



Global network of innovation

SIEMENS

Trust

Answers for Media Broadcasting

Broadcasting: The Next Generation

The media and entertainment sector is changing dramatically. It is moving from a push model, with a few key broadcasters controlling the airwaves, to a pull model, with increased competition and interactivity putting audiences in control. This trend poses many challenges for broadcasters.

Whether television, radio or online, state-funded or private, media companies must keep their eyes focused on the bottom line while delivering the news, information and entertainment their viewers, listeners and users want. Like any business, media companies are subject to rigorous cost reduction and efficiency gain targets. There is also increasing pressure from government and regulators who are setting tough standards for the future of the industry. To reach their goals, broadcasters must ensure they can deal with the challenges of the digitized world – where new technology, increased competition and a growing number of media access devices have led to audience fragmentation and reduced advertising revenues.

For those broadcasters whose main source of income is advertising, or who rely on limited state or public funding, there is a growing need to find new sources of revenue via new distribution channels. With the right technology and business processes in place, broadcasters can not only meet the demands of audiences, advertisers and regulators, but also exceed them by collecting and exploiting information about their viewers, listeners or users to enhance their offering still further. For example, new standards in broadcast transmission, such as Digital Video Broadcasting, and communication over broadband connections, will enable new business models and new products to emerge.

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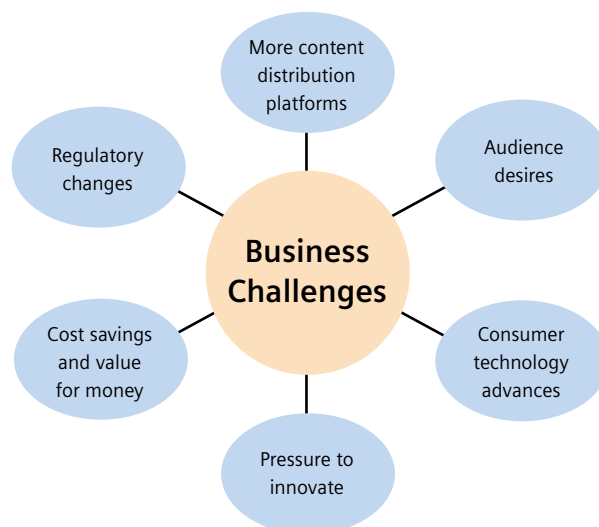




Leading broadcasters have recognized that they need to take advantage of the convergence of television, the Internet and broadband technology to compete for audiences who have lots of choices and short attention spans. The key to success is to supply the content that audiences want: exactly when, where and how they want it. Yet in order to balance their own business interests with the public's need for quality information and entertainment, broadcasters need to cut costs and increase the value of their content assets. Fortunately, converging technologies do provide opportunities for cost reductions and efficiency improvements, particularly via an enterprise-wide approach to technology planning and deployment. By making it easier

for their employees to retrieve, edit, and distribute content and information, broadcasters can maximize the value of their media across multiple genres and delivery platforms, instead of wasting scarce resources re-capturing content that already exists.

To achieve this, broadcasters need to transition their technology infrastructure, modernize their production processes and improve their ability to exploit content for the benefit of their audiences. For this, broadcasters need a trusted partner who can help them through the hurdles of the short term, while providing the vision needed for the long haul.



Right Beside You

In the first deal of its kind in the industry, Siemens Business Services is providing outsourced technology services to the BBC. This marks a transformational trend in the broadcast industry's approach to technology provision. As part of the deal, we acquired BBC Technology, greatly expanding our ability to serve the media and entertainment industry.

As the first company to provide a complete technology outsourcing solution to a media organization, Siemens Business Services is underpinning the BBC's technology strategy to enable the corporation to produce all of its content on commodity technology, using standard business networks and storage, by 2010. This, along with our acquisition of BBC Technology positions us as the best-placed transformation partner in the media industry. Our people bring unique in-depth skills and experience in all areas of converging technology – broadcast, IT and communications – and in broadcast operations, production methodologies and content management. In addition, the Siemens global network has the experience in technology development, implementation and operations that enables us to work alongside you to improve every aspect of your media, business and customer processes.

In the arena of innovation, Siemens is a world leader, averaging 13 new patent registrations per day and investing over €5 billion a year on research & development – 40% of which is spent on information, communication and media technologies. All of this gives us the breadth of skills and scale of expertise to draw on exactly what is needed to serve our media customers. In particular, we can help broadcasters to benefit from converging IT, broadcast and communications technologies, via an enterprise-wide approach to technology planning and deployment. By providing the right mix of tools, we can enable broadcasters to make it quicker and easier for employees to retrieve, edit, use, re-use and distribute digital content. Similarly, valuable media assets captured by one department can be made available to others, for fast and cost-effective re-use across multiple genres and delivery platforms, preventing scarce resources being used to re-capture content that already exists.

**The best-placed
transformation
partner in the
media industry**



We offer the full spectrum of services: from strategic and technology consulting, to advanced broadcast and production solutions, and from IT consolidation, IT continuity and service management, to complete technology and business process outsourcing. We have a wide pool of dedicated broadcast infrastructure experts and project managers, including BFE, Europe's leading systems integrator for the broadcast industry and a 100% subsidiary of Siemens. These teams design, build and operate all kinds of broadcast and production facilities including major broadcast centers, mobile studios and outside broadcast units.

With Siemens Business Services at your side, delivering the best solutions for your business, you will be able to manage your costs more effectively, integrate your business, media and technical processes, improve your creative workflows, harness new distribution channels and maximize the value of your content at every stage in the media lifecycle.

Why choose us?

- Siemens Business Services is leading the way in running end-to-end technology services for broadcasters around the world.
- Through our media group, we offer our customers outstanding strategic business and technology consulting as well as process and optimization

services by combining our understanding of broadcast, production, IT and communications technologies. We do this as a vendor-neutral partner who is interested in the best solution for you.

- Siemens is focused on converged solutions, including the development and marketing of mobile content services and IP-based entertainment networks. This contributes a broad range of skills and expertise to help broadcasters serve their customers better.
- Siemens Communications brings handset, network and application skills to the forefront of broadband technology as evidenced in the SURPASS solution that allows network operators to provide on-demand videos and linked services such as voting and gaming via the internet or interactive TV.
- Siemens has the largest vendor-independent broadcast and media systems integration capabilities in Europe.

Smarter Broadcasting Solutions

To stay ahead of the competition, reduce costs and raise revenues broadcasters need an innovative strategy, which will transform their business. With the right solutions, broadcasters can spend more time on creative work and achieve greater speed to air.

At Siemens Business Services, we have helped many customers to deliver the innovation needed to transform their business when standard solutions have been unable to meet their needs. By working in partnership with our customers, we enable broadcasters to work smarter by focusing on four key areas of their business:

- **Business performance** – looking at current business models and processes, and identifying new ways to reduce costs and increase revenues
- **Media processes and creative results** – assessing the effectiveness of current workflows with a view to enhancing speed, efficiency and creative output
- **Technology transition** – reviewing and upgrading the current infrastructure by maximizing the value of existing assets and managing the investment required in new equipment
- **Customer interaction** – evaluating audience relationships and delivery processes to improve broadcasters' ability to serve the needs of their customers for increased mutual benefit.

We combine this fresh, holistic viewpoint with our understanding of the market and an innovative spirit to update our customers' processes and technologies and achieve their goals. Here is what we have already done for a few of our customers.

FIFA 2002, Korea and Japan

BFE built two international broadcast centers in Seoul and Yokohama, cabled 20 stadiums in Japan and Korea, built 14 technical operations centers and provided 120 technical support staff – helping the world enjoy the 2002 World Cup final.

VRT Flemish Radio and Television, Belgium

VRT chose Siemens as a partner to develop its new control center. Siemens conducted a study and is in the process of implementing a newly developed transmission control center. The aim of the study was to propose an open system that will eventually allow other VRT control centers to use the same platform. This extensive project covers a very wide range of services and skills, from information and communication technology to building technology, project management, and automation. Siemens also built a new satellite ground station for VRT. The station facilitates connection with the European Broadcasting Union (EBU), which, among other things, carries some of the most important live sporting events and Eurovision programs.

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As consumers gain more choice and control over their use of media, broadcasters need to provide a ubiquitous media experience for their audiences – with more content delivered across more platforms. To do this and remain competitive in today's challenging market, broadcasters need to be flexible and agile. The key to achieving this is through minimizing costs, reducing risks and responding quickly to market and technology developments. This requires a service provider who can procure and implement all aspects of your technology infrastructure, including business IT, telecommunications, broadcast equipment, media connectivity and production technologies – allowing you to deal with just one service provider instead of many.

Siemens Business Services can provide this complete service, but we can also help with the smaller steps along the way. You can ask us for interim technology solutions with the knowledge that we have the vision and expertise to start you on the right path for achieving your long-term goals. With us as your transformation partner, you will solve your immediate technology problems and we will protect your interests in the long term by considering your future technology mix.



Closer to Your Customers

As audiences' choice of media increases, brand awareness becomes even more important. With the right technology solution, your company can establish the bonds needed to create a large and loyal customer base.

With Siemens Business Services as your partner, you will not only discover smarter ways of working, but also how to get closer to your audiences. We help you update and manage your business processes so you can focus on creating the content your viewers, listeners and users want, thus building an ever stronger and larger customer base. Our expertise in customer profiling and channel management, including state-of-the-art CRM and business processing solutions, from premium partners such as Siebel and SAP, will enable you to develop a more profitable and mutually rewarding relationship with existing customers and make it easy to win new ones.

As a flexible service provider, we can manage specific technology requirements, or entire infrastructures with custom solutions based on our understanding of broadcasters' unique requirements. With us managing your desktops, networks, applications, broadcast and communications equipment, telephony and connectivity, your time and resources will be free to concentrate on discovering what your customers want – and providing it for them. We can also design, implement and operate the specialist broadcast and production technologies to achieve this. Finally, we can help you save on procurement costs through our click2procure electronic marketplace, which will streamline your purchasing processes and supplier relationships. By integrating all production, business and customer interaction processes and technology, you will have shorter time to air and greater control of your costs and revenue flows – enabling you to win the hearts and minds of your audiences more easily.

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We know how to help you create a bond with your customers. Here are some examples of how we have enabled other media companies to get closer to their customers.

!TV4Graz, Austria

Some 150 homes in the southern Austrian city of Graz were connected to interactive digital terrestrial television in 2004. During the pilot project, three channels (ORF1, ORF2, and ATVplus) were broadcasted in digital quality. In addition, special content and interactive services were delivered on the channel !TV4Graz. Siemens Business Services made the interactive services possible by operating the Interactive Application Center (IAC) developed by Siemens PSE (Program and System Engineering), a special computing center that collects, processes, stores, and forwards information sent from set-top-boxes based on the standard Multimedia Home Platform (MHP). Viewers are able to send information by a few clicks on their remote control from their living room couch. Broadcasters and service providers are able to configure and schedule content on a flexible TV portal, which can be regarded as an improvement of the classical teletext, including advanced graphical options and services like voting or ordering. Sports betting was offered during the European soccer championship.

Viewers were even able to bet during games with permanently updated quotas. Siemens also provides many other MHP applications for advertisement, shopping, and voting. The pilot project in Graz, Styria, was an important milestone for bringing interactive digital television to Europe.

3 UK (formerly Hutchison 3G)

Through an innovative multi-stage project, we enabled 3 to become the UK's first provider of 3G mobile content services. First, we provided strategic and technology advice to scope 3's needs and develop an approach for creating and managing rich media mobile content. We then helped to develop the user and functional requirements for the first ever 3G-production facility, including metadata schema, editorial guidelines and workflow management. We also completed the design, build and project management of a dedicated production facility, before providing a fully managed service to support the 365 day hosting and operation facility, including the provision of all technical, editorial, managerial staff. The project demonstrates how we can help media companies to establish new and innovative ways of providing content to their customers.

Fitter for the Market

To gain and sustain a leading position in today's increasingly competitive media marketplace, broadcasters need to be fitter than ever. With Siemens Business Services as your transformation partner, you can become more flexible and agile by focusing on what you do best – creating and delivering the content your audiences want.

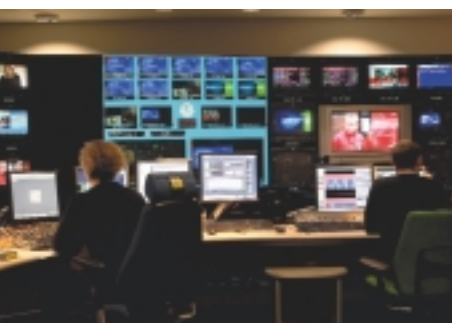
Siemens Business Services is the world's largest independent provider of multi-vendor IT infrastructure services. With our global reach and our media industry know-how, we provide the back-office IT, business services and content production and distribution solutions that broadcasters around the world need to update their equipment, lower their costs and increase efficiency. This enables broadcasters to focus on their core business capabilities and to adapt quickly to changing audience demands. On the content side, the proliferation of radio and TV channels as well as new media platforms, such as broadband Internet, mobile phones and other handheld devices, means broadcasters must respond quickly and intelligently to a fragmented audience. On the hardware side, challenges are posed by multiplexing and coding requirements and the rollout of digital terrestrial broadcasting (DTT) systems. In response to this, we can help broadcasters to

adapt their production and distribution systems to digital standards, launch new broadcast services, manage rights, exploit their archives and more effectively package and publish content. By utilizing our expertise in all aspects of technology and media business transformation, combined with our process efficiency experience gained as the world's largest manufacturer outside the automotive industry, our customers will also improve the efficiency of their media lifecycle, become profitable and simultaneously raise their audience share.

BBC, UK

To enable the BBC to realize its technology strategy of making all of its programs on commodity technology, using standard business networks and storage, by 2010, Siemens Business Services is transforming the BBC's technology infrastructure. The transformation process will improve accessibility and availability of digital material, and enable better creativity, information management and mobility.

Siemens Business Services is the world's largest independent provider of multi-vendor IT infrastructure services





As part of this, we manage the following services for the BBC:

- 28,500 PCs
- Tens of thousands of miles of network
- 35,000 concurrent streams
- 128 broadcast channel streams
- 1.7 billion web page impressions monthly
- 100,000,000 call minutes managed annually
- 25,000 broadcast feeds booked, managed every year
- 267 national and international sites managed on the BBC network (including 126 branch sites)
- 95,000 hours of digital TV output coded and multiplexed every month

In addition to running the BBC's global IT infrastructure, we are involved in BBC projects such as Creative Archive and the modernization of production for BBC News and the BBC Natural History Unit.

WDR, Germany

Siemens Business Services performed the complete rollout of Microsoft Windows XP for 3,200 desktops at the German television station Westdeutscher Rundfunk WDR. Siemens Business Services provided all of the necessary human resources to manage the entire project, including the procurement and cloning from a master image of 3,400 hard disk drives. In addition, expanded multi-functional pro-

duction studios are being installed by BFE for WDR. The studios will be used for the station's flagship Morgenmagazin morning current affairs program for live and pre-production news operations. BFE is also involved in the planning and implementation of regional television studios for WDR.

DirecTV, USA

Through the delivery of a customized broadcast control system, we enabled DirecTV to distribute an additional 220 local TV channels to customers across the United States. Utilizing our Colledia™ Control solution at 41 cities, staff at two main broadcast centers can monitor and control a total of almost 400 channels, including control of satellite uplinks, central monitoring of program output and remote control of broadcast equipment at DirecTV's local collection facilities around the United States. The project involved the phased delivery of Colledia™ Control at all locations following the introduction of an evaluation system, which enabled DirecTV to test the system and for us to define their precise needs for a customized version of the solution.

Media Services across the Spectrum

By taking a holistic approach to solving the issues faced when creating and distributing services across traditional and new media platforms, we have used our wide-ranging experience to create the best possible portfolio of services and solutions for broadcasters.

Focusing on business performance, creative results, technology transition and customer interaction, our broadcast-specific portfolio helps you to address the specific issues faced at the various stages of the media lifecycle. We do this through the provision of the following services:

Strategic and technology advice and delivery – through our Consulting and Broadcast Design and Build services, we can help you to reduce costs and risks by identifying and delivering the flexible and agile solutions needed to transform your business and technology infrastructure. This includes designing, building and operating a wide array of broadcast related systems and facilities to help you create, capture, package, protect and distribute content to all platforms.

Modernization – we provide solutions to enable customers to modernize core media and business processes for rich media, by supplying media storage, media management and integrated production and operational workflows, all based on standard IT capabilities. For example, our Colledia™ Workflow and Colledia™ Control solutions will improve the efficiency of your media production and broadcast management processes.

Content exploitation – we can help you to expand your revenues by exploiting new delivery opportunities, improving the ways you interact with customers and extending your reach and value across multiple platforms. Our Media Communications, Internet and Content Factory services will help you to do this by optimizing the value of your content assets and improving the delivery of existing and new services to your customers.

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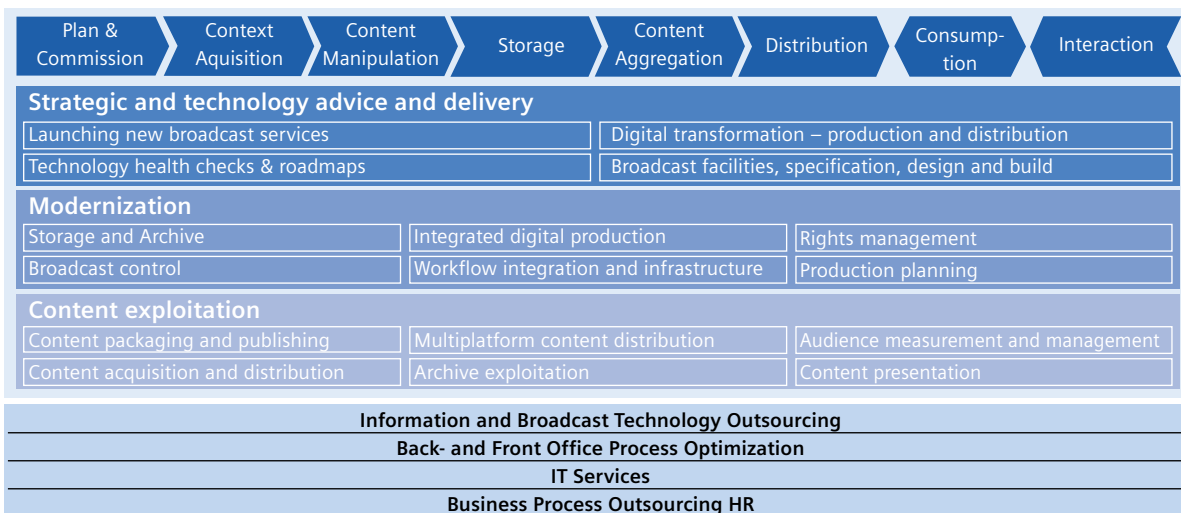




Information and broadcast technology outsourcing – we offer complete outsourcing of IT and broadcast technology services. Our Outsourcing Framework includes a comprehensive range of local and offshore service options and our modular SieQuence solution provides an integrated suite of services, which has delivered systematic cost reductions of up to 30% for a range of customers. Complete technology outsourcing also demands global consistency, so our Global Delivery Backbone ensures your infrastructure meets the demands of the world economy. Another part of our outsourcing offering is back and front offices process optimization, such as integrating business and creative systems and processes, e.g. rights management.

We also provide IT services such as hardware and software maintenance and rollout services. In order to help broadcasting companies achieve greater competitiveness, Siemens Business Services delivers systematic IT consolidation and integrated IT continuity comprising optimized availability, holistic security and comprehensive recovery. In addition, we provide a host of e-learning courses to help train employees. The diagram below shows how we combine our media industry and our classical IT and process management experience to work for you. We offer services all along your workflow, from planning and commissioning, to content acquisition, manipulation and storage and, finally, to distribution.

Our portfolio for broadcasting excellence



Our Approach

Siemens Business Services' approach combines insightful technology expertise with an understanding of your business. With our host of partnerships, solutions and ideas, and our reliable and responsive people, you can count on us to deliver exactly what you need.

At Siemens Business Services, our relationships depend on interpersonal trust and technical competence. Mark Nichols, Director of Content Partnerships, 3 says: "Following Siemens Business Services' acquisition of BBC Technology, 3 is very pleased to be working with Siemens in delivering mobile-ready, audio-visual content to the 3 customer base in the UK. Siemens' background in new technology combined with the broadcasting pedigree of those who worked at the BBC, ensures that the services delivered to 3 are of the highest quality, meeting the demanding requirements of an ever changing, leading-edge business."

Michael Hagemeyer, CIO of Bayerischer Rundfunk (a member of ARD), says: "For me, media competence is more than just IT competence. I appreciate the experience of Siemens Business Services in both IT and the broadcast industry." Siemens Business Services takes pride in approaching problems from new and different angles and offering innovative solutions.

"ProSiebenSat.1 Media AG has been successfully working together with Siemens Business Services in the technical environment for a long time. Siemens has the necessary size and know-how in order to offer promising and pre-convergent solutions, and it still remains flexible in doing so. The cooperation between Siemens Business Services and P7S1 over many years has thus been extremely positive," says Bernd Herrmann, Chief Information Officer and head of IT at ProSiebenSat.1 Production. Siemens Business Services combines the breadth of expertise of the Siemens global network with a depth of experience unparalleled for the broadcast industry.

"It is essential for VRT that our partner in this high priority project should be flexible and have all the necessary skills in-house. That's what prompted us to choose Siemens," says Tony Mary, Managing Director of VRT.



On the Horizon

Broadcasters around the world are adopting digital technology and adapting to consumers who seek maximum quality and control in their use of media. John Varney, Chief Technology Officer of the BBC, shares his view of the changes going on in the industry.

“Individuals have started to be in control of their audio consumption for some time, starting in the late 50s, early 60s, reaching a peak when the walk-man came along. And then it’s taken till now that it’s a really individual experience with the iPod. Those 40 years that the audio development took is going to be incredibly compressed for video. It won’t take more than 5, 6 years.

I see a world where a lot of people have access to large-capacity broadband, coupled with high capacity set-top boxes. It will be a very different world. But at the same time, we will still be dealing with one small portable set in the bedroom.

The internet hasn’t changed traditional broadcasting yet. If you know what you are doing, yes, you can find content and pull it down but it is very difficult to organize it. Only now are we starting to think about an internet that operates on a very high bandwidth infrastructure, that operates over grids into homes with high-capacity broadband.

We start to see how that scenario impacts on traditional broadcasting. What you get then is the ability to use a blend of web and of linear content, to create the personal experience and an individual schedule or to take content and to use it in your own programs.

I see a connection to another exciting development: the video version of the radio phone-in. People with small video-cameras that are blue-toothed or wireless who can bring them back from the field and put the content immediately onto the network – that is going to have an enormous effect on what we do.”

Our Vision

**“Our customers place their trust in us.
Our network of people gives customers
the freedom to excel.”**

Siemens Business Services
Corporate Sales & Marketing
Otto-Hahn-Ring 6
81739 Munich
Germany

Global Info Desk
Tel.: +49 (0) 1805 44 47 13
E-mail: sbs@siemens.com

www.siemens.com/sbs