

TALKING IMAGES VOICES FROM THE OPEN FRONTIER OF IMAGING

THE SUSTAINABLE WAY: VOICES OF ACTION

Chiara Davanzo

Welcome to The sustainable way: voices of action a **podcast that speaks about the challenging role of sustainability today.**

To better understand what sustainability is and how to approach it, we collected the testimony of **5 very special guests:**

- Daniele Guadagnolo, young economist and European Climate Pact Ambassador
- Gianvito Vilé, under 35 award-winning researcher and green chemistry expert
- Carlo Ratti, designer, architect, sustainability expert and Professor of Urban Studies and Planning at the Massachusetts Institute of Technology
- Giulia Grancini, Professor of Chemistry at the University of Pavia and expert in Renewable Energy
- Fulvio Renoldi Bracco, CEO at Bracco Imaging

This is Talking Images, voices from the open frontier of imaging, a podcast series by Bracco Imaging.

My name is Chiara Davanzo Zamarian, I'm Brand and Communications Director at Storeis and lecturer of Communication for Sustainability at Il Sole 24 Ore Business School. I am a passionate advocate of the environment.

But what is sustainability?

Sustainability is a journey, is a path with great rewards from which there is no turning back. **It embraces 3 main pillars: social, environmental and economic, that are often referred to as People, Planet and Profits, the 3 Ps.** For this reason, **sustainability represents the synthesis and the intersection between what is fair, liveable and achievable.**

Whichever path we decide to take with regards to sustainability will impact the generations that follow us. That's why we wanted to start our podcast by interviewing **Daniele Guadagnolo** to understand his view on **what sustainability means for the Millennials generation:**

Daniele Guadagnolo

Sustainability is most commonly defined as **the ability to provide for our present needs without compromising the ability of future generations to meet their needs.**

It is also very important for young people, because we have to think about what kind of the world, we want to live in.



Young people are more sensible about this subject because they are aware that, if we do not act now, we will not have a world in which everyone can develop its potential as human beings. This is why many adolescents are concerned about environmental issues, because they know that their future depends on their actions today. The moment to act is now, right now!

Chiara Davanzo

How do the young generations expect sustainable development to be now and in the future? **Taking leadership on sustainability and its challenges is what Gianvito Vilé claims necessary to build the world we want to live in:**

Gianvito Vilé

To me **sustainability means doing our best to leave this planet in a better shape than how we found it.** I work in chemistry, and in my field the action could be to optimize techniques to improve product trials.

Chemical and pharmaceutical companies could optimize the existing manufacturing methods to make them greener, more flexible and digital, and develop processes that reduce the carbon footprint and favour renewable energy and circularity.

We stand up for what we care about. We care for our planet.

Chiara Davanzo

In 2030, the younger generation will be the central working force in society and is expected to make real efforts to create a sustainable future. **Children born today will emit 10 times less carbon during their lifetimes than their grandparents if the world achieves the goal of reducing global emissions to net zero by 2050. That means a total transformation of how we produce, transport and consume energy.**

What can firms and institutions do to improve their path to sustainable development? And what are the most urgent areas in sustainability to take care of in the next 10 to 20 years?

The answer is complex. That is why we spoke with **Carlo Ratti**, we asked him to highlight the emerging trends to understand **where the path towards sustainability will lead us and what we need to care the most.**

Carlo Ratti

When I look at cities, I see many different trends emerging in sustainability: **people are working on the combination of digital and physical, on changing mobility, on development of new materials**, but also in a very important way materials it uses less carbon, sometimes material that embed carbon, so they basically **reduce the total carbon emissions in the atmosphere.** However, if I have to put together all of this under just one umbrella, I'll say that the key trend is the following, is to blend the difference between the natural and the artificial.

One of the things I am particularly passionate about is really looking at all the energy flows in the city, how we heat the city, how we cool it.

For instance, one of the recent projects we did is a project in Helsinki. It was a response to a global challenge announced by the mayor of the city called 'Helsinki Energy Challenge'.

Helsinki has a very interesting system for heating, is a northern capital that needs a lot of heating during the long winter months. And today its heating system is based on what is technically called 'District heating'. They've got the power plant as a by-product of co-generations that also produces a lot of hot water and they run the hot water through the city in order to heat it. However, a lot of the power is produced by coal power plants and the city has decided to decarbonize it. 'How can we heat Helsinki in a sustainable way?'. Our proposal is based on using renewables of course. We're talking about sun, especially wind but the problem is intermittency: you generate sometimes too much, sometimes too little.

And so our proposal is to develop floating reservoirs next to Helsinki, floating in the water, in the bay of the city where we can actually turn electricity, store the heat and use it to run it through the city. In doing this, the archipelago can really provide something you can call a 'formal battery' to heat the city in a sustainable way, but also to provide an amazing experience for people who may want to visit it.

And I think this is a very important point: **the only way we can face the big challenges we face at the global level is if we only do it all together.**

Chiara Davanzo

At the same time, it is undeniable that companies have been facing big challenges while approaching sustainability. Setting goals to reduce carbon footprint, lower their environmental impact and committing to socially and environmentally responsible policies while keeping profitable means embracing change at all levels of the organization and promoting cultural shifts. That is why it is fundamental not only to **establish goals that are measurable**, but also to **place sustainability at the core of the corporate strategy.**

Carlo Ratti

We talked about sustainability at the urban level but clearly there's another angle, the corporate angle, in how companies can play their key role

Whatever you are, in the company working in B2B or B2C, ultimately users are there, **citizens are there, they're the ones demanding change.**

I'd like to add something at the end, in order to look at sustainability from a different perspective, that's actually using my academic hat, that is my role as professor at MIT and Director of the Senseable City Lab. And what at MIT we really see, the new generations coming to university: these are people who will be active in society and make decisions in a few decades. And **what I see is much more interest and seriousness in sustainability.** That's a very comforting message for the future.



Chiara Davanzo

According to **Giulia Grancini**, companies have significant opportunities to improve their sustainable path:

Giulia Grancini

I'm a scientist, so my perspective is very much from a research point of view. My research is very much applied to technology, to solar industry.

My impression is that while many business activities are putting climate action or changes in their agenda, there is always a kind of delay in between thinking and action.

The climate action and all the actions related to sustainability need a gradual change that can be difficult to process.

This I think has to push a change in the mindset also of the business to really think about long term actions.

Another point is the sharing, it's not one industry, but there should be shared policies. I think that policy makers should define for industries to go towards the same direction.

The current and most urgent sustainability trends must include a reduction of the energy consumption and transition to a new paradigm for renewable energy.

10 billion people need energy by 2050, so we really need to provide new alternative clean energy sources with reduced environmental impact. Reducing the dependence on fossil fuels. This is really an urgent thing.

Renewables now make up 10/15 % more or less of energy demand but the renewables industry has to make an impact with a potential to cover up the 40% of the global energy needs by 2050. This is a really huge challenge which I think science, researchers and technology has to take.

I believe that this starts from education. As part of my role and as a professor in the university, I think that **education and training to the youngest generations is crucial to develop mindset towards sustainability.**

Chiara Davanzo

An interesting **example of a company that has been approaching sustainability with a serious commitment is Bracco Imaging, which has set an ambitious plan to generate a positive impact throughout the value chain and improve people's lives.**

We asked **Fulvio Renoldi Bracco** to explain the vision that inspired the company to take this journey:

Fulvio Renoldi Bracco

Our key purpose and our main priority is People's health and well-being. So all of our values are leading us towards these goals. **Our passion for business is characterized by attention towards people and safeguarding health is the spirit of our innovation to guarantee wellness.**



We practice sustainability because it is the basis of our value system, and this is reflected in our Code of Ethics. As our young people here, Vilé and Guadagnolo, have said, we have an obligation to leave our children with a better environment than the one we inherited. **This is what building the future really means to us.**

The path to sustainability cannot be undertaken without the contribution of younger generations. We often have the illusion that we need to be the driving force, but it is the new generations that lead and become new role models. I think about this when I look at my children. I understand that **sustainability it's a vision of progress that both societies and companies have to embrace and pursue**, and for them, is embedded in the way they live, and they look at things every day.

So, **it's imperative that we take care of the entire ecosystem:** this includes creating a sustainability consciousness in our employees and also motivating them to apply it, because only with the contribution of each of us can we reach those ambitious and difficult goals.

Chiara Davanzo

Setting ambitious goals means facing challenges that help you propelling forward to achieve better performances.

Fulvio Renoldi Bracco

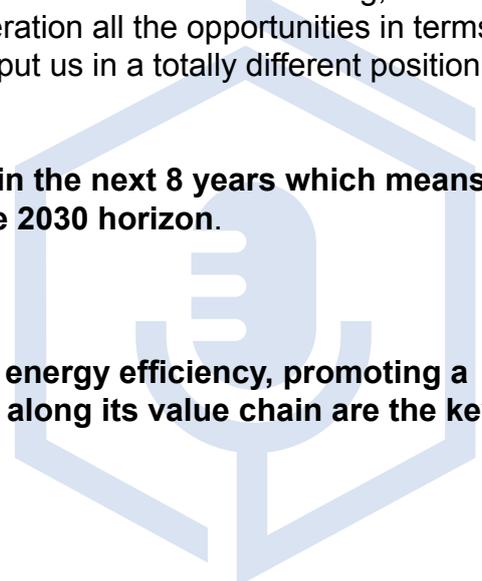
This year we further strengthened our commitment towards sustainability, in line with the path that we started in 2019, developing a concrete Sustainability Plan. Because **the foundation of a good sustainability plan is on one side to really understand where we are and then look at opportunities and new ideas** that we can implement **to radically change and improve ourselves.** So it took a little bit of time, but at the same now I can say that we have an essential and practical tool that allow us not only to monitor and to measure what we are doing, but also that allow us to look at the various areas, taking in consideration all the opportunities in terms of new technologies and in terms of new ideas that would put us in a totally different position in the next 10 years.

The strategy is to **become a fully sustainable company in the next 8 years which means that we have the ambition to realize our plan within the 2030 horizon.**

Chiara Davanzo

Reducing emissions and waste generation, improving energy efficiency, promoting a circular economy approach and responsible practices along its value chain are the key drivers in Bracco's sustainability strategy.

How does this translate into practice?





Fulvio Renoldi Bracco

Here we have to go a little bit more into technical, I'm thinking about **3 practical examples** that either we have already implemented or we are in process of implementing now at Bracco.

The first one is an example of Circular Economy and this is applied to our Ceriano Laghetto site. The manufacturing of our diagnostic imaging molecules implies the use of very relevant raw material. The most important one is iodine. So the goal here was to ensure that we develop a new process to get to the highest possible recovery of iodine, that is not used in the manufacturing of the product. This gives us a double benefit: it allows us to recover an essential and valuable raw material and then it also allows us to reduce very significantly any residual volumes from the production process that would otherwise be wasted. The iodine recovery system that we have engineering, provides for a specific network for the collection of wastewaters from the production process, which potentially contains residues of the molecule. And that was the main challenge.

The waste is then treated through a filtering membrane that separates the residual molecules of the active ingredient, containing iodine, from the wastewater flow. This means that it is capable of retaining molecules the size of a DNA double helix. So the molecules in this solution are then "split" in an acidic environment, to have free iodine that is then trapped in a bed of activated carbon, which allows it to be recovered and reused.

Chiara Davanzo

But what is the impact we can expect from a project like this?

Fulvio Renoldi Bracco

Now clearly the process is going to be even further perfected, but today thanks to this project we estimate an annual recovery of over 87% of the iodine that otherwise we'll have lost. This implies a direct benefit on the Earth's energy balance as well.

Chiara Davanzo

Another interesting example comes from the **recovery of solvents and drying of sewage sludge**.

Fulvio Renoldi Bracco

In API (Active Pharmaceutical Ingredient) plants, when there isn't the option of using water, we have to use organic solvents, and this is absolutely a common practice in the production process. **Thanks to the Best Available Technology and a constant study of new processes, we are able to significantly increase recovery of these substances over time.**

As an example, in Ceriano Laghetto and Torviscosa, the 2 main plants Bracco manufactures all the active ingredients for X-ray and MRI contrast agents, the recovery percentage at this time is



93% and it is expected to rise further thanks to the development of new internal processes and the application of innovative technologies improving also energy consumption. So furthermore, the synergy between the solvent recovery system and the industrial wastewater treatment system has led to the development of a sewage sludge dryer at the larger of the two plants, Ceriano Laghetto, which has resulted in a 70% reduction of sludge disposal.

This process does not consume any extra energy because all of the thermal energy needed for the drying process comes from the heat generated by the solvent recovery systems themselves.

So the impact is evident and it allows us to significantly decrease transportation, leading to a further lower impact on our carbon footprint.

Chiara Davanzo

Energy redevelopment of buildings is another important field of application in sustainability to lower a company's environmental impact. Bracco has recently taken the challenge with the renovation and energy refurbishment of its HeadQuarters in Milan.

Fulvio Renoldi Bracco

I would like to cite an example that ties us to what our experts say like Carlo Ratti and Giulia Grancini in terms of new cities and quality of life, and this is the Bracco's new HeadQuarters project.

The renovation of the historic Bracco headquarters in Milan has been completed using the most recent and innovative systems in terms of sustainability and energy efficiency. All the renovations were done with an eye to minimizing the impact on the surrounding environment, starting with the building shell that uses materials in line with the CAM environmental criteria guidelines as well as the use of renewable energy sources. Here we're talking about groundwater for the production of hot and cold transfer fluids and also solar energy for electricity, the idea of optimizing external air supply, modulated by the presence of sensors, the use of recovered rainwater. All this combines the health and comfort of our employees, with the functionality required by each area and a system that allows us to save energy by prioritizing its utilization.

Chiara Davanzo

At Bracco, sustainability is a concept they advance across their business and because it is the right thing to do for the environment, the supply chain, and the world's consumers. What makes up their approach to sustainability is continually evolving, but sustainability has always been at the core of their 95-year-old business.

Not only companies, but us, as individuals, have a huge responsibility towards the world we live in: we can support businesses that incorporate sustainable policies in their business model or ask for more transparency and a clear communication of goals and actions undertaken by governments and firms to reduce their environmental impact.



Our priority should be to be more aware and informed and make our behavior and consumption choices act accordingly.

You may think your individual power as a consumer is small, but groups of people can make a huge difference.

Thank you for joining us! And thanks to Daniele Guadagnolo, Gianvito Vilé, Carlo Ratti, Giulia Grancini e Fulvio Renoldi Bracco for being with us.

This was Talking Images, a podcasts series by Bracco Imaging. From Chiara Davanzo is all, goodbye and see you soon!

