



LEONARDO

PRESS RELEASE

Da Vinci's Workshop Codices, Machines and Drawings

A world-class exhibition unveils new discoveries

Milan, 16 September 2009. Thanks to a collaboration between the **Leonardo3** research center, the **Municipality of Vigevano**, the **Province of Pavia**, the **Banca del Monte di Lombardia Foundation** and the **Vigevano Regional Development Agency**, the enchanting location of the Second Stables inside **Vigevano Castle**, just a half hour from Milan, is finally being showcased by an event of international significance beginning 12 September 2009.

Leonardo's Workshop: Codices, Machines and Drawings is an important traveling exhibition featuring world premieres and discoveries resulting from unprecedented studies on the work of Leonardo da Vinci. Extensive use of avant-garde, world-class technologies based on three-dimensional, high-definition graphics and animations makes the show interactive, educational and entertaining for everyone.

For the very first time, the public is invited to turn page after page of Leonardo's most important codices: the *Codex on Flight*, *Manuscript B* and the *Codex Atlanticus*. Indeed, their digitization at an extremely high resolution and the integration of their pages into interactive books gives the public unprecedented and direct access to these codices via mega-screens. Best of all, Leonardo's drawings are brought to life by extraordinary interactive and three-dimensional interpretations that make



A view of the exhibition hosted inside enchanting Vigevano Castle

them easy for anyone to understand.

In a review of the *Virtual Codex Atlanticus*, which contains various drawings for machines designed by the Da Vinci genius, the *New York Times* called the technology "...one of the smartest, most elegant interfaces for exploring complex material ever seen". As justification for unanimously bestowing Leonardo3 with a prestigious prize for spreading awareness of cultural heritage by a jury chaired by **Umberto Eco**, it was defined as "a futuristic tool for exploring Leonardo da Vinci's Codex". Indeed, the center was awarded this prize for its "commitment to showcasing Italian cultural heritage and developing our country's culture via a powerful means for conveying content, expressive originality and emotional impact".

The center's work on *Manuscript B* is of great historical importance, since all its pages have been digitally restored to appear as they did shortly after Leonardo wrote them. Never have so many drawings spanning art, flight, war and architecture been interpreted all in one place. The drawings for the so-called **Ideal City**, identified by many as the town of **Vigevano**, are also contained in this Codex, and the new



Interactive 3D multimedia stations make all the machines easy for the public to understand



studies presented in this show will finally allow the full breadth of this design to be understood.

As for the *Codex on Flight*, not only does it contain analyses of bird flight but more importantly, it also features the design for a flying machine (and instructions to fly it!) discovered and reconstructed for the first time in 500 years by the scientists at Leonardo3.

Thanks to their digital transformation, **these Codices have been brought back together for the first time since 1796 when they were stolen out of Italy by Napoleon.** The application of cutting-edge *Digital Codex* technology, developed by Leonardo3, has had a proven impact on viewers that is superior to the original. Indeed, the public can only aspire to see a few pages at most of an original codex, and without the possibility of understanding its contents, which are seen here in a totally new light thanks to the three-dimensional models and animations.

Although Leonardo designed hundreds of extraordinary machines, we have no evidence of the objectives he reached or the successes he achieved. The only machine for which we have eye-witness accounts that it actually worked was the **Mechanical Lion, built to walk before the king of France** and offer him lilies. The drawings for this machine could have been lost (stolen or reused?) precisely because of the importance of this design. Or at least that's what scholars have believed until now. In fact, *Leonardo's Workshop: Codices, Machines and Drawings* proposes the first life-size reconstruction of the Mechanical Lion (3 meters/9.8 feet), based on new, original analysis of certain details in some of Leonardo's drawings.

Of all the musical instruments the great genius designed, one is unique and unequalled: a **portable harpsichord that sounds like a viola.** No one has ever studied or reconstructed it before. The reconstruction of the functioning instrument will be presented for the first time over the course of the six-month exhibition and will even be played for the occasion. The first study model of the **Harpsichord-Viola** made by the Leonardo3 workshops is already on exhibit. The working model, on

The first reconstruction of Leonardo's Mechanical Lion based on Leonardo's designs, produced by Leonardo3 scientist Mario Taddei





Leonardo's Self-Portrait digitized from the original and presented for the first time with the innovative HyperView technology

the other hand, will be presented in the coming months, since *Leonardo's Workshop* is not a static show. On the contrary: conferences, events and updated contents will make it dynamic (and worth a second view for the public) over the exhibition's nearly seven-month run.

Of all the machines Leonardo designed, he dedicated most of his life to those intended for flight. Indeed, being able to fly was more than just a dream for him. The **Great Kite** is perhaps the last and most definitive flying machine he ever designed. It has long escaped the notice of scholars and represents one of the most historically important points of the entire exhibition. A life-size version of the machine's cockpit is presented, as well as a small model of the whole machine. Research by Leonardo3 has revealed that the notebook mistakenly known as the *Codex on the Flight of Birds* is actually a manual for building and flying this machine (hence why Leonardo3 has re-baptized it the *Codex on Flight*). Also related to the theme of flight are the **Mechanical Bat** from the *Codex Atlanticus* – a flying machine whose innovative design and light weight distinguishes it from all other reconstructions made of it until now; the **Aerial Screw** in its proper form with a central spring engine and fixed base; and the study model for the **Wire-Controlled Bird**.

The utterly unprecedented reconstruction of the **Robot-Soldier** is another world premiere: a true 15th-century robot. Leonardo's so-called **Self-Propelling Cart** is also presented in updated form with a new interpretation that modifies its engine apparatus. And the reconstruction of the **Multi-Cannon Gunship** is yet another Leonardo3 original. Central to the show are the interactive multimedia stations that stand next to each physical model. Not only do these help the public understand how each machine actually works but they also give visitors a chance to disassemble and reassemble them piece by piece. Kids can also virtually explore **Leonardo's Workshop** by discovering the mechanisms at the basis of all his machines, putting them together and printing them out so they can bring their designs home with them.



The Great Kite's cockpit reconstructed by Leonardo3 scientist Edoardo Zanon

The exhibition experience is rounded out with the “more traditional” display of a selection of Leonardo's artistic drawings, selected from among the plates produced by the Royal Da Vinci Commission. Even in this case, however, the show provides a unique experience, since viewers are given the chance to “explore” the inside of **Leonardo's famous Self-Portrait** drawing, for example. Leonardo3 had the exclusive opportunity to digitize the original drawing preserved in the Royal Library of Turin using cutting-edge technology. In an absolute first, the drawing is reproduced in high definition and presented via interactive digital panels, thereby launching an important challenge: “can the skilled use of new technologies have a greater impact on the public's exploration of an important work of art than viewing the original itself?”

Without a doubt, what makes *Leonardo's Workshop* revolutionary is the way it uses technology to the fullest to showcase and explore our cultural heritage, applying the formula of “edutainment” (combining education and entertainment). “*Leonardo's Workshop* is a show for kids and adults of all ages to see and understand Leonardo's work in a totally innovative way, not just through new discoveries but also through tools and technologies that make the visit fun”, says **Massimiliano Lisa**, Leonardo3's CEO and one of the curators of the show. “Not to mention our careful interpretive scholarship, which makes our reconstructions of Leonardo's machines the most meticulous ever produced”, explain L3 scientists Mario Taddei and Edoardo Zanon, who co-curated the show. “But we don't want to reveal any more. The rest is for you to discover from 12 September 2009 to 5 April 2010 in the evocative setting of Vigevano Castle”. The exhibition was produced under the High Patronage of the Head of State and is the subject of an important media campaign. Its objective is both to promote *Leonardo's Workshop* and to help the people of northern Italy rediscover



"Hands-on" stations: not
just for kids



One of the interactive experiences devoted to
the Codices: Manuscript B

and fall in love with the picturesque Vigevano Castle where "Leonardo" will certainly feel at home. Organizers hope to welcome hundreds of thousands of visitors, thereby drawing attention to the event as one of national and international importance, one that will also form the first building block of a **fixed presence for Leonardo3 in Vigevano**.

To prove the show's global breadth, **it will also open in New York at the prestigious Discovery Times Square Exposition**, an exhibition space in the heart of the Big Apple collaboratively produced by the *Discovery Channel* and the *New York Times*.

Leonardo3 (L3) is a research center whose mission is to study, interpret and make the world's artistic-scientific heritage publicly available using new technologies. L3's research workshops and all its products (physical and digital models, books, multimedia materials, documentaries, exhibitions and museums) are primarily dedicated to the work of Leonardo da Vinci. The center has produced results of international importance. L3 exhibitions have been hosted in venues such as the Royal Library of Turin; the Pinacoteca Ambrosiana in Milan; the Sony Building in Tokyo; the exploraScience Museum in Tokyo; the Museum of Science and Industry in Chicago; Exploration Place in Wichita; the Papalote Museum in Mexico City; Rockefeller Center in New York; the National Museum of Bahrain; the National Museum of Riyadh; the Al-Babtain Central Library of Kuwait City; the Casa Brasileira Museum in Sao Paulo; and the Museum of Natural History of the Mediterranean in Livorno. Recent important research by Leonardo3 has included unprecedented studies on an Arab scientist from the year 1000, which led to a permanent exhibition in the Museum of Islamic Art in Doha, Qatar.

Leonardo3 is a unique entity on the global scene for its integration of art and science historians in the research and development of new technologies and methods for the promotion of cultural heritage, all under one roof. The fruits of the center's studies are disseminated worldwide through shows and publications produced directly by Leonardo3.

DA VINCI'S WORKSHOP: *Codices, Machines and Drawings* was designed and produced by Leonardo3 in collaboration with the Municipality of Vigevano, the Province of Pavia, the Banca del Monte di Lombardia Foundation and the Vigevano Regional Development Agency

Vigevano Castle (Ducal Palace)

from 12 September 2009 to 5 April 2010

Visiting hours: Tuesday to Sunday, 9:30 to 18:30; closed on non-holiday Mondays – the ticket office closes one hour early. Closed 25 and 31 December 2009 and 1 January 2010.

Tickets: Full price €7.00 - Reduced price €6.00. Special reduced price for students: €3.00.

For information and guided visits: tel. 02.4335.3522 - servizi@civita.it

The exhibition catalogue, *Leonardo's Workshop in the Ideal City* (ISBN 978-88-6048-015-6) is published by Leonardo3

For more information: www.leonardo3.net and www.leonardoevigevano.it

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