



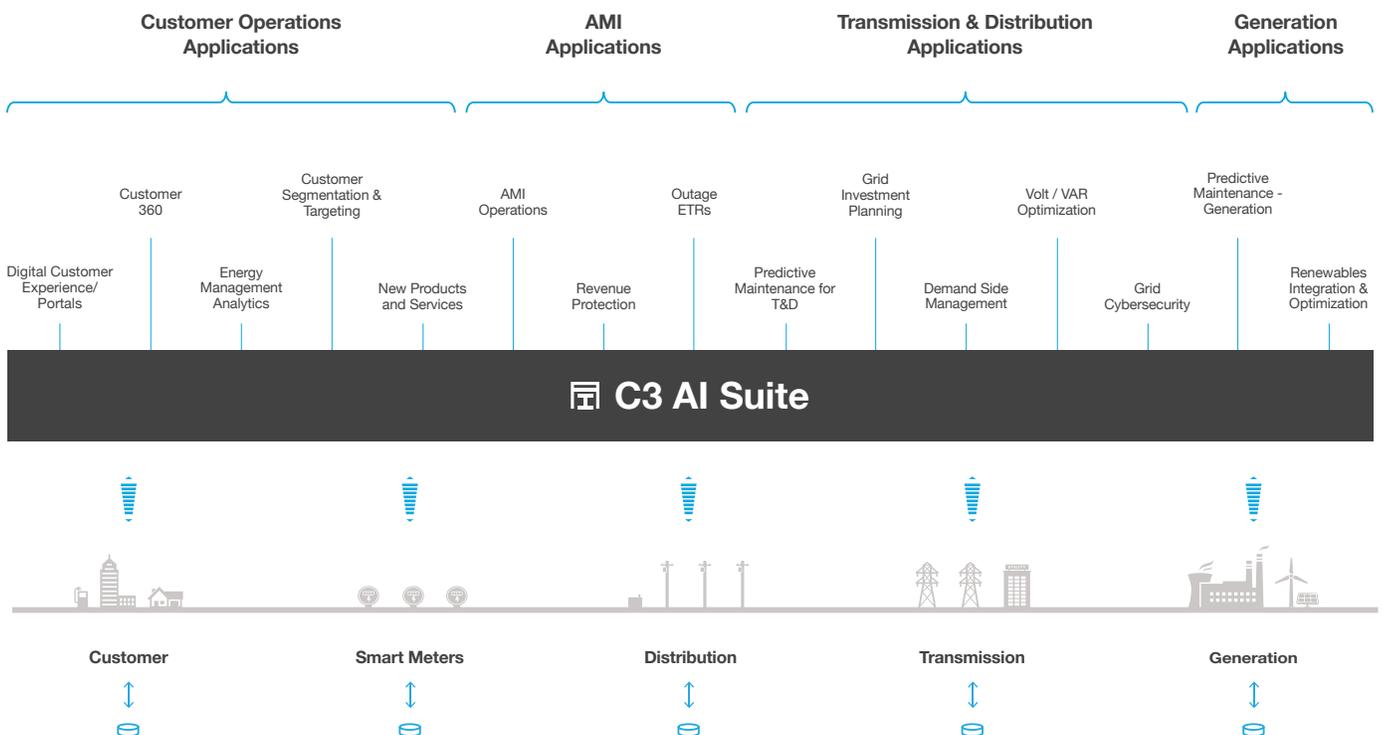
# AI for Utilities

## Use the power of enterprise-scale AI to improve asset reliability, asset health, and customer experience

The utility industry faces unprecedented pressures in dealing with aging infrastructure, rapidly shifting customer demands, and regulatory requirements. Utilities continue to face significant demands to improve service uptime and grid reliability while reducing operational costs. However, they now must also grapple with grid complexity from distributed generation and electric vehicles use, evolving customer expectations and demands, and the need for new revenue models as electricity consumption growth stagnates.

Utilities can meet these challenges head-on by leveraging existing data and applying AI techniques, but are often hindered by the presence of disparate, siloed, IT and OT systems. Furthermore, existing solutions cannot scale to utilize new and complex data sources from investments in advanced metering infrastructure and other digital sensors. Business and regulatory pressures combine to demand that utilities bridge the divides between segregated IT systems and demonstrate value from digital infrastructure investments.

The C3 AI Suite™ provides the necessary, comprehensive services to build enterprise-scale AI applications up to 40x faster than alternative approaches. The C3 AI Suite uses all relevant utility data sources to rapidly generate predictive insights, enhance grid asset management and forecasting systems, boost energy efficiency initiatives, and enrich customer engagement. Many of the largest global utilities are already using the C3 AI Suite to drive their digital transformation efforts, generating hundreds of millions of dollars in economic value annually.



# C3.ai Applications for Utilities

C3.ai applications for utilities use AI at scale to provide ever-smarter actionable insights for business-critical challenges. These include:

## C3 Predictive Maintenance™

Predict asset failures across generation, transmission, and distribution systems to reduce costs and maximize uptime. C3 Predictive Maintenance utilizes supervised and unsupervised machine learning algorithms to analyze streaming data across sensor, SCADA, and asset management systems, as well as technician notes and weather, in order to detect anomalies and predict malfunctions before they occur.

## C3 Customer Insight™

Improve utility program effectiveness, increase customer engagement, and enable new products and services by providing a 360 view on the customer. C3 Customer Insight utilizes machine learning-based segmentation models to proactively identify accounts most likely to participate in critical initiatives, or to call customer service. C3 Customer Insight delivers actionable insight for more effective targeting and richer engagement.

## C3 Energy Management™

Empower customers to reduce energy costs and improve building operations through real-time tracking, analytics, and optimization. C3 Energy Management utilizes machine learning techniques to enable accurate forecasting, benchmarking, building optimization, demand response, and anomaly detection to lower costs, improve building operations, and meet utilities' and their customers' shared energy efficiency goals.

## C3 Revenue Protection™

Proactively identify instances of energy theft to protect core revenues at higher accuracy and lower cost than conventional rules-based approaches. C3 Revenue Protection utilizes supervised machine learning algorithms to correlate disparate enterprise systems, pinpoint fraudulent activity, and support advanced pipeline management for efficient resolution and revenue recovery.

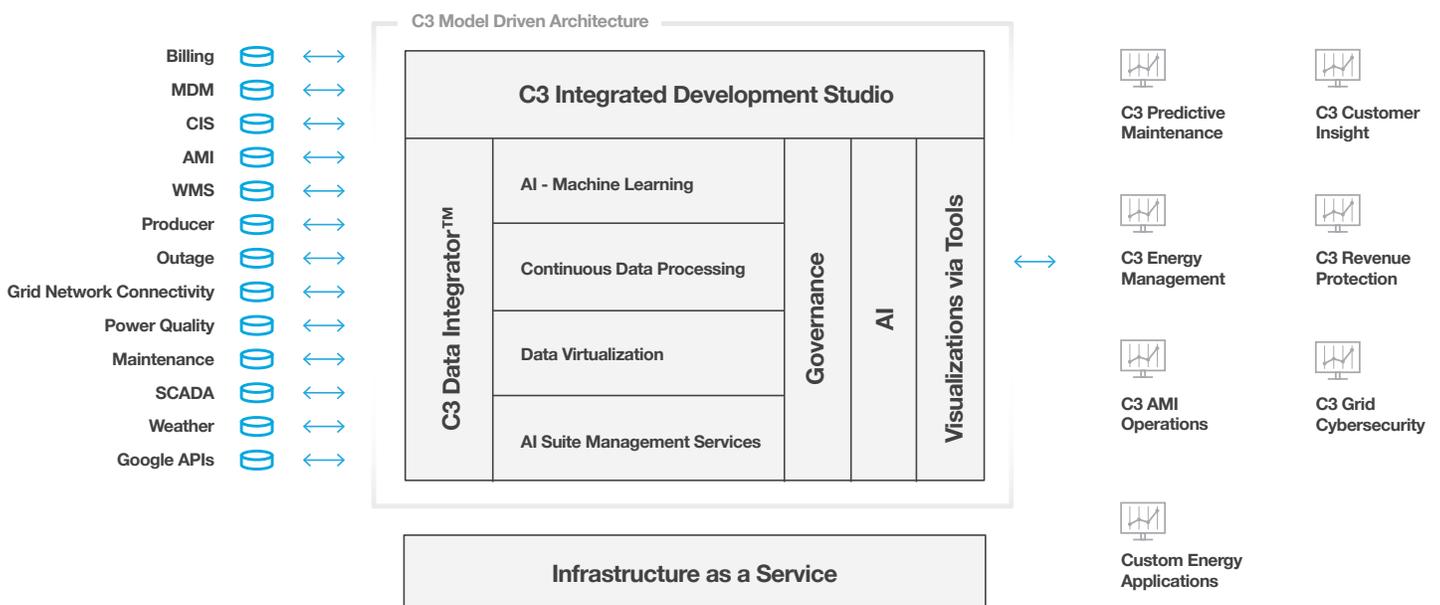
## C3 AMI Operations™

Reduce operating expenses associated with AMI and other IoT sensor deployments by identifying and predicting sensor and network health issues. C3 AMI Operations utilizes supervised and unsupervised machine learning techniques to prioritize meters projected to malfunction and enable a managed workflow for efficient triage and resolution of issues.

## C3 Grid Cybersecurity™

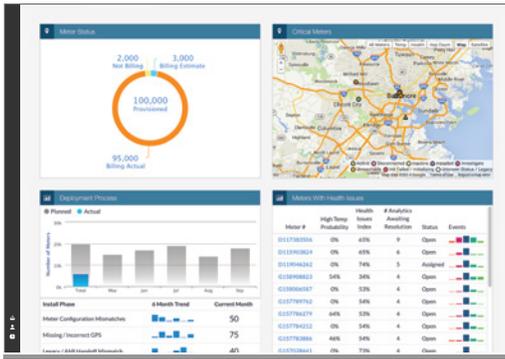
Reduce grid cybersecurity vulnerability and penetration risk by providing utility security teams with advanced diagnostics and predictive tools to identify, prioritize, and block potential cyber threats. With the C3 AI Suite, utilities can build predictive applications that enable operators to quickly prioritize security resources, addressing network and grid assets that pose the greatest risk to operational safety, reliability, and integrity.

## C3 AI Suite: Deploy Preconfigured Applications and Build Custom Applications





## Ensuring Optimal Health of Advanced Metering Infrastructure for Con Edison



Ingest meter data, integrate with other source systems and leverage machine learning to:

- Provide customers with information to manage energy use, control costs, and lower carbon emissions
- Monitor and manage smart meter deployment and identify meter and network health issues
- Proactively predict potential meter failures

**1B**  
records  
ingested per day from over  
5 million smart meters

**21**  
source systems  
integrated

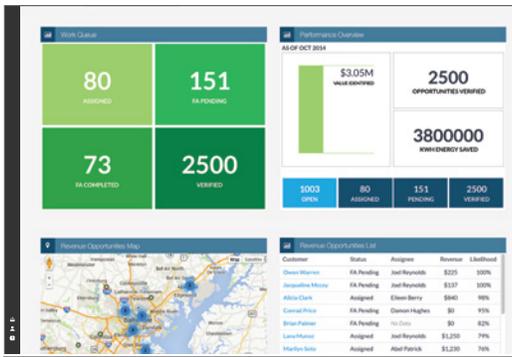
**2**  
machine learning  
models created  
with 50 analytics

**\$10M +**  
economic value  
generated annually



An Exelon Company

## Revenue Protection at Baltimore Gas & Electric



Apply machine learning algorithms to AMI data for:

- Detecting unbilled energy usage
- Quantifying the amount of revenue and energy loss at stake
- Prioritizing service points for investigation
- Reducing the cost of non-technical energy loss

**2M**  
smart meter  
data

**10TB**  
data image  
created from 12 unique  
source systems

**140+**  
complex analytics  
created

**\$15M +**  
economic value  
generated annually

# Build and Deploy Applications 40x Faster

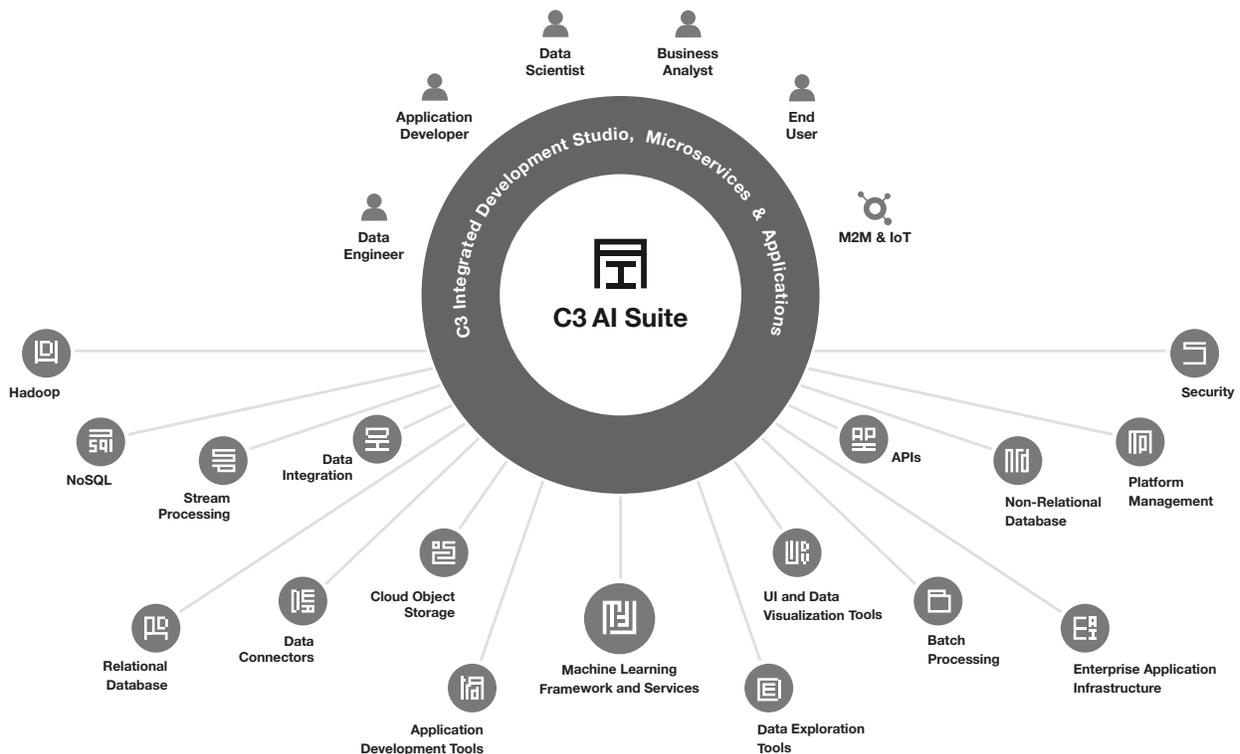
The C3 AI Suite is comprehensive software that uses a model-driven architecture to accelerate delivery and dramatically reduce the complexities of developing AI-enabled applications.

The horizontally scalable architecture of the C3 AI Suite provides the foundation to develop next-generation AI applications that use federated data management and machine learning in a secure, scalable environment. With the C3 AI Suite, organizations can rapidly develop and operate AI applications that run on any public or private cloud environment.

The C3 AI Suite's set of visual application development and AI tools, C3 Integrated Development Studio (C3 IDS), is a low-code/no-code environment for developing, deploying, and operating enterprise AI applications. C3 IDS provides data ingestion, data modeling, machine

learning feature engineering and model lifecycle management, and a metadata-driven UI development tool. With C3 IDS, application developers can configure the application user experiences and deploy AI-enabled applications. Data scientists can configure application data models and develop, train, and deploy machine learning models.

The C3 AI Suite delivers a set of services and capabilities that underpin the ability to deliver AI applications 40x faster than alternative methods. A model-driven abstraction layer; a comprehensive set of data integration, management, and processing capabilities; time series services; AI and model management; and a robust security framework speed data science and application development to accelerate delivery of AI at enterprise scale.



## Proven Results in Weeks, Not Years

Complete a low-cost, low-risk production trial of the C3 AI Suite™ in just 8–12 weeks. Validate the economic value and other benefits to your organization before expanding into full production use. For more details, visit [www.C3.ai](http://www.C3.ai).