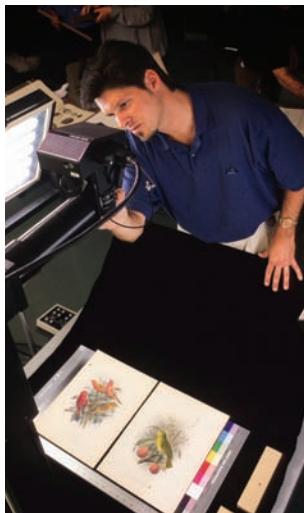




# DELIVERING ON THE PROMISE OF THE DIGITAL SMITHSONIAN



Smithsonian Institution  
SUMMER 2014



**A**ugmented reality and gamification. Crowdsourcing and new media. Norms for how we communicate have changed forever. We can now pluck information out of the cloud and download it onto one handheld device that serves as movie theater, newspaper and library combined. Wherever you are, technology enables us to bring the world to you; the Smithsonian can take individuals as far as their imagination can travel. If you are curious about how animals behave deep in the wild, the Smithsonian can show you. Budding astronomers can command real robotic telescopes that capture images in space. And scholars can study detailed 3-D scans from every angle, tracking the intricate patterns on an ancient fossil or the graceful curve of a Pergolesi side chair.

With the help of today's technology, those who come to our museums can personalize their visit. Mobile apps help you plan your Smithsonian itinerary in advance, grow your knowledge while in the museums, and bring the promise of more learning home in your pocket. If these are the things we can do today, just imagine what tomorrow will hold. By the time the National Museum of Natural History opens its new fossil hall in 2019, schoolchildren could very well tour the exhibition with a *T. rex* avatar as their guide.

By digitizing our collections and adopting a wide range of interactive tools, the Smithsonian can engage billions of people worldwide and power collaboration across nations and disciplines. We can share our expertise and resources with K-12 schools and speed scientific discovery by giving scholars ready access to our collections. By purposing technology, we can better serve our founding mission — the increase and diffusion of knowledge.

### MANAGING THE DIGITAL ENTERPRISE

Clear on where we want to go, the Smithsonian has been actively investing in approaches that will get us there. At the same time, we are cognizant of the challenges involved. New technologies emerge daily and clamor for attention, and the 137 million objects in our collections — from the space shuttle *Discovery* to microscopic dust mites — range in composition and complexity. To gain Institution-wide synergy and focus, we have outlined a digital action agenda that sets priorities and involves respected partners.

## PRIORITY 1

### Use technology to enhance the visitor experience

Millions come to the Smithsonian each year to engage with real objects and share impressions with family and friends. Physical museums — staffed by extraordinary curators, scientists, educators and volunteers — also provide the content, expertise and collections that form the foundation of our digital outreach. The Smithsonian is bringing 20th-century buildings into the 21st century, implementing free, public Wi-Fi and positioning technologies to guide visitors through our museums, allowing them to see beyond exhibitions to objects not on display. New museums, like the National Museum of African American History and Culture, will blend the physical and the virtual, offering interactive digital experiences that can engage learners long after the school trip is over.



#### Q?rius

This new education space at the National Museum of Natural History engages tweens and teens in interactive experiences that inspire inquiry. Young people use real specimens to solve forensic mysteries, examine coral reefs and investigate the types of birds that wreak havoc on airplanes. By scanning QR codes as they explore, they can earn badges. Visitors can also record their activities, notes and drawings in a digital "field book" to use as a tool for continued discovery.

[Learn More](#)

#### Infinity of Nations App ▶

An app that bloggers call beautiful, simple and elegant, the National Museum of the American Indian's Infinity of Nations, available in English and Spanish, turns users' mobile phones into an electronic guide, elaborating on objects selected for their cultural and historical significance.

[Learn More](#)



## PRIORITY 2

### Digitize the collections

The ongoing work of translating our collections into digital formats and making them available online is at the core of the Digital Smithsonian. It could take decades and tens of millions of dollars to digitize everything in our vast holdings. But we are approaching the problem strategically — setting priorities and partnering with corporations and universities to explore and implement the latest digitization technologies, even robotics. As we speed up the imaging process, the online Smithsonian Transcription Center is engaging the public in creating electronic records where only paper existed before.



#### ◀ **Rapid Capture of 19th-Century Currency**

In the 19th century, banks issued their own paper money; the U.S. Treasury collection of currency proof sheets is now held by the National Museum of American History. By optimizing digitization processes, curators captured in one week 12 times as many images as would have been possible using traditional methods. Smithsonian Transcription Center volunteers from around the world then helped create electronic records that, along with the images, were quickly made available to the public. [Learn More](#)



#### **Whale "Graveyard" in Chile ▶**

Smithsonian researchers digging in Chile's Atacama Desert made an amazing discovery — the fossilized skeletons of dozens of whales that had lain undetected for 6 to 9 million years. Soon to be paved over to accommodate the widening of the Pan-American Highway, the at-risk excavation site was scanned in 3-D by a Smithsonian crew, digitally preserving the marine fossils for science and study.

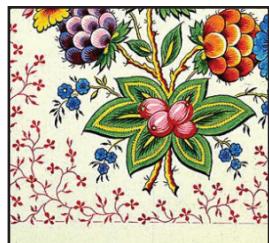
[Learn More](#)



## PRIORITY 3

Make Smithsonian digital content easy for the public to find and use

Those interested in Theodore Roosevelt, one of America's most energetic presidents, will find relevant objects in many Smithsonian museums; President Roosevelt's likeness is in the Portrait Gallery, his big-game specimens in the Museum of Natural History and his field notebooks in the Smithsonian Institution Archives. We want to make it easy for those who search online to find all Smithsonian resources on a related topic, whether that person starts out on one of our websites or comes to us through external partners, such as the Digital Public Library of America.



### ► Cooper Hewitt, Smithsonian Design Museum

Virtual visitors to the nation's design museum in New York City will find a veritable feast of options. Online exhibitions showcase Cooper Hewitt's beautiful objects, from jewelry to textiles to furniture. One of the most popular features lets users search the entire collection by color, offering a palette of 118 hues from which to choose. [Learn More](#)

### Biodiversity Heritage Library ▶

The Biodiversity Heritage Library (BHL), created by a Smithsonian-led consortium of natural history and botanical libraries, is creating a "biodiversity commons," where scientists can scan the millions of pages entered to date and find the taxonomic literature that resides in individual journals and museum collections. BHL puts everything in one place, saving precious time and facilitating discovery. [Learn More](#)



## PRIORITY 4

### Spark engagement and participation among learners everywhere

For centuries, people journeyed to museums to gaze at the world's wonders, chosen and curated for them by subject experts. Today, we want to use technology to actively engage visitors, to incite children to learn inside and outside of the classroom, and to spark discovery in adults, offering online courses that draw from our collections and research. Ever-increasing website visits and social media mentions indicate that the public is ready, and new "digital volunteer" initiatives provide opportunities for people to serve as citizen scientists, contribute their own story of the American experience or unpack archival treasures through transcription.

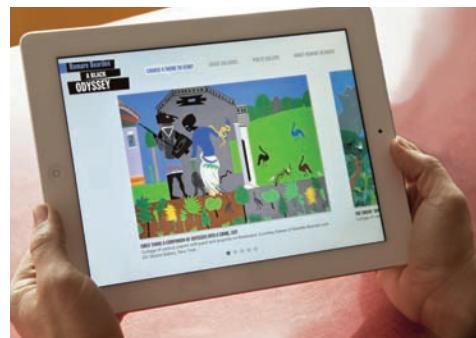


#### ◀ Leafsnap

An aid to amateur botanists, Leafsnap is a mobile app that employs visual recognition software in examining beautiful color photographs of tree leaves, flowers, fruits, seeds and bark to help users identify species from the American Northeast and stimulate interest in natural history among learners young and old. With each "snap," the user is also providing valuable data to the Smithsonian-Columbia University-University of Maryland Leafsnap team. [Learn More](#)

#### Romare Bearden: A Black Odyssey ➤

When the Smithsonian Traveling Exhibition Service launched the seven-city tour of "Romare Bearden: A Black Odyssey" — an exhibition of Bearden's collages that explore the theme of a heroic traveler searching for home — it introduced an accompanying free app. With the app, students can create their own collages using elements of Bearden's works and then share their artwork via the "Black Odyssey Remixes" website. [Learn More](#)



## ENVISIONING THE FUTURE

What will an increasingly digital Smithsonian ultimately allow us to do? We have the potential to share our knowledge with billions of people, and to bridge the opportunity gaps that have created such disparities in our culture. Technology unlocks a wealth of intellectual and physical resources and frees them to go to the places that badly need them, such as America's schools, where they can enrich the curriculum and build an ethic of independent learning. A digital Smithsonian offers limitless potential and tangible rewards that we cannot even begin to imagine today. Its promise will evolve as technology does, and will keep the Smithsonian's work and collections as relevant tomorrow as it is today, only with a much broader reach.



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