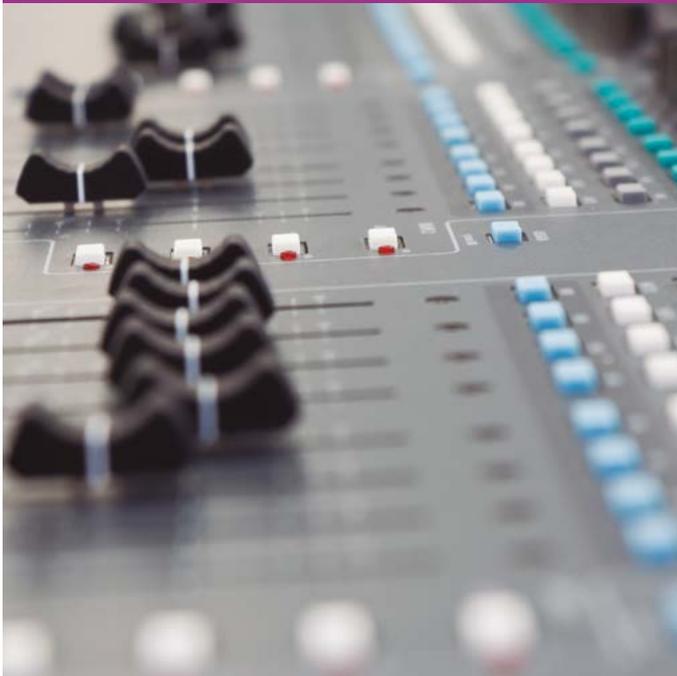


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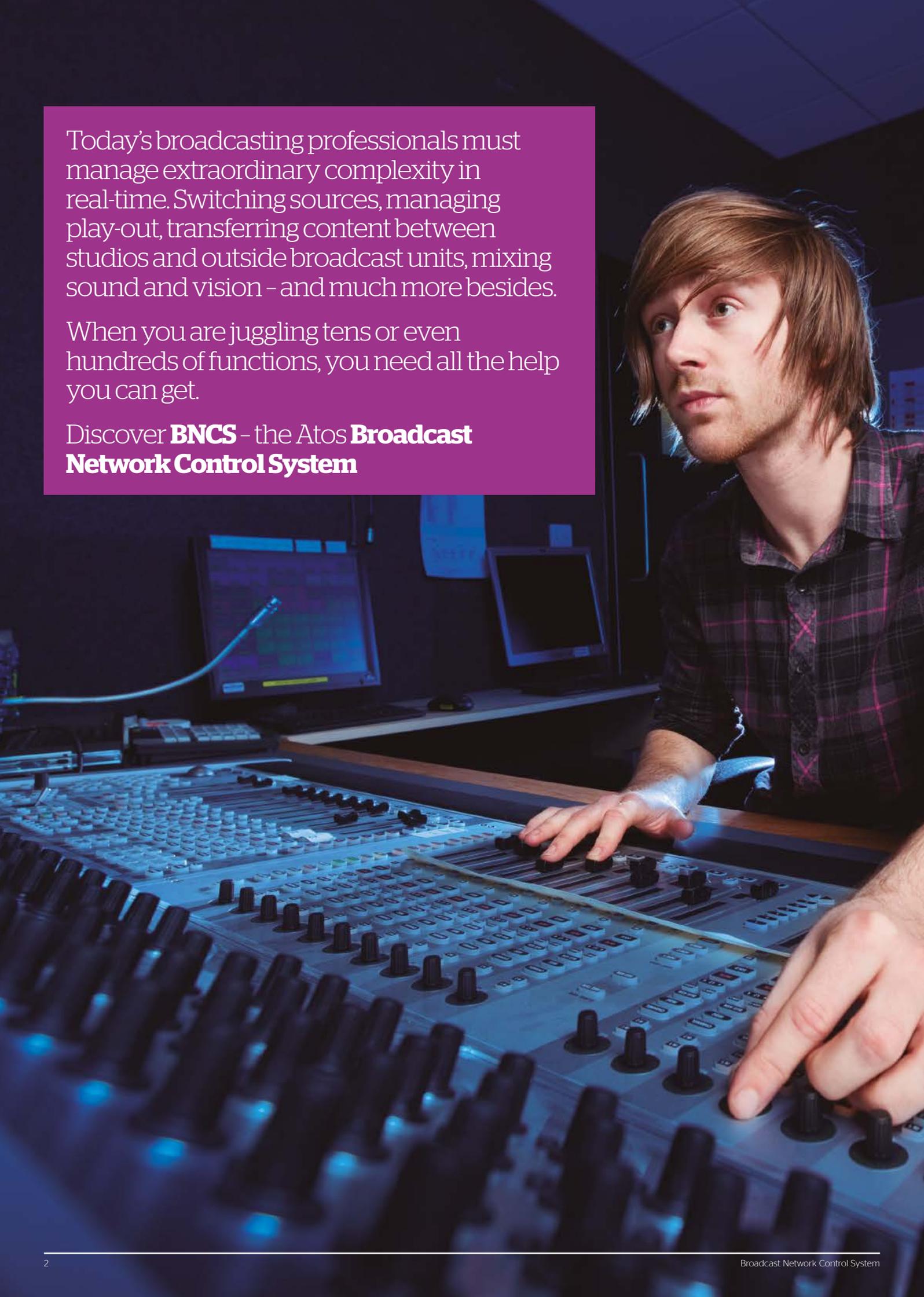


comprehensive
control and
monitoring for
complex media
networks

Today's broadcasting professionals must manage extraordinary complexity in real-time. Switching sources, managing play-out, transferring content between studios and outside broadcast units, mixing sound and vision - and much more besides.

When you are juggling tens or even hundreds of functions, you need all the help you can get.

Discover **BNCS** - the Atos **Broadcast Network Control System**



It's a revolution

Within just one generation, we have experienced a revolution in media. People who are now looking forward to retirement started their careers frantically splicing film together in the final seconds before news broadcasts went live. It's already been quite a journey - but the real revolution has only just started.

The digital revolution is hitting media companies from every conceivable direction. Audiences now take mobile, interactive and on-demand access for granted. The boundaries between professionally produced and user-generated content blur too. Means of payment and management of advertising opportunities are similarly disrupted by digital life-styles.

There are the new players too. All-IP media operations now make it possible for any special-interest group to "go TV": football clubs, automotive companies, fashion houses, rock and roll bands - if you've got the content, you've got the opportunity.

But whether you are an established state broadcaster or a new media specialist - you are also looking at all this turbulence in terms of cost and monetization:

Cost

Two challenges here:

1. How can you take advantage of continual digital innovation to drive cost out of our operations?
2. How can you afford to acquire or access the skills and technologies needed for digital mastery?

Monetization

Two challenges here too:

1. How can you turn digital delivery into direct financial advantage?
2. How can digital media formats allow you to maximize the value of all new and archived content?

But for media professionals, perhaps the biggest changes of all can be found in the studios and media control centers themselves.

And now, control ...

So why is the big digital vision even relevant to the mechanics of device and process control? Every media operations director and studio technician is fully aware of the day-to-day reality of the switch to digital. But do the actual control and monitoring systems you need to do the job really have an impact on audience experience and industry reputation?

It's a big YES for hundreds of reasons - but here are just three to think about:

Craft	The broadcast and media industries have always relied on highly-skilled craft workers - whether operating lights and cameras or mixing sound. The digital landscape does not eliminate the need for skill - but it does change the skills required.
Contentment	Everybody in business talks about the need to focus on core capabilities. It's true for media too - but perhaps it makes sense to look at it in terms of job satisfaction. How can skilled professionals give their best unless they are equipped with the tools for the job?
Cost	When the multiple specialized systems on which media and broadcast companies rely are effectively managed together, there are corresponding savings in operational cost. But that's not all. The cost of failing to integrate control systems will also be paid in error and missed opportunity.

Cutting through complexity

Media and broadcast companies need to keep up to date with continually increasing complexity. How many systems and devices does your team need to manage in the broadcast control center and beyond? You are already probably handling 150+ devices in the mix - and adding to the catalog every day. This is not going to get any simpler - but fortunately, Atos can help you make it easier.

How many device types do you already need to manage? (Sorry for the list but it's worth it just to make the point). You are already dealing with ...

audio ISDN, cameras, encoders, "glue", mixers, multi-viewers, routers, satellite equipment, receivers, modulators and positioners, tally/UMD systems, video servers, VTRs, and more ...

And for every device type you need to manage, you are probably sourcing from multiple vendors and manufacturers - sometimes industry giants, and sometimes specialist niche providers - some of your kit may even have been put together by in-house engineering teams.

The impact of this complexity is widespread. It's increasing operator stress - and with it, the risk of error. It adds to management, support and training costs and pressures. But perhaps most importantly, it inhibits your ability to benefit from advance and innovation.

Three media professions are put under particular pressure by this growing complexity:

Systems engineers

If you are responsible for the day-to-day management of Coding and Multiplexing for broadcast and online distribution, for example, you will be directly affected by continual technology change.

Operations directors

As a broadcast operations director, you need both to meet quality and performance targets and control budgets in the face of increased complexity and continuous change.

HR and procurement

Media companies have a long and respected tradition of "training their own" - but established traditions of apprenticeship cannot deliver when the pace of change outstrips the professional experience of the trainer.



Good news!

Atos offers a robust and comprehensive *Broadcast Network Control System* - BNCS provides a single point of control for this continually expanding mix of media technologies and devices.

Because BNCS is independent of the many broadcast and media technologies it supports - it gives you the means for end-to-end control and monitoring through a single interface. This frees your team from the challenge of managing the multiple interfaces associated with individual devices and manufacturers.

Physically this makes a huge difference. It dramatically reduces control room clutter. Even more importantly, it puts an end to the "octopus syndrome" - broadcast engineers no longer need eight arms to maintain control.

BNCS does not just provide simplified real-time control for all equipment via a common interface. It opens up ways of working and coordinating multiple device functions which have, until now, been impossible.

Put an end to the 'octopus syndrome' - broadcast engineers no longer need eight arms to maintain control.

Reduction

You have plenty to gain through BNCS, but it's worth focusing on reductions too ...



Staff cost

By giving your operational staff an effective master control panel, you boost individual productivity and may create opportunities to reduce or redeploy.



Operational cost

You will not only eliminate the cost of managing multiple control systems. By establishing common operator interfaces, you will also reduce the time and cost of training and professional development.



Infrastructure cost

By aggregating device control through a single interface you will be able to reduce the complexity of control and bring down infrastructure costs as a result. Not only will you optimize device usage- you also make it easier to scale up or down as required.



Error and risk

Perhaps most importantly, integrated master control provided by Atos BNCS results in reduced complexity and fewer errors. This will not necessarily translate directly into cost savings. It will be reflected directly, however, in the sustained quality of the viewer experience.

Do more, do different, do better

Every media company wants to reduce the cost of operations – and BNCS will contribute directly to this objective. But don't make cost reduction your primary objective: find better, more productive and more creative ways to work, and cost benefit will automatically follow.

BNCS will allow you to introduce practical innovations which until now, have been either impossible to achieve – or at least, impossible to achieve at acceptable cost.

Here are just a few examples ...

- ▶ **Custom Operator Panels** – different media specialists need access to different device combinations. The Atos system allows you to build custom operator interfaces – boosting productivity and suppressing redundant on-screen information.
- ▶ **Macro Functions** – in the real world, media specialists need to coordinate activity between hundreds of devices from different manufacturers. In the past, interoperability has been a challenge. You can now store and recall macro functions involving multiple devices – saving time and reducing risk.
- ▶ **Branded Ergonomics** – rather than being obliged to use multiple brand interfaces from device manufacturers, you can create a single interface control panel which meets your own style, language and brand. This is not just about aesthetic control – it's about creating an environment in which professionals can work together with real adaptability.

An orchestra - not an instrument

BNCS helps you extend the professional horizons of both broadcast technicians and operations managers. This is a change in emphasis rather than a change in role.

Before the Atos master control system was available, your team would need to manage and monitor multiple devices – they played the instruments. From now on, they're going to conduct the orchestra.

The new system will provide a transparent and actionable view of all elements under control – allowing your team to monitor and tune in real-time. This not only allows you to maximize resource utilization. It also eliminates the risks associated with the "single points of failure" that have been an unavoidable characteristic in all broadcast control systems until now.

Why Atos?

BNCS is not a hot new product. The Atos media specialists have been working on continuous system development since it was first implemented for the world's leading public service broadcast organization almost twenty years ago. BNCS is designed by broadcast professionals for broadcast professionals.

Since 1995, the system has been continuously refined, extended and industrialized. It has also been adopted as the foundation of broadcast control by leading media companies on both sides of the Atlantic. These include APTN, the BBC, BSKyB, BT Sport, IMG, RedBee Media and Technicolor.

Many members of the original development team have remained with us from the start,

and their combined experience of media control networks is, we believe, unrivalled.

What has changed, perhaps, is Atos' desire and ability to offer BNCS to a wider and younger community of media and broadcast professionals around the world. The system has already become an integral part of the operations for many leading media companies; we believe it's time to take the next step.

Atos is the sole owner of the code, the intellectual property, the process maps and the continually expanding library of device interfaces. When you adopt, you will gain immediate access to all this and more. The Atos system is now poised to become the industry standard - allowing broadcast and online media professionals to take full advantage of over 15 years' continuous investment and collaboration.

Snapshot - what do you get?

BNCS gives you a single point of control for all devices used in modern digital media control and distribution centers. Exceptional on-screen ergonomics give broadcast engineers one-touch control for all devices, play-out streams and network equipment.

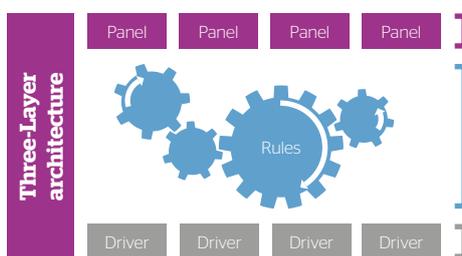
This eliminates the need for broadcast engineers to jump between multiple control systems - providing a complete and easily configurable view, designed to suit different professional roles.

Because every device control is presented as a software object, you can now aggregate multiple functions, and run them with "one touch" as macro-type commands. This also makes it possible to save frequently used combinations, allowing instant recall and increasing professional agility as a result.

When a "breaking news" item, for example, interrupts scheduled broadcast services, BNCS can handle all switches to studio or outside broadcast.

Architecture in a nutshell

BNCS is designed around a logical three-layer architecture.



Drivers - The system maintains a continually growing library of drivers for the hundreds of devices used by media and broadcast companies.

We can "add on demand" - sourcing new drivers as new devices come to market, on the one hand, or adding according to the specific mix of devices used by an individual client, on the other.

Rules - BNCS is rule-based. This is the foundation of operational efficiency and to the elimination of error.

From an operational perspective, broadcast and media companies share more common characteristics than differences. This means that you can exploit the majority of existing rules developed within the system, while tuning or writing from new where required.

The underlying logic means that you eliminate the risk of avoidable error: nobody can listen to two languages simultaneously and understand them, for example, so it must never be possible to broadcast two languages at the same time and at the same volume

Panels - The panel is the front-end - and for the operator, it's the bit that really matters: everything else is hidden.

We add real value here in lots of ways. Perhaps the most important is the degree of operational agility we support - a must for any busy digital media center. You can, for example, set up your control panels to allow any mix of processes and devices to be supported from any control panel - calling up operator interfaces instantly according to immediate need with everything designed for easy touch-screen use.

Not quite off-the-shelf

BNCS is not exactly a box of software. It is highly industrialized, with its driver repositories, its rule-based control mechanisms, and its flexible presentation to a wide range of operator panels. But when you adopt it, you will want to make it yours:

- ▶ Specifying the drivers and driver combinations
- ▶ Designing the operator profiles and on-screen ergonomics
- ▶ Setting and implementing screen language and design choices

These are highly-specialized implementations - it's not the same as buying a spreadsheet package.

The good news is that Atos has both the IT and media knowledge required to ensure that the system can be tuned to fit your requirements with speed and efficiency. You benefit from extremely cost-effective

implementation, and from the knowledge that your own adoption builds on the rigor and experience of almost 20 years' service to world-leading media companies.

Putting professionals first

The real success of your adoption, however, is not about the technology which underpins BNCS - it's about the enthusiasm with which your own digital media professionals make it their own.

This is not just about training - although learning new skills is clearly important. It's about respect and involvement from the start.

From the moment you consider making our system the foundation for your own media operations, we will ensure that you have direct access to Atos own media technology consultants. They will work with you so that your adoption is designed for the best cultural fit - and the greatest business return.

They will work closely together with your own operations teams to ensure that their ambition and experience is directly reflected in configuration and design.

Atos technical integration specialists have an important role to play too. As always, business change must be achieved without compromising continuity. Our technical teams will undertake all pre-configuration and integration testing so that you can be sure of smooth operations from the moment you go live. By taking responsibility for all integration, Atos also ensures that your own resources are not diverted from current projects.

Finally, Atos will put all service, support and business monitoring practices in place. As your own teams rapidly gain confidence, they will have less and less need for technical support - but at the start, we will ensure that expert assistance is on hand for the initial ramp-up, where the learning curve is steepest.

What next ...

If you would like to explore BNCS, we are ready. We can organize discovery days for your team on either your own premises - or at one of the Atos Business Technology Innovation Centers.

Getting hands-on experience is clearly a top priority - your experts want to understand how our system will make a direct contribution to their own professional lives.

We must not, however, forget the business end of the discussion. We will also use this initial discovery session to learn more about your own strategy and ambitions - and most importantly, to establish a solid business case with clearly substantiated indicators for return-on-investment.

Discover **BNCS - the future of broadcast control and monitoring.**



About Atos

Atos SE (Societas Europaea) is an international information technology services company with 2013 annual revenue of €8.6 billion and over 76,000 employees in 52 countries. Serving a global client base, it delivers IT services in 3 domains, Consulting & Technology Services, Systems Integration and Managed Services & BPO, and transactional services through Worldline. With its deep technology expertise and industry knowledge, it works with clients across the following market sectors: Manufacturing, Retail & Services; Public sector, Healthcare & Transports; Financial Services; Telco, Media & Utilities.

Atos is focused on business technology that powers progress and helps organizations to create their firm of the future. It is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and is quoted on the NYSE Euronext Paris market. Atos operates under the brands Atos, Atos Consulting & Technology Services, Worldline and Atos Worldgrid.

For more information, visit: atos.net.

For more information, contact: dialogue@atos.net

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