Optimizing oil field operations

How IoT-enabled virtual site visits drive oil field operation efficiencies

In this lower-for-longer global-energy price market, every oil and gas producer is looking to virtual tools to stay competitive. All aspects of competitiveness in this global commodity market—especially operations optimization—are business critical:

• Operators need to manage toward optimization and are using a growing software toolkit to deliver new value from workforce virtualization.

• Operators need to ensure IoT and virtual tools they need are easy to deploy and utilize with access to all critical data from automation systems, edge sensors and data analytics processing.

• Operations planners need to chart paths to increase safety, maximize manpower, and share critical data to cut costs and improve production.

• Workforce virtualization is a key best practice to achieve their goals.

Event Velocity™

Event Velocity™ is built for the operator: Real-time digital operations software that integrates information streams from automation data, video, instruments and audio sensors to optimize the management of critical assets and improve efficiencies and safety of operators in oil fields and operations infrastructure.

• Remote virtualization with **Event Velocity™** enables efficient management of complex operations and improves field operator efficiencies.

• Planners see that the ROI with **Event Velocity™** per wellhead begins with up to 80% in cost savings (v. manual monitoring methods) — which often creates budget room for needed production focus.
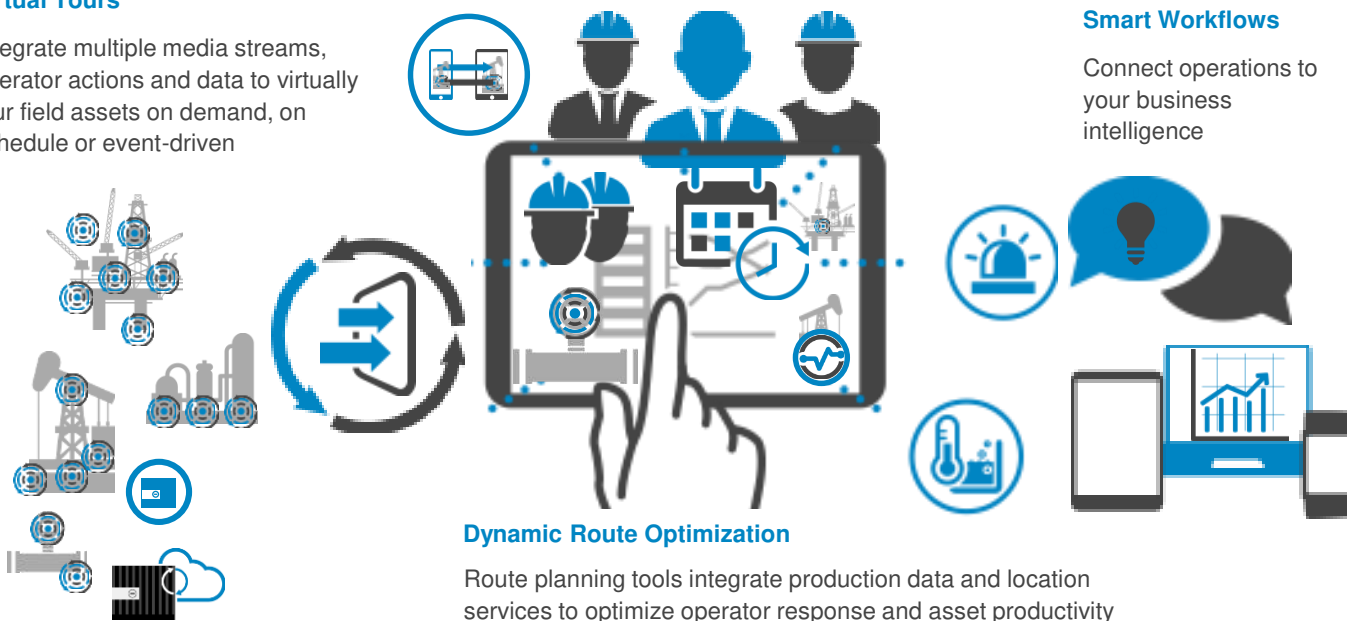
Event Velocity™ enables operators to quickly identify operational issues and potential drops in production to quickly dispatch operators with the data and right tools to resolve. The result is an increase in productivity at a lower cost basis across more locations:

Virtual Tours

Integrate multiple media streams, operator actions and data to virtually tour field assets on demand, on schedule or event-driven
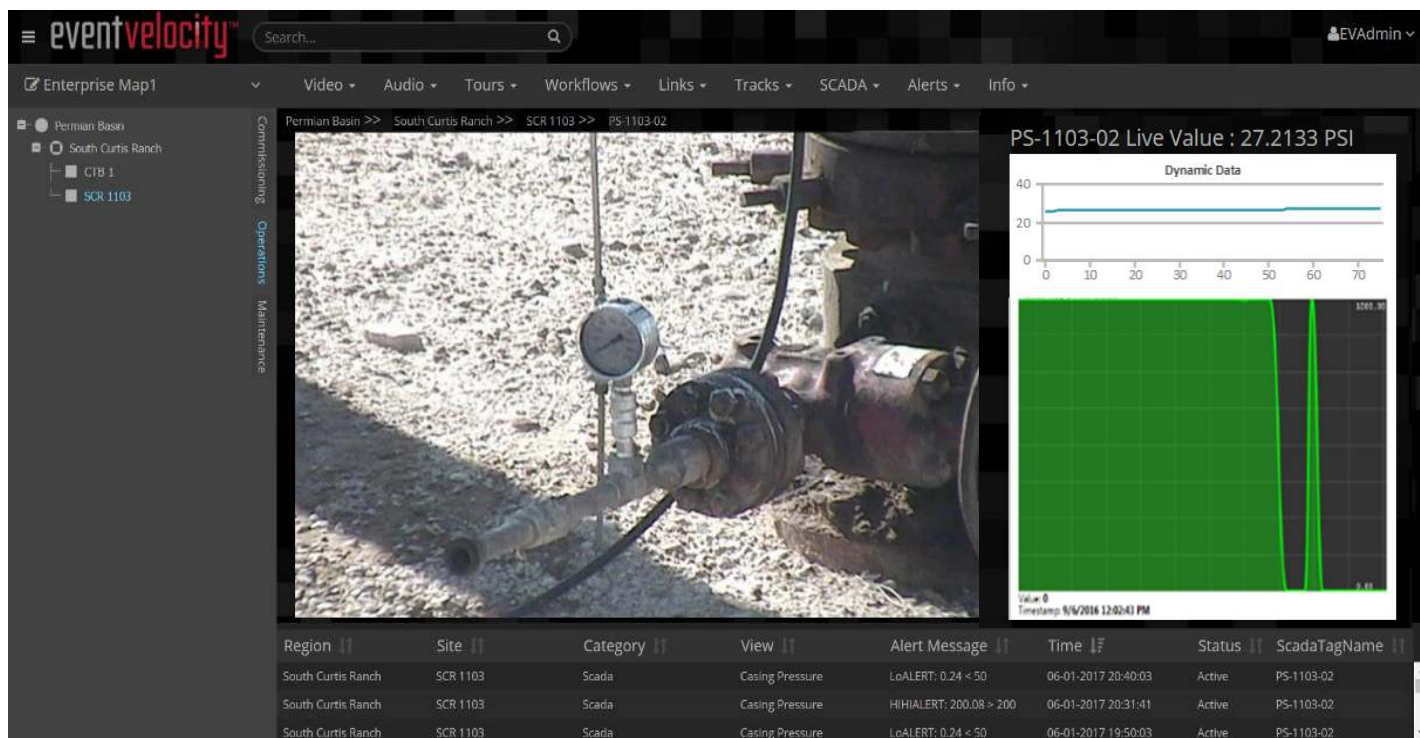
Smart Workflows

Connect operations to your business intelligence

Dynamic Route Optimization

Route planning tools integrate production data and location services to optimize operator response and asset productivity

Event Velocity™ Digital Operations Software

Follow these 6 best practice steps to digitize operations

1 | Digitize operations

Digitize your operations by integrating data sources to increase efficiencies, lower operating costs and improve production. Remote virtualization with Event Velocity™ enables more efficient management of complex operations. The ability to get a lot more done without growing the budget to keep pace means your business can grow, lower costs and increase margins.
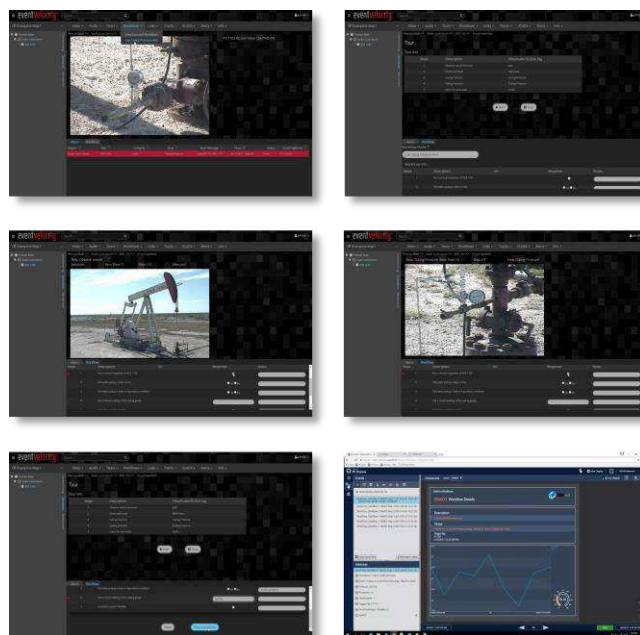

2 | Virtualize site tours and inspections

Virtual tours are major cost savings that reduces windshield time, and enables companies to leverage employee experience, whether they are onsite or offsite. Integrate multiple media streams including video, audio, SCADA and historian data. Virtually tour field assets on demand, on schedule or by event-driven scenarios.

- **On demand** | **Virtually tour field assets for immediate operational insight**
- **On a schedule** | **Virtually and automatically tour field assets on a schedule, recall and review on demand**
- **Event-driven** | **Virtual tours triggered from operator-defined events**

Set intelligent alerts that trigger your attention, such as SCADA rate-of-change, or multi-variable analysis events for a specific activity, or a predictive signature in equipment operations. Virtual Tours seamlessly bring together multiple media streams, operator actions, and all relevant data when you need them to proactively impact efficiencies, production and costs.

3 | Connect operations technology and information technology with Smart Workflows

Smart Workflows put enormous power in your operator's hands with instant access to conditions, expertise and history. Smart Workflows help onsite and offsite teams bring context to the field site, with a full range of operator experience and expertise on an asset. Smart Workflows save time and resources by connecting operations to business intelligence.
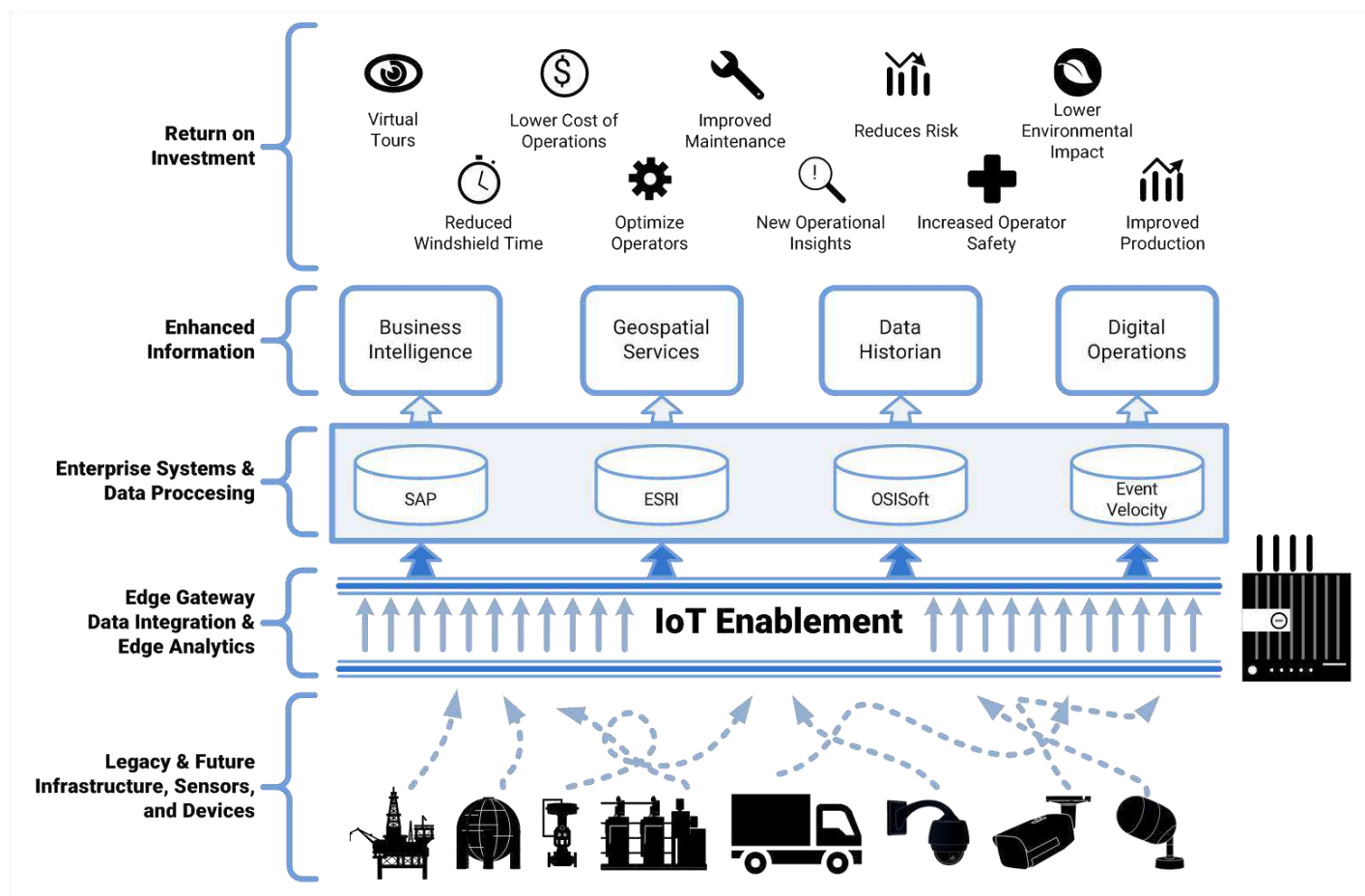
4 | Merge edge data for better context information

Edge Data Merge helps companies to virtually manage assets to enhance productivity, reduce costs and improve safety. Event Velocity leverages, integrates and consolidates data from both existing and new third party systems, enhancing the contextual information available to operators.

5 | Deploy the digital operations solution in your environment

Dynamic Route Optimization begins with a route-planning tool built into Event Velocity that leverages Dell Edge Gateways in the field. The gateways process production data and location services, so your teams go where they are needed most first. Dynamic Route Optimization enables your operations managers to dramatically impact overall asset productivity and bottom-line results.

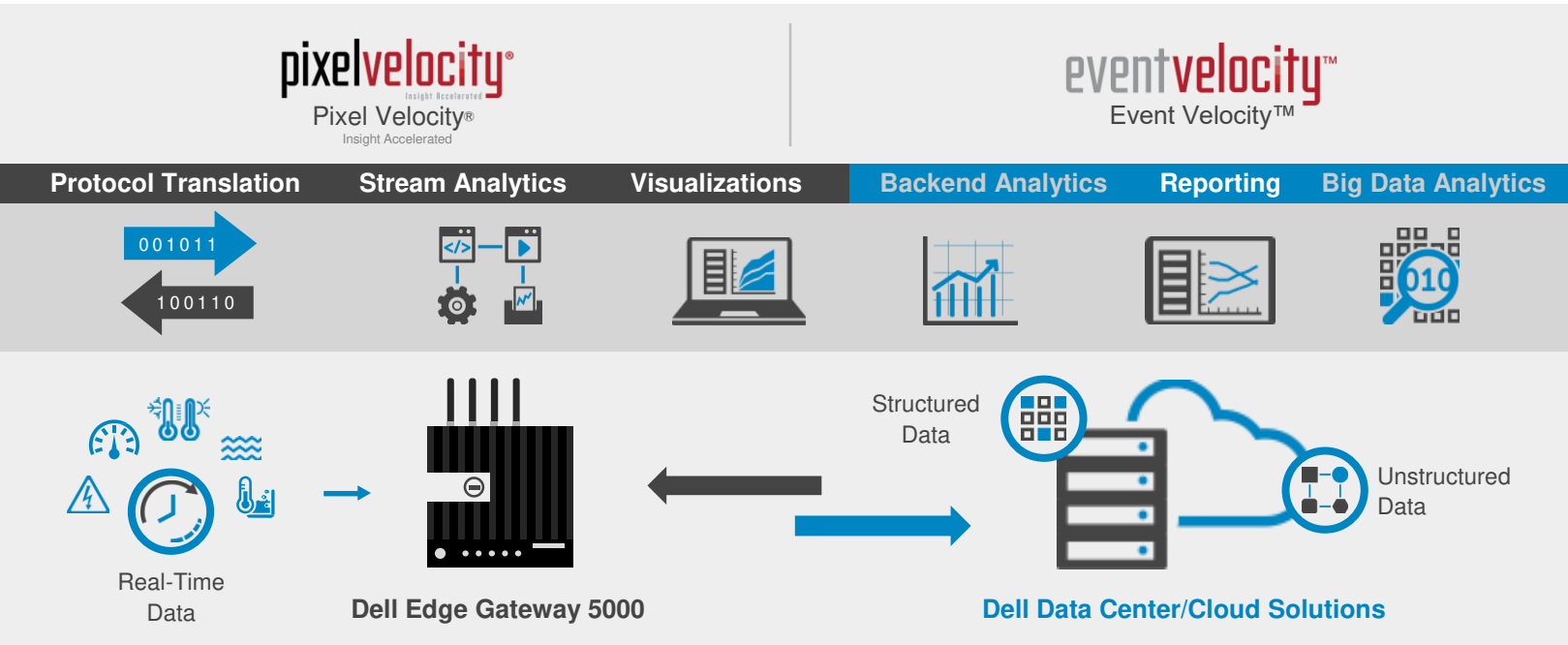## 6 | Realize substantial return on investment

The ROI with Event Velocity™ on Dell Edge Gateways at your well pads begins with up to 80% in cost savings over manual-operating methods. Focus your manpower on higher-level production activities, modernize your infrastructure and tap your untapped data while realizing operational cost savings.

Event Velocity™

Event Velocity lowers operating costs by increasing workforce efficiency and safety. An oil and gas company that has over 700 well pads in a field in Texas, has a workforce of approximately 100 field operators to manage these sites. The operators are required to visit each of their sites daily to conduct production inspections and maintenance tasks. The time to site ranges from 10 to 45 minutes with an average time on site of less than five minutes. Event Velocity is being used with integrated SCADA data, video and audio from the well pads to conduct daily virtual site visits by the operations team in their remote operating center (ROC). ROC operators are able to quickly identify and validate process anomalies and provide operators insight prior to responding. With less time on the road, operators are able to focus on higher value tasks while reducing the risks of driving and onsite visits. With Event Velocity in place, the operators now conduct physical site visits weekly. And as they bring new well sites into production, they're planning for only monthly visits. Results to date indicate they are able to reduce costs for site inspections by $50 per day per site across the 700 sites. The company has the acreage to expand to 3000 well pads, and will use Event Velocity to do so without increasing their operator workforce.

Event Velocity™ was developed for operators to virtually perform operations tasks at remote assets, in response to a need for simple solutions to access IoT sensors, data and systems across the energy market. Event Velocity™ is a top layer IoT software solution for operations provided by Pixel Velocity, one of Dell's industry-leading partners. Event Velocity™ is designed for numerous applications, which may involve a combination of other technology providers within the Dell IoT Partner ecosystem.

Pixel Velocity®
Insight Accelerated

Event Velocity™

| Protocol Translation | Stream Analytics | Visualizations | Backend Analytics | Reporting | Big Data Analytics |

Real-Time Data

Dell Edge Gateway 5000

Structured Data

Unstructured Data

Dell Data Center/Cloud Solutions

Along with our IoT Solutions Partners, we provide technology you can trust to help you get started quickly and efficiently.

Dell takes a pragmatic approach to the Internet of Things (IoT) by building on the equipment and data you already have, and leveraging your current technology investments, to quickly and securely enable data and analytics-driven action.

The Dell IoT Solutions Partner Program is a multi-tiered partner ecosystem of technology providers and domain experts to complement Dell's broad portfolio of IoT-enabling technologies.

To learn more visit us online at: www.delliotpartners.com

Contact Dell Sales to learn more about the Dell Edge Gateway 5000, our ecosystem of qualified partners, and to deploy this flexible digital operations solution today.

D∜LL IoT Solutions
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