SAPeri&Co

Sapienza Enhances Research
Innovation and Coworking

SAPIENZA
UNIVERSITÀ DI ROMA

SAPeri&Co was created thanks to the financial support of the Lazio Region
(Public Call for Proposals "Research projects presented by Universities and Research Centers, Lr. 13/2008"; Research project "Sapienza Enhances Research Innovation & Coworking - SAPeri&Co").

A TECHNOLOGY TRANFER CENTER

SAPeri&Co is a research and services infrastructure of Sapienza University of Rome, born to promote the applied research excellence of the largest University of Europe and to offer services dedicated to companies and external organizations.

SAPeri&Co promotes and encourage synergies

INSIDE THE UNIVERSITY

- By supporting the researchers giving them access to interdisciplinary activities and advanced tools
- By training the students for their future jobs applying networking strategies that connect students with the companies

OUTSIDE THE UNIVERSITY

- By creating a space for encounter and exchange between public research and private companies
- By giving access to advanced know-how and a variety of research fields to public and private companies and institutions

A big research, innovation and training infrastructure, which, according to the European model of Research Infrastructures, it aims to promote the multidisciplinary nature of knowledge and skills; assist innovation and technology transfer; activate the collaboration between university and business world; to stimulate the creation of new entrepreneurship; enhancing the excellence and values of Sapienza at a national and international level; to systemize the network of laboratories and competences of the largest University of Europe.


USCITA DI EMERGENZA
COWORKING

ACTIVITIES

Saperi&Co networks all the Sapienza's excellences from Design to Medicine, from Chemistry to Biology, from Economics to Psychology, from Jurisprudence to Computer Science, and makes knowledge and skills available, also thanks to the use of digital fabrication tools.
SAPeri&Co focuses its activities in the areas of regional specialization such as aerospace, renewable energies, cultural heritage, biosciences.

SAPeri&Co proposes and promotes multidisciplinary and diversified activities, with particular attention to the territory priority strategic areas and according to the knowledge triangle scheme which is:

TRAINING

📌 Training on specific subjects, research apprenticeships and higher education at and for companies

RESEARCH

📌 Tools and laboratories that allow students and researchers to maximize, monitor and test their researches

INNOVATION AND TECHNOLOGY TRANSFER

📌 Services and resources that encourage the transition of the products of the research to the market and the society, triggering links and opportunities of dialogue between the university and the business world

SERVICES

SAPeri&Co develops a series of services aimed both at the Sapienza community members and outsiders, who can benefit from the Center's skills, spaces and services, activating a specific collaboration.

SERVICES FOR STUDENTS AND PHD STUDENTS

Sapienza students and PhD students, of all disciplines and degrees, can take advantage of the Center skills, spaces and services, starting with specific collaborations, namely if winners of one of the Calls, if they have activated a curricular internship with SAPeri&Co or if enrolled in one of the training activities organized by the Center.

WINNERS OF THE CALLS

📌 They have the opportunity to carry out their activities within the Center for a period varying from 2 to 12 months. Taking advantage of the services offered they may: book a work station for free in the Coworking area; use the equipment and instruments of the Fab Lab and the Workshop space (*the costs of the material are up to the user) under the guidance of assigned personnel and under the supervision of their supervisor (advisor); join the SAPeri&Co community by offering a percentage of their time for service activities for the Centre's initiatives, collaborating in the activities of other scientific-cultural areas colleagues, thus activating profitable exchanges between knowledge and disciplines. SAPeri&Co will annually select the best works developed, creating the conditions for possible patenting, start-up, research initiatives (in connection with the Sapienza offices), and organizing specific meetings with interested companies and external subjects

INTERNSHIPS

📌 Interns will have the opportunity to carry out a curricular internship at SAPeri&Co through the Jobsoul platform (www.jobsoul.it) activating it for 150 hours (Master's Degree) or 250 hours (Bachelor's Degree) based on a training project approved and coherent with their mission and activities

PARTICIPANTS IN TRAINING ACTIVITIES

📌 They can access the Training area of SAPeri&Co and have a PC station with a dedicated wi-fi network

SERVICES FOR PROFESSORS AND RESEARCHERS

Researchers and professors having a collaboration with the Center can take advantage of its skills, spaces and services.

SAPeri&Co promotes activities of exchange and comparison among the various subjects involved, to promote the advancement of knowledge, the collaboration between the various disciplines, the dissemination and diffusion of experimental research activities by organizing specific meetings with interested companies and external subjects.

RESEARCHERS AND PROFESSORS OF LAB ON DEMAND CAN

- Take advantage of a specific area used as a specialized laboratory or meeting room
- Reserve a workstation in the Coworking area for free
- Reserve the usage of the equipment and instruments of the Fab Lab and the Workshop space with a discounted price of 30% on the hour/machine cost (*the costs for the materials are charged to the user)
- Joining the SAPeri&Co Community by offering a percentage of their time for service activities to the Centre's initiatives, collaborating in the activities of colleagues from other disciplines

RESEARCHERS AND TEACHERS AFFERENT TO THE CENTER CAN

- Reserve a free workstation in the Coworking area free of charge for a maximum of 50 hours/year
- Reserve the usage of equipment and instruments of the Fab Lab and Workshop space with a 30% discount on the hour/machine cost (*the costs for materials are on the responsibility of the user)
- Joining the SAPeri&Co Community by offering a percentage of their time for service activities related to the Centre's initiatives, but also by collaborating in the activities of colleagues from other scientific sectors, thus activating profitable exchanges between "knowledge" and disciplines

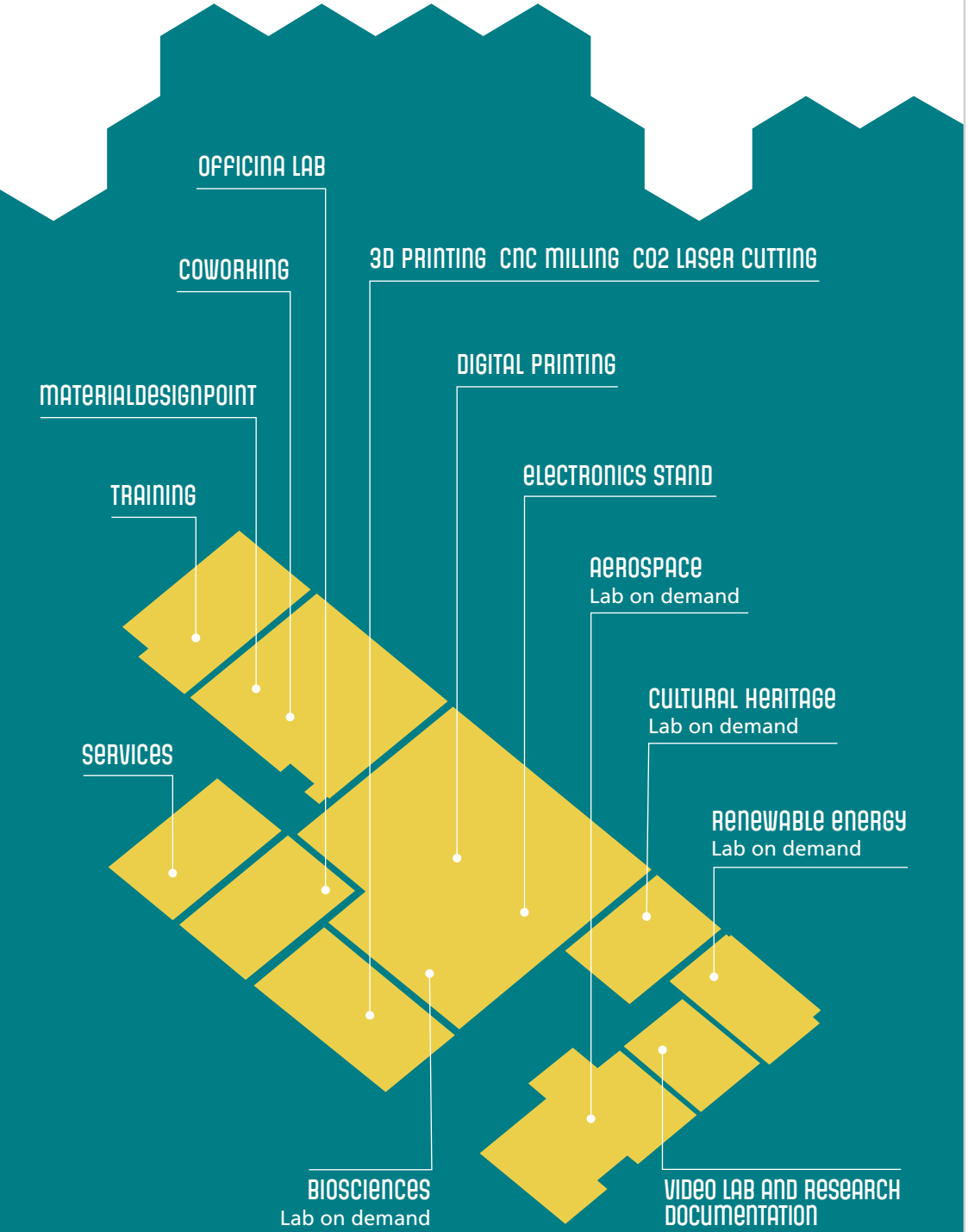
RESEARCHERS AND TEACHERS NOT AFFERENT TO THE CENTER CAN

- Reserve a workstation in the Coworking area according to the current rate
- Reserve the usage of equipment and instruments of the Fab Lab and Workshop space according to the current rate (*the costs for materials are up to the user)
- Collaborate in the activities of colleagues from other scientific sectors, thus activating profitable exchanges between "knowledge" and disciplines

SERVICES FOR COMPANIES AND PUBLIC AND PRIVATE INSTITUTIONS

External subjects such as private or public entities and companies that aim to undertake innovation paths can take advantage of the skills and services of the Center. Specifically, external parties can:

- **RESERVE THE COWORKING AREA** for specific activities and initiatives
- **RESERVE THE TRAINING AREA** for specific activities and initiatives
- **REQUEST SUPPORT ACTIVITIES** to develop innovative ideas, taking advantage of Sapienza's know-how and using the sophisticated equipment available in SAPeri&Co and in the Network laboratories
- **PROPOSE AND PROMOTE INITIATIVES** in partnerships, such as experimental research, training activities, seminars, workshops and hackathons



ORGANIZATION AND STRUCTURE

Thought following a Hub model, SAPeri&Co connects several laboratories and competences of the University with a central node located inside the University City.

The infrastructure includes the following facilities:

- FABLAB
- COWORKING
- TRAINING
- 4 LAB ON DEMAND dedicated to the 4 regional Strategies: Aerospace, Cultural Heritage, Biosciences, Renewable Energy
- MATERIALDESIGN POINT by MaterialdesignLab
- LAB VIDEO AND DOCUMENTATION RESEARCH by IDEaCT

The following departments belong to SAPeri&Co:

- ✓ Biologia ambientale
- ✓ Chimica e tecnologie del farmaco
- ✓ Diritto ed economia delle attività produttive
- ✓ Fisica
- ✓ Fisiologia e farmacologia "Vittorio Erspamer"
- ✓ Informatica
- ✓ Ingegneria astronautica, elettrica ed energetica
- ✓ Ingegneria chimica, materiali, ambiente
- ✓ Ingegneria civile, edile e ambientale
- ✓ Ingegneria dell'informazione, elettronica e telecomunicazioni
- ✓ Ingegneria meccanica e aerospaziale
- ✓ Ingegneria strutturale e geotecnica
- ✓ Metodi e modelli per l'economia, il territorio, e la finanza
- ✓ Pianificazione, design, tecnologia dell'architettura
- ✓ Psicologia dei processi di sviluppo e socializzazione
- ✓ Studi giuridici, filosofici ed economici
- ✓ Storia, disegno e restauro dell'architettura
- ✓ Ingegneria informatica, automatica e gestionale "Antonio Ruberti"

FABLAB

The SAPeri&Co FabLab, according to an open access vocation, promotes the use of open-source resources and aims to be full share, namely to share results in order to speed up sustainable, social and cultural development.

The SAPeri&Co FabLab, is a workshop-laboratory and experimentation center dedicated to new digital manufacturing technologies and to innovation in production processes, equipped with advanced machines. The aim of SAPeri&Co is to promote activities of research, development, training and technology transfer in the field of advanced manufacturing at a multidisciplinary level.

The services offered by the SAPeri&Co FabLab are managed through a dedicated online booking service and regulated by a specific Regulation available on the website.

ADDITIVE MANUFACTURING

Delta Wasp 4070

Technology
FDM (Fused Deposition Modeling) 3D printing

Process
3D printing

Working Area
40x40x70 cm

Materials
PLA, ABS, nylon, flexible polymers, polystyrene, Laywood

Resolution X/Y
12 micron

Resolution Z
5 micron

Delta Wasp 2040 turbo

Technology
FDM (Fused Deposition Modeling) 3D printing

Process
3D printing

Working Area
20x20x40 cm

Materials
PLA, ABS, nylon, flexible polymers, polystyrene, Laywood

Resolution X/Y
12 micron

Resolution Z
5 micron

IRA3D Poetry 360

Technology
FLD (Fast Layer Deposition) 3D printing

Process
3D printing

Working Area
25x25x30 cm

Materials
PLA, ABS, nylon, Soluble, Medical, IRA-Bronze, IRA-Wood, IRA-Carbon, IRA-Copper, ABS-Super

Resolution X/Y
50 micron

Resolution Z
15 micron

Zotrax M200

Technology
LPD (Layer Plastic Deposition) 3D printing

Process
3D printing

Working Area
20x20x18 cm

Materials
Z-ABS, Z-ULTRAT, Z-HIPS, Z-GLASS, Z-PCABS, Z-PETG

Resolution X/Y
1,5 micron

Resolution Z
1,25 micron

Formlabs Form 2

Technology
SLA (Stereolithography Apparatus) 3D printing

Process
3D printing

Working Area
14,5x14,5x17,5 cm

Materials
Metallic resin

Resolution X/Y
25; 50; 100 micron

DigitalWax XFAB2000

Technology
SLA (Stereolithography Apparatus) 3D printing

Process
3D printing

Working Area
ø 18 cm

Materials
Gamma Invicta 3 (gray and white ABS-like material, polypropylene- like material), Flexa 2 (black and transparent rubber-like material), Vitra 2 (amber and transparent acrylic material), Precisa 779 (rigid opaque gray material), Therma 289 green (nano clay- like material for thermal resistance), Vesta 443 (wax-like material)

Resolution Z
10 to 100 micron

SUBTRACTIVE MANUFACTURING AND 3D SCAN & MODELING

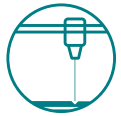
Valmec Falcon 1500

Technology
CNC milling machine

Process
Cutting, profiling, 2D and 3D engraving

Working Area
150x120 cm

Materials
Wood, plastic, expanded polyurethanes, soft metals



Birio 1000

Technology
Laser cut and engrave CO_2

Process
2d engraving and cutting

Working Area
100x60 cm

Materials
Wood, plywood, cork, acrylic, polycarbonate, natural fabrics, paper and cardboard, leather, leather, MDF, PETG, Delrin®, tape in Kapton, Mylar, Depron, Gator, magnetic sheets, rubber, Teflon, carbon fiber, polionda, slab glass, ceramic tiles, anodized aluminum, marbles, hard stones

Roland Versacam SP540I

Technology
Plotter

Process
2d printing, engraving, cutting

Working Area
width 137 cm

Materials
Thermo transfer cardboards, sandblast, paper, micro-perforated PVC banner, fabrics, adhesive PVC

Shining 3D Einscan-Pro

Technology
structured light

Process
3D scan

Touch 3D stylus

Technology
Haptic device

Process
3D modeling

Godox SL60

Technology
LED light illuminator

Process
Photo and video lighting

Sony Alpha 7R II

Technology
Mirrorless camera with interchangeable lenses

Process
Photography

METAL ADDITIVE MANUFACTURING

This is a great facility of interest of the University. Within the 2015-2018 multiannual plan for the acquisition of large equipment for the entire scientific community, Sapienza has equipped itself with a next-generation 3D metal printer, EOS M290, owned by DIMA and the Department of Physics, currently installed within the SAPeri&Co Center.

EOS M290

Technology
Direct metal laser Sintering

Working Area
25x25x32,5 cm

Materials
aluminium Alloy AlSi12, Stainless Steel 316L, Titanium Ti64

Applications
Digital manufacturing of items with standardized Part Property Profiles (PPPs)


XFAB

COWORKING

SAPeri&Co Coworking is a space dedicated to the meeting among various branches of knowledge and in which students, researchers, professionals and entrepreneurs can work and compare.

The space, of approximately 100 MQ, is organized in an "open" and multi-functional way, with 20 WORKSTATIONS, 16 PCS, WI-FI network, PROJECTOR, LIM, and allows you to book a work station for a fixed time or to organize activities for the dissemination and communication of the research in line with the objectives and the mission of the Center.

The Coworking is configured as a "facilitator" place for community building through the integration of different skills, in the name of multidisciplinarity and with the objective of being an incubator of research and innovation.

Inside the Coworking area there is a Materialdesign Point, a library created by MaterialdesignLab, the design laboratory dedicated to the theme of product innovation through the use of innovative materials, with a small library of dedicated books and a selection of material samples with an high level of innovation – patented and/or in the process of patenting and industrialization – useful to activate a comparison on the topic.

LAB ON DEMAND

SAPeri&Co includes four highly specialized Lab on Demand and in line with the four regional strategies.

AEROSPACE LAB

📌 The laboratory carries on research and development activities in the sectors of aerospace, aviation, satellite monitoring in line with the Galileo program and the programs of the European Space Agency(ESA).
Scientific supervisor: prof. Paolo Gaudenzi

CULTURAL HERITAGE LAB

📌 The laboratory carries on research activities about the enhancement, monitoring and protection of cultural heritage, as well as the development of cultural and touristic services. In the lab there is a collaboration between Humanities (Archeology, History of Art, Linguistic and Esthetic) and Science (Informatics, Chemistry and Physics).
Scientific supervisors: prof. Giorgio Piras and Chiara Petrioli

LIFE SCIENCE LAB

📌 The laboratory carries on research activities focused on medicine, e-health, domotics, biotechnologies, nutrition and biomaterials.
Scientific supervisor: prof. Angela Santoni

RENEWABLE ENERGY LAB

📌 The laboratory carries on research and development activities in the fields of energy efficiency, alternative and renewable energies, and green development.
Scientific supervisor: prof. Livio De Santoli

Within SAPeri&Co there is a production Video lab and Research documentation, born from the Project of Excellence of the Dip. P.P.S.S. in order to make video lessons (remotely dispensable), document research-interventions and good practices, and create social communication campaigns aimed at policy makers and citizens.

TRAINING

The Training area of SAPeri&Co is dedicated to advanced training on topics related to the mission of the Center.

With the aim of improving the development of innovative skills and fostering technology transfer, SAPeri&Co offers the following training activities.

ADVANCED TRAINING

📌 High educational programs about emerging topics connected to technological transfer in the variety of sectors where SAPeri&Co operates

LEARNING BY DOING

📌 Active learning sessions focused on experimentation and innovative design development, to connect young researchers with industry, high crafts and research, as well as to develop entrepreneurship by experimenting innovative methodologies and techniques through the use of the advanced tools available in the Fab Lab SAPeri&Co

TAILORED TRAINING

📌 High specialized training co-designed with companies and private and public institutions

SAPeri&Co

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