

Sapienza and Microsoft Italia together for the house of the future: a partnership as a support of the education and research activities

At Microsoft House a preview of ReStart4Smart, the Italian project that will be the protagonist of the Solar Decathlon Middle East 2018 in Dubai

Thanks to the collaboration between Microsoft and Sapienza University of Rome and Azure for Research and Student Advantage programmes, the best talents of the Athenaeum benefit from Microsoft new technologies in order to build a cutting-edge sustainable house prototype

November 13 , 2017 – In occasion of the presentation of the finalist Italian project in the Solar Decathlon Middle East 2018 in Dubai at Microsoft House, **Microsoft Italia** and **Sapienza University of Rome** have announced the ampliation of their strong partnership, that has seen the two subjects collaborate for years in order to experiment innovative education modes and that is now gaining a further contribution to the research activities: thanks to the **Microsoft Azure for Research** programme, Sapienza can freely leverage on Microsoft Cloud Computing. An opportunity that has already been seized by the team of over 50 students and PhDs that is currently creating the prototype of house of the future **ReStart4Smart** competing in the university sustainable architecture Olympics.

Microsoft Azure for Research, as a matter of fact, is addressed to academic researchers and allows to freely use the calculus, elaboration and storage capacities of the cloud platform Azure, as well as programming tools like Linux, Python, Java, Hadoop and Microsoft.NET and AI and Machine Learning functionalities, the whole thing with the advantage of being able to benefit from education and technical support courses. Within this global programme, Sapienza has earned a **20.000 \$ prize** and the students and teachers from the ReStart4Smart workgroup can take advantage of powerful computational virtual laboratories and design the innovative building automation system of the Solar House, relying on Azure cloud services. Moreover, Team Sapienza will be able to enhance the data collected inside the building and to improve the project by integrating Artificial Intelligence capacities, thanks to the IoT tools and Microsoft cognitive services.

ReStart4Smart project leverages on the most advanced Microsoft technologies: through the **facial recognition** by cameras and sensors, for instance, it will be possible to unlock electronic keyholes and monitor the localization of the house inhabitants. The integration of **Cortana** virtual assistant and **BOT** services will allow to communicate with a **Virtual House Keeper**, making the house management easier and improving its availability. The data analysis capacity offered by Machine Learning will permit to use technology to learn and implement predictive maintenance controls on the interconnected appliances, improving the system efficiency. Finally, the project also aims to the experimental use of **HoloLens** holographic visor and mixed reality in the design, management and maintenance of the building.

A complex project, that has involved the contribution of each of the over 50 members of Team Sapienza, that were able to collaborate thanks to the potentials offered by cloud productivity platform **Microsoft Office 365** made available within the **Student Advantage** programme, which requires the Office resources to be available for free for all the students of the Universities using the suite for teachers and administrative staff. **112.000** students from Sapienza now can benefit from Office solutions to communicate and collaborate in a more simple and effective way and the Team designer of ReStart4Smart is able to share information at any time even remotely and from different devices in total security. The Team will be able to continue the development and improvement of the project with a view to the exhibition in Dubai, enhancing its productivity through the most advanced functions offered by the familiar applications **Office**, sharing notes through **Outlook**, as well as **OneNote Class Notebook** and **Sharepoint**, and generally collaborating on **Microsoft Teams** digital hub.

*"We are proud that a project lead by our best talents has qualified as the Italian finalist in the Solar Decathlon Middle East and we are sure that it will be able to represent well our Country in occasion of the exhibition in Dubai next year", **Rector of Sapienza University of Rome Eugenio Gaudio**. "The new technologies are fundamental to imagine the house of the future and transform it into reality and in this Team Sapienza was able to leverage on the most evolved solutions made available by Microsoft. The partnership between Sapienza e Microsoft is framed within a wider programme for the renovation of the educational offer that our Athenaeum is taking forward and that includes the empowerment of the informatics tools available to the students and the experimentation of innovative digital ways of education provision as a support to the teaching and research activity".*

*"It's an honor to host at the Microsoft House the presentation of ReStart4Smart, a project that shows how digital is a tool at the service of brilliant ideas and that is able to contribute to shape a more sustainable future. We are proud to consolidate our partnership with that according to the Best Global Universities Ranking 2017 represents the first Italian university. Thanks to Microsoft Azure for Research programme, the team competing in the Solar Decathlon Middle East was able to leverage on Microsoft Azure and the most advanced Internet of Things, Artificial Intelligence and Mixed Reality functionalities to build a smart home prototype, that conjugates design and energy efficiency. Not only, but also thanks to the cloud productivity platform Office 365 made available for free through Student Advantage, the best students and researchers from Sapienza could build a team and will keep on collaborating to improve the project of house of the future that we are sure that will stand out in Dubai", commented **Silvia Candiani, CEO at Microsoft Italia**.*



SAPIENZA
UNIVERSITÀ DI ROMA



Sapienza University of Rome

With over 700 years of history, 112 thousand students, 4.000 teachers and 2.000 officials, technicians and librarians as well as 2.000 secretaries in the hospital facilities, Sapienza is the first university in Europe. Its mission is to contribute to the development of knowledge society through research, quality education of excellence and international cooperation.

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Microsoft

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