



# Increase output, improve efficiency, and enhance safety

Gain the real-time information you need to dramatically improve operational efficiencies and employee safety in your facilities. Put the power of Cisco IoT technologies to work for you. By using the Cisco Connected Refinery solution set, you can combat the challenges of rising material and production costs and increasingly strict health and safety regulations – and grow your business faster at the same time.

## Drive better business outcomes by getting full value from your IoT data

Cisco Connected Refinery solutions, featuring the Cisco Kinetic platform, make it possible to streamline the way you work and quickly realize quantifiable benefits. As an example, for a large plant, here are some use cases and potential results that can improve your bottom line.



### Improve worker safety

#### Avoid \$1.5-3M cost per incident

Fines, downtime, workers' compensation



### Increase productivity

#### Add \$23.6K per day productivity

583 plant workers, 3x shifts, \$27/hr, ½ hour regained per 8 hour shift



### Reduce waste & processing

#### Save \$10-15M annual reprocessing

Aggregated across multiple incidents



### Shorten turnaround times

#### Regain \$1.3M per hour lost production

598K bbl/day refining capacity, \$55 bbl feedstock



### Minimize fines & penalties

#### Avoid \$180-340K cost per incident

Fines for releases into atmosphere; larger fines for ground/water spills

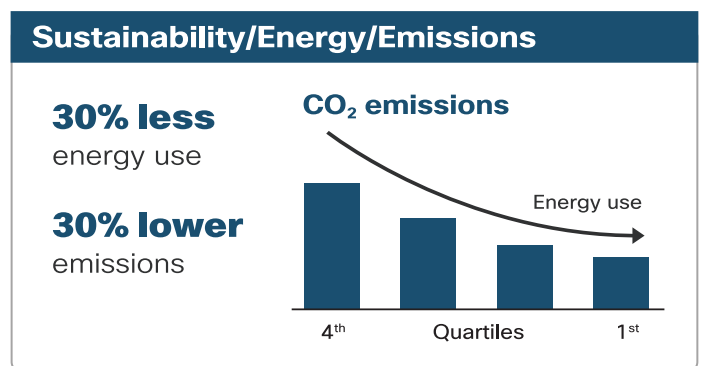
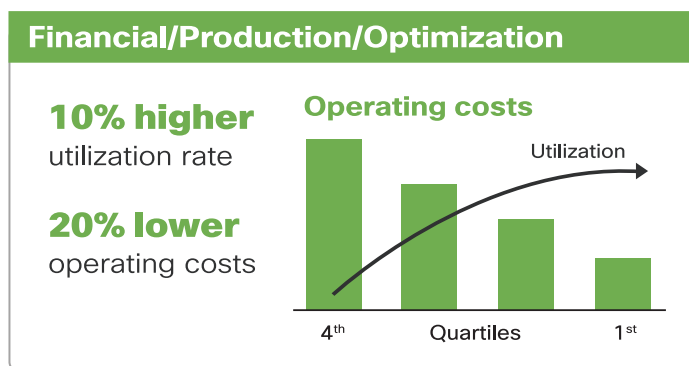
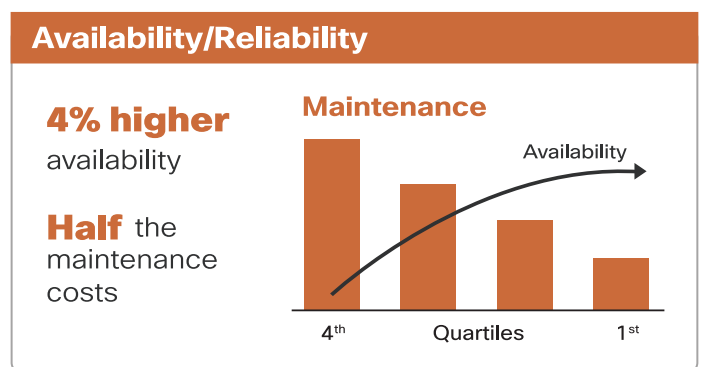
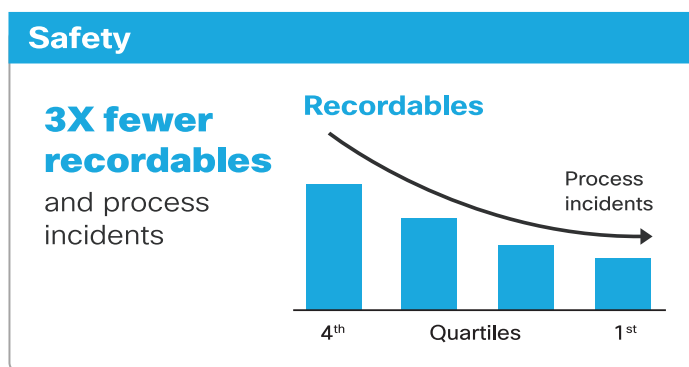
Amplify productivity with automated tasks and predictive maintenance to minimize downtime

# Turn data-driven plant intelligence into real business benefit

The plant of the future is a place where advanced technologies and well-equipped, highly skilled workers interact to dramatically improve the standards for operational efficiency, safety and automated intelligence. Use Cisco Kinetic to get the right data to the right place at the right time, and feed your applications and visualization tools so you can:

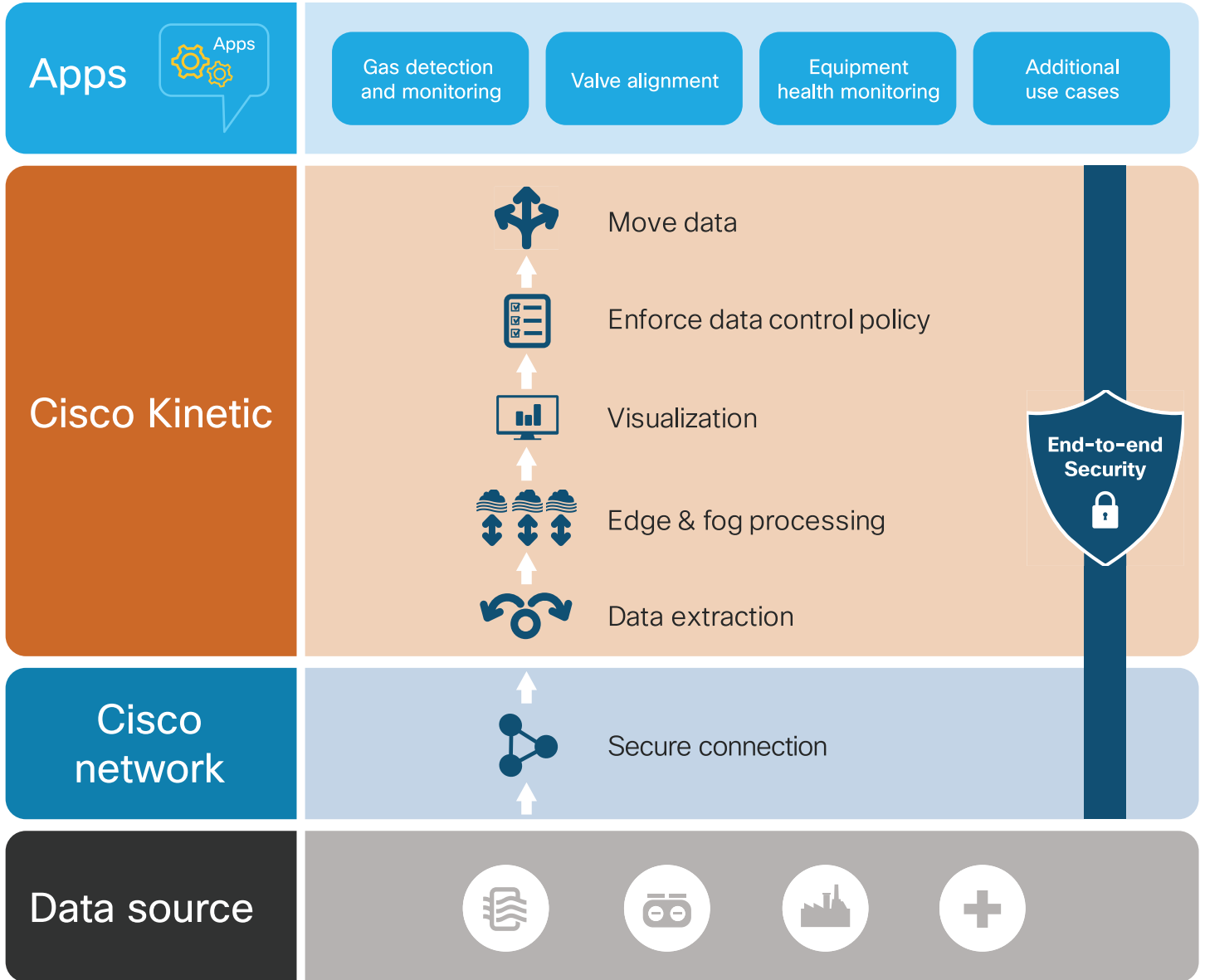
- **Prevent equipment failure and downtime** by predicting maintenance needs before incidents occur.
- **Give workers access to the right technologies** to complete their job first time, wherever they are to improve productivity and wrench time.
- **Immediately detect gas leaks**, correlate them with employee location, and provide the best evacuation routes to meet safety and compliance goals.
- **Automate routine tasks**, enabling workers to focus on activities that impact the business and customers.
- **Leverage advanced security technologies** and gain crucial visibility into plant operations to mitigate an expanding threat landscape.

By deploying Cisco IoT technologies, you can create a better connected and automated refinery, creating new insights that deliver continuously optimized performance of the whole plant in real-time – with measurable results.



Data sources: Refining and Petrochemical Benchmarks, API, Solomon, OSHA, HIS, Emerson

# Extract, compute and move IoT data to your applications



# Maximize the value of your IoT data with Cisco Kinetic

Cisco Kinetic is an IoT data fabric, a new class of platform, that provides three key functions:



**Extract data from diverse and distributed devices.**

Transform that data to make it usable to your applications.



**Compute data in a distributed IoT environment.** Apply rules to data in motion or at rest, and micro-process from edge to diverse destinations.



**Move data to diverse and distributed applications.**

Get the right data to the right applications where you can use it to create business value.

## Increase efficiency with flexible control over your data

Cisco Kinetic supports all types of data, devices and communication methods, giving you total flexibility. Together with partner technologies, this platform delivers numerous benefits:

### Purpose-built to drive value

- Consistent, unified network architecture (customer-defined)
- Open ecosystem for customers, partners, third parties
- Global delivery and services capabilities

### Robust capabilities for optimal results

- Contextual multi-sourced data correlation
- Extensibility beyond process monitoring
- Ability to leverage or unify cross domain data
- Rich operational and actionable insights

## Reduce time to deploy, speed time to business value

Cisco Kinetic is a foundational platform that helps you optimize your IoT data to increase production output, improve operational efficiencies and enhance worker safety in your refineries and plants. With industry-specific architectures, technologies and standards, and end-to-end multi-vendor validated solutions, you'll have the power and agility to drive bottom line results.

## Learn more

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