# REPORT ON U.N. SUSTAINABLE DEVELOPMENT GOALS

2017



ALMA MATER STUDIORUM Università di Bologna

# REPORT ON U.N. SUSTAINABLE DEVELOPMENT GOALS

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Report on U.N. Sustainable Development Goals drawn up by:
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### Photos:

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Consistent with the perspective adopted in the Strategic Plan 2016-2018, and in continuity with the effort of extensively reporting started since the publication of the Social Report and the Gender Report, the University of Bologna adoptes an innovative way to report on the contributions generated by its institutional activities, including training, research and social and public engagement, aimed at the achievement of the 17 Sustainable Development Goals (SDGs) of the U.N. 2030 Agenda.

The 2030 Agenda is an action plan for transforming the world, acting in favour of people, peace, the planet, prosperity and partnerships. This becomes realistically possible the more the values and the communicative and inspirational power of the SDGs enter into daily life, with real impact on the behaviours of teachers, administrators, executives and auditors within different institutes.

The University of Bologna is committed to the values of sustainability, such as enhancing and safeguarding the

territory, improving community wellbeing, promoting a knowledge-based development economy, social equity, and the ability of those involved to work effectively together for the common good.

Faithful to its mission, and thanks to a history that has consolidated over time, the Alma Mater Studiorum is fully aware that its activities can produce significant impact, both direct and indirect, on the community and on the region. Therefore, it continues to invest in the quality of training and in research related to the needs of society, as well as in a valuable organizational, institutional and multicampus structure, allowing their members to operate over a vast territory.

In line with its mission of a large public university and the pursuit of social responsibility, the Alma Mater Studiorum has taken an innovative path based on the careful classification and reporting of its activities in a framework that considers its contribution to the achievement of the sustainable development goals. Along this journey, Alma

Mater has highlighted not only the connection between the university and the theme of the quality of education, but also the possible interconnections with the goals of the U.N. 2030 Agenda.

These are the reasons behind this publication, which is also a methodological proposition to be discussed and shared, and a statement of intent and responsibility that can be adopted by universities to achieve the values of the hoped-for future society described in the 2030 Agenda. Last version of this report has been presented at the G7 Environment held in June 2016 in Bologna (Italy), and also it has been mentioned by the International Association of Universities, Onultalia.com and Sustainable Development Solution Network Australia/Pacific.

Finally, I would like to thank all the faculty members and the technical and administrative staff members participating to the Scientific and Technical Committee for Social Reporting at the University of Bologna, who have worked intensively

during the last few months to formulate this innovative reporting approach and to collect and organize the data reported in this publication, which summarizes the daily contribution of a large community of men and women – the Alma Mater Studiorum – working with enthusiasm and great professionalism.

Francesco Ubertini Rector Alma Mater Studiorum - Università di Bologna

Varing K





**5** CAMPUSES: BOLOGNA, CESENA, FORLÌ, RAVENNA, RIMINI

14 MUSEUMS









Interpreting and Translation Law

Medicine

Pharmacy, Biotechnology and Sport Science

Political Sciences

Psychology and Education

Science









**RESEARCH PROJECTS** 

7PQ-H2020-LIFE-INTERREG The funded projects create networks with over 1200 partners, **470** of which are private



ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA

# ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA KEY FACTS



### 85,244 TOTAL NUMBER OF STUDENTS **ENNROLLED IN: DEGREE PROGRAMMES** OF ALL LEVELS, PHDS, MASTERS, POST-GRADUATE TRAINING AND LIFELONG LEARNING PROGRAMMES



5,871 INTERNATIONAL **STUDENTS** 

### STUDENTS IN THE CAMPUSES



### STUDENTS' INTERNATIONAL MOBILITY

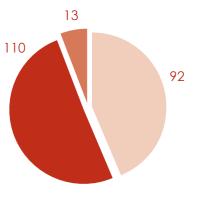






OUTGOING

DEGREE PROGRAMMES (61 INTERNATIONAL)



FIRST CYCLE DEGREE PROGRAMMES

SECOND CYCLE DEGREE PROGRAMMES

SINGLE CYCLE DEGREE PROGRAMMES





### SUSTAINABILITY RELATED COURSE UNIT

Clinical and Health 603
Natural and Life Sciences 654
Technology and Engineering 1,150
Management and Social Sciences 1,023
Arts and Humanities 975

TOTAL 4,405

## SUSTAINABILITY RELATED RESEARCH PROJECTS

152

Clinical and Health	18
Natural and Life Sciences	31
Technology and Engineering	12
Management and Social Sciences	83
Arts and Humanities	8

15 UT RESERVE ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

12 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

13 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

14 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

17 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

18 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

19 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

10 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

10 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

11 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

12 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

13 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

14 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

15 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

16 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

17 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

18 HORSEN ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS

**TOTAL** 





116 **COURSE** UNITS



8.001 STUDENTS WHO COULD CHOOSE THE COURSE UNITS

# RESEARCH



1.046 PUBLICATIONS IN SCOPUS 2007-2017



16,888 "CITED BY" IN SCOPUS



PUBLICATIONS PER CAPITA INDEX NUMBER: 101

INTERNATIONAL BENCHMARKING = **100** 



**PUBLICATIONS PER CAPITA** INDEX NUMBER: 83

NATIONAL BENCHMARKING = **100** 

# THIRD MISSION

### **UNIBO4REFUGEES**

The doors of the University of Bologna are now open to refugee students with the Unibo4Refugees project.

In orientation interviews, students get the chance to submit their CVs, find out about the opportunities for study and financial aid and draw up an educational plan for rebuilding their future.

Even before obtaining refugee status and without having to pay enrolment fees, students can enrol in single learning activities and attend Italian language courses.

Enrolment in degree programmes is made easier thanks to special procedures for checking academic qualifications and admission requirements, obtaining study grants, getting exemption from fees and access to microcredit.

Through this action 19 asylum seekers from 10 different countries registered in single learning activities for the Academic year 2017/2018 and 9 refugees enrolled in degree programmes for the Academic year 2017/2018.

Most of these students come from Sub Saharan Africa (Ethiopia, Nigeria, Ghana, Gambia, Guinea, Mali, Somalia, Sudan, Liberia, Uganda), some others come from Pakistan, Mongolia, Syria, Ukraine.

Among the projects developed by Unibo4Refugees in 2017, there is the construction of a new stable at the Department of Veterinary Medical Sciences of the Alma Mater. Donated by the Archbishop of Bologna, Matteo Maria Zuppi, will allow two young people requesting international protection to continue their path of work placement.





98 COURSE UNITS

STUDENTS WHO

**COULD CHOOSE** 

THE COURSE UNITS



COLLABORATIONS, TEACHING, MOBILITY



(3 EUROPE, 1 AFRICA)



11 **PUBLICATIONS IN** SCOPUS 2007-2017



150 "CITED BY" IN SCOPUS





RESEARCH

PUBLICATIONS PER CAPITA



INTERNATIONAL BENCHMARKING = 100



PUBLICATIONS PER CAPITA





H2020-FP7 LIFE-INTERREG RESEARCH **PROJECTS**  $(3,799,895 \in)$ 

## INTEGRATED RESEARCH TEAM - IRT ALMA FOOD

## Mission of the IRT:

- To guarantee the safety, quality and healthiness of food, both for enhancing quality of life and for the sustainable development of the agro-food systems.
- To develop the agenda of future research needs in collaboration with political, social, and economic stakeholders.
- To promote knowledge and innovation within food-related areas and to meet the changing social demand and the latter answer to the challenges for a more efficient and productive research activity within the University of Bologna.

13

• To provide scientific and technological support, as well as specific training, to stakeholders of the food sector.

# THIRD MISSION

COOPERATION AND SOCIAL ENGAGEMENT RESEARCH PROJECTS



**EUROPE: 2** AFRICA:1

**SOUTH AMERICA: 1** 

ASIA: 2





**791**COURSE
UNITS



COLLABORATIONS, TEACHING, MOBILITY (EUROPE: 8, ASIA:1))



58,512 STUDENTS WHO COULD CHOOSE THE COURSE UNITS

DEGREE PROGRAMME	STUDENTS
Pharmacy and Biotechnology	3,146
Medicine and Surgery	5,964
Psychology	3,327
Medical Specialization	1,014
Total	13,451

# RESEARCH



95
PUBLICATIONS IN SCOPUS 2007-2017



**8,269** "CITED BY" IN SCOPUS



26



PUBLICATIONS PER CAPITA

INDEX NUMBER: **76**INTERNATIONAL BENCHMARKING = **100** 



PUBLICATIONS PER CAPITA

INDEX NUMBER: **63**NATIONAL BENCHMARKING = **100** 



26 H2020-FP7 LIFE-INTERREG RESEARCH PROJECTS (13,687,655 €)

# **INTEGRATED RESEARCH TEAM - IRT ALMA SEQUENCING**

Alma Sequencing Integrated Research Team (IRT) combines the competences of many of the Alma Mater's research groups, whose fields of activity go from genetics of rare diseases and cancer to evolutionary analysis; from pharmacogenomics to preventive genetic screenings; from the identification of biological markers for the improvement of animal and plant production to systems biology and the study of microbiota.

The use of NGS platforms also implies the development of several innovative applications: bioinformatics analysis, generation and storage of large amount of data; cloud computing and elaboration of algorithms for analyzing nucleotide sequences; processing of complex data and protection of sensitive data.

# THIRD MISSION



# INSTITUTION

UNIBO STAFF WORKING IN HOSPITALS	No.
Teaching staff	265
Technical-admistrative staff	129







4,405 ALL COURSE UNITS

39

COLLABORATIONS,

TEACHING, MOBILITY

(17 EUROPE, 7 AFRICA,

7 SOUTH AMERICA,

1 NORTH AMERICA,

6 ASIA, 1 OCEANIA)



ALL STUDENTS

The University of Bologna has an Internal Quality Assurance System involving a self-assessment that allow the University to improve the quality of its study programmes. This process service: students, families, companies, institutions, etc.

For each study programme, the outcome of the analysis is a offered by the University.

### PARAMETERS FOR QUALITY EDUCATION

STUDENT ATTRACTIVENESS	
Students enrolled in Second cycle degree programmes (from other universities)	47.2%
Incoming exchange students	2,777
International students (UE and Extra-UE)	7.1%
SOCIAL INCLUSION	
Value of scholarships (merit and status based)	25,920,694
Students followed by the Service for disabled	625
Enrolled students by gender	M 44.6% F 55.4%
PROGRAMMES OFFERED AND MAIN RESULTS	
Degree programmes	215
Degree programmes taught in English	47
Masters' programmes and post-graduate/lifelong learning programmes	97
Courses with at least three quarters of students satisfied with the course	75%
Graduates	18,068
Graduates within regular enrollment	84.2%

### **UNIVERSITY QUALITY ASSURANCE**

aims provider an adequate response to the expectations of all actors who have an interest in the offered training

The system envisages the periodic analysis of significant data (such as the number of graduates in the course, the views of the students and the employment status of the graduates) collected both by the University and by the National Agency for the Evaluation of the University and Research System (ANVUR).

self-evaluation report, in which strenghts and weaknesses are identified and concrete actions for improvement are planned. After the study programmes have completed their activities, the Joint Teacher-Student Committees and the University Quality Committee examine the documentation, in order to monitor the functioning of the self-assessment activities and identify ideas for improving the quality of teaching, based on an overview of all the degree programmes

4. QUALITY EDUCATION
4. QUALITY EDUCATION

# RESEARCH





Data updated to 2017



Hindex

**51** 



PUBLICATIONS PER CAPITA INDEX NUMBER: **73** 

INTERNATIONAL BENCHMARKING = **100** 



RESEARCH PRODUCTS	No.
Articles	5,866
Chapters	1,637
Books	411
Proceedings	988
Translations	49
Patents/licences	97
Other	77
Research-related activities	98
Total	9,223

# INSTITUTION

TRAINED PEOPLE IN 2017	% ON UNIBO STAFF	
1,424	48%	

# THIRD MISSION





173
TEACHERS ON LIFELONG
LEARNING PROGRAMMES

AND **8,900** ENROLLED TO OBTAIN UNIVERSITY CREDITS FOR QUALIFICATION

GUIDANCE (CURRENT AND OUTGOING STUDENTS)	2017
Curricular internships	19,978
Professional internship	980
Career Days participants	2,816
Recruiting Day participants	1,267
Job Days ( School of Agriculture and veterinary Medicine) participants	540
Job Placement-web site visitors	69,646
Job Placement service: no. of participants to Companies presentations	1,333
No. of beneficiaries of the Guidance - Education and Support to Entrepreneurship services	3,520



COOPERATION AND SOCIAL ENGAGEMENT RESEARCH PROJECTS

EUROPE: 1 ASIA: 3





362



COLLABORATIONS. TEACHING, MOBILITY (EUROPE)





31,613 STUDENTS WHO **COULD CHOOSE** THE COURSE UNITS

# RESEARCH



451 **PUBLICATIONS IN** SCOPUS 2007-2017

PUBLICATIONS PER CAPITA

INDEX NUMBER: 85

INTERNATIONAL BENCHMARKING = **100** 



5,198 "CITED BY" IN SCOPUS





**PUBLICATIONS PER CAPITA** INDEX NUMBER: 75 NATIONAL BENCHMARKING = **100** 



### **INTEGRATED RESEARCH TEAM - IRT ALMA GENDER**

Alma Gender IRT promotes research on gender issues, focusing on how societies shape, organize, and innovate gender roles, relations, identities, and representations of gender, and how these interact with other variables such as nationality, ethnicity, sexual orientation, gender identity, disability, age, profession, religion, economic

Alma Gender IRT's main goal is to create a network of scholars from different fields in order to promote research and teaching on gender issues and to advance gender equality within the University of Bologna's community of students, teachers and workers.

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# THIRD MISSION

### **EVENTS PROMOTED ON GENDER RELATED ISSUES**

The University of Bologna promotes the valorisation of gender-related issues through organization, the participation, the patronage, the dissemination of public initiatives (such as presentations, seminars, conferences, etc.) carried out in the Campuses where the University operates, as well as through the dissemination of publications, flyers, brochoures, ect. to gender issues.

From an analysis of the events advertised through the online magazine of the University of Bologna - "UniboMagazine" (www. magazine.unibo.it), in 2017 were published 32 articles on gender-related issues.



**GENDER REPORT** 

# INSTITUTIONS

# BODIES FOR THE PROTECTION OF GENDER EQUALITY AT UNIVERSITY OF BOLOGNA

1) Guarantee Committee for Equal Opportunities, Employee Wellbeing and Non-Discrimination at Work – CUG, the Harassment Adviser;

- 2) Vice-Rector of Human Resources;
- 3) Delegate for Occupational Welfare;
- 4) Delegate for Equal Opportunities;
- 5) Harassment Adviser.







+ 98 = 166

### THE GLASS CEILING INDEX (SHE FIGURES, 2015)

The **Glass Ceiling Index (GCI)** is a relative index comparing the proportion of women in academia (grades A, B, and C) with the proportion of women in top academic positions (grade A positions; equivalent to full professors in most countries) in a given year.

### The GCI can range from 0 to infinity.

A GCI of 1 indicates that there is no difference between women and men in terms of their chances of being promoted.

A score of **less than 1** means that women are more represented at the grade A level than in academia generally (grades A, B, and C) and a GCI score of **more than 1** indicates the presence of a glass ceiling effect, meaning that women are less represented in grade A positions than in academia generally (grades A, B, and C).

In other words, the interpretation of the GCI is that the higher the value, the stronger the glass ceiling effect and the more difficult it is for women to move into a higher position.



GLASS CEILING INDEX OF UNIVERSITY OF BOLOGNA (SHE FIGURES, 2015)

**2014**: 1.83 **2015**: 1.80 **2016**: 1.65

**2017**: 1.59



THE GENDER EQUALITY PLAN

The **Gender Equality Plan (GEP)** is a flexible tool, comparable to a Positive Action Plan, which is constructed taking into account the peculiarities and needs of each single University or Research Center.

The GEP of University of Bologna contains measures developed on the basis of the needs and the context analysis of the University of Bologna, an analysis carried out through the valuable collaboration of its researchers, professors, Vice-Rectors and Rector technicians and administrative staff, during the Gender Audit phase of the PLOTINA project, that has been undertaken from February to December 2016. The measures are addressed to specific beneficiaries, being the main target of the GERI 4 call "female researchers". The individual measures were specifically foreseen for the years 2017 - 2020 (total duration of the PLOTINA project) and will be verified through the use of indicators and by peer-reviewers.





72 COURSE UNITS



4,968
STUDENTS WHO
COULD CHOOSE
THE COURSE UNITS

# RESEARCH



264
PUBLICATIONS IN SCOPUS 2007-2017



3,171
"CITED BY" IN SCOPUS



33



PUBLICATIONS PER CAPITA

INDEX NUMBER: **97**INTERNATIONAL
BENCHMARKING: **100** 



PUBLICATIONS PER CAPITA

INDEX NUMBER: 100

NATIONAL
BENCHMARKING = 100



4 H2020-FP7 LIFE-INTERREG RESEARCH PROJECTS (1,430,153 €)

# INSTITUTION

WATER CONSUMPTION /YEAR	M³
2015	1,381,404
2016	824,067
2017	422,130







168 COURSE UNITS



8,086
STUDENTS WHO
COULD CHOOSE
THE COURSE UNITS

# RESEARCH



195
PUBLICATIONS IN SCOPUS 2007-2017



2,901
"CITED BY" IN SCOPUS



32



PUBLICATIONS PER CAPITA

INDEX NUMBER: 122

INTERNATIONAL BENCHMARKING = **100** 



PUBLICATIONS PER CAPITA

INDEX NUMBER: 104

NATIONAL BENCHMARKING = **100** 



9 H2020-FP7 LIFE-INTERREG RESEARCH PROJECTS (2,455,032 €)

# INTEGRATED RESEARCH TEAM - IRT ALMA LOW CARBON

The **Alma Low Carbon Integrated Research Team** coordinates the scientific competences of the University of Bologna, its thematic structure based on the European Horizon 2020 priorities for Research and Innovation:

29

- Energy efficiency;
- Competitive low carbon energy;
- Waste: a resource to recycle, reuse and recover raw materials;
- Water Innovation: boosting its value for Europe;
- Growing low carbon, resource efficient economy with sustainable supply of raw materials;
- Social, environmental, and economic aspects of the energy system.

# THIRD MISSION



COOPERATION AND SOCIAL ENGAGEMENT RESEARCH PROJECTS

AFRICA: 1 ASIA: 1

# INSTITUTION

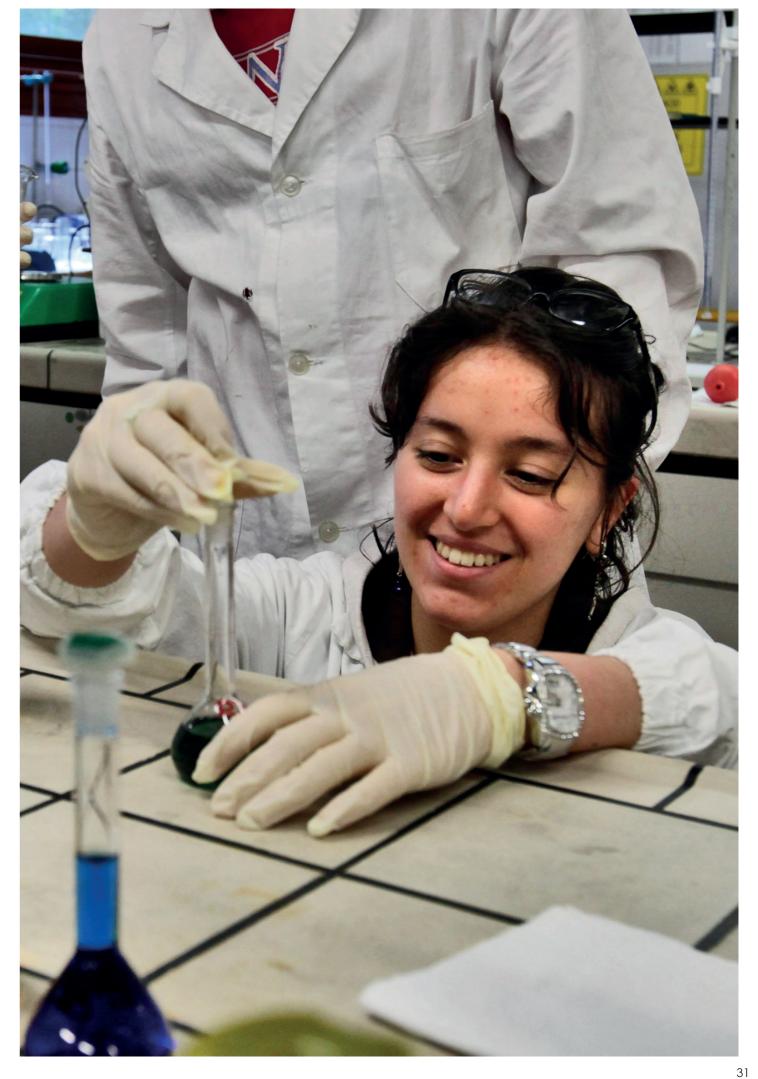
GREEN ROOFS	M²
School of Engineering and Architecture (via Terracini)	120
School of Agriculture and Veterinary Medicine (viale Fanin)	932
Total	1,052



1,426,186 KWH PER YEAR.
SOLAR ENERGY PRODUCED
EQUAL TO 1,000 TONNES OF CO<sub>2</sub>
PER YEAR NOT RELEASED
INTO THE ENVIRONMENT.



MORE THAN 80% OF CONVENTIONAL APPLIANCES ARE REPLACED BY ENERGY EFFICIENT ONES







364 COURSE



16

COLLABORATIONS,

TEACHING, MOBILITY

(EUROPE:14, NORTH

AMERICA: 1, ASIA:1)

24,152 STUDENTS WHO **COULD CHOOSE** THE COURSE UNITS



69.7% **GRADUATES EMPLOYED** 

# RESEARCH



**78 PUBLICATIONS IN** SCOPUS 2007-2017



1,211 "CITED BY" IN SCOPUS



20



PUBLICATIONS PER CAPITA

INDEX NUMBER: 97 INTERNATIONAL BENCHMARKING = **100** 



PUBLICATIONS PER CAPITA INDEX NUMBER: 162

NATIONAL BENCHMARKING = **100** 



H2020-FP7 LIFE-INTERREG RESEARCH **PROJECTS** (713,420 €)

# THIRD MISSION

### ENGAGEMENT IN ACADEMIC ENTREPRENEURSHIP

Academic entrepreneurship refers to the interaction between university, industry, markets and society at large and encompasses different channels through which the output of academic research can be conveyed to the market. These channels include patents, licenses, universityindustry collaborations, academic consulting and new venture creation. This latter, among the various mechanisms in support of the commercial exploitation of research, has received increasing attention. The actions to be implemented at the University of Bologna to support academic entrepreneurship can be grouped according to five main conceptual dimensions, representing five pillars on which the strategy builds

- inspiring and raising awareness;
- scouting of Ideas;
- pre-incubating services;
- incubating;
- · accellerating and enabling growth.



30 SPIN OFFS AND START UPS

8. DECENT WORK AND ECONOMIC GROWTH

8. DECENT WORK AND ECONOMIC GROWTH

# INSTITUTION

TEACHING STAFF	2017	
	Women	Men
Full Professors	171	520
Associate Professors	443	613
Assistant Professors	457	516
Total of teaching staff	1,071	1,649
Research fellows	611	594
Total	1,682	2,243

TECHNICAL-ADMINISTRATIVE STAFF	2017	
TECHNICAL-ADMINISTRATIVE STAFF	Women	Men
Heads of administrative divisions	7	8
Technical-Administrative staff	1,897	982
Language assistants	55	16
Farm workers	0	6
Total	1,959	1,012

TRAINING ON HEALTH AND SAFETY IN WORKPLACES	2017
Training initiatives	63
Participants	2,087
Training hours	8,543

### INITIATIVES TO SUPPORT ADMINISTRATIVE STAFF WITH DISABILITIES: 230

The University pays particular attention to people with disabilities or in situations of personal hardship, to whome specific initiatives aimed at inclusion are promoted. Among these initiatives there is the creation of the Mobility and Labor Protection Office

The objective of this office is to promote targeted placement throughout the working life. Among the planned actions are: the promotion of actions aimed at the protection of individuals and the management of situations of conflict and criticism, support in the provision of aids and adaptations of environments, organize focus groups with subject specialists for the analysis of critical situations, carry out a mapping permanent status of disabilities in the University, etc.

This is accompanied by a widespread policy of sensitization of working contexts and the creation of a collaboration network both within the University, between institutional figures and services in charge of work well-being, and outside the university with the local authorities interested in various aspects of disability, for a multimodal approach to critical situations. Finally, the office provides for the mandatory obligations according to the provisions of the current legislation on the right to work of persons with disabilities.

FINANCIAL PERFORMANCE	2017
Expenses for personnel	65.19%, within the limit of 80%
Debt-to-equity ratio	5.09%, within the limit of 15%
Indicator of financial sustainability	1.21 (higher than 1, the legal limit)





606 COURSE UNITS





37,366 STUDENTS WHO COULD CHOOSE THE COURSE UNITS



14,737,109 €
TOTAL INVESTMENT FOR PHD STUDENTS (2017)

# ENGAGEMENT IN ACADEMIC ENTREPRENEURSHIP: THE PdA \_PHASE1 - PdA \_PHASE2 ENTREPRENEURSHIP EDUCATION

**The PdA \_phase1** aims at offering students, on a continuous basis, the opportunity to disclose their ideas any time during the year. Students disclose their ideas to a team of experts who will help and assist them to find their way in the initial stages of the generation of an entrepreneurial opportunity and develop a preliminary assessment.

**Start up day:** event organised by University of Bologna to promote the merging of skills and entrepreneurial development in young people. The aim of the event is helping students and graduates to successfully kickstart their entrepreneurial ideas and facilitating the encounter between those who have an idea (startuppers) and those who want to practice their skills (players).

The PdA \_phase2 aims at pushing further those students' ideas showing potential for business development. Students whose ideas are selected in phase 1 are introduced to a training program up to 6/9 months aimed at developing their ideas until they are ready to be submitted to the most appropriate incubators/accelerators.

The Entrepreneurship education consists in ad-hoc courses for undergraduate and postgraduate curricula in all of the disciplines/fields offering the basic notions of entrepreneurship (feasibility analysis, business planning, etc.). More advanced courses are available only in specific disciplines (management and engineering) and Master programs are offered by BBS Bologna

Business School.

# RESEARCH



390
PUBLICATIONS IN SCOPUS 2006-2017



6,404
"CITED BY" IN SCOPUS



35



PUBLICATIONS PER CAPITA INDEX NUMBER: **117** 

INTERNATIONAL SENCHMARKING = **100** 



PUBLICATIONS PER CAPITA INDEX NUMBER: 108



41 H2020-FP7 - LIFE-INTERREG RESEARCH PROJECTS (19,961,492 €)

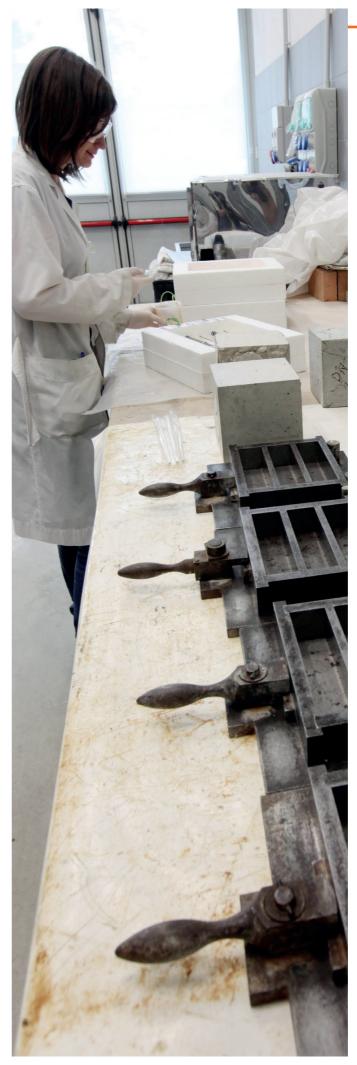
37

H2020 PROJECTS AT 31/12/2017	NUMBER OF PROJECTS	FUNDED BY UNIVERSITY OF BOLOGNA
H2020	124	45,662,412€

# ENGAGEMENT IN ACADEMIC ENTREPRENEURSHIP: LAUNCH PAD - MAKER SPACE

**Unibo Launch Pad** is a program targeting PhD students, post-doc scholars and young researchers with a strong focus on science-based venturing ideas. Students whose entrepreneurial ideas are selected are introduced to a three months intensive acceleration experience. The program includes a conclusive demo day during which the most promising projects are selected by a panel of VCs and industry experts to participate in a fully funded three weeks immersion program in Silicon Valley and London.

**Maker space** is a coworking space targeting University of Bologna students and equipped with tools for 'makers' to create their own prototypes and with an array of computer-controlled tools that cover several different length scales and various materials. This is a brand new project to be open early in 2018.





### 33 DEPARTMENTS

- Agricultural and Food Sciences
- Agricultural Sciences
- Architecture
- Biological, Geological, and Environmental Sciences
- Biomedical and Neuromotor Sciences
- Chemistry «Giacomo Ciamician»
- Civil, Chemical, Environmental, and Materials Engineering
- Classical Philology and Italian Studies
- Computer Science and Engineering
- Cultural Heritage
- Economics
- Education Studies «Giovanni Maria Bertin»
- Electrical, Electronic, and Information Engineering «Guglielmo Marconi»
- Experimental, Diagnostic and Specialty Medicine
- For Life Quality Studies
- History and Cultures
- Industrial Chemistry «Toso Montanari»
- Industrial Engineering
- Interpreting and Translation
- Legal Studies
- Management
- Mathematics
- Medical and Surgical Sciences
- Modern Languages, Literatures, and Cultures
- Pharmacy and Biotechnology
- Philosophy and Communication Studies
- Physics and Astronomy
- Political and Social Sciences
- Psychology
- Sociology and Business Law
- Statistical Sciences «Paolo Fortunati»
- The Arts
- Veterinary Medical Sciences

9. INDUSTRY, INNOVATION AND INFRASTRUCTURE 9. INDUSTRY, INNOVATION AND INFRASTRUCTURE



# INTERDEPARTMENTAL CENTRES FOR INDUSTRIAL RESEARCH

### **BOLOGNA**

- Interdepartmental Centre for Industrial Research in Building and Construction - CIRI Building and Construction
- Interdepartmental Centre for Industrial Research in Energy and Environment - CIRI Energy and Environment
- Interdepartmental Centre for Industrial ICT Research -CIRI ICT
- Interdepartmental Centre for Industrial Research in Advanced Mechanical Engineering Applications and Materials Technology - CIRI Advanced Mechanics and Materials
- Interdepartmental Centre for Industrial Research in Health Sciences and Technologies - CIRI Health Sciences and Technologies

### **CESENA**

- Interdepartmental Centre for Industrial Agrofood Research - CIRI Agrofood
- Interdepartmental Centre for Industrial ICT Research -CIRI ICT

### FORLI'

- Interdepartmental Centre for Industrial Aeronautical Research - CIRI Aeronautics
- Interdepartmental Centre for Industrial ICT Research -CIRI ICT

### RAVENNA

- Interdepartmental Centre for Industrial Research in Building and Construction - CIRI Building and Construction
- Interdepartmental Centre for Industrial Research in Energy and Environment - CIRI Energy and Environment
- Interdepartmental Centre for Industrial Research in Advanced Mechanical Engineering Applications and Materials Technology - CIRI Advanced Mechanics and Materials

### **FAENZA**

 Interdepartmental Centre for Industrial Research in Advanced Mechanical Engineering Applications and Materials Technology - CIRI Advanced Mechanics and Materials

### **RIMINI**

- Interdepartmental Centre for Industrial Research in Energy and Environment - CIRI Energy and Environment
- Interdepartmental Centre for Industrial Research in Advanced Mechanical Engineering Applications and Materials Technology - CIRI Advanced Mechanics and Materials



RESEARCH CONTRACTS BETWEEN
CIRI AND COMPANIES





AGREEMENTS BETWEEN CIRI AND OTHER RESEARCH INSTITUTES



53
PARTICIPATIONS IN
RESEARCH PROJECTS

# INSTITUTION

### **ALMAECLUB**

The club is an **open community** of the University of Bologna faculty members and scholars from all of the disciplines aimed at **spreading entrepreneurial culture within the Alma Mater**.

The club gathers on a bimonthly basis and provides participants the chance to:

- learn about entrepreneurship (basic courses are offered to those who are not familiar with entrepreneurship and are willing to know more):
- be inspired by speakers (entrepreneurs, outstanding scholars, managers, etc.) sharing their stories, passions and interests in entrepreneurship;
- join a think tank and contribute with ideas and competences to the development of specific projects/actions to support entrepreneurship within Alma Mater.

AlmaEClub was launched early in 2017.

# THIRD MISSION



98
PATENTS
(INCLUDING NEW PLANT VARIETIES)

### **INCUBATORS**

Networks of incubators (Innovation Square, CesenaLab and Basement) other incubating facilities located within different campus of the University of Bologna offering incubation, preincubation and idea-scouting services, on top of spaces. Innovation Square is located in Rimini. CesenaLab is located in Cesena and Basement is located in Forlì.

AlmaCube is the incubator jointly founded in March 2013 by the University of Bologna together with Unindustria Bologna to support the generation of highly innovative companies. It serves both spin-offs and start-ups.





380 **COURSE** UNITS



13 COLLABORATIONS. TEACHING, MOBILITY (EUROPE)



31,627 STUDENTS WHO **COULD CHOOSE** THE COURSE UNITS

# RESEARCH



134 **PUBLICATIONS IN** SCOPUS 2007-2017



2,869 "CITED BY" IN SCOPUS





20

# THIRD MISSION



3,360 DOWNLOADS OF **SOCIAL RESPONSIBILITY REPORT** 



**COOPERATION AND SOCIAL ENGAGEMENT RESEARCH PROJECTS** 

**EUROPE: 8** 

# ISTITUTION

# THE GUARANTEE COMMITTEE FOR EQUAL OPPORTUNITIES, EMPLOYEE WELLBEING AND **NON-DISCRIMINATION AT WORK - CUG**

This committee makes proposals, provides consultation and monitors the development of a culture that promotes equal opportunities, enhances employee wellbeing and prevents discrimination, with reference to Italian current legislation and art. 14 of the University Statute.

It avails of the internal services for the promotion of employee wellbeing provided by Alma Mater and works closely with the Harassment Adviser.

43



PUBLICATIONS PER CAPITA INDEX NUMBER: 59

INTERNATIONAL BENCHMARKING = **100** 



**PUBLICATIONS PER CAPITA** 

INDEX NUMBER: 72 NATIONAL BENCHMARKING = **100** 

H2020-FP7 LIFE-INTERREG RESEARCH **PROJECTS** (2,258,149 €)





COURSE



STUDENTS WHO COULD CHOOSE THE COURSE UNITS

COLLABORATIONS. TEACHING, MOBILITY



83% STUDENTS' SATISFACTION WITH CLASSROOMS STUDENTS SATISFIED WITH THE CLASSROOMS)

# RESEARCH



136 **PUBLICATIONS IN** SCOPUS 2007-2017

PUBLICATIONS PER CAPITA

INDEX NUMBER: 118

INTERNATIONAL BENCHMARKING = **100** 



1,803 "CITED BY" IN SCOPUS





H2020-FP7 LIFE-INTERREG RESEARCH **PROJECTS** (4,349,163 €)

# 27

PUBLICATIONS PER CAPITA INDEX NUMBER: 99 NATIONAL BENCHMARKING = **100** 

### INTEGRATED RESEARCH TEAM - IRT ALMA HERITAGE SCIENCE

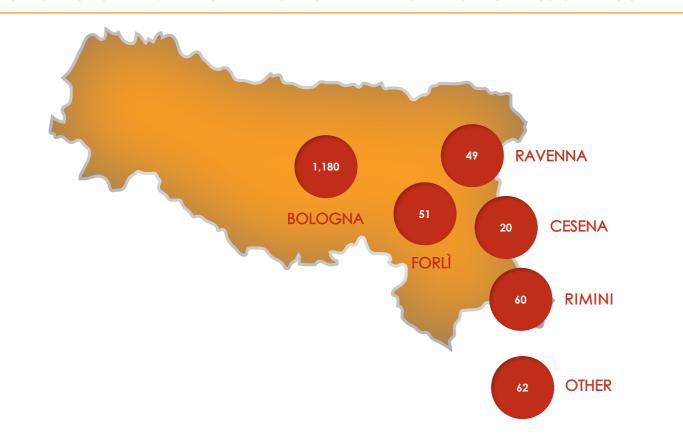
### Mission and Aims of the IRT Alma Heritage Science:

- To use interdisciplinarity as solution to cope with contemporary challenges related to Cultural Heritage conservation, restoration and valorization.
- To give support to the implementation and development of new solutions by covering several scientific sectors and studying the research field from different perspectives.
- To be a main partner for major stakeholders: foundations, associations, industries, policy makers, research centers and institute.
- To facilitate multi-disciplinary research.
- To contribute to the strengthening of the European Research Area.
- To develop the agenda of research needs at national and international level.

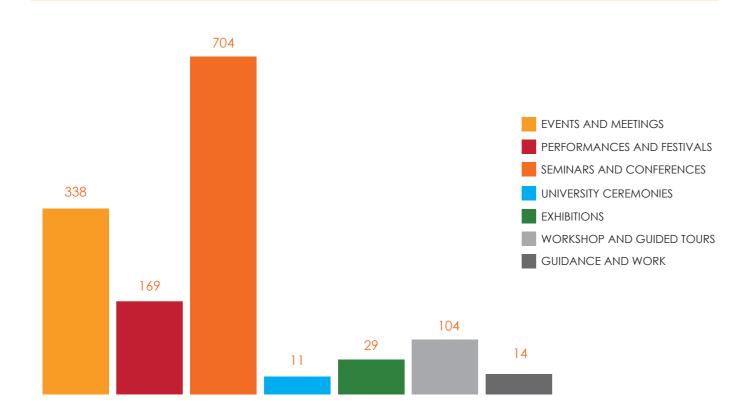
11. SUSTAINABLE CITIES AND COMMUNITIES 11. SUSTAINABLE CITIES AND COMMUNITIES

# THIRD MISSION

### PUBLIC ENGAGEMENT: EVENTS IN THE TOWNS WHERE THE UNIVERSITY CAMPUSES ARE LOCATED



### **PUBLIC ENGAGEMENT: EVENTS BY TYPE**



## **UNIVERSITY MUSEUM NETWORK (14 MUSEUMS)**

The "G. Ciamician" Chemistry Collection

MeuS – The European Student Museum

The Observatory Museum

The "L. Cattaneo" Anatomical Waxwork Museum

Comparative Anatomy Museum

The Domestic Animal Anatomy Museum

The Museum of Veterinary Pathology and Teratology

The Antropology Museum

The Museum of Physics

The "L. Bombicci" Mineralogy Museum

The Palazzo Poggi Museum

The Zoology Museum

The Giovanni Capellini Geological Museum

The Herbarium and the Botanical Gardens





47





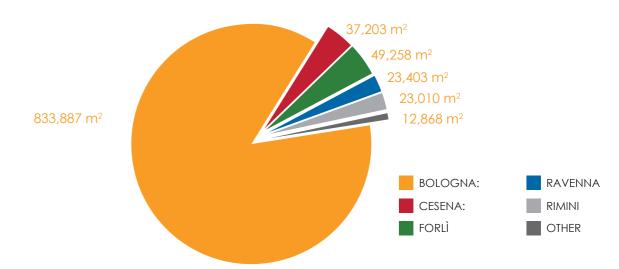
ON 2015 DATA)



# INSTITUTION

# **GEOGRAPHICAL DISTRIBUTION OF BUILDINGS (2016)**

Total 979,632.70 m<sup>2</sup>



Data refer to the indoor surface area of the buildings and do not include outdoor areas.





312 COURSE UNITS



19,509 STUDENTS WHO COULD CHOOSE THE COURSE UNITS

# RESEARCH



157
PUBLICATIONS IN SCOPUS 2007-2017



2,388
"CITED BY" IN SCOPUS



26



PUBLICATIONS PER CAPITA

INDEX NUMBER: 124

INTERNATIONAL BENCHMARKING = **100** 



PUBLICATIONS PER CAPITA INDEX NUMBER: **124** 

NATIONAL BENCHMARKING = **100** 



13 H2020-FP7 LIFE-INTERREG RESEARCH PROJECTS (4,310,003 €)

# INSTITUTION



RECYCLING PROGRAM FOR UNIVERSITY WASTE (GREEN METRIC 2017 ON 2016 DATA) **EXTENSIVE** (MORE THAN 50%)



INORGANIC WASTE TREATMENT (GREEN METRIC 2017ON 2016 DATA)

FULLY RECYCLED (MORE THAN 50%)





160 COURSE UNITS



6,681 STUDENTS WHO COULD CHOOSE THE COURSE UNITS

# RESEARCH



PUBLICATIONS IN SCOPUS 2007-2017



303 "CITED BY" IN SCOPUS





2,581 PERSONAL PASSES FOR USE OF PUBLIC TRANSPORT ON FAVORABLE TERMS

INSTITUTION



40% OF ELECTRIC CARS IN THE UNIVERSITY FLEET OF CARS (GREEN METRIC 2016 ON 2015 DATA)



6,333 MEAN NUMBER OF BICYCLE AROUND THE UNIVERSITY (GREEN METRIC 2016 ON 2015 DATA)



507 CO<sub>2</sub> EMISSION OVER THE LAST 12 MONTHS (TONS) (GREEN METRIC 2016 ON 2015 DATA)

51

PUBLICATIONS PER CAPITA

INDEX NUMBER: 24

INTERNATIONAL BENCHMARKING = **100** 



PUBLICATIONS PER CAPITA INDEX NUMBER: 105

NATIONAL BENCHMARKING = **100** 



H2020-FP7 LIFE-INTERREG RESEARCH **PROJECTS** (710,036 €)





55 COURSE UNITS



COLLABORATIONS, TEACHING, MOBILITY (EUROPE)



1,984
STUDENTS WHO
COULD CHOOSE
THE COURSE UNITS

# RESEARCH



**82**PUBLICATIONS IN SCOPUS 2007-2017



2,072
"CITED BY" IN SCOPUS



19



PUBLICATIONS PER CAPITA

INDEX NUMBER: 149

INTERNATIONAL
BENCHMARKING = 100



PUBLICATIONS PER CAPITA INDEX NUMBER: 216

NATIONAL BENCHMARKING = **100** 



6 H2020-FP7 LIFE-INTERREG RESEARCH PROJECTS (1,293,157 €)

### **BLUE GROWTH @ UNIBO**

At the University of Bologna there is different **expertise on topics related to seas and oceans**, in particular with reference to:

- Marine ecosystems, including vulnerabilities and resilience to anthropic impacts;
- Climate change, adaptation and mitigation plans;
- Risks and coastal protection (including erosion, pollution, marine litter and spills);
- Blue & White Biotech for marine environment;
- Fisheries;
- · Aquaculture;
- Tourism
- Marine spatial planning and integrated coastal zone management:

53

- Maritime transport technologies and infrastructures;
- Observation and oceanographic systems;
- Multi-purposes offshore marine platforms;
- Marine coastal cultural heritage.

 $\sim$  2





162



9,531 STUDENTS WHO **COULD CHOOSE** THE COURSE UNITS

# RESEARCH



34 **PUBLICATIONS IN** SCOPUS 2007-2017



390 "CITED BY" IN SCOPUS





**PUBLICATIONS PER CAPITA** 

INDEX NUMBER: 45

INTERNATIONAL BENCHMARKING = 100



**PUBLICATIONS PER CAPITA** 

INDEX NUMBER: 37

NATIONAL BENCHMARKING = **100** 





H2020-FP7

LIFE-INTERREG

RESEARCH

**PROJECTS** (1,882,747€)

The Ozzano Centre has a teaching cow-house for dairy cattle, geared to experimentation with different feeds and their yield.

One section of the Farm is applying an ongoing protocol of organic agriculture, a subject of wide topical interest yet controversial in the technical and scientific world.

Today's Farm puts on services to design, implement and maintain areas of greenery throughout the University; it also runs a canteen at the Cadriano Centre for teaching and experiment.

In general, it is an 'observatory' onto agriculture as practised in our country, fielding the kind of questions that consumers and agriculturists expect the academic world to answer. This helps to make experimental and research projects more 'targeted'.

# THIRD MISSION

## THE UNIVERSITY OF BOLOGNA EXPERIMENTAL FARM - AUB

The University of Bologna Experimental Farm - AUB dates from 1974 and was designed to support research and experiments conducted by departments of the Bologna University School of Agricultural Sciences and Veterinary Medical Sciences.

As concerns research, the Farm enables programmes to be devised for the benefit of theoretical and applied studies.

Experimental projects include issues bound up with farm management: defence of the land, fertilizing the land, and improving techniques of herbaceous and tree cultivation.

> This whole multi-faceted facility forms an important trainingground for students; it is used for guided tours and practical work, and can be profitably harnessed to practical applied internships and above all graduation dissertations





386



STUDENTS WHO **COULD CHOOSE** THE COURSE UNITS

# RESEARCH



COLLABORATIONS. TEACHING, MOBILITY (EUROPE:2,



NORTH AMERICA: 1)



19

**PUBLICATIONS IN** 

SCOPUS 2007-2017

**PUBLICATIONS PER CAPITA** 

INDEX NUMBER: 61 BENCHMARKING = 100



117 "CITED BY" IN SCOPUS



**PUBLICATIONS PER CAPITA** INDEX NUMBER: 100

BENCHMARKING = 100





H2020-FP7 LIFE-INTERREG RESEARCH **PROJECTS** (1,954,536 €)

### INTEGRATED RESEARCH TEAM - IRT SOCIAL ECONOMY AND CIVIL SOCIETY

### Mission of the IRT:

Gathering many social researchers, this IRT aims at coping with social problems and contemporary challenges through academic research. Covering several scientific sectors and studying social economy from different perspectives, it gives support to the implementation and development of new solutions.

### Its research team works:

- to be a main partner for major stakeholders: foundations, associations, industrial and cooperative enterprises, policy makers, research centres and institutes;
- to facilitate multi-disciplinary research;
- to contribute to the strengthening of the European Research Area to develop an agenda of scientific research at national and international level;

57

• to promote the role and culture of social economy in the civil society.

# INSTITUTION

# ISTITUTIONAL ACCOUNTABILITY AND TRANSPARENCY

At the University of Bologna web site http://www.unibo.it/en/university/who-we-are/who-we-are all the istitutional documets and regulations, including planning and reporting documents are available.

Also, the University of Bologna has signed the Berlin Declaration on open access to knowledge in the Sciences and Humanities.



15,420,508 VISITS UNIBO.IT (ITALIAN VERSION)



1,297,124 VISITS UNIBO.IT/EN (ENGLISH VERSION)

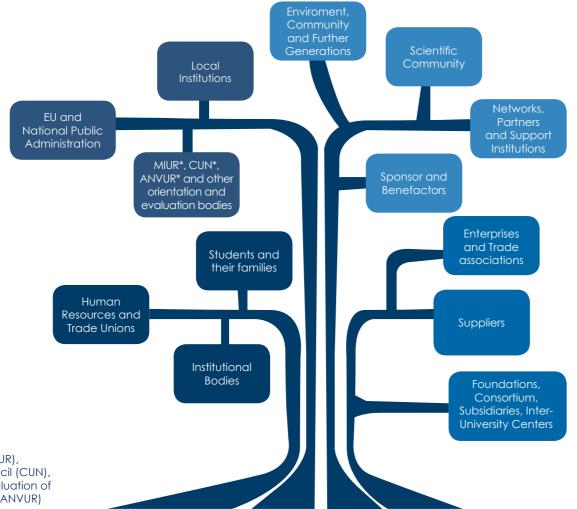


34,549,290 VISITED PAGES UNIBO.IT (ITALIAN VERSION)



4,304,489
VISITED PAGES
UNIBO.IT/EN
(ENGLISH VERSION)

### STAKEHOLDERS MAP



<sup>\*</sup>Ministry for University (MIUR),
\*National University Council (CUN),



# THIRD MISSION

# INVOLVEMENT IN EXTERNAL INSTITUTIONAL ACTIVITIES: PARTECIPATION INTO THE MAGNA CHARTA OBSERVATORY

The University of Bologna widely supports the goals and activities of the Magna Charta Observatory of Fundamental Values and Rights (MCO). Founded by the University of Bologna and the European University Association, the Magna Charta Observatory is the global guardian of fundamental university values set out in the Magna Charta Universitatum and assists universities and higher education systems to operate effectively in accordance with these values.

The University of Bologna was among the first universities to sign the Magna Charta in 1988 and to declare its core values, such as academic freedom and autonomy. Since then, **over 800 universities from 85 countries** have signed this statement and the University of Bologna continues to support it through a number of initiatives.

In 2017, it produced a conference statement on diversity and social engagement that was promoted during the 2017 G7 in Taormina and is now taking part in a pilot project to review universities values worldwide, thus continuing to strengthen the bonds between universities and society.



COOPERATION AND SOCIAL ENGAGEMENT RESEARCH PROJECTS

EUROPE: 2 ASIA: 2

<sup>\*</sup>National Agency for Evaluation of University and Research (ANVUR)





**72 COURSE** 



STUDENTS WHO **COULD CHOOSE** THE COURSE UNITS

# RESEARCH



COLLABORATIONS. TEACHING, MOBILITY (EUROPE)



90 **PUBLICATIONS IN** SCOPUS 2007-2017



2,679 "CITED BY" IN SCOPUS





**PUBLICATIONS PER CAPITA** 

INDEX NUMBER: **82** 

BENCHMARKING = 100



**PUBLICATIONS PER CAPITA** 

INDEX NUMBER: 78 BENCHMARKING = 100



H2020-FP7 LIFE-INTERREG **RESEARCH PROJECTS** (998,975 €)

# **INTEGRATED RESEARCH TEAM - IRT BRASIL**

IRT Brasil connects a large number of researchers of the University of Bologna who are active in scientific projects with and about Brazil, in order to:

- promote an interdisciplinary approach and coordinate a consistent critical mass of researchers, cooperating with Brazilian partners and working on themes linked with Brazilian culture and knowledge production;
- become a recognized stakeholder, qualified for the dimension and quality of knowledge and research on Brazil and with Brazilian, European and Italian partners;
- promote scientific, institutional and economic dialogue with Brazilian, Italian and European partners, by developing and improving multi and trans-disciplinary research initiatives;
- enhance the quality of scientific, cultural, and economic dialogue between Brazil and Italy, Brazil and Europe;

61

contribute at different levels to the diffusion of knowledge on Brazil in Italy, so as to promote shared cultural

17. PARTNERSHIP FOR THE GOALS

# THIRD MISSION

### No. OF DEVELOPMENT COOPERATION INITIATIVES



Western Balkans	5
North Africa	7
Middle East and Gulf region	8
Central and South America	15
Near East	3
Asia	13
Sub-Saharan Africa	8

### **DEVELOPMENT COOPERATION: ALMAENGAGE**

AlmaEngage is a virtual structure for coordinating development cooperation activities within the University of Bologna at a local and an international level. AlmaEngage is part of a broader process in which universities are opening up to the outside world, are actively engaging in social and public issues and are sharing as well as transferring knowledge to the benefit of society. This project serves as a way to promote and put in place any planned initiatives, as well as to create and implement new ones aimed at sensitizing and stimulating academic and non-academic stakeholders on the themes of development cooperation.

Within the activities of AlmaEngage, the University of Bologna has collaborated with international NGOs to identify opportunities for student mobility within development cooperation projects. As for promotion and communication, the University has recently created a photographic exhibition that shows its projects on development cooperation all over the world.



COOPERATION AND SOCIAL ENGAGEMENT RESEARCH PROJECTS

**EUROPE: 3** 



### **UI GREENMETRIC 2017**

**UI GreenMetric is an international ranking of universities**, published by the Universitas Indonesia of Jakarta, focused on the evaluation of their environmental sustainability. The assessment is based on a list of items grouped including six areas: Setting and Infrastructure, Energy and Climate Change, Waste, Water, Transportation and Education.

In the last edition of the ranking (2017) the University of Bologna has been ranked at position 29th in the world, and at 1st position in the Italian rank. UniBo is the national coordinator of Italian Hub of GreenMetric network, and in the September of 2017 has organized the first National and Technical workshop of UI GreenMetric in Bologna, hosting the representatives of over than 30 Italian universities.

# RUS - NETWORK OF UNIVERSITIES FOR SUSTAINABLE DEVELOPMENT

The University of Bologna is a part of The Italian Network of Universities for Sustainable Development (RUS), the first experience of coordination and sharing, with the main goal to spread the culture of sustainability.

The Institutional Objectives are:

- harmonizing institutional activities and improving the management of the members environmental and social aspects, even through continuous monitoring of the state of sustainability within the Universities.
- Creating a community which is able to develop/ spread/transfer/adapt national and International best practises with particular attention to sustainability in International rankings and the achievement of Sustainable Development Goals.
- Promoting projects, and developing joint initiative, in areas such as knowledge and skills transmission, education and university management, with a focus on learning and on a multistakeholder/ multidisciplinary blend.
- Developing a multidisciplinary approach in university programs, with the purpose of contributing in the growth of the sustainable development culture
- Training and updating the staff of Italian universities (professors, technical-administrators, collaborators and linguistic experts) on the topics of sustainable development, including teachers and professors from different levels of education, if necessary.
- Developing awareness and promotion campaigns at local, national and international level, to stimulate stakeholder engagement.
- Increasing collaboration with public bodies as well as with public and private businesses, in order to join forces and achieve RUS' goals regarding the Third Mission of the University.
- The RUS Network actively collaborates with the Italian Alliance for Sustainable Development (AsviS) and is officially represented inside the seventeen working groups related with SDGs promotion.





700
DOWNLOADS OF
REPORT ON U.N.
SUSTAINABLE
DEVELOPMENT GOALS

### WHO

### International Association of Universities

ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA

The International Association of Universities, created under the auspices of UNESCO in 1950, is a membership-based organisation serving the global higher education community through: expertise & trends analysis, publications & portals, advisory services, peer-to-peer learning, events, global advocacy.

Development (HESD) global portal, a tool developed by the International Association of Universities; it provides access to actions and initiatives developed around the world to promote sustainability. http://www.iau-hesd.net/en/universities/3901-university-bologna.html

The Higher Education and Research for Sustainable

### Onultalia.com

Il giornale italiano delle Nazioni Unite

http://www.onuitalia.com/2017/06/06/g7-environment-unibo-launches-first-sustainability-report/

### WHO

### Sustainable Development Solution Network Australia/ Pacific

Was commissioned by UN Secretary-General Ban Ki-moon in 2012 to mobilise scientific and technical expertise from academia, civil society, and the private sector to support practical problem solving for sustainable development at local, national, and global scales. The SDSN operates national and regional networks of knowledge institution, solution-focused thematic networks, and is building the SDG Academy, on online university for sustainable development.

Getting Started with the SDG in Universities - A guide for Universities, higher education institutions, and the academic sector

65

(page 42: A selection of University annual reports)

### Impresa Progetto - Electronic journal of managment

- Pubblicazione atti del workshop "L'Università: quali performance, come misurarle, come monitorarle, come rendicontarle", in collaborazione con l'Università del Piemonte Orientale

www.impresaprogetto.it

**WHERE** 



This document presents the methodological approach used to define the direct and indirect impact of the university's activities in their four dimensions - training, research, third mission and institution - in order to measure their contribution to the advancement of the United Nations 2030 Agenda.

This document was formulated by the Scientific and Technical Committee for Social Reporting at the University of Bologna from April 2018 to July 2018. The data presented herein refers to 2017, as well as A.Y. 2017/18 for training data. Following the Rector's introduction, the report presents the key figures of the University of Bologna, followed by 17 sections, each one dedicated to a U.N. 2030 Agenda goal, reporting the impact generated by the University of Bologna through its diversified activities.

In particular, each goal is reported on in relation to the four dimensions of activities carried out at the University of Bologna (training, research, third mission and institution, where available) using a set of metrics specially formulated to match and integrate with the institutional documents adopted by the University of Bologna.

Data comes mainly from the University Data Warehouse, a database powered by the Alma Mater Studiorum's management systems, also drawing upon ad hoc surveys by the coordinators of the study programme, content analysis of research projects and cooperation programmes, and SCOPUS queries. Below is a description of how certain metrics were quantified in the document.

67

METHODOLOGICAL NOTE

METHODOLOGICAL NOTE



### **PUBLICATIONS IN SCOPUS**

Research regarding the number of publications was taken from the Scopus database, considering all articles from 2007-2017 which contain a specific sequence of keywords and an author affiliated with University of Bologna. Keywords were chosen for each UN SD goal by considering the general declaration of the goals and all targets of each goal.



### "CITED BY" IN SCOPUS

The number of documents that have cited the author for a document's publication in the DB Scopus.



### H-INDEX

The h-index was developed by the physician Jorge Eduardo Hirsh and counts the highest number of papers having at least the same number of citations. It express an easy to read 1:1 relationship between publishing articles and citations. In the bibliometric sectors is widely used to measure the impact in terms of scientific output of a researcher. Here is used to measure the scientific output of the University of Bologna, using the keywords' clusters, extracted from each SDG, to contain and limit its topics and objectives.



### INTERNATIONAL BENCHMARKING

Benchmarking includes universities within the top 10 European Universities ranked in QS World Universities Ranking 2017/2018 comparable to the University of Bologna in terms of:

- Size (XL more than 30,000 students)
- Focus (FC all 5 QS faculty areas, including the school of medicine)
- Research Intensity (Very High more than 13,000 publications in the last 5 years)
- Status (Public)

Using the above parameters, the field was narrowed to 10 universities:

UCL (University College London)	UK
The University Of Manchester	UK
Ludwig-Maximilians-Universität München - DE	DE
Sorbonne University - FR	FR
University of Copenhagen - DK	DK
Katholieke Universiteit Leuven - BE	BE
University of Leeds - UK	UK
Utrecht University - NL	NL
University of Ghent - BE	BE
Rheinisch-Westfälische Technische Hochschule Aachen - DE	DE

The total number of articles was determined as described in "PUBLICATIONS IN SCOPUS". The total number of articles for each university and each goal was scaled against the number of academic staff as listed by QS for the World University Ranking 2016/2017 and published on www.topunivesities.com. By doing so, we eliminated any dimensional effect caused by simply considering the total number of publications. Finally, for each goal we compared the University of Bologna's ratio with the average of the ratios for the 10 universities in the benchmark group. The result is the index number "benchmark = 100"; an index number higher than 100 means that "per capita publications" by UNIBO academics is higher than the average of the universities in the international benchmark group. If the index is lower than 100, UNIBO academic productivity is lower than the benchmark.



### **NATIONAL BENCHMARKING**

Following the parameters used for the selection of the international benchmarking, three Italian universities were selected from the first 400 in the QS World Universities Ranking 2017/2018.

SAPIENZA - UNIVERSITÀ DI ROMA (UNIROMA1)

UNIVERSITÀ DEGLI STUDI DI PADOVA (UNIPD)

UNIVERSITÀ DEGLI STUDI DI MILANO (UNIMI)

The Scopus research criteria and the index number calculation criteria were the same as that of international benchmarking.



### **COURSE UNITS**

This data came from a survey investigating the link between the single course unit of a study programme and the U.N. Sustainable Development Goals. The survey was conducted asking to all teachers the link for each their course units using a web procedure. More than 95% of course units of the A.Y 2017/2018 has a link with at least a SDG.



### **STUDENTS**

The number of students attending a course unit "tagged" for that SD Goal in A.Y. 2017/2018.



### **COLLABORATIONS, TEACHING, MOBILITY**

The number of collaboration, teaching and mobility projects which were active in 2017.



### FP7, H2020 RESEARCH PROJECTS

The number of FP7, H2020 research projects active on 2017.



### **COOPERATION AND SOCIAL ENGAGEMENT RESEARCH PROJECTS**

The number of cooperation and social engagement projects active in 2017.



### PATENTS (INCLUDING NEW PLANT VARIETIES)

The number of active patents and vegetal varieties registered in 2017 by the university (both ownership and co-ownership), including their various international extensions.





# ALMA MATER STUDIORUM Università di Bologna