

Bocconi

Address for the Academic Year Opening Ceremony 2017-2018

INNOVATION AS  
A SOURCE  
OF ORGANIC GROWTH  
IN THE DIGITAL AGE



# 1. INTRODUCTION

Economic history and history in general teaches us that the dawning of each century represents a moment of profound social, political, economic and technological change. The 21<sup>st</sup> century is proving that it fits in perfectly with this pattern.

It would be impossible today to cover the complexity of the change we are experiencing now. With my speech I will therefore focus on a distinctive trait of this age, or the extraordinary **potential for innovation** that has become available to humanity<sup>1</sup> in recent years. This potential has fundamental implications for the economy and society. More specifically, it directly impacts higher education and the social sciences, areas that Bocconi has been contributing to actively since its foundation in 1902.

Joseph Schumpeter, the first economist to systematically study the topic of innovation, observed how economic growth was closely connected to the quality and intensity of innovation sustained within the sectors located in a nation<sup>2</sup>. In his studies, Schumpeter gained an understanding of how innovation on a sector level depended on the entrepreneurial efforts stimulated by factors both outside of the industry and factors produced internally, thanks to the investment made in research activities – which today are commonly called R&D<sup>3</sup>. Innovation and its inclination toward “creative destruction” are the true organic elements of growth for companies, industries, and nations, the pioneering Schumpeter concluded nearly 100 years ago<sup>4</sup>.

To this view, the noblest notion of innovation is certainly technological. And the age we are living in is the seedling of a blossoming in technological innovation that promises developments more extraordinary than at any other time in the history of mankind. The advancement that I am referring to is that of **digital technology**, which makes it possible to revisit Schumpeter’s theory in a unique way.

Digital technology is, as we in the business world love to say, “disruptive,” as it presents a matrix:

- versatile,
- evolutive,
- global,
- widespread,
- and demand-driven.

The same way that the steam engine, in the 18<sup>th</sup> century, and electrical energy, in the 20<sup>th</sup> century, revolutionized life and the factories of the past, digital technology is **versatile**,

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<sup>1</sup> For a contrary, but fascinating view to what is presented in this report, see Gordon R.J. 2016 *The Rise and Fall of American Growth: The US standard of living since the civil war*. Princeton University Press, Princeton New Jersey

<sup>2</sup> Schumpeter J., 1911/2000. *The Theory of Economic Development. An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Harvard Economic Studies, Cambridge.

<sup>3</sup> Schumpeter J., 1942/2008. *Capitalism, Socialism, and Democracy*. Harper Perennials, Brooklyn, New York.

<sup>4</sup> Schumpeter J., 1939/2006. *Business Cycles. A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*. Martino Pub, Mansfield Centre, Connecticut.

with a wide-reaching impact on every sector of every economy. Over recent years, different technologies have led to important changes in a variety of sectors: examples include biotechnology in the health sector or mechatronics in the automotive industry and in micromechanics. But the essence of digital is not being limited to any sector: it fits in everywhere<sup>5</sup>.

However, unlike steam engines and electrical energy, digital technology is also **evolutive**. From the spread of the internet in the late 1990s, to the production of apps at the turn of the millennium, to industry 4.0, which introduces robotics and artificial intelligence to manufacturing and service sectors, digital technology is growing inexorably in individual industries, redesigning modes of production, distribution, and consumption. *Big data*, *the internet of things*, *blockchain* and *augmented reality* are only some of the neologisms that identify this change, which is taking place incomparably faster than previous revolutions. The automotive sector is perhaps the most striking example of the evolutive nature of this change. The recent declaration made by Elon Musk, founder of PayPal, Tesla and SpaceX, claimed that, “In 20 years, owning a car will be a lot like owning a horse”<sup>6</sup> (a sort of hobby). That may seem excessive, but hybrid motors, electric cars, new urban transportation services and self-driving cars are certainly concrete examples confirming the extraordinary impact of the technological boom we are experiencing. And it applies even in sectors like the automotive one, that until a few years ago seemed impermeable to radical change.

Digital technology is **global** in that it has modified the dynamics underlying the internationalization process. The speed of the international trade of goods and services is indeed slowing down, while the flow of data and information is increasing dizzily year after year. According to recent studies, the bandwidth used for cross-border data transmission grew 45-fold between 2005 and 2014<sup>7</sup>.

Digital technology is **widespread**: the diffusion of the internet and social media have given rise to a new form of molecular internationalization that today allows smaller businesses (and even individuals) levels of global interaction that until not long ago were accessible to only large organizations, with times and costs amounting to a mere fraction of before. And these costs are destined to decrease even further. The 7 trillion sensors expected for 2025, or the 1,000 sensors that rotate around each individual and enable micro-interactions with the digital ecosystem, are among the many estimates of the level of diffusion foreseen.

The peculiarity of digital technology, however, is its strong link with **demand**. Unlike other technologies, the strength of digital is that it activates a two-way street, where demand always plays a crucial role<sup>8</sup>. Digital technology engenders entrepreneurial stimuli that

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<sup>5</sup> Brynjolfsson E., McAfee A., 2014. *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. MIT Press, Cambridge.

<sup>6</sup> <http://www.businessinsider.com/elon-musk-owning-a-car-in-20-years-like-owning-a-horse-2015-11>

<sup>7</sup> Manyika J., Lund S., Bughin J., Woetzel J., Stamenov K., and Dhingra D., 2016. *Digital globalization: The new era of global flows*. McKinsey Global Institute.

<sup>8</sup> Von Hippel E., 2005. *Democratizing Innovation*. MIT Press, Cambridge; Christensen C., 1997. *The Innovator's Dilemma*. Harvard Business School Press, Cambridge.

industrial life has never known until today. As Schumpeter taught us, innovation must never be limited to technological innovation, but should also involve the production of new products and services, the development of new organizational forms and the creation of new markets<sup>9</sup>. Digital technology, with its link to the demand side, opens up exceptional innovative horizons. The confirmation of this phenomenon can be found in the estimate that the apps we use on our smartphones today represent only 10% of the apps we will have available in five years<sup>10</sup>.

While this extraordinary transformation creates new opportunities for organizations and individuals, it is also important to highlight the **risks** associated with it. For example, consider cyber-security, the safeguarding of intellectual property, the protection of consumers and citizens and their privacy. Not to mention the issue of taxation. Moreover, the impact on productivity and employment<sup>11</sup> is not merely quantitative, that is, the net result of jobs lost and created by new technologies, but also qualitative. There are jobs that do not yet exist, but will become part of the economy and society of the future<sup>12</sup>. We are confronted with the complexity of establishing today what skills will be required by a different job market in the future. But we are dealing with a context that changes suddenly, bringing that future very near.

More generally, the challenge presented by digital technology is to construct **new models**: legal, regulatory, economic and managerial. On one hand, these models should not obstruct the development of innovation and its diffusion worldwide, meaning the creation of new businesses, interaction between scientific and business communities and international mobility of labor. On the other hand, they must guarantee compliance with laws, beginning with the principles of competition and, naturally, individual freedom.

Companies and institutions are therefore called upon to make a further commitment to social responsibility, by finding new solutions and promoting their comprehension, acceptance and dissemination. Without this educational effort, skepticism can modify, slow down, or even block the spread of innovation, with important implications in terms of widening gaps, not only between areas of the world and countries, but also within the same country<sup>13</sup>.

The biggest burden falls upon those that enjoy the best reputation and are most trusted in public opinion. Hence it is essential that trust be maintained and never betrayed. To this view, the **rigor of the scientific method** is fundamental, both to win trust and to maintain it over time, in particular during an era of fake news and self-referential sources.

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<sup>9</sup> Schumpeter J., 1911/2000. *Op. Cit.*

<sup>10</sup> Tra i report recenti si veda <https://www.appannie.com/en/insights/market-data/app-annie-forecast-2017-mobile-app-store-revenue-exceed-139-billion-2021/>

<sup>11</sup> Turner A., 2016. The Skills Delusion <http://www.straitstimes.com/opinion/the-skills-delusion>

<sup>12</sup> World Economic Forum, 2016. *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*. Global Challenge Insight Report.

<sup>13</sup> Gupta N., Fischer A., Fewer L., 2012. *Socio-psychological determinants of public acceptance of technologies: A review*. *Public understanding of Science*, 21 (7) 782-795.

## 2. THE EDUCATION SECTOR AND INNOVATION

As a source of growth, innovation has always been at the center of the higher education sector. From their birth in Europe, and especially in Italy around the year 1000, universities have represented a crucial garden of learning for the teachers and students who frequented them.

The most recent and important organizational innovation of the university system should be credited to the Anglo-Saxon model, starting post-World War II. More specifically, the larger American universities assumed the mission of generating and transmitting knowledge through **research**, both basic and applied. They became powerful drivers of innovation, contributing to social and economic progress in all fields. From magnetic resonance to search algorithms to the concept of human capital, the list of innovations developed by universities has a fundamental place in the history of mankind.

But a university also contributes to innovation through its **educational mission**, teaching young people to think independently and critically, providing them with the tools to understand the world – beginning with the scientific method – and urging them to make their own contribution for its improvement.

For all these reasons, universities also contribute to the creation of trust in the future – not at all a secondary consideration these days. Such trust should not be generated uncritically, nor on faith, nor pursuant to dominant ideas of the moment. It must be built consciously, based on the analysis of facts, on the open comparison of multiple sources and different positions. Trust grows wherever greater diversity is synonymous with richness and creativity, even considering the difficulties of coexistence among different cultures, religions and traditions.

Because it is sensitive to innovation, the higher education sector is among those most intensely impacted by the wave of change caused by digital technology. By making available **new channels** to vehicle the learning process, digital technology gives rise to significant challenges to the educational and university system.

In recent years, the debate has focused on the creation of new business models (for example Udacity or Kahn Academy) and on the possibility of remotely offering individual courses or even stand-alone programs like Massive Open Online Courses (MOOCs). Actually, there is much more to the topic. As was demonstrated at a recent conference at Bocconi, in situations where the transfer of knowledge is increased digitally, and where potential application of knowledge is high, industrial and service businesses are focusing less on the R of research and more on the D of development. The crucial process of basic research is more and more often delegated to universities<sup>14</sup>. This type of research thus requires more national and European funding (I would like to remind you that the European Commission, through European Research Council grants, provides a fundamental supply of resources for research).

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<sup>14</sup> Arora A., Belenzon S., & Patuconci A., 2015. Killing the golden goose? The decline of science in corporate R&D. *NBER Working Paper 20902*. Cambridge, MA: National Bureau of Economic Research; Gambardella A., von Hippel E., 2017. “Open inputs” as a profit-maximizing strategy by customers. *Working Paper*.

To this we must add the increasingly important role that innovation plays in **university management**, a role that leading institutions have to cultivate well beyond financial and academic management. Innovative and entrepreneurial stimuli must be injected into the very nervous system of a university<sup>15</sup>. Indeed, we should remember that today's campuses are populated by students from Generation Z (born later than the year 2000). These youngsters have digital technology in their DNA. It is a global, informed, socially aware generation born into the use of technology like no other generation before it. They present an immense cultural, social, entrepreneurial, and managerial potential that universities are morally obliged to foster and motivate.

### 3. BOCCONI AND INNOVATION

Where does Bocconi stand with respect to today's enormous potential for innovation, and the wave of innovation that is already invading the field of higher education?

It is important above all to remember that innovation is historically rooted in our University's DNA. The only university in Italy founded following a gift made by a businessman, Ferdinando Bocconi, the School was conceived from the start as a private no-profit institution built on the values of independence, integrity, diversity, internationality, and social responsibility.

Under the firm hand of President and Rector Leopoldo Sabbatini, in 1902 Bocconi offered its first university program in Economics and Business<sup>16</sup>. It thereby distinguished itself from other early Business Schools born around the same time (Tuck School of Business at Dartmouth College, founded in 1900, and Harvard Business School, started in 1908) and from the even rarer Schools of Economics (like the London School of Economics and Political Science, founded in 1895). In this sense, Bocconi asserted its uniqueness from the outset, as a university of both economics and management. A university where horizontal knowledge of economic-social disciplines, aimed at promoting an open intellect, are constantly combined with vertical knowledge of applied business management, enabling a deep link to communities of practice<sup>17</sup>.

Bocconi undertook a transformation process to become a global player beginning in the 1980s. Significant changes were made, including the launch of the first programs held in English, the introduction of student satisfaction as a means of teacher evaluation and joining an international accreditation system. The School of Law was established to meet the growing demand for rigorously trained legal practitioners aiming to join traditional professions.

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<sup>15</sup> Leih S., Teece D. J. (*forthcoming*). Campus leadership and the entrepreneurial university: A dynamic capability perspective. *The Academy of Management Perspective*.

<sup>16</sup> Cattini M., Declava E., De Maddalena A., Romani M., 1992. *Storia di una libera università – Volume primo*. Egea.

<sup>17</sup> Sabbatini L. 1902 "A school of business that really wants to reach university level cannot be confined (...) within the limits of professional, practical teaching. It must take on broad, in-depth, scientific study of economic disciplines." From "Programma Sabbatini" *Founding document of Università Bocconi – 1902*.

The innovation that Bocconi is capable of producing today is born of the extraordinary work done by the Rectors who preceded the current team. In recent years, I remember in particular the strategic-organizational transformation introduced by Professor Emeritus Angelo Provasoli; the transformation of the career and research incentives system introduced by Professor Guido Tabellini; the transformation of study programs with an international spin introduced by Professor Andrea Sironi. All this took place under the careful administrative management of Bruno Pavesi, who has been an anchor of continuity for the past 10 years.

## 4. INNOVATION AT BOCCONI TODAY

All these pieces today come together to form a University that is economically and financially solid, granting the new Rectorial team the opportunity to undertake a new wave of innovations. We have introduced them during this past academic year, thanks to the enthusiastic contribution of the entire faculty and staff, orchestrated respectively by the Academic Council and by the Executive team. The motto that best fits the spirit and substance of the innovations is *Knowledge that matters*. Indeed, the production, promotion and distribution of knowledge that matters is always goal of the innovative efforts made over these months, and the efforts to be made from now until the term of the Strategic Plan finishes in 2020.

### 4.1 INNOVATION IN HUMAN CAPITAL

As I said, even before teaching, a university is science, and the primary contributor is therefore the scientist, in our case the **social scientist**. When it comes to the faculty, the activities of these last 12 months have focused on research and on the addition of new colleagues recruited on the international job market. These are resources capable of consolidating the upward trajectory of quality in scientific research and teaching excellence that Bocconi already follows. The effort was, if I may say so, extraordinary, and is crowned by the recruitment of twenty-three new teachers from outstanding international universities. We would like to welcome them warmly to Bocconi (in parentheses you will find the university they came from and the Bocconi Department they are joining):

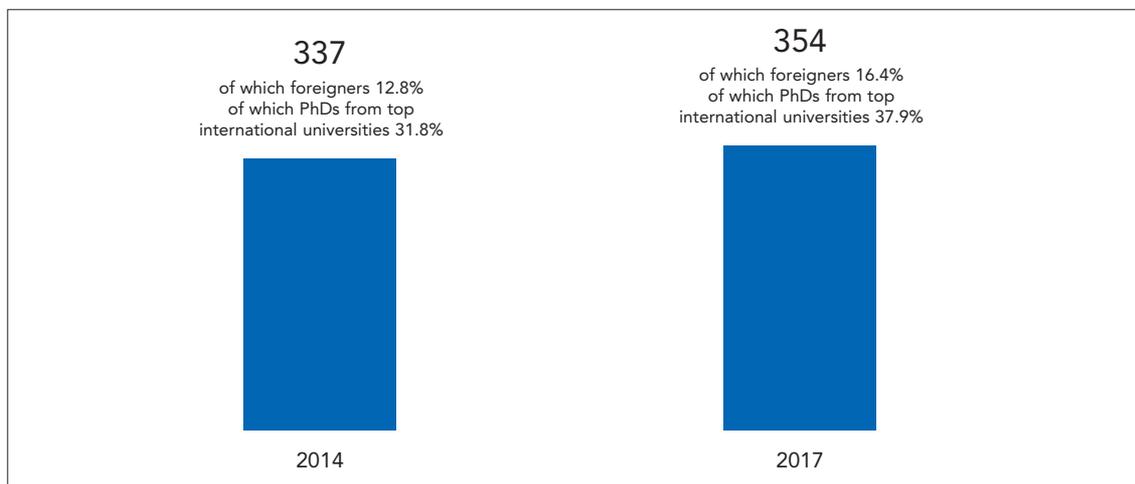
- Prof. Prajakta Desai (London School of Economics and Political Science, Accounting)
- Prof. Carlo Baldassi (Turin Polytechnic, Decision Sciences)
- Prof. Miaomiao Dong (Toulouse School of Economics, Decision Sciences)
- Prof. Daniele Durante (Padua University, Decision Sciences)
- Prof. Satoshi Fukuda (UC Berkeley, Decision Sciences)
- Prof. Riccardo Zecchina (Turin Polytechnic, Decision Sciences)
- Prof. Antonio Lijoi (Pavia University, Decision Sciences)
- Prof. Basile Grassi (Oxford University, Economics)
- Prof. Francesco Decarolis (Boston University, Economics)
- Prof. Pamela Giustinelli (Northwestern University, Economics)
- Prof. Sara Lowes (Harvard University, Economics)
- Prof. Gianmarco Ottaviano (London School of Economics and Political Science, Economics)
- Prof. Mara Squicciarini (Northwestern University, Economics)
- Prof. Christoph Wolf (Mannheim University, Economics)
- Prof. Nicola Limodio (London School of Economics and Political Science, Finance);

- Prof. Stefano Rossi (Purdue University, Finance)
- Prof. Cédric Gutierrez (HEC Paris, Management and Technology)
- Prof. Dovev Lavie (Technion, Management and Technology)
- Prof. Pak Yan Choi (Carnegie Mellon University, Marketing)
- Prof. Francesco Billari (Oxford University, Policy Analysis and Public Management)
- Prof. Livio Di Lonardo (New York University, Policy Analysis and Public Management)
- Prof. Lanny Martin (Rice University, Policy Analysis and Public Management)
- Prof. David Stuckler (Oxford University, Policy Analysis and Public Management)

For statistical purposes, there are nine tenured professors (more specifically eight Full Professors and one Associate Professor) and 14 researchers or Assistant Professors. Five of these professors pertain to the disciplinary areas of Computer Science and Political Science, into which Bocconi has made a strong entrance in recent years.

With these additions, the core faculty of the University now numbers 354 professors. I would particularly like to thank the Faculty and Research Division, which played a central role in supporting this development.

## CORE FACULTY



As the quality of human capital is linked to market values, it is appropriate now to sincerely thank the stakeholders that make it possible for us to establish new professorships dedicated to research and teaching. The system of **term chairs** and **endowed chairs** is a fundamental mechanism of attraction for the faculty. For Full Professors, there are two agreements recently signed with new institutional donors: the General Chair in Risk Management, assigned to Prof. Stefano Rossi, and the Vodafone Chair in Data Science and Machine Learning, assigned to Prof. Riccardo Zecchina. They will be joined by Prof. Nicolai Foss, who came from the Copenhagen Business School in September 2016 and was assigned the Rodolfo Debenedetti Chair in Entrepreneurship.

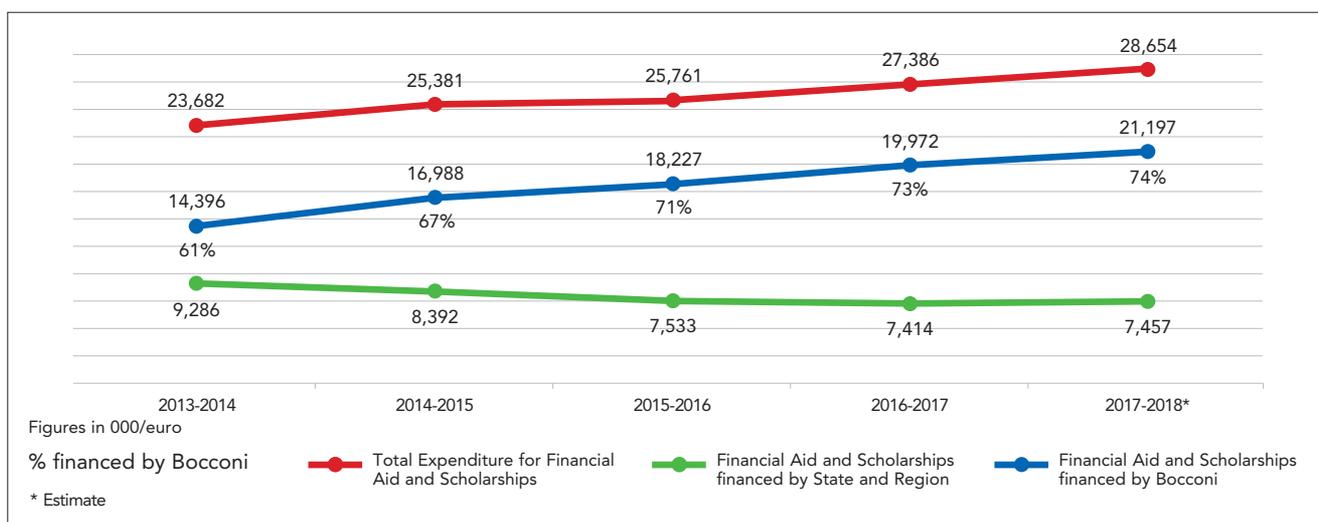
Also concerning the faculty, we have consolidated the role of the **Professor of Practice**, a complementary figure, but fundamental to guarantee quality levels in keeping with our objectives. The Professor of Practice combines high educational levels, excellence in applied research and a particular propensity for management activities. In particular, we would like

to welcome Prof. Francesco Daveri, who will direct the MBA program, and Prof. Matteo Di Castelnuovo, who will be asked to handle the publication of information linked to the world of energy. To this view and always in reference to institutional donors, I am pleased to announce that we have established the Antin IP Associate Professorship in Infrastructure Finance, which was awarded to Prof. Stefano Gatti and will start off in February 2018.

We have promoted new initiatives aimed at making the **research environment** of our University more productive, and thereby creating conditions that enhance the academic career course of those who select Bocconi. For example, to reduce the “glass ceiling” effect, we have instituted a mechanism dubbed CarDev. This makes it possible for women Associate Professors and tenured Researchers who have had to put their careers on hold due to family commitments to obtain an additional sabbatical of 6 months above the annual sabbatical they are already entitled to. They also receive supplementary research funds to accelerate the publication process and enable them to complete the final passage of their academic career.

Quality of human capital naturally involves the **quality of the students** present on our campus - the soul of our University. In order to be attractive and compete with the best within a context of increased international mobility, we are pushing to continuously improve recruitment, selection and admission of talented applicants. Various actions have already been carried out in this area as a first stage of a process that will continue next year. An example of this is an Early Undergraduate Session that has been introduced into the selection process for late June of each year. We have also launched a new marketing campaign with the objective of engaging families, also on an international level. With the Student Affairs Division we have undertaken intensely targeted micromarketing initiatives. They are aimed at positioning us, in addition to leading trade fairs, also in international high schools in selected nations, including German-speaking countries, France, England, and the East Coast of the United States. We also continue our commitment to allowing deserving and capable young people to attend Bocconi, regardless of their economic means. This is made possible through a system of financial aid and scholarships that has witnessed a significant increase in the resources invested by the University in recent years.

## FINANCIAL AID & SCHOLARSHIPS

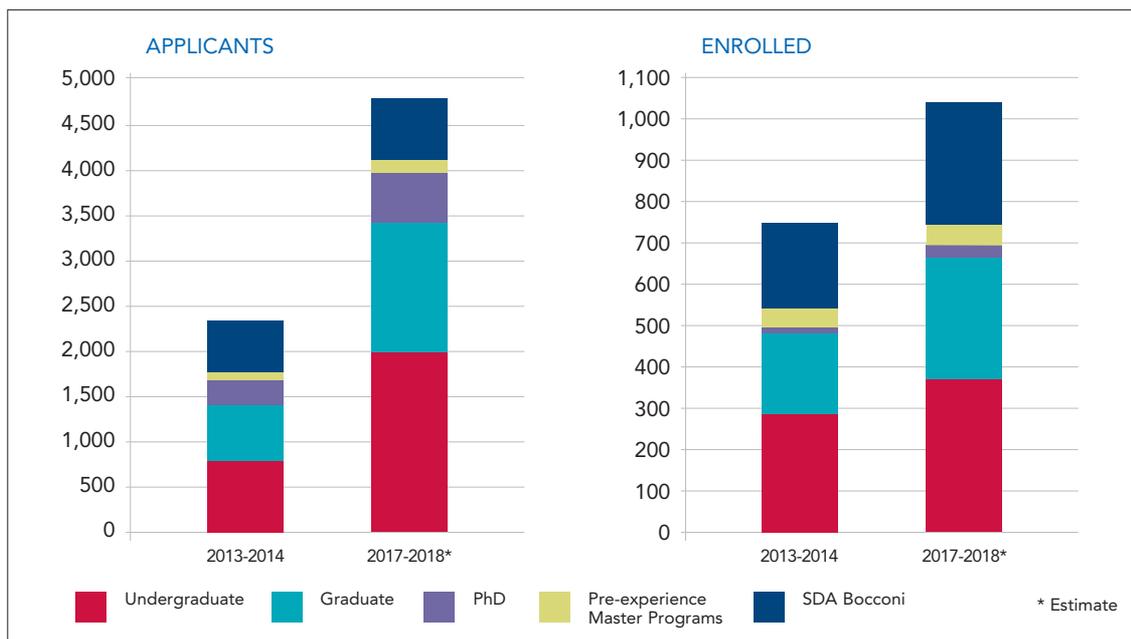


This year we successfully launched the first Summer School for high school students with weekly workshops that cover topics from marketing to finance, from game theory to macroeconomics. We intend to substantially expand the Summer School for the 2018 season.

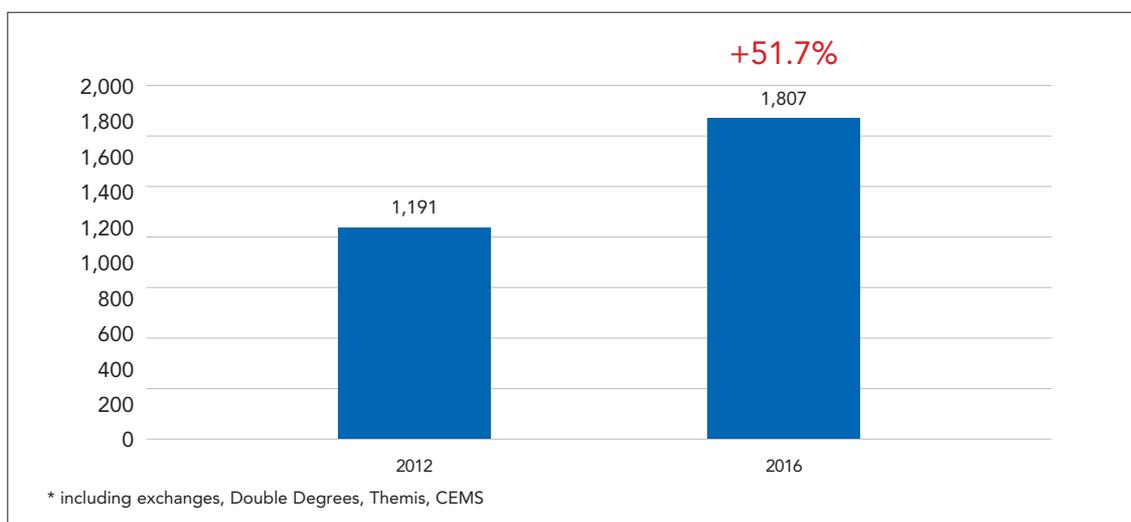
Concerning student housing, we have added 140 beds on campus with the Bligny residence: this means that we have a total of 1,800 beds, making it possible to provide university housing for a significant and growing number of students from all over the world.

The international students who apply to and enroll in our University have increased notably over the past 4 years. In addition, around 1,800 international students come for short periods, as part of exchange agreements with partner schools.

### INTERNATIONAL STUDENTS



### INCOMING EXCHANGE STUDENTS\*



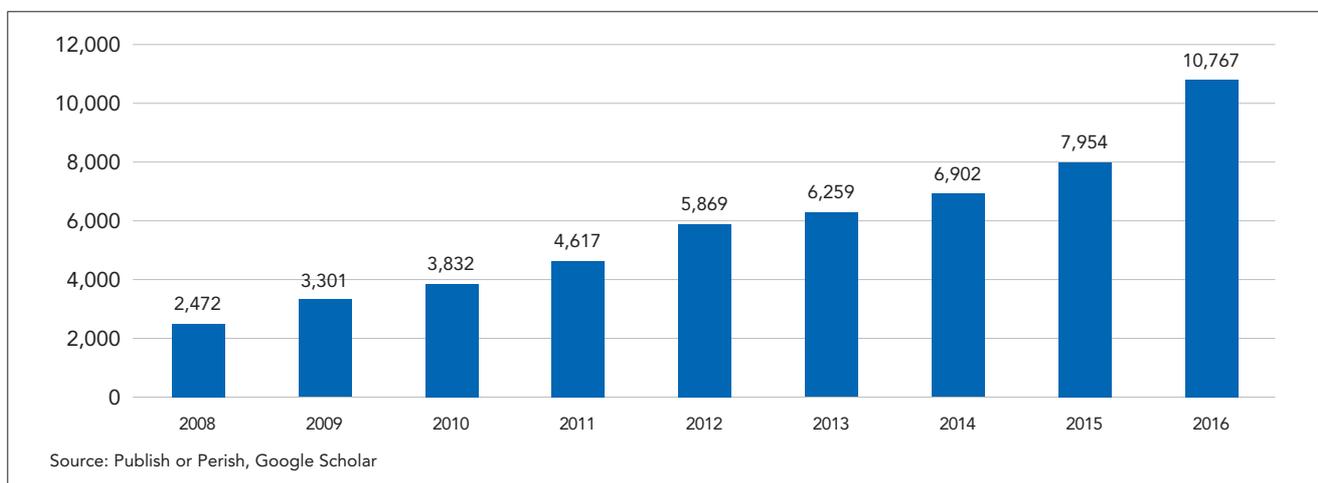
To contribute to the harmonious growth of our cosmopolitan student body, the Academic Affairs Division has started up an important diversity awareness project focusing on cultures and religions. The objective of the project is to adapt to diversity and draw attention to religious holidays of different cultures, considering elements that range from the exam calendar to dietary restrictions.

A final thought about human capital regards our city. Hard work, creativity and openness to new developments are aspects of the Milanese personality that are perfectly reflected in Bocconi's history. Milan is going through a new renaissance and, thanks to its appeal, its dynamism and its strength, it is a magnet that attracts faculty members and students from all over the world.

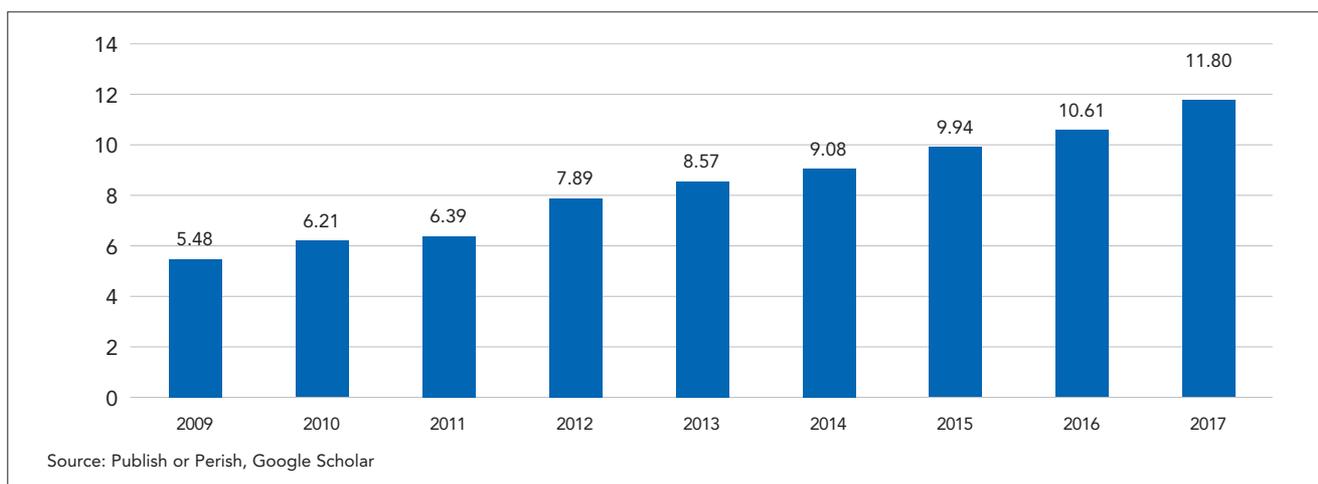
## 4.2 INNOVATION IN RESEARCH

The most typical and qualifying form of innovation that a university institution can produce are scientific findings published in prestigious international journals. Through the rigorous evaluation process that precedes publication, it is indeed the scientific community of reference that accredits the worth of research projects. Our faculty, over the period of the past ten years, has noticeably increased its index of international citations.

### TOTAL CITATIONS PER YEAR, WEB OF SCIENCE



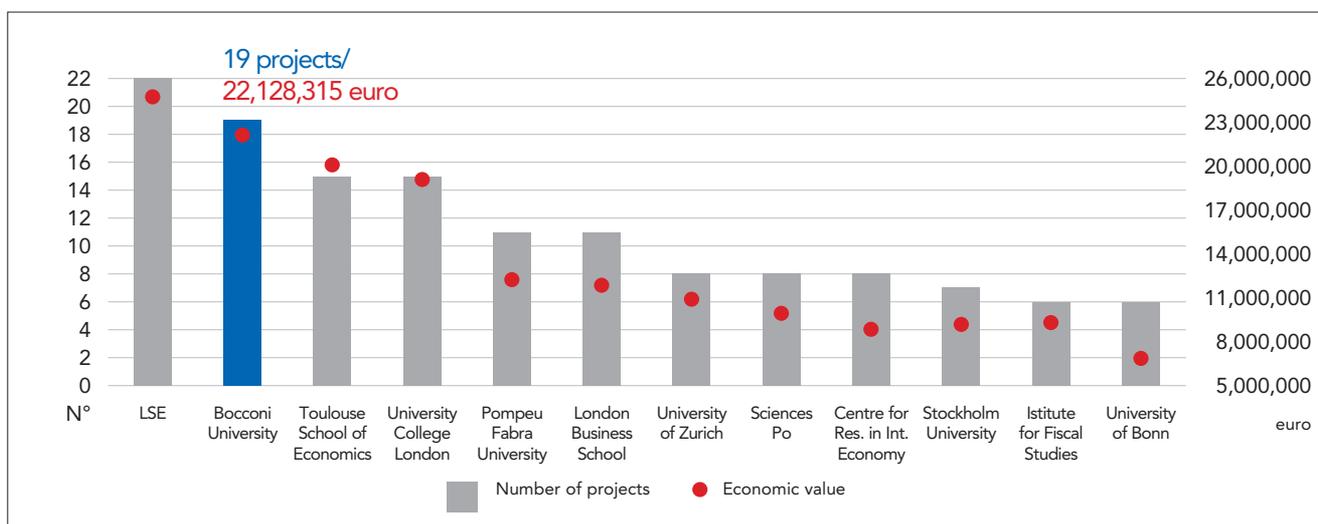
### MEDIA H-INDEX



In addition, many of our faculty members – a total of 20 – are currently co-editors or associate editors at the most prestigious 56 international journals in the subject areas of our research.

In the most recent “VQR-Assessment for Research Quality 2011-14,” completed by ANVUR, we placed first among large universities for area 13 (economics and social sciences) and second among small universities for area 12 (legal studies).

## ERC GRANTS



Recurring events are great opportunities to take stock and Bocconi’s research has demonstrated positive performance over the decade in terms of the European Research Council grants. Indeed, during these ten years Bocconi has hosted 29 ERC grants. Moreover, according to the latest data, in the “Economics, Finance, and Management” division (Panel SH1) we are in second place in Europe, with 19 grants awarded.

To cap off these results, next May the annual congress of the *European Accounting Association* (EAA) will bring to Bocconi 1,500 academics from all over the world. Furthermore, we have just received news that the prestigious world conference of the *Econometric Society*, which is held every 4 years in a different part of the world, will be hosted on our campus in August 2020. Another distinguished arrival, the *European Finance Association* (EFA) will be at Bocconi in August of 2021.

In addition to pure research, **applied research** is also of fundamental importance for our University. This is because it connects our researchers to communities of practice. Regarding this, I am very pleased to announce the foundation of the Gucci Lab on “The Evolving Organization in the 21<sup>st</sup> Century”, which will be operational starting in January 2018.

The fundamental role of universities is however not only to contribute to the production of new knowledge through research, but also to promote its **spread**. Indeed, the centers of advanced learning and research have an obligation in this sense, not only towards their own students, but to society and public opinion, to whom they must be able to transfer

knowledge directly, with no mediation. In order to be effective, this transfer requires adaptation of language to a variety of audiences and contexts. We see an increasing need to construct a dialogue with those who, due to age, profession or skills, are not in a position to enter a study program of any kind. In this challenge, digital technologies and internet are certainly our allies: for this reason we are experimenting with new formats and approaching new groups of people, while controlling content quality and methodological rigor. The challenge is to make research in the social sciences more accessible by highlighting its positive impact on society.

In view of this, we have instituted a new series of seminars entitled “Bocconi Research for Europe and the World Economy” (BREWE) to promote dialogue among academic researchers, policy-makers, and the business community. The first event, entitled “*Globalization at a Turning Point? Challenges for Europe*” was held in March, at the same time as the celebration of the Treaty of Rome. The second, dedicated to “*The Sharing Economy of Open Innovation*,” was held few weeks ago.

Another knowledge-spreading vehicle, this time aimed at a younger public, was also launched. In *Snack News* (the video news that will be released on Monday, Wednesday, and Friday on the *Corriere della Sera* and Bocconi digital platform), we join forces with the *Corriere della Sera* newspaper to bring news to Generation Z high school students, leveraging the viewpoints and expertise of our faculty. We have also collaborated with *Il Sole 24 Ore* and *La Stampa*, two leading Italian newspapers, in projects called *Morning Call* and *Capire la Finanza*.

The experimentation of new formats led us to produce brief video clips to spread the scientific products published by our teachers in international academic publications through social media and our website. More recently, we completed the restyling of our multimedia magazine *viaSarfatti25*, which is published 10 times per year and is sent to about 80,000 stakeholders of the University.

#### 4.3 INNOVATION AT SDA BOCCONI

There are also a number of innovations underway in SDA Bocconi School of Management, our post-experience business school.

SDA, with its Master Division, has been competing on the international market for years. The numerous efforts launched by Dean Giuseppe “Beppe” Soda and his team were therefore aimed above all at the internationalization of the Divisions pertinent to the area of executive education – open courses, custom courses, and commissioned research. For example, promotional initiatives were started up in international markets (like the launch of 5 new catalogue programs for the German market in Berlin) that will certainly provide a boost. Furthermore, there was also the successful launch of the executive MBA course dedicated to the luxury sector (EMYLUX), in partnership with ESSEC, which includes lessons on the universities’ five campuses: Paris, Milan, Dubai, Mumbai and Singapore. The historic bi-weekly managerial development program entitled Executive Management Program was also launched with great success. As if to demonstrate the variety of skills and the portfolio offered, a course on personal brand management was held with some of the leading players of the American National Basketball Association (NBA). But above all, SDA Bocconi successfully

launched the first Doctorate in Business Administration (DBA). The 19 participants, from 14 nations, occupy high positions in important multinational firms and aim to acquire analytical decision-making skills based on the scientific method during this modular three-year program.

In addition to these important product innovations, the SDA has acquired a new **organizational structure**, aimed at a more effective integration of the faculty in other departments. The idea is move even further towards the international context and be more reactive to the new needs of business and institutions in the field of executive training. With this in mind, the SDA has also introduced a new faculty manual that closes the gaps with international business schools. This process has also given rise to the fusion of the CERGAS research center with SDA, constituting the GHNP Division (Government Health and Not for Profit). The result is the first integrated European platform combining research and higher education in the health care field. It is oriented to public and private health care system “providers”, pharmaceutical and biomedical industries, as well as life science industries in general. Another aspect of the new governance at SDA is the **Advisory Board**, made up of prestigious alumni and professionals.

A **review** is being carried out to further reinforce the international vision of SDA Bocconi, despite the school's status as one of the 0.5% of global schools to boast triple EQUIS, AACSB and AMBA accreditation. This informal review will be conducted by a prestigious commission presided over by Prof. Laura Tyson (Past Dean of Haas and LBS and member of our International Advisory Council), by Prof. Paul Danos (longtime Dean at Tuck School of Business), and by Prof. Peter Tufano (Dean of Saïd Business School, Oxford).

#### 4.4 INNOVATION IN TEACHING

In terms of teaching, I would like to call attention to four main innovations, the first of which is particularly significant, given its overall magnitude.

I am referring to the introduction of the **Python** programming language course in all Bachelor of Science programs of our University. We firmly believe that today coding is the equivalent of English thirty years ago: an unavoidable factor of literacy, not only for the world of work or for academic research, but for living fully in our times. We chose Python because it is one of the most common programming languages and the fastest growing one, given that it is considered simple, flexible (it can be adapted to a variety of uses in economics, management, finance, statistics, marketing, accounting, etc.), free of charge because it is open source, versatile (it dialogues easily with other languages) and is suitable for collecting data on the internet, an activity that is increasingly common in research and on the job. As far as programming is concerned, I would like to cite some information that is eloquent about the unmet demand for education in this field. In OECD countries only 6% of the population possesses the most advanced level of ICT skills<sup>18</sup>, that is those who are able to master data in the logic of data analytics, which means the capacity to process, cross-reference, interpret and model large quantities of data to support strategic decisions.

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<sup>18</sup> OECD, 2017. *The Next Production Revolution – Implications for Governments and Business*.

But students do not take just one programming course during the first year of the Undergraduate School. In undergraduate and graduate programs we have in fact already inserted 28 fundamental and elective courses that focus on topics ranging from macroeconomics to demographics, from finance to marketing, and that use Python software or R software: this means that our students will pass from the familiarization phase to daily use of big data. To those are added two extracurricular courses for students not in their first year or in the School of Law, plus a tutoring platform for faculty who want to learn the programming language.

The second is the creation of **BUILT** – Bocconi University Innovations in Learning and Teaching, the center with the objective of studying innovation in teaching methods and implementing new ways of teaching and learning. In part through digital technologies, it makes the experience of those who are studying – and those who are teaching – at Bocconi unique. BUILT is directed by Professor Leonardo Caporarello and represents the evolution and consolidation of the BETA startup, for which I warmly thank Professor Luigi Proserpio. The BUILT center, in close coordination with our five Schools, is conducting an analytic review of the classroom experience to develop a series of formats that enable teachers to identify the theories and tools needed to teach courses using modern and effective methods, in keeping with Bocconi's tradition. This year BUILT produced and launched a new MOOC (Massive Open Online Course) entitled “Arts and Heritage Management” on the Coursera platform. This new MOOC completes a portfolio of seven courses with a total of 255,575 enrollments. Bocconi is in the top 15 for user satisfaction (with an average of 4.7/5): our course on “Private Equity and Venture Capital” is in the ranking of the top 10 business single courses, while the course on “Fashion and Luxury Management” is in the top 10% for monthly proceeds of the platform.

These two important innovations are joined by **product innovations** that are just as significant from both a strategic and symbolic point of view. With reference to our School of Law, we have launched the first LLM in Law of Internet Technology. For the uninitiated, this is a 12-month Master of Law that also projects our School of Law onto the international education market. The historic DES program, which has become the Bachelor of Science CLES, was redesigned with the title of BESS (Bachelor in Economics and Social Sciences). The program presents a very challenging curriculum with courses that intertwine economics and mathematics, cognitive psychology and epistemology.

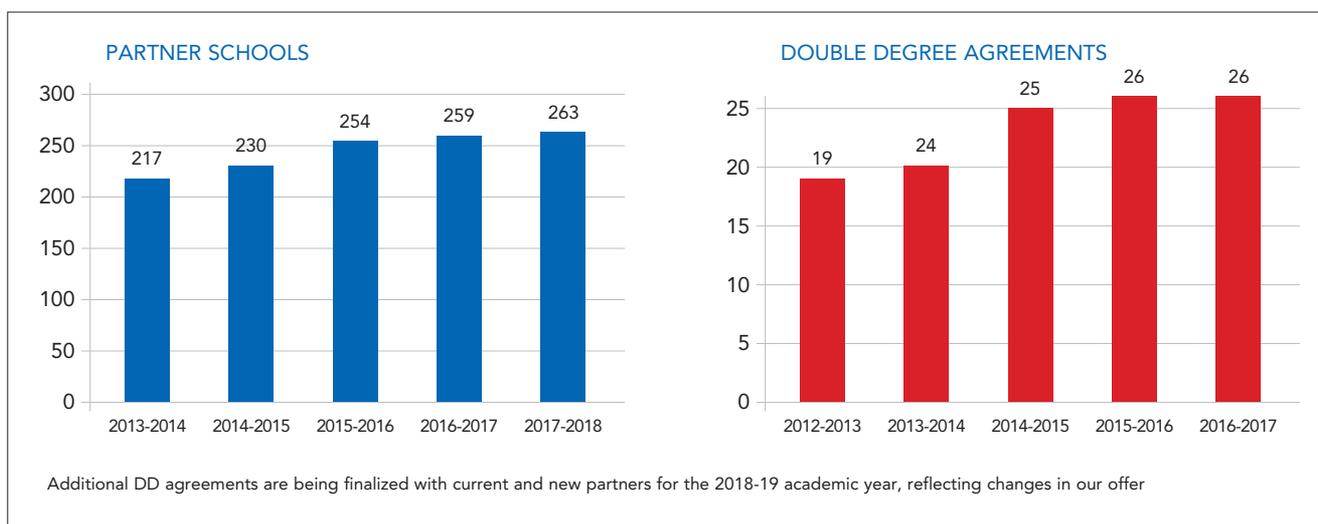
Regarding **process innovations**, we are seeking to make our infrastructure increasingly digital. Indeed, we have activated the Blackboard platform for all programs, implemented a fingerprint detection system for student attendance at exams, and made fingerprinting obligatory for courses that require “class participation” as a tool for evaluating student performance.

#### 4.5 STAKEHOLDERS AS AN ECOSYSTEM

We are convinced that a modern university fulfils its mission in part through its capacity to understand the needs and interests of its stakeholders, and how to integrate them into an ecosystem. To this view, we have dedicated much energy to nourish and enrich our ecosystem so that it is increasingly resilient. I will consider four main networks: the academic, employers, alumni and University donors.

I would like to cite the **network of academic partners**, with the number of partner schools further increasing to 263 and Double Degrees increasing to 26. I like to emphasize in this case not only the purely quantitative element, although significant, but above all the qualitative aspect. The entrance into new disciplinary areas indeed implies extending the network of partners into new domains. Considerable effort is therefore required to obtain accreditation and succeed in signing new agreements to gain opportunities for international exposure, which already involves 45% of our students.

## ACADEMIC PARTNERS



The **employer** network comprises the businesses, institutions, and professionals that collaborate with us and enrich our students' experience through classroom appearances, counselling, internships and, after graduation, job offers. The relationship with employers has always been strategic for Bocconi. Our Markets and External Affairs Division dedicates constant attention to it, articulated in a system of activities aimed at both the job market and at students and new graduates, resulting in an employment rate one year after graduation of 94.8%, 25.5% of which are abroad.

## RECRUITMENT MEETINGS ON AND OFF CAMPUS (2016)

Type of event	Participating companies	Participating students
Bocconi&Jobs on campus (2 editions)	215	8,073
Bocconi&Jobs abroad (2 editions)*	66	320
Recruiting Dates**	192	2,036
Investment Bank Weekends	18	
Networking event CEMS***	12	
Special recruitment initiatives	96	

\* Held in London, Paris and Shanghai.

\*\* Editions focused by sector: Arts, Media and Entertainment, Fashion&Luxury, Financial Services, Government, Public Services & International Organizations, Retail, Web Companies and the ad hoc initiative in collaboration with LVMH.

\*\*\* Special for Corporate Partners

The **alumni network** has recently undergone a very thorough process of strategic review. During the first 12 months of my term, I have had several occasions to meet with alumni in Italy and abroad. From New York to Boston, from London to Barcelona by way of Paris, each

opportunity was a reconfirmation of the strong bond that ties Bocconi to Bocconians, wherever they are around the world, whether working in business, within institutions or in academia. So I would like to thank all the Chapters, Areas, Topic Groups and Class Leaders, located on five continents, that transport the Bocconi name around the globe and organize events, social activities and initiatives that support the University's objectives. This shared commitment aims to leverage the three T's so loved by Alumni President Riccardo Monti, that is: Time, Talent and Treasure.

The **network of Bocconi donors** includes the individuals, companies and foundations that recognize the value of our University and believe in the project of research and education outlined in the Bocconi 2020 Strategic Plan. This is why they have supported the Within Our Reach fundraising campaign in the past 12 months as well, allocating resources to scholarships, named areas of the campus, academic positions and funding research.

Of the institutions that have not been mentioned in other parts of this speech, I would like to recognize: the AXA Research Fund for the Joint Research Initiative on smart cities; The European Central Bank for the Tommaso Padoa-Schioppa Visiting Professorship; Citi Foundation for Bocconi #Startupday; and all the supporters of the Partners for Development Program, which has now been in place for 20 years.

Referring to people, I would like to first of all thank the Campaign Board, which has supported us in this organizational effort that is so important for our future, particularly Massimiliano Cagliero and Diego De Giorgi. Also on behalf of the President and the Chief Executive Officer, I would like to sincerely thank Massimiliano and Mary Cagliero, Mario Arlati and Davide Serra for their substantial gifts. They are included among the more than 700 individuals who have chosen to fund our University with gifts supporting our development priorities, often made in memory of special people who are no longer with us.

## 5. RESULTS

I have sought to give a brief description, given the understandable limits of time and your patience, of a very intense year. Our efforts have been rewarded by results of which we are very proud, although not fully satisfied. For this reason, we once again promise to do more and do better during the academic year that we are officially opening today. Before mentioning the new challenges we intend to undertake, I would like to give you a summary of these results, taking time to emphasise those certified by external and independent bodies, even if they are very different from each other.

In the leading **international rankings**, regardless of the varying focuses and different methodologies adopted, our position continues to improve noticeably, settling in the top 10 on a European level and in the top 30 worldwide.

In the international accreditation of business schools, the SDA Bocconi School of Management received a five-year accreditation from AACSB and is preparing to receive the EQUIS commission in spring for the certification of the next accreditation.

## RANKINGS

EUROPE		WORLDWIDE	
	Financial Times		Financial Times
9 <sup>th</sup>	MBA Full Time	22 <sup>nd</sup>	MBA Full Time
3 <sup>th</sup>	Executive Custom	4 <sup>th</sup>	Executive Custom
6 <sup>th</sup>	Masters in Finance	7 <sup>th</sup>	Masters in Finance
10 <sup>th</sup>	Masters in Management	10 <sup>th</sup>	Masters in Management
	Bloomberg Businessweek		Bloomberg Businessweek
8 <sup>th</sup>	Best International Business Schools (non-US Programs)*	8 <sup>th</sup>	Best International Business Schools (non-US Programs)*
	US News		US News
7 <sup>th</sup>	Global Universities Economics and Business	27 <sup>th</sup>	Global Universities Economics and Business
	Forbes		Forbes
5 <sup>th</sup>	Best International MBAs	5 <sup>th</sup>	Best International MBAs
	The Economist		The Economist
5 <sup>th</sup>	WhichMBA?	28 <sup>th</sup>	WhichMBA?
	QS		QS
5 <sup>th</sup>	World University Rankings: Social Sciences	17 <sup>th</sup>	World University Rankings: Social Sciences
6 <sup>th</sup>	World University Rankings: Business & Management	11 <sup>th</sup>	World University Rankings: Business & Management
4 <sup>th</sup>	World University Rankings: Economics & Econometrics	16 <sup>th</sup>	World University Rankings: Economics & Econometrics
	RePEc		RePEc
6 <sup>th</sup>	Top Economic Institutions**	24 <sup>th</sup>	Top Economic Institutions**

\* As of 2016.  
 \*\* October 2017, updated every month.

On a national level, we received accreditation with a fully satisfactory judgement from ANVUR, for both the University overall and for individual programs.

All this regards both the past and the present. At this point, I would like to conclude this inaugural address with a quick glance towards the future.

## 6. BOCCONI TOMORROW

As the great innovators of the present and the past teach us, innovation is 10% inspiration and 90% perspiration<sup>19</sup>. Therefore, what really counts are the efforts in consolidation that we are undertaking to ensure that the many innovations introduced during the academic year are implemented in appropriate ways and times.

<sup>19</sup> Quote attributed to Sir Thomas A. Edison. Cfr. <http://www.thomasedison.com/biography.html>

In keeping with the objectives of the Strategic Plan, we are currently completing the outlines for two Master of Science programs that will enable us to offer our students a complete education in geopolitics (Master of Science in Politics and Policy Analysis) and computer science (the Master of Science in Data Science and Business Analytics).

The upcoming academic year will also be dedicated to completing the revision of the Bocconi Model for Remuneration (MRB), which a selected committee of Deans is finishing. We should also remember that the instrument in question is fundamental for providing our faculty incentives that are consistent with international market standards. Seven years after its creation, the model is undergoing revision and refinement, in light of changes made in the faculty and the objectives of the 2020 Strategic Plan.

In 2018 we will also implement the new communication campaign announced today with the presentation of the tagline *Knowledge that matters*.

It will also be a crucial year for the long-awaited consolidation of our Alumni Network which, under the careful guidance of President Riccardo Monti, is finalizing a project that will reorganize it in conformity with the alumni networks of leading Anglo-Saxon schools.

The campus will continue to grow. The upcoming academic year will see the completion of the student residence with an additional 300 beds that will bring the total to 2,100 places by the end of classes. The construction of the recreation and sports center, the Master and Executive buildings, and the offices that will complete the new headquarters of SDA Bocconi are also well under way. The buildings in question will hopefully be ready for the beginning of the 2019-2020 academic year, and the academic year about to begin will require the utmost commitment to the construction site in via Sarfatti. Ours is currently the largest construction site in all of Milan, covering 35,000 square meters, half of which is green areas and half buildings. 85,000 square meters of floor space is being built, employing hundreds of workers, who are busy every day right across the street.

## 7. ACKNOWLEDGEMENTS

These results were made possible thanks to valuable teamwork. So please excuse me if I take a moment to thank the team that is working on this project. The team that orchestrates resources involves above all the eleven Deans, who in turn make up the Rectorial Committee:

- Prof. Annalisa Prencipe, Dean of the Undergraduate School
- Prof. Antonella Carù, Dean of the Graduate School
- Prof. Stefano Liebman, Dean of the School of Law
- Prof. Giuseppe “Beppe” Soda, Dean of SDA Bocconi School of Management
- Prof. Pierpaolo Battigalli, Dean of the PhD School
- Prof. Francesco Billari, Dean of the Faculty
- Prof. Marco Ottaviani, Dean for Research

- Prof. Stefano Caselli, Dean for International Affairs
- Prof. Bruno Busacca, Dean of Fundraising and Alumni Engagement
- Prof. Fausto Panunzi, Dean of General Affairs
- Prof. Alberto Grando, Dean of Strategy Implementation

and the Academic Council which, in addition to the Deans, includes the Department Heads:

- Prof. Miles Gietzman, Accounting
- Prof. Massimo Marinacci, Decision Sciences
- Prof. Donato Masciandaro, Economics (from 1 November 2017, Prof. Tommaso Monacelli)
- Prof. Carlo Favero, Finance
- Prof. Marco Ventoruzzo, Legal Studies
- Prof. Andrea Ordanini, Marketing
- Prof. Alfonso Gambardella, Management and Technology
- Prof. Andrea Colli, Policy Analysis and Public Management.

My thanks also go to the managers, who are fully committed and dedicate all their professionalism and, sometimes, patience, to the innovative project that we are working on. For everyone here, I would like to mention the head of the administrative staff, Bruno Pavesi, our Chief Executive Officer, whom I prefer to consider as my “partner in crime” in this venture.

Of course I thank the student representatives, who are always constructive, and those alumni in the various Chapters and Topic Groups, who are just as constructive and always eager for innovation and a Bocconi that is striving to grow and improve.

It is also important for me to thank four people who, in different roles, are supporting the work of the Rectorial team. President Monti who, while respecting the diversity of roles, has proven to be not only always present and attentive, but also brimming with far-sighted advice during my first year as Rector. Vice President Guatri, who has generously shared his valuable wisdom. Professor Francesco Giavazzi, Vice President of our International Advisory Council, whose presence and constant support are also an important stimulus for improvement. And Enrico Cucchiani who, as a member of the Executive Committee of the University Board and President of the Campaign Board, thanks to his enviable international experience, supports us on many fronts.

I particularly wish to express my feelings of esteem and friendship for former Rector Professor Andrea Sironi, whom I had the pleasure to serve under as the Director of the MBA and then as the Dean of Human Resources. His term as Rector was for me a point of reference, and I always try to draw upon what I learned with him over the years I spent at his side.

I would also like to conclude by remembering Professor Antonio Borges, former Dean of INSEAD and one of Portugal’s most celebrated economists, who conceived of and became the President of the Bocconi International Advisory Council. Professor Borges was a central figure in the international plans achieved by our University. While I was Director of the MBA, he was a constant source of inspiration, suggestions and, sometimes, when

dealing with small frustrations linked to routine mishaps along the way, a source of comfort. Professor Borges left us prematurely four years ago and I am certain that today he would be proud to see how much progress Bocconi has made over these years.

## 8. CONCLUSIONS

With this speech, I hope I have been successful in sharing the message that the potential for innovation held by this new century is unique, and also key to the future of higher education. The actions of the international institutions that are able to exploit this potential for innovation will make the competitive context of our sector increasingly strong and complex at the global level. The leadership at Bocconi, including the President, the Board, the Chief Executive Officer, the Bocconi Managers, the Rector, the Rectorial Committee, the Academic Council, the President of the Alumni and the Board, will do its best to continue on this track, thanks to ongoing inspiration and support from our students, alumni, staff and faculty. The goal for the near future will be to make sure that Bocconi moves, as it traditionally has, towards increasingly prestigious, innovative and global shores.

With that, I officially declare the opening of the 2017-2018 academic year.