empowering
knowledge to support
a changing landscape for education

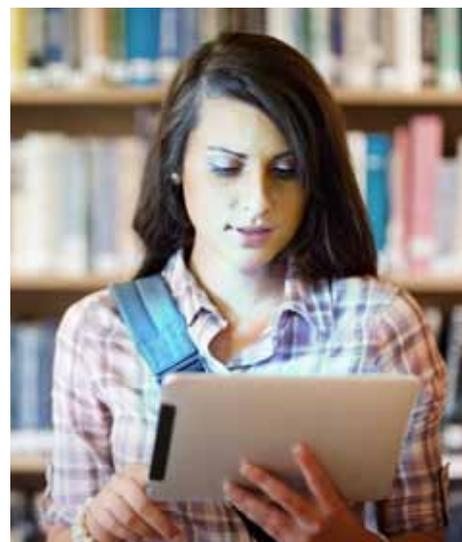## Using new technology to transform education outcomes

A perfect storm is striking the world of education, and it's leading both to challenges and new opportunities on a huge scale. We're living through a tectonic shift in education: nothing will look or feel the same again. And it's happening pretty much everywhere, in countries around the world, in schools, colleges, universities, homes... Digital technology is one of the key drivers for transformation through online research, collaboration via social media and flexible use of smart devices.

Young people are connected as never before. They live a large part of their lives online, and that includes finding out information, discussing ideas and sharing opinions: quite apart from gaming and social networking.

19th century education models are finally being overturned, with remote learning, international projects, "flip" learning, with basic work done at home and school used for review and revision, now becoming normal. Budgets are very tight in places suffering from economic difficulties, but in fast growing countries like China, India and Brazil, educational demand is exploding at an unprecedented speed.

Colleges now suddenly need to provide comprehensive, corporate-standard IT services and infrastructure, not just to teaching staff but to many thousands of students, as well, and that has a major impact on provisioning and management of IT services. And it's not just about "going to school". Lifelong learning and personal development are the key to future educational models, together with closer connections between educators and employers to make sure young people gain skills relevant to a 21st century, global economy.

The question is not so much what's changing but is anything NOT changing? One thing is for certain: IT is becoming a huge issue in education, both in terms of being more relevant to digitally-aware young people and in embracing the power of technology to drive positive change. That makes IT professionals more important than ever in determining the future direction of education.

Atos is already making a difference to educators and students all over the world.

Atos

Learning to let go

It's not just about providing better services to individual schools and colleges, or even to groups of them: the challenge today is to integrate education within the wider digital landscape. In a world where virtually everyone is connected, education needs to profit from and build on the potential of new technology to drive better outcomes for all.

That leads to one simple conclusion: it no longer makes sense for even large institutions to own their own technology, to develop proprietary systems and applications and to keep reinventing the wheel. In order to make the best possible use of technology, they need to let it go. With limited resources and budgets, it is not possible to keep up with the pace of change and deliver the best, most innovative services to students using only in-house personnel and departments. The world is full of new concepts and new services, accessible to all, affordable by all. But to make sense of this new technology world, it is necessary to unlearn some old lessons and then learn some new ones.

The "Unless" strategy

From now on, it will make sense for educators to access technology on a service basis unless there are very strong reasons not to do so. Some of the world's leading technology companies are now delivering online services that form an ideal starting point for new educational models and services: including core administrative systems; online and mobile learning solutions; and use of both social networking and intelligence search options to feed into educational assignments.

Atos has developed the capability to build new, customized services, targeted at precise educational needs, based on standard components, using proven best-practice, and delivered on-demand as services, with payment according to usage (pay per click). Our new e-Examination service is just one example of how Atos can offer new functionality, paid for by usage and delivered as a BPO service from the Cloud.

Working with Atos, educational institutions can maximize the potential of new technology and create the right services for their own needs. But they no longer have to fund costly in-house departments, or spend money upfront on technology investment. It is possible to have as much or as little of what you need and pay only for what you want, and only when you make use of it. By letting go of in-house IT and taking the decision to move into the Cloud, with on-demand, pay as you go models, a world of new opportunities at competitive cost opens up.

It's a new approach targeting a new set of benefits. There may be a perfect storm striking the world of education, but the net result could and should be a higher quality course, more targeted investments, better educational experience and better outcomes at lower cost for students and society, everywhere.

For educators, there are some significant benefits, including greater flexibility about courses, more efficient use of college and school premises, ability to reach out to a wider population, and customization of courses to more specific individual needs.

Building the future of education

It's not hard to identify opportunity but it's a whole lot more difficult to get the best outcomes without the potential disadvantages. Use of eServices is a key driver for positive change in education, but simply signing-up for free online services will not in itself lead to transformation. Legacy systems need to be integrated, educational networks have to be fully secured and expert integration skills are essential to tie everything together and deliver the right outcomes. That's where Atos comes into the picture.

We are one of Europe's largest education IT specialists and we have a long track record of supporting and investing in original science-based research, and that status has just been dramatically reinforced with our participation in the pan-European Helix Nebula Science Cloud. In partnership with CERN, the European Space Agency and European Molecular Biology Laboratory, Atos is helping create a sustainable Cloud computing infrastructure, capable of scaling to meet growing demand from current and future users, including the world of education.

Unlike niche players, we cover the landscape from end to end, providing key design and integration services from end to end, on an industrial scale, with complete reliability and excellence. Unlike global technology vendors, we are not offering a "one size fits all" approach, and nor do we have IT products to sell. Instead, Atos specializes in delivering comprehensive solutions that combine the best of eServices, integrated with legacy platforms and applications, connected to educational administrative systems and always targeted on improved learning outcomes for students and colleges, alike. Vital new services are available from major providers online, but they are not enough to change education for the better in themselves. Expert advice, design, integration and management are what make the difference: the Atos difference.

That means we can act as an impartial but expert champion of the client, blending and integrating the best technology options; delivering customized services based on proven best practice; and stay right up with emerging technologies at all times.

As partner to the International Olympic Committee (IOC) and many national governments, we are trusted to handle the most sensitive and complex projects without compromising quality or security. Those are the capabilities we bring to the education market.

Strategy for success

Atos has a five stage strategy for supporting the development of new models for education:

- Share
- Empower
- Connect
- Collaborate
- Secure

Share: by using best practice shared services, delivered on-demand from the Cloud, and paid for according to usage, it is possible to future-proof IT, cut out all upfront costs, improve quality and reduce the investment burden. Atos is a leader in use of the Cloud for on-demand, pay as you go services. We are natural partners for an IT strategy that is scalable, sustainable and cost-effective.

Empower: young people often have access to better technology than the average corporate office worker and know more about the online world than their teachers. Atos embraces consumer technology and puts it at the heart of educational practice. We empower young people to collaborate more creatively, connect with a wider world and make educational breakthroughs.

Connect: education will only succeed in its goals when it helps young people fulfil their potential throughout their lives, so closer connections to the world of work are essential. Atos helps educational bodies and their students move closer to employers, bridging the often side gap that exists between students, educational bodies and the marketplace.

Collaborate: the marketplace has globalised as never before, but most young people are ahead of this particular game and are fully accustomed to collaborating with teams and individuals, often in different countries, via gaming platforms and social networking. Atos can help drive better outcomes for students through a cross-border, cross-discipline joint working, working with the academic bodies responsible to curriculum design and for awarding qualifications.

Secure: new technology and greater openness also bring security challenges, from identity theft to stealing of ideas, IP and property, to physical violence. Atos is a proven leader in every aspect of security management, and is trusted by government bodies and defence organisations to safeguard the public interest in countries across the world.

Opportunity is everywhere, so how can you make change work for you, securely and efficiently?

21st Century vision

Education is a vital concern, but many of the methods and structures in our educational environments are out of date, and there never seems to be enough money available for constantly-changing needs. The Atos 21st Century education vision helps educational bodies face the challenges of today and tomorrow with confidence.

Atos can ensure that educators always have access to future-proofed, best practice IT, emerging technologies, innovative thinking and complete security. We will build a roadmap to the future that enables educators to take the most appropriate first steps, delivering maximum benefit as fast as possible, while staying on track for transformational change. Atos enables educators to focus on their core concerns, knowing that their technology will always be affordable and relevant, supporting their own future vision at all times.

Atos is already making a difference to educators and students all over the world:

▶ 25,000 students are now connected to online services at Albeda college in the Netherlands. The infrastructure has been consolidated and virtualized, giving users anytime, anywhere access with any smart device or PC.

▶ 7380 standard workplaces, including IP telephony have been set-up for The Ministry of Education, Culture and Science in the Netherlands.

▶ At the University of Leuven in Belgium, Atos has reduced the cost of managing accounts and roles across systems and independent schools, leading to increased agility (moving at "internet" speed).

▶ In Scotland the "My world of work" system enables individuals to plan their learning and career moves through "self managed lifelong learning". Multi-channel support resource makes use of the web, contact centre, careers centres and the 500+ learning centres to help drive their careers forward.

▶ At the European Biodiversity library Atos manages more than 25 Million pages of scientific literature with interconnection to more than 20 repositories.

▶ Atos enables Federated and Community Search at the Bibliothèque Publique d'Information in France. The system permit 800 simultaneous visits, includes more than 1 Gigabyte of metadata, over 1 Million referenced objects, 10 internal DB, 70 external DB.

▶ The place project, an education platform for the Lorraine Region in France is operated by Atos and its partner ITOP, deploying comprehensive educational service to almost 400,000 users. This is also the largest ever implemented using the NetLycée/NetCollège 2.0 solution.

If you would like to talk to an Atos Education specialist please contact: dialogue@atos.net or for more information visit: atos.net/empoweringknowledge