







Marie Pierre Aulas General Manager La Fondation Dassault Systèmes

Thibault, La Fondation Dassault Systèmes has been around for 10 years now. What inspired the decision to create it?

#### Thibault de Tersant President La Fondation Dassault Systèmes

Dassault Systèmes has always been involved in philanthropic activities, driven by our longstanding commitment to harness the power of 3D virtual representation for the benefit of all. Creating a foundation gave us a formal framework and better organization for these efforts. It also allowed us to set up a dedicated team and budget to select and support projects aligned with our mission.

MPA: Education, research, and heritage are at the heart of our mission. This mission is more relevant than ever, as education and scientific culture are essential to understanding today's world, making informed decisions on major contemporary challenges, advancing research, and preserving our historical heritage.

TDT: Our initial thinking—where could Dassault Systèmes and its team members have the greatest impact?—naturally led us to education. Our expertise in virtual worlds proved to be an invaluable asset for younger generations. It sparks their curiosity and helps them grasp complex issues far more effectively than wordy explanations ever could.

MPA: And all this with the help of our volunteers!

TDT: Exactly. Every activity of the foundation is strongly linked both to philanthropy and to skills-based volunteering.

MPA: What I find really interesting is our ability to support each project through Dassault Systèmes' volunteers. Their diverse expertise not only helps our partners bring their projects to life but also opens up new, sometimes unexpected, opportunities. Furthermore, our colleagues often come away from these projects enthusiastic and enriched with new experiences.



TDT: Yes, and the example set by our volunteers for young people in challenging environments-whether in rural areas or underprivileged suburban neighborhoods—is a crucial boost to their motivation education, and ability to find sustainable employment. It is also very important to introduce engineering careers to young girls, who often shy away from them, usually for the wrong reasons. Having three foundations—in Europe, India. and the United States-provides an even stronger local presence and real capacity for action.

MPA: Thibault, what would be La Fondation Dassault Systèmes' ambition for the next 10 years?

TDT: I'm very proud of what our foundation has already achieved. If I could dream, I would say our big ambition for the coming decade is to establish a real training curriculum in scientific 3D careers accessible to as many people as possible. We could build on existing initiatives to bring them together and create a new, shareable approach...

MPA:... to tackle real-world challenges through virtual worlds and develop new skills that serve the greater good...

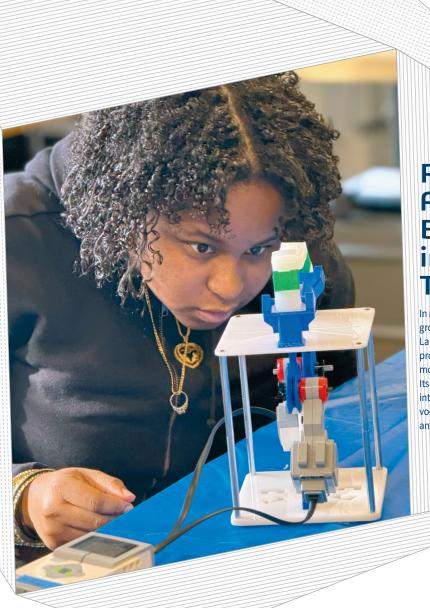
TDT: Giving everyone access to scientific 3D means empowering them to understand, imagine, and change the world.

Cogether, with our partners and volunteers, we are sowing the seeds for a brighter, fairer, and more sustainable future.



# Building a Sustainable World

Through partnerships and skills-based volunteering, La Fondation Dassault Systèmes actively contributes to the 17 Sustainable Development Goals. It works to promote better access to science for all and to support responsible research in response to environmental and social challenges. The foundation is particularly committed to advancing girls' access to scientific careers and their empowerment, health research, renewable energy, and ocean conservation.



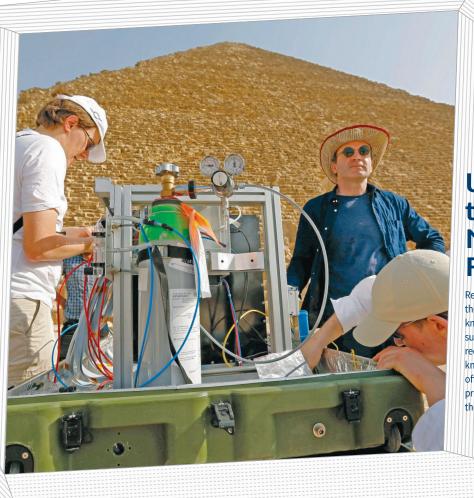
# Raising Awareness and Building Skills in Science and Technology

In response to today's societal challenges and the growing demand for engineers and technicians, La Fondation Dassault Systèmes supports educational projects that leverage virtual worlds to make learning more engaging and accessible to a wide audience. Its mission is twofold: to spark young people's interest in science and technology while inspiring vocations in engineering careers, and to support students in developing their skills.









# Understanding the Past to Navigate the Future

Revisiting the past enriches our understanding of the world and opens new avenues for research and knowledge sharing. La Fondation Dassault Systèmes supports the digitization, modeling, simulation, and reconstruction of historic monuments and ancestral know-how using 3D technologies. Virtual worlds offer ways to study cultural heritage more effectively, preserve traditional techniques, and ensure their legacy can be passed on to future generations.

#### What if students **learned** science by exploring the oceans?

Mission Océan is an innovative digital educational program that aims to facilitate student learning and enable them to deepen their knowledge in disciplines such as mathematics, physics and chemistry, geography, life and earth sciences, etc., while discovering the major challenges facing the oceans. For the first time, key actors from the private sector - La Fondation Dassault Systèmes -, from the public sector - the French Ministry of National Education, Higher Education and Research, ONISEP, Réseau Canopé – and a research center - Ifremer - have brought their expertise together for the benefit of middle and high school students.



possibilities offered by virtual worlds (3D modeling, virtual reality experiences, and digital simulations) in the context of ocean conservation. Digital tools strengthen students' understanding of complex but essential technical devices - an HROV robot and a sonar, for example - while enabling the exploration and discovery of inaccessible environments, such as the seabed and submerged reefs. Thus, students can discover their power to influence their environment. Thanks to the Pass Océan, they can also plan for the training and careers

they will pursue in the future.

Mission Océan allows them to

learn differently thanks to the



**66** VR is emerging as a new learning method in classrooms. Virtual worlds offer immersive experiences in environments or concepts that would otherwise be too difficult to access.

Frédéric Pinchon Project Manager, Digital Innovation School and Industry. French Ministry of Education Pedagogical content Coordinator. Mission Ocean



public graduate school of engineering, part of Université de Lorraine - with La Fondation Dassault Systèmes to prepare future engineers for the governance of sustainable urban planning projects. Students work on key local

How can we train engineers to

invent the

city of

sustainable

tomorrow?

issues in the Greater Nancy metropolitan area to improve the quality of life of its inhabitants. Heat islands, noise pollution, air quality, energy renovation, and new forms of mobility with the Urban Loop project are all topics that lead them to develop the crossdisciplinary skills necessary for this new, highly sought-after profession.



Throughout the e-Urban Manager curriculum, students benefit from personalized tutoring provided by university professors and Dassault Systèmes volunteers who guide them through using advanced collaborative 3D modeling and simulation technologies. The training also involves urban issues experts from local authorities. By building virtual twins of neighborhoods using data they have created or collected, students can simulate the environmental impact of their ideas, explore innovative structures and materials, while strengthening their technical skills. This training prepares them to tackle

the complex challenges of the

ecological transition.

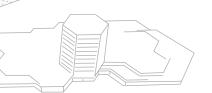


66 I've really enjoyed helping these future engineers implement 3D modeling and simulation technologies while takina into account the human, social, and political aspects of urban plannina.

Yann Lavairye Volunteer, Dassault Sustèmes









#### How can we empower young Indian women to shape their own future?

ASPIRA is one of the flagship programs of La Fondation Dassault Systèmes in India. It brings together a range of initiatives designed to support underprivileged schoolgirls and young women, helping them build an ambitious future for themselves despite the socio-economic barriers that often limit their opportunities. The School ASPIRA initiative caters to girls students from underprivileged family backgrounds. The goal is to spark their interest in science and digital technologies, and to help them build new skills through hands-on workshops. Graduate ASPIRA supports young women throughout their engineering studies. Throughout their four-year academic journey, participants receive scholarships and personalized mentoring from "buddies" women employees of Dassault Systèmes who volunteer with the foundation and specialized technical training from Dassault Systèmes Volunteers, thereby creating a comprehensive support system for them.



The Rural ASPIRA track specifically addresses the needs of girls and young women in rural areas, with the aim of providing them with the same learning opportunities and chances of success as their peers in cities. The program includes STEMfocused residential camps ranging from 1 week to 1 year, implementing scientific and digital experimentation, degree courses in rural technologies, and hackathons. These formats all share a common approach: learning by doing, opening career perspectives, and promoting greater autonomy. Finally, the Industrial ASPIRA initiative offers a certified training program combining classroom learning, practical experience, and support for job placement. It enables young women to gain valuable skills in quality control and CNC programming and 'helping them on their own. Through these various initiatives, made possible with the support of many partners, ASPIRA is taking concrete action to open up new career pathways for girls and young women in India - empowering them to take charge of their futures with confidence and independence.



66 Knowledge is the key to success. Having the opportunity to learn from our mentor's experience is a real privilege that makes all the difference for our future.

Sanika Mane Engineering student Mentee, Graduate ASPIRA



Founded by Jean Manas and At HMA, the pedagogical approach is student-centered, Rebecca Haile as a non-profit in 2021, Haile-Manas Academy focused on experimentation. is a unique pilot school. In design thinking, and critical 2025, it welcomed more analysis. La Fondation Dassault Systèmes supports than 200 promising students (expected to reach 400) from this forward-looking project. across Ethiopia and provided notably through the creation them with access to a quality of the Design Lab and the education regardless of their Robotics Center. These dynami financial resources to the project-based learning spaces extent possible. Designed as a are now at the heart of the model for secondary education school's pedagogical approach. in Ethiopia, it embodies an In addition to their own studies. ambitious vision; to train the HMA students use these spaces country's next generation of to lead robotics workshops for leaders and engaged citizens local middle school students, while contributing to a run summer camps in Addis profound transformation Ababa, and teach online courses for young people in of the education system for all young Ethiopians, Mozambique, Ghana, and celebrating the talent of Namibia. In the process, they Ethiopia's youth and the further develop their technical

What if Ethiopia's

an innovative school?

future lay in

richness of its cultural diversity.



skills, creativity, and leadership.



66 The Design Lab and Robotics Center are now thriving hubs of student learning at Haile-Manas Academy. They are opening up life-changing opportunities for so many young people.

Rebecca Haile Executive Director. **Ethiopia Education Initiatives** Co-Founder, Haile-Manas Academy



### How to develop self-confidence through a different approach to learning?

Course en Cours is a national competition where students, as a team, must imagine, design, manufacture, promote, and race a mini electric vehicle. Since 2016 La Fondation Dassault Systèmes has been supporting middle school students from the Apprentis d'Auteuil Saint-Philippe Educational and Ecological Campus in their participation in this project, which combines innovation, creativity, and experiential learning.

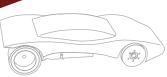




promotes student growth and success. Through interactions with volunteers from La Fondation Dassault Systèmes, students reconnect with learning and achieve their goals. This helps them develop a positive view of themselves and school. It's so rewarding to hear students say, "Miss, we did it, we're proud!".









# What if we seeded an entrepreneurial spirit at school?

Beyond technical skills, the

curiosity, creativity, team spirit,

Developed in India in 2020 under

the name Made in 3D-Seed

the Future Entrepreneurs.

Innovation Mission (AIM).

NITI Aayog of Government

of India, the program has

experienced remarkable

hundreds school students

growth since 2021. Every year,

across India participate in this

in partnership with Atal

to experiment with the

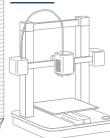
and self-confidence.

The Made in 3D program is a French joint initiative of the Fondation La main à la pâte and La Fondation Dassault Systèmes, successfully implemented in India and the United States. It offers middle and high school students an introduction to the culture of innovation and entrepreneurship by engaging them in a project that promotes the use of 3D design and printing tools while relying on a start-upstyle learning approach. Supported by their teachers and volunteers from La Fondation Dassault Systèmes, a team of students forms a pseudo start-up, identify a need, research solutions. imagine an innovative product, model and manufacture it in 3D, promote it through a marketing strategy, and pitch their project to a jury like true budding entrepreneurs. The themes addressed are central to societal issues: sustainable agriculture, inclusion of people with disabilities, quality of life for the elderly and rural populations, renewable energy, water resource management, and more.

program turned me into a real innovator. It gave me the chance to learn how to turn ideas into reality and inspired me to launch my own groundwater competition allows participants detection company at age 15. scientific approach and develop

**Participating in this** 

**Arjunveer Singh** Former student, Made in 3D - Seed the Future Entrepreneurs Young CEO, BhujalSense Nirdharak LLP









## How to bring back to life the Lighthouse of Alexandria using 30?

The PHAROS project, led by archaeologist and architect Isabelle Hairy (CNRS) at the Centre d'Études Alexandrines, brings together a multidisciplinary team historians, numismatists, archaeologists, and architects – with the mission of understanding the unique architecture of the legendary Lighthouse of Alexandria.

An underwater mission and a collection of depictions of the lighthouse in ancient sources, from the early 3rd century BC to its definitive disappearance at the beginning of the 15th century, made it possible to reconsider all the usable materials. During a unique underwater excavation, 22 blocks, including elements of two monumental gates, were pulled out of the water.

After photogrammetric processing and architectural analysis, the digitized blocks were handed over to volunteer engineers with La Fondation Dassault Systèmes. A collaborative 3D environment was created to gather the 3D models and their information for the 3D reconstruction of the famous lighthouse.

Each block of this immense archaeological puzzle will be analyzed and repositioned virtually. Using the archaeological and historical data collected, and 3D scientific simulations, a new image of the Lighthouse of Alexandria will be created. This 3D model will allow Isabelle Hairy and the engineers to test all hypotheses, from the building's construction to the reasons for its collapse. It will bring this lost marvel back to life, revealing its highly original layout and allowing visitors to explore it as if they were on site.



has revolutionized underwater archaeology.
Together with the Dassault Systèmes engineers, we're taking yet another step forward in the 3D reconstruction of lost heritage.

Isabelle Hairy Archaeologist, Architect, Research associate, Centre d'Études Alexandrines (CEAlex) Project Manager, PHAROS



# What if rural communities could benefit from student innovations in India?

The RuTAGe Smart Village Centers (RSVC) program, led by the Office of the Principal Scientific Adviser to the Government of India (PSA Office), aims to make technology directly accessible to rural communities at their doorsteps to sustainably improve their living conditions. These centers provide villagers with concrete and innovative solutions to develop their economic activity and thus strengthen their selfsufficiency. Technologies developed through Academia participation such as solar dryers, satellite-based crop monitoring and crop advisory, providing crop specific biofertilizers to improve yield, which helps in transforming rural eco system.





innovators with rural communities, we are not only solving problems but also creating opportunities. The partnership with La Fondation Dassault Systèmes has been instrumental in demonstrating how scalable and impactful the RSVC model can be.

**Dr. Sapna Poti**Director of Strategic Alliances,
Office of the Principal Scientific
Adviser to the Government
of India







Blindness caused by damage to the optic nerve affects millions of people, yet the exact causes are still not fully understood. The two most common forms - glaucoma and non-arteritic anterior ischemic optic neuropathy - are due in part to disrupted blood flow in the optic nerve head, the small area at the back of the eye where the optic nerve connects to the brain. Remarkably, there is no 3D anatomical model of this region. Without such a model, researchers cannot accurately study how factors like viscosity, anemia, or changes in blood pressure, intraocular pressure or cerebrospinal fluid pressure affect blood flow through the many little vessels supplying the optic nerve head in this delicate area.

The Living Eye Virtual Twin, project, led by Dr. Joseph Rizzo, Professor of Ophthalmology at Harvard Medical School and Massachusetts Eye and Ear, and seeded by La Fondation Dassault Systèmes, intends to develop a novel model of the optic nerve head blood flow. This model will be customizable for each patient to assess critical parameters and the impact of stress as the eye moves thousands of times a day. These studies will elucidate blindness mechanisms and could provide insights into new therapies.



Dr. Joseph Rizzo Professor of Ophthalmology, Harvard Medical School & Massachusetts Eye and Ear Project Lead, Living Eye Virtual Twin



# How can scoliosis be better treated using non-invasive technologies?

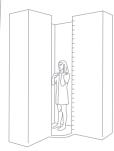
The VIVID-Spine project uses non-invasive and harmless imaging and visualization techniques to study 3D spinal deformities. Initiated at the UniTyLab of Heilbronn University in Germany, in collaboration with the Institute for Biomechanics at ETH Zurich (Switzerland) and the ASKLEPIOS Katharina-Schroth Clinic (Germany), the project, supported by La Fondation Dassault Systèmes, reduces the use of harmful X-ray emissions in children diagnosed with scoliosis and provides access to therapeutic information in mixed reality. It relies on optical acquisition of the patient's back to obtain a faithful 3D model of spinal pathologies.

All captured data—spinal anatomy and key patient data-will be available digitally. Using 3D engineering solutions typically used in industry, simulations will predict future deformities. These simulations can be displayed directly in the doctor's field of vision using a mixed reality (MR) headset, enabling more efficient. real-time diagnosis. Unified into conventional scoliosis treatment, this new process will drastically reduce the use of X-rays and the associated risk of cancer development. It will also provide physicians with a new clinical approach that is less invasive, faster, and more accurate.



"Together, we can advance applied research and foster the development of innovative solutions in medical imaging and pediatric healthcare powered, by technology.

Ferdinand Burkhardt PhD student Project Member, VIVID-Spine





We value our partnership with La Fondation
Dassault Systèmes as a shining example of what
is possible when government, industry,
and educational institutions come together
for a shared vision. We look forward to scaling
new heights together in shaping the future
of innovation-led learning in India.

**Deepali Upadhyay** Program Lead Atal Innovation Mission (AIM), NITI Aayog, Government of India The Fab Foundation has worked for more than 15 years to provide global access to digital fabrication for STEM education, community resilience and economic opportunity. In partnership with La Fondation Dassault Systèmes, we are providing tools for technology invention and advanced manufacturing to schools, libraries, museums and community centers – reaching educators, underserved youth, and new communities – and laying foundations for a more inclusive, sustainable and prosperous future for all.

Sherry Lassiter CEO and President, The Fab Foundation, the non-profit spinoff from MIT Director, global Fab Lab Program, MIT Teaching science and technology from an early age – starting in preschool – is key to ensuring that every future citizen develops the scientific and technological literacy needed to form sound opinions. With this shared ambition, Fondation La main à la pâte and La Fondation Dassault Systèmes are joining forces to introduce students to a rigorous intellectual approach that will guide them throughout their lives.

Didier Roux
President, Fondation La main à la pâte
Member, French Academy of sciences
and The National Academy of Technologies of France

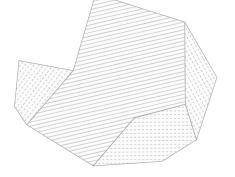
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"Stronger with Science": at Ifremer, we have taken on the challenge of bringing ocean science closer to citizens. To meet this challenge, our researchers, engineers, and technicians are working in collaboration with La Fondation Dassault Systèmes, the French Ministry of National Education, ONISEP, and the Canopé network. Our shared goal is to develop innovative, 3D-based educational tools to raise awareness and inspire future vocations among middle and high school students.

François Houllier
President and CEO, Ifremer

Fundamental research in France needs the support of non-profit foundations. It was only natural La Fondation Dassault Systèmes and the CNRS should cross paths. The foundation has put virtual reality at the service of science, supporting not only research, but also education and culture—three ore missions that are at the heart of the CNRS activities and that contribute to drive forward major, iconic research projects.

Antoine Petit
Chairman and CEO, CNRS

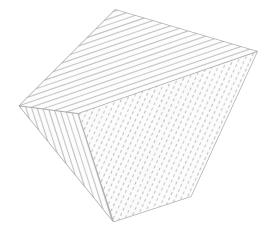


## The 2030 Agenda for Sustainable Development

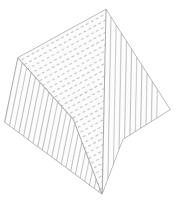
Adopted by all United Nations Member States, the 2030 Agenda provides a shared roadmap for peace and prosperity for people and the planet, today and tomorrow. This plan centers around 17 Sustainable Development Goals (SDGs), which represent an urgent call for action by all countries within a global partnership.

La Fondation Dassault
Systèmes supports innovative
projects that combine
technology and social impact,
aligned with these goals.
By fostering synergies between
the world of education,
research, and industry, and
bridging public and private
stakeholders, the foundation
promotes cooperation and
contributes to building a more
resilient and inclusive society.

For more information, visit www.lafondation3ds.org







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