



Dr Luisa Prista:

She is a senior advisor in innovation, women in tech and entrepreneurship and an advisor of Water Europe Board and a member of EuroScience Governing Board. As a mechanical engineer, she has worked in the private sector in Switzerland and Portugal for 16 years and for 29 years at the European Commission in Brussels, leading research, innovation and legislation in a wide variety of industrial sectors. Women entrepreneurship and leadership are mainstream topics across her life and career. She is a co-author of the report 'Strengthening Canada's Research Capacity in the Gender Dimension'. She received different awards while leading the EU Executive Agency for SMEs.



Nina Riegel, PhD:

She is head of project management office in corporate technology of amsOSRAM. Her technology home base is Organic LEDs; within OSRAM OLED she was responsible for innovation management (2010-18). During this time, she was board member of OE-A. Riegel is co-founder of a company wide diversity initiative. Mentoring, offering spaces for re-thinking leadership and bringing people together across boundaries are a leading theme throughout her career. As parents of three school children, she and her husband are enjoying the challenges of balancing family and career.

Focus on female leadership

At LOPEC 2022, the OE-A hosted a "Women in PE" panel on 24 March, in which female leaders not only shared insights into obstacles and challenges on the path towards more diversity, but also optimistic visions for the future – a future that requires female perspectives and leadership. Giovanni Nisato, host of the panel at LOPEC, sat down for an interview with the female leaders for OPE journal

OPE journal: What do we know that tech businesses tend to gain when they increase diversity? Which risks are usually decreased?

Luisa Prista: There is clear evidence that diversity improves the performance, impact and sustainability of companies. For instance, a study of EIB has shown that, when companies that are led by women receive investments, they on average perform better in the long-run. The absence of women in tech leads to a lack of women in shaping the future. In other words: our innovations, solutions, products and services will be designed mostly to favour only one half of society.

Nina Riegel: I imagine myself as a talented engineer who is looking at different companies in printed electronics. I would apply to a company where I can work with teams to develop products that bring value to customers and make a difference in their lives, where I have the freedom to be creative, learn and grow together with my colleagues, and where I feel valued and can enjoy my work every day.

Numerous studies by e.g., Cornell University clearly link the diversity index to the reputation of companies and their retention rate. As a talent – independent of age, gender or ethnicity – I want to have a choice between various players who focus on diversity because they see the business value. At ams OSRAM I am personally involved in a grass-

roots initiative to foster diversity to enhance our leadership potential. This is a key pillar in the Company's overall diversity strategy. I also think, for instance, of the small, diverse team of specialists that is developing quantum dots in Hillsborough within ams OSRAM. They succeeded in developing state-of-the-art dots with a unique encapsulation – ready to be used in harsh LED environments. How was that possible? They embraced the benefits of a start-up: they can still experiment, discuss, and decide quickly, and they are embedded in ams OSRAM – with more applications and markets for quantum dots.

Additionally, a 2015 McKinsey report on 366 public companies found that those in the top quartile for ethnic and racial diversity in management were 35% more likely to have financial returns above their industry average, and those in the top quartile for gender diversity were 15% more likely to have returns above the industry average. A Boston Consulting Group study found that companies with more diverse management teams have 19% higher revenues due to innovation. This finding is significant for tech companies, start-ups and industries where innovation is key to growth.

OPE journal: Asked specifically for printed electronics: why could diversity provide a competitive advantage?

Helen Kardan: The nature of printed electronics requires us to look at electronics in a different way. The way of how we integrate and interact with technology is fundamentally different. Therefore diversity of mind and gender can play a big role.

Corinne Versini: 80% of the decision making for purchasing in the world are made by women. If you don't have women in your team, you can explain or say what you want, the conclusion will always be this: "You cannot serve your market because you cannot know it!"

H. Kardan: Women are 50% of the population, or in business terms, 50% of the target market. In the B2C business, the vast majority of financially related decisions are made or influenced by women – with an increasing tendency. Therefore for the success of any business, it is crucial to incorporate the voice of female users at different levels including business strategy, technology development and product design. The best way to achieve this is to increase the number of female employees in all sectors and layers of a company.

OPE journal: What stops or slows down the adoption of diversity as a strategy in tech companies?

N. Riegel: Why is diversity in it not adopted more often? There are few and far between. Looking at all organisations of government talent programmes, the percentage of women is below 50%; for people in leadership positions, it is still below 30%, according to Cusanuswerk (2021). So focussing on initiatives and programme for minorities especially for women enables us to close the gaps! In the end, all employees, the company and our society will benefit.

H. Kardan: The importance of diversity is an accepted topic, but in tech companies it usually refers to the diversity of disciplines (electrical engineers, mechanical engineers, etc). The other argument would be due to the increasing demand of new technologies. Companies usually put priority on managing the growth and achieving short term goals. This shifts the focus from off-centre topics and radical changes. We focus on incremental improvement on top of an already growing business.

OPE journal: What can companies do? How can diversity be implemented in organisations?

C. Versini: For me it is easy because I have more women in my company than men: each time I want to hire a woman, I ask the question to myself, whether there is a man with the same skills that I could hire. Nevertheless I want to go further, diversity is not only gender balance, it is more than that. The handicap is important, if you are in a wheelchair you can't see the world with the same perspective than if you are on your feet; this difference is a strength to innovate.

L. Prista: The EU is doing a lot in order to improve the situation in the innovation ecosystem in terms of policies, programmes, financial measures and dedicated actions to encourage and support Women in Tech and entrepreneurship (e.g. Women TechEU, EU Prize for Women Innovators, WeGate, Women Leadership programme).

H. Kardan: In ASML we see more interest in taking diversity and inclusion into how we build teams and for a couple of years we have introduced core values of "Care, Col-



Helen Kardan:

She received a B.Sc. in Mechanical Engineering and M.Sc. in Computer Sciences from Tohoku University in Sendai, Japan. After graduation she worked for in various positions from product market and business development to innovation management in high-tech industries, including semiconductor and flexible electronics, bringing end-to-end perspective from idea generation to product launch. Currently she works as senior manager in the sourcing department of ASML. She is also a coach and advisor to various start-ups in high-tech eco-system in the Eindhoven region.

OE-A Working Group "Women in Printed Electronics"

The roundtable and discussion at LOPEC was organised and coined by the OE-A Working Group "Women in Printed Electronics". The working group creates various formats for an open dialogue with both men and women in the field of printed electronics. The objective is to encourage discussions, support and involvement as we will only be able to tackle this complex challenge together. The OE-A Women in Printed Electronics initiative raises awareness of the benefits of diversity to the printed electronics industry and beyond. The international core team of the initiative consists of women based in Canada, France, Germany, Finland and Spain. Are you interested to contribute? Contact Isabella Treser at isabella.treser@oe-a.org.

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- 360 design solutions (from idea to product).



Corinne Versini:

She is founder and CEO of GenesInk, a company specialised in the conception, development and manufacture of nanoparticles and/or hybrid nanocomposite in solutions for active inks. Versini has international experience and is involved in many associations. She is a member of the Foreign Trade Advisers involved in the promotion of the territory, founder of BPW France Marseille Métropole, to promote the position of women in regional institutions, member of the Board Richelieu Committee, in charge of innovation and the role of women, member of the PAC Pact SME, and member of the board of directors of Medinsoft.



Giovanni Nisato:

He is managing director of Innovation Horizons, a consultancy. Passionate about enabling collaborative innovation, over the past 25 years Giovanni has held various R&D, project and business development leadership roles including at Philips Research and CSEM. A veteran of the printed electronics world, he also served in the OE-A board. Giovanni holds a PhD physics, from Strasbourg University, is a Project Management Professional (PMI) and affiliate professor at the Grenoble School of Management.



laborate and Challenge” to support our customer needs while taking care of employees. This being said, still the focus is on diversity of expertise and backgrounds, but since we have a global pool of new hires, we are hiring a lot of women.

Recently we set up D&I organisation with global head of D&I with sponsorship of our board of management which hopefully will bring even more speed to creating a diverse and inclusive global company.

OPE journal: What could all of us do now to impact change – and how would we measure that?

N. Riegel: I believe the hiring process is the most important factor. I remember a very good boss of mine hiring an intern. The person had almost dismissed a candidate because of the perception that the person did not fit the norm. The person admitted to potentially being biased and invited the candidate for the interview. This intern became the best performing intern in the team.

Bias is “accepted” as normal – in all dimensions. It can involve a different education, age, cultural background or gender. People who are different feel less familiar, and do not connect so easily with others. It is imperative for leaders to make our teams aware that sometimes we are closed to what we do not know. Awareness is the first and a very important step – we are all judgment machines. Step back, smile, rethink, keep the door open and

embrace diversity. The results will then take care of themselves, and be visible in innovation, change mastery and sustainable growth.

C. Versini: We, as women, have to explain to our male colleagues that if they hire men, this is actually very normal. It could be a genetic preference: everybody has this tendency to mingle with people that look like us. This is reassuring for ourselves! And when you hire people, the risk we always imagine is to hire the wrong person. We should rather be thinking about the risk of not picking the ideal person because of bias! In the first case, it is logical for us to go on the safe route and hire the person who will resemble us the most. However, if we stop thinking with our reptilian brain and plug in the rational brain, things change. So stop feeling guilty for something that is a reflex and start being more like a mammal. Stop feeling guilty is the key.

H. Kardan: We cannot and should not want an overnight change. This would create more chaos than benefits. We should rather focus on the ripple effect of having these conversations and follow-up actions. Every drop in the water will eventually become part of a large wave. Finally, we should be aware of our own biases and educate each other on how to deal with them to create a fair environment. This can be done at every level, personally and professionally.

A call for action

Luisa Prista, senior expert on innovation, women in tech & entrepreneurship and formerly a board member of EU associations, imagines printed electronics as a profitable, growing, innovative industry BECAUSE it has integrated more diversity, including more women

What do we know that tech businesses tend to gain when they increase diversity? Which risks are usually decreased?

As we emerge from one of the worst crises in living memory, the opportunities created by novel technologies and disruptive innovations promise to deliver the fair and sustainable recovery that Europe needs. However, the reality is that innovation and tech remain a man's world. The figures speak for themselves. Today, three quarters of start-ups in Europe are founded by men, while only 8% are founded by all-women teams (European Startup Monitor).

This lack of diversity translates into a low amount of capital invested into female-led

and managed companies, resulting in a vicious circle. In 2019, 92% of all funds raised by European VC-backed companies went to all-male founding teams. Furthermore, women inventors account to less than 13% of patent applications and according to the Commission's 2020 Women in Digital Scoreboard, only 18% of ICT specialists are women. There are also huge discrepancies in the number of women leaders and member of boards in the private sector (women form only 4% of corporate CEOs and hold less than 15% of the board roles).

Half the population is being overlooked!

How can we expect to utilise the full potential of new technologies and innovations in Europe, if we overlook half the population? This is a lost opportunity, not only for women but also for Europe and our society in general. There is clearly a paradox here as women represent half of the population, 60% of graduates and make 80% of consumer spending decisions.

Furthermore, a study by EIB showed that women-led enterprises on average perform better in the long run – for €1 of investment raised, women-owned start-ups generate

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€0,78 revenue while male-run start-ups generate €0,31. We also know that diversity is correlated with higher financial performance of private ventures, and at executive level with effective decision-making. Forming mixed teams of men and women in a technological context is also a critical element in increasing companies' competitiveness and returns. Diverse companies are for example 15 % more likely to have financial returns above their respective national industry medians.

Conclusion: Closing the tech gender gap is not only a matter of fairness, but a clear economic, business and societal case!

What can companies do? How do you implement diversity in your own organisation?

- We as a society need to take urgent action in order to improve the current situation.
- The EU is aware of all these unbalances and about the negative impact it will have in our future society that we want to be more green, digital, sustainable and inclusive

We need to act now at different levels: such as policy, funding, advisory, etc. – by raising awareness and support through more soft measures such as coaching, mentoring, role models. etc.

That is why gender equality is at the heart of the European Commission and specifically the new Horizon Europe programme, the European Innovation Council and the Single Market programme, which seek to establish fair, inclusive and prosperous research and innovation ecosystems in Europe.

Some of the concrete very recent actions we are implementing at the level of the European Innovation council and support to SMEs order to close this gender gap are:

- **Women TechEU:** a brand-new initiative that offers first-class coaching and mentoring to female founders, as well as targeted funding (grant of €75 000) to help take their business to the next level. It provides support at the earlier, riskiest stage of companies to increase the number of women launching their own start-ups. Due to the success and high political priority of the programme, this year, we

will be more than doubling the budget to €10M, which we expect will fund around 130 companies (up from 50 this year).

- **EU Prize for Women Innovators** is a prize awarded every year to the most talented women entrepreneurs, who have founded a successful company and brought innovation to the market. With this prize, the EU seeks to raise awareness of the need for more women innovators, and create role models for women and girls everywhere. Three "Women Innovators" each receive €100 000, and another three prizes of €50 000 will be awarded to a "Rising Innovator", an exceptional entrepreneur at the beginning of her career. The prize is now open to applications.
- **EIC Women Leadership Programme** is implemented by the EIC and includes different ad-hoc mentorship, training, community and promotional activities to support female founders and research leaders in their entrepreneurship path.
- A very important part of supporting women entrepreneurs is also the **WEgate platform** – a European women entrepreneurship community of practice. The platform now has over 2000 members from 43 different countries in the EU and beyond.

Encouragement and support from a very young age

We also understand that we need to create actions to encourage and support women and girls from a very young age to choose the STEM and ICT field. This is why, as part of the COSME programme, we recently kicked-off the action "Enhancing digital and entrepreneurial competences in girls and women" with the objective to enhance the digital and entrepreneurial competences of girls and women and boost their confidence to use those competencies creatively to spot opportunities.

We aim at a target of 50% women in all EIC advisory structures (including the EIC Board, remote and panel evaluators).

Further good news refer to our Horizon Europe programme: our €95.5bn research and innovation programme now has new eligibility criteria. To receive EU funding, public bodies, research organisations, and higher education institutions must have a Gender Equality Plan in place.

What can we do NOW?

I believe that in order to be effective we need to implement different actions at the same time, support measures aiming towards women in different phases of their life: from students to innovators, entrepreneurs and leaders. However, I can tell you a story where a small dedicated action had a strong positive impact on one of our programmes – the EIC Accelerator – a programme for highly innovative and disruptive technologies: When we looked at the data, on how much funding we were distributing to women-led companies and how much to male-led companies, unsurprisingly the data was discouraging. We realised that we were funding less than 10% of women-led companies!

In 2020 when running the pilot of the programme, we decided to implement a measure that would prioritise 25% of women CEOs in the last stage of the evaluation process without jeopardising the quality of the proposals. This has led to an increase of the success rate from 6 to 29%, in one year! Of course, we received a lot of scepticism before implementing this measure, e.g., that the quality of projects was going to decrease, that it would not be possible to find so many women to fund, etc. However, in the end, we proved that none of this was true!

As a result, the EIC Accelerator now has an even more ambitious target – to reach 40% of women CEOs to be invited to the final stage of the evaluation process. An interesting fact is also that this measure came spontaneously in a panel during one of the first Women in Tech events we organised in Brussels back in 2019. This just comes to show the importance of having these types of discussions and fighting to move from the status quo. Any action, no matter how small or big it is, if implemented with the right intentions, can make a difference.

A vision for a diverse printed electronic industry

We know that diversity enables innovation, so we expect that printed electronics will reach more industries; integrates other disciplines; develops new products; may be more green and sustainable – and that will facilitate the life of the entire population, in terms of gender and age!