

# BREAKING NEWS



## ECOBALL

A ball that moves autonomously across watercourses in order to create a real-time map of the health of water in large regions

## ERASMUS+

The history of Erasmus and our personal experience.



## MEETING ARIANNA

Arianna Milazzo joins us in an interview



# ECOBALL: A DEVICE TO SAFEGUARD OUR PLANET

Nowadays, everybody talks about **sustainability** and the growing need to make the world more sustainable but, what is sustainability? Sustainability means to satisfy the needs of the present generation, without compromising the possibility of **future generations** to satisfy their own.

Our planet is a priority for the “**2030 Agenda**” for sustainable development so schools all over the world organize events, carry out activities and work on special projects to make students aware and involve them in the issue. But some schools seem to work harder than others and do more! This is the case of **ITET Rapisardi da Vinci** where a group of students have invented **ECOBALL** a device aimed at **analyzing and monitoring the level of pollution in rivers, lakes and streams**.

They decided to take part to a competition where students were asked to create new devices that could protect and safeguard the environment and after months of hard work Ecoball came up!

Ecoball consists of a set of **spheres** equipped with **sensors** for water analysis and **data communication**. The project originated from the need of extending the detection of pollutants on larger territories, in order to generate a map of the territories at risk and to carry out an action of preventive monitoring.

Some students have been interviewed about the idea behind ECOBALL. Here is what they said: “During a class discussion we decided to take part in a competition organized by the **STMicroelectronics** a leading company in the field of technology. They wanted competitors to develop something that could contribute to the protection of the marine environment. So we analyzed environmental problems in our region and around the world, and we realized that **water pollution was one of the most serious problems**. Hence, we decided to create a device that could monitor the health of waterways”.



When asked about the future impact of their device in the prevention of water pollution they seem to have no doubt. “Ecoball **has been specially designed to help environmental research**, monitoring in real-time the status of water and coastal seas.

Thanks to its sensors and its ability to communicate with a **cloud server**, it can generate a graphical mapping of the status of pollution over vast geographical areas. **This makes ecoBall a valuable tool** in the prevention and management of marine pollution”.

Students do not deny how challenging it was to come up with the final product. **It took a lot of time, energy, and skills** but now they dream about Ecoball and what it can become. We asked them about their ambitions and expectations and that’s what they said: “Well, **making Ecoball available on the market and starting production on an industrial scale** is our dream! That would mean producing a considerably more compact and economical device”.

We can only wish these talented students to make their dreams come true because our planet needs **creative, visionary students** that can use technology to make it a better place to live in.



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# MEETING ARIANNA

On Thursday 9th March 2023 at the “Rosario Livatino” auditorium of the ITET Rapisardi- Da Vinci the students of the 12th and 13th classes of the IT address met the engineer Arianna Milazzo manager of the “Reply” company. At the end of the meeting, the students had the opportunity to ask her questions.

Welcome Arianna, it is a pleasure to have the opportunity to interview you today as engineer and manager of Reply.

The pleasure is mine!



## **Could you briefly tell us about your academic training and the beginnings of your professional career?**

I was always quite decided on the type of course of study I would take: Computer Engineering. Although, in a moment of doubt, I first compared the differences with the Faculty of Informatics. These are important choices. You can also change them, but I preferred not to waste time later on. So I enrolled in Palermo and stayed in Sicily until I finished the qualifying examination.

Later I moved to Rome. At first I thought I would do some specialisation, but in fact then I preferred work. In fact, already during university in Palermo, I worked during the day and studied at night. I would have missed work too much. I always liked, in addition to studying, to be 'actively' involved in IT, that is to say, doing things, experimenting, realising. So I immediately started interviewing. While waiting to find the job and the company I really liked, I started teaching at a school that prepared students to pass university exams. Although this teaching interlude only lasted a few months because then I found the job I wanted. Which in fact is still for the company where I work today.



### **How would you describe Reply's corporate culture and what are the values that guide the company?**

Right from the moment we enter the company, we are told what the values of the company are and what, consequently, they look for in the people they hire.

On the one hand, these are values that relate to behaviour: ethics, trust, transparency and honesty. On the other hand, there are values that relate more specifically to work: excellence, teamwork, customer orientation, speed and innovation.

### **How would you describe your role within Reply?**

My current role is that of Business Unit Manager.

We are divided into various companies which make up the Reply company. And each of them has its own Business Unit structure. I manage one of these Business Units.

My job, however, consists of many things: from managing the Project Managers who in turn manage the teams, to managing the Client. Obviously managing the budget (costs, revenue, margin...), but also managing suppliers, responding to tenders, interviewing and hiring staff.

But also finding new ideas and innovative solutions to propose to customers and, consequently, always studying new technologies in order to be prepared when they come out on the market.

### **What are the challenges you face on a daily basis as a manager at Reply and how do you deal with them?**

There are different types of challenges. There are business challenges, rightly dictated by customer demands, i.e. to achieve the best possible solution, with the least possible expense and in the shortest possible time. There are 'social' challenges so to speak, i.e. those related to people. Who wants to do a certain type of activity rather than another, who expects to fill a role regardless of whether they are ready or not.

Of course you try to please everyone, but you also have to take into account the needs of the projects and the company. You always have to make everything fit together in the best possible way and that is not always easy.

**What are the biggest challenges Reply has to face in the IT sector?**

Obviously change. And in this business that is normal. You have to be ready when a new technology invades the market. By ready, I mean having studied it, tested it, compared it, analysed the pros and cons...



Because if the next day the customer asks to use it, or if we think it is the right solution for a given situation, we have to be ready to deploy it. You cannot wait for that technology to become a trend to be an expert on it. Be it blockchain, artificial intelligence or whatever. In fact, the name 'Reply' comes from the ready response that the company has to the requests that come in.

**How does Reply respond to customers' needs in terms of data security?**

This issue is really part of Reply's business. Not only because of the importance of the customers and the topics covered (banks, public administrations, etc.), but also as a topic in general. There are Companies in the Reply Group that deal exclusively with that. And even a part of my Company (Technology Reply) has an entire business unit that deals with cybersecurity. And of course in addition to the technology-related topics (data, access...) there are also all the legal topics. Starting with the GDPR.

So to put it simply, Reply has several groups of people dealing with security and each group is deeply specialised in certain aspects of the latter.

**It is known that women in the IT field are clearly outnumbered by men. What are the challenges women face in the technology sector?**

It is true, there are far fewer women and they often come from fields such as Management Engineering rather than Computer Engineering. However, there are no specific difficulties for women due to the type of environment. If anything, in general, as women. Especially in the last few years, I have fortunately noticed a lot of progress in this sense on the part of the various companies. A problem that I have never encountered at Reply, fortunately.

In the past, when I was interviewed for jobs, I was asked questions such as 'Are you planning to have children?'

Not only are interviewers not allowed to ask these kinds of questions as they are personal and irrelevant, and besides, the candidate at the interview could also lie or simply change her mind later. A man has never been asked these questions.



### **What skills can women bring to the technology sector?**

My thinking is the same as in the previous question. Exactly the same as men. There are no men or women who can bring different skills because they belong to a specific gender.

There are those who bring more, less, different or different skills purely as a person, with their own character, their own way of thinking, their own preparation, passion and commitment. It is these characteristics that can make the difference, not gender.

### **What are Reply's initiatives to encourage the participation of women in the technology sector?**

The initiatives are diverse. Either as a direct Reply organisation, or as a participant in initiatives such as Almalaurea's classic "AL Lavoro Empower Young Women", or as a sponsor in activities such as "STEM Women Technology Graduate Careers" or "REPLY MEETS STEM WOMEN", but these are just a few. Events are organised not only in Italy, but also abroad, with locations in different parts of the world.

### **What strategies can women adopt to succeed in the technology sector?**

I don't think there is a specific strategy for women. However, I hear around that there are still preconceptions about women choosing this career. In my opinion, the best way is to demonstrate, with facts, what women, just like men, are capable of doing. Let me explain myself better. In my career, especially at university, I have found those who were convinced that women could not do this job. When asked for an explanation, the answer was 'you are not suitable' or 'you cannot be able'. Not really an explanation. So the solution was to do things to prove that you are fit. The real problem is being forced to prove it before being taken seriously. Therefore, if I really have to point to something, which is not exactly a strategy, I would say tenacity.

### **What are some of the difficulties women face in reaching leadership positions in the technology sector?**

Compared to other jobs, which can also be interchangeable between people, leadership positions do not involve 'substitutes'. I can exchange one developer for another with the same skills, but a manager, who of his business unit knows the accounts, the situations, the projects, and therefore has his own responsibilities, cannot be replaced as if nothing had happened. To give an example, if I go on holiday, there is not another person to do my job in the meantime. I have to do it when I come back (along with the current one, of course!) and in the meantime it's standing still. Or you work even if you are on holiday. The main problem for women at this point is motherhood. That is why whoever decides whether a woman deserves that role or not is perhaps based more on other 'information' than on competence.



### **How is Reply addressing the issue of gender diversity and equality?**

Reply is very attentive to these issues. Within the company we have our own social network through which we exchange ideas, knowledge, organise events and also publicise externally those in which we participate.



Reply has organised, and continues to organise, several internal events (workshops, webinars...) both online and in-person, treating topics such as diversity, equality, inclusion, accessibility. And it has actually created a 'Reply - Uniquely Diverse' group, leveraging on Reply's intrinsic nature: a network of companies that by nature celebrate difference.

### **What skills do you consider essential to succeed in this field and what would you recommend to those who aspire to become a business manager?**

Apart from a degree, skills can also vary from year to year. What really counts to reach higher and higher levels is the work: dedication, quality, availability. And these things can only be achieved and last over time if you do your job with passion. My advice is always to choose something that we are truly passionate about and not because maybe it is the fashion of the moment or it seems the easiest way. Maybe our choice will be the hardest one, but I am convinced that even the easiest one, if not done with the will to do it, becomes burdensome.

### **Finally, what is your advice for young female professionals who want to follow in your footsteps and succeed in the world of engineering and business management?**

The answer is never give up. Although things are changing (for the better), unfortunately there is still a long way to go. And you may be told that it is better if you give up, that it is not for you, that you are not suitable, that women have to do something else...

Don't listen to those voices! I guarantee they are not true!

Rita Levi Montalcini used to say, when she went to conferences, the other speakers were all men, accompanied by their wives. Before entering the room (she was the speaker!!), they stopped her and asked, 'Are you here with your husband?'

Montalcini laughed and replied: 'I am my husband'.



# ERASMUS+

Erasmus is a European Union initiative that supports the mobility of students and staff within European higher education institutions. The programme is named after Erasmus of Rotterdam, a Dutch teacher who lived in the late 15th and early 16th centuries.

The Erasmus programme was launched in 1987 with the aim of promoting student and staff exchanges, fostering cooperation between universities and improving the quality of European higher education. Over time, the programme has undergone several transformations and extensions, adapting to the changing needs and priorities of the EU. It is now part of a broader framework called the Erasmus+ programme, which includes education, training, youth and sport.



My school, "ITET Rapisardi - Da Vinci", has been involved in internationalisation and student mobility projects for over twenty years. In the past years we have participated and are still participating in several projects such as "No bully no cry"; "Code of Youth: Shield of Human Rights" and "OPEN" which is still ongoing; and many others.

I had the honour of taking part in the "No bully no cry" project, which ran from 2021 to 2023, by participating in the third mobility, which took place in Spain from 8 October to 15 October 2022.

4 students, including myself, our English teacher and the headmistress landed in Madrid where we stayed for the first night. The next day we took a bus to Granada where we stayed for the rest of the trip.



On the first day we visited our partner school and met the teachers and other students involved in the project.

The following days were spent doing activities in our host school, but also outdoor activities such as visiting the city, famous monuments (like the Alhambra) and tasting typical food.

It was a very formative experience because it allowed me to get to know a culture different from my own, to live in a city that was not my own and where my language was not spoken.

I highly recommend this type of experience because it allows you to make new friends, get to know different cultures and, above all, it gives you the opportunity to travel and visit new countries.