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Siemens Enterprise Communications OpenSmart Best Practices Case Study

Global Deployment Proves Business Value of OpenScape Unified Communications Suite

ABOUT THIS CASE STUDY

Research and analysis for this study was conducted by Mainstay Partners LLC, the leading boutique management consulting firm focused on quantifying and communicating the business value of technology. Mainstay Partners has performed hundreds of studies for leading information technology providers including Siemens, Oracle, SAP, Microsoft, Dell, Lexmark, HP, Cisco, EMC, NetApp, Fortify Software and HP for the past decade. This white paper was based on interviews with Siemens Enterprise Communications' business executives, IT executives and IT project personnel; review of project planning documents and financial reports; and other external industry literature. ROI calculations use industry standard assumptions regarding the time value of money. Information contained in the publication has been obtained from sources considered reliable, but is not warranted by Mainstay Partners LLC.

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EXECUTIVE BRIEF

Goal:

- *Showcase the value of next generation Unified Communications and Collaboration based on a private cloud*

- *Showcase OpenSmart Best Practices for deploying a large UCC production system in a live enterprise*

- *Cut annual operating costs by more than 50% by consolidating office platforms and reducing the total number of communications and IT vendors and outsourcers*

- *Improve productivity, collaboration, flexibility, scalability, and mobility*

Solution:

Implemented a full range of OpenScape solutions at 134 sites worldwide, including new applications for voice, web, and video conferencing, mobile communications, contact center and system administration.

Result:

- *Reduced IT and communications costs*

- *Streamlined system management*

- *Improved workforce productivity*

- *Realized net savings of €30.3 million and a ROI of 114% over five years*

After expanding to every corner of the globe, Siemens Enterprise Communications (SEN) found that it was facing many of the same business challenges shared by its largest customers: a communications infrastructure that was growing increasingly fragmented and expensive to maintain; a workforce that needed better tools to collaborate more effectively; and executives that needed better visibility and control over widely distributed operations.

The logical solution for SEN was to become a proving ground for its own unified communications and collaboration (UCC) technology – specifically its suite of voice, video, mobility, contact center, messaging and collaboration solutions known as OpenScape. The result was the launch of an ambitious transformation project in 2009 with the goal of migrating 134 offices in 30 countries onto a single global, cloud-based communications platform based on OpenScape's session initiated protocol (SIP) technology, open, standards-based software architecture, and full range of next generation products and services.

A standards-based Open Communications Architecture was ideally suited for the project, ensuring seamless interoperability within the company's multi-vendor environment while providing the scalability and flexibility to integrate with public cloud-based services – including social media platforms like Twitter and LinkedIn. Delivering its OpenScape UC Suite services through a private cloud as a software-as-a-service (SaaS) would allow people to consume communications on demand – from any device, in any location – and increase user and asset productivity. The private cloud SaaS delivery model would also drive savings by enabling the consolidation of hardware and IT support to two strategic data centers, simplifying maintenance and administration.

Using its OpenSmart Best Practices approach, the company launched an initiative to create a state of the art global enterprise deployment with their own cloud-based OpenScape solutions. The project objectives included:

- Showcase next generation UCC based on a private cloud

- Showcase OpenSmart best practices for deploying a large UCC production system in a live enterprise, including adherence to Information Technology Infrastructure Library[1] (ITIL) standards

- Cut annual operating costs by more than 50% and bring key IT functions in house, reducing the total number of communications and IT vendors and outsourcers

- Improve productivity, collaboration, flexibility, scalability, and mobility

Eighteen months later the company finished deploying OpenScape solutions worldwide, standardizing the company on a single private cloud-based communications and collaboration infrastructure. The migration replaced hundreds of premise-based locally managed voice, data and contact center services with a single consolidated communications platform powered by economical SIP trunking technology, a global wide area network (WAN), and two redundant, fault-tolerant data centers on two continents.

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1. The Information Technology Infrastructure Library (ITIL) is a set of concepts and practices for Information Technology Services Management (ITSM), Information Technology (IT) development and IT operations.

An assessment by Mainstay Partners showed that the move to UCC has had a transformative effect on the company, helping to cut communications costs by half, boost workforce productivity, and lay the foundation for broader deployments of cost-effective collaboration tools and technologies. Factoring in the cost of the OpenScape investment, the company is expected to realize a profit and loss (P&L) net benefits estimated at €30.3 million over 5 years, which accounts for a productivity impact of €240.2 million, a payback period of 17 months, along with a return on investment (ROI) of 114%, and an internal rate of return (IRR) of 78%.

OpenScape Financial Summary	
P&L Net Benefits	€30.3 Million
Productivity Impact	€240.2 Million
Payback Period	17 Months
ROI	114%
IRR	78%

From Pilot to Global Rollout

In April 2009, SEN piloted the OpenScape solutions at company sites in Hanover and Frankfurt, Germany, successfully migrating each office to a single SIP-based UCC platform. With the concept proven, the company executed a four-step project plan to roll out the solution to 134 offices worldwide as shown on figure 1:

1. It chose a single, reliable wide area network (WAN) provider capable of handling the bandwidth and quality-of-service levels required

2. It chose a single, reliable SIP provider

3. Migrated each site to an Enterasys integrated wired/wireless local area network (LAN) capable of handling the bandwidth and quality-of-service levels required

4. Implemented OpenScape solutions

"We are the first in the world, serving two continents with one system, with this level of business application integration and geographic layout. It is one of a kind."

– Andreas Tolkmitt
Global Project Manager

Figure 1

Project Timeline

APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR

Pilot Rollouts | **WAN Migration** | **Early LAN Migration** / **Global Rollouts of OpenScape** | **Global LAN Rollout**

- Hanover (April 4 – April 13)
- Frankfurt (July 10 – July 17)

- WAN migration to central WAN provided by British Telecom

- Early LAN migration of individual sites
- Global rollout to sites with network readiness

- Global rollout of WLAN, LAN, WLAN guest access, and special network services
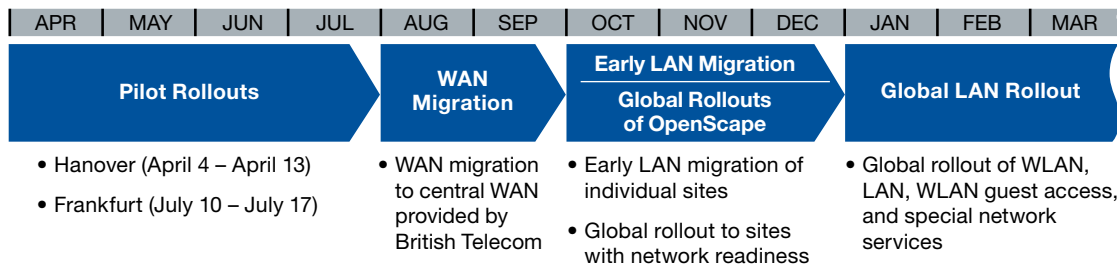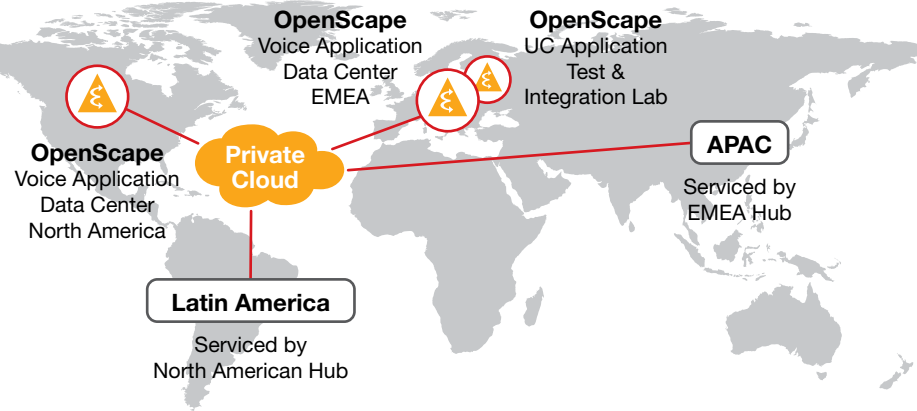
Figure 2

Siemens Enterprise Communications: Private Cloud Global Architecture

Adhering to OpenSmart and ITIL best practices throughout the project, SEN tested each solution on a mirrored production environment before deploying the OpenScape solutions at offices throughout Europe, Asia, Africa, North America and Latin America. The company managed the global infrastructure from two redundant data centers – one based in Europe serving Europe, Africa and Asia, the other in North America serving North and Latin America.

COST SAVINGS

The assessment found four key areas of cost and productivity savings from the OpenScape deployment:

- **Hardware consolidation** – which reduced IT maintenance and energy costs and transferred management from individual offices to cost-effective, secure and redundant global data centers

- **Standardization on OpenScape voice and collaboration solutions through the use of SIP trunking** – which reduced the number of local service providers, increased scalability, and reduced toll charges for internal, external, and mobile calls

- **More efficient system administration** – which minimized time-consuming administration activities such as new-user provisioning and phone number updates

- **Communications-enabled business processes** – which accelerated workflows, and improved efficiencies and worker productivity by embedding unified communications capabilities into existing business applications and processes

Overall, the move to the consolidated OpenScape platform resulted in a 62 percent reduction in annual communications infrastructure operating costs – from approximately €8.5 million to €3.2 million per year, as shown in Figure 3.

Figure 3

Infrastructure Consolidation Savings (Legacy vs. OpenScape)
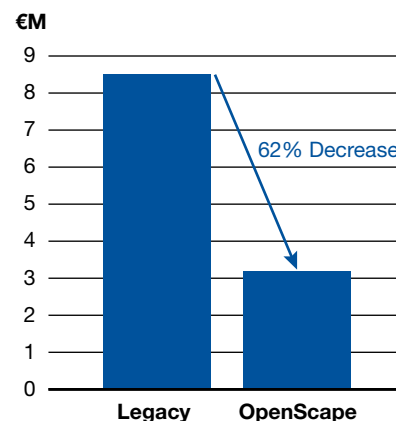

Infrastructure Consolidation Shrinks Hardware Footprint

The completely IP-based architecture enabled SEN to move most of its communications hardware to two global data centers, eliminating about 60% of the telephony gear previously housed at local sites. SEN was able to reduce the size of its hardware footprint from 134 PBX servers, down to just two SIP-based voice software servers on industry standard hardware. This reduction nets a savings of €126K per year through lower energy costs. Key to reducing its hardware was OpenScape's ability to support VMware virtualization, which enabled multiple applications to reside on a single server, resulting in lower hardware, installation and management costs. Consolidation on UCC technology also simplified procurement processes and lowered the cost of technology upgrades. Finally, the smaller, more efficient infrastructure lowered power and cooling costs.

Because technical assessments were required at each office prior to implementation, the company had the opportunity to uncover and systematically correct network inefficiencies. The result: network utilization was optimized, the per-KB cost was reduced as the company switched to one, single service provider for their WAN, and quality-of-service standards were ensured at each site.

System Standardization Yields Savings

Standardizing on the single SIP-based network made it possible to significantly reduce the number of third-party service providers, with the global OpenScape platform replacing hundreds of local contracts for voice, video and web collaboration services. Reducing the number of third-party providers allowed the company to internalize its cash flow. The move also gave corporate managers better visibility into communications costs and service usage worldwide, while improving reporting and account management capabilities.

Substantial savings were realized as Siemens Enterprise Communications leveraged global SIP trunking capabilities to virtually eliminate long distance toll charges. Today, the company can make calls through its global network to any SIP-trunk-enabled country at the same rate as a local call.

Reducing Mobile Network Costs

The company generated more savings by using OpenScape Mobility to plug its mobile workers into the economical SIP network. Now mobile calls are relayed through, using a VoIP routing service, to OpenScape, allowing users to avoid per-minute charges as well as expensive roaming rates that apply when workers travel internationally. The company now incurs a predictable monthly fee based on the maximum number of concurrent calls made through the OpenScape UC Mobile Client, rather than the unpredictability of usage based expenses.

OpenScape Mobility virtually eliminates the use of costly roaming charges, hotel phones, and calling cards. At an average incremental cost of €131[2] per trip for additional communication costs, SEN can save €1.6 million.

Reducing Travel Costs

SEN is a global company with many geographically dispersed teams and customers, leading to frequent traveling for customer facing employees and distant team members. Deploying a single, global UCC solution with a unified video, web, and voice conferencing platform presents the opportunity to reduce travel costs. According to a study by Insignia Research, companies, on average, spend at least €2,394[3] per person on unnecessary business travel, which stem from ineffective or heterogeneous communication systems among employees. With collaboration tools such as OpenScape UC Application, OpenScape Video, and OpenScape Web Collaboration, the company can reduce its travel budget without negatively impacting business collaboration and productivity. Conservatively estimating 20% of employees as customer facing employees who travel, the savings amount to €2.4 million per year.

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2. *Measuring the Pain: What is Fragmented Communication Costing Your Enterprise?*, Siemens Enterprise Communications GmbH & Co. KG, October 15, 2007.
3. *Measuring the Pain: What is Fragmented Communication Costing Your Enterprise?*, Siemens Enterprise Communications GmbH & Co. KG, October 15, 2007.

Accelerating Administration for Both Office and Teleworkers

In the legacy communications environment, starting or updating an employee's phone service – known as a move-add-change (MAC) order – was a time-intensive process. Generated every time an employee joined the company, moved to a new office, or left the company, MAC orders required several different groups working together to provision and synchronize user information on multiple systems – and often in a specific sequence. Thus a single MAC order could take as long as four hours to complete and tie up several skilled IT resources in the process.

MAC orders today are fulfilled in less than one hour. The difference is OpenScape Identity Lifecycle Assistant, a solution that automates the MAC process by integrating with the company's ADP Human Resources (HR) database and Microsoft Active Directory, and managing identities and service provisioning through a simple-to-use web interface, which can be used by non-IT resources as well. The move to OpenScape Identity Lifecycle Assistant is boosting employee productivity by eliminating long waits for new services. Teleworkers in particular benefit from immediate plug-and-play access to OpenScape applications from any location, including their home office. The use of OpenScape Identity Lifecycle Assistant to provision access for these teleworkers saves not only costs for IT, but the time and potential issues that may arise in setting up their home office.

Figure 4

OpenScape Identify Lifecycle Assistant Benefits
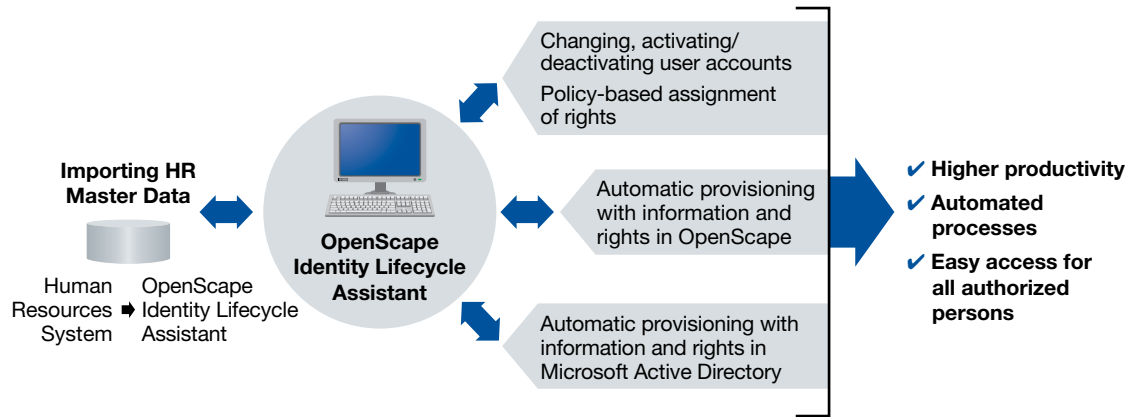
Lastly, OpenScape Lifecycle Assistant helps reduce the traditional hardware investments such as servers and gateways, along with a local service provider, required to set up an office with phone and data services. Now, with a sufficiently robust local area network and a SIP provider, the only significant hardware requirements are the end devices and an internet connection. In addition, provisioning times are drastically reduced, and full integration with the company's Human Resource system provides a significant reduction in both cost and time to set up a new site anywhere in the world, regardless of size or location.

Streamlining User Provisioning

In addition to individual MAC changes, OpenScape Identity Lifecycle Assistant provides for ultra-fast provisioning of large groups of users, saving thousands of hours of administrative effort per year. For example, for the 10,000 employees of Siemens Enterprise Communications, the savings amounted to an estimated 1,657 hours, or €93K in avoided administration costs annually.[4]

Enterasys Integrated Wired and Cloud Wireless Simplifies Network Management

Figure 5

Fast Mass Provisioning with Integrated Administration
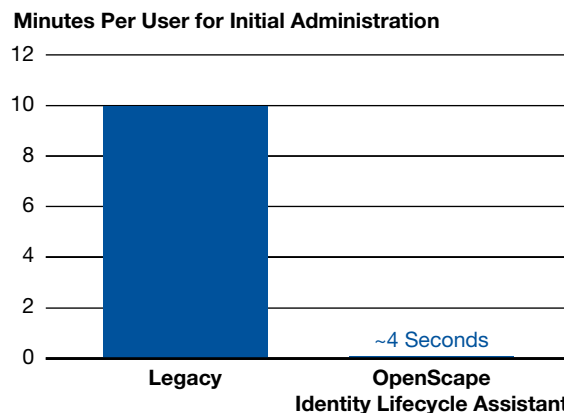
Minutes Per User for Initial Administration

Seeking to control costs, SEN recognized it had to build its global UC platform on top of a scalable, easy-to-manage network infrastructure. Consequently, the company turned to Enterasys Networks and its Cloud Wireless Solutions to design and build the backbone of its global UC production network – an end-to-end communications architecture combining local area networks (LANs), wireless LANs (WLANs) with WLAN guest access, and special network services.

The networking project was global in scope, encompassing 28,000 LAN ports and 340 WLAN access points across 120 company sites. The LAN was required to process data at a rate of 1 gigabyte per second. Enterasys supplied the bulk of the networking gear, with about 10% provided by other manufacturers.

The new Enterasys LANs were designed with an economical, centralized management model in mind, and then implemented using the Siemens Enterprise Communications OpenSmart methodology that incorporates ITIL best practices. Today, the entire global infrastructure – LANs, WLANS, firewalls – is managed from a central facility by the company's Global Managed Services team, as is capacity planning and reporting. As a result, the company has cut network costs from 10€ to 4€ per port, saving 168,000€ per year.

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4. Mass provisioning using OpenScape takes seconds per user compared to about 10 minutes with legacy portal technology. Avoided costs calculation assumes fully loaded costs of $80/hour for the typical IT administrator.

INCREASE PRODUCTIVITY THROUGH MORE EFFICIENT COLLABORATION

"I'm able to communicate with my team, my colleagues and customers, regardless of where I am and find everyone with just a single click."

*– Juliano Menegazzo Souza
Technical Sales Expert
Solutions Engineering &
Development*

A key advantage of an open standards-based communications solution like OpenScape UC Application is its potential for integration with business applications to improve business processes – a concept called communications-enabled business processes (CEBP). Indeed, an important goal of the project was to build CEBP into several critical business functions to help accelerate workflows, improve process efficiencies, and boost employee productivity.

OpenScape UC Application's OpenScape Fusion[5] SDK (software developer toolkit) which is based on the company's OpenSOA[6] framework and application interfaces made it comparatively easy to embed communications capabilities into applications for business tasks such as content management, calendaring, and customer relationship management. And all of these application integrations are accessible from any device and location, which makes it easy for mobile employees to remain highly productive while traveling or working from remote locations.

Here are a few examples.

Microsoft Outlook and Salesforce.com Integrations Boost End User Productivity

SEN leveraged the CEBP approach to integrate OpenScape UC Application capabilities into Microsoft Outlook and Salesforce.com. Integrating OpenScape UC Application with Microsoft Outlook, extended the power of users' email and calendaring systems with embedded communications features, including click to call, Presence, contact lists, and audio, web, and video conferencing. For example, employees can now synchronize their calendars with their Presence status so they are automatically seen as In Meeting during scheduled meetings – and then available when the meeting ends.

"I use OpenScape every day to accelerate real-time responsiveness in sales-related activities. I use rich, media-based presence awareness to see when a colleague is available for an IM or phone call, and then reach out accordingly."

*– David Leach
UC Sales Support*

Other productivity enhancements included:

- Automatic call initiation by clicking on names on contact lists or phone numbers on web pages
- One-click meeting and audio/web conference call set ups

Virtually any application can be integrated with OpenScape UC Application. Similar communications capabilities were enabled within the company's Salesforce.com solution, including the ability to click-to-call and click-to-conference directly from within the Salesforce.com user interface. This enables employees to rapidly communicate with account team members without searching for names or contact information. Employees can also click on sales orders within the application to connect directly to the person able to provide more information.

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5. OpenScape Fusion is Siemens Enterprise Communications' range of open integration capabilities and offerings, designed to enable faster, simpler and more cost-effective application integrations of OpenScape with 3rd party environments.
6. OpenSOA is Siemens Enterprise Communications' framework for building products from the ground up based on Services Oriented Architecture (SOA) principles.

Cost Effective Audio and Video Conferencing

OpenScape Video in Action

OpenScape Video has become a popular way for teams to communicate across Siemens Enterprise Communications. Stefan Miesbach, for example, a Toronto-based VP of Solution Management and Testing, relies on OpenScape Video nearly every day to collaborate with his 35-person team located in Munich.

Not only does his team use OpenScape Video for regular team meetings, but Miesbach frequently makes impromptu video calls – or "virtual walk-bys" – to colleagues using his desktop telepresence system, avoiding the need to book a specialized video conference room. "OpenScape Video allows me to have spontaneous, high-quality discussions with my team as if I were in the Munich office," Miesbach says.

Miesbach estimates he spends about half of his workday on video calls, with half of that time consisting of walk-bys. He also uses the video conferencing platform for running workshops, many of which last four to six hours. "These workshops can be extremely exhausting and ineffective with audio only," says Miesbach. The open platform and high-definition video also makes it easy to collaborate with partners for meetings and presentations. "HD Telepresence is so realistic that you forget about the video link after a few minutes," he says.

OpenScape UC Application offers all employees one global conferencing solution for all audio, web, and video conference calls and the elimination of external cash flow going to third party conferencing providers at a regional level.

Previously, employees would use a third party audio conferencing service for meetings. Additionally, regional sites had their own service provider for audio and video conferencing, which made tracking costs nearly impossible. With OpenScape UC Application and the OpenScape Fusion integration plug-in for Microsoft Outlook, meetings can be scheduled in one easy step, and launched with a single click from the Microsoft Outlook client.

Enhanced Web Collaboration and Desktop Video

The company also introduced an advanced web conferencing solution called OpenScape Web Collaboration. This solution enables geographically dispersed teams who collaborate regularly, to quickly and easily schedule and launch web/video conferences, while improving project collaboration and accelerating decision making.

Prior to moving onto one, single communications platform, each region had its own set of collaboration tools from different 3rd party providers.

With OpenScape Web Collaboration, SEN now has a single web conferencing solution used across the globe by all employees. The solution's user interface is so intuitive and easy to use, it required very little training, and it takes only seconds to download a single exe file for moderators, while there is no client configuration or installation necessary for participants. In addition, full motion H.264 multi-party desktop video capabilities are built into the solution, adding a more personal touch to meetings, and employees can easily transition from text chat to web to video with a single click.

In addition, OpenScape Web Collaboration is fully integrated with OpenScape UC Application and Microsoft Outlook which makes it fast and convenient for employees to schedule and launch combined audio/web/video conferencing sessions from either application.

Integrated Video Conferencing

With travel costs rising, more companies are leveraging video conferencing to help employees collaborate economically and effectively with colleagues spread around the world. Siemens Enterprise Communications is a leading innovator in video conferencing, and it has made its enterprise-grade OpenScape Video solution an integral part of its UCC platform.

OpenScape Video works with all leading brands of video room equipment – including Polycom, Tandberg, and LifeSize – so companies can keep their existing video equipment and fully leverage their infrastructure even if they own a mix of equipment brands. In addition, the system works with any end-point, which means virtually any employee can participate in a video conference.

Installed at company offices throughout North America and Europe, OpenScape Video has proven to be an indispensible collaboration tool for the widely distributed teams at Siemens Enterprise Communications. Besides being easily interoperable with most video equipment makes and models, OpenScape Video provides two other key capabilities:

- **Integration with OpenScape UC Application.** OpenScape video can be integrated with other OpenScape solutions, allowing users from a variety of devices – including desktop computers, mobile phones, or video endpoints – to join conferences with video and voice. Furthermore, OpenScape's presence capability shows whether people are available for a video conference.

- **Ease of use.** With the system's SIP-based dialing-to-video capability, initiating or joining a video conference is as easy as making a phone call.

Unifying Multiple Devices

Getting in touch with colleagues became even easier with OpenScape's One Number Service (ONS) capability. With ONS, each employee publishes only one phone number, and regardless of which phone they are using, all their calls are routed to their preferred phone or device. Employees no longer need to keep track of multiple phone numbers for colleagues or leave multiple voice mail messages. This has resulted in fewer missed calls, voice mails, and emails – and has improved first contact resolution between colleagues and team members.

Empowering Mobile Employees and Teleworkers

With more employees working from home, SEN needed to provide a cost-effective and convenient way for teleworkers to connect from home offices and have full access to all enterprise communications tools. OpenScape has proven to be an ideal platform to achieve this goal. With its rich Presence, multi-media conferencing, and One Number Service, teleworkers are just as easily accessible at home as they are in the office.

In addition, teleworkers have the option to plug an IP phone into their home network to access the OpenScape Voice system, or alternatively they can use a soft phone, their home phone, or mobile phone for all incoming and outgoing voice communications, improving their productivity and eliminating the need to track and expense their voice usage back to the company.

The OpenScape deployment also gave mobile workers more collaboration options while traveling. For example, users on the OpenScape UC mobile client can view the Presence status of their contacts, have quick access to conferences, and update their own Presence status on devices such as the Blackberry and the iPhone, among many others.

Additionally, mobile employees can participate in web conferencing sessions from their OpenScape Web Collaboration mobile client, including from an iPad, resulting in increased productivity and maximum meeting participation.

Reducing Business Discontinuity from Fragmented Communications

Unifying UC, voice, conferencing, and video creates a standardized communications environment across the globe. Employees spend less time trying to connect with colleagues while seeing when and how users are available through Presence. Additionally, new capabilities such as those stemming from CEBP in core applications, and OpenScape Mobility to increase productivity for mobile workers further reduce wasted time spent on syncronizing communications and connecting with colleagues.

The financial impact of fragmented communications is mainly through employees waiting for information from others, which can have an especially significant impact for customer facing roles. A survey of over 500 companies showed that the average wait time per employee was around 5.3 hours per week. Moreover, further impacts were experienced through unwanted communications and lack of team collaboration, all leading to an estimated €6,338 annual per user productivity loss due to ineffective collaboration tools. With 10,000 employees, SEN can gain €63.4 million in productivity gains from using a function rich, reliable, and globally standardized communications platform.[7]

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7. The lack of effective, remotely-accessible collaboration tools also affect teleworkers, resulting in an average of 7.8 hours per month of productivity loss. With roughly around 2% of SEN employees working remotely, OpenScape solutions net an additional €790,000 in productivity gains for teleworkers.

UNIFIED CONTACT CENTER APPLICATION DRIVES SAVINGS

A key goal of the initiative was to streamline the company's contact center operations, which were challenged by the same kind of infrastructure fragmentation and outmoded communications technologies that affected the rest of the organization. Instead of sharing a unified contact center infrastructure, the company's premise-based contact centers were built and managed regionally, typically with different business processes, workflows, and applications. Manual processes were generally common and visibility into individual contact center performance from a corporate perspective was severely limited. Adding and supporting geographically dispersed agents was expensive and time consuming, as it typically required additional hardware and telecommunications costs.

Maximizing Contact Center Resources

Standardizing the contact centers on a single SIP-based private cloud solution – OpenScape Contact Center – once again proved to be the intelligent move to combat inefficiency, capture savings, and increase performance. The single global application has unified contact centers in 14 countries with over 660 agents on a high-efficiency communications platform, generating savings from economical SIP trunking and from phasing out costly local ISDN service providers.

The centers also gained significant new operational flexibility with the OpenScape solution. For example, it's now much easier to set up a new contact center agent. Managers simply use OpenScape Identity Lifecycle Assistant to designate any user as a contact center agent. Once authorized as an agent, that person can work from any location – at home or while traveling – and have access to the same communications tools and business processes as someone working in the contact center facility. From a systems perspective, upgrades and enhancements are made once as opposed to having to maintain multiple sites.

Additional benefits from the cloud-based contact center include being able to hire home-based agents, provide better geographic coverage, greater customer access, and the flexibility to scale up or down as needed. In addition, routing calls to agents by defined skills on a global level is now possible. At-home agents typically have much higher job satisfaction, which leads to better customer care. In addition, enabling the agents to perform their job from either the office or home works especially well for the center's disaster recovery plan.

USING BEST PRACTICES TO BUILD A HIGHLY RELIABLE AND SECURE GLOBAL ENVIRONMENT

High Reliability

Siemens Enterprise Communications deployed OpenScape Voice, a carrier class switch that can scale to 100,000 users. It used two data centers with full backup capabilities and redundancy, one in Germany for EMEA and APAC and the other in North America for NA and LA.

Fault Tolerance

There are no single points of failure in either data center, including network components and power supplies. Disaster recovery is assured by mirrored, geographically separated systems, connected to different physical networks.

Scalability and Security

"The security features in OpenScape's conferencing are reassuring - being able to see who is on, locking the conference, regenerating PINs for secure connections etc. The control is excellent".

– Paula Avery
Head of Executive Briefing Center

Through its deployment of OpenScape solutions, SEN has demonstrated the scalability and security of its technology on a global basis. The company's Global Managed Services team monitors the network 24/7 to ensure high availability and performance. Security was a top priority, so SEN created a dedicated team to ensure the highest levels of security, and they added an additional set of firewalls along with session border controllers to secure the environment from internal and external intrusions.

Standardized and Secure Wireless Network

The Enterasys network features wireless connectivity in the conference rooms of every office, with additional coverage if business requires it. Customers and other business visitors can easily access the WLAN and Internet with a guest access code.

In addition to general office WLANs, individual business units can request separate networks that support specialized business needs, such as labs, helpdesk operations, or development environments. These special networks can share the WLAN's firewall, or feature additional security measures such as network switch access lists. As with its LANs and WLANs, the company's Global Managed Services team centrally manages these special networks on a global basis.

OpenSmart Best Practices

While the OpenScape solutions enable both end users and IT to gain financial and productivity gains, the structure and process that Siemens Enterprise Communications followed, using its OpenSmart Best Practices approach, gave the company that extra advantage.

OpenSmart is a unique best practices methodology the company developed for its own customer engagements to keep projects on track while focusing on the reliability, security, serviceability, and manageability of the solutions. The methodology includes activities and tasks such as project design, project management, processes, testing, and automation. To ensure that everyone is on the same page from start to finish, with clear expectations expressed, delivered and tested, customers receive a comprehensive set of blueprints containing the scope of work, technical design specifications and acceptance tests. The company's Project Managers undergo training on the OpenSmart approach to ensure projects are implemented and delivered with the same level of high quality and consistency.

As part of their OpenSmart approach for implementing OpenScape solutions, SEN also used Information Technology Infrastructure Library (ITIL) best management practices to ensure reliability and zero downtime before solutions went into production for end users.

Implementation processes included using a full duplicate environment to test the new products before rolling them out to users. In fact, the test and integration system based in Frankfurt Germany still exists and is used to validate upgrades and feature changes or additions before changing the production systems. New products or major changes undergo a review by the change advisory board following ITIL best practices and change management. Additionally, with future solutions added to the environment, the company will apply a structured process to allow themselves to experience and learn from the rollout of the solution before introducing it to customers.

Another important element of OpenSmart was making sure employees were trained on the new solutions. A special intranet page was established where employees can find training materials such as manuals, quick reference guides, videos and other training and support resources available to help them successfully download and use the OpenScape products.

The company believes that OpenSmart was the only responsible way to undertake such an in-depth deployment of its technology. The global rollout was performed simultaneously in all continents, by an intercultural team of project managers from around the world, who worked closely over a two year period. According to Andreas Tolkmitt, Global Project Manager of the transformation project, "What made the project successful was our implementation of project management concepts, techniques, and practices through effective application of project management principles, and the project team playing a key role in sharing best practices and lessons learned to the overall benefit of the entire company."

ROI SUMMARY

The business assessment of the OpenScape deployment analyzed the range of benefits and calculated a total return on investment of approximately 114 percent. Table 1 shows the five year discounted totals for each benefit area. Table 2 summarizes the ROI analysis, factoring in initial investment costs and net benefits expected to be realized over five years. Table 3 summarizes the key operating improvements, and Figure 7 shows the net present value of the project over five years.

Table 1

Benefits Breakdown

| ROI Benefits Summary (5 Year Discounted Totals)	
Communications Infrastructure Operating Costs	€31.8 Million
Service and Productivity Gains	€9.0 Million
Time Savings for Initial Mass Provisioning	€93K
Energy Cost Savings from Server Reduction	€479K
LAN Management Costs	€629K
Travel Savings	€9.0 Million
Communications Costs for Mobile Workers	€5.9 Million

Table 2

ROI Summary

Return on Investment Summary[8]	
Total Net Return on Investment (Over 5 Years)	€30.3 Million
Internal Rate of Return (Over 5 Years)	78%
Return on Investment (Over 5 Years)	114%
Initial First Year Investment	€14.6 Million
Total Benefits (Over 5 Years)	€56.8 Million

Table 3

Summary of Key Operational Improvements

Operational and Productivity Benefits	
	% Improvement
Time to Implement Move-Add-Change (MAC) Orders	>75%
Reduction in Communications Operating Costs	62%
Reduction in On-Premise Hardware Systems (Estimate)	60%
Reduction in Average Cost per Network Port	60%
Reduction in Time Required to Provision Large Groups of New Users	99%

Figure 7

5 Year Net Present Value Summary
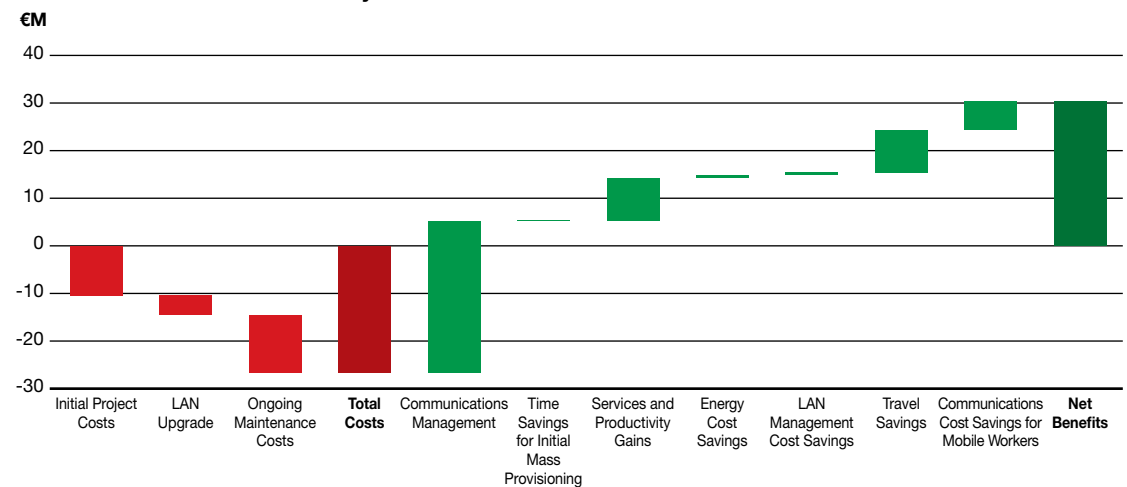
8. 5 Year discounted using WACC of 10.5%.

FUTURE OPPORTUNITIES

Looking ahead, Siemens Enterprise Communications plans to take advantage of recent advances in software-based video conferencing by introducing software based OpenScape Video multi-conference units (MCUs) at offices in North America and Europe.

The company also plans to embed social media tools into its own OpenScape applications and processes as a way to build customer relationships, stimulate dialog, and proactively communicate with customers and colleagues.

FINANCIAL GLOSSARY

Internal Rate of Return (IRR):
Discount rate which makes the net present value equal to zero (ROI would also equal zero).

IRR was calculated using a five year timeframe.
Formula used to calculate IRR is (CF_N is the net cash flow in year N)

$$0 = CF_0 + \frac{CF_1}{(1+IRR)^1} + \frac{CF_2}{(1+IRR)^2} + \frac{CF_3}{(1+IRR)^3} + \frac{CF_4}{(1+IRR)^4} + \frac{CF_5}{(1+IRR)^5}$$

Net Benefits:
Total gain from the investment over a given time period.

Net Benefits were calculated using a five year timeframe and discounted cash flows.
Formula used to calculate Net Benefits is

$$\text{Net Benefits} = (\text{Total Benefits}) - (\text{Total Cost})$$

Payback Period:
Period of time required for the investment's net present value to hit zero, where total benefits equals to total cost.

Payback period was calculated using discounted values and expressed in months.

Return on Investment (ROI):
Ratio of money gained over a given time period against the total amount invested. Also known as Rate of Return.

ROI was calculated using a five year timeframe following the initial investment. Future cash flows (both benefits and costs) were used to discount values into present values.
Formula used to calculate ROI is

$$ROI = \frac{(\text{Total Benefits}) - (\text{Total Cost})}{(\text{Total Cost})}$$

ABOUT SIEMENS ENTERPRISE COMMUNICATIONS

Siemens Enterprise Communications is a premier provider of end-to-end enterprise communications, including voice, network infrastructure and security solutions that use open, standards-based architectures to unify communications and business applications for a seamless collaboration experience. This award-winning "Open Communications" approach enables organizations to improve productivity and reduce costs through easy-to-deploy solutions that work within existing IT environments, delivering operational efficiencies. It is the foundation for the company's OpenPath® commitment that enables customers to mitigate risk and cost-effectively adopt unified communications."Ukgo gpu"Gpvgtr tkug"Eqo o wpkecvkqpu"ku"qy pgf "d{ "c"lqkpv'xgpwtg" qh"Vj g"I qtgu"I tqwr "cpf "Ukgo gpu"CI 0"Vj g"lqkpv'xgpwtg"cnuq"gpeqo r cuugu"Gpvgtcu{u"P gyy qtmu."y j kej r tqxkfgu"pgy qtm"kphtcuvtwewtg"cpf "ugewtkv{ "u{uvgo u."fgnkxgtkpi "c"r gthgev'dcuku"hqt"lqkpv"eqo o wpkecvkqp uqnwkqpu

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For more information about Siemens Enterprise Communications please visit www.siemens-enterprise.com

Organization Profile	
Siemens Enterprise Communications	Munich, Germany
http://www.siemens-enterprise.com/us/	

- Premier provider of enterprise communications
- Comprehensive portfolio of voice, network infrastructure, security, devices, unified communications and collaboration, contact center applications and services
- Over 1 million customers, 10,000 employees, in 90 countries, with €2.4B revenues
- European-based company owned by The Gores Group and Siemens AG

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