Aitek’s experience in development of advanced web solutions and in the use of cloud services powered by AWS platform is the basis of several online platforms launched by Amazon in the recent years to offer at the Italian customers high-value added services.
Allowing users to access content and services easily, quickly and securely is the basis of an Internet Company’s success. This is the reason why Aitek offers complete support in all phases of the implementation of a web application: starting from the design, going through the choice of the most suitable configuration for operational needs, to consulting on AWS services, up to putting on-line and data management. That’s why all the web solutions developed by Aitek for important customers offers the best results in terms of reliability, safety and performance.

Thanks to Aitek’s expertise in designing and developing advanced web applications, Amazon Italia has launched a wide range of digital platforms that go beyond e-commerce. Some examples? It ranges from tools to support training and teaching, to the dissemination of on-line playful activities, up to the availability of government economic incentives.

AWS and Aitek’s know-how: a winning mix

The architectures of the solutions created for Amazon are entirely serverless and involve the use of a mix of services from AWS platform: from HTML5 pages to the connection with Aurora and Dynamo databases, the result is a suite of platforms within everyone’s reach, reliable, secure and easy-to-use, in which all sensitive data (user profiles, logs, transactions, etc.) are encrypted and protected by AWS.

Among the most widely used cloud computing services, we can mention Cloud Front, the fast, highly secure and programmable content delivery network; S3 for storage of objects; Cognito for managing access to the applications through social accounts such as Facebook, Google and Amazon or corporate identity providers; and ECS, the highly secure, reliable and scalable method to manage containers.

UN CLICK PER LA SCUOLA: shop on Amazon.it and support your school

How to turn an online purchase into a tool that can support Italian schools? The answer comes from “Un click per la Scuola” (“a click for the school”), the initiative launched by Amazon.it and dedicated to all primary and secondary schools of Italy. Through “Un click per la Scuola”, Amazon will support the participating schools to the initiative donating a virtual credit equal to a percentage of the value of purchases (of products sold and shipped by Amazon) made by customers who participate in the same.
Each school will be able to use the virtual credit received by Amazon to request products for free, choosing from a wide catalogue of +1,000 articles, designed to meet the needs of students and teachers, including electronic equipment, stationery, sports goods, games, musical instruments, furnishing, accessories and more.

**How to participate?**

Within the unclickperlascuola.it portal the users can select the school that they want support, authenticating with their amazon.it credentials or creating a new account if they are not already customers. For every subsequent purchase, Amazon will donate to the selected institute a percentage of the expenditure in the form of virtual credit, at no cost to the user.

**What should schools do?**

Inside the portal, schools can join the initiative in a dedicated area, by entering the ID code of the institute and following the instructions received via e-mail. Schools can access their profile at any time to control their accumulated virtual credit and request gifts.

**Aitek’s technology**

«Un click per la Scuola» is an easy-to-use tool, but it requires high standards in terms of managing of large user flows, security operation and personal data protection.

Aitek provided Amazon with technical support to develop an entirely serverless solution that uses the compute, storage, database and analytics services of the Amazon Web Services platform.

This solution also allowed integration with the adozionilibriscolastici.it web portal, also developed by Aitek, through which users can select the textbooks of interest and buy them on Amazon: a link within this site allows to access the «Un click per la Scuola» portal, where users can register and automatically donate 2.5% of the cost of the purchase of textbooks.

A quick and easy tool for students and families to support their school, a unique opportunity to provide concrete support to educational institutions in our country.

Following the great success of this initiative, in 2020 Amazon decided to launch a similar platform also in Spain. Also in this case, all the activities for the construction and commissioning of the platform have been entrusted to Aitek.
Similarly, teachers can benefit from the "Carta del Docente" (Teacher’s Card) to buy products for updating and training. This initiative allocates to the teachers an amount of 500 euros spendable on Amazon.it for purchases of Books, Kindle e-Books, Kindle E-reader, Fire tablet and a selection of computer products. To use the Card, the teacher will have to create vouchers on the cartadeldocente.istruzione.it portal, then access the amazon.bonus-docenti.it portal, developed by Aitek to allow teachers to convert vouchers into Amazon discount codes.

Cloud computing for maximum security
To achieve the highest standards of reliability, both sites for the conversion of bonus into discount codes have been developed using the AWS Web Service platform of Amazon, the world’s number one cloud computing service. What are the cloud services employed by Aitek to create an on-line application in line with the latest trends in the IT world? The applications developed by Aitek are guaranteed by the integration with AWS IAM (Identity and Access Management), which manages the permissions associated with users and resources (such as EC2 virtual machines) isolating development, testing and production environments. In addition, the access to the platform by users is protected by OTP type MFA (Multi Factor Authentication), as required by the most stringent security rules.

BONUS CULTURA: a web portal to get a culture
An unprecedented initiative, dedicated to young adults and Italian teachers: it is the bonus of 500 euros allocated by the Government to purchase books and, in the case of teachers, also computer equipment. A new opportunity not only to promote culture, bring young people to reading and encourage the professional updating of teachers, but also to give a new impetus to the publishing market and expand the target of users who make on-line purchases. For this reason, Amazon has entrusted to Aitek with the development of two web portals through which young people and teachers can easily and safely spend their bonus, taking advantage of the wide catalog and the countless advantages offered by amazon.it.

How does it work?
The "Bonus Cultura", dedicated to young people residing in Italy who turn 18, has as its objective the promotion of culture and knowledge of cultural heritage. In order to spend the 500 euros on Amazon, users must create vouchers on the 18app.it web application, after which they can access the amazon.bonus18.it portal, specially developed by Aitek, to convert the vouchers into Amazon discount codes to be used to make purchases in the Books categories and Kindle e-books.

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Protection from external cyberattacks such as Ddos (Dynamic Denied of Service), XSS (Cross Site Scripting) and SQL Injection is also guaranteed by the integration of AWS WAF (Web Application Firewall) and Cloud Front, the CDN of AWS. No less important are the reliability and scalability of the systems, ensured by AWS ELB (Elastic Load Balancer), a set of Auto Scaling policies of virtual machines that automatically manage peaks of work reducing costs in periods of less use.

Monitoring is provided by AWS Cloud Watch, which collects logs of all resources (such as EC2 virtual machines, RDS database, S3 storage), monitors and reports any malfunctions to support staff, or acts independently to enhance the service (communicating with Auto Scaling service).
AMAZON DIGITAL LAB: the new way to learn

Aitek has provided technical support for the design of Amazon Digital Lab, a multimedia space that provides students and teachers with a wide catalogue of free resources. An innovative tool to support new training models based on distance learning in a practical way, facilitating interactivity between users.

This portal, organized in sections accordingly to the type of content and school degree, allows the display of video tutorials created by qualified professionals, e-books for kindle, audiobooks, files in .mp3 format, but also links to websites and content on Youtube, Dailymotion or Twitch. But that’s not all, because Amazon Digital Lab allows access to free training webinars, to participate in which users just need to connect to the event at the scheduled date/time, without the need to register.

A dashboard specially developed by Aitek allows Amazon backend operators to manage both the unclickperlascuola.it portal (such as the virtual credit verification activities of schools and the status of orders) and uploading content within the digital lab. It also includes all the tools for inserting and graphically setting the pages in which the contents are available, which operators can create quickly and easily using the Markdown language.

Media files can be sourced from external online sources or stored on Amazon S3, the resource storage service offered by AWS.

Amazon Digital Lab increases the offer of unclickperlascuola.it, the digital project through which Amazon supports Italian schools, devolving a virtual credit equal to a percentage of the value of purchases made by customers participating in the initiative.

BACK TO SCHOOL: select the book of your class and buy them on Amazon

The digitalization of the Italian school also involves the use of online tools that allow students and families to buy text books in an easy and fast way, eliminating the long queues in the library and reducing waiting times to receive them.

When we make a purchase on the web, the first store that we immediately think about is Amazon. For this reason, a few years ago the global e-commerce giant launched the adozionilibriscolastici.it portal, designed with the technical support of Aitek.

Thanks to an easy and fast procedure, users can select the city, the school and the class for which textbooks are needed: the portal will show the list of all books adopted by teachers for that class, also reporting any texts “already in use”, i.e. purchased in previous years.
Within Amazon Digital Lab the contents are divided by subject and school level. There are video tutorials on youtube, audible contents, AWS Educate courses, Alexa’s Question& Answer services on a large number of topics, as well as a rich catalogue of kindle e-books dedicated to the great protagonists of Italian literature and culture.

For teachers, this platform provides many contents and tools for training and to support teaching with video, toolkit, audio resources and webinars with the provision of training hours. The entering and management of external contents and links is managed by Amazon's backend staff through a dashboard specifically created by Aitek.

All the books to buy are automatically entered in the cart and with a simple click users can access the amazon.it portal to complete the purchase and receive the books comfortably at home.

**The technology**

Thanks to Aitek’s expertise in the development of cloud-based web applications, the entire infrastructure is hosted on the AWS cloud computing platform. The result is a solution hosted on virtual servers, in which reliability and security are guaranteed by Amazon Cloud Front, the data distribution network that manages user requests, blocks anomalies and compensates for load increases due to traffic peaks employing optimized load balancing policies.

This portal, designed in HTML5 following the graphic style of Amazon, employs a mix of Angular JS and Node JS technologies to ensure both the sending of requests to the Oracle database in which the data of textbooks are stored, is the management of the dynamic pages of the portal (containing the map and menus for the selection of region, city, school and class of interest).

The lists of textbooks are managed by a backend service that periodically receives official data from +31,000 Italian schools and continuously updates the database.

**Not only investments... but also revenues!**

The structure of the adozionilibriscolastici.it website has been designed to allow the insertion of advertising within the web pages. Advertisers interested in promoting their activities within a portal characterized by large volumes of daily traffic can insert their messages in appropriate banners. For Amazon this is an opportunity to turn investments into a source of revenue from the sale of ads.

**The Italian school in step with the times**

The solution that Aitek has created for Amazon uses the most advanced web and cloud computing technologies to combine maximum security with great user-friendliness. No registration or authentication are required to use the features of adozionilibriscolastici.it. In addition, the portal does not manage sensitive data or transactions, but is connected directly to the Amazon store within which users can make purchases with their account in complete security.
With adozionilibriscolastici.it just a few clicks to access the list of textbooks in your class!

1. Click on your region
2. Select the province
3. Select the city
4. Select the school grade
5. In the “scheda istituto” form click on your class...
6. ... and check the list of adopted textbooks. Click “procedi all'ordine” to complete the order on Amazon.it!
With the introduction of the obligation of the presence of anti-abandonment devices on child seats for the transport of children under the age of 4 by car, the Italian government recognizes an economic contribution for the purchase of these devices, with the aim of facilitating their diffusion.

That’s why amazon.bonus-seggiolini.it was born, the web portal through which it is possible to take advantage of the "Bonus seggiolino" also on the Amazon store. As with many other Amazon applications launched in recent years, the mix of Aitek’s expertise in developing advanced web solutions and the high-performance standards offered by AWS’s cloud services underpins the project.

Thanks to an easy-to-use frontend interface, the user can enter their refund request following the purchase of an anti-abandonment device made on amazon.it.

To take advantage from the bonus, the issuance of an e-voucher must be requested, following the procedure on the appropriate website created by the Italian government. After gaining the e-voucher and making the purchase, the user can access the amazon.bonus-seggiolini.it portal, where he must enter the Amazon order number, the government voucher code and his e-mail address.

For each request, the system verifies that the order number is valid and not previously used; in case of positive match, the refund, equal to the amount of the voucher, is made directly on the payment method used for the purchase. The data control operations are carried out by Aitek, which receives daily from Amazon the list of orders of devices that are entitled to refund.

The AWS infrastructure, the best in cybersecurity and data protection, guarantees maximum security, since all personal information and voucher codes are encrypted.
Since Covid-19, exhibition events had to rethink their interaction with the public, regarding live events as well as online content. This is also the case of Lucca Comics & Games, the great international event dedicated to comics, animation, games and video games.

One of the most awaited "virtual" appointments is the Amazon Comics Awards, a contest giving fans the opportunity to vote for their favorite comic, choosing from a list of candidates selected according to criteria of originality and creativity.

Amazon has entrusted to Aitek the development of the amazoncomicsaward.it portal, where users holding an Amazon account can vote, view the ranking and access the official store of Lucca Comics & Games to make purchases.

The images of the covers of the candidate comics are displayed in the Home Page: a simple click on the cover of the favorite comic is all it takes to open a dialog window through which users can give their vote or buy the selected comic.

"AMAZON COMICS AWARDS": in search of the most beloved comic

A simple yet powerful web solution that takes advantage of the cloud computing services of the AWS platform. Reliability and security are guaranteed by Amazon Cloud Front, the data distribution network that can better manage load increases due to peak traffic thanks to optimized load balancing policies.

In addition, all of the application's data and processes have been included in Docker containers, which are managed through Amazon ECS, the service that allows you to easily run, deploy and secure applications in local containers, without the need to install, manage and scale a management infrastructure.