



Company profile

Cubbit is the first European provider of distributed cloud storage: its services exceed current market standards in terms of security, privacy and environmental sustainability.

The cloud, as we know it today, is a growing technology, but with limitations related to its centralized infrastructure and based only on data centers. Many of its services have privacy issues, are susceptible to cyber-attacks, data loss, and are expensive. In addition, data centers are responsible for a huge amount of CO2 emissions ([which account for approximately 3.7% of those produced globally, while the ICT ecosystem is estimated to be responsible, as of today, for 10% of the total worldwide energy demand - equivalent to the combined energy production of Germany and Japan](#)).

Cubbit, partner of the European project Gaia-X, is an Italian deep tech startup that is helping to build Web 3.0 - the internet of the future - combining centralized and new distributed technologies. Cubbit operates in a global cloud market that is growing at 22.3% per year and is estimated to be worth [\\$173 billion by 2025](#).

Founded in 2016 by four university students - CTO Marco Moschettini, Stefano Onofri and Alessandro Cillario, joint-CEOs, and Lorenzo Posani, advisor and PhD - the ambition of the co-founders is for Cubbit to become the most important provider of distributed cloud services in the world, guaranteeing the highest level of privacy by design and without the use of expensive and polluting data centers.

During 2020, the Company had already distributed its products to its first 3,500 customers in more than 70 countries around the world and today its distributed network protects more than 15 million saved files.

Convinced that the Internet of the future must resolve its current contradictions, Cubbit's founders are guided by a vision that identifies privacy as a fundamental and inalienable right, and by the certainty that digital technology must be re-framed to make its carbon footprint sustainable. The main way to achieve these results is the introduction of distributed technologies in the IT world: solutions that guarantee security, privacy and environmental protection, preparing for the advent of Web 3.0, expected in the next decade.

How Cubbit works: an enabling technology for Web 3.0

Cubbit does not use centralized data centers for its cloud services: instead, it creates distributed data centers by leveraging wasted resources in homes and businesses. Its software allows you to transform any device (servers, computers, routers, IoT devices etc) into one of the nodes of the Cubbit network. It is an enabling technology: once the distributed, device-based infrastructure is built, multiple different cloud services can be delivered. Currently Cubbit offers a Sync&Share cloud service that allows users to save and share their files and documents, while Backup and Cloud Object Storage services will be launched soon.



Each file that is saved on Cubbit's distributed data center is fragmented into 24 pieces, redundant in 36 parts through state-of-the-art algorithms and encrypted with zero-knowledge encryption mechanisms (highest security standard on the market with military-grade encryption keys). Then the individual fragments are distributed to the individual devices that are part of Cubbit's distributed data center. This redundancy procedure guarantees the uptime of the distributed storage, allowing the owner to recover the original file in any situation by reassembling any 24 parts among the total 36 fragments.

Files saved on the network are encrypted, fragmented, invisible and unrecognizable to anyone who is not the legitimate owner. The technology therefore ensures compliance with GDPR and CCPA by design.

Cubbit offering

The Cubbit Cell: for individual consumers, B2C customers, independent professionals, and Micro Enterprises

The customer buys a physical device, of Italian design, with a hexagonal shape, that they simply connect to their home or office router. Once connected and activated, the user becomes part of the Cubbit network: they can save data to the cloud, synchronize files and share easily. The advantage is that, unlike all other cloud services which are given on a monthly subscription basis, in this case, one purchase provides a cloud service that will remain free forever, with maximum levels of security and protecting the environment.

This solution enables additional hard drives to be connected to the Cubbit Cell to increase its cloud storage capacity, and the use of up to 4 different accounts per single Cubbit Cell.

The SaaS service: for those who don't want to buy hardware

For maximum data security and privacy without having to purchase the Cubbit Cell, corporate users can subscribe to Cubbit's SaaS solution on a monthly or annual basis. This offer is particularly suitable for SMEs or organizations that want to achieve maximum security and privacy in saving and sharing their data among employees or with their customers. The system is compliant by design with GDPR and CCPA. In addition, for every TB of storage saved on Cubbit, 40KG of CO2 that would otherwise be produced is saved each year. The service is available for all browsers and operating systems. There are 3 plan types (1TB - 2TB - 5TB) and users can upgrade anytime.



Timeline

2016

Startup Constitution and Business Startup.

Cubbit was not started in a garage, like famous Silicon Valley companies, but it is more accurate to say it was started in an Airbnb! An apartment, owned by a relative of the founders, was used as an office during the day and rented at night to collect the first resources through which founders could pay developers.

Cubbit wins the Barletta Award in Rome and the prestigious National Innovation Award, dedicated to research projects with great potential.

2017

Cubbit successfully tests, on an international network of beta-testers, a first distributed network in Alpha version. These innovators contribute to the development of the Cubbit solution by installing the software on their Raspberry Pi. In the same period, Cubbit wins the European Union's Climate Kic competition, dedicated to startups in the green world, and the Tim Call for Startups.

2018

Cubbit is the first Italian startup to receive investment from Techstars, one of the most important VC companies in the world for startups. Techstars also powers international financial institution Barclays' award-winning Accelerator programme, dedicated to cybersecurity in Tel Aviv, Israel.

Cubbit wins the Mastercard Award and the Regional Call for Startup Development of Emilia Romagna. It also begins a collaboration with CERN for the development of an interoperable cloud solution with the Geneva research center.

2019

Cubbit launches a record crowdfunding campaign on Kickstarter and Indiegogo to launch its Cubbit Cell product: it raises more than 1,000,000 euros and enters the top 1% of the most funded campaigns ever. To date, more than 3,500 units have been sold, in over 70 countries worldwide.

Cubbit is awarded €1.9 million by winning the SME Instrument Phase 2 of Horizon 2020, a European Union competition designed to fund high-potential technology projects across the EU. In the three-year period of 2018-2020, only 33 Italian companies were awarded this funding.



2020

Cubbit officially starts to distribute the Cubbit Cells sold during the crowdfunding campaign: the first distributed cloud network based on a European technology is officially launched online, connecting users from over 70 countries worldwide.

Three of Cubbit's founders are named among the Forbes 100 Italian 30 Under 30 of 2020.

Founders

Stefano Onofri - Co-founder and co-CEO

Stefano Onofri, named Forbes Italy 30 Under 30 in 2020, holds a degree in International Management at the Collegio Superiore of the University of Bologna, studying in London and Paris. In 2016 he co-founded Cubbit and is joint CEO. Prior to Cubbit, in 2012, in a difficult period for startups, he co-founded StartUp Day Unibo, with Alessandro Cillario, which today is the most important Italian event for youth and academic entrepreneurship. He later held the role of Head of Startup Unit at Almacube, Innovation Hub of the University of Bologna and Confindustria Emilia.

Alessandro Cillario - Co-founder and co-CEO

Alessandro Cillario, named in Forbes Italy 30 Under 30 in 2020, graduated with honors in Law at the University of Bologna. In 2016 he co-founded Cubbit and is joint-CEO. Since the age of 19 he has been involved in communication and journalism in different sectors: as Head of the Press Office of Virtus Pallacanestro Bologna, Unipol Arena and Gruppo Sabatini; Head of Communication of Mozart14 of the Orchestra Director and Senator for Life Claudio Abbado, and as a collaborator of Avvenire and the weekly Bologna7. Passionate about innovation, he co-founded StartUp Day Unibo with Stefano Onofri, which today is the most important Italian event for youth and academic entrepreneurship. From 2018 to 2020 he was a member of the Board of Directors of Almacube, Innovation Hub of the University of Bologna and Confindustria Emilia.

Marco Moschettini - Co-founder and CTO

Marco Moschettini, named in Forbes Italy 30 Under 30 in 2020, is a senior software architect with a master's degree from the University of Bologna, and is a true lateral thinker. As CTO, Marco leads the entire technological development of Cubbit's solution. Passionate about technology from a young age during high school, over the years he has specialized in web and cyber security technologies, scaling innovative projects and applications for tens of thousands of users. During university, he developed an interest in distributed systems and peer-to-peer technologies, his thesis on a decentralized cloud, forms an integral part of Cubbit's technology.

Lorenzo Posani - Co-founder, PhD

Lorenzo Posani, PhD, is co-founder and scientific advisor of Cubbit. He graduated with honors in Physics in Bologna, where he developed several extra-university projects. In 2016, he met Marco Moschettini, and together developed the technical and theoretical foundations that led to the launch of Cubbit. He gained his international master in Physics of Complex Systems (SISSA, Poli-To, Sorbonne), and in 2018 he obtained a PhD in Statistical



Physics at the École Normale Supérieure in Paris, with a thesis in statistical inference methods for the analysis of complex systems. Author of several papers in international peer reviewed journals, he is currently a researcher in Theoretical Neuroscience and Machine Learning at Columbia University in New York. He is author of the Cubbit green paper on the environmental impact of cloud storage.

1. Source: *The Shift Project - Lean ICT - Towards digital sobriety*
2. Source: Cubbit green paper <https://www.cubbit.io/assets/media/greenpaper.pdf>
3. Source: Study Markets & Markets