

MAKE EVERY TOMORROW SAFER THAN ANY TODAY

Honeywell technologies can integrate safety into your business, to help you better protect your people and your investment.

Integrated life safety solutions
for industrial applications

Honeywell

PUT SAFETY AT THE CENTER OF YOUR OPERATIONS

When it comes to the industrial space, risk is often part of the business. But with an integrated approach to safety, you can better mitigate those risks and protect your employees, your assets, and your bottom line. With independent layers of protection, Honeywell integrated solutions help deliver more reliable, advanced technology and expertise for industrial fire and gas applications. Our connected systems empower you to closely monitor areas where hazardous levels of explosive or toxic gas may become present – with early warnings that help you detect potential concerns before they become costly issues.

WHERE TO START

SAFETY

Preserve operations and help avoid process incident-related losses.

RELIABILITY

Improve uptime and optimize asset availability.

EFFICIENCY

Help reduce energy and operational costs, and improve throughput.

SUSTAINABILITY

Adopt solutions that promote steady system performance.

RESILIENCE

Lower risks to help recover capital investment faster.

THE TOP 5 HONEYWELL BENEFITS

Our integrated safety solutions come to your aid to support business continuity and help you:

- 1** Ensure and enhance the safety and security of your people and facility
- 2** Improve uptime and reduce insurance premiums
- 3** Comply with local regulations and corporate policies
- 4** Avoid major losses and penalties, and align environmental compliance
- 5** Reduce false alarms and associated costs



SMART INTEGRATION

Honeywell Enterprise
Buildings Integrator (EBI)

PAVA addressable
fire alarm systems

SIL2 Addressable F&G
control Systems

Gas - Flame detectors,
Calibration & Services

Safety lifecycle services
and digitized maintenance

Air sampling smoke
detection

Command & Control Suite

Regulatory compliance
and system validation

Cybersecurity

Workforce management

Experion PKS
with first and best mega-
system capability – DSA

Advanced detection
solution Li-Ion Tamer
for battery safety

Industrial Fire
Panels HS81

THE POWER OF INTEGRATION FOR INDUSTRIAL ENVIRONMENTS

Integrated technology can be an enabler for your business, giving you the power to cut operational costs, enhance customer experience, optimize investments and performance, and more. Solutions like the Honeywell Enterprise Buildings Integrator can help you leverage the power of integrated technology to optimize both your business and your building outcomes.

PERIMETER INTRUSION
DETECTION



REGULATORY
COMPLIANCE AND
SYSTEM VALIDATION



CRITICAL UTILITY
PROTECTION



GAS & FLAME
DETECTION



INDUSTRIAL
SIL CERTIFIED
FIRE PANELS



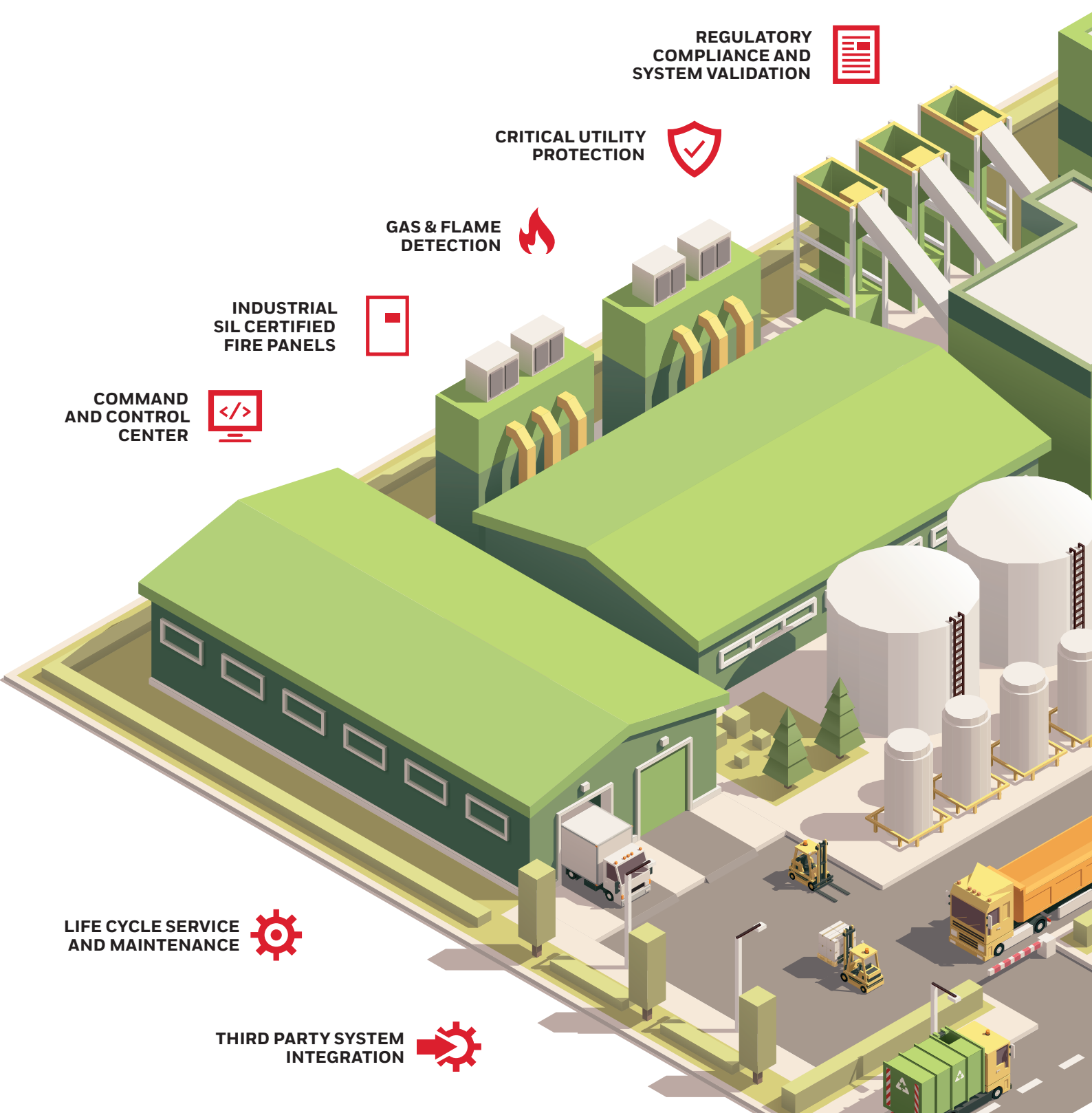
COMMAND
AND CONTROL
CENTER



LIFE CYCLE SERVICE
AND MAINTENANCE



THIRD PARTY SYSTEM
INTEGRATION



 FIRE DETECTION AND ALARM

 EMERGENCY COMMUNICATIONS

 CYBER SECURITY SOLUTIONS

 ACCESS CONTROL

 PUBLIC ADDRESS AND VOICE ALARM

 DIGITAL VIDEO SURVEILLANCE

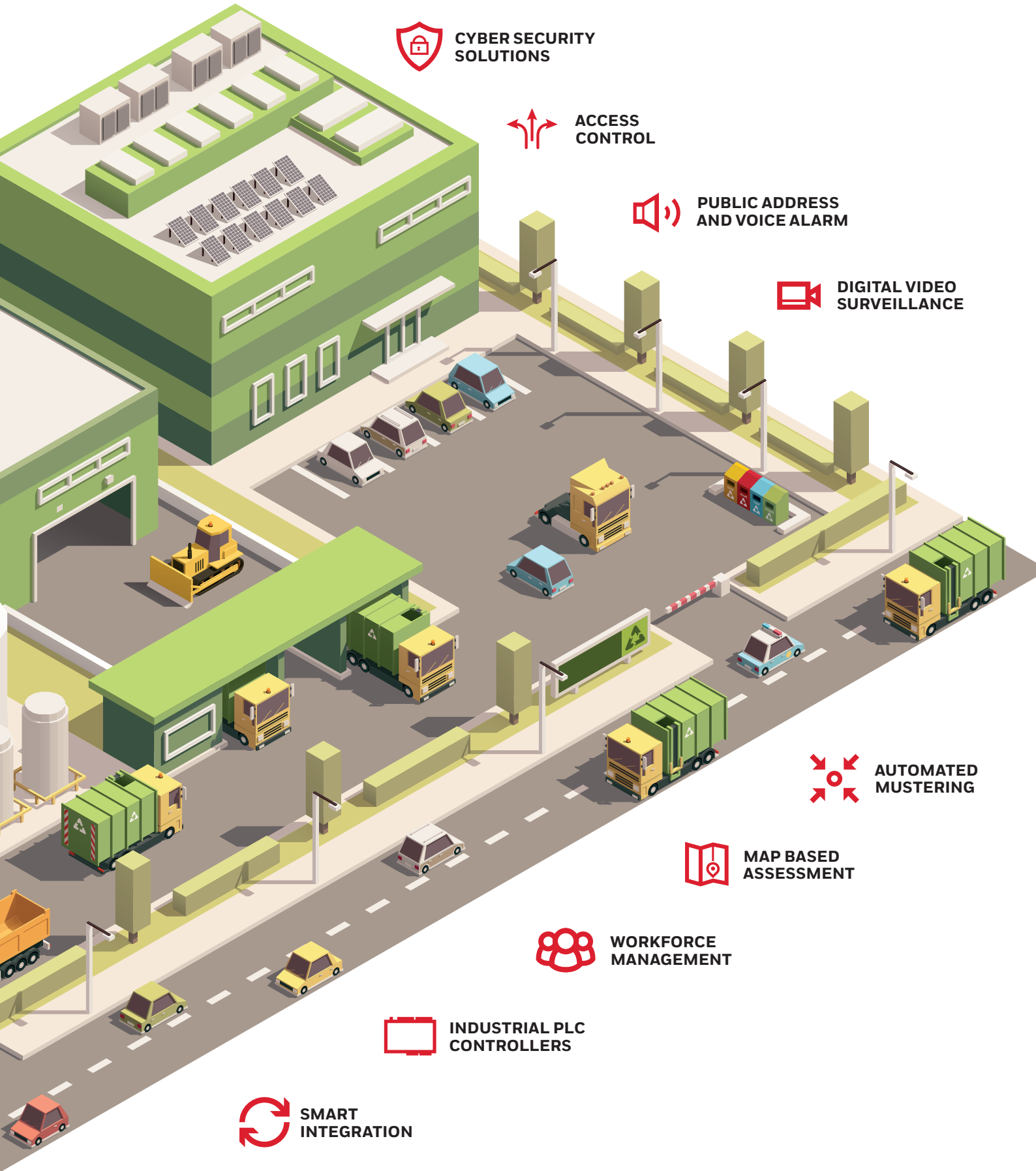
 AUTOMATED MUSTERING

 MAP BASED ASSESSMENT

 WORKFORCE MANAGEMENT

 INDUSTRIAL PLC CONTROLLERS

 SMART INTEGRATION



TAKE CHARGE WITH COMMAND AND CONTROL SUITE

Promote enhanced business continuity and mitigate risks with the Honeywell Command and Control Suite (CCS), an intuitive interface that helps with the management of your emergency, safety, and security operations. With the help of intuitive, zoomable maps and orchestration, you can improve your response time and address potential issues ahead of time. The guided incident response feature helps you save training costs and maintains a record of events for evidence and process improvements. CCS helps you achieve greater situational awareness, while improving the efficiency of your incident assessment and response capabilities.

POTENTIAL BENEFITS



Integrated view of the facility, across safety and security systems.



Enhance situational awareness on a zoomable map, for fire and gas, and security incidents.



Faster response with an intuitive interface that promotes business continuity.



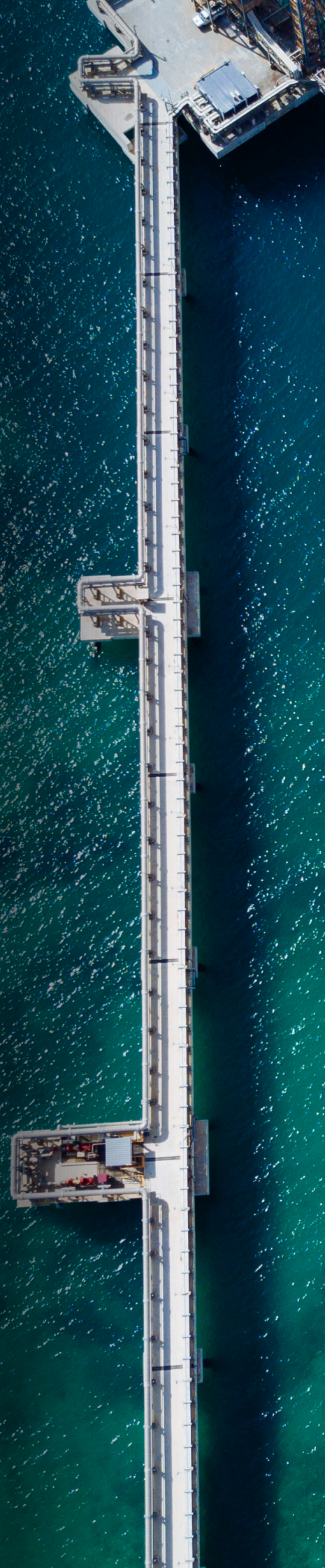
Easy-to-operate technology that optimizes productivity and training costs.



Consistent response with automated standard operating procedures.



Improved decision making with enhanced communication and collaboration features.





YOUR BUILDINGS CAN RUN BETTER WITH ENTERPRISE BUILDINGS INTEGRATOR

The Honeywell Enterprise Buildings Integrator (EBI) gives you the tools to run smarter buildings that can increase comfort, enhance security, and lower costs. Take care of virtually all your facilities' systems through a single management portal – helping to decrease incident response time and dial up the safety, security, and comfort of all your sites. EBI is an open, scalable solution that works with a wide range of third-party equipment and software. It can reduce operational and lifecycle costs while giving you room to grow as your needs expand.



POTENTIAL BENEFITS



Near real-time facility data enables more performance and helps you improve productivity levels, while reducing costs.



Improve user experience with the help of enhanced operational efficiency and an intuitive interface.



Access your facility's data in near real-time with cloud connectivity and mobility that helps empower you to make faster and more informed decisions.



Reduce your incident response time and detect risks as they appear, boosting facility control and situational awareness.



Honeywell Enterprise Buildings Integrator (EBI)

BOOST YOUR FACILITY'S PRODUCTIVITY WITH HONEYWELL FORGE

ENERGY OPTIMIZATION

Reduce energy usage without compromising comfort. Now it's easier to collect, analyze and act on valuable data insights – helping to reduce energy consumption, costs, and carbon emissions across your facility. With Honeywell Forge, you can also monitor, validate, and optimize energy usage to help protect the environment and your bottom line at the same time.

POTENTIAL BENEFITS



OPTIMIZE ASSET VALUE AND RETURN

Optimize your CAPEX and OPEX opportunities along with maintenance and planning costs.



OPERATIONAL EFFICIENCY

Continuously monitor and optimize your processes and benefit from available systems that help reduce failures.



SAFETY AND PRODUCTIVITY

Maintain high safety standards while improving productivity.



SUSTAINABILITY STRATEGY

Environmental and social compliance with guidelines and regulations.

ASSET PERFORMANCE TRACKING

Honeywell Forge takes asset performance management (APM) capabilities to a new level, helping to reveal latent asset performance issues and reduce related faults. Honeywell Forge APM combines performance monitoring with machine learning and predictive analytics to help provide early indications of performance gaps and a quick path to resolve them.

POTENTIAL BENEFITS



ENHANCE ASSET UTILIZATION

Reduce unplanned downtime by predicting failures and providing proactive response.



REDUCE MAINTENANCE COSTS

Optimize maintenance-based, real asset conditions, while promoting extended equipment life.



INCREASE OPERATING EFFICIENCY

Improve engineering effectiveness with continuous monitoring, remote collaboration, and ready-access to required information.



INCREASE SAFETY

Reduce risks and production stops for safety system verification.



DIGITIZED MAINTENANCE

Now your building can essentially schedule itself for maintenance with data that supports more informed and faster decision making. Reduce disruptions and optimize the lifecycle of your assets with the help of predictive maintenance features. Enhance facility uptime and boost productivity as you improve occupant experience – helping to reduce maintenance costs and planning.

POTENTIAL BENEFITS



PERFORMANCE ANALYTICS

Detect issues oftentimes before they turn into complaints and cause operational interruptions.



BENCHMARKING AND COMPARISONS

Understand KPI improvements compared with historical and targeted levels.



OPERATIONAL READINESS

Promote steadier business operations.



TARGETED RESPONSE

Know where to better allocate resources to deliver improved results.



CONNECTED LIFE SAFETY SERVICES

By integrating Honeywell FORGE Platform into your facility, you can use data from your equipment combined with our advanced analytics capabilities to better assess your property's health and even predict when a life safety accident might occur.

POTENTIAL BENEFITS

- Near real-time issue identification capabilities through data analysis from assets.
- Easier data viewing and analysis thanks to the Honeywell Forge near real-time diagnosis feature that sends notifications and stores data history, while helping to reduce downtime.
- Reliable system prognosis with the help of Physics Based Models (PBM), Artificial Intelligence (AI), and Machine Learning that enable improved fault prediction.
- Advanced reporting and service management that let you quickly compare pre and post-fix data.

THE VALUE OF CONNECTED LIFE SAFETY SERVICES

Honeywell Connected Life Safety Services places connectivity at the heart of fire safety, providing visibility to help drive more timely and accurate decision making. The Honeywell CLSS platform harnesses the power of hardware and software to transform the way systems are designed, installed, monitored and maintained. Our cloud-based mass notification systems help inform persons when there is an emergency, so that your people can take safety precautions in due time.

POTENTIAL BENEFITS

- Forecasting of life cycle costs and predictive maintenance that empowers you to spot and fix issues earlier.
- Compliance with mandated inspection and maintenance requirements, including an audit trail stored in the cloud.
- Automatically push event data to the customer data lake.
- A more holistic view of your facilities so that sites can operate more effectively.
- Valuable insights and near real-time details of significant events such as fire, faults/troubles and disablements.
- Enhanced cybersecurity features with proactive monitoring, safer data storage, and restricted access.

GAS, FLAME, AND SMOKE DETECTION SOLUTIONS

For more than 50 years, Honeywell safety solutions have designed and delivered outstanding gas, flame, and smoke detection technology. Tough enough for many of the world's harshest land or offshore environments, and engineered to deliver enhanced accuracy, our solutions are part of one of the most comprehensive product portfolios available to the oil and gas industry.

- Smoke Detection
- Gas Detection
- Flame Detection
- Infrared Detection
- Electrochemical Detection
- Calibration
- Speed Of Response

UNPARALLELED PROTECTION AND SITUATIONAL AWARENESS

Since pioneering aspirating smoke detection (ASD) technology over 30 years ago, **VESDA** has been recognized as one of the best in the world by providing very early warning of a potential fire hazard. With field adjustable and configurable alarm thresholds, VESDA helps you establish a fire escalation protection scheme. Simplify compliance with aspirating smoke detection system features that enable flexibility and enhanced facility performance. VESDA detectors help give you the time you need for a fast response to fire threats, while reducing the potential for damage and business downtime.

POTENTIAL BENEFITS

- Detection of both small incipient smoldering fires and large flaming fires
- Superior performance in harsh environments and a high resistance to contamination through the use of our clean air barrier technology that protects the detection chamber
- Flexibility to design on ceiling, underfloor voids, in cable ducts across return air intakes, or enables targeted sampling within targeted equipment such as electrical cabinets
- Multiple configurable settings to provide, for example, very early warning for investigation, and sub-sequent warnings to initiate a fire response plan, evacuation and suppression
- Simple access to the detector and sampling pipework for quick and effective maintenance

HONEYWELL SOLUTIONS ARE DESIGNED FOR MANY APPLICATIONS WHERE SAFETY IS ESSENTIAL



OIL AND GAS



PHARMACEUTICALS



CHEMICALS



AUTOMOTIVE



DISCRETE
MANUFACTURING



POWER
GENERATION



FOOD AND
BEVERAGE



MINING



USE CASES

Explore these scenarios to discover the prospective steps taken in case of a fire incident.

A FIRE HAS BROKEN OUT



- 1** **Faster Response for Improved Safety and Mitigation of Impact on the Facility**
- 2** **Identify Risk And See The Big Picture Faster**
OBSERVE
 - Fire alarm initiates Incident Workflow
 - Automatically send nearby cameras to video display to assess situation
 - System triggers automated response – unlock access doors etc.
- 3** **Centralized Collaborative Command With Record-keeping & Traceability**
INVESTIGATE
 - Emergency Response team coordinates incident activities with Command Wall
 - Initiate specific workflows for shelter, evacuation and muster as required
- 4** **Optimize Response Time and Decision Making**
RESOLVE
 - Operations Director / key decision makers monitors the situation on Command Station remotely
 - Transparency of steps and notes provide traceability and auditable version of events for investigative purpose

SECURITY THREAT: FIRE ALARM



- 1** **Respond Quicker, Mitigate Potential Risks, and Better Manage the Incident**
- 2** **Faster Response To Potential Threats**
OBSERVE
 - Combination of maps and multi-window video provide clearer monitoring capability.
 - Security Operator provided with alert from video analytics at map location.
 - Incident Workflow procedure automatically triggered.
- 3** **Enhanced Situational Awareness Helps Mitigates Risk**
INVESTIGATE
 - Incident Workflow guides actions and gives improved access to relevant information.
 - Coordinates with Security Guard while recording incident events for management review.
 - Sends automated alerts to key personnel to initiate major incident actions.
- 4** **Increased Speed Of Response & Improved Decision Making**
RESOLVE
 - Management collaborates on Command Wall with maps, video, and notes.
 - Evacuation workflow initiated; doors released and announcements triggered directly from workflow steps.
 - Assessment through audit trail of recorded events.

INTERNATIONAL CODES AND STANDARDS

NON-PROCESS AREAS

INSTALLATION CODES

Codes are used so that the products are selected and used correctly based on installation, locations design, commissioning & maintenance guidelines.

BS 5839

UK code - British Code

NFPA 72

US code - National Fire Alarm Code

DIN 14675

German code - German Institute for Standardization

PRODUCT STANDARDS

Codes are used so that the products are selected and used correctly based on installation, locations design, commissioning & maintenance guidelines.

EN 54 Standards

European Union Standards

UL Standards

Under writers laboratories - US and Canadian Approvals

GOST

Russia Standards

SIL Certification

PROCESS AREAS

Prescriptive Standards like NFPA and BS do not cover Fire & Gas detection in Process Areas

SAFETY SYSTEMS, DEVICES & PROCEDURES

IEC 61508

Functional Safety of Electrical / Electronic / Programmable safety-related systems.

IEC 61511

Functional Safety - Safety Instrumented Systems for the process industry sector.

ISA S84.01

Application of Safety Instrumented Systems for the Process Industries (Adapted the IEC 61511).

GAS DETECTION

EN 60079-29-1

Requirements for construction, testing and performance of detectors for flammable gases used in potentially explosive atmospheres.

EN 60079-29-2

Selection, installation, use and maintenance of detectors for flammable gases and oxygen.

FLAME DETECTION

EN 54-10: Requirements for construction, testing and performance of flame detectors.

Following Codes and Standards is a legal obligation in many countries

KEEP YOUR WORKFORCE SAFER IN VIRTUALLY ANY ENVIRONMENT

Our solutions are tailor-made for many industrial fire and gas applications like yours. Let us help improve your facility's uptime with cost-effective technologies, while at the same time helping you better protect your people, your property, and your bottom line.



**DISCOVER WHAT YOUR FACILITY CAN ACHIEVE WHEN YOU
HAVE HONEYWELL SAFETY SOLUTIONS WORKING FOR YOU.**
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**THE
FUTURE
IS
WHAT
WE
MAKE IT**

Honeywell