

# DCIM software for data centers and edge network challenges

EcoStruxure™ IT enables resilient, secure,  
and sustainable IT infrastructure, anywhere.

[se.com/dcim](https://se.com/dcim)

Life Is On

**Schneider**  
Electric

# The evolution of data centers is transforming data center infrastructure management (DCIM) strategy

Data centers and IT infrastructure continue to evolve at a rapid pace in response to increased connectivity and digital transformation.

“Today’s data center exists without clear boundaries, creating growing complexity.” -CIO.com

The rapid evolution of hybrid IT including data centers, cloud and edge computing installations, is driving the need to monitor and manage a more complex and evolving data center infrastructure. DCIM was created to meet this need with sophisticated software used to monitor, measure, and manage data centers and IT equipment as well as support infrastructure such as power and cooling systems.

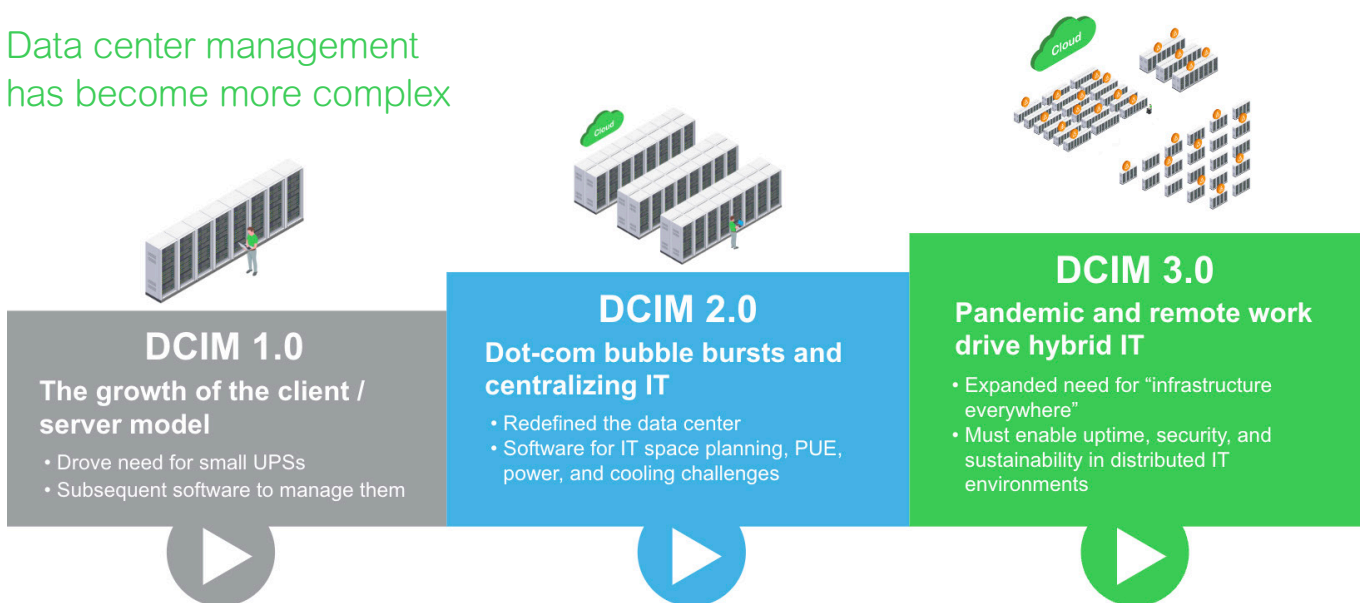
DCIM software has evolved and improved through the years to respond to the rapid growth of data usage and the server consolidation that occurred within data centers. Important features were added to facilitate factors such as IT space planning, as well as power and cooling requirements. Concerns about data center efficiency spawned a new metric in the form of Power Usage Effectiveness (PUE) that expanded the capabilities of DCIM from a monitoring and management tool to include planning and modeling.

Now, with today’s hybrid work environments, every endpoint that is on the network is mission critical. The world is more dependent on IT than it was 20 years ago which has changed the dynamics, we call this trend DCIM 3.0. To meet the evolving requirements requires a new tool to manage this effectively and that tool is EcoStruxure IT.

## The need to evolve to DCIM 3.0


The modern data center is no longer contained within a single facility but is a hybrid environment that extends to cloud providers, colocation facilities, and edge computing. These hybrid environments increase complexity and are much harder to operate as required levels of performance, reliability, compliance, and security increases. To meet the challenge of managing data centers without boundaries, DCIM software must support on-premise and cloud-based solutions for distributed IT environments that range from a few sites to thousands of sites globally. And, it must seamlessly integrate with other systems to meet the challenges of resiliency, security, and sustainability that operators are facing.

Data center management has become more complex



# IT industry trends driving the need to improve DCIM strategy


The sprawling hybrid IT environment is challenging even the most sophisticated IT organizations with maintaining the resiliency, security, and sustainability of their IT systems. DCIM 3.0 is positioned to address these challenges.

**Resiliency** 

Resiliency is the ability to recover quickly and continue operating even when there has been a disruption. According to the Uptime Institute study, almost 80% of respondents said their most recent outage was preventable, with on-premise power failures, network failures, and software or IT systems errors being the most common primary causes.

**Security** 

Cybersecurity is becoming an ever greater threat. According to the 2022 Allianz Risk Barometer, an annual survey of more than 2,700 risk experts from 100 countries, cybersecurity ranked the number one threat for companies for the next 12 months and beyond.

**Sustainability** 

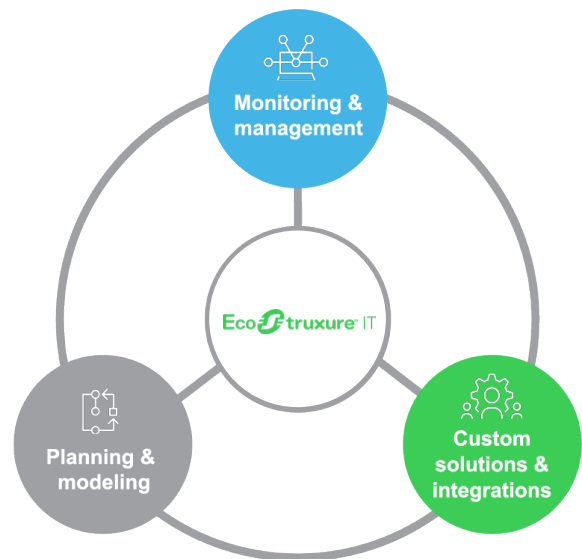
Across the globe, consumers and businesses are becoming increasingly aware of the need for action tied to net-zero emissions. A survey from Harvard Business Review revealed that 99% of large company CEOs agree that sustainability issues are important to the future success of their businesses.

## The three categories of EcoStruxure IT

**The DCIM 3.0 Challenge: Make the hybrid environment resilient, secure, and sustainable**

DCIM software requirements have changed dramatically since it was originally introduced. Schneider Electric has modernized its DCIM software portfolio, EcoStruxure™ IT, to include critical capabilities to meet the challenges of DCIM 3.0 and empower operators to manage the most resilient, secure, and sustainable IT infrastructure anywhere.

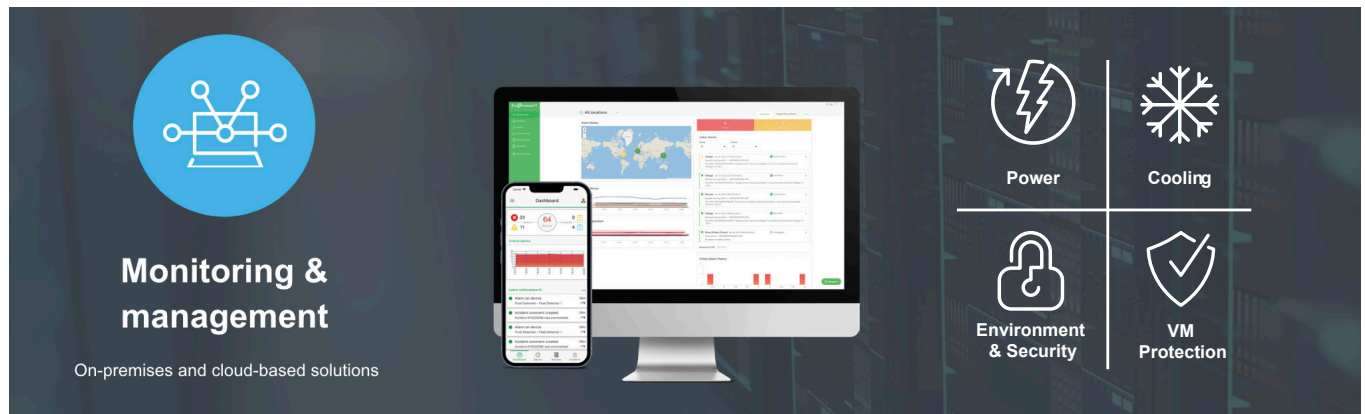
Whether it is deployed on a single IT rack, hyperscale IT, on-premise, in the cloud, or at the edge, Schneider Electric's comprehensive DCIM solution, EcoStruxure IT, ensures business continuity by enabling secure monitoring, management, insights, planning, and modeling.



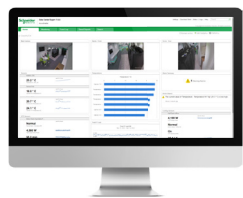
# EcoStruxure IT Portfolio: A comprehensive and tested DCIM 3.0 solution

EcoStruxure IT is the DCIM solution that ensures business continuity by enabling secure monitoring, management, insights, planning, and modeling. The solution is vendor neutral to maximize customer flexibility and ROI.

## Monitoring and management



The image shows a central graphic for 'Monitoring & management'. On the left is a blue circle with a white icon of a network diagram. Below it, the text reads 'Monitoring & management' and 'On-premises and cloud-based solutions'. In the center is a computer monitor displaying a dashboard with a world map and various charts, with a smartphone in front of it showing a similar interface. On the right is a 2x2 grid of icons: a lightning bolt in a circle labeled 'Power', a snowflake labeled 'Cooling', a padlock labeled 'Environment & Security', and a shield with a checkmark labeled 'VM Protection'.



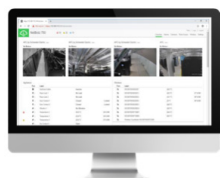
**Data Center Expert** – An efficient way for organizations to monitor their company-wide, multi-vendor physical infrastructure such as power, cooling, security, and environment. Real-time monitoring, user-defined reports and graphs, and instant fault notification and escalation enable quick assessment and resolution of critical infrastructure events that can adversely affect IT system availability. This centralized repository of critical information can be accessed by multiple users from anywhere on the network, creating a consolidated view of the physical data center infrastructure.



**IT Expert** – A cloud-based, advanced remote monitoring tool for wherever-you-go visibility and alarms, preventative management, and data-driven recommendations to mitigate security and failure risks of the data center and distributed IT infrastructures.



**PowerChute™ Network Shutdown** – Provides protection for server and hyperconverged infrastructure (HCI) systems. PowerChute Network Shutdown works in conjunction with the APC UPS Network Management Card to protect physical and virtual IT environments from threats to IT availability.



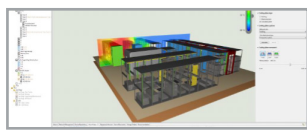
**NetBotz™** – The solution consists of rack mount and wall mount appliances, sensor pods, and sensors, designed to provide a wide range of integrated environmental monitoring, surveillance, and access control for sensitive equipment.



# Planning and modeling

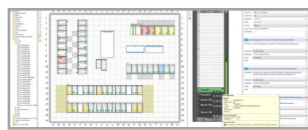


**IT Advisor** – A data center infrastructure planning and modeling solution makes daily data center infrastructure management simple and more efficient with full insights into the data center or colocation infrastructure from the overall system down to individual devices. It delivers operational excellence through proper asset tracking, risk management, and capacity optimization.



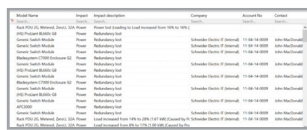
## Capacity planning

Know where to place the next server by planning and analyzing the infrastructure in a modern, 3D view.



## Change management

Reduce human error and deploy best practices across all moves, adds, and changes with workflow automation.



## Risk planning

Impact analysis report indicates how incidents may impact your devices and infrastructure.



## Colocation

Assess colocation infrastructure with floor view of areas, cages, and racks along with utilization reporting.

# Custom solutions and integrations



Maximize your investment in EcoStruxure IT software and free up staff time with custom solutions developed exclusively for you to meet your specific needs by our team of highly skilled engineers.






**EcoStruxure Advanced Custom Solutions (ACS) Engine** – A powerful platform on which a community of developers, both Schneider Electric and partners, can create business driven outcomes, turning data into meaningful business insights.

# How EcoStruxure IT helps customers

Customer results and use cases



## Enhances resiliency

Customer 	Challenge 	Solution 	Result 
<p>UK-based multi-media company</p> 	<p>Manage dispersed data centers and reduce unplanned downtime</p>	<p>EcoStruxure IT with device monitoring, integrated alarms, and access to simulations to identify risks</p>	<p>Reduced the risk of downtime while also improving operational efficiencies</p>

“Data center operations is the foundation of IT at Sky and it needs to enable our business to grow. Uptime is the primary goal and responsibility of the operations team, but maximizing capacity and efficiency while minimizing our carbon footprint is high on the agenda too.”






– Riccardo Degli Effeti,  
Head of Data Center  
Operations at Sky

# How EcoStruxure IT helps customers

Customer results and use cases



## Reduces security threats and increases resiliency

Customer 	Challenge 	Solution 	Result 
<p>A leading provider of floating production services and development of proven hydrocarbon reservoirs</p> 	<p>No centralized monitoring of distributed ITs dispatched across vessels and sites worldwide</p> <p>Needed better visibility and management of UPSs</p>	<p>EcoStruxure IT Expert with alarm notifications and ability to conduct cybersecurity assessments of physical infrastructure</p>	<p>Gained full visibility of the IT infrastructures deployed across multiple vessels around the globe to increase awareness of security threats and proactively prevent unplanned downtime</p>

“Visibility and management of our IT infrastructure around the globe is mission critical in our business. Now we also have full control of all UPSs around the globe.”






– Peter Tham,  
Technical Lead Servers and  
Hardware at Offshore BW

# How EcoStruxure IT helps customers

Customer results and use cases



## Supports sustainability goals

Customer 	Challenge 	Solution 	Result 
<p>Swedish-based colocation and high-performance computing provider</p> 	<p>Need of safe and reliable power management that would ensure customer-server uptime and energy efficiency</p>	<p>EcoStruxure for Cloud &amp; Service Providers and EcoStruxure IT Advisor with custom dashboard reports to monitor PUE</p>	<p>Improved efficiencies resulting in a PUE of 1.15 making EcoDataCenter one of the most sustainable data centers in Sweden</p>

“EcoDataCenter's ambition to be climate-positive has been turned into reality with the use of digitization and EcoStruxure solutions.”

– Mikael Svanfeldt,  
Chief Technology Officer,  
EcoDataCenter



# The DCIM 3.0 challenge: empower the most **resilient**, secure, and sustainable IT infrastructure, anywhere.

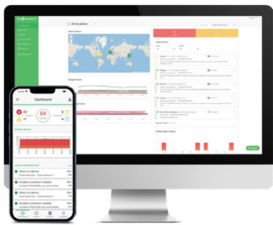
In addition to the complex, hybrid environment of modern data center infrastructure, there are three significant areas that hybrid IT environments must comply with: resiliency, security, and sustainability.

## Resiliency

EcoStruxure IT enhances resiliency, reducing vulnerability to unplanned downtime by:

- Performing device monitoring and health assessments
- Monitoring the environment to prevent damage and outages
- Run simulated impacts to expose and address vulnerabilities

### Monitoring & Management



Perform device monitoring & health assessments

**IT Expert & Data Center Expert**  
*Cloud-based & on-premises software*

IT-integrated alarms to **manage & proactively protect** server & hyperconverged infrastructures

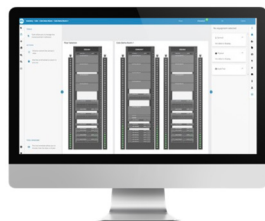
**PowerChute**  
*On-premises software*

Monitor temperature & humidity to prevent damage & outages



**NetBotz**  
*Appliances, Cameras, Sensors, & Rack Access*

### Planning & Modeling



Run simulated impacts to expose and address vulnerabilities

**IT Advisor**  
*Cloud-based & on-premises software*

### Custom Solutions & Integrations

Collect and store data generated by EcoStruxure IT & any other IT system in a Custom Engine – enabling cross platform sharing to gain operational insights to control risk and optimize your business, all without impacting your core EcoStruxure IT solution performance

**EcoStruxure IT Custom Solutions and Integrations & Advanced Custom Solutions (ACS) Custom Engine**



Team of highly skilled engineers all over the world and custom ACS engine to tailor a DCIM solution to your needs

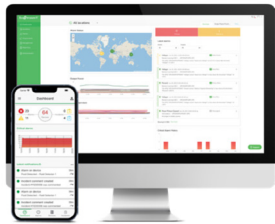
# The DCIM 3.0 challenge: empower the most highly, **secure**, and sustainable IT infrastructure, anywhere.

## Security

EcoStruxure IT reduces cybersecurity threats by:

- Maintaining device security policies
- Conducting cybersecurity assessments of physical infrastructure
- Performing mass device firmware updates to keep from running outdated firmware that can create security risks

### Monitoring & Management



Conduct cybersecurity assessments of physical infrastructure & perform mass device firmware updates

#### **IT Expert & Data Center Expert** *Cloud-based & on-premises software*

Utilize the most secure communication methods while providing resiliency and sustainability for UPSs

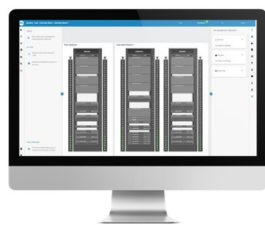
#### **PowerChute** *On-premises software*

Enable surveillance and recording for compliance, racks with access controls lock down to protect assets, and monitoring environmental to reduce physical threats



#### **NetBotz** *Appliances, Cameras, Sensors, & Rack Access*

### Planning & Modeling



Reporting and analytics with asset audit trail to track asset moves, adds, and changes by date/time, owner and work orders to coordinate with other security measures in place help maintain secured spaces.

#### **IT Advisor** *Cloud-based & on-premises software*

### Custom Solutions & Integrations

Ensure a stable and secure data exchange when creating dashboards and reports across different platforms

#### EcoStruxure IT ACS Custom Engine

ACS engine available for custom solutions:  
Reports, dashboards, integrations, and features



INTEGRATE

COLLECT

CREATE

MAINTAIN

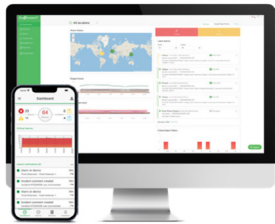
# The DCIM 3.0 challenge: empower the most resilient, secure, and **sustainable** IT infrastructure, anywhere.

## Sustainability

EcoStruxure IT supports sustainability goals by:

- Providing dashboards and reports for improved transparency
- Tracking PUE, energy, and carbon emissions
- Measuring energy efficiency down to sub-system level
- Delivering both standard and customized reports and dashboards

### Monitoring & Management



Accurate, real-time power consumption with monitoring and management solutions

**IT Expert & Data Center Expert**  
*Cloud-based & on-premises software*

Support energy management reporting for UPS

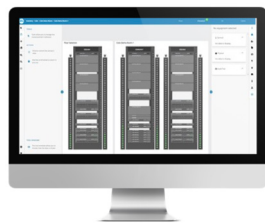
**PowerChute**  
*On-premises software*

Monitor environmental conditions to optimize and maintain performance of power and cooling infrastructure



**NetBotz**  
*Appliances, Cameras, Sensors, & Rack Access*

### Planning & Modeling



- Track PUE, energy, and carbon emissions
- Capacity management to minimize IT footprint
- Simulate layout for cooling optimization
- Measure energy efficiency down to sub-system level
- Reduce power with server management & AI-enabled cooling

### Custom Solutions & Integrations



We deliver both standard and customized reports and dashboards

#### EcoStruxure IT Custom Solutions

ACS engine available for custom solutions:  
Reports, dashboards, integrations and features



“IDC views the EcoStruxure family as a transformative platform that changes the core way that data centers are monitored and managed.”

Jennifer Cooke,  
Research Director for Data Center  
Trends and Strategies IDC

## To learn more

Read relevant blog posts and white papers

[DCIM 3.0 in 500 words](#)

[Justify Your DCIM Monitoring Software with Our Simple Tool](#)

[3 Steps to Calculate Total Enterprise IT Energy Consumption Using DCIM](#)

[WP281, How Modern DCIM Addresses CIO Management Challenges within Distributed, Hybrid IT Environments](#)

[WP170, Avoiding Common Pitfalls of Evaluating and Implementing DCIM Solutions](#)

[WP64 Why Data Centers Must Prioritize Environmental sustainability: Four Key Drivers](#)

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