

Bocconi

SUSTAINABLE DIGITAL

THE ROAD TO A MORE
HUMAN FUTURE.

ADDRESS FOR THE ACADEMIC YEAR
OPENING CEREMONY 2021-2022

TOWARDS A SUSTAINABLE CAPITALISM IN THE DIGITAL CENTURY

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Bocconi. Knowledge that matters.

OPENING OF THE ACADEMIC YEAR 2021-2022

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INTRODUCTION

Since their birth, economics, business administration and the social sciences as a whole have critically questioned themselves on the fundamental issue concerning the impact of capitalism on society.¹ I believe no one can question that capitalism has been the main source of prosperity in modern human history. It is equally evident how its specific functioning over the last two centuries has produced a series of implications which today require a profound rethinking.²

For this reason, since the end of the twentieth century a large group of scholars in the various branches of the field of Economics and Management have dusted off some central values regarding a more enlightened notion of entrepreneurs and of economic actors in general.³ These notions were certainly not lacking in the first writings of moral philosophers and scholars of industrial enterprise, but they have been gradually abandoned in favor of the strict liberalism that produced the globalization we know today.⁴

Although of growing interest in the last twenty years, these studies, which are associated with the word "sustainability", have until now represented a minority of thought with an important original sin: the fact of presenting a normative vision of the main engine of capitalism, the company, rather than a positive vision, as science requires. Consider, for example, the so-called "stakeholder theory" – that is, the importance and inclusion of the company's stakeholders with respect to shareholders in defining its objectives and operations. Although it has been hoped for since the earliest writings on business administration, in operational reality it remained a fantasy for a long time – just take a look at the composition of the boards of directors of most companies in the Western world. Think also of the important effort of many institutions aimed at producing social and sustainability reports: these are the result of the innovative but makeshift efforts of individual companies, without clear guidelines that certify their quality.

There have been a few important media moments including above all, the famous call to arms in 2018 by Larry Fink, CEO of BlackRock, for a company that places "purpose" at the center of its objectives; the Business Roundtable which in the summer of 2019 led 250 managers of US multinationals to sign an agreement on the relevance of stakeholders to shareholders; the 2020 cross-sector initiative of the European CEO Alliance which signed a 55% reduction in carbon emissions for 2030. Otherwise, sustainability has represented a desire rather than mainstream behavior. On a more macro level, Thomas Piketty's cry of pain, also in his recent works, as well as the awarding of the Nobel Prize in 2019 to Development Economists, Professors Duflo, Banerjee and Kramer, have certainly produced interest and attention, but they do not appear to represent a definitive shift in perspective.⁵

If this is the starting point, there are nevertheless three recent events that must help us to make the issue of sustainability central in the context of a new vision of capitalism – a capitalism that we like to call sustainable capitalism. Two of them represent a major threat to humanity, the third an extraordinary opportunity.

¹For all: Smith A. 1776/2008 An inquiry into the nature and causes of the wealth of Nations. Oxford University Press (and Katherine Sutherland). Drucker P. 1946/1993 The concept of corporation. John Day.

²See, among others, Henderson R 2020. Reimagining capitalism in a world on fire. Public Affairs, New York.

³For a summary and comparative analysis see Matten D. Moon J., 2008 Implicit and explicit CSR: A conceptual framework for a comparative understanding of corporate social responsibility. Academy of management review, 33: 2.

⁴One bearer of this enlightened vision is Schumpeter J.A. 1934/1984 The theory of economic development: an inquiry into profits, capital, credit, interest, and the business cycle. New Brunswick, New Jersey.

⁵Piketty T. 2014 Capital in the 21st century. Belknap Press, Cambridge Mass; Picketty T. 2020 Capital and Ideology. Harvard University Press, Boston.

The first concerns the growing awareness of the consequence of industrial activity with respect to the stability of the planet's climatic system. Today we have all become aware that in the century of mass production and globalization, the temperature of the globe has increased by one degree Celsius, above all due to the mass industrialization that took place in the period 1950-80. If we care to include the first industrial revolution in the nineteenth century, we must also add a 0.15-degree increase compared to what happened for millennia before then.⁶ And that if we extrapolate what has been done in the last five decades without taking any action, by 2050 the temperature of the globe will increase by 4 degrees. The solution to the climate change problem cannot be extended, as emerged from the complex negotiations undertaken during the recent COP26 and earlier during the G20 meeting held in our country.

The second concerns the pandemic induced by SARS-CoV-2. For the first time in the recent history of humanity, the spread of a virus on a global scale has forced all industrial countries to a substantial lockdown, on the scale of the wartime periods remembered only by the generations that lived in the first half of the twentieth century. The pandemic exposed, first of all, the fragility of the international health system and the growing challenges that the global world poses to medicine and public health; but it also highlighted the non-sustainability of global production chains, built on a sometimes exploitive division of world labor. We are aware that this virus was not the first to put the industrial world in difficulty – recall the recent SARS outbreak which intensely affected 17 industrialized countries, mainly in Asia. Even more significantly, we know that unfortunately it will not be the last, and this awareness pulls us strongly toward a conversion of thought.

But, in the face of these two threatening factors, a third cause heralds profound opportunities for the future of our society: the presence of digital technology based on information and knowledge. This allows us to employ a new infrastructure of knowledge to seek effective and real-time solutions to the problems that an increasingly complex world poses to society. The digital transformation is in fact flooding us with great quantities of data, thanks to which we are becoming better at measuring the macro and micro phenomena that allow us to imagine innovations that can rewire the strategic and organizational processes of our institutions. We can thus reduce the polluting impact of the current global organization of standardized supply chains that are no longer sustainable. More generally, digital transformation, which allows information to be transformed into knowledge, represents the infrastructure on which to design the industrial future. An excellent example of this is the coordination required to deal with the recent pandemic and the vaccine solution at a therapeutic level. The ability to share protocols and data has allowed hospitals around the world to find more or less effective solutions in real time. Pharmaceutical companies were enabled to reduce to 8 months the production of a vaccine that until a few years ago would have taken 10 years on average.

These three epochal events quickly lead us towards a sustainable capitalism, to achieve which it is necessary to rethink the work of the company. From an analogue profit production machine driven by *homo oeconomicus*, the company evolves towards a sustainable enterprise resting on a digital infrastructure and aimed at economic and social values. That is, a company that increasingly combines profit with purpose – the term that has emerged in the last five years as a bridge between business and society, between private and public interest, between the mechanical and rational soul of finance and industry and the beating heart of stakeholders and territories. Purpose, writes Ranjay Gulati of Harvard, must arouse passion and unconditional involvement. To do so, it must be authentic and elicit the natural compromises that it implies compared to traditional work so that they can be discussed and resolved.⁷ The task is very difficult, but not impossible in the short- to medium-term. The task is difficult because material investment involves costs and financial investment. In fact, sustainability is not a gala dinner: it is necessary to change plants to reduce emissions; write new protocols that pay attention to rules we are not used to; and learn new tasks to work differently. For consumers, too, sustainability requires some sacrifices that we must make – it is more convenient to continue using polluting products than to bear

⁶<https://climate.nasa.gov/evidence/>

⁷Gulati R., Deep Purpose. The heart and soul of high performance companies. Harper Business. Kaplan S. The 360 corporation. From stakeholder trade-offs to transformation. Stanford University Press.

a cost for those that pollute less. Think of the consumer who owns an internal combustion car and who, in addition to the investment in a hybrid or electric car, must also change behavior to find a way to refuel with the new energy that is not yet widespread in the country's infrastructure.

The task is also difficult because in order to be able to tackle it in a scientific way from an economic point of view, clarity is needed on the measurement and impact of phenomena – research that needs to be accelerated in the short term. As mentioned, the initiative on issues related to purpose and sustainability reports is currently left to the sensitivity and autonomous efforts of corporate boards. It is, however, advisable to quickly aim for a shared synthesis at European and international level – for example, there are more than 400 standards by which corporate sustainability can be measured. These standards must be summarized in order to associate the environmental and social sustainability of companies with their financial solidity. That will allow auditors to carry out a correct control and investors to adequately judge the performance of the companies. It is therefore very positive that the IFRS (International Finance Reporting Standard) is working in this direction to achieve this fundamental objective in the short to medium term.⁸

But the task is not impossible for two reasons: the incentives available and the new cohorts of workers and consumers.

In a moment of maximum financial liquidity, the demand for innovation is high and the world of finance seems increasingly sensitive to the issue of sustainability, further expanding the reach of the incentives included in the Next Generation EU Fund. In fact, now it is thanks especially to the PNRR that we are finally at a decisive step for our country. Furthermore, the data confirm that those who know how to integrate sustainability into investment and corporate strategies will see an impact over time that is destined to improve performance and market value. A series of studies conducted since 2016 by Harvard Professor George Serafeim⁹ and a team of colleagues gives all companies – large, medium and small – an important indication. Those who invest in “material sustainability”, that is, those who take concrete actions in the three areas described above, obtain a higher impact on corporate performance in the medium term than those who do it simply for image. That is, whoever manages to integrate a significant dose of sustainability into business processes and production and commercial strategies will find an important market value over time. Of course, this also applies to investors, who get a higher return if they allocate their savings to portfolios linked to companies focused on material sustainability.

A second key factor are the new cohorts of workers and consumers. In fact, this reversal in favor of sustainability is also due to the extraordinary contribution of Generation Z (born in the new millennium), with their tastes markedly different from previous cohorts. Movements such as Fridays for Future have amplified the unquestionable voice of science and have peacefully prodded politics with the slogan of “Blah, Blah, Blah”. And, even more decisively, Generation Z in the company of millennials (those who were about 18 in 2000) are pushing the market for sustainable products to replace polluting ones and are looking for jobs that reflect preferences and tastes consistent with the new challenges. A company that wants to grow cannot underestimate these stimuli.

What is missing then? The stone guest is our political and corporate will to innovate in this direction. The competences of the sustainable enterprise must bring together areas that are often distant from each other – materials engineering and economic implications; digital behavior and legal impact; environmental science and the art of politics. We must set them up by mixing experts in the corporate functions responsible for managing sustainability and we must give these functions not only visibility but centrality of action. It is essential to help schools and universities to teach them from the beginning of the educational path, which at present does not happen. Very positive are the indications contained in the PNRR and the declarations of Ministers Bianchi and Messa on the subject of specialized and

⁸<https://www.ifrs.org/news-and-events/news/2021/11/ifrs-foundation-announces-issb-consolidation-with-cdscb-vrf-publication-of-prototypes/>

university education that are increasingly technical but at the same time interdisciplinary. We need to get well along this path quickly.

At this point, therefore, it is up to all of us, consumers, shareholders, investors, managers, and policy makers to take the necessary leap to make the world better, as is also required by the contract we signed with Europe for our children. Only in this way will it be possible to advance the "net zero emission" goal of 2050 and contribute to an epochal transition also in cultural terms.

The Role of the Bocconi Community

We can assert that Bocconi has the DNA of sustainable capitalism in its legacy. Born from the will of a successful entrepreneur at the beginning of the twentieth century, with a donation that represents the quintessence of giving back to society, our university aimed to train professional figures that did not exist at the academic level, but were central in the nascent Italian industrial world. In a professional world then composed only of doctors, jurists and engineers, **Ferdinando Bocconi** addressed the women and men of the world of commerce and administration. Those people who would be fundamental during the second industrial revolution of mass production that was putting down roots in those years at the turn of the century. The ambitious nature of their education resulted in a degree course in Economics and Business, which in 1906 produced the first graduates.⁹ The vision was to go beyond simple entrepreneurship and administration, creating a course of study that insisted on theoretical elements and implications for society as a whole. That is, a social science course.

But, not only that: the students' goal was precisely to impact society in a positive way. The first Rector, **Leopoldo Sabbatini**, wrote in a letter:¹⁰

"He (Ferdinando Bocconi) felt that the decline of each young person coming out of school was not indifferent to him, but each one had to – if necessary with his contribution and with the aid of the specific knowledge he had about it – to be employed at the right place and not only in their own interest but also for the formation of that army destined to fight the battles of the national economy in all the squares of Italy and of the world. The university had not only to teach, but to take on the protection of the young. That conception of the school whereby everything is fulfilled by teaching alone, and which in turn impoverishes the culture of the world, losing sight of the most vital purposes of science, and that equally narrow and equally miserable concept of practice must have no place in this school. The young person who enrolled in it did not stay there for more than four years to then become totally alien to it, but had to feel connected for their whole life."

Seventy years later, in the period between the sixties and seventies, fueled by industrial tensions with the world of work, always in the name of sustainability, the first professional school of management in Italy was born: SDA Bocconi. The group of very young professors who with the support of the top management of Bocconi University created SDA Bocconi in 1971 thought of a post-graduate school project that could offer first Italy and Europe and later the world – the productive world, companies and institutions – a place in which to train a competent management class. It would be open to the world, capable of guiding development and facing the great challenges of society and the economy. Aware of this challenge, **Claudio Demattè** and the young colleagues who worked with him to build and launch SDA Bocconi imagined a different management school, capable of grasping the spirit of the times, combined with the continuous challenge for modernity and progress, able to project its contribution far beyond the walls of the classroom.

To reread it today, the extraordinary manifesto with which the School was launched is the futuristic expression of an innovative institution grasping the challenges of its time but also projecting them into the future:

⁹Bocconi Yearbook of 1902-03

¹⁰M.A. Romani, "Costruire le istituzioni " Leopoldo Sabbatini (1860-1914), Rubbettino Ed. 1997.

"A school of management serves the community when it operates in the constant tension between the need to prepare for the practice of a profession and the need to produce constructive criticism for the search for more just economic and organizational structures."

Affirming the collective identity of the School in the tension between the strength of preparation for leadership roles and the need to observe the economy and businesses through critical thinking remains still today an extraordinary lesson and a timeless vision.

As with SDA Bocconi, the birth of the Institute of Legal Studies and then of the Department of Legal Studies and of the School of Law in more recent years also follows this path. They maintain a balance by which students are not only vertical in their disciplinary knowledge but are able to interact with the world of social sciences that surrounds them and that contributes to their impact on society. As **Angelo Sraffa**, to whom the Department is dedicated, clearly points out:

"The devaluation of the work and function of jurists always coincides, in history, with the decline of civil thought and with the obscuring of political freedoms. When the method of jurists is reduced to a cold and sterile study of cases, unworthy of the name of science, and the study of law to summarily learning the norms in force, society, as a rule, either comes out of a crisis or is about to enter one."¹¹

Human Capital

Thanks to this strong base, today's Bocconi stands ready to accept the challenge of sustainable capitalism thanks to human capital, professors and students whose quality is constantly increased and certified by all the main indicators.

- *The Faculty*

Today Bocconi can count on an international, quality faculty that covers the entire field of social sciences. A teaching staff that represents a point of reference in the academic world, so much so that Bocconi is today one of the most attractive universities for young researchers who, after earning their PhD in the most prestigious schools in the world, choose Bocconi to start their career. Even professors who already cover senior positions decide to come to Bocconi, attracted because they find a stimulating environment here that supports scientific production at all levels.

And 2021-2022, the year we are inaugurating, is a year of records in terms of the number of new colleagues. Thanks to the work coordinated by Professor **Francesco Billari**, Dean of the Faculty and by our department heads, out of a total of 29 new faculty there are six Associate and Full Professors who have joined us:

- **Francesca Franco**, London Business School
- **Remus Ilies**, National University of Singapore Business School
- **Alon Rosen**, Herzliya Interdisciplinary Center (Israel)
- **Botond Szabo**, Amsterdam Free University
- **Sara Valentini**, University of Bologna
- **Zhao Wanli**, US Securities & Exchange Commission

And 23 Assistant Professors:

- **Grace Ballor**, European University Institute
- **Jan Bakker**, University College London
- **Andrea Celli**, Facebook Core Data UK

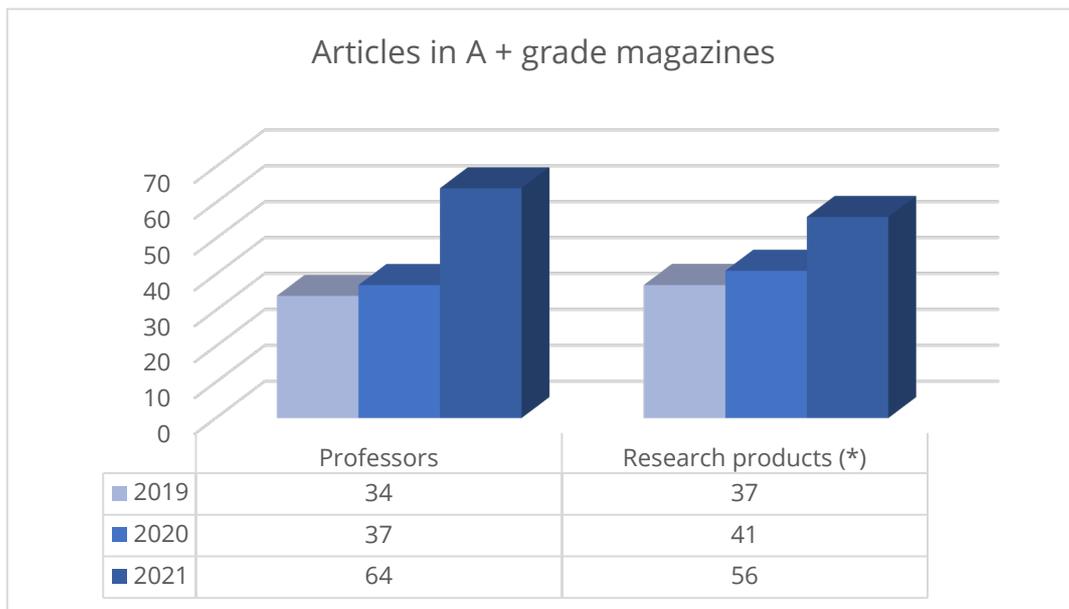
¹¹Angelo Sraffa, "La riforma della legislazione commerciale e la funzione dei giuristi", 1913.

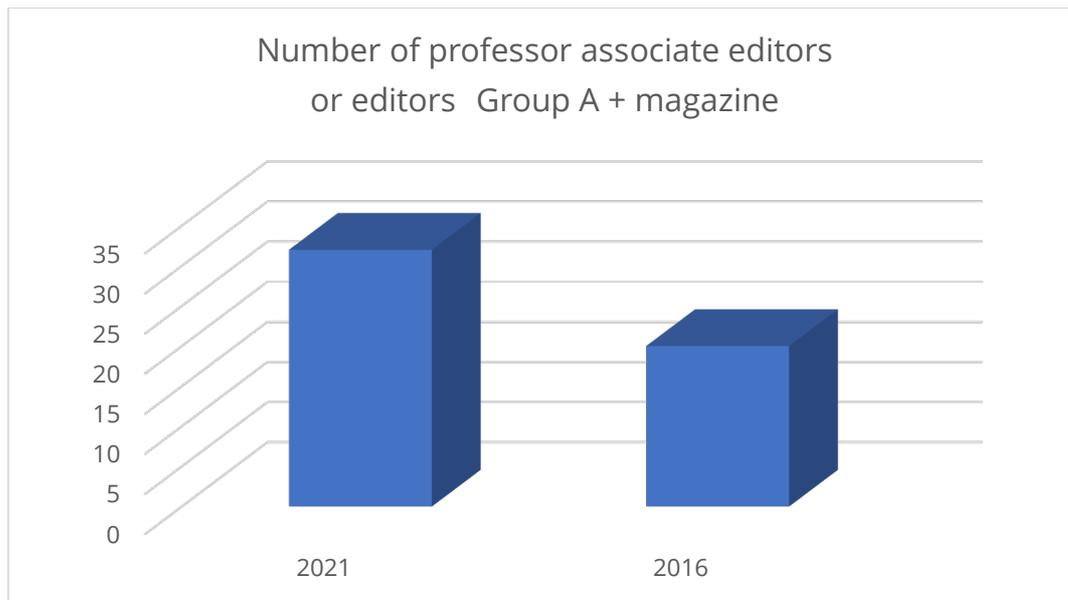
- **Annie Cohen-Solal**, Self-employed author
- **Carlo D'Augusta**, Middle Tennessee State University
- **Anwasha De**, Kelley School of Business, Indiana
- **Antonio De Rosa**, New York University
- **Marek Elias**, CWI Amsterdam
- **Miguel Espinosa**, Universitat Pompeu Fabra
- **Moritz Heimann**, Columbia Business School
- **Aldona Kapacinskaite**, London Business School
- **Colin MacArthur**, Northeastern University
- **Enrico Malatesta**, Sapienza University of Rome
- **Pier Vittorio Mannucci**, London Business School
- **Tim Martens**, Cass Business School, London
- **Stephen Penman**, Columbia Business School
- **Matthias Rodemeier**, University of Chicago
- **Qiaoni Shi**, University of Pittsburgh
- **Tommaso Trincherà**, Bocconi University
- **Marton Varga**, INSEAD
- **Lynn Wang**, Hong Kong University of Science and Technology
- **Scott Williamson**, New York University
- **Heather Yang**, MIT Sloan School of Management

Following these entries, today the core faculty is made up of 398 professors (+ 16% compared to 2016) of which 23.6% have an international passport (+ 55.8% since 2016) and a third, 31.2% are women, in line with the leading social science universities around the world.

Even more important, however, are the numbers that attest to the absolute quality of this group of researchers. The three main indicators referring to scientific production (citations, H Index and number of articles published in range A+) have been constantly growing in recent years.

The number of scientific articles published in A+ journals is especially significant, as is the number of authors involved and professors who in the same journals were called to fill the role of Associate Editor or Editor, as can be seen from the graphs below:





The Dean for Research is Professor **Jerome Adda**.

- *Students*

Just as Bocconi is attractive to professors, it increasingly acts as a catalyst for the new generations who want to study the social sciences. The constant increase in applications (compared to 2016-2017, for this academic year we received 54.6% more applications, and almost 120% more among international applicants) allows us to make an increasingly rigorous selection, raising also the quality of students at the point of entry. If the selection rate is 1 out of 5 for our Bachelor programs, it reaches 1 out of 20 for doctorates where this year 50 candidates out of the roughly 1,000 who had applied were admitted. Our thanks for all this go to the School Deans, Professor **Annalisa Prencipe** (Undergraduate School), Professor **Pietro Sirena** (School of Law), Professor **Antonella Carù** (Graduate School), Professor **Andrea Fosfuri** (PhD School) and the Dean for International Affairs, Professor **Stefano Caselli**, as well as our Guidance and Recruitment service.

Today Bocconi has around 15,000 students, 21.2% of whom are international and account for 40% of students in the programs taught in English. Exposition to this international cohort contributes to forming an increasingly open-minded and global generation, which at the time of graduation 75.1% is already employed (of which about 35% abroad). Despite the slowdown in the labor market, the percentage of our graduates according to the latest survey confirms that 93.6% are employed one year after graduation.

Almost 15,000 professionals and managers attended its SDA Bocconi physical and virtual classrooms this year on a total offer of 141 open programs, of which 10 international, and 466 custom programs, of which 128 international. Our School of Management, headed by Professor **Giuseppe Soda** and his team, is one of the leading European Business Schools, the only Italian presence in the top positions of the world rankings on all segments in which it operates, post-experience Master training and Executive education.

Recognition

Two important moments of recognition obtained in 2021 cite the quality of the Bocconi model, which since its foundation has worked to build a sustainable institution aiming at continuous innovation, internationalization and quality of its human capital:

- The QS World University Ranking places us 16th in the world and 4th in Europe for Social Sciences & Management.

- SDA Bocconi, in addition to being among the 0.5% of schools in the world to have obtained triple accreditation from the leading international assessment bodies (AACSB, EQUIS, AMBA), has completed the assessment process promoted by EFMD Global and thus obtained the BSIS - Business School Impact System, joining the small group of BSIS-Labeled Schools.

DIGITAL FOUNDATIONS

Like steam during the first industrial revolution and electricity during the second, digital is a "general purpose" technology as defined by technology economists, whose impact is horizontal across all sectors of production and human life and for this in turn heralds an industrial revolution. Digital is substantially changing the skills of traditional jobs by opening up new perspectives and professions, but also new needs for regulation. With the amount of data it produces and is able to read, digital is strongly impacting every field of knowledge, accelerating its advancement. Plus, it is a virtuous circle from whose interaction benefit both AI and the scientific disciplines in which it finds fertile ground for its application. Of these, the social sciences are among the most promising.

Digital represents the infrastructure of sustainable capitalism, and Bocconi has internalized it by strengthening and transforming across five years our way of doing research and teaching.

Teaching

Our actions were driven by the awareness of how crucial it was for the future of society to train future leaders by giving them solid methodological knowledge and technical skills that remain relevant regardless of the evolution of technologies. For this reason, on the educational front we have operated both by enriching our traditional programs with courses related to the field of Computer and Data Science (of which the introduction in 2017-2018 of the Python course – which led to the renaming of coding, the new English – for all our students is only the most macro example), and by proposing new courses of study:

- 2016-2017 Bachelor of Science in Economics, Management and Computer Science directed by Professor **Emanuele Borgonovo**.
- 2018-2019 Master of Science in Data Science and Business Analytics directed by Professor **Alessia Melegaro**.
- 2019-2020 Master of Science in Cyber Risk Strategy and Governance, (with Milan Polytechnic) directed by Professor **Greta Nasi**.
- 2019-2020 LLM in Law of Internet Technology directed by Professor **Oreste Pollicino**.
- 2020-2021 Bachelor of Science in Mathematical and Computing Sciences for Artificial Intelligence directed by Professor **Riccardo Zecchina**.
- 2020-2021 PhD in Statistics and Computer Science directed by **Professor Antonio Lijoi**.

Digital has not only changed course content but also teaching methods and equipment. And once again the Covid-19 pandemic and the need to avoid interrupting the relationship between university and students acted as a driving force for a change already underway. The last year therefore saw certain transformations in the teaching and learning process, including:

- Strengthening the need to create a new digital learning environment.
- The spread of the blended model (with respect to pre-2020 face-to-face teaching and fully online teaching, which characterized the lockdown period of the pandemic).

In this context, under the guidance of Professor **Leonardo Caporarello**, director of BUILT, Bocconi University Innovations in Learning and Teaching, we launched the BEL22, Bocconi Elearning 2022. This didactic and learning innovation program aims to prepare and support our university in the evolution

of its teaching model, in order to effectively include the digital dimension that determines our future teaching and learning experiences in an increasingly significant way. In the course of 2021 we have thus implemented new solutions both in terms of structure (hardware) and tools (software). I would like to mention a few examples:

- The adoption of Blackboard Ultra to improve the teaching experience and in particular the dynamics of interaction (online and offline) with students.
- The creation of the Faculty Training HUB, a digital knowledge base where it is possible to find all the resources, training opportunities, and support for the faculty for the management of the hybrid classroom as well as methodological suggestions and experiences to rethink their teaching.
- The empowerment of our classrooms in terms of digital media which sees its maximum expression in the new immersive room, operational from next calendar year. This classroom responds to the search for new ways of engaging, socializing and immersive experience, for effective and exciting learning without borders, combined with cutting-edge teaching. It is a classroom that can be experienced in person, remotely and in both ways at the same time. The classroom has a circular design and thanks to the presence of a video wall and 12 screens, the 24 students in attendance and the instructor will be able to interact with anyone following remotely and with any guests also thanks to a Hologram space.
- The development of simulations and business games, through the use of web interaction tools, with the purpose of creating inclusive experiences. In the last year in particular, three live business games have been developed (Start Up Legend; Up to You role play; Ultimatum Game) and four other web interaction tools are being released (Start up Legend 2.0 - Hint Hunter; Kaleidoscope; ICU - I Convince You; ILM - Teaching Monitoring). Overall, over 1,600 students participated in simulations / business games while 2,800 students used multimedia case studies in 2021.

Research

The big push in teaching methods and in the creation of new programs with strong Computer and Data science content was only possible because at the same time Bocconi has also strengthened its human capital level in these fields, helping to produce new cutting-edge knowledge. Today, computer science researchers, theoretical physicists, and computational neuroscientists sit alongside economists, management experts, jurists, political scientists and professors working in other social sciences in the Bocconi Faculty Council. They have been talking and collaborating since 2016, in particular within BIDSA, Bocconi Institute for Data Science and Analytics, directed by Professor **Igor Pruenster**, which is divided into four units: ArtLab Artificial Intelligence Lab; Data and Marketing Insights; Bayesian Learning Lab; and Blockchain Initiative.

During the last academic year, Bocconi obtained two ERC Grants related to digital (in total, 40 projects have been funded since 2007, when the European Research Council was founded, of which 22 are active in this academic year):

- CoDim, Competition in Digital Markets by Professor **Francesco Decarolis**.
- INTEGRATOR, Incorporating Demographic Factors into Natural Language Processing Models, by Professor **Dirk Hovy**.

Interest in the topics of artificial intelligence and machine learning is an interest that Bocconi shares with partners eager to develop knowledge and meet new talents in these fields that are increasingly relevant to the areas in which they operate. In fact, in recent years, three professorships have been created thanks to the contribution of our supporters:

- The Amplifon Chair in Customer Science entrusted to Professor **Gaia Rubera**, inaugurated this year, aims to deepen the understanding of customers and their purchase and loyalty paths through the most advanced computer science and artificial intelligence tools.
- The Vodafone Chair in Machine Learning and Data Science entrusted to Professor **Riccardo Zecchina**, inaugurated in 2018, whose research area is the use of data science and machine learning to analyze large amounts of data and extract information. These methods can be used successfully in all fields of quantitative knowledge, from the natural sciences to the social sciences and economics. The development of learning algorithms for "Deep Neural Networks" (structures that mimic the functioning of the human visual system), is one of the most advanced in this field.
- The BNP Paribas Chair in Marketing and Service Analytics entrusted to Professor **Andrea Ordanini**, inaugurated in 2018, aims to study the evolution of the customer experience in the service sector following the introduction of new technologies and the construction of new analytics to evaluate different stages of the customer journey.

In addition, the agreement with the Algorand Foundation for the creation of the Algorand Fintech Lab within the BAFFI CAREFIN Center for Applied Research on International Markets, Banking, Finance and Regulation, is newly established under the guidance of Professor **Claudio Tebaldi**. The research activity of the lab will focus in particular on 4 areas:

- Central bank digital money, monetary policy and macroeconomics.
- Crypto-assets and financial markets.
- Fintech, financial institutions and services.
- Blockchain and society.

The activity of the Algorand Fintech Lab will be central to the fields of:

- The digitization and re-bundling of money and payment platforms.
- The impact on banking and asset management institutions of the industrial reorganization of financial assets.
- The impact of Smart Contracts and Blockchains on the organization of production and value chains.

The Department of Computing Science

The crowning achievement of Bocconi's five-year journey is the establishment of the Department of Computing Science starting from the spring of next calendar year. Today, we have an international and diverse group of faculty engaged in computer science research, the development of innovative information technologies with wide-ranging applications, including applications to AI, health and recognition sciences, and digital society who apply computational thinking to the mathematical, physical and life sciences, with an awareness of the ethical aspects and social consequences of technological innovation.

The team of professors at the new Department has made it possible in recent days to join ELLIS, European Laboratory for Learning and Intelligent Systems, which brings together the best academic resources to promote the development of AI and machine learning in Europe. Bocconi, together with the University of Milan, Milan-Bicocca and Milan Polytechnic, has been accepted as a Unit of this association making Milan one of the major European scientific centers in the field of AI and machine learning. There are four lines of research on which over 40 scientists from the four universities are working together: interactive machine learning, which studies the interaction of an algorithm with the environment; neuronal networks and deep learning; health and computational biology, which applies AI to medicine; and the use of AI for natural language analysis and processing.

PRINCIPLES OF ESG: FROM THEORY TO PRACTICE

If digital represents the infrastructure of sustainable capitalism, its beating heart is based on ESG principles. These principles, applied to a university that makes the impact of knowledge its motto, naturally represent a field of study (for research and dissemination of knowledge) and a terrain on which to grow good practice and behavior at both the individual and community levels.

Bocconi has included these objectives in its Vision 2030 and in its five-year strategic plan that came into effect this year. It did so thanks in good part to the support of the Sustainability Committee led by Professor **Francesco Perrini** which for years has helped us to evolve with the complexity of the themes it oversees. We can say that if the committee is the engine of sustainability, the entire Bocconi community, students, professors and staff are the indispensable fuel to feed it every day. In fact, each member of our community contributes to making Bocconi sustainable through their commitment and behavior, which every year translate into KPIs to certify their value and measure their impact. Thus the 2020 Sustainability Report was born, in which we report the university's main contributions to the achievement of the SDGs (Sustainable Development Goals) of the United Nations 2030 Agenda for sustainable development. In addition, the same KPIs are linked to the consolidated reporting practice of the GRI (Global Reporting Initiative) standards.

Environmental

For a company, the letter E of Environmental represents the environmental and evaluation criteria of its behavior towards the environment, locally and at a global level. For a university, there are three important areas to consider: research, teaching and campus.

✓ Research

Energy, environment and sustainability are at the heart of the research activities of GREEN, Center for research on Geography, Resources, Environment, Energy & Networks, directed by Professor **Marco Percoco**. This young center, born in 2018, has absorbed the skills of two previous research centers, IEFE and CERTeT and today is therefore a point of reference both in more classic fields of study such as transport economics, economics of the environment, energy, and in more recent areas such as sustainable finance and environmental law. In particular, the researchers belonging to GREEN in the area of economic geography and local governance deal with the spatial analysis of socio-economic phenomena and the evaluation of local public policies. In the area of economics and environmental policy they are mainly focused on climate change and in the realm of economic analysis they concentrate on sectors such as transport, energy, telecommunications, water services and urban services. Finally, there is the area of the circular economy and ESG Finance, or the analysis of the relationship between sustainability and finance.

In the course of 2021, GREEN has given a strong impetus to new fields of study by launching two initiatives that are added to the three existing observatories (i.e. the Green Economy Observatory; the Smart City Observatory and the Renewable Gas Observatory):

- The Observatory on Public Procurement and Sustainability, directed by Professor **Fabrizio Fracchia**, who was inspired by the PNRR, National Recovery and Resilience Plan, and by the need to have a reference point for operators and stakeholders in the field of public procurement, sustainability and technological innovation.
- The SUR Lab, Sustainable Urban Regeneration Lab, directed by Professor **Edoardo Croci**, was created through the contribution of four important partners in the sector: Hines, Intesa Sanpaolo, MilanoSesto and Prelios. The goal of the new lab is to study, analyze and promote the development of sustainable urban regeneration, meaning interventions that do not involve land consumption, ensure high standards of energy efficiency, contribute to circularity and use nature-based solutions. This approach generates individual and social value and increases not only infrastructural capital, but also human, social and environmental capital. Bocconi has a consolidated expertise on these issues developed in the context of important research projects funded by the European Commission:

- MAtchUP: Maximizing the upscaling and replication potential of high-level urban transformation strategies.
- Expanding PadovaFIT! Home Solutions.
- URBAN GreenUP: New Strategy for Re-Naturing Cities through Nature-Based Solutions.

Lastly, this year a Circular Economy white paper was presented in the context of GREEN. A De-Risking Strategy and Driver of Superior Risk-Adjusted Returns resulted from a collaboration with Ellen MacArthur Foundation and Intesa Sanpaolo. The researchers, led by Professor **Claudio Zara** conducted an analysis on 222 listed companies in Europe, active in 14 different sectors, highlighting that the adoption of the principles of the circular economy significantly reduces the risk of default of a company and, at the same market risk, guarantees better returns on stocks. Following the study, a Circularity Score was created, which can assign a grade to the circularity of each company. The Circularity Score is functional to investigate the relationships with the main financial performance variables, such as those with the risk of default at one and five years and with the equity return adjusted for its risk.

During 2021, three other important research initiatives were launched, demonstrating how important this fertile field is to overcoming the global challenge of sustainability. In fact, within SDA Bocconi the following were launched:

- eSG Lab excellence in Sustainability and Governance for SMEs, promoted with the Sodalitas Foundation and with the support of the ENEL Foundation and Falck Renewables. Scientific directors of the lab are professors **Francesco Perrini** and **Alessandro Minichilli**. eSG Lab aims to help companies of all sizes to fully integrate the most advanced sustainability ideas and ESG issues into their strategies, to grow sustainably and become more competitive. To achieve this goal, the Laboratory is committed to developing a strategic-organizational model directed at all the production chains that represent the backbone of our economic-industrial system.
- The MOBIUS Lab, Smart Mobility Lab, directed by Professor **Fabrizio Zerbini**, thanks to a partnership with the Atlantia group. The applied research activity of the lab aims to analyze the main evolutionary tendency of the mobility sector on a global level, according to the four trends that are changing social and economic habits and behavior in the movement of people and goods. These trends are globalization, the digitization of devices and processes, modern forms of locomotion and propulsion (increasingly technological and sustainable), and the affirmation of new business models.
- The SDALab REPAiR, Responsible, Patient and Reliable Finance, directed by Professor **Maurizio Dallocchio**, considers finance as a pillar on which the economy and society can build a better future, provided that everyone fully trust those concepts and principles that inspire and drive finance. ESG is therefore not a goal but a tool to update the role of finance in a responsible way.

The three labs work alongside:

- Sustainability Lab, directed by **Francesco Perrini**, who during this year also launched the Monitor for Circular Fashion, coordinated by **Francesca Romana Rinaldi** and promoted with enel x, which works on identifying the KPIs of circularity.
- Africa Lab, directed by Professor **Matteo Di Castelnuovo**, which aims to contribute to the development of sustainable investments and business opportunities in the African continent with particular attention to the energy and health sectors.

The biggest challenge that we must overcome, as a society and as researchers, is that of climate change. In this field as well, Bocconi makes its contribution thanks to the work of Professor **Valentina Bosetti**, winner of two European research grants and author of numerous papers published in Nature and other prestigious scientific journals. She recently also obtained funding from the Cariplo Foundation for the INHALE project, Impact on Human Health of Agriculture and Livestock Emissions. Bosetti also was a reviewing member of the Blanchard-Tirole Major Future Economic Challenges Report commissioned by the French government.

Professors **Luigi Iovino**, **Thorsten Martin** and **Julien Sauvagnat**, who work at IGIER, Innocenzo Gasparini Institute for Economic Research, are engaged in an important study on Corporate Taxation and Carbon Emissions that studies the relationship between these two factors in the United States. The three researchers find that "dirty" firms pay less tax on profits – the opposite of what optimal taxation of negative externalities requires. These firms benefit disproportionately from the debt tax shield due to their increased leverage. For this, they conclude, the elimination of the fiscal advantage of debt would reduce carbon emissions by about 3.9%, while aggregate production would fall by about 2.2%.

✓ Teaching

Attention to ESG issues and in particular to those related to environmental impact and sustainability have grown in parallel in the classroom with increasing awareness among young people and more generally in society at all levels: from policy makers to companies, consumers and citizens. Historically, attention to the environment has always been high at Bocconi, as demonstrated by the fact that our MASEM program, Master in Sustainability and Energy Management, directed by Professor **Matteo Di Castelnuovo**, is consistently in first place worldwide, ahead of the programs of Stanford and Yale, in the Eduniversal ranking. Looking at the numbers reported in the latest Sustainability Report in the five Bocconi schools, the number of courses on sustainability issues has grown from 26 (in 2019) to 88 (in 2020), with an amount of hours that has tripled: from 1,390 to 3,770. At the same time, the number of students who attend these courses went from 3,062 to 5,361.

New for this academic year was the activation of the course Creating a Startup in the Digital and Sustainable Economy, for second-year Master of Science students, held by **Federico Marchetti**, founder of the first Italian unicorn, YOOX, and Alumnus of the Year in 2014. The aim of the course is to give students the step-by-step tools of "things to do" to create and grow a new business. Drawing on the insights of successful venture capitalists and entrepreneurs, the course focuses specifically on the two megatrends that characterize entrepreneurship today: digital innovation and environmental sustainability.

The 14th MOOC, Massive Open Online Course, which will be released in 2022, is linked to the Economics of Sustainable Urban Regeneration course led by Professor **Edoardo Croci**. Bocconi's MOOCs are distributed on the Coursera platform and in academic year 2020-2021 over 170,000 participants from 66 countries registered.

Finally, the online course Sustainable Fashion Branding Program, directed by Professor **Stefania Saviolo**, has just started on the Getsmarter platform which counts over 50 million users worldwide. This is one of the first 4 courses launched by SDA Bocconi on the platform (the Sales Management Program started at the same time, while the General Management Program and the Bitcoin and Blockchain Program will start next year).

As these recent examples show, the theme of environmental impact and sustainability permeates all our levels of teaching and all sectors in a transversal way: from fashion to mobility, from urban regeneration to entrepreneurship. As with digital technology, for sustainability it is not in fact a question of creating closed paths dedicated to one topic, but rather spreading a culture and a transversal competence that can spill into all academic fields and work sectors.

A concrete example of how our teaching and approach to sustainability have an impact on our students is the startup founded this year by four students in the Master of Science in Economics and Management of Innovation and Technology. **Giovanni Cartapani**, **Pietro Cimenti**, **Gabriele Doppiu** and **Sara Signorelli** created Glac-Up, a startup that has become part of the pre-acceleration program of B4i, Bocconi for Innovation, which dedicates one of its three verticals to sustainability. The startup aims to involve people and companies for the protection of glaciers, by raising funds that will be used for the purchase of special geotextile sheets to cover the glaciers during the summer season.

✓ Campus

Promoting a culture of environmental responsibility means first of all promoting sustainable behavior within one's own community. For this to be transformed into concrete actions, all the necessary measures must be taken within the campus so that such behavior is actually achievable. Bocconi has done so with initiatives that involve the four elements of fire, earth, water and air, in a virtuous process which in the last two years has sped things up in parallel with the development of our urban campus.

If, for example, attention to energy saving and the self-sufficiency of the campus started with the construction of the building on Via Röntgen designed by the Grafton studio, it reaches its maximum expression with the project by the SANAA studio and the new SDA Bocconi headquarters. Bocconi, whose campus covers 90,000 square meters, of which 30,000 are green areas, this year earned the LEED Platinum certification (which concerns the entire life cycle of the building, from design to construction) for the new SDA Bocconi headquarters. Our ISO 50001 Energy Management certification, first awarded in 2017, was also renewed, thanks to the policies adopted by the university for the continuous improvement of the energy efficiency of the campus. The latter certification was first obtained in 2017. A system of solar panels also guarantees on-campus production of 1.2 MW of electricity.

Particular attention has also been paid to reducing water consumption: water use in cubic meters has been steadily decreasing since 2017 (144,679 cubic meters compared to 86,620 in 2020, but the comparison is unclear given the reduced presence of students, faculty and administrative staff, both in university structures and in residences over the past two years). During 2020, 628,867 liters of water were supplied free of charge from the 54 dispensers installed on campus, corresponding to approximately 1.2 million 0.5-liter plastic bottles saved (33.6 tons of plastic). Overall, the tons of waste produced fell between 2017 and 2020 from over 10 tons to just over 4, as did the reduction in the number of sheets of paper, thanks to the various initiatives underway to dematerialize and digitize administrative documents and teaching aids: from a reduction of 895,000 sheets in 2017 to 1 million 842,000 in 2020.

Bocconi was also among the first institutions to adopt the Air Quality Regulations approved by the Municipality of Milan in November last year. At the beginning of this year, the Bocconi campus became smoke free and five outdoor areas reserved for smokers were established and equipped.

Credit for the rapid and effective application of all the initiatives to make the campus sustainable goes to the Managing Director, **Riccardo Taranto**, and to his entire team. I make particular reference to the Infrastructures, Sustainability & General Services team, which is also involved in projects to promote sustainable mobility (the campus has 400 bike parking spaces) and food and healthy lifestyle initiatives. These include the elimination of single-use plastic products, the replacement of vending machines with low energy consumption models and the simultaneous transition from junk food to healthier products.

Social

The S of Social for organizations, whether companies or other institutions, refers to their relationship with people, communities, territories and their capacity for inclusion. For Bocconi this mainly means three things: practices in favor of diversity and inclusion in its community, impact on the territory and the community of Milan, and the development of knowledge.

✓ Diversity and inclusion

To demonstrate the centrality of social sustainability issues for a community that welcomes students and professors from over 100 countries around the world, on the occasion of the inauguration of the 2020-2021 academic year we presented the new Dean for Diversity and Inclusion, Professor **Catherine De Vries**, whose work broadens the themes historically overseen by the Equal Opportunities Committee. In fact, the university's commitment is and will be increasingly anchored to the enhancement of equal opportunities, the development of increasingly inclusive policies aimed at stimulating social mobility

and a culture of integration. We stand against any form of discrimination, with particular attention to disability and sexual orientation.

At the heart of the Dean's work there is first of all the need for involvement and sharing with all the components of the Bocconi community. During this year in particular, the delegates for diversity for each department and for SDA were appointed for the first time:

- Professor **Angelo Ditillo** (Department of Accounting)
- Professor **Sonia Petrone** (Department of Decision Sciences)
- Professor **Eliana la Ferrara** (Ettore Bocconi Department of Economics)
- Professor **Anna Battauz** (Department of Finance)
- Professor **Hao Jiang** (Angelo Sraffa Department of Legal Studies)
- Professor **Fabrizio Perretti** (Department of Management and Technology)
- Professor **Stefania Borghini** (Department of Marketing)
- Professor **Paola Profeta** (Department of Social and Political Sciences)
- Professor **Silvia Cinque** (SDA Bocconi)

Three main projects were developed during 2021:

- Communication and scientific dissemination campaigns on Pride and Gender issues within the Bocconi community and towards public opinion.
- The first Inclusive Gender Equality report which will be presented at the beginning of 2022.
- The Alias Career program to foster the inclusion of transgender students, teachers and staff within the Bocconi community which will be implemented in 2022.

On the subject of social mobility and inclusion, Bocconi has always been careful to guarantee deserving students access to university education regardless of economic and social conditions. This is a concrete commitment that has seen over the years the economic assistance to support students grow through scholarships and exemptions. During the Covid-19 pandemic that hit the world in the last two years, this commitment has further expanded.

For the current academic year, the estimate is that over 38 million euros will be invested in financial benefits for students: it was 25 million in the 2015-2016 academic year, an increase of 48%. Not only has the absolute figure increased but also the percentage paid by Bocconi, which today is 81.5% compared to 68.1. It is an investment that means more than 1 in 4 students receive economic assistance.

Among these, I would like to mention the 107 students benefiting from the *Una scelta possibile* program launched starting from the 2013-2014 academic year. This is the program that more than others embodies the Bocconi spirit of promoting social upward mobility. This year, 21 new students took advantage of it (there were 5 in the first year), demonstrating how Bocconi, with the collaboration of schools, is able to meet a real need of many young people and their families.

Furthermore, this year, together with the **Citi Foundation**, we have launched a very important initiative in terms of social mobility and access to university. Indeed, the 1stGEN@UNI project has the objective of promoting, among Italian high school students in particular situations of economic and social hardship, the awareness of how much studying at university can represent a powerful engine of social mobility and therefore impact their future. The project involved 450 students from 60 Italian schools. Of these, 180 have chosen Bocconi for their education, and those who pass the admission test will be able to take advantage of the *Una scelta possibile* scholarships.

In what I consider a mission, Bocconi can count on the generosity of many supporters, individuals, Bocconi alumni and non-Bocconi alumni, foundations and companies, who like us believe in the

importance of education and want to guarantee access to it for the new generations. Fundraising activities are orchestrated by Professor **Bruno Busacca**, Dean for Fundraising and Alumni Engagement.

On behalf of these young people and Bocconi, I would like to thank all those who have been enabling many students to attend Bocconi during this year with their donations.

A heartfelt thank you to:

- The more than 800 donors who contributed to the fundraiser in memory of Ambassador **Luca Attanasio**, a Bocconi alumnus who passed away following a terrorist attack in Congo. Thanks to them, 5 scholarships for students of African origin have been established.
- **Gennaro Casale**, MBA 25 alumnus, who chose to honor the memory of his father with a gesture of intergenerational solidarity by naming an exemption for students in need.
- **Paolo and Esmeralda Merloni**, a couple of alumni, for their choice to renew support for the most needy and deserving students.
- Alumnus **Gilberto Pozzi** who for the third consecutive year has renewed his commitment to support the new generations through an important donation to the Partial Exemptions program.
- **Natale and Antonia Labia** who, through the Labia Foundation, developed an innovative recruitment program for South African students in collaboration with Bocconi.
- The **Romeo and Enrica Invernizzi Foundation** for supporting talent and research through "The Invernizzi PhD Financial Aid" and to students who are particularly deserving and coming from contexts of economic and social hardship, through the *Una Scelta Possibile* scholarships.
- The numerous companies and institutions that care about the education of young people and that this year – with important gifts – have decided to support merit, need, and diversity: **Bolton, Cisco, eBay, Fastweb, Fincantieri, Istituto Javotte Bocconi, Kaleyra, Man, Mastercard, Pirelli, Pirola Pennuto Zei & Associati, Reply, Tod's**.

✓ **Community Impact**

The attention that Bocconi places on the new generations and its students runs parallel to that which it places towards the neighborhood, the city and its citizens. It is a virtuous exchange of dialogue and solidarity. An example of this is the relationship that links the university to Pane Quotidiano. Always close, not only physically, this year a project was launched to support this association, founded in Milan in 1898 with the aim of ensuring free food every day to the poorest sections of the population. The initiative supports management operations, internal and external logistics, workers – above all volunteers – and finally communication and management of donors. A working group was thus created, which involves the entire Bocconi community. After a phase of elaboration of the case study, which will become teaching material, the group is now continuing its work in defining an innovation path that includes:

- A logistics project with simulation on a centralized collection point and 4 distribution points in the Milan metropolitan area.
- The proposal of a new organizational structure and drafting of the first job description, for employees and volunteers.
- The creation of a mockup for a platform that could innovate the process of donation, selection and reception of food goods (GoodGiving).
- An innovation contest that will be launched at the beginning of 2022 and will involve the entire community of Bocconi and SDA Bocconi students.

Bocconi's commitment to the service sector is rooted in its DNA and involves all aspects of the life of the university and its community. In this inauguration about sustainability in all its forms, I would like to mention a few activities in particular:

- The promotion of voluntary activities in collaboration with CSV - Centro Servizi per il Volontariato and the Students for Humanity association with the creation and management of an open desk in the university to promote volunteer activities and provide information. Thanks to this activity, on average every year 600 students participate in voluntary activities promoted by the various non-profit organizations and associations involved in the project.
- Making Sense of Profits: an initiative that aims to stimulate students in the management of social enterprises, develop some skills in the field for the achievement of economic and social objectives and establish exchange relationships with social enterprises and committed for-profit enterprises in the social sphere. In 10 years, about 300 projects have been carried out with the involvement of 550 students.
- With the Citi Foundation, at the end of 2020 we launched Phoenix, a project that aims to support the third sector through the involvement of students in internships and projects in the field. The project has registered a strong interest, with over 400 applications, 40 internships and 10 field projects launched in 32 different institutions involved.

Finally, I want to mention one last project of inclusion that has had a strong impact on the community. Since 2016, Bocconi and the Penitentiary Administration of Lombardy have launched a social mobility and re-education project aimed at giving inmates of Italian prisons the opportunity to attend the three-year degree course in Business Economics and Management from prison. The project involves 24 Bocconi professors and is open to a maximum of 10 students per year (serving sentences of more than 5 years) identified through a merit ranking among inmates throughout Italy who have received a favorable opinion from the Penitentiary Administration. To be admitted, candidates must pass the standard admission test to the university's three-year Bachelor programs.

The activities described are coordinated by the Community and Social Engagement Committee chaired by Professor **Salvatore Vicari**.

✓ Research

The themes of inclusion, diversity and social mobility that we have seen described in the daily details of life in our community are first of all the fields of study of our researchers: there can be no good practice without knowledge and its continuous advancement.

During 2021, within the Dondena Center for Research on Social Dynamics and Public Policy, we launched the AXA Research Lab on Gender Equality, directed by Professor **Paola Profeta**, thanks to the support of the insurance group AXA Italia and AXA Research Fund. Its goal is to investigate the role of public policies in promoting gender equality as well as women's empowerment and leadership.

The project of Professor **Guido Alfani** also refers to Dondena, financed with an ERC Grant, SMITE, Social Mobility and Inequality across Italy and Europe: 1300-1800. Thanks to this project, which will conclude in 2022, it is possible to measure mobility, but also to understand its consequences for the economy and society in general.

The two projects are just an example of the activities of Dondena, directed by Professor **Marco Bonetti**. The center is focused on the analysis of social dynamics based on an interdisciplinary approach that combines economic history with demography, statistics with epidemiology, and public economics with political science.

Understanding and combating the causes of poverty using rigorous assessment methodologies is the goal of LEAP, Laboratory for Effective Anti-Poverty Policies, directed by Professor **Eliana La Ferrara**, Fondazione Romeo and Enrica Invernizzi Chair in Development Economics. In addition to promoting the chair, the Foundation is a partner of LEAP. Among the various projects that are part of LEAP, I want to mention:

- Aspirations, Social Norms and Development. The project is funded by the European Research Council and will end next year. Thanks to this study, our knowledge of the sources of failures of

the aspirations of the poor and the interplay between aspirations and social norms will be able to advance, ultimately paving the way for a new set of anti-poverty policies.

- The set of projects on the subject of education and inclusion, including Equality of Opportunity for Immigrant Students in Italy and, launched during the first lockdown in spring 2020, TOP, Tutoring Online Project, which was among the winners of the FISIR 2020 COVID call, issued by the Special Integrative Fund for Research of the Ministry of University and Research.

Over the past two years, the research world has re-positioned its focus by concentrating on the pandemic that has hit us globally. While the efforts of scientists engaged in medicine and pharmacology have allowed us to identify vaccines and treatments in amazingly short times, researchers in the social sciences are committed to studying the impacts of Covid-19 on all aspects of our life: the economy, health, legislation, society. The social impact of Covid, as well as that on health, will in fact have long-term consequences. A society that wants to be sustainable must investigate in order to give quick answers. Bocconi also reacted in a timely manner to this, starting as early as May 2020 the Covid Crisis Lab, where 60 study projects are currently underway that have already produced 70 publications.

Among the studies launched in recent months, one sees Bocconi collaborating with Humanitas Research Hospital in Milan to investigate the health costs (and their sustainability) related to Covid-19 in Italy. The goal is to identify, measure and evaluate the resources associated with patients admitted to Lombardy hospitals for Covid-19. Researchers will focus on the main cost drivers and compare them across treatment, age and socioeconomic groups, in order to highlight any potential disparities in the resources used. Possible differences related to health care pathways will also be explored, constructing "hospitalization careers" that describe the sequences of treatments received and grouping patients with similar careers. This will also enable the identification of potential learning effects over time both in the resources used and in the improvement of the quality of care.

The Covid Crisis Lab is directed by Professor **Alessia Melegaro** who this year won an ERC Grant for her IMMUNE project, Modeling the Impact of Human Behavior on Infections Spread, thanks to which she will create an interdisciplinary modeling framework to explore the dynamics of human behavior on the spread of infections. Through the lens of social sciences, the project will integrate risk perceptions on diseases and vaccines, (mis)information campaigns, the influence of social peers and digitization. Combining quantitative approaches and research methodologies, the project will analyze the interplay between health communications, risk perception and vaccine adoption.

Governance

According to the ESG principles, the G comprises the Governance responsibilities of companies by defining their identity. It is governance that guarantees an organization to define and take sustainable actions. It is therefore a particularly prolific research field for Bocconi researchers. But it is also an element that distinguishes the university in the way we define our strategy by gathering stimuli from our stakeholders and in particular from the International Advisory Council, the Bocconi Alumni Community and the world of work.

✓ Research

Bocconi, now a full-fledged university institution in the field of social sciences, was born as we have mentioned with a particular focus on the world of businesses and their administration. In particular, dedicated to that field is the work of the researchers who report to the Departments of Management and Technology, Accounting and Marketing, Legal Studies (with particular reference to those involved in corporate governance issues), the ICRIOS research center, the Invernizzi Center for Research on Innovation, Organization, Strategy and Entrepreneurship, and the Corporate Governance Lab of SDA Bocconi.

Thanks to our donors we have activated Chairs over the years which, by combining research and teaching activities, bring forward the understanding and dissemination of company organization and its operating mechanisms:

- AldAF - EY Chair in Family Business Strategy in memory of Alberto Falck entrusted to Professor **Guido Corbetta**.
- KPMG Chair in Accounting entrusted to Professor **Annalisa Prencipe**.

During this year, Professor **Alfonso Gambardella**, who heads the Department of Management and Technology, won an ERC Grant for the SAIM project, A Scientific Approach to Innovation Management. The goal is to understand whether managers and entrepreneurs can improve their decision-making skills by adopting a scientific approach based on formulating data-tested models, as scientists do. The project develops a framework that explains the mechanisms and implications of this approach and tests them on a large scale at six international sites. The framework shows that a scientific approach improves performance by pursuing valuable innovations and ending unsuccessful projects earlier. SAIM focuses on managers and entrepreneurs involved in startups.

Numerous papers were published in the course of 2021 in prestigious scientific journals that analyze issues related to governance and its protagonists. Among these, I point out three dedicated to the role of CEO:

- *Cooperation Beyond the Network* by Professors **Ronald Burt** and **Sonja Opper** published in *Organization Science* shows, analyzing data collected in China, that CEOs who operate within more closed networks are less likely to cooperate outside of them, especially when they run successful businesses. They thereby miss opportunities to develop new ideas and create value. *Social Network and Temporal Myopia* was published in the *Academy of Management Journal* by the same authors. The paper shows that managerial decision-making is often plagued by a lack of long-term planning and, more generally, by a neglect of the future. This, the authors conclude, often depends on the closed managerial networks that lead to temporal myopia.
- *When Do Outside CEOs Underperform? From a CEO-Centric to a Stakeholder-Centric Perspective of Post-Succession Performance* by Professor **Dovev Lavie** in *Academy of Management Journal*. The study answers the question of how the appointment of an external CEO affects the performance of the company that hires them and offers a new stakeholder-centric perspective, assuming that the negative sentiment of stakeholders towards the appointment of the CEO undermines post-succession performance. By analyzing CEO appointments in US public companies, contrary to expectations, the study shows that the length and breadth of their executive experience does not explain post-succession performance or the differences in performance between external and internal CEOs. Rather, the mismatch between CEOs' business backgrounds and the characteristics of their companies and the negative sentiment surrounding their appointments explain the performance differences and underperformance of external CEOs. The paper therefore focuses on the important but little studied reactions of stakeholders to the appointments of CEOs.

✓ Stakeholders

An institution is better able to develop and achieve its objectives the more it is able to listen to its stakeholders and absorb the stimuli that come from them within its strategy. Bocconi's international projection and determination to produce knowledge capable of positively impacting people, organizations, policy makers and ultimately society, require having a broad vision on the trends, evolution, and needs of its interlocutors. Bocconi has therefore built platforms for dialogue and debate that allow its governance to design long-term strategies.

- *The International Advisory Council*
Established in 2009 and chaired until his death in 2013 by **Antonio Borges**, the IAC is made up of managers of global companies and foreign academics, Italian administrators and entrepreneurs who are protagonists in the internationalization of their companies, with a balanced mix of skills, nationalities and industries. The IAC, with its Chairman Mario Monti and Vice Chairman Francesco Giavazzi, meets once a year and represents an effective forum for discussion on the

future of higher education and of our University. The IAC is a vehicle bearing complementary strategic visions that enrich our international perspective and stimulate us to innovate.

The members of the IAC

- **Paul Achleitner** Chairman of the Supervisory Board, Deutsche Bank AG
- **Ornella Barra** Chief Operating Officer, International, Walgreens Boots Alliance
- **Antonio Belloni** Group Managing Director, LVMH
- **Marco Bizzarri** President and CEO, Gucci
- **Jean-Laurent Bonnafé** Director and CEO, BNP Paribas
- **Thomas Buberl** CEO, AXA Group
- **Ilaria Capua** Director, One Health Center of Excellence for Research and Training, University of Florida
- **Natarajan Chandrasekaran** Chairman, Tata Group
- **Claudio Costamagna** Executive Chairman, CC & Soci
- **Enrico Cucchiani** Founding Partner & CEO, TGI; Chairman, Bocconi Campaign Board
- **John Elkann** Chairman and CEO, Exor
- **Clara Furse DBE** Chairman, HSBC UK
- **Mario Greco** CEO, Zurich Financial Group
- **Angel Gurría** Former Secretary General, OECD
- **Peter Löscher** Chairman of the Board, Sulzer Group
- **Lisa Lynch** Former Provost, Brandeis University
- **Leena Nair** Chief Human Resources Officer, Unilever
- **Alessandro Profumo** CEO, Leonardo
- **Jan W. Rivkin** C. Roland Christensen Professor of Business Administration, Senior Associate Dean for Research, Harvard Business School
- **Klaus Schwab** Founder and Executive Chairman, World Economic Forum
- **Laura Tyson** Chair of the Board of Trustees, UC Berkeley's Blum Center for Developing Economies
- **Beatrice Weder di Mauro** President, Center for Economic and Policy Research (CEPR)

- *Bocconi Alumni Community*

The community of our alumni led by **Silvia Candiani**, CEO of Microsoft Italy, is at once Bocconi's best business card and a valuable partner for its growth and development. Alumni are first and foremost ambassadors to the world of their Alma Mater. They are when they actively participate in University initiatives, such as Bocconi Meets or Mentorship Programs, they are thanks to their actions as professionals and leaders who have studied at one of the most important social science universities. In recognition of this, every year the Bocconi Alumni Community names the Alumnus of the Year, which in the crucial year for overcoming the pandemic went to **Matteo Del Fante**, CEO and General Manager of the Poste Italiane group. He made Poste Italiane a strategic pillar in support of Italy for the Covid-19 vaccination campaign, making available the group's digital platform and logistical machine.

In recent news, our Alumna, **Barbara Cominelli**, CEO of JLL Italy, has been named Senior Alumna of the Year of CEMS, Global Alliance in Management Education, the leading business school network. Founded in 1988 by Bocconi, ESADE, HEC and the University of Cologne, CEMS today brings together 34 schools from all over the world, plus 70 multinationals and 8 non-governmental organizations. This award is assigned based on the following five parameters: global citizenship, cultural diversity, professional responsibility, professional accountability and impact on society as a whole.

In order to support new generations of Bocconians, to be a point of reference and a guide for them, keep their relationship with the Alma Mater and colleagues alive and continue to grow together

and advance in the world of knowledge, the Bocconi Alumni Community is organized as a network rooted in the world. More than 34,000 Bocconians have joined, and between local chapters and thematic topics there are 81 active groups. Through the leaders and the community board, the dialogue with Bocconi is continuous in a process of reciprocal exchange.

- *The World of Work*

Dialogue with the leaders of the labor market is essential to be constantly updated on the demand for skills. Only with continuous feedback is it possible to set the educational programs, review the contents of the courses, and manage to wisely mix the most advanced theories with good practices. For this reason, over 100 companies and foundations collaborate with Bocconi through partnership programs, strategic alliances between business community and university with a positive impact on society as a whole. In particular, Bocconi has developed two initiatives over the years:

- The Partners for Development Program, which promotes constant dialogue and articulated collaboration between businesses and the academic world. The Partners actively collaborate in the life of Bocconi through periodic meetings to discuss the most recent results of Bocconi research and the university's growth strategies.
- The Corporate Associates Program, which involves close collaboration between the Career Service and firms, in order to work for the best possible professional placement of graduates.

CONCLUSIONS AND ACKNOWLEDGEMENTS

Bocconi, as we said, has the notion of sustainable capitalism in its DNA. And since its foundation it has operated by following the thrust of its internationalization, aware that only by opening up to the world could it best work in favor of Italy. In particular, we are committed to consolidating and spreading the European spirit by acting in the context of all our three missions: research, teaching and what is called the third mission, or the set of activities through which universities interact directly with society and its territory of reference. This happens both through actions for the economic enhancement of knowledge and more generally through activities that help disseminate culture. The most recent example of Bocconi's European commitment is our contribution to founding CIVICA - The European University of Social Sciences, as part of the European Commission project to create European Universities. CIVICA represents an element of change in the European education system, in accordance with the challenges that the Commission is preparing to outline for the next few years with the possible launch of a European Degree and the review of the Bologna Accords.

For Bocconi, acting as a sustainable and socially responsible institution means being able to interpret the needs of society and act to provide concrete answers capable of supporting its development. This is all the more important in crucial stages of change and transition. The Covid-19 pandemic is acting as an accelerator of an inevitable global change dictated by megatrends, by a set of powerful forces of social, demographic, environmental and technological change that are transforming our world. The first concrete response came at the European level from the Next Generation EU and at the level of our country from the PNRR, the National Recovery and Resilience Plan.

Today we are therefore all called to support, each in their own field and according to their skills, the changes taking place. Bocconi is building the digital infrastructure and developing the skills to foster the affirmation of digital transformation. Bocconi is also acting according to the ESG principles that we have briefly analyzed in the course of this report. But it also does so with concrete programs that have the objective of supporting the entrepreneurial and economic development of the country and its public administration, whose proper functioning in this historical period has become even more central.

✓ **Entrepreneurship and Economic Development**

This is why Bocconi continues to focus on startups and its B4i accelerator, Bocconi for Innovation. In two years (the fifth call is currently open and will close on 9 January) we have received 1,106 applications

and selected 90 new companies, which have entered the acceleration and pre-acceleration programs, some of which in less than a year are confirming themselves as realities and solid investments. Among these I want to mention Quick Algorithm, founded by our alumnus **Jacopo Piana**, who has recently closed a 1 million-euro round. This is a virtuous example that well interprets the need to respond to the current phase of digital transition that companies are experiencing in the first place. The market is in fact rewarding this innovative startup because its solution also allows medium-sized companies to seize all the opportunities of the data driven economy and industry 4.0. One new aspect this year that should be emphasized is that B4i is now open to all young innovators and no longer just to the Bocconi community. This is a precise response to a growing need for new entrepreneurs who know how to combine good, innovative ideas with their effective implementation. This is why B4i offers them a mix of training and resources for project development, facilitating business development opportunities. Italy needs new businesses capable not only of surviving but of creating value for themselves and for the territory. It therefore becomes crucial to pay equal attention to both the startup phenomenon and that of corporate entrepreneurship. Under the guidance of **Markus Venzin**, Dean for Innovation, this year we have activated ICE, Innovation and Corporate Entrepreneurship center. ICE is at the service of companies that want to improve their innovation capacity and increase their entrepreneurial energy by leveraging all the potential of their human resources, acting on momentum and transforming a passive reaction to market uncertainty into proactive action.

With the same spirit, SDA Bocconi will be alongside Fincantieri starting from 2022 to give life to a three-year project for the social and economic rebirth of the entrepreneurial fabric of Central-Southern Italy, which will involve artisan and industrial companies in particular. Business School for Italy, this is the name of the program, provides a training phase to create and disseminate managerial skills and culture and a selection of development and growth projects whose implementation will be supported by B4i and ICE.

✓ **Public Administration**

The PNRR has once again highlighted how much the recovery of the country is linked to the proper functioning of its public administration and to the healthy and virtuous interaction between this and the other realities that make up the backbone of Italy, starting with its businesses. SDA Bocconi 4 Government is the new project aimed at supporting the public administration in facing and managing the profound changes required by the PNRR. Changes that are necessary to relaunch the role and effectiveness of public action, as a lever for the development of the entire national system. The two pillars of the initiative that have their roots in the consolidated expertise of our faculty in this field are: research (Government Research Hub) and education (Government Academy). The Government Research Hub produces and disseminates knowledge and empirical evidence to support both policy making and the implementation of public sector transformations. The Government Academy, launched in February 2021, aims to strengthen the skills of public managers and officials through a personalized, flexible and continuous learning approach.

✓ **Acknowledgements**

The immediate reaction of Bocconi and its community to the global needs of the country and of society, for example the projects just described as well as the birth of the Covid Crisis Lab last year, are possible because the university acts within guidelines outlined by its Vision 2030 which guarantee the openness and flexibility that are indispensable for responding to a world characterized by ever-increasing complexity. All this was possible thanks to the dedication and commitment of our Academic Council, and our faculty, management and staff, plus the openness and stimuli of our student body. It was also possible thanks to the guidance and vision of a governance that continuously dialogues with its stakeholders, interpreting their needs and expectations.

For this the Bocconi community once again thanks:

- the **Javotte Bocconi Manca di Villahermosa Institute**, which as the foundation of the university represents its main reference for strategic and governance choices. On behalf of everyone, we thank its president, Professor **Angelo Provasoli**;

- the University Board – on which I have the honor of serving – which is headed by the President, Professor **Mario Monti**. Professor **Luigi Guatri** is Honorary President, Vice President Professor **Andrea Sironi**, and Managing Director **Riccardo Taranto**. The Board members are listed below (who they represent is indicated in brackets):
 - **Carlo Bonomi** (Milan Chamber of Commerce, Industry, Crafts and Agriculture)
 - **Diana Bracco** (Ministry of Education, University and Research)
 - **Achraf Fadhel** (Student representative, Javotte Bocconi Institute)
 - **Enrico Cucchiani** (Javotte Bocconi Institute)
 - **Alessandro Foti** (Municipality of Milan)
 - **Patrizia Grieco** (Javotte Bocconi Institute)
 - **Vittorio Grilli** (Cariplo Foundation)
 - **Eliana La Ferrara** (Representative of the Faculty, Javotte Bocconi Institute)
 - **Alberto Meomartini** (Milan Chamber of Commerce, Industry, Crafts and Agriculture)
 - **Carlo Messina** (Javotte Bocconi Institute)
 - **Diego Piacentini** (Javotte Bocconi Institute)
 - **Barbara Poggiali** (Lombardy Region)
 - **Maria Serena Porcari** (Metropolitan City of Milan)
 - **Gianfelice Rocca** (Milan Chamber of Commerce, Industry, Crafts and Agriculture)
 - **Marco Tronchetti Provera** (Javotte Bocconi Institute)

I declare the Academic Year 2021-2022, the 120th year of life of our university, open.