



museum of  
**science+industry**  
chicago

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## **FAST FORWARD ... INVENTING THE FUTURE FOCUSES ON UNIQUE INNOVATIONS AND CREATIVITY AT THE MUSEUM OF SCIENCE AND INDUSTRY**

**CHICAGO**—The Museum is looking to the future with permanent exhibit *Fast Forward ... Inventing the Future*. This rotating gallery showcases cutting-edge technology and innovations developed by groundbreaking inventors and scientists from around the world. Within the exhibit, guests learn how ingenuity and creativity are being used to shape our future and advance our society in the areas of agriculture, transportation, entertainment, energy and much more.

*Fast Forward* challenges all of us to ask “What if?” What if you could repair your body at the cellular level to live forever? What if you could really replicate food like on Star Trek? What if robots were so lifelike you couldn’t distinguish them from real humans? What if you had a whole planet to yourself? What if your computer spoke body language? What if a farmer could grow his crops in a crowded city? Seemingly impossible challenges can be overcome by beginning with this simple “What if?” question.

The *Fast Forward* interactive gallery features 12 innovators—selected by Museum exhibit curators—who are asking this question and pushing the current boundaries of science and technology. Guests will discover what motivates these visionaries, understand their challenges, and interact with their successes. The exhibit content and featured innovators are designed to rotate to keep pace with the latest in scientific discovery and technological advancement.

Some of the innovators include:

### **Homaro Cantu, Chef and Inventor**

Homaro Cantu was executive chef at Moto Restaurant in Chicago as well as founder of Cantu Designs, a firm looking to take the dining experience to a new level through design and engineering. Through this company, Cantu filed numerous patents covering diverse fields such as dining items, cookware and edible surfaces. Cantu also worked with NASA to develop a “food replicator”—a converted ink-jet printer that produces edible prints. Cantu’s radical notions of food could change the way we feed people in crisis, disseminate medicine to stem an epidemic and sustain astronauts on long missions.

### **Aubrey de Grey, Biogerontologist**

Trained as both a computer scientist and a biologist, de Grey is conducting biological research at the Methuselah Foundation in Cambridge, United Kingdom, in order to radically extend the human life span. He is the founder of the Methuselah Mouse Prize, a scientific competition designed to draw attention to the ability of new technologies to slow and even reverse the damage of the aging process.

### **Dickson Despommier, Microbiologist and Medical Ecologist**

Despommier, of Columbia University in New York, is the leader of the visionary Vertical Farm

Project that proposes to grow food in high rise buildings in urban centers, helping to feed increasing urban populations while also allowing sprawling farmland to be returned to nature.

The exhibit also features a “young innovator”—a young person beyond his or her years who shows great promise, vision and motivation to change the world. The first young innovator profiled is a self-taught 20-year-old, William Kamkwamba, who as a teenager built a windmill out of scrap materials to provide electricity for his family. He now dreams of powering every village in his African nation of Malawi.

Guests can examine the work of these groundbreakers through video presentations, models and prototypes of actual new inventions. In the exhibit, guests can

- Explore images of several NASA Mars missions dating back to 1960, leading up to the exhilarating journey taken by the Mars Curiosity rover in 2011 to land on the Red Planet. Through imaging software and a variety of cameras that acts as its eyes, hands that can dig up rocks and soil, and other instruments and detectors, learn how the rover helps scientists to unlock answers to some of Mars most essential questions.
- Play a game to see how the “eyes” operate on the Xbox Kinect sensor, a voice and motion system device that was originally developed to be a hands-free game controller. Through skeletal tracking and gesture recognition, the device can track multiple users’ movements in real-time and recognize their faces and voices. This technology can be used for a variety of creative purposes—like trying on clothes virtually.
- Try their hand at planting virtual crops in a vertical farm created for urban landscapes with the Vertical Farm Concept Model and Interactive Game, based on concepts by Dickson Despommier. The towering model is activated by a multi-player game designed to teach guests more about this new idea of urban agriculture.
- Reflect on art merging with technology with the wall projection interactive, Mariposa, created by Zack Simpson, a software engineer, artist, and molecular biology researcher at Mine-Control in Austin, Texas. The projection attracts a bevy of virtual butterflies to land on guests’ shadows.
- “Play” an amazing new instrument, the “Reactable,” a new, cutting-edge instrument invented by Sergi Jordà, a computer scientist and musician from Pompeu Fabra University in Barcelona, Spain, that provides a wide range of sonic possibilities with a luminous, multi-touch tabletop.

*Fast Forward* demonstrates with a spark of inspiration and hard work, the future of our world can be changed, and the seemingly impossible can become possible. The inspiring stories of these innovators and their inventions will encourage Museum guests to dream big—because anyone of us can produce extraordinary ideas and because we, as a collective society, are inventing the future. *Fast Forward ... Inventing the Future* is included with Museum Entry.

### **About the Museum of Science and Industry, Chicago (MSI)**

The Museum of Science and Industry, Chicago (MSI), one of the largest science museums in the world, offers world-class and uniquely interactive experiences that inspire inventive genius and foster curiosity. From groundbreaking and award-winning exhibits that can’t be found anywhere else, to hands-on opportunities that make you the scientist—a visit to MSI is where fun and learning mix. Through its Welcome to Science Initiative, the Museum offers a variety of student, teacher and family programs that make a difference in communities and contribute to MSI’s larger vision: to inspire and motivate children to achieve their full potential in science, technology, medicine and engineering. Come visit and find your inspiration! MSI is open 9:30–4

p.m. every day except Thanksgiving and Christmas day. Extended hours, until 5:30 p.m., are offered during peak periods. The Museum is grateful for the support of its donors and guests, who make its work possible. MSI is also supported in part by the people of Chicago through the Chicago Park District. For more information, visit [msichicago.org](http://msichicago.org) or call (773) 684-1414.

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