

Both the operations and food safety apps offer comprehensive dashboards detailing daily activities, standards, and regulatory requirements for the entire organization to monitor and adhere to.

### Hardware

The apps are accompanied by the following in-house developed hardware devices:

- Infrared thermometer (Food safety app)
- Label printer (Operations app)
- RFID scanning and encoding smart device

## The results

The suite is utilized across more than 32,000 locations in 25 countries and supports 15 languages, making it a global solution.

**2.5M**  
inventories  
performed annually

**Over 100**  
distribution centers  
across the world

**\$5 billion**  
in supply ordering  
processed each year

## The team

A large group of CME experts has been directly working with our client for more than a decade now, including product owners, scrum masters, project managers, Android and iOS developers, back-end and front-end developers, data and analytics specialists, AI specialists, data management specialists, solution architects, UX/UI designers, QA, hardware engineers, and a 24/7 support team.

Energy

# Developing an end-to-end smart solution, contributing to EaaS offering

## The background

→ A world-leading energy-as-a-service (EaaS) provider and innovator was looking for ways to decrease HVAC consumption in business facilities. Smart thermostats, being the most prominent solution for HVAC application efficiency, are inherently prone to data breaches. The EaaS provider was well aware of that issue. That's why they were on the lookout for a comprehensive system that could guarantee optimal ventilation while maintaining industry-standard security measures and top-tier data management.

## What we did

Given CME's proven track record in end-to-end solutions, the project was right up our alley. We quickly set up a team comprising two divisions: hardware and software.

### Hardware

To kickstart the process, a team of hardware experts at CME created a blueprint, from scratch, for a new smart thermostat. The PCB design and population phase followed shortly after at CME's hardware labs.

Once the thermostat moved from concept to prototype, a slew of tests were run to ensure compliance with international standards. First, an extensive safety-reliability-durability stress test was conducted in-house and passed successfully. Soon after the thermostat went under rigorous testing in an FCC (Federal Communications Commission) accredited laboratory to measure the emitted levels of radio frequency. It also passed the test and is now FCC-certified.

During production, expert Quality Assurance (QA) teams meticulously oversee each phase, and Quality Control (QC) teams thoroughly evaluate every batch before it reaches the client.

### Software/Security

On the software side, to circumvent susceptibility and vulnerability to cyber-attacks, robust security measures were implemented within the in-house developed firmware. All inbound and outbound data was encrypted, and the thermostat received regular security updates to prevent the compromise of sensitive information and potential disruptions to operations.

### Data management and analysis

When it comes to data, the new smart thermostat can collect meaningful insights to automate systems according to ambient conditions such as air quality and insulation. Insights are also processed through AI algorithms to detect anomalies in energy usage, like unexpected spikes or drops.

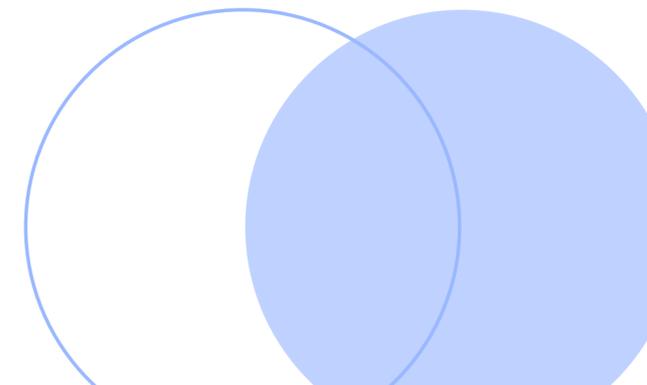
## The results

**17,000 units delivered in 1 year**

On a small scale, the thermostat helps businesses achieve sustainability through data-driven insights, advanced AI algorithms, and IoT devices. On a larger scale, it enables businesses to participate in collective demand response programs, help stabilize the grid, and lower overall greenhouse gas emissions.

## The team

The team of experts working on a daily basis with our client consists of hardware engineers, AI specialists, software engineers, manufacturing engineers, business analysts, data analysts, firmware engineers, and a support team.



Professional services

# Digitizing governmental ICT procurement processes in 15 months

## The background

→ One of the Big Four firms partnered with a major government entity in the MENA region to offer support for their pioneering digital transformation initiatives. Given the large scale and complexity of the project, the firm was looking for a technology partner who could readily provide experienced resources with a specialized focus on software development and data engineering.



## What we did

We were tasked with implementing three digital streams focused on software architecture and development, and data engineering and visualization. These streams included the creation of three internal and external portals dedicated to the ICT procurement process of governmental entities:

[Vendor registration portal](#) | [Vendor classification service](#) | [RFP assessment service](#)

## Initial setup and team mobilization

Within two weeks, we assembled a versatile team of managerial, technology, and business experts, both on-site and remotely, trained in CME's best practices for quality control and efficiency.

## Project execution and agile implementation

In the first quarter, we developed in-depth Business Requirements Documents (BRDs). Our approach integrated extensive experience in business analysis and user experience design, setting a solid foundation for subsequent development stages. Our agile methodology allowed us to adapt rapidly to emerging requirements and feedback, speeding up the launch of the first stream's Minimum Viable Product (MVP) within just 3 months.

## Scaling and advanced deployments

As the project progressed, we expanded our team to address the remaining streams. A few months later, we successfully launched the Vendor Classification Service, meeting a new regulatory requirement for vendors to be certified in order to participate in governmental bids. The RFP Assessment Service followed a month later. To finalize the BRDs, we rolled out consequent releases. Within 15 months the solution was fully operational.

## The results

<b>24</b> months total project duration	<b>500</b> registered vendors	<b>300</b> classified and certified vendors
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Our successful execution led to additional project assignments from the client.

## The team

This project was supported by a dedicated and diversified team of CMERs, covering a wide range of expertise, including specialists in data engineering, back-end development, quality assurance, front-end development, project management, UX/UI design, DevOps, solution architecture and design, product management, business analysis, and copywriting in both Arabic and English.



## REIMAGINE EVERYTHING

CME is a technology partner with 40+ years of experience creating and modernizing systems, scaling AI, and enabling transformation that lasts. Our solutions power Fortune 500 brands and serve 80M+ daily users worldwide, with 90%+ client retention built on trust and delivery excellence. By uniting strategy, engineering, and adoption under one roof, we give enterprises the resilience and agility to reimagine business and lead the future.

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