

Charter Steel Relies on Avaya IP Telephony and Mobility Solutions to Deliver Just-in-Time Advantage

Challenge	Solution
<p>To ensure its competitive advantage of 95 percent, just-in-time delivery, Charter Steel's goal was clear — to implement a highly reliable converged communications solution while simultaneously cutting costs.</p>	<p>Charter Steel was able to upgrade to an Avaya IP Telephony Solution and protect much of its existing investment by implementing Avaya DEFINITY® Communications Servers, an Avaya S8500 Media Server, and an Avaya G650 Media Gateway. The Avaya one-X™ Deskphone Edition for 9600 Series IP Telephones improves personal productivity through its user-centric design, intuitive user interface and high-fidelity audio. Avaya Global Services supported a smooth transition by providing an Avaya IP Network Readiness Assessment.</p>
Value Created	
<ul style="list-style-type: none"> • More agile, secure and reliable operations through improved enterprise connectivity and mobility with the Avaya IP Telephony Solution that connects more than 1,000 employees across Charter's multi-site enterprise, extending main voice features to remote locations and mobile workers. • Reduced operating costs realized from routing voice traffic over an IP network, thereby reducing long-distance charges. • Improved productivity for employees using the Avaya one-X™ Desktop Edition for 9600 Series IP Telephones through its highly intuitive feature functionality, simple call forwarding, and ease of teleconferencing management. • More productive internal collaboration resulting from simplified network administration that enabled the Charter IT staff to easily manage new locations without adding resources. • Provided a smooth migration to converged networking using Avaya Communication Manager, a five-year net benefit of \$334,000, and payback period of less than one year. 	

Saukville, Wisconsin, USA — Facing sharp competition in the hard-as-nails steel business, Charter Manufacturing is installing an Avaya IP Telephony solution to seamlessly connect 1,000 employees across its multi-site enterprise.

As Charter sees it, migrating to a converged enterprise voice/data network will save money and optimize its existing investment in its Avaya DEFINITY® Communications Servers.

“Just to throw out our Avaya systems isn’t a wise business decision, because they’re rock solid,” says Peter Schwei, telecommunications supervisor. *“We want to build on the investment we’ve made in those dependable platforms and add the new features and functions our business requires. Fortunately, that’s easy with Avaya.”*

And that, Charter has found, is the beauty of migrating to IP communications and connectivity by upgrading its existing Avaya systems to Avaya MultiVantage®

Communications Applications. With the upgrade to Avaya Communication Manager 3.1, the additional upgrade of an Avaya DEFINITY® Communications Server to the Avaya S8500 Media Server, and the new possibilities created by Avaya one-X™ Deskphone Edition for 9600 Series IP Telephones, the company further enhanced its rock-solid foundation to provide the benefits of IP telephony across all of its locations.

Even in its initial stage, the IP migration plan for Charter produced tangible benefits: improving connectivity for remote locations, providing enhanced mobility for telecommuters and road warriors, and reducing administration and network costs.

What is more, Charter says its Avaya communications network plays a pivotal role in helping Charter meet the high expectations of its automotive industry customers for just-in-time product delivery and zero defects.

“Our customers care about on time delivery, zero defects and zero downtime,” says Tony Bares, IT strategic consultant. “These expectations depend on our ability to flawlessly execute our customer service processes, and that’s really our competitive edge.”

Continuous Improvement — Including Communications

It’s no surprise that Charter’s drive for continuous process improvement, plus its need to squeeze costs out of the business, would affect its approach to delivering high quality, cost-effective communications. Though today’s systems are perfectly reliable, Charter is planning and building for the future.

For a steel operator such as Charter, cost control is vitally important. *“In the steel industry, our costs are rising incrementally and we can’t increase prices,”* says Bares. *“So it’s really been a crunch for the steel industry to make money. Charter’s goal is clear: to implement a highly reliable, converged telephony solution and, at the same time, cut costs.”*

Schwei adds, *“We currently have two separate voice and data networks. There’s no need for that. We can converge both voice and data on our Avaya IP network, reduce facilities costs, and trim the resources required to maintain and administer two networks.”*

Beyond just spending less, Bares and Schwei plan to do more. As Charter grows, it is seeking the best way to economically add new sites to the Charter network and provide employees across the company with the same rich communication services.

Because communication is key to the company’s success, Charter is driving at what may look like conflicting goals: to lower costs while enhancing its ability to communicate with associates and customers. A failure to communicate could cost Charter tens of thousands of dollars, slow its progress toward zero defects, or even jeopardize a customer relationship.

Charter’s “Big Three” automaker customers commonly turn their just-in-time (JIT) production schedules on a dime. They forecast their requirements for Charter’s steel products, used to make bolts, pins and fasteners for use in vehicles, weeks in advance. Yet they may telephone as little as two hours ahead to ask Charter to finish and ship their orders. If such a call failed to reach Charter’s sales staff, it could cause a missed delivery — and potentially cost Charter \$10,000 a day. With an on-time delivery rate hovering around 95 percent — some 15 points above the industry average — Charter finds that possibility unacceptable.

Quality, too, demands comprehensive communication as an integral element of execution. Charter melts steel in 90-ton increments, called “heats.” Inability to contact a supervisor or metallurgist to troubleshoot the process could cause a heat to be scrapped, costing up to \$15,000. If a communication problem caused downtime at one of Charter’s 24-hour-a-day rolling mills, that could cost \$5,000 to \$7,000 per hour, according to Bares.

In addition, Charter’s field-based technical service representatives (TSRs), who work with Charter’s customers and production staff to resolve product quality issues, need to be instantly available no matter where they may be. *“Our goal is zero defects,”* says Bares. *“The communication has to be streamlined between the customers and the technical services representatives to make that happen. To get to zero defects is a lot of work.”*

So Charter is carefully balancing costs and capabilities. *“Charter is transitioning methodically to IP. We are analyzing all aspects of our existing communications infrastructure,”* says Schwei. *“But as we move toward a single network, it’s also important for us to utilize our existing investment in communications systems; not just our Avaya DEFINITY® Servers, but our telephones and other components as well.”*

Another key issue is business continuity. Today, each Charter division is served by its own Avaya communications

Avaya sets the bar and the standard for communications, in my mind. Avaya is a corporate standard here, as it is with over 90 percent of other FORTUNE 500® companies.

Peter Schwei, telecommunications supervisor

Avaya Global Services also watches over Charter's optimized network, with outstanding results... I stay with Avaya maintenance because if we have problems — which are rare — they're fixed. Avaya maintenance services are phenomenal. I don't see another vendor Charter has that delivers the same level of performance. Just like Avaya products, Avaya services set the standard.

Peter Schwei, telecommunications supervisor

solution, so an issue at one location does not impact other sites. "As we considered migrating some of the smaller locations onto servers at other locations," notes Bares, "we knew we were going to have to pay more attention to business continuity issues."

Choosing an IP Solution: An Easy Decision

As the Charter team considered its objectives, Schwei said the easiest step was picking a technology platform.

"Avaya sets the bar and the standard for communications, in my mind," Schwei says. "Avaya is a corporate standard here, as it is with over 90 percent of other FORTUNE 500® companies."

Charter selected an Avaya Diamond-certified Gold BusinessPartner and distributor based in Elk Grove Village, Ill., to design its Enterprise Branch Connect solution and upgrade its Avaya communications network to IP.

"They managed and implemented the upgrades and new server with us. We are very happy with the result," says Schwei.

The Solution

The heart of Charter's IP Telephony solution is Avaya Communication Manager 3.1 running on a foundation of Avaya DEFINITY® Communications Servers and the Avaya S8500 Media Server with an Avaya G650 Media Gateway. By simply replacing the processor pack in its existing DEFINITY® Communications Server and installing IP communication boards, Charter was able to upgrade to IP Telephony, enable its existing servers, and build on its embedded base. The company upgraded from Avaya DEFINITY® Servers to Avaya S8500 Media Server with the Avaya S8300 Media Server in Local Survivable Processor (LSP) mode, re-using the circuit packs from its original installation. Charter also added

Avaya Expanded Meet Me Conferencing, Avaya Unified Communication Center with Speech Access and Avaya INTUITY® AUDIX® Voice Messaging. All of this helps ensure that much of its investment in the Avaya DEFINITY® platform will continue delivering value far into the future.

"That is our product for the future," says Schwei. "We plan to move at our own pace, upgrading locations where and when it makes sense."

Charter Manufacturing also uses an all-Cisco data network that will soon shoulder voice traffic too. And Avaya INTUITY® AUDIX® Voice Messaging with its Internet Messaging capability allows Charter mobile workers to be more responsive to clients and each other, making them highly productive. With INTUITY® AUDIX® Voice Messaging, Charter workers can view their voice and e-mail messages in their Microsoft® Exchange Outlook mailboxes, where they can access, manage, and respond to their messages easily from any location, using either computer or telephone. They can listen to e-mail messages by phone, for instance, or hear voice messages over their computer's sound system. INTUITY® AUDIX® Voice Messaging helps employees respond faster and keeps information and decisions moving for Charter Manufacturing.

Other mobile workers find the Avaya IP Softphone to be a productivity booster. With IP Softphone loaded on their laptop computers, they can take their business phone to hotel rooms, client sites, and their homes and make and take calls as if they were in the office. They have full access to the powerful features of Avaya Communication Manager 3.1 from remote locations — enabling true office desktop portability.

Finally, the recent addition of Avaya 9600 Series IP Telephones improves personal productivity through its user-centric design, intuitive user interface and high-fidelity audio. Schwei appreciates not only the new look and feel, but also the enhanced functionality, sound quality, and ease of use.

“Phones have to be easy to use. They have to be intuitive. Losing calls is not an option. All of the features being given to the end users via IP telephony, I think, are going to be very important.

“These new phones are definitely different,” Schwei says. “They have a different feel and a different look to them. The flip up screen gives users the ability to reduce glare. I also think the backlit screen display is something that you’ll see as standard. That will be something that just has to be there in the future.

“The sound quality is much richer, too;” It makes it very easy to discern and hear what’s going on around you during a conference call, he adds. The conversation is clearer and easier to understand.

These phones also make it easier to manage teleconferences right from the desktop, Schwei notes. *“There are multiple features so that we can get to the end users no matter where they are, any time, any place.”* The conference manager also can easily control any disruptive behavior, such as typing during a conference or handling, ensuring a smoother, more productive meeting.

Charter’s reliable network started with an Avaya IP Network Readiness Assessment by Avaya Global Services that generated a list of recommended improvements. Using the industry-leading Avaya ExpertNet™ VoIP Assessment Tool, which was developed by Avaya Labs, engineers created a roadmap for a successful deployment. They pinpointed potential problem areas on the network and suggested solutions to ensure a smooth migration. Says Schwei, *“We had 50 to 60 action items — hot- hitters — that we accomplished. We’ve greatly improved our efficiency,*

“Avaya Global Services also watches over Charter’s optimized network, with outstanding results. Avaya provides 24 x 7 network monitoring through Avaya EXPERT Systemssm Diagnostic Tools, which remotely resolve 96 percent of alarms on Avaya equipment. I stay with Avaya

maintenance because if we have problems — which are rare — they’re fixed. Avaya maintenance services are phenomenal. I don’t see another vendor Charter has that delivers the same level of performance. Just like Avaya products, Avaya services set the standard.”

Customer Benefits in Detail

Benefits that Charter has achieved:

- **Mobile Employees** — Charter’s culture of employee empowerment puts a premium on having the right people working at the right places, able to move quickly where they are needed. The Avaya IP Softphone *“keeps me totally in contact and gives me maximum flexibility whether I’m at home, or here, or at one of our other sites. No matter where I am on the network, I have my phone there,”* says Schwei, adding that it also gives Charter *“flexibility with telecommuting options. We use it for our quality and technical people; the support people within the organization will be using it. True telecommuters. Road warriors.”*

Avaya Modular Messaging, Avaya Expanded Meet Me Conferencing, Avaya Extension to Cellular (formerly EC500) and Avaya Unified Communication Center with Speech Access keeps Charter’s road warriors’ easily and safely in touch with the business from anywhere at any time, with easy access to voice, fax and e-mail messages improving responsiveness and productivity.

The Avaya 9600 Series IP Telephones also serves Charter’s road warriors well with its easy-to-use call forwarding features. *“They’re very intuitive and actually remind you if you have activated a forwarding feature,”* he says.

Charter’s road warriors can’t afford to miss calls, he adds. *“As a steel mill, we need to make decisions in real time. If we’re in the middle of a manufacturing cycle and we need to decide how to save a “heat” or batch, a call can be critical and has to be answered.”*

The Avaya solution overall has helped us improve in both our delivery times and our zero defects

Tony Bares, IT manager

“These new phones are definitely different. They have a different feel and a different look to them. The flip up screen gives users the ability to reduce glare. I also think the backlit screen display is something that you’ll see as standard... in the future.”

Peter Schwei, telecommunications supervisor

- **Enterprise Connectivity Reduces Costs** — With better connectivity between locations, it’s easier for Charter employees to share information and make the fast decisions required to compete in today’s just-in-time world. Charter’s Avaya IP Telephony network is helping. By routing some voice calls over the company’s Avaya data network, Charter is saving on long-distance charges. Charter anticipates that the Avaya IP Telephony solution will deliver a 10 percent year-over-year reduction in network costs.
 - **Always Connected** — To keep sales, technical and production workers in touch with customers and each other, Charter uses an enterprise-wide, four-digit dialing arrangement. Calls and voice messages are automatically redirected to the called party’s cell phone or voice mailbox.
 - **Doing More with Less** — Though Charter Manufacturing has added three new locations in the past four years, the telecommunications staff has not grown. The same two-person staff is handling all the new locations and employees. “We can do more with less,” says Schwei. “First, our Avaya solution never breaks.” And administration of the Avaya solution just keeps getting easier as IP telephony evolves at Charter Steel. By avoiding new hiring, Charter is saving the equivalent of two full-time people, or approximately \$100,000 each year including benefits.
- ‘More with Less’ also means more capabilities for less money, thanks to Charter’s Avaya IP Telephony solution.
- **Smooth and Easy Migration to IP Telephony** — Charter can easily upgrade its existing base of Avaya communication servers to full IP capability with Avaya Communication Manager. In the process, the company can retain and continue to derive value from the investments it has made.

- **Advantage: Quality** — “The Avaya solution overall has helped us improve both our delivery times and our zero defects,” says Bares. “We don’t have our own trucking company, so communication between sales, shipping, and production is critical. When we get a message from a customer that they want to release material, that’s got to get into the production process and to our shipping people; communication between plants makes it easy for them to get information from one person to the next.

“On the zero defects side, we have technical service representatives (TSRs) out in the field, tracking down problems that customers might have. They use their Avaya IP Softphones to keep in contact. Now the customer has one number they can call for these TSRs. Instead of using the cell phone, they can get in touch with them by one number and track them down wherever they are.

- **Rock-Solid Reliability** — From the network to the telephones themselves, Charter has seen extraordinary reliability in its Avaya solution. “We have seen rock-solid network equipment that just doesn’t fail,” says Schwei.

Telephones have been equally dependable. “In a remote area where we have data connectivity and they need a phone out there, it’s a great option to just slip in (Avaya) 4600 Series IP Telephones,” Schwei says. “It’s a steel business. This is a steel mill out here, and a lot of the endpoints can get trashed. But the IP telephones have held up just as well as the analog telephones.”

Charter Creates Its Own Destiny

The same vision Charter’s founders employed during the Great Depression — seeing opportunity in hard times — is working today to create a vital new network that will carry Charter through the 21st Century.

With its flexible, economical and feature-rich converged network from Avaya, Charter is ready for any challenge its competitors may pose, and every opportunity that comes its way.

Learn More

For more information on how Avaya can take your enterprise from where it is to where it needs to be, contact your Avaya Client Executive or Authorized Avaya BusinessPartner, or access other collaterals by clicking on [Resource Type](#) under “Do Your Research” at www.avaya.com

Objective	Benefits Achieved
Improve enterprise connectivity and mobility	Avaya Enterprise Branch Connect extends main voice communication system features to remote locations and telecommuters. The Avaya IP Softphone application on a laptop enables telecommuters to connect to the main communication server using IP Telephony from anywhere over a secure virtual private network (VPN). Avaya INTUITY® AUDIX® Voice Messaging with the Internet Messaging feature and Avaya one-X™ Deskphone Edition for 9600 Series IP Telephones supports road warriors by providing easy access on their deskphone to forwarding options to improve responsiveness and productivity.
Reduce operating costs	Routing voice traffic over an IP network reduces long-distance charges. The Avaya Enterprise Branch Connect solution allows management of the network as a single system, maximizing efficiencies.
Enhance productivity; do more with less	Simplified network administration enables existing staff to manage new locations without additional resources. Avaya IP Telephony provides additional feature/functionality, enabling cost reductions.
Smooth migration to convergence networking	Existing Avaya DEFINITY® Servers are easily upgraded with Avaya Communication Manager, extending the useful life of existing platforms and enabling Charter Manufacturing to preserve significant parts of its communication investment. Avaya Global Services helps ensure smooth transition by assessing the network configuration's IP readiness and recommends steps for optimal performance.

Business Analysis of the Solution

START UP	Year 1	Year 2	Year 3	Year 4	Year 5	Cumulative Value
PROJECT COSTS	\$(36,000)	\$(6,000)	\$(6,000)	\$(6,000)	\$(6,000)	\$(6,000)
PROJECT BENEFITS	\$50,000	\$50,000	\$100,000	\$100,000	\$100,000	\$400,000
Net Value	\$(36,000)	\$44,000	\$44,000	\$94,000	\$94,000	\$94,000
Cumulative Value	\$(36,000)	\$8,000	\$52,000	\$146,000	\$240,000	\$344,000
FINANCIAL ANALYSIS						
Net Present Value (NPV)		\$240,000				
Annual ROI		506%				
Internal Rate of Return (IRR)		143%				
Payback Period		10 mos				

*Benefits include avoidance of outsourcing administration. Results shown are not a guarantee of equivalent performance.

In a remote area where we have data connectivity and they need a phone out there, it's a great option to just slip in (Avaya) 4600 Series IP Telephones. It's a steel business. This is a steel mill out here, and a lot of the endpoints can get trashed. But the IP telephones have held up just as well as the analog telephones.

Peter Schwei, telecommunications supervisor

ABOUT CHARTER STEEL

Growing for more than 68 years, privately held Charter Manufacturing has moved into a leadership position in the highly competitive steel industry. Today, Charter Manufacturing operates the Charter Steel division in Saukville, Wisconsin; Centerline, Michigan; Cleveland and Fostoria, Ohio; Charter Specialty Steel in Fond du Lac, Wisconsin; and Charter Wire and Milwaukee Wire Products in Milwaukee, Wisconsin. A sales office in Detroit serves Milwaukee Wire Products auto industry customers. Charter Steel provides steel bar, rod and wire for demanding applications in the cold heading, cold finishing, bearing, tool, specialty spring and stainless steel markets. For more information, visit www.chartersteel.com.

ABOUT AVAYA

Avaya enables businesses to achieve superior results by designing, building and managing their communications infrastructure and solutions. For over one million businesses worldwide, including more than 90 percent of the FORTUNE 500®, Avaya's embedded solutions help businesses enhance value, improve productivity and create competitive advantage by allowing people to be more productive and create more intelligent processes that satisfy customers.

For businesses large and small, Avaya is a world leader in secure, reliable IP telephony systems, communications applications and full life-cycle services. Driving the convergence of embedded voice and data communications with business applications, Avaya is distinguished by its combination of comprehensive, world-class products and services. Avaya helps customers across the globe leverage existing and new networks to achieve superior business results.

Applications	Systems	Services
<ul style="list-style-type: none"> • Avaya MultiVantage® Communications Applications • Avaya Communication Manager • Avaya IP Softphones • Avaya Unified Communications Center Speech Access • Avaya Expanded Meet Me Conferencing • Avaya Extension to Cellular • Avaya INTUITY® AUDIX® Voice Messaging 	<ul style="list-style-type: none"> • Avaya S8500 Media Server • Avaya S8500 Enterprise Survivable Server • Avaya S8300 Media Server with Local Survivable Processor (LSP) • Avaya G700 Media Gateway • Avaya G650 Media Gateway • Avaya G350 Media Gateway • Avaya G150 Media Gateway • Avaya DEFINITY® Communications Servers • Avaya INTUITY® AUDIX® Server with Internet Messaging • Avaya Integrated Management Suite • Avaya 4600 Series IP Telephones • Avaya one-X™ Deskphone Edition for 9600 Series IP Telephones 	<ul style="list-style-type: none"> • Services provided by Avaya BusinessPartner • Avaya IP Network Readiness Assessment • Avaya Maintenance Contract • Avaya EXPERT SystemsSM Diagnostic Tools • Avaya ExpertNet™ VoIP Assessment Tool

All statements in this Case Study were made by Peter Schwei, telecommunications supervisor, and Tony Bares, IT strategic consultant, Charter Steel.

