

STEM 4 FUTURE
FINAL REPORT
4TH EDITION





FINAL REPORT - DATA



BOEING GLOBAL ENGAGEMENT IN ITALY - 2011/2021

STEM 4 FUTURE

GOAL:

Creating value in the community in which Boeing is present and stimulating the new generation's interest in STEM subjects



4 years

DISSEMINATION:
Lazio,
Lombardy,
Emilia R.
and Apulia



TARGET:
Upper
secondary
schools



3,808
students



212
teachers



27
High schools



+4,000
family
members
reached



The program focuses on the diversity and inclusion theme with contributions from women working in STEM areas, to illustrate to female students the opportunities open to them

SCHOOL CLEANING DAY

GOAL:

Fostering everyday responsible decision-making for the purposes of safeguarding urban spaces and the environment



10 years

DISSEMINATION:
Countrywide



TARGET:
Primary
schools



211,240
students



3,605
teachers



9,894
classes



+500,000
family
members
reached



1 March -
30 June 2019

The program actively involved Boeing employees as a corporate volunteering activity, focusing on environmental requalification of schools, squares and parks



FINAL REPORT - DATA



4 EDITIONS OF STEM 4 FUTURE



Cities involved

Milan edition

- 2018-2019
- 2019-2020
- 2020-2021

Bologna edition

- 2019/2020
- 2020/2021

Pisa edition

- 2017/2018
- 2018/2019

Rome

- all editions

Taranto edition

- 2020/2021



Students involved in the project (middle and high school)

It was not possible to get middle school children involved for COVID-19-related reasons



Teachers involved in the project



Main goals

- Incentivizing enrollment in STEM area university faculties
- Overcoming the STEM subject gender gap

1,000 Qualitative Student Surveys

30%

were influenced in their STEM choices

81%

held that boys and girls are equally capable of understanding STEM subjects



FINAL REPORT - DATA



THE 2020/2021 EDITION NUMBERS

THE PROGRAM



1 career Day with Boeing staff



Pathways for orientation and soft skills - 30 hours



4 themed modules - Science Technology Engineering Mathematics



1 Remo Platform Tool Conference



1 Creative Competition and Final Hackathon



Students involved in the project (high school)

220



Universities involved

2



High schools involved

8

Milan

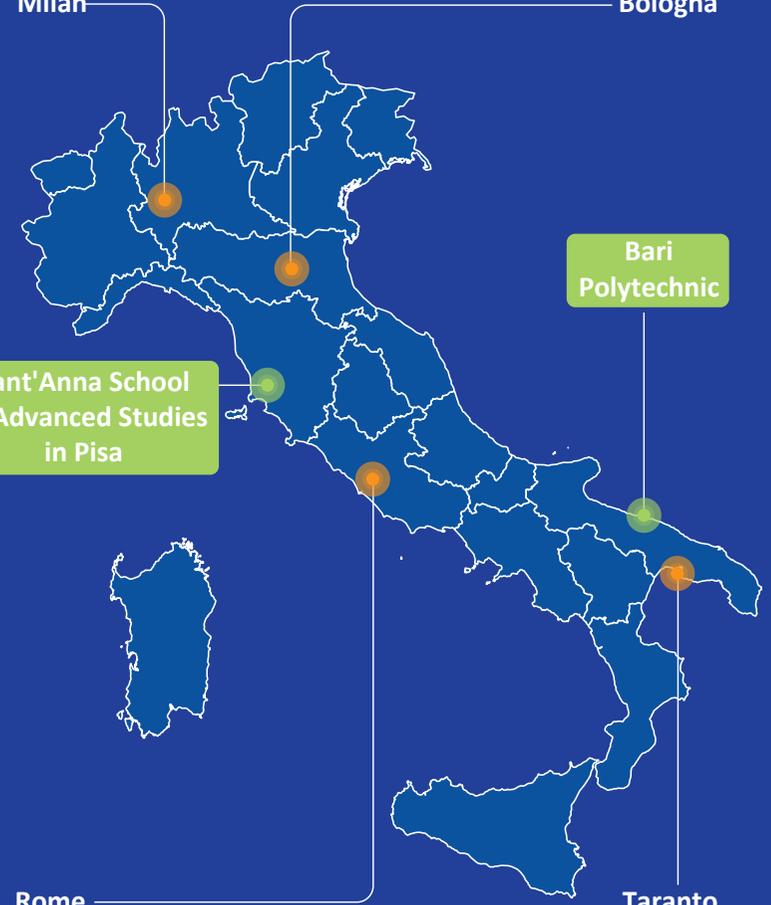
Bologna

Sant'Anna School of Advanced Studies in Pisa

Bari Polytechnic

Rome

Taranto



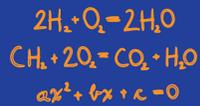


FINAL REPORT - MODULES



4TH EDITION'S LEARNING MODULES

S



16 February

Curated by
Scuola Superiore
Sant'Anna di Pisa

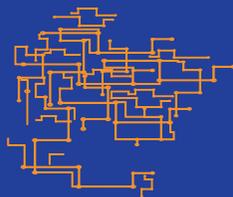
Space Biology: by
Deborah Angeloni

Real Hospital,
Virtual Hospital: by
Prof. Michele Emdin

Person Centered
Medicine: by
Dr. Giuseppe Vergaro

Solve the Outbreak,
How to investigate
on a pandemic: by
Massimiliano Valente

T



3-5 March

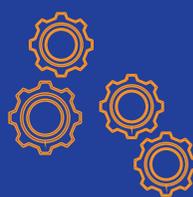
Curated by
Scuola Superiore
Sant'Anna di Pisa

Artificial Intelligence: by
Prof. Giorgio Buttazzo

Robot Ethics: by
Prof. Barbara Henry

Robotics and Thymio
Programming: by
Massimiliano Valente

E



2-4 March

Curated by
Politecnico
di Bari

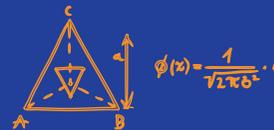
Modelling for
3D print: by
Prof. Michele Fiorentino

3D Print, plastic material,
Implementation in
COVID-19 emergencies: by
Prof. Gianluca Percoco

3D Print, metallic powders,
Implementation in
aerospace sector: by
Prof. Sabina Campanelli

3D Print and COVID-19
emergency: by
Massimiliano Valente

M



9-11 March

Curated by
Politecnico
di Bari

Predictive mathematical
models for
COVID-19 outbreak: by
Prof. Alessio Pomponio

Maths used in Blue
Engineering, examples
from Taranto Sea: by
Prof. Michele Mossa and
Ing. Diana De Padova

From coastal protection
to the diffusion
of pollutants: by
Massimiliano Valente

REMO

CONFERENCE TOOL



remo is the most useful tool for the digital lessons and the organization of didactical modules with 220 students and almost 20 teachers connected at the same time, on the same platform. Also, it allows us to divide students into groups for the practical exercises



FINAL REPORT - CAREER DAY



INSPIRING STUDENTS

Program

April 20, 2021

H: 8.30 - Roll Call

H: 9.15 - Welcome and Introduction

H: 9.30 - What is a Career Day?

H: 9.50 - University choices

H: 10.15 - The Curriculum Vitae

H: 10.35 - Career's path

H: 10.55 - Job interview and how to face it

H: 11.10 - Job interview simulation

H: 12.45 - Group Activities

H: 13.30 - Conclusion



Angela Natale
President
Boeing Italy



Boeing Staff



Francesco Cupertino
Rector,
Politecnico di Bari



Sabina Nuti
Rector, Scuola Superiore
Sant'Anna di Pisa



Egidio Cofano
HR Country
Leader, Boeing



Ilaria Sbrilli
Talent Acquisition Advisor
Team Leader, Boeing



Marilena Gemmato Mollichella
Supply Chain Manager
and Boeing Women
Inspiring Leadership
Europe President



Andrea Goffi
Boeing Manager
Global Customs
& Trade, Global
Trade Controls
UK, Law and
Global Compliance



Roberto Russo
Boeing Manager,
International IT
Infrastructures
Services



Simona Frassone
President
ScuolAttiva Onlus



Online, through
Remo



Simulations
with Top Managers



Participation of
grad students

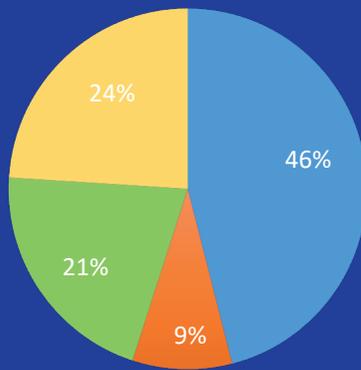
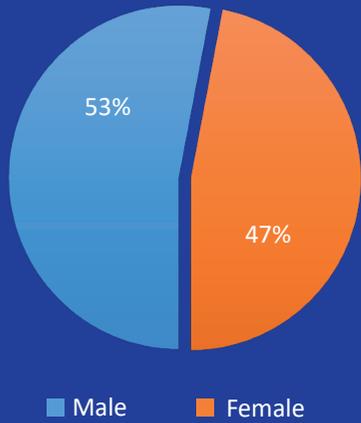


FINAL REPORT - SURVEY



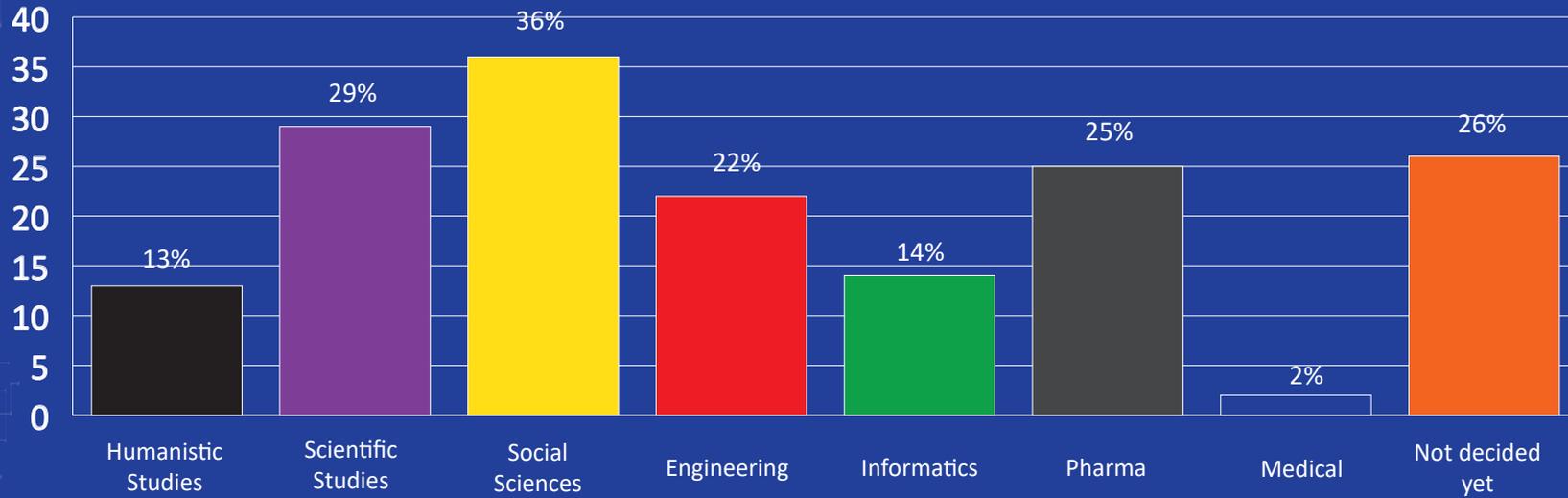
SURVEY BEFORE THE LEARNING MODULES

PARTICIPATION



- Scientific High Schools
- Linguistic High Schools
- Classic High Schools
- Scientific-Technological High Schools

INTENTIONS OF UNIVERSITY CHOOSING*



*Students could express multiple preferences

UNIVERSITY AND JOB CAREERS



According to **54%** of the participants, it is **highly probable** that their university paths will influence their future careers. Only **7%** say it will be **irrelevant** or **not so important**



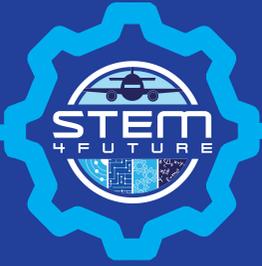
46% of the participants say they will choose their university path thinking about **the opportunity to have the job of their dreams**. Only **17%** will choose on the basis of their **natural predisposition to a specific subject**



59% of the participants say they had never known neither **Boeing**, neither the **aerospace professions**. Thus, while they understand the **importance of technological innovations**, the majority feels them as far from their reality. **92%** also confirm they **do not perceive males as most advantaged** in the study of STEM subjects



89% say they would like or want to study abroad

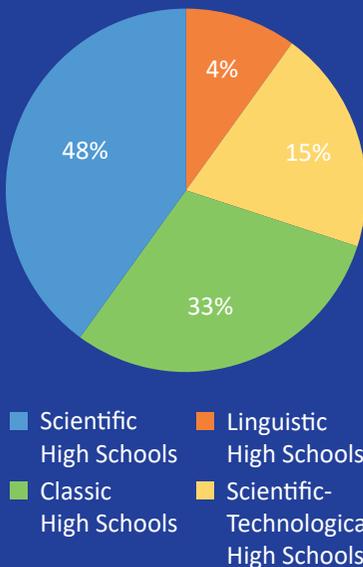
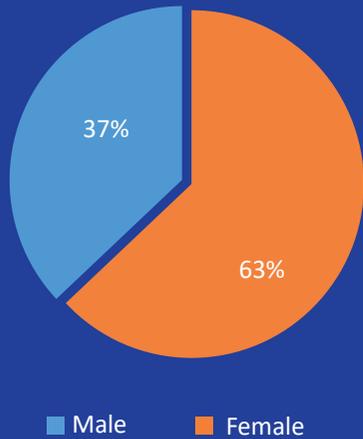


FINAL REPORT - SURVEY

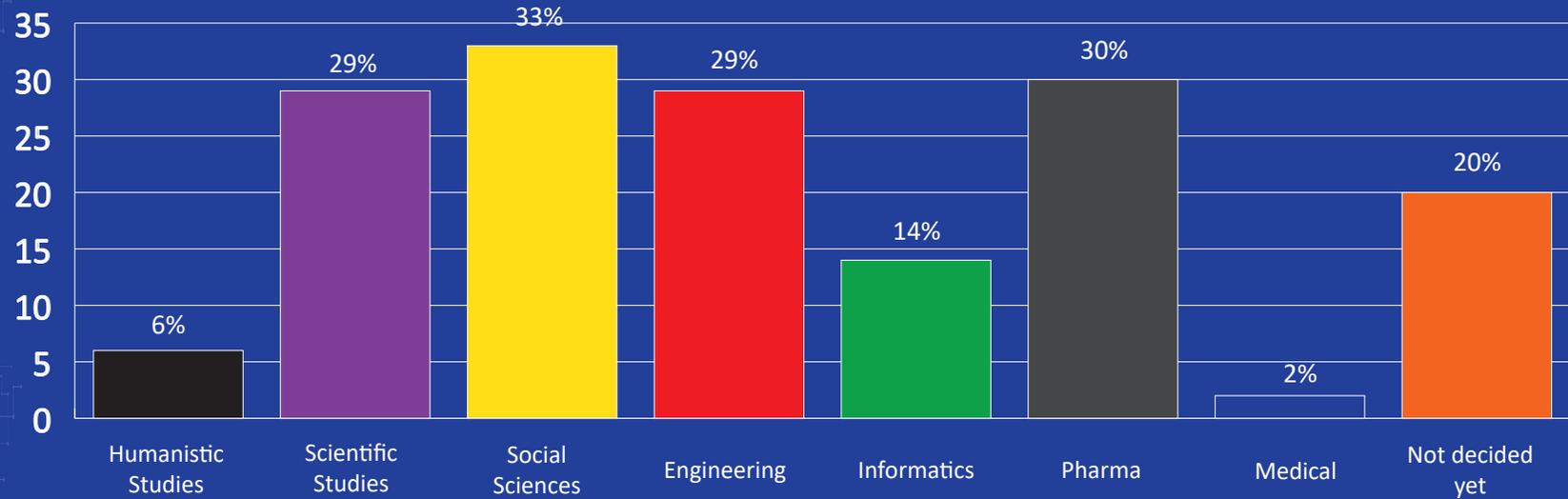


SURVEY AFTER THE LEARNING MODULES

PARTICIPATION



INTENTIONS OF UNIVERSITY CHOOSING*



*Students could express multiple preferences

UNIVERSITY AND JOB CAREERS



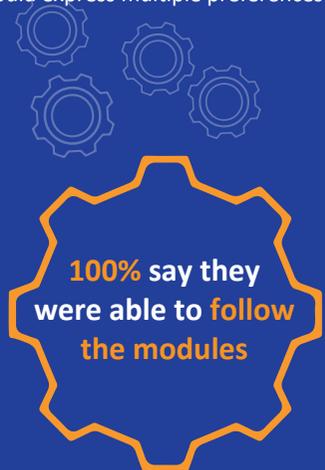
83% of the students were interested and say **they will probably further explore STEM subjects**. Moreover, **66%** of the participants say **the project will probably change their intentions** of university choosing



66% of the participants say they found the modules very interesting and are now **more interested in STEM subjects than before**. Also, **86%** think that the program and the four modules were **useful to their course of study**



STEM 4 future helped students to perceive technological innovations as closer to their daily reality. **97%** of the participants also confirm they **do not perceive males as most advantaged** in the study of STEM subjects, even if **just 12%** think **gender equality has been reached** in the scientific and technological field

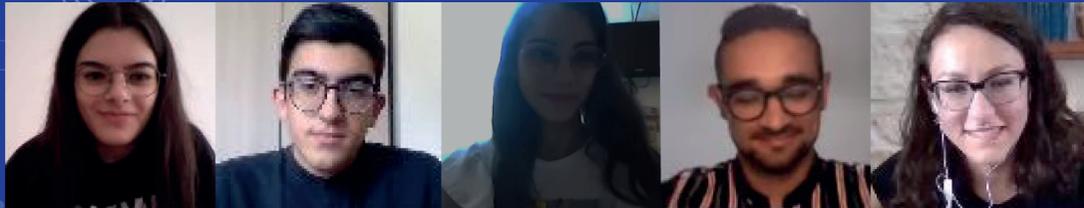




FINAL REPORT - CONTEST



THE 2020/2021 WINNERS



CREW



I BILANCIATISSIMI



TARANTO



LICEO SCIENTIFICO TITO LIVIO



SPEAKER: DARIO MINEI

Project name: W.I.S.S.E. (Italian Seeping System for Water Evenness)

Stages: New York, Massachusetts, Porto, Melbourne, Nigeria

Reason Why: Development of a low-tech system for water seeping, in order to bring pure water to rural or poor communities.



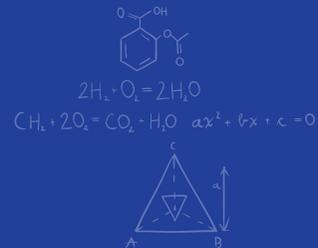
FINAL EVENT

27 May 2021



ILARIA CERVINO
DESIRÉE FEDELE
DARIO MINEI
SILVIA NARDELLI
PIETRO SCATIGNA

THE CREW FROM
TARANTO, APULIA
WON THE FIRST
"BOEING EXPERIENCE"





FINAL REPORT - PRIZE



THE FIRST BOEING EXPERIENCE



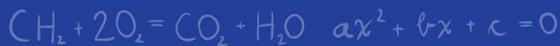
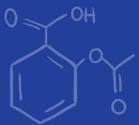
The crew from **Taranto** won a trip to **Rome**, to visit BOEING's facilities and meet **Angela Natale, President for Southern Europe**



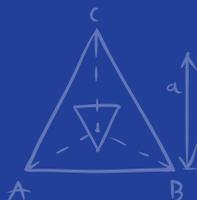
The five youngsters met **top managers from Italian BOEING team**, and had the opportunity to better know the **company's activities**



Through the final survey, **they expressed a lot of enthusiasm** for this exclusive opportunity: **"Useful and intriguing"**, they said



$$\phi(x) = \frac{1}{\sqrt{2\pi\sigma^2}} \cdot e^{-\frac{x^2}{2\sigma^2}}$$





FINAL REPORT - PRIZE

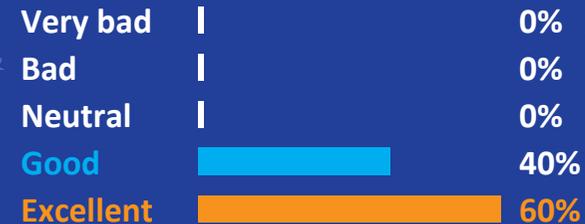


THE FIRST BOEING EXPERIENCE - SENTIMENT ANALYSIS

How would you **rate** the Boeing Experience?



How would you **rate** the organization?



How would you **rate** the experience at the Boeing **facilities**?



Do you think the Boeing Experience was **useful**?



Do you think the Boeing Experience was a right **prize** for winning the 2020-2021 **contest**?



Do you think the Boeing Experience will **influence** your choices for the **university**?





FINAL REPORT - PRIZE



THE FIRST BOEING EXPERIENCE - SENTIMENT ANALYSIS

What was the **main strenght** of the Boeing Experience? And the **main weakness**?

*"The strength of the Boeing Experience was the **opportunity to talk with the very friendly Boeing team and the President**, because each of them left me a very positive and inspiring message for my career. **The weakness is the duration of the experience**, it would have been better if it had lasted at least one more day"*

Desirée Fedele

*"It was all wonderful and well organized; the experts were very kind, very nice and above all clear while explaining their role. The proposed activities helped us to understand what people who work at Boeing usually do. **ScuolAttiva's staff organized everything perfectly**, and they have always been extremely helpful. I believe that this experience, in addition to teaching us a lot about how Boeing operates, has indirectly helped us to know each other better; in fact, having spent almost four days together made us bond a lot. **I hope that next year the winners of STEM for Future can have the same opportunity** and enjoy it as the five of us did, and I especially hope they enjoy it because occasions like this don't happen every day. In short, I am very satisfied with everything. **Thank you so much for this experience"***

Silvia Nardelli

What would you tell to other students who are approaching **STEM 4 future program**?

*"I would suggest them to **do their utmost**, since the victory would be a personal satisfaction and the Boeing Experience would represent **the event that can determine the choice of the university path"***

Ilaria Cervino

What will you **take with you** from this Boeing Experience in **Rome**?

*"**The knowledge of new professions**. Already wanting to undertake engineering studies at university, **this experience has strengthened my idea** about what path I want to undergo"*

Pietro Scatigna





FINAL REPORT - 5TH EDITION



GOALS OF THE 2021/2022 EDITION



10 HIGH SCHOOLS FROM
6 DIFFERENT CITIES AND
5 DIFFERENT REGIONS, WITH
2 HIGH SCHOOLS FROM FLORENCE, AND
300 STUDENTS



THANK YOU
FOR YOUR ATTENTION !

