



CBT and HPE customer showcase: Refinery of the Future—IIoT meets edge computing

The global petrochemical industry is intensely competitive. Companies are constantly seeking ways to gain an edge. Yet there are few activities as demanding as operating a refinery with mission-critical concerns ranging from pump condition to personnel safety. The health of the workforce is of utmost concern, and variances in pump performance can wreck the bottom line. Refinery operators are on the hunt for advanced systems that generate real-time insights, provide full automation and oversight, and reduce the risk of human error.

Edge innovations and expert integration

Texas toll manufacturer Texmark Chemicals is a crucial link in the petroleum product supply chain, and because it works with regulated hazardous materials, safety is a top priority. So Texmark turned to Hewlett Packard Enterprise (HPE), CBT, and a select group of industry-leading partners to build a Refinery of the Future (RotF).

Texmark's vision hinges on the promise of the Industrial Internet of Things (IIoT): sensed devices combined with advanced analytics to generate insights, increase efficiency, and reduce risks. More than a few companies claim they can deliver an IIoT project like this, but only CBT, HPE, and the RotF partners have the track record to move beyond the proof-of-concept phase and prove it in a live, petrochemical production environment like Texmark Chemicals.

CBT and HPE are paving the way to the RotF with cutting-edge analytics software and sensed devices. They support five key solutions to achieve next-generation innovation, efficiency, and safety. The resulting system combs through data and reveals how the entire plant is interconnected. If any part falls out of line, it flags for intervention.

Each of the five RotF solutions uses the unique skills and technologies of a number of partners, supported by HPE's edge innovations and expert integration by CBT.

- 1. Condition monitoring and predictive maintenance:** Providing personnel access to real-time assessments on asset performance, enabling proactive maintenance planning.
- 2. Video as a sensor:** Enabling automatic notification of suspect activity on plant property including trespassing, theft, and unwelcome/hazardous wildlife.
- 3. Worker safety and security:** Integrating instruments capable of collecting and processing video, audio, and biometric data, to assess the health and operational condition of workers in the field.
- 4. Connected worker:** Striving to bring plant operators/operations into the 21st century with intrinsically safe devices that deliver actionable plant data in real time.
- 5. Asset integrity management:** Allowing optimized inspection, repair, and workload planning by providing asset maintenance, performance, and location/tracking information.

“Texmark is a leader in innovation, and from the beginning—when my dad founded this company—we embraced ideas that were ahead of their time. Now HPE and CBT have given us the opportunity to do that again. These innovative IIoT technologies will help us become safer, more competitive, and better at everything we do.”

– Doug Smith, CEO,
Texmark Chemicals

“At HPE we count it a privilege to step up to leading in the IIoT industry with innovative edge solutions, coupled with ecosystem programs such as the RotF and the HPE Channel to Edge Institute (CEI). SI’s like CBT, an RotF pioneer and inaugural CEI member, join us as first-movers to ensure our customers are first-movers in their own industries.”

– Dr. Tom Bradicich, Vice President and HPE Fellow, and Global Head of Edge and IIoT CoE & Labs, HPE

Schedule your IIoT consultation today:

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The Partner Consortium

Today, CBT orchestrates technologies on behalf of Texmark and the RotF partners and maintains Texmark’s IT systems as the solution frameworks are deployed and integrated.

“CBT recognizes that, for companies like Texmark, capitalizing on IIoT technologies is uniquely demanding because of their legacy IT and OT systems, and the need to keep the plant operational 24 hours a day, 7 days a week. We worked with HPE and the Partner Consortium, taking a consultative approach to identify Texmark’s key functional and operational challenges and build them an individualized digital transformation roadmap. CBT defined how we could successfully integrate a multitude of partner technologies to realize their vision of next-generation innovation, efficiency, and safety.”

– Stan Galanski, Senior Vice President of Customer Success, CBT

The full list of RotF partners includes HPE, CBT, Aruba, Deloitte, Intel, PTC, National Instruments, OSIsoft, Flowserve, Allied Reliability, SparkCognition, GuardHat, and RealWear. Under the direction of CBT, these partners contribute to the different solution frameworks, enabling the simultaneous deployment and unification of a wide range of hardware, software, and OT.

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