



# Belden Customer Innovation Center™ (CIC)



Customer  
Innovation  
Center

**BELDEN**



# ACCELERATE YOUR PATH FROM THE SENSOR TO THE CLOUD

In the fast-moving and uncertain times that are today's reality, data and insights are essential for making smart, fast and effective business decisions. The convergence of operational technology (OT) and information technology (IT) will provide the backbone you need to move forward.

But we know getting there isn't easy. Talent shortages are an ongoing challenge. Technology evolves faster now than it ever has. Customers have higher expectations for quality and innovation. Demand and market conditions fluctuate endlessly.

This is where the Customer Innovation Center™ (CIC) can help. Our mission is to help you accelerate the design and implementation of robust, reliable and secure industrial networks that deliver the data and insight needed to fuel better business performance.







## TECHNICAL CONSULTING

Confidently build the network you need



## PROJECT MANAGEMENT

Bring your customized networking solution to life



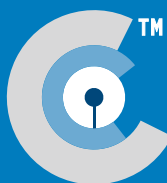
## EDUCATION & EVENTS

Own your future by learning new skills



## SERVICE & SUPPORT

Ensure your network availability 24/7



**BELDEN**

**PILLARS**



# TECHNICAL CONSULTING

## Confidently build the network you need

Data-driven operations enable countless improvements, from quickly launching new products to streamlining processes for better agility and lower risk. As a result, the ability to share information seamlessly and securely across the enterprise has become the standard for operational excellence.

But if critical information is siloed within your organization, you're facing an uphill battle to achieve seamless and efficient connectivity between OT and IT systems. **That's where the CIC comes in.**

### OUR APPROACH

No organization is the same; your challenges are unique to your business and infrastructure. That's why we're different.

Our Technical Consulting services are centered around collaborating with you to design, deploy and validate tailor-made solutions that meet your unique requirements.

We put Belden's best technologists, engineers and application experts to work — innovating, iterating and solving your most complex networking challenges. It's what we live for.

And we don't take the easy way out with 'rip-and-replace.' We help you get the most out of your existing network infrastructure, while transitioning to new standards or designs.

### WHAT WE OFFER

Our technical consultants provide:

- **Local support** to complement your IT team, drawing from top global talent who have extensive field experience and application-specific expertise
- **Deep vertical market expertise** in mass transit, discrete manufacturing, process automation, energy and smart buildings
- **Proven capabilities** for faster testing and validation of real-world applications

Together, we build solutions that deliver the robust and reliable sensor-to-cloud connectivity you need.

- Reduce total cost of ownership and improve ROI
- Increase network uptime
- Prevent network breaches
- Improve operational efficiency and lower OpEx costs



**With our CIC team at your side,  
you can quickly and effectively:**



#### **OPTIMIZE**

your networks with multi-functional and standardized products to reduce the total cost of ownership



#### **MODERNIZE**

your existing infrastructures with seamless integration of future-proof technologies for increased bandwidth, efficiency and ease-of-use



#### **AUTOMATE**

your network functions to enable sensor-to-cloud connectivity and provide improved network-wide visibility and data analytics



#### **SECURE**

your network segments to minimize threats, comply with industry-wide ICS standards and maximize operational availability

#### **OUR TEAM**

Belden's global, multi-disciplinary team of engineers and consultants combine technology and vertical market expertise to simplify network complexity and accelerate business impact.





## Let Us Prove It

We know that any investment in technology has to work from the start and deliver measurable value. But don't just take our word for it.

We've built the CIC so that you can see how our products and solutions will work in your environment. We invite you in to show you what we have and give you the space to take it all for a test drive.



### LIST OF SERVICES

Network Assessment  
Service

Digital Automation  
Workflow Assessment

Network Security Audit

Product Customization

Technology Workshops

Resident Consultant

## INTEGRATED PRODUCT & SOLUTION DEMOS

See first-hand and understand how various products and solutions work. Whether on-site or online, we'll share an overview of features and capabilities and go behind-the-scenes into the interfaces.

## VALIDATION LAB

Easily compare products, validate designs, gather benchmarks and evaluate multi-vendor solutions within our centers. We provide open-end architectures, remote connectivity and best-in-class tools. You can bring your own gear or work with a standard prototype.

## PROOF OF CONCEPT (POC)

Realize the vision for your technical ideas and co-create customized solutions in our PoC lab. We'll help you verify that certain concepts or features have the potential to become a solution for your real-world application.

## VALIDATION SERVICES

Offload expensive, time-consuming internal testing to accelerate development and deployment and speed your time to market. We manage the entire testing process — whether you need to test a function, network performance, upgrades or migrations.

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**Our team of experts can support any use case or application. Here are some specific ways we've helped organizations like yours.**

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## APPLICATION CONSULTING

- **Modernize/Retrofit:** Migrate existing systems to a new standard or technology
- **Design & Validation:** Test and document that the solution works in a specific environment
- **Technical Updates:** Engage with CIC engineers to receive the latest technology evolutions

## IIOT CONNECTIVITY

- **IT/OT Convergence:** Accelerate seamless, efficient OT and IT connection from sensor-to-cloud
- **Network Management:** Integrate customer-specific use cases and manage entire IIoT network with best-in-class management tools
- **Field-Level Digitization:** Connect and automate operational assets

## INDUSTRIAL CYBERSECURITY

- **Assess & Audit:** Benchmark solutions against industry and customer security standards
- **ICS Network Certification:** Certify networks against industry standards or benchmarks
- **IT/OT Security:** Secure transition of OT networks and integration with IT networks





# PROJECT MANAGEMENT

## Bring your customized networking solution to life

All of the information and insight needed to meet the needs of your customers, suppliers and channel partners can be found at the intersection of OT and IT systems. And while you know you need to build a network that can support that vision, it's tough to find the time, resources and talent required to make it happen.

**The great news?** You don't have to do it alone. The Project Management team within the Belden CIC is ready to bring your custom networking solution to life — from planning to implementation — and every step in between.

### OUR APPROACH

No one knows your organization's connectivity, security, performance and cost needs better than you!

That's why we collaborate with you from the outset to ensure that the network you get is the one you want (and need).

We put our expertise to work for you — helping you make the right investments and ensuring that all milestones are met. Ultimately, though, you're always in control.

Our model is simple and proven — and designed to turn your vision into reality. And while we manage all projects in phases, each step is customized to your individual requirements!



## GO-LIVE

It's launch day! After comprehensive site acceptance testing and optimizations, we're by your side for the go-live — and our certified experts will train you on-site, so you're prepared for whatever the future holds.



4

2

## DESIGN

Any new products and technologies must fulfill your business requirements — that's a non-negotiable. Let us handle the tests and simulations to validate everything will work as planned.



3

## COMMISSION

While strategy and prep are critical, nothing excites us more than bringing it all to life in your environment. Our team will be there on-site to install, configure and deploy your solution.



1

## PLAN

We take an integrated approach to planning, and leverage our technical, application and market experience to help you define deliverables and meet all major implementation/ project milestones.



# Helping Ensure Quality & Predictable Outcomes

You've decided to invest in building a future-proof network. Choosing a respected, accountable and transparent partner to help you make it happen is one of the most important decisions you will make.

Belden's Project Management team knows you need to be certain that there won't be any surprises or disappointments. Because you're in control, we have built a rigorous process led by experts, so that you'll always know what is happening when, and who to talk to with any questions.

1

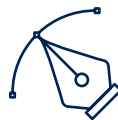


## PLAN

*During this phase, we set a high bar, putting people and processes in place to ensure you are confident in our partnership.*

- A dedicated, certified Project Manager
- Defined milestones and project deliverables
- Implementation hotline for fast response to queries
- Bill of materials management (supply chain, stock)
- Management of tools and software leased for project
- Regular and frequent reporting and documentation of status

2



## DESIGN

*We tap into our team's extensive experience to understand what you have, what you need and what will be the best possible solution for you.*

- Expert, on-site analysis of your existing network
- Integration of your third-party project specific components
- Network simulations and/or validations in Belden's CIC lab
- System compatibility testing (Proof of Concept – PoC)
- Technical design workshops
- Network performance KPI definitions





3



## COMMISSION

*We understand the challenges you'll be facing during this project phase and we do everything we can to ensure that the network will perform as you envisioned — and that you have what you need to run it.*

- Factory acceptance testing (FAT) in controlled environment
- Delivery and installation managed by the Belden CIC team
- On-site and off-site configuration services
- Network benchmarking
- Installation manuals
- Software/configuration back-up files and recovery media
- Installation training for your engineers

4



## GO-LIVE

*Once everything's in place, we're still with you to make sure that it all works as it should and the fine-tuning does not end until you are satisfied.*

- Site acceptance testing (SAT) to validate network on-site
- On-site survey to monitor post-installation performance
- Immediate optimization based on survey results
- Benchmark network performance against KPIs
- Customized training for maintenance engineers
- Extended monitoring and hotline for 3-6 months (optional)



# EDUCATION AND EVENTS

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## Enable your team to get the best out of your network

Network technology evolves fast – and it’s non-stop. You need a team with the latest skills, but it takes time to keep up with innovations and to understand how they apply to your environment. When network uptime is the priority, it’s not easy to make time for continuing education.

That’s where our CIC experts step in. Whether you have a new team member – or an experienced one – we help develop and educate your team, providing customized training and support throughout a project’s lifecycle.

**Our highly qualified experts** are focused on setting you up for ongoing success with hands-on training and certifications that enable you to learn by doing.

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### OUR APPROACH

Finding time in your day-to-day routine for training and education can be challenging. That’s why we designed our Education and Events in a way that can easily adapt to your specific needs.

With the CIC, you can train when, where and how you want. Do you want to meet online, or at your (or our) location? Do you need one dedicated session or an ongoing series? Do you prefer self-guided training or a hosted workshop? We have it all.

Our goal is to be flexible! With education and training from the CIC, we give you options that are personalized to your needs. This might include:

- Practical training to design your specific network
- Customized training based on projects, products or technology
- Certification programs to gain expertise and professional recognition





**WE SUPPORT AND ENABLE  
ONGOING SUCCESS WITH  
TECHNOLOGY RESOURCES  
AND TRAINING THROUGH:**

Live & On-Demand Training

Customized Training

Technology & Product  
Certification Training

Application-Based  
Best Practices

Technology Workshops

Insightful Industry Events





# Own Your Technology Future

Our robust offering of training, technical workshops and certification programs helps you strengthen your team's ability to manage the day-to-day needs of your network and gives you the insight you need to stay ahead of the innovation curve.



## BELDEN ACADEMY

*Online, mostly free courses in a wide range of technologies, products and best practices give your team the skills they need to be the best they can be.*

- Technology and Product Trainings
- Application-Based Solution Trainings
- Short How-To Trainings
- Proof of Concept Workshops
- Market Trends (e.g., IT and OT Convergence)



## TECHNOLOGY AWARENESS PROGRAMS

*We're wherever you are – in person, online and via social media to keep you up-to-date and informed.*

- Roadshows
- Industry Events
- Application and Technology Webinars
- Blogs and Chats



## ADVANCED TECHNOLOGY PROGRAMS

*There's always something new to learn about, whether it's products, trends, standards or strategies. Our team watches and predicts what's next and we're here to help you make the most of innovation.*

- Benchmarking Analysis
- Future Technology Forums (like TSN Forum)
- Application Notes and Technology Papers
- Member of Standards Committee (IEEE)



### COME SAY HELLO!

Our CIC experts participate in all of the top global tradeshow and events. We can't wait for the opportunity to meet you face-to-face! If you'd like to know when and where we'll be next, check out the link below.

**[belden.com](http://belden.com)**



# SERVICE AND SUPPORT

## Keep your network running 24/7

Your network is the backbone of your organization. With it, production runs, supply and demand stay in balance, vendors are paid and much more. It's vital to every aspect of your business, but it's not easy to keep it up and running. The skills you need are hard to find and even harder to fund. Your environment may be harsh on hardware. As the pace of technology evolution continues to escalate, it can be challenging to stay ahead.

Need some back-up? The Service and Support team within the CIC takes the pressure off. We're ready to partner with you to design and deliver a service and support program that's tailored to your needs.

### OUR APPROACH

Ensuring that your network runs optimally requires three things.

1

First, you need fast, effective access to remedial help when there is a problem.

2

Second, you need to monitor network health to ensure uptime and optimized performance.

3

Third, you need to keep an eye on the technology horizon and make smart decisions about investments that keep you ahead of the innovation curve.

That's where our Service and Support team comes in. We help you simplify complexity, mitigate risk, and gain peace-of-mind knowing your network performs at its best.

#### TIME IS MONEY

Did you know that for every hour your network is down, it could be costing you \$300,000?

\*Source: Gartner, "The Cost of Downtime," July 2014

[blogs.gartner.com](https://blogs.gartner.com)







## WHAT WE OFFER

Our support engineers have the expertise to quickly resolve network issues, whenever they arise. They know where potential problems may be hiding and how to proactively prevent them from becoming a crisis. They stay up to date on challenges and opportunities in technology and can help you understand and invest in what works best for you and your business.

The CIC Service and Support portfolio is built on a three-pronged approach to network health. Delivery is tailored to your requirements and can scale up as you need it!



### CORRECTIVE SERVICES

*Around-the-clock access to our highly skilled engineers means issues are resolved in the shortest possible time.*



### PREVENTIVE SERVICES

*With our preventative approach, potential issues are predicted and diagnosed — and malfunctions are avoided.*



### PREDICTIVE SERVICES

*By outsourcing your network's ongoing management, rely on us to give you the facts to make smart investment decisions.*



## Optimize Your Network Performance with End-to-End Service and Support

Immediate tactics. Future-forward strategies. And everything in between.

That's what you get with our Service and Support team. 365 days a year, 24/7, remote or on-site.



### CORRECTIVE SERVICES

*When the network stops working, in part or in whole, there's no time to waste. We have the expertise and tools to quickly bring your network back to life in the shortest time possible.*

- Direct access to a technical support manager for emergencies provides a path to immediate corrective action
- Personalized and high-priority access to our ticketing system and knowledge base helps you easily monitor your network's status and get support when you need it
- Response from a qualified technician within the shortest time possible ensures timely recovery
- Priority escalation of bugs and issues to R&D speeds resolution
- Replacement parts guaranteed the next day reduces the impact of unplanned downtime
- On-site engineers can diagnose and solve critical network issues
- Remote network access ensures fast recovery to the most recent healthy state

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### OFFERINGS

- 24/7 hotline
- Guaranteed response times
- Online ticketing system
- Next-day on-site support
- Priority RMA repair service
- Advanced product replacement





## PREVENTIVE SERVICES

*Network health depends on proactive measures. Our preventive services help you reduce exposure, keep up with industry standards and train your team to optimize network reliability.*

- Emergency security vulnerability planning, patching and upgrades speed recovery
- Detailed reports on the impact and resolution of security vulnerabilities ensure accountability
- Direct contact with security experts for assessment, audits and compliance ensures protection
- Remote and on-site network health checks close any potential gaps
- On-site workshops on new technologies improve your team's skillset and keep automation engineers up to date
- Annual audits ensure compliance against industry standards and benchmarks, and fine-tune network performance
- Resident engineer programs locate an expert near you

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### OFFERINGS

- |                           |                              |
|---------------------------|------------------------------|
| • Network health check    | • Technical update trainings |
| • Network security audit  | • Network benchmarking       |
| • Network upgrade service | • Extended product warranty  |



## PREDICTIVE SERVICES

*Fine-tune your network and find opportunities to maximize new investments. Our experts help you get more from your network today and future-proof performance.*

- Data and asset management solutions provide full visibility of network components and access to business-critical data, so that you're always in control of your operations
- Data analytics and algorithms provide the critical network insights required for risk mitigation and counter measure/action plans
- Benchmarking against industry standards for best-in-class network performance keeps your network up to date with the latest innovations
- Belden-certified and -approved network documentation ensures quality and transparency
- Real-time online reporting to monitor network status and performance enables proactive management on-site or remote
- Access to state-of-the-art labs and facilities enable extensive testing, when needed

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### OFFERINGS

- |                                |  |
|--------------------------------|--|
| • Data management and analysis | • Performance monitoring and optimizations |
| • Asset management             | • Test lab facilities                      |
| • Real-time online reporting   |  |





**NOT SURE ABOUT A YEARLY SLA, BUT YOU NEED SUPPORT?**

*No problem. Choose the support you need from the list of Corrective and Preventive services we offer. Our paid service packages are designed to suit your regional commercial terms and conditions.*

**belden.com**





# Guaranteed Network Performance and 100% Availability

Network downtime isn't an option. That's why you need a partner who can ensure that critical network infrastructure is always available and free of malfunctions and security issues.

And since your network challenges are unique, you need service and support agreements designed for you and your organization. Belden CIC's Service Level Agreements (SLAs) are designed exactly for this reason.

Annual agreements form the basis of trust and ensure 100% fulfillment of all agreed KPIs (Key Performance Indicators) and performance parameters.

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## Designed to support your individual needs, our SLAs offer complete flexibility on:

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### LEVEL OF SERVICE

*Only select the services you need*



### SCOPE

*Easily add more services or network elements to the SLA scope for a minimal cost*



### COST

*Choose to pay your way (yearly contracts or as services are provided)*



### REMOTE MANAGEMENT

*Reduce overhead costs by allowing our engineers to diagnose and solve issues remotely*



### DURATION

*Extend or discontinue services on a year-to-year basis*



### LANGUAGE

*Communicate in your preferred language with our field engineers around the globe*



# MARKET EXPERTISE

The Belden CIC facilitates easy, seamless access to the best and brightest talent. Our local experts are available to customers – wherever they are in the world – and put their market-specific, real-world application expertise to work for you.



## MASS TRANSIT

Reliable, secure & compliant network infrastructures for the transportation industry, including world-class train-to-ground communication.



## ENERGY

Seamless data flow solutions to maximize uptime, secure communication & ensure system reliability for energy producers — even in the harshest environments.





## DISCRETE MANUFACTURING

Advanced production automation solutions for maximum system availability, unparalleled flexibility & future expandability to protect factory investments.



## PROCESS FACILITIES

Complete data & control communication solutions to meet the demanding needs of process applications — from oil & natural gas to petrochemicals.



## SMART BUILDINGS

Smart building solutions designed to enable business growth, enhance security, reduce operating costs & adapt to workplace changes with ease.



**LEARN FROM THE SUCCESS OF YOUR PEERS — AND THE COMPETITION**  
Check out how others in the industry have put the Belden Customer Innovation Center to work for them — and what we've been able to achieve together!  
**[belden.com](http://belden.com)**





 **OPEN - Stuttgart, Germany**

 **FUTURE SITES**

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