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Hubgrade Digital Solutions: Making Industrial Facilities Smarter

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Hubgrade: Veolia's Smart Digital Solutions

Veolia offers a suite of digitally enabled solutions we call Hubgrade. Industrial companies can use Hubgrade to improve facility performance, resource use, and efficiency.

Hubgrade combines human expertise and our wide range of digital services into a single package, helping you take full advantage of your investment in facilities management technology.

By employing Hubgrade's services, we put digital tools at the heart of our interactions with customers, allowing them to better leverage our expertise to collect, manage, analyze and make decisions.

Hubgrade Benefits:

Hubgrade serves local governments, businesses, and manufacturers by adding value through digitalization to improve facility operational processes such as:

- Enhancing utility invoice processing, budgeting and financial reporting
- Optimizing operations and maintenance for facilities, systems and assets
- Improving performance, efficiency optimization
- Managing sustainability projects and programs
- Managing regulatory and environmental compliance
- Enhancing security and safety on site
- Ensuring business continuity and stability of operations (anticipating crisis, preventing failures, shutdown, regulatory breaches)
- Reducing utility consumption and costs

Digital Solutions + *Human Expertise* = Hubgrade

The following case studies highlight how Hubgrade's offerings benefit customers across a range of sectors and industrial activities.

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Ensuring Business Continuity at a California Refinery

The Challenge

- Business continuity, security and safety to avoid unplanned downtime

Veolia's Hubgrade Solution

- Install remote monitoring tools to increase reliability, specifically when unmanned
- Leverage all operational data and KPIs with smart alarm management with a priority scheme

Benefits and Value Created for our Client

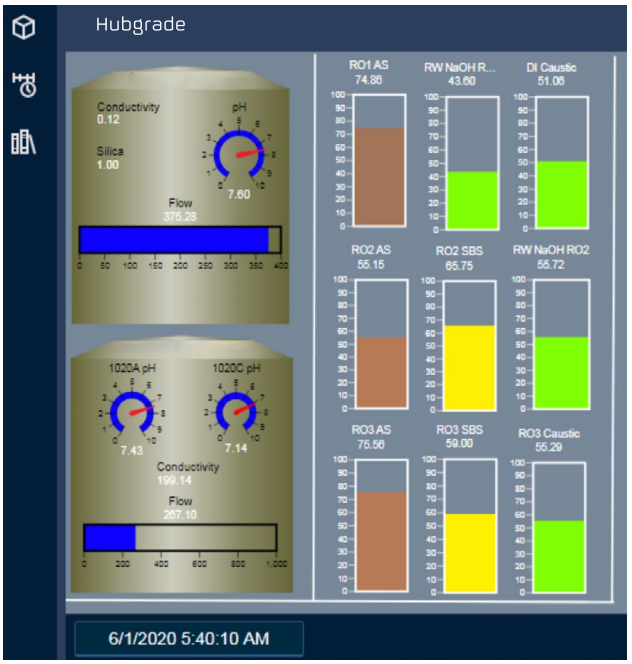
- Increase process response speed as automated triggers combine with operator knowledge to catch problems and send notification instantly, avoiding costly unplanned downtimes
- Reduce risk for the plant's performance by automating alerts routed to the appropriate responder
- Digital maintenance services allow for operators to monitor remotely, increasing plant and operator safety site-wide

Market: O&G Refinery

Operation: Wastewater Treatment

Contract: 20+ years

Location: California



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Improving Sustainable Performance at a Major Food and Beverage Company

The Challenge

- Improve on sustainable performance goals via digital innovation
- Secure digitally enabled operations to reduce risk and protect on-site staff

Veolia's Hubgrade Solution

- Implementation of "smart" digital systems to ensure wastewater compliance and more efficient plant performance
- Installation of custom technology which ensures flexible connectivity solutions while meeting the site-specific cybersecurity and data confidentiality needs

Benefits and Value Created for our Client

- Improve operational resilience
- Digital innovations in both wastewater operations and power generation enabled the site to create a closed waste-to-energy loop that saves operational costs and contributes to the circular economy

Market: Food & Beverage

Operation: Wastewater Treatment

Contract: 5 years

Location: Pennsylvania

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Enhancing Operational Efficiency at a Large Chemical Plant in Texas

The Challenge

- Enhance operational efficiencies by reusing treated wastewater to produce clean process water at large industrial site
- Increase visibility and transparency to actively manage operations and detect off-specification data early

Market: Chemicals Processing

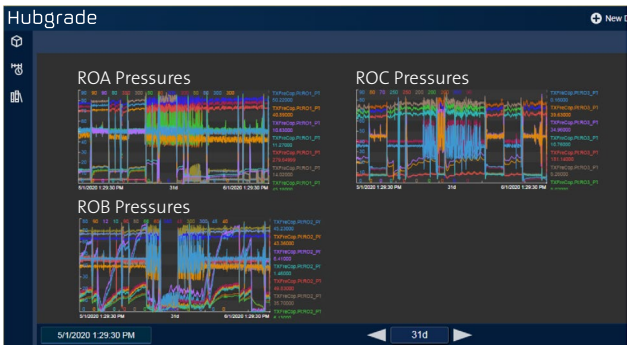
Operation: Process Water Treatment

Contract: 5 years

Location: Texas

Veolia's Hubgrade Solution

- Digitally enabled algorithms allow for the combination of 2 sources of data (lab data and sensors/PLC data), enabling us to create a complete operational picture and track customized KPIs not available from Supervisory Control and Data Acquisition (SCADA) alone
- Combination of real-time insight with historical data and Veolia's operational expertise enable benchmarking and educated predictions that improve efficiency and increase uptime



Benefits and Value Created for our Client

- The comprehensive blend of operational data allows our teams to mitigate risk
- Efficient chemical dosing control led to significant reductions in customer spend, saving up to 30% on chemical consumption in certain instances and positively affecting the customer's bottom line
- Years of expertise combined with a complete operational picture ensures optimal process performance

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Ensuring Compliance and Operational Stability at a US Power Plant

The Challenge

- Ensure compliance and operational stability
- Enhance operator safety, effectiveness and decrease operational risk

Veolia's Hubgrade Solution

- Through Veolia's digital twin system, digital indicators are cross-referenced with our historical knowledge base to provide a recommended solution to our operators and alleviate operational hazards
- Hubgrade smart technologies function as continuous on-the-job training
- Our augmented reality solution provides seamless access to Veolia's global expert network, providing operators with necessary technical guidance without the cost or time of travel

Benefits and Value Created for our Client

- Digital twin system ensures operational efficiency and operator safety through remote monitoring systems
- Augmented reality troubleshooting reduces response time by eliminating unnecessary travel by providing comprehensive situational consulting for complex issues
- Advanced monitoring tools helped eliminate unnecessary overtime and call-in time, saving approximately $30,000 per month

Market: Power Plant

Operation: Wastewater Treatment

Contract: 1+ years

Location: Texas

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