Five Years of the Arrow Five Years Out Art Challenge
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What it means to be “Five Years Out”

Most people live in the present. The world of now. But a handful of us work in a unique world that doesn’t quite exist yet—the world of Five Years Out.

Five Years Out is the tangible future. And the people who live and work there know that new technologies, new materials, new ideas and new electronics will make life not only different, but better. Not just cheaper, but smarter. Not just easier, but more inspired.

Five Years Out is an exciting place to be. So exciting that, once you’ve been there, it’s hard to get excited about the present. Because we know what’s coming is going to be so much better.

Five Years Out is a community of builders, designers, engineers and imaginers who navigate the path between possibility and practicality. Creating the future of everything from cars to coffee makers.

Are you one of them?

Then you’re probably working with us.

The Five Years Out Art Challenge

For the past five years, Arrow Electronics and the Cherry Creek Arts Festival have partnered to bring you the Arrow Five Years Out Art Challenge.

Through it, we’ve challenged artists from around the world to explore the notion of innovation and express Five Years Out through their medium.

Each year, a group of finalists are selected and a winner chosen. Winners receive an additional stipend and an exhibit booth at the Cherry Creek Arts Festival in Denver, Colorado.

The commissioned pieces are on display in Arrow offices around the world.

Enjoy the collection.
This piece presents the evolution of innovation in a visually dramatic and compelling way. It conveys the sense that the number of inventions today vastly exceeds that of the past, illustrating how the rate of innovation is exponentially accelerating. Inventions of various sorts are “birthed” at a central core or engine and, after creation, are pushed radially outward. The earliest inventions in history are at the outer periphery, followed by recent ones at the rim of the engine, and future innovations incubating inside the engine.

_Innovation Engine_ is part of the Fragmentation Series, in which flash sculptures are used to capture and freeze dramatic or explosive events in a three-dimensional format, analogous to flash or high-speed photography in the two-dimensional world. The intent of the work is to visually generate a sense of anticipation for what the future holds.

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**Stefan Begej**

*Engine of Innovation | Mixed Medium | Littleton, Colorado*
Fraley envisions a future where a sonic time machine is the next big thing. Using proprietary algorithms and state-of-the-art technology, the Lost Sound Search Engine is born. The device retrieves voices from the past, thought lost to the ages, and plays them back. Though the concept is fictional, by using his own custom circuitry, Fraley makes this interactive piece appear to be a working unit.

Toby Fraley
Lost Sound Search Engine
Mixed Medium
Bridgeville, Pennsylvania

Through this brain–computer interface (BCI)-controlled LED sculpture, Niemczyk gives viewers the chance to participate in the art by influencing the light patterns with their individual brain scans. Yes, I See interprets electrical activity in the brain in a somewhat random pattern, creating a unique signature for each user. The user controls it by concentrating, meditating, focusing or becoming distracted. BCI technology is expected to bloom in the next five years.

Karen Niemczyk
Yes, I See
Electronic Art
Greensboro, North Carolina
Finalist

Stephen Ausherman

e-scape v
Digital Art
Albuquerque, New Mexico

e-scape v explores the presence of technology in open spaces, revealing with a sense of magical realism the ways in which electronics alter our perceptions of the outdoors. This series of ambient video loops features emerging writers and artists from Colorado. The content reflects a local geographic identity, while the process is unrestricted by distance. In that sense, the project illustrates a balance in working both locally and globally. Interwoven for single-channel display, the assemblage illustrates a series of abstract narratives: Nature revives a discarded TV, then consumes it; a window both divides and duplicates our view of a mountain landscape.

Finalist

Donald Gialanella

Motherboard Earth
Sculpture
St. Petersburg, Florida

Five Years Out, the things we use today will seem primitive. Reflecting this idea is Motherboard Earth, an orb created from electronic devices, computers and consumer objects in common use today. The sculpture is a visual touchstone for how rapidly our world is changing. In five years, the devices featured in this piece will be considered outmoded, thus transforming this artwork into a time capsule of 2013 and an indicator of how fast technology is evolving.
Made of mirror-polished aluminum, the sculpture’s five columns symbolize the Five Years Out philosophy. The various heights signify the idea of added knowledge and change each year. The twists in the fifth column represent thinking outside of the box and how that action must be taken to make new discoveries. The polished mirror finish reflects the other columns, allowing the viewer to magically see an infinite number of twists or ideas and possibilities for the future.
Betsy Youngquist

*Hero* | Mixed Medium | Rockford, Illinois

Hero celebrates the wonder Youngquist felt as a young girl as she and her father watched a man walk on the moon. The three-dimensional mosaic honors the call for a view of the future. The ship’s pilot is equipped with an abundance of hands that help connect, explore and communicate. Hands serve as conduits of power symbolizing creation, transformation and friendship. Through the twists and turns of Hero’s journey, we are reminded to better tend to our environment, embrace the diversity of life on our planet, and encourage technology to flow in a way that honors our interconnected and interdependent global home.
Birth of Flight conveys the source of human potential. The bright colors that surface through the seams imply infinite technicolor possibilities that lie within. Constructed from one continuous piece of wood, Byrns combines traditional materials and techniques with new technology and self-developed sculpting methods. Both the process and the form suggest that art needs to utilize both tradition and technology to remain relevant and evolve.

Finalist

Tim Byrns

Birth of Flight
Sculpture
Duluth, Minnesota

For more than 200 years, artists and musicians have dreamed of portraying music visually. Now, with the aid of fast computers, Wilson captures the spirit of music with images that are detailed and intuitively read. Analyzing the frequencies of a phrase of music, then displaying them three dimensionally over time as it plays. A true intersection of visual art, music and technology. Wilson invites you to explore these worlds of sound. To literally see music in an entirely new way.

Finalist

Randy Wilson

Five Years Out
Digital Art
Pacifica, California
Mobile devices have dramatically transformed the way we communicate and interact with each other. The fingerprints left behind on our devices’ screens illustrate how intimate we are becoming with the device itself. Remove the device, and you are left with smudges illustrating the story of how we communicate. The artwork shows that our devices are simple canvases, and what we do with them is the art that society continues to unknowingly create. The message is invisible yet remains a hieroglyphic of our future direction.

Xinxin Zhi

Love Letters
Porcelain Sculpture
Beijing, China

We express our feelings through letters. This action expresses maybe just a mood of emotion, like love, care or hate. Zhi chooses to exhibit these discarded love letters in delicate ceramic forms. They look like pure paper, but cannot be easily unfolded. You can see a portion, but cannot unfold to reveal the rest, as secret feelings are left fragmented. The finished piece is an interpretation of both artist and audience, demonstrating universal connection across cultures.

Andre Woolery

Invisible Hieroglyphics
Digital Print
New York, New York

Finalist

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Whether you look five years out, or five thousand years out, you cannot build anything without Carbon, Hydrogen, Oxygen and Nitrogen (C.H.O.N). After millions of years, this beautiful stone surfaced to create C.H.O.N., composed of layers of resin, metal, wood, stone and ice. The main material in the sculpture is marble, which was formed through immense pressure. The scorched wood warns of possible disasters if we do not innovate to create a sustainable future. Within the bronze layer, the artists present binary code as a new element. All elements work together through a forward-thinking, symbiotic relationship.

Finalist
Sayaka Ganz
*Untitled*
Sculpture
Fort Wayne, Indiana

Japanese Shinto belief teaches us that all objects and organisms have spirits. In kindergarten, Ganz learned that items discarded before their time weep at night inside the trash bin. Driven by combination of sympathy for inanimate objects and passion for fitting shapes together, she creates forms that are alive and in motion. Building these sculptures helps her understand the situations that surround her. Even if there is conflict, there is a peaceful solution.

Finalist
Jared Anderson & Eric Dallimore
*C.H.O.N.*
Sculpture
Denver, Colorado

Whether you look five years out, or five thousand years out, you cannot build anything without Carbon, Hydrogen, Oxygen and Nitrogen (C.H.O.N). After millions of years, this beautiful stone surfaced to create C.H.O.N., composed of layers of resin, metal, wood, stone and ice. The main material in the sculpture is marble, which was formed through immense pressure. The scorched wood warns of possible disasters if we do not innovate to create a sustainable future. Within the bronze layer, the artists present binary code as a new element. All elements work together through a forward-thinking, symbiotic relationship.
Arrow’s Five Years Out Challenge inspired Ivanovic to examine the magic of metamorphosis. Innovations thrive on the natural brilliance involved in the evolution of an idea or product. These transformations symbolize what a business needs to thrive, inspire and reshape its products and thinking in a “Five Years Out” world.

Ivanovic’s simple, yet incredibly beautiful pouring process captures and collaborates with gravity to facilitate a conversation about the ideas of metamorphosis. Her process starts with both premeditated and spontaneous pouring of 14 gallons of paint to produce shocking and unexpected results. The massive, free-formed painting is based on several concentric pours. The bullseye pours are symbolic of continuous drips of radiating innovation. Hidden within the connected bullseye pours are caterpillars, cocoons and hundreds of painted butterflies swirling from the center of the work.

Jennifer Ivanovic

*Metamorphosis* | Poured Acrylic on Plywood | Fort Collins, Colorado
**Finalist**

**Ana Maria Botero**  
**Magical Collision**  
Painting on Glass  
Longmont, Colorado

A star’s life begins with the gravitational collapse of interstellar gas. The force of gravity compresses massive amounts of atoms until the fusion reactions begin, and a new star is born. The piece gives the illusion of the universe when a star’s life begins. It captures the magic and beauty in a glass box, making us believe that we can reach the unreachable. Botero’s *Magical Collision* is intended to reflect the Arrow values and ideas of universal impact and commitment to help reach the unthinkable.

**Finalist**

**Ed Kidera**  
**Into the Cloud**  
Metalwork  
Woodbine, Maryland

*Into the Cloud* is a mobile platform that can be stationed anywhere she is needed to provide cell phone, Wi-Fi, television and radio service along with cloud storage and internet server functions. Modern equipment can be so sterile in appearance, but this piece is designed with a Victorian flair and a touch of whimsy to bring comfort to those who see her.

Powered and supported by clean hydrogen, built of super strong yet lightweight material, and adaptable to a wide range of missions, *Into the Cloud* may be Five Years Out, but she is on her way, as she takes to the sky.
The basic idea is that life and consciousness are the inevitable result of increasing entropy. Energy released from the creation of our local universe dissipates more efficiently as more and more seemingly ordered states of matter are created, including life and consciousness. Consciousness, self-awareness and intelligence strive to find meaning and purpose, and in this striving innovation is rewarded. Thus, innovation is self-sustaining as its effects change the environment. It reveals new challenges, which require further innovation; the broadest of all themes represented in the piece.

John Ames
Consciousness and Thermodynamics
Digital Art
Chicago, Illinois

In creating r+Evolution → 2020, Thetford placed a modern-day Copernicus in the center of the image encircled by his own diagram of the cosmos. A mix of mathematical equations, electronics and artifacts orbit around him. Today’s technological advances are the result of the confluence of ancient and modern revolutionary thinkers. It is in merging the revolutionary with the evolutionary, and the theoretical with the practical, that they build the bridge between where we are and where we will be.
The idea behind The Archivist is that five years from now, we will have technology to affordably build these reliable robots. Hundreds of these units would be assigned a human counterpart. For a year, they shadow their subjects as unobtrusively as possible and record their daily activities – capturing their work life, religious and political views, interactions with friends, families and colleagues, sleep schedules, meals eaten, movies cried through, sunsets watched - everything.

These detailed records are compiled into a searchable, time capsule database. Once that person has passed away, their story is uploaded to a cloud server for the world to access for eons. Decades from now, researchers may stumble upon a story through simple keyword searches that overlap a segment of that person’s recorded life. No person is too mundane to be not be remembered. No one should be forgotten.

Toby Fraley

The Archivist: I will not let you fade away
Mixed Medium & Electronic Sculpture | Bridgeville, Pennsylvania
Innovation is more about ideas than hardware. That belief is embodied in Seamless, a work that explores the way we see technology - futuristic today, but likely as a dated novelty to future generations. Each panel appears black or white when viewed simultaneously with its neighbor. But when viewed individually over a period of minutes, colors begin to emerge, and the viewer sees that the apparent black or white field is much more complex, bringing a temporal dimension to the viewing experience. The piece breaks several conventions of traditional painting, yet still works intuitively, just as future innovations will question today’s preconceived ideas.

Bryan David Griffith
Seamless
Mixed Media Painting & Wood
Flagstaff, Arizona

Finalist

In this anamorphic work, Aspinall explores the dilemma that symbols, objects and even events often have vastly differing significances depending on the subjective and cultural standpoint of the observer or interpreter. He reveals differing subjects when viewed from different angles, symbolically encapsulating our long-lasting search to understand the very nature of the savage universe in which we exist, and mankind’s attempts using mental tools of mathematics, science and philosophy to define and codify the cosmos.

Mark Aspinall
Platonic Challenge
Mixed Media Acrylic Sculpture
Crotone, Italy

Finalist
Aesthetica Sculptura reflects innovation at the intersection of crowdsourcing, evolutionary algorithms and connectivity. It uses the concept of “survival of the fittest” to morph into a sculpture that is more likely to succeed. A website was created to allow visitors to help define the physical parameters of this interactive sculpture. The site was free to use, and allowed the user to modify some basic elements of the circular-like sculpture. As more users interacted with the site, the art became more sophisticated and beautiful. The final piece is displayed in the case shown. The process itself is part of the artwork, and the early iteration versions are also displayed.

Philosopher’s Stone represents a beacon for innovation. Encircling and nesting arrow forms cradle an egg, which is the philosopher’s stone of perpetual creation. Something imagined but unattainable in the world of Five Years Out and beyond. As the form grows and opens, the new egg is revealed inside, in continuous progression. The beacon seems to pulse, as waves from the universe are transmitted and received. The arrows point out to all directions.
Imagine a future where fluid transformation is prevalent. A future where boundaries between art, material, function and the human form stretch, blend and take new shape. The butterfly is a classical reference to metamorphosis. By creating something that blends humanity and art, another transformation takes shape. Nova takes art off the walls and into the world. This wearable installation speaks to light, to community, to gathering, and has an open ethereal dream like quality that gracefully dances and glows. From person to butterfly, from individual to art, this convergence is a conversation already happening in worldwide culture. Nova is meant to inspire graceful changes in the way we think about our relationship with technology and with each other.

Finalist
Anne Bossert
Reliquary for the Future
Wood Sculpture
Fort Collins, Colorado

The word, “relic” refers to something from the past. But in this case, the relic is the future or, more precisely, the promise of a future represented by a maple tree seed. The reliquary that houses this future maple tree is made from maple plywood, which are maple trees from the past. While mankind appears to be increasingly functioning within the ether, it is the earth, where we and the trees live, that anchors us all in the present. This piece simultaneously represents the past, present and future.
The production of Clouse’s weavings is extremely labor intensive. Electronic wires and cables get heavy fast, and small braids build into long weavings that then get woven into tapestry-like sculptures. The initial intention was not to create a feminist work, but the piece evolved into it. Clouse believes that just as women can do what has traditionally been defined as masculine work, a man may create feminine piece.

Clouse has chosen materials that surround him, literally picking items from the garbage. He sees potential and beauty in things that others have discarded. This habit or hoarding of discarded materials has created a passion to practice sustainability as an artist. Clouse is passionate about consumption, how it leads to the disposal of goods, and he believes it is his responsibility to put these materials back into production.
Posters had been the king of public communication since the invention of the printing press. But in the last 50 years, electronic media ended their reign. Television and the Web have taken this amazing commercial art form out of the public sphere and turned communication into a segmented, private media experience. Today, many of the electronics we use rely on printed circuit boards to function. Using that technology, this piece inverts the relationship and brings print media into the 21st Century, and back into the public eye, by making interactive art that can both communicate and entertain through the universal language of music.

Dan Stiles
Reaching Forward, Reaching Back
Digital Art
Portland, Oregon

Finalist

Sharon Brush
Safe Passage
Ceramic Sculpture
Santa Fe, New Mexico

Every innovation begins with a commitment to a creative journey. Safe Passage illustrates the phases of the innovation process. The “boat” form of the piece represents the journey. The white orb at the uppermost lookout of the vessel symbolizes the seed of inspiration. The spinning wheel in the hull of the boat represents the day-to-day labor necessary to transform the Five Years Out idea from inspiration to completed innovation.
Inspired by their stories, Hequembourg selects individual subjects to portray a narrative that connects need to innovation, producing engraved assemblages from salvaged materials. The subject of *Always a Driver* is Sam Schmidt, former Indy Racing League driver and now team owner. Sam has always been a driver, through early childhood and into a successful professional career. A career that was seemingly cut short by a horrible accident, paralyzing him from the collarbone down. But then, in partnership with Arrow, technology came into his life, and now Sam is a driver again.

Below the portrait includes images from Sam’s life as a driver. Above the portrait are the possibilities for the technology that changed Sam’s life. When technology becomes tangible, there is no end to the possible ripple of lives it will benefit in the future.

Aaron Hequembourg

*Always a Driver*
Engraved Assemblage on Wood & Aluminum
Monticello, Georgia

The power of art is in its ability to resonate with and move another person simply by communicating with color, composition and form. We connect with each other, and our greater humanness, through something beautiful. But to have that experience, we must be present for it.

Carstensen believes that as society’s dependence on screens has increased, our ability to connect with the arts has decreased.

This piece represents the growing disconnect. The original oil painting is framed with screens representative of technological advances expected to materialize in the next five years and contribute to this dilemma. This is a statement of hope that brings awareness to the situation and the first step toward collectively finding a healthy balance between technology and the arts.
The Ethical Viewer: Perceptual Fog
Interactive Sculpture
Cranston, Rhode Island

The Ethical Viewer: Perceptual Fog is an interactive sculpture that manifests both the virtues and criticisms of storytelling. It inspires and actualizes a confluence of principles in art making. In the spirit of Five Years Out, it harnesses innovation and technology by fusing sculptural and computational methodologies towards accessible and socially minded art. The innovation space is as much about the ethical practices in the expressive application, as it is the inventive integration of both emerging and established technologies.

Finalist
Amenda Tate Corso

Manibus
Mixed Medium on Paper & Wood
Des Moines, Iowa

These works were created in conjunction with professional dancers from the Colorado Ballet. Each dancer took turns wearing a motion-sensing control device that relayed instructions to a wireless painting robot called Manibus. Their dance movements were translated into dynamic, painted works of art. Choreographed by Colorado Ballet Mistress, Sandra Brown, the dancers performed to music composed by Colorado Symphony Resident Conductor, Scott O’Neil, to represent the Arrow Five Years Out brand. Manibus is Corso’s iteration of innovation in painted form.
Acknowledgements

This publication of Five Years of the Arrow Five Years Out Art Challenge would not have been possible without key partnerships and far-reaching participation.

Arrow gratefully acknowledges Colorado-based non-profit Cherry Arts and their dedication to the program, demonstrating what it means to be Five Years Out. We would like to thank Tara Brickell, executive director and CEO of Cherry Arts, and the Cherry Arts’ staff who dedicated time and attention to reflect the Arrow brand through innovation in the arts.

We would also like to thank the hundreds of talented artists from around the world for submitting such diverse, thoughtful proposals, as well as the finalists, whose commissioned work is shared throughout Arrow offices.

The world of technology is an ever-changing, dynamic space, and the artists embodied this concept throughout the collection.

Lastly, we wish to thank the Arrow team members that contributed to the success of the program and this publication, including Cherry Arts board member Leda Abrams, Adri Jones-McMeekin, Rich Kylberg, Hugo Meyer, Joe Verrengia, Alexandra West and the facilities installation team.

With this book, we hope you find new inspiration both personally and professionally in the never-ending journey of Five Years Out.

About Arrow Electronics

Arrow guides innovation forward for over 150,000 of the world’s leading manufacturers of technology used in homes, business and daily life.

Through a network of more than 345 locations serving over 80 countries, Arrow aggregates electronics and enterprise computing solutions for customers and suppliers in industrial and commercial markets.